



Seagull

The Lyckeby River

**– an attitude investigation
about water issues, study I**

Marianne Lindström

Seagull Report 2-2003

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Earlier published Seagull Reports

1-2003 Democracy in Euroregion Baltic

Preface

The Euroregion Baltic (ERB) cooperation started in 1998. Since then the nine neighbouring partner-regions in Denmark, Latvia, Lithuania, Poland, Russia and Sweden have established close contacts on the political level. After considerable preparations during 2001 the ERB Board and Council decided that it was time to develop the ERB cooperation to be more active and concrete. A decision was made to apply for EU funding of a project with the aim to deepen and concretise the ERB cooperation. The central objective of the Seagull project, approved in May 2002 by the Decision Committee of the Baltic Sea Region Interreg IIIB programme, is to work out a joint strategy for the long-term development and a more concrete Joint Transnational Development Programme (JTDP) for the entire region. The JTDP is planned to contain the most important cornerