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**The Influence of the Media on the Development of Publics Environmental
Consciousness: Case study of Lithuanian Press**

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Summary

Mass media plays a crucial role as a source of information, in encouraging knowledge and concern about environmental problems. Presumably, the more informed the public is about environmental problems the more likely they will be to support politicians and policies committed to environmental protection. Therefore it is crucial to investigate mass media contributions to the formation of public environmental consciousness. By developing a model I tried to understand and evaluate the relation between the media, public agenda, and possible influence on policy agenda. The main focus of the study is to analyse environmental problems related to the Baltic Sea in the context of general environmental problems in press, particularly national "Lietuvos Rytas" and regional "Vakaru Ekspresas" dailies. In order to assess environmental coverage in press and public opinion, and to investigate media correspondence with experts and public agenda, content analysis and questionnaires were used as appropriate methods for case study. It was found that environmental issues related to the Baltic Sea have high coverage in both dailies. Global environmental issues are absent from both dailies, therefore the press plays only a limited role in creating public concern about global environmental issues. When comparing expert agenda and media agenda, one finds that there is a gap between media and experts' agenda, regarding environmental problems related to the Baltic Sea. According to defined types of environmental problems and their dependence on mass media, the press tends to cover environmental issues, which are not dependent on mass media. However, those environmental problems that are difficult to experience are covered insufficiently, or some of them like dumping issue even are absent in national dailies. Conformably, as a result of insufficient reporting on media, was noted lack of knowledge among respondents that show that people are not familiar with such issues as TBT and dumping. Nevertheless, it was found that students are an environmental conscious group of the society. Press in the context of mass media plays a crucial role in providing students with environmental information and in forming students environmental consciousness.

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Abbreviations:

CCB – Coalition Clean Baltic
 INPS – Ignalina Nuclear Power Station
 LEPM – Lithuanian Environmental Protection Ministry
 MRC – Marine Research Centre
 HELCOM-Helsinki Commission
 JCP- Baltic Sea Joint Comprehensive Environmental Action Programme
 TBT - Tributyltin

1 Introduction

There are a number of local and global environmental issues that I think warrant serious attention from media sociologists as well as others in related disciplines.

The environmental management programmes, conventions, declarations, protocols, actions plans have become a necessary (but not sufficient) condition for controlling or preventing the causes of environmental degradation and for finding ways to mitigate both the global and local environmental impacts of human activities. The success of a given project or approach actually depends on the number of people supporting it (Lewin, 1990). It is arguably easier to achieve results, lower environmental impact, with the help of collective measures, i.e. that politicians receive a mandate from the people to take action against industrial polluters, environmental harmful substances and activities.

There are reasons to believe that the efficacy of environmental management programmes realisation depends on public environmental concern and public pressure on institutions. It is well known that mass media is an information source that contributes to increased public environmental concern, which is awareness and attitudes. The effective dissemination of information lead to knowledge that tends to increase environmental awareness. Increased awareness of environmental problems may cause people to demand those politicians change matters towards environmental sustainability. Furthermore, environmental awareness makes people more environmentally concerned that can lead to pro-environmental behaviour and active participation in decision making process.

According to a survey in 1998, Lithuanians are aware of such environmental problems which they face everyday and those, which are global ones, were placed at the bottom of the list (Juraite & Thelander, 1999). That shows that people have less knowledge concerning global environmental problems and they see just local problems. On the other hand, if they would know, they may be interested in it. There is still lack of information regarding global consequences due to local environmental problems (Juraite & Thelander, 1999). Nevertheless, to get knowledge it does not mean to act in pro-environmental way, just we can say that it is greater probability what people will have what to think about.

Therefore, it is interesting to study the contribution of mass media towards public awareness on environmental issues. Mass media is one of the factors that contribute to the public opinion formation. Since field of mass media is too broad, main focus of my study will be on the press.

One can say, that for reporting on environmental problems there are special newspapers published by Green Movement or Green Parties. However, these newspapers are dedicated for special interest groups. In addition, information published in "Green" press is not assessable for everyone, as "Green" newspapers are printed in just a few thousand copies. In case of making the public more environmentally concerned, the national press as well as regional press has to play a role in environmental reporting. In other words such ongoing process can be called "greening of the press".

In my opinion, national as well as regional dailies are important media means, which can contribute to the increase of public environmental awareness. The regional Lithuanian press is likely to focus on regional environmental problems, but national newspaper has to play role in coverage all environmental issues, local, regional as well as global.

Furthermore it is interesting to analyse the coverage of Baltic Sea environmental problems, as they are crucial in Lithuania as well as in other countries, and they are common for 80 million people.

In writing this paper, I was particularly interested to analyse the role of press in forming people environmental consciousness.

1.1 Objectives

Mass media is one of the most important tools in encouraging knowledge and concern about environmental problems.

Aiming to find out how the press forms people environmental consciousness, the objectives of the study are:

1. Explore the relation between media and public agenda by using as a background theoretical approach;
2. Analyse the coverage of environmental issues related to the Baltic Sea in the context of general environmental issues in press, bearing in mind quantitative and qualitative aspects;
3. Investigate dependence of various issues on press, by categorising them into different types;
4. Identify respondents opinion, which represents public opinion and explore correlation between press environmental reporting and public agenda.
5. Investigate links between media usage among students and environmental awareness

1.2 Scope & Limitations

There are two reasons, why I have chosen the Baltic Sea environmental issues.

First of all, I am interested in analysing such environmental problems that would be common for the different countries. I am intending to make comparative analysis in the future. Second, the Baltic Sea has reached a highly critical level, as the Baltic Sea's ecosystem is threatened by environmental pollution due to the trade, transportation, and releases of wastewater and recurrence of oil spills that could cause irreversible damage to a sea. The biggest culprits are, of course, people. However, the idea of responsibility is quite weak in the current debate; no one person, group, state or firm is pointed out as responsible.

The press, particularly national "Lietuvos Rytas" and regional "Vakaru Ekspresas" dailies, was chosen as a case material, since it can be presumed that national as well as regional dailies can contribute to the public environmental awareness. Moreover, I intended to investigate differences between national and regional dailies.

Nevertheless, the press has advantages over other mass media. The press has a stronger agenda-setting function than other media. Moreover, newspapers offer a greater capacity for dealing with weighty issues and specialist knowledge than television or radio (Ericson et al 1991). While one can go back over and re-read information in newspapers, with television one has to take in specialist knowledge in a very short space of time (Lowe & Goyder, (1983); Anderson, (1993)).

As it was mentioned before the main focus will be on press and the public, particularly students, agenda. I am not going to analyse the relations between public and policy agenda. Moreover, I am not going to deal with any kind of environmental concerned behaviour.

1.3 Hypotheses

For the purpose of this research it is hypothesised that:

1. The press agenda corresponds with experts agenda on Baltic Sea environmental problems
2. Baltic Sea environmental problems portrayed as a crucial in regional as well as in national context
3. There are links between media usage and students environmental consciousness.
4. As it is presumed that students are the most active group of society they should be an environmentally conscious group of society as well.
5. The press plays role in forming people environmental consciousness.¹
6. Environmental awareness and concern lead to people pro-environmental behaviour.

¹ Environmental consciousness is a measure of a persons ability to understand the nature of environmental processes and problems, her or his degree of concern for environmental quality and the extent to which he or she is committed to positive environmental behaviour in everyday life (Linke, 1980; UNESCO-UNEP,1988; Yau, 1992)

1.4 Material and methodology

Articles, which cover environmental problems and are presented in both the national “Lietuvos Rytas” and the regional “Vakaru Ekspresas” dailies, are used as a case material for study. It is chosen time period of six months, from January to June in 2000. Because, it is optimal (Stone, 1981), especially for understanding what the coverage of environmental issues is, without any analysis of trend of the environmental issues on media agenda.

In order to construct circular connections and feedback, the problem of the study is conceptualised by drawing a causal loop diagram (CLD). By drawing a mental model in such way, I tried to understand and evaluate the relation between media and public agenda and to predict possible influences on policy agenda.

An investigation of experts’ agenda on environmental problems related to the Baltic Sea is based on interviews with experts as well as studies of scientific journals.

Analyses of the societal and organisational contexts of environmental reporting are based on interviews with reporters of dailies, as well as studies of material, analyses of articles, scientific journals and extensive analysis of previous research on mass media, regarding the environmental issues in Lithuania.

Statistics on the mass media landscape and media usage in Lithuania is taken from Nordic Information Centre for Media and Communication Research.

Investigation of public environmental awareness is based on questionnaires, which includes 21 question. To get statistical output of the questionnaires, the statistical software SPSS and Excel are used in processing the data.

In order to understand and evaluate the relation between the media, public agenda, and possible influence on policy agenda, the causal loop approach is used.²

The links between different issues, possible problems arising from them and the solutions, possible changes towards more sustainable environment, and their relations are analysed by the cause and effect relationship between different parameters.

If editors and reporters are concerned about environment (Figure 1), it is more likely that they will produce environmental news that leads to an increase of environmental stories. The news production process is influenced by various internal and external factors, like organisational factors, determined frameworks given for environment, cultural and etc. An increase in coverage of environmental issue leads to an increase of media consumption or amount of readings. Such factors as welfare, particular interest, which is determined by different backgrounds have an impact on amount of readings, people do. Presumably, the greater amount read by people, the more knowledge in public, and the greater (deeper) awareness. How much knowledge they will get depends on education and ability to understand (receptivity). If a person have background information or have experienced one or another environmental problem, presumably he will be more able to perceive. That leads to increases in knowledge, respectively in awareness. An increase in awareness leads to an increase of concern that leads to an increase of demand for environmental stories. This lead to an increase of editorship concern. Therefore it is reinforcing system (R1), where main actors editorship interest and public interest reinforce each other in certain way.

The more people will be concerned, the more likely they will educate themselves. An increase in self-education leads to awareness. It is another reinforcing system (R2). It is likely that more they will be educated, more they will participate in environmental campaigns or decision making process. An increase in public participation will increase public pressure on institutions that makes them aware and concerned. This increase leads to promotion of environmental agenda in different sectors.

² The symbol R indicates that the loop changes direction, causing the system to fluctuate or even to move toward equilibrium. The arrow (+) indicates that the variables at the tail and the head of the arrow change in the same direction (for instance if editorship concern increases, so the environmental news production increases)

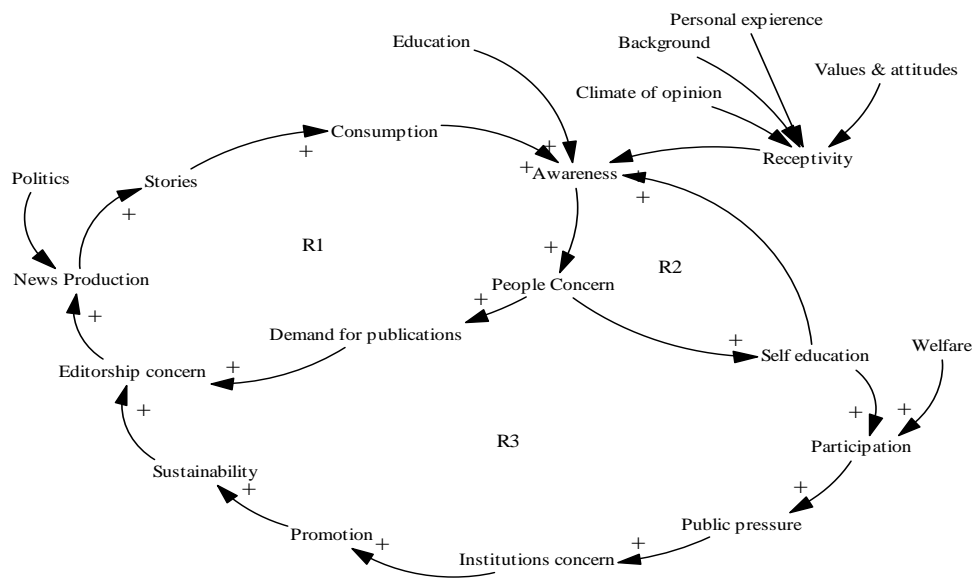


Figure 1 Causal loop diagram of interrelations between media, public and policy agenda

Presumably, it will lead to changes in environmental policy, or increases in efficiency of environmental management programmes that will lead to more sustainable environment. Increases in sustainability can have direct positive effect on editorship concern. It will be like raw material for environmental news production process. It is third reinforcing system (R3).

More minute description of processes and influential factors will be presented in theoretical approach. Main focus of my thesis will be on first reinforcing system (R1), as my analysis will include relations between media and public agenda. Furthermore, press correspondence with experts' agenda on Baltic Sea issues is one of the key questions of my study.

1.5 Paper Outline

Baltic Sea environmental problems in the context of general environmental problems can be interpreted as factor of environmental insecurity (danger). In analysing coverage of Baltic Sea problems in press, it is crucial to investigate experts' agenda. Therefore, I intend to give short overview of environmental problems related to the Baltic Sea in a global and a regional context.

To explore how environmental problems related to the Baltic Sea in the context of general environmental problems are reflected in mass media, a theoretical background is needed.

The theoretical part of the paper contains description of public opinion formation, agenda setting theory and news production process.

Methodology describes the methods, specifically procedures and processes, used for collecting data and making analysis

Analysis is conducted in several steps, described below:

First of all, I analysed the coverage of environmental problems in one national and one regional newspaper, respectively "Lietuvos Rytas" and "Vakaru Ekspresas" in Lithuania. The analysis of styles of expression and of the environmental discourse has required a combination of qualitative and quantitative content analysis. Content analysis is conducted by answering to specific theme questions (see Appendix).

Secondly, I intend to categorise articles and environmental problems, according to quantitative and qualitative aspects and to define types of environmental issues, in order to investigate dependence on mass media.

Thirdly, I tried to analyse differences between characteristic features of national and regional newspapers.

Fourthly, public opinion survey is crucial in investigating role of press in forming people opinion. Therefore, section six analyses the public (students) agenda on environmental issues.

Discussion will include the proposals for suggestions to make press “greener” and to make people more environmentally concerned. Some of arguments will be based on interview with reporters and experts.

2 Baltic Sea Crisis (Experts agenda)

The pollution, such as untreated human waste, toxic materials (DTT, TBT, PCB), spilled oil products has resulted in stratification of the Baltic Sea. {PRIVATE}{PRIVATE "TYPE=PICT;ALT=k.gif"}The Baltic Sea, common to the 80 million people in 14 countries, is especially vulnerable to pollution because Baltic Sea is shallow and surrounded by land. Only a few narrow straits link Baltic Sea to the Atlantic Ocean, so its water regenerates with difficulty.

The Baltic Sea's rich biodiversity is threatened by environmental pollution that could cause irreversible damage to a sea. Species of fish such as herring, sprat, and cod are affected by pollution from urban areas, industries, and agriculture (fertilisers). Sea birds die in oil slicks. Fish are unable to spawn in oxygen-depleted waters. Toxic matter builds up in the food chain - big animals eat smaller ones and accumulate toxic substances in their bodies. Animals at the top of the chain, including humans, tend to be most affected.

One of the goals of HELCOM, in order to protect Baltic Sea ecosystem, is implementation of JCP, which main focus is on regulations, policy, institutional strengthening, investment, management, applied research, public awareness and environmental education.

2.1 Eutrophication

The Baltic's main problem is eutrophication or excess build-up of dissolved nutrients in the water. Eutrophication depletes the oxygen in the water and may lead to changes in aquatic environments, unsustainable fisheries and break-up of habitat. Main causes for that is nutrients from household waste or from farms. These days, the Baltic receives eight times as much phosphorus and four times as much nitrogen as it did at the turn of the century. There is no oxygen in 50 percent of the Baltic's bottom (Stankevicius, 1998).

Blue green algae blooms are common problem for coastal cities. On the Lithuanian coast high concentrations of blue-green algae were observed from the end of June to the end of August in 1998. Since the cities round the Baltic Sea have a great impact on the nutrient flow to the seawater, the cities play an important role in preventing algae blooms in the future. Proper waste treatment is of crucial importance. In Lithuania 25 percent of wastewater is dumped into the Baltic Sea untreated (Stankevicius, 1998).

2.2 Trade, pollution and dumping

On land, pollutants can travel great distances before being deposited in the Baltic Sea. Every year the Baltic receives tons of heavy metals and other poisonous substances from industries, towns, farms and traffic. It gets untreated waste from homes and pesticides that are dumped by farms. Many of these pesticides are banned in the West, but old Soviet stocks are still sold and used. On water, shipping has increased especially the transport of oil to and from the eastern Baltic after the breakdown of land transport routes in the former Soviet Union (Alyanak, 1999). The transporting of oil products has increased rapidly after new Butinge oil terminal was built. It has been a lot of conflicts between environmental NGOs and governmental institutions.

According to chief of one terminal, there is no threat to environment due to activities performed by Butinge Oil Terminal. On the other hand, accidents are unpredictable.³

Dumping of industrial waste is still performed in Lithuania, while in other countries, such as U.S. has stopped. Barges and ships still legally dump quantities of dredge spoils. In Lithuania there is one dumping site in the Baltic Sea, which is heavily contaminated with toxic chemicals.

2.3 Oil spills

Yet plans continue for the construction of offshore oil exploration platforms in an area that has seen its share of oil spills. New oil terminals are planned for transit of Russian oil heading West. “There is pressure on society because this is good for the economy,” Kontautas⁴ said. “But it is dangerous for nature and made worse by choppy seas, which increase the risk of spills.” Stopped oil can have irreversible effects on Baltic Sea ecosystem, respectively on marine biota and human. Volatile organic hydrocarbons in oil immediately kill a number of aquatic organisms, especially in their vulnerable larval forms. Heavy oil components that sink to the sea floor can smother bottom-dwellings organisms and make them unfit for human consumption. In addition, oil slicks can have serious economic impact on coastal residents, who lose income from fishing and tourist activities. Despite their localised harmful effects, experts in U.S. rate oil spill as a low-risk ecological problem (Miller, 2000).

2.4 TBT - Tributyltin

TBT is known as dangerous chemical substance. TBT is included in paint composition, which is used for the hull painting. The main reason for use is that TBT protect the hulls of ships from the overgrowing with algae and crustacean. However, this compound has negative impact on other marine biota as well. In some places of sea concentration of TBT exceed three times permitted limit. In some places of Kursiu lagoon the concentration of TBT exceeds more than eighty times permitted limit. TBT is likely to accumulate in fat tissues of marine animals. Human can be affected easily as well.⁵

3 Public agenda and news media representations of environmental issues

Theoretical chapter contains a description of the public opinion formation, and mass media role in it, agenda setting theory and news production process. Theory covers the following questions. What is the contribution of mass media to the public opinion? To provide explanation for the transformation of meaning, circuit of communication will be described as well. What are the main components of agenda setting theory? How media, public and policy agenda interact with each other? What role sources play in building media agenda? What are the characteristics of environmental new items?

Short presentation of mass media systems in Lithuania are presented at the end of section “theory”. Specifically, it contains description of legal background of public mass media in Lithuania, mass media systems and their contribution to environmental issues. Moreover, it is important to evaluate media usage as contribution to the importance of mass media for the public environmental concern. At the end of section are described national “Lietuvos Rytas” and regional “Vakaru Ekspresas” dailies.

³ Kontautas A., a hydrobiologist and Lithuanian representative for the Coalition Clean Baltic (CCB), a Baltic-wide network of environmental organisations

⁴ Kontautas A., a hydrobiologist and Lithuanian representative for the Coalition Clean Baltic (CCB), a Baltic-wide network of environmental organisations

⁵ Jokubauskaite R., 2000, Marine Research Centre Report on case-study “TBT detection in Baltic Sea water”

3.1 Causes for different media message interpretation

Social scientists have recently started to investigate the influence of mass media on the environmental attitudes and values. However, most studies have revealed only slight direct influence of mass media on the individual level (Anderson, 1997).

Talking about the role of mass media in the individual thinking and saying one should keep in mind social and cultural environment where the meanings are being constructed (Anderson, 1997). Degree of media effect could be caused by different reasons. For instance, the welfare level and satisfaction of the basic needs in society to some extent defines whether people are more or less concerned with environmental issues (Anderson, 1997). This could be one of the explanations of different media message interpretations. For instance Sekar (1981) found that the Indian press plays only a limited role in creating mass concern about environmental issues. One of the reasons is that people are preoccupied with daily struggles to satisfy basic needs.

The findings or opinions, regarding media and public relationship, vary among different researches, mainly due internal and external factors, which play influential role in agenda setting process. Thus, social, economic, political and cultural factors, such as social class, education, gender, ethnicity, age, socialisation and belonging to subgroups and subcultures, should be taken into account when analysing the media – individual interrelationship (Anderson, 1997). One of the factors, for instance, can be concerning persons economy, as not every person can afford to subscribe newspapers. In other words, it is important to evaluate limiting factors corresponding to the media usage.

For instance, according to survey (1998) conducted in Lithuania, people are more concerned with those problems which they are facing in their daily life, while those dependent on mass media are considered less important (Juraite & Thelander, 1999). As a consequence, according to survey, was noted declined media interest in environmental problems. It is a serious consequence as reduced media interest in environmental problems means reduced public interest (Juraite & Thelander, 1999). On the other hand, media reflects people interest. So, public and media interests are actors, which reinforce each other. In addition, according to the media practitioners, they feel what public is interested in.⁶

3.2 Contribution of mass media to the public opinion formation

Frequently, researchers make the assumptions that it is possible to demonstrate a direct causal relationship between media coverage and public opinion.

According to Vincent Price (1992), a distinction between opinion and attitude should be clarified before the discussion about contribution of mass media to the process of opinion formation. Following the author, opinion is “a conscious judgement” when an individual decides whether to support or oppose some person or event. However, an attitude refers more to an inclination to respond positively or negatively towards something. Moreover, opinion is more situational, based on a certain issue, whereas an attitude is more global and stable orientation towards a broader problem. This distinction is necessary to be made, since opinions expressed by people can be quite different from their attitudes. For example, social pressure or absence of concrete attitude towards an issue may evoke an attempt to “snap judgements or pseudo-opinions“(Price, 1992).

The process of opinion formation is influenced by several factors, e.g. basic knowledge of certain issue, values and groups identifications. Social interaction with one’s friends, neighbours and family members may have influence on the formation of individual opinion, too. It is the climate of opinion where an individual is making a judgement (Price, 1992).

⁶ Zemulis F., 2000 07 25, interview with reporter for ecology in national newspaper “Lietuvos Rytas”

3.3 Circuit of communication

A mass media researcher Johnson (1986) has introduced a “circuit of communication” - a model, which provides an explanation for the transformation of meaning.

Correspondingly, the process itself incorporates four stages (Figure2), such as: 1) production of some meaning/message; 2) text which represents the message with the help of some images and words; 3) reading or consumption of the message; 4) lived cultures when a person integrates the meanings in his/her private life and social relations. How person will integrate the meaning depends on ability to understand, which depends on many other factors, described below. All four elements of the cycle are influencing each other and are affected by the inside and outside effects. For instance, public representations and private lives can be preconditions for the production of the meaning stage, while such features as abstract/universal or concrete/particular can have influence on the third - reading of the message- stage.

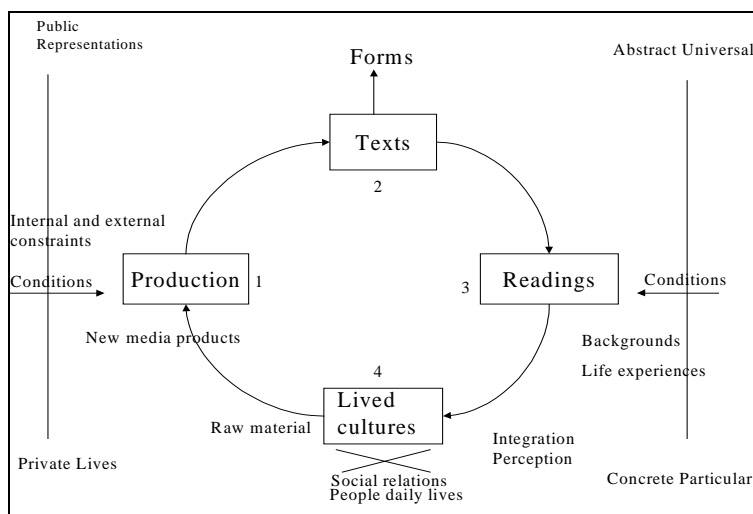


Figure 2. Circuit of Communication (source Johnson 1986: 284)

The model is significant because “it directs attention to the complex relationship between structural factors (material conditions) and individual subjectivity (values, beliefs, action)”. Looking backward, it is possible to make the connection of figure 1 with the figure 2, as the circuit of communication represents more detailed overview of relations between media and public agenda. The circuit of communication is based on reinforcing relations of processes.

3.4 Environmental perception (receptivity)

Human perception of the environment is one of the keys in understanding how individuals establish their relationships with the environment.

People’s degree of mass media exposure seems to be positively related to their acceptance of the media agenda as their personal agenda of issues. However, recall is effected by such factors as previous knowledge, socio-economic characteristics and the danger of the particular event. Even if mass media is important to our knowledge of the world, especially of abstract and unobservable issues, some “problems” still exist. Findahl (1995) means that usually no continuity exists in the coverage of issue e.g. environmental problems. Moreover, there is often a lack of background information and explanations. It means that information and knowledge mostly are comprehended by those who are already knowledgeable and informed, while people with less knowledge cannot apprehend it. Therefore, a knowledge gap (Olien, Donohue and Tichenor, 1983) occurs, which forms groups with different levels of knowledge.

As it was mentioned before, personal experience and interpersonal interaction plays a considerable role in the forming of the public perception of environmental issues (Anderson, 1997). Moreover framing and representation aspects are important as well. Bell (1994) study suggests that people tend to exaggerate what they remember from the media, especially if it is very dramatic or negative. People tend to have stronger identification with place than with time; so the place where an environmental incident occurs (e.g. Chernobyl) tends to be more memorable than its timing (Bell, 1994).

3.5 Agenda-Setting

Agenda-setting offers an explanation of why information about certain issues, and not other issues, is available to the public in a democracy; how public opinion is shaped; and why certain issues are addressed through policy actions while other issues are not. The study of agenda setting is the study of social change and of social stability. There has been a tendency to see environmental problems as something distinct from society, separate from the individual and everyday life. However, environmental problems have always been social problems, in terms of activities of society, that gives rise to environmental problems (Lundgren, 1999).

Cohen (1972) observed, that the press may not be successful much of the time in telling people what to think, but it is stunningly successful in telling its readers what to think about.

The agenda-setting process is composed of the media agenda, the public agenda, the policy agenda, and the interrelationships among these three elements (Dearing & Rogers, 1996). Figure 3 shows the main components of agenda setting process and the interrelation among them:

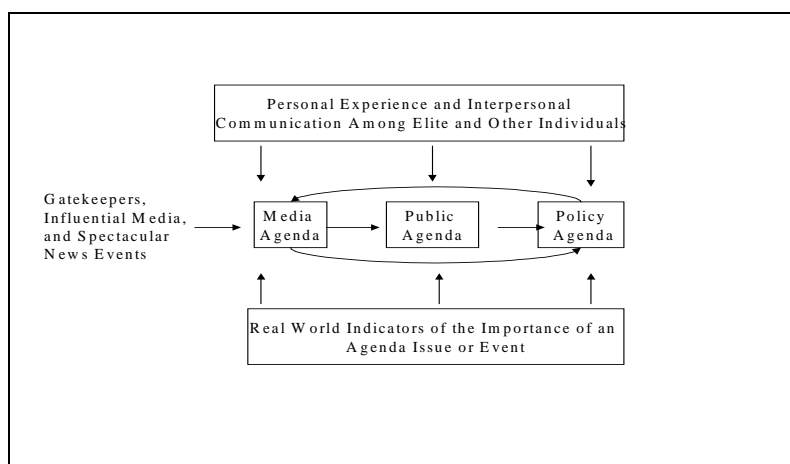


Figure 3. The Main Components of Agenda – Setting Process (Dearing & Rogers, 1996:5)

Media agenda sets public agenda. Public agenda have influence on policy agenda. In addition, policy agenda can be influenced directly by media agenda and in turn policy agenda play as influential factor in setting media agenda. As we can see, the personal experience and interpersonal communication are the influential factor in agenda setting process. Media, public and policy agenda are affected by real world indicators.

The general conclusion of agenda-setting research is that the media agenda sets the public agenda. Yet the empirical support for this relationship is far from overwhelming. The media agenda-public agenda relationship has usually been found even when various intervening variables (such as source/channel credibility and interpersonal discussion of the issue) are taken into account. Interpersonal communication can reinforce public agenda setting when such conversation concerns the same issue that the media had earlier emphasised (Dearing & Rogers, 1996).

Human's close familiarity with an issue is a way in which individual personal experience from an issue overrides the influence of the mass media in determining what is important to that person.

3.5.1 Description of Agenda-Setting Components

The public agenda is usually measured by public opinion surveys in which a sample of individuals is asked a question originally designed by George Gallup: "What is the most important problem facing the country today?"

The media agenda is usually indexed by a content analysis of the news media to determine the number of news stories about an issue or issues of study. There is a complex of variables, which has to be taken into account in evaluation quantity and quality of media coverage. It is a matter of one media superiority over other kind of media, ownership, politics of news production, taken priorities, characteristics of issues, role of advertisers, public relations staff, technical sources of information (Dearing & Rogers, 1996).

The policy agenda for an issue is measured by such policy actions as the introduction of laws about an issue, by budget appropriations, and by amount of time given to debate of an issue.

3.5.2 Real World Indicators correlation with media agenda

If we analyse the relations between real world's indicators and media agenda, the indicators measure more or less objectively the degree of severity or risk of a social problem. Often, the indicator is a single variable. However, such issue as environment, a multiply variable measure must be developed. Most of researchers have found no relationship, or a negative correlation, between real-world indicators and the media agenda. In other words, according to 20 years study made by Ader in 1993, as the problem of pollution decreased media coverage of the issue increased (Ader, 1993). The conclusion is that the real-world indicators are sometimes necessary but certainly not a sufficient explanation of media agenda setting. It is interesting argument that the world presented by media does not or never has any correspondence to experts understanding of the real world.

3.5.3 Public relation with media agenda

If we look at the relation between the public and media agendas, according to the study made by Takeshita (1993), the public agenda was not so highly correlated with the rank order of the issues on the media agenda. Takeshita (1993) noted: "Mass media exert more influence on what people think about the climate of opinion than of what they think about as their own concerns". This argument support the issue that mass media coverage has a powerful impact on what individuals believe that other people is thinking. McQuail & Windahl theory (1993), with its origins in social psychology suggests that individuals opinions are highly dependent upon what is perceived to be the "majority" view on any given issue.

Fluctuations in public concern for environmental issues are likely to reflect, in some measure, the following sorts of factors: competing issues on public, media and political agendas; economic conditions; high profile publicity of mediagenic environmental issues (Anderson, 1997).

3.5.4 Scientific information in agenda setting process

Studies show that scientific research results usually do not play an important role in the agenda-setting process (Anderson, 1997). One of the explanations can be that for instance amount of coverage in press is limited by space; there is not enough space to cover results of scientific research. Other reason is that scientific advance thrives on openness, honesty about what is known, uncertain or unknown, and competition of ideas. Scientific information and expert advice are increasingly important to the government when making policy and regulatory decisions – particularly on sensitive environmental issues and those involving peoples

health and safety, and animal and plant protection. These are often characterised by significant scientific uncertainty and diverse scientific opinion, which has too often led to incomplete media reporting and poor public understanding of the scientific debate (Smith, 2000).

The problem is that there is a fundamental conflict between the tendency for scientists to qualify everything and the media dependence upon short, sharp events and clear unqualified statements. Scientists tend to have little training in media relations and they are therefore often suspicious of journalists (Anderson, 1997).

3.5.5 “Issue-attention” cycle

Evidence suggests that interest in social issues such as crime, race, gender or ecology goes through a cyclical process of fervent concern and increasing boredom. Downs (1972) conceptualises this in terms of an “issue-attention cycle”. The issue attention cycle presents the rise and fall of the issue on the public agenda. There are five stages of issue attention cycle: pre –problem stage; alarmed discovery stage; realising the cost of problem solution; decline of public interest state; post-problem stage. Downs predicts that environmental issues are unlikely quickly to enter the “post-problem” stage and fade from media attention because of the peculiar nature of environmental issue. For instance, according to the issue-attention cycle, Lithuania appears to be more likely in the stage of realising the cost of the problem solution (Juraite & Thelander, 1999).

3.6 News production process

News production is influenced by various types of constraints ranging from advertising pressure, editorial policy and ownership, to stylistic conventions, news culture and the limitations of time and space (Anderson, 1997). The figure below reflects the role of actors and factors in news production process.

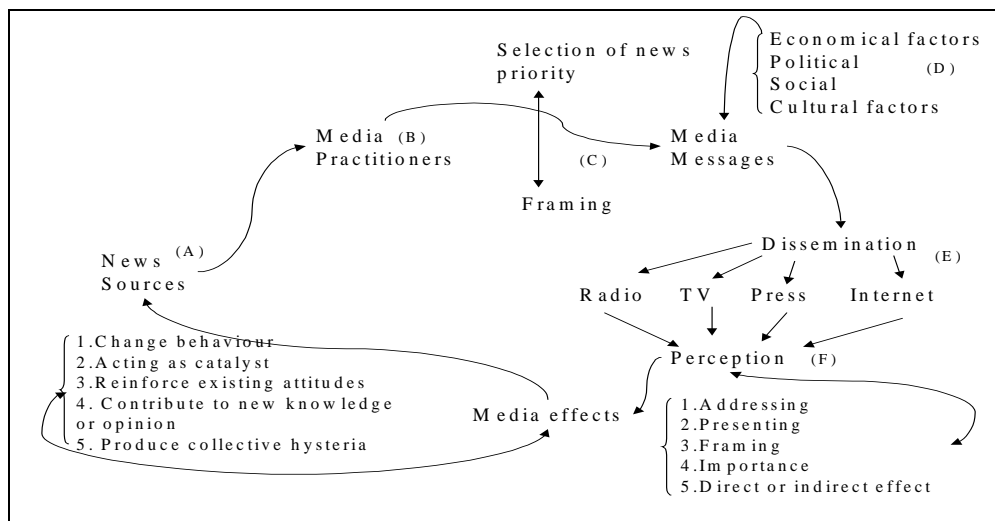


Figure 4. News Production Process

The figure 4 shows those news sources such as government, industry, scientists, environmental groups are competing with each other in aim to gain media attention (A). The message from news sources is transmitted to media practitioners, who select messages according to specified criterion and values or characteristics (B). In other words, priority is given to one or another message, as all information can not be published due to limitations of space or time. Mass media convey the priority of an issue mainly through repetition, which cues the public as to the relative importance of an issue.

News can be framed in different ways, for instance as environmental, political or socio-economical issues. Framing is important process that can influence public perception, as in many cases for example environmental issues are framed as economical or political issue (C). Moreover, economical, social, political

and cultural factors have great influence in shaping media messages (D). Next, the media message can be disseminated through radio, newspapers, TV or Internet (E). Message transmitted through these channels can be perceived differently. Perception of individuals depends on the following factors: to whom this message is addressed; how it is presented; how it is framed; importance of problem; if it have direct or indirect effect; how close it is related with you; if it is message of special interest; on personal experience; on interpersonal communication (F). Classification of audience is important as well in investigating the perception of audience. Social factors as gender, age, education and cultural factors as ethnicity, values, beliefs can have influence on public environmental understanding.

The process of news production is a continuous one, involving a number of feedback loops, most important among which are the way political figures see their own image mirrored in the media, the pooling of information within the press corps, and the various indicators of the public response (Anderson, 1997).

3.6.1 Sources play a central role in building media agenda.

Studies of environmental news coverage in a variety of countries have found that official sources (particularly government departments and scientists) tend to enjoy advantaged access to the media and become “primary definers” of the issue in question. By contrast, environmental pressure groups are much less likely to receive “primary definers” status. Campaigns designed to increase public awareness form a vital part of pressure group activity. For this reason, pressure groups have to develop fine-tuned media strategies if they are to be successful in developing a wide support –base (Anderson, 1997). Furthermore, the environment is largely mediated through the “expert” as the voice of authority. This may have the effect of discouraging critical thinking and marginalising lay views. Moreover, scientific information thrive competition of ideas what lead to uncertainty and confusion for people. On the other hand, expert advice is important as a background information not only for public, but also for policy makers.

3.6.2 Characteristics of environmental news items

Galtung & Ruge (1973) identified eight key factors that shape the news: frequency; amplitude and size; ambiguity; meaningfulness; unexpectedness; continuity and cultural factors such as elite nations, personification and etc. Frequency, amplitude and size are quantitative variables, which can be defined by conducting quantitative content analysis of media. Ambiguity means unclearness by virtue of having more than one meaning and can be considered as uncertainty. Meaningfulness can be understood as significance or importance of environmental issue. This factor can be difficult to define due factor of subjectivity, as what can be significant for one actor can be not for another. The public opinion can be helpful in defining meaningfulness of environmental issue. Unexpectedness factor, in my opinion, can be considered as “hot” news. Mass media is likely to report hot news. Mass media is looking for sensation (Conell, 1999). Continuity of issue can be defined as persistence of issue on mass media. For instance, such issue as Nuclear energy issue can be considered as persistence. In addition, it can be assumed that important issues usually become persistent issues.

There are other characteristics of environmental issues, which is worth to mention.

First of all, much environmental coverage is event-centred. Several researches have found the news media to be preoccupied with dramatic events such as oil spills and, to a lesser extent, pseudo-events such as publicity stunts (Anderson, 1997).

Secondly, environmental coverage tends to be characterised by a strong visual component. Research suggests that television news make greater use of such criterion than do the press (Wilkins & Patterson, 1987). In addition, images or picture that are portrayed by the media makes the sense of publication stronger or arouse stronger feelings and make a stir about one or another environmental disaster or issue.

Environmental issues sometimes tend to be mixed with economic, social aspects or to reflect strongly industrial and technical aspects (Hansen, 1990). In addition, news production tends to be closely tied into a

24-hour daily cycle (as media tend to report day's news) while environmental issues usually tend to involve lengthy processes. Therefore, it can be presumed that environmental issue (for instance global warming) could not be covered in a broad context due to lack of space or time. However, taking into account other issues, such as economic and political, they can be also long term processes. Therefore, it can be argued that importance of issue; given priorities and determined frameworks play role in news production process.

Media reporting is often risk-led, based on anxieties concerned threats to health posed by major incidents, accidents or disasters.

3.7 *Mass media as a source of environmental information*

3.7.1 *Legal background*

Since independence of Lithuania newspapers, radio and TV, are relatively free to transmit information without any control from the state. Although new legal regulations have been established in order to ensure media's independence, even rather liberal media legislative frameworks are not able to guarantee freedom of expression (Juraite, 1999). There are certain legal acts of Lithuania concerning media, the most important of them are: law of the provision of information to the public and law of competition (Legal Acts of Lithuania).

Under the law of public information, state employees have no right to refuse provision of information to the representatives of press and mass media. Under the law on environmental protection, the Ministry has to inform the public about environmental status and has to organise environmental education.

In order to prove the importance of mass media for the public environmental concern, it has to be taken into account the media landscape and media usage in the country.

3.7.2 *Description of Mass Media Systems as information systems*

Lithuanian data (Statistical Department of Lithuania) show that the main sources of information on the environmental issues are the main mass media, including television, newspapers and radio.

Today the mass media landscape is quite diverse in Lithuania. There are 19 daily newspapers, 38 magazines and periodicals published in the country. In total, there are 24 radio stations, i.e. 3 public nation-wide radio stations, 5 private nation-wide stations, 3 private regional stations and 13 private local stations. People can watch 6 television channels, including 1 public nation-wide television, 3 private nation-wide television channels and 2 private regional television channels (Nordic Baltic Media Statistics 1998).

3.7.3 *Environmental issues on mass media in Lithuania*

The history of environmental coverage in Lithuania illuminates point that never more so than in the period between 1989, when environmentalism or "green movement" made its first impact on the Lithuania media. Mass media played crucial role at that time in covering environmental issues "with political background" (Juraite, 1998). However, the environmental coverage in media confirms the fact that "alarmed discovery stage" has passed.

Despite the national and regional dailies, there are three environmental newspapers, which are weekly periodical: "Zaliasis laikrastis"; "Teviskes gamta"; "Zaliasis pasaulis" (Daubaras, 1995; LEPM Annual Report, 2000). Radio and TV can be potential sources of environmental information as well. On radio people have possibility to listen radio coverage broadcast "Gamta musu namai", which is more oriented on recreational environment. The viewers can get information by watching such telecasts as "Ekorykste" on BTV and "Gamta visu namai" on LNT.⁷ The latter is oriented on world environment, by mainly showing short films, which usually are taken from international channel "Animal Planet". However, bearing in mind

⁷ BTV – Baltic Television, LTV – National Television

quite diverse media landscape in Lithuania, there is reason to believe that diversity of broadcasts and telecasts, regarding environmental issues is low.

3.7.4 Media Usage

Mass media usage is very high among Lithuanians. The most popular mass media are television and daily newspapers for both, men and women independently on the different age (Nordic Baltic Media Statistics 1998). The vast majority of Lithuanians (94%) daily watch television and read newspapers (73%), while over one third of them (38%) daily magazines. Taking in consideration age, studies show that more young and middle aged people are reading newspapers and magazines than older population. Radio is also one of the most popular mass media. Facts show that Lithuanian Internet usage during six months in 2000 is 8% (SIC Gallup Media, 2000).

Also important to point out that the trust in the mass media is also very high in comparison to other institutions. According to public opinion survey results (Juraite & Thelander, 1998), the majority of people (63%) trust mass media, which is on the second place of the institutional trust scale. Such results allow us to assume that people pay more attention to the representation of the media than the state and other institutions. Trust is important, as it means that people have confidence in mass media.

The figure below shows the average audience of newspapers per issue in Lithuania. Lithuanian national daily “Lietuvos Rytas” has the largest readership 35% of readers per issue. The average readership of “Vakaru Ekspresas” is 5%.

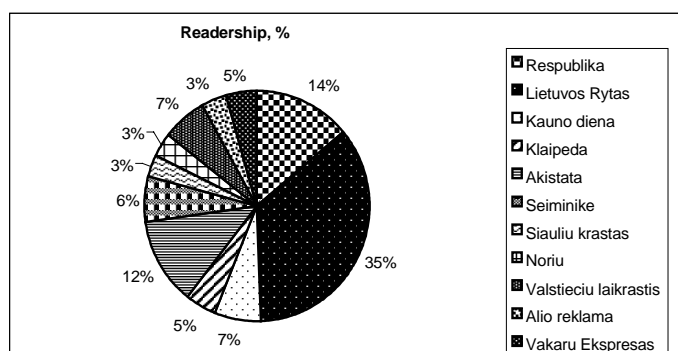


Figure 5. Average audience of newspapers per issue (source: Department of Statistics, Baltic Surveys, SIC Gallup Media)

In addition, according to popularity, newspapers can be rated as following: “Lietuvos Rytas”-34,59%, “Respublika” – 7,66%, “Vakaru Ekspresas” – 6,27%, “Klaipeda” – 6,16%, “Lietuvos zинios” – 4,51%; “Kauno diena”- 0,99% (Sic Gallup Media, 2000).

3.7.5 “Lietuvos Rytas” and “Vakaru Ekspresas”

The national newspaper “Lietuvos Rytas” is generally regarded as the most respected Lithuanians news medium. “Lietuvos Rytas” (“Lithuanian Morning”) is a national daily, which are put in circulation six times a week. The daily has such supplements as “Capital”, “Mill of Muse” (Muzu Malunas), “Mode of Living” (Gyvenimo Budas), “Highway” (Greitkelis), “Dwelling” (Bustas), “We” (Mes), “Weekend” (Savaitgalis). “Lietuvos Rytas” include such sectors as “first page”, “urgent events”, “signs of time”, “opinions”, “fifth page” (crimes), “world”, “sport news”, “economy”. There is no special heading for environmental issues. Therefore, if there is accident, for instance oil spill, then it is reported under rubric “Urgent Problem” with headline “Pollutants”. The special page “Nature”, which is part of the supplement “Weekend” is in

responsibility of special reporter for environmental issues F. Zemulis. Supplement “Weekend” like other supplements are put to circulation once a week.

“Vakaru Ekspresas” is regional daily for Klaipėda City and the Baltic Sea coast of Lithuania region. Daily are put in circulation six times a week and has such supplements as “West Business” (Vakaru Verslas), “Province” (Provincija), “Express” (Ekspresiukas), “Fallen in Ground” (Igriova), “TV Plus Antenna”. There are special headings such as “first page”, “opinions”, “urgent events”, “sport”, “sea”, “culture”, “health”, “province”, and “youth league”.

4 Methods and procedures of case study

The study aims to identify the coverage of environmental issues in press and the role of press in forming people environmental consciousness. Latter aim to investigate public opinion on environmental issues. As a case material are chosen national “Lietuvos Rytas” and regional “Vakaru Ekspresas” dailies of Lithuania. Analysis of coverage is conducted during the period of five months, from January to June in 2000.

The newspapers were examined to answer the following questions:

- Which kind of environmental problems the national and regional press report, particularly “Lietuvos Rytas” and “Vakaru Ekspresas”?
- Did they report about global environmental issues?
- Which kind of environmental problems related to the Baltic Sea national and regional newspaper report?
- What are length, location and title of articles?
- How environmental problems can be categorised, according to qualitative and quantitative characteristics of articles?
- How environmental issues are represented, taking into account characteristics of environmental items?
- What are effects on public opinion?
- What is the role of agenda setting on environmental issues in forming public opinion?

In order to answer the research questions quantitative and qualitative content analysis was used to analyse the coverage of environmental issues. A questionnaire was used to evaluate public opinion by using students.

4.1 Content analysis (Quantitative and Qualitative Analysis)

Content analysis is an established research technique within mass communications research and has traditionally been grounded in quantitative and qualitative approaches. Content analysis is well suited for analysing and mapping key characteristics of large bodies of text, and it lends itself well to the systematic charting of long-term changes and trends in media coverage. Content analysis is a directive method, as it gives answers to the questions you pose (Deacon at al., 1999). Therefore, it is crucial to define your concerns at the beginning. In my case study the main focus will be on themes of environmental issues; actors and sources and characteristics of items, taking into consideration representation aspects.

The quantitative content analysis uses predetermined categories in order to measure not only the frequency with which particular characteristics appear in texts, and the amount of space devoted to them, but also qualitative aspects (Anderson, 1997:138).

Procedure was based on looking through the national and regional newspapers and on counting and distributing articles according to theme of environmental issues. The articles, which reflect environmental aspects, were selected as well. First of all, I focused on analysing coverage in the national daily. After I got a general overview of environmental coverage in national newspaper, I selected articles that were covering environmental issues related to the Baltic Sea. There are two reasons: my own interest and the high coverage

of articles related to the Baltic Sea. Then I realised that it would be interesting to investigate coverage of environmental issues related to the Baltic Sea in regional newspaper, as potential source of information regarding environmental state of Baltic Sea. Because, relatively few researchers have focused upon the question of how environmental coverage by regional and national media differs and because of my interest in Baltic Sea environment, I chose regional newspaper “Vakaru Ekspresas”.

In order to conduct quantitative content analysis such characteristics of articles were defined: title, length, and location. Length of articles was measured in cm of columns by using ruler. In order to divide articles to the categories, the deeper (more attentive) reading was needed.

The qualitative content analysis study was based on answers to the theme questions. Theme questions was formed in aim to explore and evaluate the environmental news in particular field (Baltic Sea pollution) during same time period and in the same newspapers, mentioned before (see Appendix).

Procedure was based on more attentive reading of articles, which were selected from both newspapers. According to theme questions I categorised them into different categories, taking in consideration characteristics of environmental items presented in theory. Categories and types of environmental issues and their dependence on mass media will be presented in section five.

The articles chosen as item for content analysis are either directly proclaimed to be environmental or which nevertheless reflected environmental interaction in some way. This procedure inevitably has an element of subjectivity in it. There are some issues which one person might think of as environmental, and another person might not. For instance, issue of stranded international vessels near Baltic seashore seemed for me as article, which has intrinsic aspects of environment, as it rise threat to marine ecosystem and it destroy recreational environment in certain way. However, it has to do with understanding of what the environment and what the environmental problems are. It is known what environment is complex of systems and interactions among them. In aim to avoid complexity, it is crucial to make definition of environmental problems.

4.2 Definition of Environmental Problems

Rather than reflecting reality the “environment” is a social construction and the media play a crucial role in defining how we view our relationship with nature (Anderson, 1991).

The most recent trend is to perceive environmental problems as very complex and dispersed. Individuals, collectives, companies and nation-states are generating them in many sectors – industry, agriculture, and tourism – in many different processes of production and consumption, in different geographical locations. Environmental problems seem to be everywhere. At the same time they are nowhere, because in this perception there is no clearly defined culprit. No one person, group, state, bureaucracy or firm is pointed out as responsible (Kronsell, 1997).

Environmental problems can be global, regional and local. It can be short or long term problems. It can be invisible, ineffaceable or visible and people can face them in everyday life. In general environmental problems can be defined differently.

According to Kronsell, there can be pointed out three types of problem definitions: reflective, reactive and “non-environmental” problem definitions. The reflective kind of problem definition is comprehensive and general, concerned with environmental issues in a larger societal context. Reactive can be either a problem definition as a reaction to an incident, a catastrophe or accident, which can cause sensation of panic or urgent sensation of risk. In general, environmental accidents lead to an awareness that renders breaking points and the recoil of nature more visible (Murphy 1994; Lundgren, 1999). Along with catastrophes or accidents, events can put the spotlight on an issue and, often through the media, attract attention from policy makers and the public (Kronsell, 1997). Non-Environmental problems are considered those that did not have much, or anything, to do with a specific environmental condition or problem formulation (for instance, stranded international vessels at the seashore of Baltic Sea). The study was conducted bearing in mind the definitions

of environmental problems, mentioned above. As it is possible to find relations between environmental problems defined above and environmental problems, which were portrayed in dailies.

In conducting content analysis of articles I have been used following definition: environmental problems in general and problems related to the Baltic Sea in particular are defined as problems where all kind of human activities, which have direct or indirect destructive impact on fragile environment, play a crucial role.

4.3 Statistical Output of Questionnaires

In order to get statistical output of questionnaires, the SPSS statistical package were used. SPSS can conduct a vast range of sophisticated statistical tests and procedures, but my focus was on most basic uses: generating frequency tables and cross-tabulations and providing descriptive statistical measures. First of all were defined variables and values for every question, then data was entered. The frequency table provides the raw count of numbers that correspond to each of the values and overall percentage distribution for each of the values. In order to investigate relation between two variables such as media usage and importance one or another environmental problem, the cross-tabulation was used. Excel was used in order to give graphical view of the results.

5 Environmental coverage in newspapers

Before the start overview of content analysis, it is worth to introduce organisational factors of national newspaper "Lietuvos Rytas".

5.1 Organisational factors of daily "Lietuvos Rytas"

The national newspaper "Lietuvos Rytas" is an independent, commercial newspaper and the biggest newspaper in Lithuania. In addition, it is the only newspaper, which has an environmental reporter. According to the interview with the reporter on environmental issues F. Zemulis, he carried out of two pages in newspaper, under the heading "Nature". Mainly, his ideas are based on the wishes of the editor, who is expressing and guiding what about reporter has to write. According to the reporter, he has little freedom considering covering of environmental issues.⁸ It can be explained that once the "news line" of a story is established it can be hard for individual reporters to take an independent line. News editors are voracious consumers of other media, and despite an ambition of editorial independence, many have a natural human inclination against being found to be on the wrong track. This can lead to a narrowing of the potential news agenda (Smith, 2000). That means lead to concentration on leisure activities in nature. There are reasons to believe that the editor understands environment as leisure place and gives recreational meaning. The word "leisure" is understood as fishing, hunting, picking mushrooms and berries; love to birds, wild animals. These two pages are oriented and covered by all these themes, mentioned above. Furthermore, pages "Nature" are put in circulation just at weekends. Other environmental issues are placed under different headings or special pages of "Lietuvos Rytas" and usually are carried out by general reporters. Reporter for environmental issues is not taking part in covering environmental issues related to the Baltic Sea. All kind of issues, including environmental, related to the Baltic Sea is in responsibility for special reporters of Baltic Sea region.

5.2 Environmental Coverage in "Lietuvos Rytas"

All environmental issues, which were picked out from newspapers, can be divided in different categories with subcategories. The categories can have subcategories (in brackets), but it does not mean that a subcategory belong to one and only one category. The categories are considered such as: nuclear energy

⁸ Zemulis F., interview, 2000 07 25, reporter for environmental issues in national daily "Lietuvos Rytas"

issue (INPS issue); ground pollution (former military services, petrol stations); air pollution (emissions due transportation, industrial emissions); loss of biodiversity (with explicit effect on biota, reports of offences against the nature); waste processing-utilisation issue; renewable energy sources (potential energy sources, biofuels uses in cars); nature conservation and protection issue; pollution of water resources (pollution of drinking water, pollution of rivers, pollution of Baltic Sea water); use of fertilisers (contamination of vegetables, pesticides storage issue); ecological education; NGO activities; World ecological accidents.

Table 1. Coverage of the environmental issues in national daily “Lietuvos Rytas” during January-June 2000.

Environmental issue	Number of articles	%
Loss of biodiversity:	37	31
1. Explicit effect on biota (dead ducks)	(2)	
2. Reports of offences against the nature	(35)	
Pollution of water resources:	26	21
1. Pollution of drinking water	(2)	
2. Pollution of rivers	(3)	
3. <i>Pollution of Baltic Sea</i>	(21)	17
Nuclear Energy Issue (Ignalina Nuclear Power Station)	13	10
Air pollution:	6	5
1. Emissions due transportation	(4)	
2. Industrial emissions	(2)	
NGOs activities (protests)	6	5
Waste processing and utilisation issue	6	5
Nature conservation and protection issue (reservation, national parks and etc.)	5	4
Ecological education (projects)	5	4
Use of fertilisers:	5	4
1. Contamination of vegetables with pesticides	(2)	
2. Pesticides storage issue	(3)	
Ground Pollution:	4	3
1. Due former military services	(3)	
2. Due petrol satations	(1)	
Renewable energy sources:	4	3
1. Potential renewable energy sources	(2)	
2. Bio-fuels uses in cars	(2)	
Worlds ecological accidents	4	3
Total	121	100

From the table above (Table 1) we can see that the daily has the greatest amount of reports (31%) regarding offences against biodiversity. Mainly these articles deal with inspection reports given by environmental agencies. The fact is that Lithuanian Environmental Protection Ministry has signed agreement with editorship of daily “Lietuvos Rytas”, where both sides are responsible for reporting inspection reports.⁹ Environmental issue of Baltic Sea pollution as a subgroup of “Pollution of water resources” can be placed at the second place according to the number of reports (26) or amount of coverage (21%) in daily “Lietuvos Rytas”. Number three (10%) can rank the issue of Ignalina Nuclear Power Station. However, the main focus in articles about nuclear power station is on economical-political question regarding main requirement

⁹ Gedvilaite N., 2000 08 22, interview with representative of LEPM for the press

of EU to shut down INPS. If we look at public agenda, according to public opinion survey, the people consider Ignalina Nuclear Power station as one of the serious environmental problems facing the country today (Juraite & Thelander, 1999). The coverage of other environmental issues is less extensive than of issues mentioned before. It is worth to mention that global environmental issues even have not touched upon during this period. There are just shortly mentioned world environmental accidents, which happened in other countries. There is clear absence of global environmental issues. Furthermore, local environmental problems are not discussed in global context. For instance, wastewater problem is discussed as local environmental issue, but the global consequences due to releases of wastewater, such as eutrophication, is absent. Taking in consideration number of articles in each month during period January - June, the greatest coverage of such issues as INPS, pollution of Baltic Sea (17%), violation of environmental regulations (inspection reports) are in April. One of the arguments might be that April is month of cleaning the environment.

5.3 Organisational factors of regional newspaper “Vakaru Ekspresas”

One characteristic of editorial organisation is that there is no reporter with specific responsibility for news about the environment. Stories are assigned to general reporters. Reporters have no specialised knowledge of environmental issues. They have environmental issues beside other areas of coverage. Regional newspaper “Vakaru Ekspresas” has no special pages such as “Nature” in “Lietuvos Rytas”. “Vakaru Ekspresas” has special heading “Environmental Protection” when there is something to write about environmental problems. However, mainly all environmental issues related to the Baltic Sea is placed under such heading as “At the Sea and near the Sea”, “At the Port”, “Litas to Litas”, “Urgent Problem”, “Opinions”.

5.4 Coverage of Environmental Issues in Regional Daily “Vakaru Ekspresas”

The environmental issues were categorised in the same way as it was done in national newspaper. Quantitative analysis was made in aim to find differences of environmental reporting on Baltic Sea environmental issues in the context of general environmental problems between these two newspapers: national and regional.

Table 2: Coverage of the environmental issues in regional newspaper “Vakaru Ekspresas” during January – June 2000.

Environmental issue	Number of articles	%
Pollution of water resources:	32	41
1.Pollution of drinking water	(-)	
2.Pollution of rivers	(3)	
3.Pollution of Baltic Sea	(29)	37
NGOs activities (protests)	14	18
Waste processing and utilisation issue	9	12
Renewable energy sources:	6	8
1.Potential renewable energy sources	(6)	
2.Bio-fuels uses in cars	(-)	
Nuclear Energy Issue (Ignalina Nuclear Power Station)	4	5
Air pollution:	4	5
1.Emissions due transportation	(4)	
2.Industrial emissions	(-)	
Loss of biodiversity:	4	5
1.Explicit effect on biota (dead ducks)	(-)	
2.Reports of offences against the nature	(4)	
Worlds ecological accidents	4	5
Use of fertilisers:	1	1

1.Contamination of vegetables with pesticides	(-)	
2.Pesticides storage issue	(1)	
Ground Pollution:	-	-
1.Due former military services	-	
2.Due petrol stations	-	
Nature conservation and protection issue (reservation, national parks and etc.)	-	-
Ecological education (projects)	-	-
Total	78	100

There is absence of such environmental issues as ecological education, nature conservation-protection issue and ground pollution issue. The issue of water pollution, including Baltic Sea pollution, has the highest coverage (41%). One of the reasons can be that “Vakarų Ekspresas” is daily for the Baltic Sea region of Lithuania, that is why the problems of Baltic Sea is of great importance in environmental news reporting. Articles, regarding NGO protests is quite frequent (accounts 18%) and placed under headline “news of country”, as NGO are active in organising protests, mainly regarding social problems. Moreover, as it is even-centred news, so media tends to pay attention and make reports. Waste problem is considered as one of the serious environmental problems of Baltic Sea region. According to the number of articles (coverage 12%) waste issue can be placed to the third place. Moreover, chief of Klaipėda Environmental Department noted waste issue as one of the most important in Klaipėda region at this time.¹⁰

Differences between regional and national newspapers

Differences between regional and national newspapers can be distinguished from two aspects: quantitative and qualitative (representation) aspects.

In general all articles in regional newspaper are presented more detailed than in national “Lietuvos Rytas”. It means that articles of regional daily presented more in form of presentation, with explanation performed by specialist, also included interviews with leaders of companies and experts of environmental institutions. The articles in “Vakarų Ekspresas”, regarding environmental issues are longer than in the national newspaper. However, taking in consideration total amount of coverage (121 articles), the national daily “Lietuvos Rytas” has more extensive coverage of environmental issues, mainly due to reports of offences against the nature, than regional newspaper (78). However, the coverage of environmental issues related to the Baltic Sea is quite high in both dailies.

5.5 Categories of environmental issues related to the Baltic Sea

According to the findings, based on content analysis of newspapers, environmental issues related to the Baltic Sea can be categorised into such groups as issue of oil spills (oil spills accidents, safety issues regarding oil spills, and stranded international vessels near Baltic seashore), chemical substances (TBT issue, loading and transporting chemical substances, safety issues regarding loading chemicals), pollution of Dane River (wastewater releases, due near river located landfill), dumping issue. All groups mentioned above could be considered as causes (causal factors) for pollution of Baltic Sea. Such issue as environmental safety can be seen as reaction to or response to environmental damaging activities, performed by different companies. Loss of biodiversity is presented as a consequence of such environmental damaging activities as oil spills transporting oil products and chemical substances and etc.

¹⁰ Zukiene D., 2000 07 21, interview with chief of Environmental Department of Klaipėda Municipality

5.6 Coverage of Baltic Sea Environmental issue in both national and regional newspapers

Pollution of Baltic Sea is considered as a subcategory of water resources pollution. However, taking in consideration system approach, air pollution as well as ground pollution can have impact on Baltic Sea in certain ways. Therefore, main focus will be on environmental problems related to the Baltic Sea, which have been reported in both newspapers, without any detail analysis of interrelations with other systems.

I intend to present general overview of results from quantitative content analysis in both newspapers taking into consideration issues of Baltic Sea pollution.

Table 3: National and regional daily press coverage of pollution in Baltic Sea during January-June 2000 in Lithuania

<i>National press</i>	<i>Number of articles</i>	<i>%</i>
Lietuvos Rytas	21	17
<i>Regional press</i>	<i>Number of articles</i>	
Vakaru Ekspresas	29	37

The articles are longer than in the national newspaper and gave broader overview of the current environmental situation in Baltic Sea region. The fact that usually regional newspaper is likely to cover local or regional issues, which they face in region today can explain that. Table above shows that the amount of coverage in regional newspaper “Vakaru Ekspresas” is more extensive comparing with coverage of the same issues in national newspaper “Lietuvos Rytas” (accounts 17%). In this case the “Vakaru Ekspresas” carried an impressive 29 items (accounts 37% of total coverage), since it do not have as much space as “Lietuvos Rytas” do. It is worth to mention that it depends on environmental issue, its definition, on organisational factors of newspapers, on importance of environmental problem on local or regional level, and many other factors. Particularly, it was found out impressive number of short reports (in both dailies), which were dealing with accidentally happen oil spills. In addition, taking into consideration space of newspapers and length of articles, it was noticed that articles in “Vakaru Ekspresas” were longer than in “Lietuvos Rytas”.

One of the arguments might be that people are facing these problems and state of the Baltic Sea is of great interest not only for public but also for scientists, environmental governmental and non-governmental organisations. Moreover, “Vakaru Ekspresas” is daily for Baltic Sea region. However, according to the interview with the journalists, who are responsible for coverage of the environmental issues, NGOs play quite passive role in presenting environmental information.¹¹ NGOs in this case are active in organising protest, related with more economical and social-political sides of life, than within environmental field. The leaders of NGO argue that when people face difficulties in meeting their basic needs they can not be expected to be very concerned about environmental degradation. The current situation, however, reveals that people tend to be more concerned with social and economic problems, which they are facing in their daily life (Juraite & Thelander, 1999).

5.7 Qualitative Analysis of Environmental Coverage in Newspapers

The qualitative analysis consisted of in depth readings of articles: 21 from the national daily and 29 from the regional newspaper from the same period as the quantitative analysis. Firstly, according to the quantitative analysis, it was found what both newspapers have the highest coverage of Baltic Sea environmental issue through the period of January-June 2000. In aim to conduct qualitative analysis, theme questions were posed (see Appendix).

¹¹ Vasariene I., 2000 08 21, interview, reporter in regional daily “Vakaru Ekspresas”

The conclusion, drawn in quantitative content analysis, is that the coverage of environmental issues within Baltic Sea in regional newspaper are more extensive than in national newspaper “Lietuvos Rytas”. According to qualitative content analysis can be noted the following findings:

The first finding could be made that factual data and event focused reporting took priority over scrutiny, critique and analysis. Coverage rested on a perspective of consensus, and journalists consequently sought more to calm and inform the public of what was believed to be fact rather than to alarm or arouse with sensational revelations. According to Zemulis, in 1992 –1994 coverage of environmental issues was more extensive, articles were longer, and most of them raised sense of sensation. One of the explanations can be that greens inspired and encouraged media practitioners to bring environmental issues as one of the most important at this time. However, Down (1973) predicts that environmental issues are unlikely quickly to enter the “post-problem” stage and fade from media attention because of the peculiar nature of environmental issue. According to study, conducted in 1998, Lithuania appears to be more likely in the stage of realising the cost of the problem solution (Juraite & Thelander, 1999). Next stage, according to issue-attention cycle supposed to be decline in public interest – last but one stage of cycle.

The second finding is that environmental protection and conservation are generally treated as isolated – and relatively peripheral – problem areas. The state of the natural environment is described as problematic, but hardly catastrophic; the problems presented seems to be important, but no more important than other societal concerns. It can be motivated that articles are placed on different sub-headlines, which even hard to find and to call somebody’s attention. It seems rather unimportant than crucial. Whereas pollution of Baltic Sea is considered as important environmental problem, no essential threat to the survival of mankind or of plant or animal life is perceived.¹²

Another finding is that environmental discourse focused on local and national problems, with no reference to international and global aspects.

Djerf Pierre pointed out the similar findings in conducting the survey of Swedish press (Djerf Pierre, 1996). Also the fact that Lithuania facing the economic problems or is in the stage of realising the cost of the environmental problem solution, gives an explanation for accounting environmental problems as peripheral comparing with other issues.

Results of the qualitative content analysis will be presented in the following sections: agenda, type, priority, responsibility, and solutions. According to aroused research questions of analysis, the dividing into such sections, it is one of the ways to systemise my findings.

The first section will deal with question: which issues dominate on press agenda?

In second part I will try to categorise articles and environmental issues according to their quantitative (length), representation aspects and characteristic of environmental items (see Theory, Appendix). Moreover, it is crucial to identify types of issues and their dependence on mass media.

Third section will analyse which issues have priority over other issues. One of the theme questions of qualitative content analysis is who is responsible for one or another environmental problem. The issue of responsibility will be brought up in section fourth. The last section is devoted to the analysis of possible solutions, presented in articles.

5.7.1 Agenda

In analysing agenda-setting process it is crucial to know what issues are on media agenda. The environmental issues related to the Baltic Sea can be analysed taking into consideration characteristics of environmental items and representation aspects.

¹² findings of survey, based on experts agenda (Coalition Clean Baltic publications)

I intend to give overview of issues related to the Baltic Sea, which was published during period January – June 2000. It is possible to distinguish between four subgroups of issues which contributes to as a causes to Baltic Sea pollution and one subgroup – as a consequence of Baltic Sea pollution.

1. Oil spills

In certain way there is special group of environmental issues, which can be divided into four types of issues in one or another way related with oil spills: 1) short reports of oil spill accidents; 2) safety issues regarding oil spill, presented in broad long presentation of companies; 3) harm to biota due to oil spills, with explicit effect on biota; 4) stranded international vessels near the seashore of Baltic Sea, as a threat or possible cause for oil spill.

Accidents of oil spill are presented as short event and clear report. According to Anderson, media tend to be dependent on short, sharp events and clear unqualified statements (Anderson, 1991). Therefore, this type of articles can be considered as observable, urgent, unalarming. In addition, unexpectedness and significance are factors that contribute to this type of reports.

In articles regarding stranded vessels at the seashore, the environmental sides are just mentioned. And it is mentioned in such way, as for instance “it was noticed oil products pellicle” or “oil products were not found”. “Stranded vessels are one of the potential sources that contribute to the pollution of Baltic Sea”.¹³ However, environmental risk as such does not play any role within presentation of this type of news. It can be explained, by factor of probability that damaging events will occur or not.

It can be formed a conception, what detection of oil products at the sea or at the seashore of the sea is just usual thing, without any risk as such neither for environment nor for humans. Consequently, I started to doubt what such issue as oil spills it is not considered as environmental problem at all. It can rise such argument that nothing need to be done because in fact, the consequences are invisible and not that serious. On the other hand, according to specialist of Marine Research Centre oil products spilled to Baltic Sea is considered as environmental problem, which have negative impact on marine biota and have a quality accumulate and stay at sea bottom. In addition, in case of oil spill, just 25 % of oil products can be collected. It is impossible to collect all of them, as it depends on effectiveness of collection equipment, meteorological conditions and other circumstances. That means that other 75% are left at the sea. Taking into consideration that oil spills are frequent, it turns into significant percent of oil products left at the sea.

There are a lot of articles where the issues of environmental safety are discussed. Representatives of companies are likely to give positive overview in respect to environment. There are reasons to believe that their long broad presentations are related with recurrence of oil spills accidents. Oil terminals and shipping companies tend to be blamed, as the one of the potential sources of oil spill. So that is why companies are interested in giving such presentation, in aim to decrease suspicion. From a critical point of view, such type of articles does not reflect environmental and human health sides, just economic and industrial factors (Hansen, 1990).

2. Pollution of rivers

One of the cause for Dane river pollution is household wastewater realises. In broader context, wastewater which is realised to the Dane River, and flow into Baltic Sea is one of the source of the Baltic Sea pollution. The Nemunas – the largest river of Lithuania flow into Baltic Sea, and contributes as a potential source of pollution. Two years ago when the Nemunas has reached highest level of pollution and mainly due to released wastewater from the largest cities of Lithuania such as Kaunas and Vilnius, it was one of the most popular issue in press. New wastewater treatment plant was build two years ago and it seems that the frequency of this issue in press has decreased during this year.

¹³ “Vakaru Ekspreso” info, 2000 03 14, line from article in regional daily “Vakaru Ekspresas”, *Laivai tersia jura kaip metalo laužas*

3. Chemical substances

Chemical substances contribute to the Baltic Sea pollution as well. There are three types of articles: one, regarding high concentrations of TBT, which was detected in water of Kursiu lagoon and Baltic Sea, other, regarding loading and transporting chemical substances, and another type contributes to the safety issues.

Kursiu lagoon has great impact on state of Baltic Sea ecosystem, as it borders upon Baltic Sea. According to experts, in some places of lagoon high concentrations of dangerous substances such as TBT, DDT, PCB has been found, which have quality to accumulate in fat tissues of marine animals. Therefore, it sounds risky, but issue of environmental risk is just mentioned. The article about TBT is short, reported as urgent news, sound alarming and are based on scientific results. However, possible effects on biota and human are mentioned implicitly.

Safety issues

Economic profit is one of the major aims for most of companies. However, of late year's environmental safety issues are considered as important as well not only for environmental institutions but also for leaders of companies and public. The articles are based on comprehensive explanations, debates among environmental institutions and leaders of organisations. It seems that the articles are devoted for workers, who are performing loading of toxic substances, in aim to make them feel safe.

4. Dumping issue

Dumping is one of the environmental damaging activities, which contributes to pollution of Baltic Sea.¹⁴ One of the articles, regarding pollution of Baltic Sea in general, pointed out dumping as one of the most serious environmental problems. However, dumping issue is just mentioned in the regional daily, without background information or more detailed explanation of possible consequences and impacts.

5. Absence of eutrophication issue in press

According to findings, eutrophication issue is not mentioned at all. It seems strange, as in most of articles and international publications such as "Enviro" and publications presented by CCB and etc. is considered as one of the most important environmental issues. According to specialists of MRC, eutrophication is considered one of most serious environmental problems.¹⁵ There could be a lot of reasons for being absent.

First of all, MRC is publishing the results of analysis in other publications such as annual reports.

Secondly, can be that eutrophication is not considered as so important and interesting problem for reader. Because, it is unobservable, abstract, and unurgent, so for reader it is difficult see any threat for human due eutrophication. Presentation of background information, regarding issue of eutrophication can raise public interest.

Thirdly, there is no risk for people health and people are not facing this problem everyday.

Fourthly, it can be assumed that it is not an urgent problem, which is worth to mention. In general, issue of eutrophication is considered not only as regional or local, but also as global issue. Eutrophication is long-term systemic process. According to Smith, it is difficult for the media to report long-term processes, threaded through with scientific uncertainty and contentious debate. Moreover, global issues also tend to fall between journalistic specialisms (Smith, 2000). Therefore, in this case issue of eutrophication is absent in newspapers both in the regional and in the global context.

¹⁴ Jokubauskaite R., 2000 07 21, Marine Research Centre (MRC); publication of Coalition Clean Baltic (CCB)

¹⁵ Jokubauskaite R., 2000 07 21, Marine Research Centre; publication of Coalition Clean Baltic

5.7.2 *Media agenda compared with experts' agenda*

According to theory, on experts' agenda there is wider range of environmental problems related with Baltic Sea than on media agenda (see section "Background"). It can be presumed that there is a gap between experts' agenda and media agenda. The media agenda tends to report short event-centred articles and comprehensive articles, based on reaction to event. According to findings of content analysis, issue of eutrophication is absent, dumping and TBT issues are somewhat mentioned and such issues as pollution of rivers and wastewater are rare and seem to be non-urgent, non-alarming and unimportant. In contradiction, as it was mentioned before, experts consider all these issues as serious environmental problems. Whom to believe? What is the reality? Taking in consideration correlation between real world indicators and media agenda, most of researchers have found no relationship, or a negative correlation (see "Agenda Setting") and draw the conclusion that the real-world indicators are not a sufficient explanation of media agenda setting. However, media agenda is supposed to have correspondence to the real world; it is media, which gives information about events and different problems from the entire world.

Consequently, the following conclusions can be drawn: mass media is oriented towards the interests of the widest public. Therefore it tends to focus on news about events or reaction to events in terms of simplified explanations and reassurance, while experts tend to focus on results of scientific research, and these tend to vary among different experts. Therefore, as media agenda is not likely to deal with uncertainty, scientific information does not play an important role in agenda setting process. In addition, an issue like eutrophication, which is a long-term environmental problem, can be considered as non-existent, invisible and press is not likely to deal with long term environmental problems due to limitation of space.¹⁶ One of the explanations can be that the consequences and possible effects of problems like eutrophication or dumping tend to be (are) unobservable. On the other hand, according to Severin & Tankard (1997), unobservable issues tend to be dependent on mass media for getting attention, as public can not experience them. The final conclusion is that press (in this case "Lietuvos Rytas" and "Vakarų Ekspresas") does not sufficiently reveal the real state of the Baltic Sea.

5.7.3 *Categories of articles & Baltic Sea environmental issues presented in articles*

Different categories of articles

According to the variables of quantity and way of writing, articles can be divided in:

1. Short event centred reports (oil spill accidents, TBT, and etc.)
2. Long broad presentation (safety issues, presented by companies)
3. Article based on discussion (loading chemicals)
4. Article based on opinion (NGO leader against loading of chemicals)

If taking into consideration how it is presented, as causes, impacts, consequences, effects, solutions (actions), articles can be divided into different groups. Article can contain all these characteristics. For instance, oil spill is cause for death of seabirds and for contamination of beaches. Impacts on the environment are evident. However, consequences in most of articles, regarding oil spill, are not pointed out clearly, they are presented implicitly. Every environmental problem has effects: explicit or implicit effects on biota and human. Effects on biota and human tend to be presented implicitly. Just one article, presented in national daily "Lietuvos Rytas", is considered as article with explicit effect on biota, as it was found 56 dead ducks at Baltic seashore. It seems that other articles tend to hush up the environmental risk and effects on biota and humans. Possibly, they are not presented due to lack of scientific evidence and uncertainty. According to the theory, in order to become news, environmental risk must be associated with sufficient levels of one or more news values.¹⁷ In

¹⁶ see section "Characteristics of environmental issues"

¹⁷ News exists not because there is significant risk, but because there is some triggering event such as an explosion, accident or conflict among stakeholders (Stuart, 2000, *Environmental Risk and Media*, 47 p.)

my opinion, the coverage of environmental risk issue is low, especially regarding possible effects on human health, because of probability factor that effects can occur or can not. One argument might be that in most cases environmental problems lack scientific background for reporting and presenting problem as an insecure.

Oil spill issue is presented as accident in short report, mainly regarding such questions as where, when, who and how (possibly), what actions has been taken. On the other hand, the articles regarding safety issues are presented in deeper context, regarding analysis of possible sources of pollution. In case of oil spill, oil terminals and shipping companies are considered as most potential sources of pollution. On the other hand, according to articles, Klaipeda and Butinge oil terminals are safe and they can not be considered as sources of pollution. Then the reader left in uncertainty, as it happens frequently but sources are unknown.

The question arises, who is responsible – not just for uncertainty but also for regulating it and taking actions. This has to be seen in the context of the regulations of sea national-international transportation and the imposition of taxes and EU standards and legislation, resulting in confusion, in the public mind at least, over how (for example) Baltic sea water quality are to be protected, to what standards by which agencies. Therefore, in the context of a wider political debate the question can be put in such way “who owns the environment”.

Articles, regarding pollution of Dane River are based mainly on discussion of causes and impact on Baltic Sea. The main causes are wastewater releases to the river and pollutants, which comes from landfill, which is located near the river. In this case, consequence is clearly pointed out that Dane is polluted river, which have negative impact on Baltic Sea.

The main focus of articles, regarding loading of chemicals, is on discussion of possible impacts on environment, particularly occupational environment. Causes, consequences and effects on human are implicitly presented.

The other articles deal with issue of transporting dangerous chemical substances. The articles give quite broad overview of implicitly presented impacts, consequences, and effects on biota and human.

In general, data on background information, analyses, critics, public debate and data on causes and consequences due human activities is missing.

However, I believe that news reporting is supposed to document the causes and consequences of damage to the environment and, by means of pedagogical explanations, facts, analyses and background information, to help the public grasp the situation at hand.

5.7.4 Various types of issues and their dependence on mass media

According to analysis, regarding questions of presentation and characteristic features, environmental issues can have similar or different character. Type of issue is very important for the discussion of the mass media effect. The environmental issues that are difficult to observe and experience tend to be most dependent on mass media (Dunlap, 1998).

According to previous study environmental issues can be categorised in such types as observable or unobservable (Juraite & Thelander, 1999). According to representation of articles, they can be divided into urgent or not urgent, alarming or unalarming, with explicit or implicit effects on biota and human. In this case, for more detailed analysis was singled out such types as observable and unobservable, and urgent or unurgent types of issues. Issues that the public is experiencing directly are called observable and people can rely on their own experience. Personal experience of an issue overrides the influence of the media agenda (Zucker, 1978). It can be explained that when people can experience, the media becomes as a “secondary” source of information.

One can combine these dimensions in a table. First of all, it can be combined such characteristics of issues as observable and unobservable, and urgent and unurgent (see Figure 6). I chose such characteristic as urgent, as some of the environmental issues are compelling immediate action, for instance such as oil spill. In reality

oil spills are presented as accidents and accidents are usually urgent, as you have to take immediate actions in case to liquidate consequences.

<i>Type</i>	<i>Time</i>	
	Urgent	Unurgent
Unobservable	1a TBT Loading of chemicals	4a Wastewater Dumping
Observable	2a Oil spill Stranded vessels	3a Loss of biodiversity

Figure 6. Four types of environmental issues and their dependence on media coverage

From the figure above, the first cell cover issues (1a.), which are unobservable and urgent. Such type of problems is difficult to experience; it is hard to see, as for instance TBT and other chemical substances are invisible. However, the people who are loading toxic chemicals are familiar with it, then it can be considered as observable type. However, in broader context, there is limiting number of people who has direct experience. The effects and consequences in article are presented as uncertain. Such kind of issues needs scientific evidence, in aim to reduce uncertainty. However, diversity of scientific opinions among experts led to uncertainty too. Therefore, according to Anderson, mass media and people are not likely to deal with uncertainty. Zucker (1978) and Severin & Tankard (1997) found that less direct experience the public has with a given issue; the more influential is the media agenda. It can be made assumption that these types of issues are dependent on mass media, as they are invisible or unobservable. Moreover, they are presented as urgent, and mass media are likely to focus on urgent events.

The second cell (2a.) covers those issues that are observable and urgent. According to findings mentioned above, observable issues can be experienced, so the less influential is the media agenda. The meaning is that not only media that provides people with information, regarding (2a) issues, as personal experience can be another source of information for people. However, my findings shows that oil spills issue, including consequences due oil spills (polluted seashore), safety issues as a response of companies are frequently reported. It can be assumed that these issues are dependent on media in certain way. However, people can experience consequences of oil spills by walking at seacoast. On the other hand, chance to have experience is relatively low among people, as it can be experienced just in case if oil products thrown ashore. This type of issues is reported as urgent. Especially, these articles regarding oil spill accidents are dependent on media, as if people have no possibility to experience it, how public can be informed in another way. According to Lundgren (1999), accidents are always informative; they send a fairly clear message to a large number of people and stimulate action (Lundgren, 1999).

The third cell (3a.) refers to the issues that are observable and unurgent. This type of issues tends to be not dependent on media. It is visible (dead seabirds noticed at seashore) and it sounds unurgent. There is no continuous as such and the causes are still unknown for the reader.

The fourth cell (4a.) covers those issues that are unobservable and unurgent. As it was mentioned before, unobservable issues tend to be dependent on media. However, according to my study, this type of issues is rare in regional newspaper, and absent from the national newspaper. Consequently, if the media is one that

makes people aware about these (4a) issues and they are not on the media, then arises question, how people can be aware of this type of issues?

Therefore, in spite of the fact that issues, which are observable and urgent, tend to be not dependent on media, they are reported frequently in both newspapers. Facts show that people get a lot of information about oil spills in quantity terms, even if they are informed by personal experience. On the other hand quality of information is important as well. Unobservable and unurgent issues such as wastewater and dumping, which are dependent on media, seems to be not the issues of interest in press. It is evident conclusion, that media play insignificant role in informing people about dumping and wastewater. The arguments might be that either these issues (4a) lack of scientific evidence and are considered as uncertain and not that important for public by media practitioners, or experts play passive role in providing with background information. There are reasons to believe that until consequences and effects are implicit, such issues tend to “sleep” until something will happen in terms of accident or they will become observable and urgent. So, press tends to fail in providing people with information about environmental issues, which are difficult to experience.

5.7.5 Priority

Theoretically, mass media convey the priority of an issue to the public mainly through repetition. Usually environmental issues are sustained or prioritised by factors intrinsic to the nature of the issue, by a certain degree of fortuitousness and by external social and political forces (Anderson, 1997). Environmental issues were given relatively low priority in news coverage comparing with other issues such as political, economical and social issues. It can be explained by taking into consideration organisational factors. It is difficult to find and distinguish environmental issues from other issues; therefore environmental issues are usually placed under general headlines such as “news of country”. In addition, some of the articles strongly reflect industrial and economical factors; environmental aspects are just mentioned and it makes difficult it for the reader to perceive them.

Such issue as oil spill receives priority by gatekeepers, as it is an urgent problem and presented as accident. Event-related nature of oil spill telling is explicit. However, if taking in consideration one of the factors that shape the news – continuity, no continuity exists in the coverage of issue.¹⁸

Priority is given to environmental safety issues of Butinge oil terminal, as it raised a lot of debates among NGO, GO, experts, politicians and public. The environmental safety issues are presented as response to frequent oil spills.

There is no priorities taken among other environmental issues related to the Baltic Sea such as contamination with chemicals, wastewater issue, pollution due transportation, issue of stranded international vessels. However, if we are talking about priority among other issues such as economical, political and social, then environmental issues are covered just in case if they are urgent, unexpected, significant,¹⁹ and alarming. Some stories are based on reaction to the event (oil spill accident) and they sound unurgent, unalarming, expected and significant. For instance, safety issues regarding oil spills presented by oil terminals or safety issues regarding chemical substances. Priority are given for such articles because, as even happens, in one or another way the terminals or companies are tend to be blamed as potential source of pollution.

5.7.6 Responsibility

Presumably, according to the articles, people know that oil spills destroy environment and they also know that in these cases shipping companies, environmental institutions are responsible. What is the role of public? There is no involvement of public in this process as such. It seems that reader is not involved, so how can

¹⁸ By world “continuity” I mean, continuity of one accident, as it is supposed to be portrayed detailed information, but usually is not. Oil spills are frequent, but still no continuity exists, as every oil spill is separate case.

¹⁹ According to Galtung & Ruge, they defined key factors that shape the news, such as unexpectedness, frequency, significance, continuity and etc.

he/she take any action. When it happens, the reader is invited to deal with consequences, but this invitation is uncompleted, as there is nothing mentioned where you have to go, whom to ask, where you have to apply and what can be your actions in such case. Djerf Pierre noted the similar finding in Swedish press that environmental problems are not in responsibility of the individual citizens, but should rather be solved by society and the political leadership. On the other hand, as individuals form society, individual responsibility led to responsibility of society.

5.7.7 Solutions

All problems have solutions: unknown, known, realistic, unrealistic and etc. Most of problems presented in articles can be solved by improved technology. For instance, environmental safety issues can be solved by implementation of new technologies. However, beyond doubt there are other solutions. Not always technology can solve problems, without proper legislation and taxation system. Taking into consideration all circumstances it becomes complex of possible solutions, which can be adopted. For instance, releases of ballast water to sea happen due to high taxes, which are required to be paid by environmental institutions. That is why captains of ships are not willing to pay and are decreasing amount of ballast water by releasing to the sea.

It can be assumed that the public can not do much in solving environmental problems, which can be solved by technology. In contradiction, public participation in legislation system is considered as one of the major factors. However, it depends on many other factors, including media agenda as well.²⁰ For instance, Dunlap (1998) noted that an important question from a policy making perspective is the degree to which the public understands the causal factors of environmental problems. In this case, it can be drawn the conclusion that environmental problems related to the Baltic Sea came to be perceived as problems of policy, i.e., problems requiring corrective measures, and problem of technology, rather than problems of knowledge. On the other hand, according to agenda setting theory, policy agenda is influenced by public agenda and media agenda. All these three agendas are interrelated with each other. Information given by media agenda leads to knowledge and set public agenda, which will play important role in setting policy agenda and finding the technological or other solutions to the environmental problems. So, firstly, public has to be informed in aim to form environmental consciousness and increase environmental awareness that in turn will influence policy agenda. Consequently, as mass media, contributes as information source to a wider public, press as well as TV, radio, internet has to provide public with environmental information, in aim to make public aware, to encourage them for action and to behave in pro-environmental way.

Also a crucial problem is that newspapers do prefer not to deal with uncertainties, whereas in the vast majority of cases the causes of environmental problems are contested and some of the solutions are viewed as too expensive (Anderson, 1997). In Lithuanian case, according to the issue-attention cycle, country appears to be more likely in the stage of realising the cost of the problem solution.

6 Public Agenda

6.1 Design and Execution

In order to explore the relation and to found correlation between coverage of environmental issues in press and public agenda, it is crucial to investigate public opinion.

Questionnaire design. The questionnaire for the survey in Vilnius, Kaunas and Klaipeda contained 21 question. The questions were formulated taking into consideration theoretical background, results of quantitative and qualitative analysis. The questions were grouped to cover the following topics: respondent

²⁰ See section "Agenda Setting"

behaviour towards media; general environmental issue awareness; Baltic Sea environmental problem awareness; effects, responsibility, solutions; social/demographic characteristics (see Appendix).

Focus group. The students were chosen as a sample. According to Baltic Survey/ Gallup, taking into consideration one of demographic factors - age, people who are from 20 to 29 tend to read newspapers mostly (30%).²¹

Field work. Public opinion survey was conducted on October 20 –25 in three Universities of Lithuania, namely in Vilnius, Kaunas and Klaipeda Universities. The contact persons were invited to help in distributing questionnaires to students in Vilnius, Kaunas and Klaipeda Universities. The Vilnius University students filled in 52 questionnaires, but one of them was excluded from statistical analysis, as was not properly filled in. For some reason, questionnaires from Klaipeda University have not received yet. Later questionnaires was sent by e-mail, but just 4 filled questionnaires has been received, which does not allow us to draw any conclusion, regarding students opinion of Klaipeda University. Students of Kaunas University were chosen as an additional sample. The students of Kaunas University filled in 30 questionnaires. It is worth to mention that, because students in Kaunas University are studying environmental sciences, they can be characterised by having a personal interest in environmental issues. This is an important fact because it might influence the content level of the answers of the students. However, results show (results are presented above) that there is no significant difference between Kaunas and Vilnius, bearing in mind public awareness of environmental problems. Therefore, it can be made assumption that Vilnius and Kaunas are representative for Klaipeda region, as students from Vilnius and Kaunas Universities are environmentally conscious in respect to environmental problems related to the Baltic Sea.

6.2 Data Analysis

6.2.1 Social and Demographic Characteristics

The comparison of social-demographic factors can provide some interesting insights about possible segmentation of target groups for environmental awareness campaign. Different groups may be defined for media targeting. However, the results of survey have shown that demographic characteristics are not essential indicator in order to investigate the differences among respondents regarding environmental awareness. As the respondents are in the 18 –28 age group. Most of them are 19 and 22 year old. Moreover as most of respondents are female- 77%, it is difficult to see any differences in interpreting results of survey. Taking in consideration, geographical factor, 32% of respondents are from Vilnius, 26% are from Kaunas and 42% from different regions of country. It could be said that students, who lives in Baltic Sea region tends to give more comprehensive answers to open questions. Most of students (65%) are studying library sciences. Presumably, they are not likely to get environmental information through their studies (education). However, students who are studying environmental sciences, they are likely to get environmental information through education, even if they consider it as least source of information for environmental issues. Moreover, they supposed to be more environmentally concerned.

6.2.2 Students media habits

One of the objectives in my survey is to define role of press in forming people environmental consciousness. The results of the analysis show that students tend to read newspapers “sometimes” or “often”. Moreover, it can be assumed that if people subscribe newspaper they are reading often. According to statistical analysis the most readable newspaper among students is “Lietuvos Rytas”, as 88 % tend to read sometimes and 12 % often (mean 1,8765).²² Comparing with data presented by SIC Gallup Media (Nordicom, 1997), “Lietuvos Rytas” has the highest number of readers (total audience is 47 % of population, that accounts 1.298,85

²¹ Baltijos Tyrimai/ Gallup, 2000, May, “Nacionalinis skaitytoju tyrimas”

²² scale is 1 –often, 2-sometimes, 3-never, as mean is 1,8627, then it tend to be most readable newspaper among respondents comparing with other means of newspapers

thousands of readers). The national daily “Respublika” is noted as less readable daily among respondents but still has quite high percentage of readers 71 % (sometimes) and 6 % (often). The regional newspapers, included “Vakaru Ekspresas” is not playing significant role, as among respondents regional dailies tend to be less readable than the national is. For instance, just 49 % of respondents noted that sometimes is reading “Vakaru Ekspresas”. However, according to the former results, coverage of environmental issues in general is more extensive in “Lietuvos Rytas” than in “Vakaru Ekspresas”.

The respondents mostly are interested in such headlines as “World events”-28%, “Urgent events” – 21 %, “News of country” – 16 %, “Crime” – 9%, “ Sport” – 8%, “Nature” – 7%, “Economy” – 7%, “Environmental protection” – 4%. Data shows that these headlines which supposed to be for environmental issues are considered as not interesting for reader. As it was mentioned before, editorship of daily are oriented on people interest. That can be explanation why “Lietuvos rytas” is not that interested in covering environmental issues. However, such headline as “Nature”, which contributes to “recreational environment” and it is considered as having an interest for public, tend to have less interest among students than other headlines. On the other hand, as it was mentioned in previous analysis, most environmental issues included those, which are related to the Baltic Sea, tend to be placed under such headlines as “Urgent events” or “News of countries”. One can draw the conclusion that students are getting information, regarding environmental problems, even if they are not interested in special headlines for environmental issues, by reading news, as environmental news are placed under other headlines. Moreover, personal interest and climate of opinion can be considered as influential factors in forming students’ environmental consciousness.

The answers to the question, if respondents have noticed any articles regarding Baltic Sea environmental issues during six months, depends on such characteristics as attentiveness, visual memory, personality, distraction. 64% of respondents do not remember any articles related to the Baltic Sea environmental state. On the other hand 29% of respondents noticed some of articles mainly regarding such type of problem as oil spills (safety issues, coast contamination) and short reports of offences against nature.

6.2.3 How the students are informed

In analysing environmental consciousness of people, it is interesting to investigate the sources, which play a key role for students as a source of information about environmental problems in general and Baltic Sea environmental state in particular.

TV and radio are considered as primary sources of information, as 38% of students marked it as a main source. If we are taking newspapers as separate variable, then newspapers have lower percentage (34%), as a source than TV and radio (Figure 7). On the other hand, data shows that newspapers, TV, radio together are considered as main sources of information for 46% of students. Therefore, the results supports the statement that media channels are more successful in providing information about environmental issues than friends, environmental agencies and education. 10% of students are getting additional information from friends.

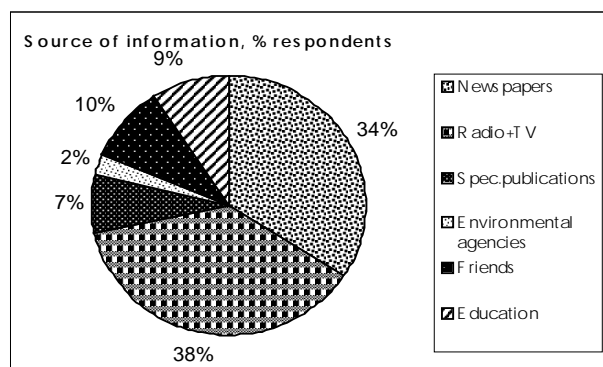


Figure 7. Source of information regarding environmental problems

Fact confirms that interpersonal communication is important factor in agenda setting process, as sometimes it can override the mass media agenda. However, in this case, interpersonal communication does not seem to play a significant role.

Special publications of environmental agencies and magazines are considered as weak source of information. It is worth to mention that 8 students pointed out education as a source of information. This result is not significant in the context of other results, as it comes to inconsiderable percent (9%), but it shows that education play role as a source at least for some of respondents. Presumably, as target group is students, in one or another way they supposed to get environmental information through education. However, it shows that environmental education is left in periphery in context of other subjects in Vilnius University. Nevertheless, it is known that environmental education is one of the crucial tools in encouraging and creating public environmental concern. Education must equip people to think in systems and patterns and to comprehend how cause and effect work in complex system (Huckle, 1997). On the other hand, promulgation of environmental education idea must come through media.

Therefore the analyses of media habits allow us to consider the mass media as the main channel for environmental campaign.

6.2.4 Environmental awareness

In editing the statistical data, the scale of answers to the question of what is the most important environmental problem facing the Lithuania today, was divided into two parts: positive (important) and negative (non-important). However, most of respondents have answered positively with respect to every environmental problem.

According to the results of survey (Figure 8) in Vilnius and Kaunas Universities, Ignalina Nuclear Power station, air pollution, water pollution, waste, drink water pollution and pollution of Baltic Sea are considered as most important environmental problems in the country.

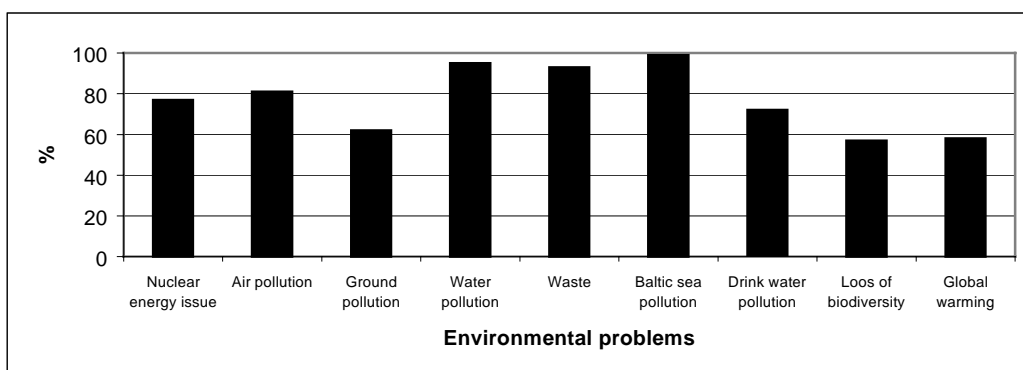


Figure 8. Importance of environmental problems The question is what is most important environmental problem facing the Lithuania today? (The respondents were asked to mark the importance of each environmental problem).

Furthermore, ground pollution, loss of biodiversity and global warming is considered as important environmental problems as well. The figure shows that the highest number of student, respectively 99% and 95% consider the Baltic Sea and water pollution as important environmental problems. Waste issue can be placed at third place (93%).

It is worth to note that global warming is among the serious environmental problems, even as from the graph we can see, is placed at the bottom of serious environmental problems. 58% of respondents marked global warming as important. On the contrary, according to results of previous public opinion survey, conducted in

Kaunas (1998), global warming was considered as the least serious environmental problem. Therefore, it is a significant change regarding people environmental awareness. On the other hand, it can be seen as a distinct contradiction, as press as well as TV, radio is the main channel for environmental campaign and the global problems are absent from press. There are reasons to believe that they are likely to get information from other channels of mass media. Moreover, data show that the main sources of information on the environmental issues are the main mass media, including television, newspapers and radio. Therefore, TV and radio it might be considered as potential sources of information concerning global environmental issues. However, it is hard to say, but according to the low diversity of telecasts on TV (except cable TV) and broadcast on radio, it would be erroneous to make any conclusions. Furthermore, another argument can be that it is matter of social group, as in this case target group is student, who can be considered as knowledgeable and most active group of the society.²³ Therefore, as the global environmental problems are absent from both newspapers, it is possible to make an assumption that press play limited role in creating public concern about environmental issues during study period.

6.2.5 Consciousness of Baltic Sea environmental state

Statistical data shows that Baltic Sea pollution is considered as very important environmental problem in Lithuania. When asked “Which kind of environmental problems do you know related to the Baltic Sea”, the respondents pointed out the following: oil spills, including Butinge oil terminal as actor of environmental insecurity, wastewater issue, transporting and loading of chemicals, overexploitation of sea in terms of over fishing and transitional shipping. Furthermore, students were asked to mark the importance of every environmental problem related to the Baltic Sea. Figure below shows that almost all respondents (99%) pointed out oil spills as important environmental problem of Baltic Sea.

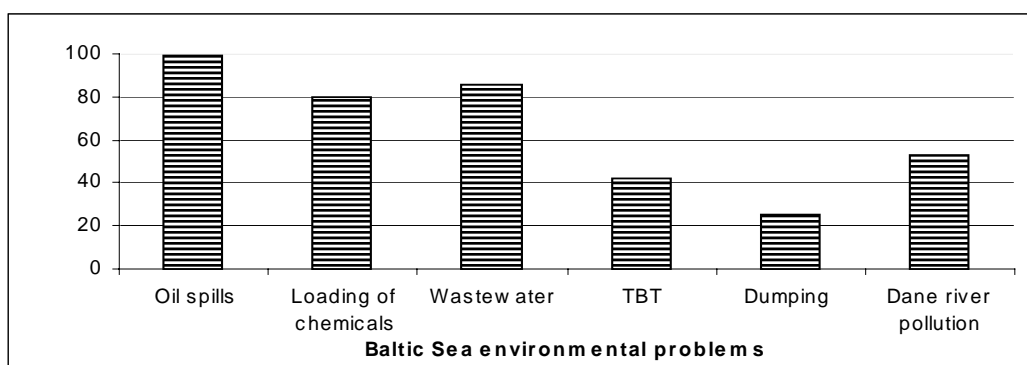


Figure 9. Importance of Baltic Sea environmental problems

Baltic Sea diseases

According to results of survey, oil spills and wastewater issues are considered as very important environmental problems in the context of other Baltic Sea problems. Loading of chemical substances and Dane River pollution is less important problems. Such issues as TBT and dumping to the sea seem to be least serious problems. As 42% of respondents consider TBT as important issue, and 34% of respondents have no opinion about TBT. Just 25% of students consider dumping issue as important (Figure 9), and 63% of them have no opinion. Facts show that people are not familiar with such issues as TBT and dumping. There are reasons to believe that unawareness can be explained by insufficient coverage on media agenda, as TBT and dumping issues are somewhat mentioned in dailies, even dumping issue is absent in national daily. Moreover, one argument might be that people lack background information about such type of problems, as though they are sometimes mentioned on media agenda, they are not observable and it is difficult to

²³ In public opinion survey conducted in Kaunas (1998), sample includes Kaunas residents over 18 years old.

experience them. Analysis above shows that the less experience public has with a given issue, the more dependent the issue is on media agenda. Presumably, these types of issues are supposed to be dependent on mass media, as they are invisible. According to the expert agenda, TBT is one of urgent, alarming and serious problems nowadays. One of reasons for insufficient reporting on media and conformably for unawareness of respondents can be that it is a quite new issue and scientific research is needed to prove it as a crucial issue not only among experts but also for media and public agenda.

According to analysis of coverage in press, dumping issue that is dependent on media seems to be not the issue of interest in press. The fact that most of students have no opinion about dumping to the sea confirms the previous argument regarding lack of information in dailies possibly due the lack of interest in press. Other explanations can be that dumping issue (4a) lacks scientific evidence and is considered as uncertain and not that important for public by media practitioners. Nevertheless, I believe that experts play passive role in providing background information. In addition, there are no visible consequences and influence upon people due this problem and it is known that media tend to react to consequences, which can be harmful for the environment.

Respondents consider oil spills as a very important environmental problem. People are aware of the problem, even some of them have experienced it by finding oil products at the beach. Theoretically, this type of issue are not dependent on mass media, but results of our survey show that oil spills tend to be covered mostly in press. It can be drawn the conclusion that press play a significant role in informing people about oil spills. Moreover, we should bear in mind that such factors as personal experience, climate of opinion influence people environmental receptivity that leads to environmental consciousness. However, bearing in mind the representation aspects of oil spill and other issues in press, they are represented as a short report and environmental risk does not play any significant role in articles. Such issues as wastewater is on the top of students' agenda, even if there are just few articles in press. Presumably, there can be two reasons, either students have knowledge from media previously, or they can see association between water usage and releases of wastewater. Although, the facts of this survey and previous survey, which was conducted in Vilnius, show that people tend to think that they do not play any role in polluting water, in terms of releasing wastewater (PHARE, Vilnius University, 1997).

Experts claim that eutrophication is a crucial problem for Baltic Sea. Absence of this issue in press confirms the fact that there is the gap between expert and media agenda. According to public opinion survey, just some of students, mainly who are studying environmental sciences, mention eutrophication as a Baltic Sea problem.

Causes and effects

To evaluate public opinion regarding the importance of potential sources that contribute to the Baltic Sea pollution, the respondents were asked to mark the importance of each source. Students were asked to mark on a scale ranging from positive (important) to negative (unimportant) in five steps ("not important", "not very important", "no opinion", "very important", "important". The neutral part of scale such as "no opinion" was excluded in analysing data, as irrelevant (as it does contribute neither to positive nor negative answers).

From the figure (figure 10) below we can see that most (86%) of students tend to consider household wastewater as an important source of pollution. Oil terminals can be placed at second place according to the importance, as 75% of students marked as important source of pollution. 65% students consider Nemunas river basin as important source.

There are reasons to believe that students can have personal experience from using water; they can associate water use with wastewater releases to different bodies of water. Moreover, wastewater issue has been popular in mass media, since the projects, regarding building proper wastewater treatment plant was started to carry out. Therefore, students might be familiar with wastewater issue and can consider it as a most potential source of pollution, due to the information, which they got previously through mass media or other sources.

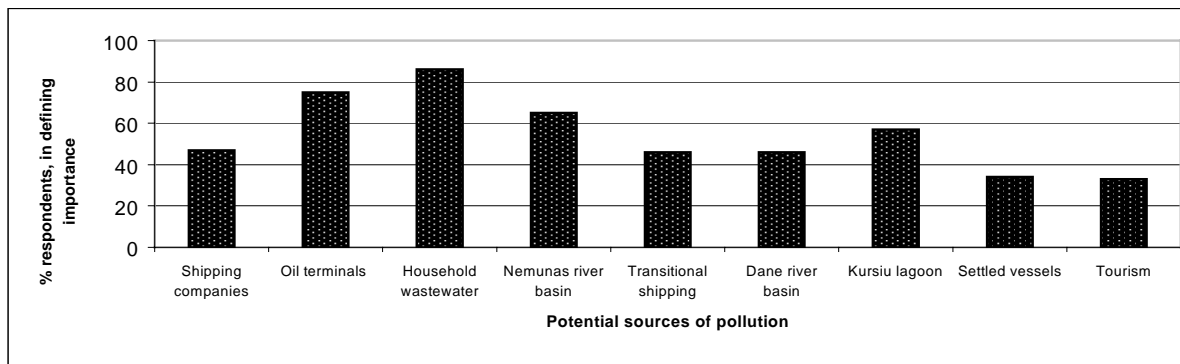


Figure 10. Importance of sources that contribute to the Baltic Sea pollution

Oil terminals are blamed as important source of pollution. It is correlated with frequently happened oil spills. Moreover, almost all respondents (99%) pointed out oil spills as important environmental problem of Baltic Sea. Main blame is on Butinge oil terminal as most potential source of pollution. There are reasons to believe that previous debates among NGO, governmental organisations and other stakeholders have impact on students' opinion formation. On the other hand, according to the qualitative results of coverage, Butinge oil terminal presented as safe. However, one of the arguments might be that such kind of presentations tends to be less influential on public opinion formation, especially after long debates, where Butinge was considered as a threat to Baltic Sea ecosystem.

Nemunas River is one the most important source of pollution, as it “collect pollutants” from three countries and brings them to the Baltic Sea. Therefore, 65% of respondents consider Nemunas river basin as serious “burden” on marine environment.

Most of respondents noticed that it becomes unsafe to swim, to eat fish, even to walk at the seashore of Baltic Sea. The extinction of species, possible infections to humans, destruction of recreational environment are considered as possible effects due to the pollution of Baltic Sea. The answers to the question on, in which way it can affect human, support the argument that the students have strong visions of possible effects on human health. However, the articles presented in national and regional daily lack of information regarding environmental risk, possible effects on human and biota. So, how people are aware of possible effects? One of explanations can be that despite information given by media, they can have personal experience. Next, it is easy to imagine; for instance after oil spill person can imagine picture that Baltic Sea water is unfit for swimming or fish is unfit for eating. For instance, some of students noticed that it becomes usual to find pieces of oil products at the seashore of Baltic Sea; it gives cause for reflection on possible effects due to swimming or eating. 40% of students marked that it is likely to be affected by swimming and 39% - by eating fish, which are from Baltic Sea. Most of respondents (49%) noticed that it is possible to be affected in both ways.

Responsibility and solutions

The awareness of Baltic Sea state importance and environmental problems is not an essential prerequisite for students' behaviour. High rate of awareness (or knowledge) is not supported fully by the knowledge of cause and effects relationships, end-means chains. It can not be made any evident conclusions, concerning environmental awareness and behaviour, as the question “Do you pollute Baltic Sea water?” is answered “no” and “no opinion” by 72% of respondents in both Universities. 28% of students think that pollutes water, mainly due releases of wastewater. There is reason to believe that students of Kaunas University see their own role more clearly, as 57% of them (total 30) marked that they pollute the Baltic Sea water.

One argument might be that it is difficult to see your own role; it depends how individuals see their relation with environment. Moreover, in analysing role of individual we have to consider which environmental worldviews,²⁴ which result from the interaction of values, attitudes, affects, beliefs and knowledge, individual have.

It can be made that among respondents a human centred view is dominant and they are not feeling as individually responsible. However, when people were asked to mark the actors who are responsible for environmental problems related to Baltic Sea, 22% of respondents noted Lithuanian Environmental Ministry and public as responsible. Most of students (79%) noted Lithuanian Environmental Protection Ministry as responsible for solution of environmental problems. 58% of respondents pointed out public as a responsible actor. There is reason to believe that human is considered as responsible on a macro level and irresponsible on an individual level. On the other hand individuals are those who form society. Therefore, if individually ones do not care about environment, how can the society be environmentally concerned and behave in pro-environmental way?

12 % of respondents noted that all actors, listed in questionnaire are responsible for environmental state of Baltic Sea, such as Lithuanian Environmental Ministry, environmental divisions of organisations, agencies, chiefs of companies, captains of ships, NGO and society. Young people are powerful group of society; they supposed to be aware and active in decision making process, in sending “message” to institutions in aim to achieve lower environmental impact, which led to environmental sustainability.²⁵

According to the results of content analysis of articles, the issue of responsibility is weak, as most of articles do not contain the list of responsible actors. Environmental Agencies, Marine Research Centre, chiefs of shipping companies, captains of ships are pointed as responsible. However, according to media, it seems that environmental problems are in responsibility neither at individual nor at societal level.

As it was mentioned before, every problem has solutions. Results from the survey shows that 84% of respondents think that information, technology and legislation must solve environmental problems related to the Baltic Sea. Information does not play any significant role without technology and legislation. Although, information, which leads to knowledge, can be considered as incentive and influential factor for action: for implementing appropriate laws and new technologies. Lets us not forget that there are limiting factors, such as welfare, cultural and political factors.

²⁴ Environmental worldviews can differ from atomistic or individual centred to a holistic or ecocentric (Miller, 1997)

²⁵ According to World Commission, sustainability is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. And media should be aware of their crucial role in truthfully and comprehensively informing and educating the general public on all issues, and in turn promote sustainable development (Bossel, 1998; World Commission on Environment and Development, 1989).

7 Discussion

The main purpose of the study is to investigate the role of the press in forming people environmental consciousness. In aim to achieve the main goal, hypotheses were stated. Following the analysis of the results, I will discuss and draw conclusions with respect to every hypothesis.

The results of survey show that on experts agenda on environmental problems related to the Baltic Sea is of a wider range than on media agenda. There is gap between experts and media agenda. So, the hypothesis that the media agenda correspond with experts' agenda has not proved correct. The reason is that media tends to focus on news about events and reaction to events in terms of simplified explanations and reassurance, while experts tend to focus on results of scientific research, and they are likely to vary among different experts. Therefore, the national and regional dailies do not sufficiently reveal the real state of the Baltic Sea. However, the most extensive coverage of the Baltic Sea environmental issue unveil that the Baltic Sea environmental problems are crucial in regional as well as in national context.

Consequently, one of the main hypotheses of my study, that press form people environmental consciousness, has been proved. Despite the gap between experts and media agenda, students have knowledge, concerning the environmental problems, including those related to the Baltic Sea. Even though the coverage of environmental issues in press is not sufficiently reveal the real state of environment, regarding quantitative and qualitative (representation) aspects. Although, presumably TV and radio play role in students' environmental consciousness, as TV and radio are the main sources of information as well. Moreover, one of the assumptions can be that students are affected previously by "alarmed discovery stage" or boom of "environmentalism", as coverage was more extensive during this period (see "issue-attention" cycle). However, the main consequence (statement) is that press in the context of mass media play crucial role in providing students with environmental information and in forming environmental consciousness. Talking about the role of the mass media in the environmental concern, public trust in the mass media is one of the major indicators of the process. It is possible to make an assumption that the mass media has more influence on the environmental concern than other institutions in Lithuania.

The coverage in press seems to be corresponding with environmental awareness. However, we have to bear in mind other mass media such as TV and radio, as we could not say about their role in forming students' consciousness. But it can be presumed, according to mass media usage, that there is correlation between all mass media and students environmental awareness.

Personally speaking I was impressed by students' high level of awareness, regarding environmental problems. Therefore, students can be considered as environmental conscious group of the society. Looking forward, it sounds promising with respect to environment. Increases in public awareness can lead to environmental concern that can lead to environmental concerned behaviour at individual level and to public participation in decision making process or to changes in policy agenda at societal level. Presumably, the more informed the public is about environmental problems the more likely it will support politicians and policies committed to environmental protection. That can lead to environmental sustainability.

Despite the students' confirmation on mass media as a main source of environmental information, I have noticed some drawbacks on environmental coverage in press, mainly taking into consideration quantitative and qualitative aspects. First of all, there is no special headline as such for environmental issues, as they usually tend to be placed under different headlines and seems to be accounted not as environmental problems. It is important fact, because it might influence perception of public. However, bearing in mind psychological aspects, environmental aspects integrated in other subject areas, can be influential for people in general, if they have no personal interest.

Secondly, the background information on possible consequences, effects are missing. There are just few words within environmental risk perception when environmental issues are portrayed. For people who do not have environmental basis, it can be difficult to understand what everything in nature has connections and

harm to environment can have bad consequences to human. As Smith stated (2000) that “the environment, conservation, sustainability and pollution are not on the top on media and respectively on many peoples immediate agenda, but it tend to “sleep” perhaps, until something awakens it, and then it becomes a “monster wrecking anything in its path”.

Suggestions and implications

In aim to make press “greener” that will lead to increases in public environmental awareness, the following proposals for implications and suggestions can be stated. First of all, reporting of cross-sectoral issues can be one of ways for “greening the press”. When I looked through all the pages in the national newspaper, I felt those environmental aspects of economy, of housing and transport and other areas, which are discussed in special supplements such as “East- West”, “Dwellings”, “Highway” respectively are missing. The first idea I came up with, was that it would be interesting to find and to read articles about energy savings in supplement “Dwelling”, about sustainable transport means such as bicycles or environmental impacts of transports in supplement “Highway”. However, cross-sectoral issues are difficult for news organisations that are structured into separate specialities reporting on different areas of interest. Stories, which concern more than one area of interest, have often fallen between the gaps in journalistic speciality. Although, promotion of environmental education for mass media practitioners can be one of the solutions for first suggestion as well as proposal for “greening the press”. In this case environmental educational means should be applied in order to raise editors, producers and reporters environmental awareness.

Increases in media practitioners environmental awareness can change the frameworks that are used for the representation of the environment. However, such factors as political, economical have significant impact on organisational aspects of news production process. In my study case “environment” is accounted as place for recreation. It is important fact, because frameworks, determined by media practitioners communicate itself for people that can lead to wrong understanding about nature as non-exhaustable (renewable) and eternal resource. Presumably, there are reasons to believe that editorship of newspapers has different understanding of “environment”. According to organisational factors of dailies and results of content analysis, can be drawn conclusion that in national newspaper the term “environment” has two meanings as accidents and urgent events or as “recreational nature”. With respect to mass media, it is obviously important to understand the frameworks that are used for the representation of the environment and how those frameworks come to be dominant. Therefore, reporters are “gatekeepers” in framing the news and sending “environmental” message.

According to mental model presented in theory, presumably, if people will be more aware, they will be even more concerned on environmental issues that will increase the audience for environmental publications. It is a cyclical and positive process. Therefore, as media interest is in proportion to public interest, it has to be one actor, which is more environmentally concerned and possibly more active. In study case, students are aware of environmental problems, so they are supposed to be concerned for further readings of more environmental publications that would in turn lead to more extensive coverage. However, in order to investigate this, further research is needed. Furthermore, after my study I found that it is important to investigate the relation between public and policy agenda. For instance, bearing in mind TBT issue, appropriate measures have to be taken on policy agenda, as in most of countries TBT is banned. However, in aim to increase efficiency of implementation of proper measures, public support is needed. Therefore, increasing public awareness through media can lead to changes in policy agenda.

Moreover, I found that in aim to investigate the role of mass media in forming people environmental consciousness, further studies are needed, regarding TV and radio. Although the result was impressive and satisfactory, it is important to make more extensive research, by using more relevant and detailed questions, in order to prove behaviour and different phenomena.

8 *Concluding Remarks*

- First of all, as there is a gap between experts and media agenda, it can be stated that national “Lietuvos Rytas” and regional “Vakaru Ekspresas” dailies does not sufficiently reveal the real state of the Baltic Sea. Nevertheless, the extensive coverage of the Baltic Sea environmental issue unveil that the Baltic Sea environmental problems are crucial in regional as well as in national context.
- Secondly, press tends to fail in providing people with information about environmental issues, which are difficult to experience, namely unobservable, such as dumping, wastewater issues. However, press plays a significant role in informing people about environmental problems, which are not dependent on media, such as oil spills.
- Thirdly, results show that press does not contribute to public global environmental concern during study period.
- Fourthly, the analyses of media habits allow us to consider the mass media as the main channel for environmental campaign. Furthermore, the results support the statement that media channels are more successful in providing information about environmental issues than friends, environmental agencies and education.
- Furthermore, the coverage in press seems to be corresponding with environmental awareness. The main consequence is that press in the context of mass media plays crucial role in providing students with environmental information and in forming students environmental consciousness. Therefore, students can be considered as environmental conscious group of the society.

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Appendixes

1. Evaluation of environmental issues within field of Baltic Sea in national and regional newspapers according such criteria (theme questions):

1. Title of article
2. Length of article
3. Location of article in newspaper (In which rubric (heading) article is situated?)
4. Which sources are playing major role in publication?
5. What is type of item? Does fact, opinion, or propaganda cover the information?
6. Is the language free of emotion-rousing words and bias?
7. What is the problem?
8. Who is responsible for the problem?
9. What solutions are presented to the problem?
10. Who is responsible for the solutions?
11. What is the role of reader?
12. What is the role of the expert?
13. What is the role of the author?
14. How environmental issue is represented? Is it represented as political, economical, sociological or ecological subject area? Is it framed as economical-political or sociological issues?

Examples of qualitative content analysis

March 20, reporter Dalia Bikauskaite

Location: headline "Urgent Problem", "Monday Subject", 1, 3 p.

Title: "Poilsiautojams pajuryje – mazuto vonios?" ("Oil bath at the Baltic Sea are waiting holidaymakers")

Length: 142,1 cm.

Language: free of emotion rousing words, based on facts

Source: Chief of Sea EPA, Captain of co-ordination centre, Chief of Civil Security Department, Inspector of Environmental Agency, leaders of companies

Type of item: Article about pollution of Sea. Based on interviews with specialists, who are responsible for the control of oil spills. Annual facts are presented as well. Discussion and presentation of different opinions of specialists about oil spills, regarding such fields as inspection, collection, analysis.

Problem: This year was collected two tonnes of oil products just from the beaches. It sounds like signal for people, what it will not be surprising if people will found some pieces of oil products. From where oil products get into beach? Who is controlling current situation? What are the sources of pollution? Who is responsible for such accidents? Who is taking care of collecting oil products? There are the main questions of this article.

It has to be thought that pollutants get into water mainly with realised ballast water from the vessels. Since the collection of ballast water is quite expensive procedure, captains of vessels are not afraid to release ballast water to the Sea. They know that polluters can be hardly found. That means that control and inspection system is undeveloped or is working not properly. Just this fact that last year was received 54 reports in case of pollution. However, just in 15 of all cases polluters were ascertained. Why it happens like this? What are the main reasons? Why not all the vessels are under control? Vessels are being checked by chance. According to Chief of Sea environmental agency there is no point to check all the ships and it will be impossible. According to Musulas who is responsible for collection of pollutants, "sometimes it is impossible to collect them, as we have not enough ships for that and equipment are old and are working not always properly".

Other constrain of this problem is money. He explained that to get people for the collecting the pollutants without payment is not that easy. People wish to be paid for their performed work.

In case of accident usually are responsible three institutions: Sea EPA, Department of Civil Security, Centre of Co-ordination. To investigate the origin of pollutants the samples are usually transported to Vilnius.

Other constrain is absence of techniques and equipment which are needed in case of accident.

Responsibility: In case of accident usually are responsible three institutions: Sea EPA, Department of Civil Security, Centre of Co-ordination.

Role of reader: This article is quite broad explanation about how things work in case of oil spill. These article gives understanding for the reader from where the pollutants are appearing at the coast on Sea. In addition, it is mentioned that in case of pollution public participation is important as well. Even if they will not be paid, they have to take care of environment.

Role of experts: There are presented different opinions of experts taking in consideration every step, performed in case of oil spill accident

Representation: mainly is represented as environmental issue; there is no mentioned environmental risk as such; technical and economical sides are mentioned as well.

2. Questionnaire

A) Communication: respondent behaviour towards media

1. What newspapers and how often do you read?

Newspaper	Subscribe	Sometimes	Never
1. Lietuvos rytas	1	2	3
2. Respublika	1	2	3
3. Lietuvos ziniuos	1	2	3
4. Regional (Vakaru ekspresas; Kauno Diena and etc.,)	1	2	3
5. Other	1	2	3

2. In which headline do you interested mostly?

1. Economy
2. Sport news
3. World events
4. Urgent events
5. Crimes
6. News of country
7. Environmental protection
8. Nature

3. Have you noticed any environmental articles within the area of Baltic Sea during the last six months?

1. Yes 2. No 3. Don't remember

4. If yes, then what about articles (or which type of article it was) were? If there are more than one article, which you have noticed, then mark several types.

1. urgent report of oil spill
2. safety issues presented by companies
 - a) regarding oil spill
 - b) regarding loading of chemical substances
3. coast contamination with oil products
4. loss of biodiversity
 - a) with explicit effect on biota (dead ducks at the seashore of Baltic Sea)
 - b) short reports of offences against nature
5. TBT (detection of TBT at the ground of Kursiu lagoon and Baltic Sea)
6. Dane river pollution
 - a) Due releases of wastewater
 - b) Due situated landfill near the river

B) Specific Part

5. What is most important environmental problem facing the Lithuania today? Mark the importance of each environmental problem.

Environmental problems	Not very important	Not important	No opinion	Very important	Important
1.Nuclear energy issue (Ignalina Nuclear Power Station)	1	2	3	4	5
2 Air pollution	1	2	3	4	5
3 Ground pollution	1	2	3	4	5
4 Water pollution	1	2	3	4	5
5 Waste treatment	1	2	3	4	5
6 Baltic sea pollution	1	2	3	4	5
7 Drink water pollution	1	2	3	4	5
8 Loss of biodiversity	1	2	3	4	5
9 Global warming	1	2	3	4	5
	1	2	3	4	5

6. Which kind of environmental problems do you know related with Baltic Sea?

7. How do you get information about environmental problems related with Baltic Sea?

1. newspapers
2. radio, TV
3. special publications from specialists
4. special magazines
5. friends
6. no information
7. other....

8. What is the most important problem related with Baltic Sea? Mark the importance of each environmental problem.

Environmental problems related with Baltic Sea	Not very important	Not important	No opinion	Very important	Important
Oil spill	1	2	3	4	5
Loading of chemical substances	1	2	3	4	5
Wastewater issue	1	2	3	4	5
TBT*	1	2	3	4	5
Dumping to the Sea	1	2	3	4	5
Dane river pollution	1	2	3	4	5

*TBT is toxic chemical compound, used for painting the decks of ships

9. How do you get information about environmental state of Baltic Sea in general?

1. newspapers
2. radio, TV
3. special publications from responsible institutions
4. special magazines
5. no information
6. other....

10. Which sources have the greatest treat in terms of pollution in your opinion? Mark the seriousness of each source.

Source	Not very great	Not great	No opinion	Very great	Great
Klaipeda port	1	2	3	4	5

shipping companies					
Butinge oil terminal	1	2	3	4	5
Household waste	1	2	3	4	5
Transitional shipping	1	2	3	4	5
Nemunas river basin	1	2	3	4	5
Settled international vessels	1	2	3	4	5
Kursiu lagoon	1	2	3	4	5
Dane river basin	1	2	3	4	5

11. What can be possible effects on biota or on humans, due problems related with Baltic Sea?
12. How it can affect you or your health in your opinion (in which ways)?
 1. Swimming
 2. Eating fish
 3. Fishing
 4. Walking
 5. Other
13. What are solutions to the environmental problems related with Baltic Sea?
 1. Technology
 2. Legislation
 3. Information
 4. Other
14. Who is responsible for the environmental problems related with Baltic Sea? You can mark more than one.
 1. Lithuanian Environmental Ministry
 2. Environmental Agencies
 3. Environmental divisions of enterprises
 4. NGO
 5. Captain of ships
 6. Chiefs of shipping companies
 7. public
 8. other
15. Do you pollute Sea in terms of using water in your opinion?
 1. Yes, because.....
 2. No, because.....
 3. No opinion
16. Have you noticed some changes of Baltic Sea water for the last five years?

C) Personal part

17. What is your age?
18. What is your sex?
 1. female
 2. male
19. Which part of the country are you from?
20. What is your background?

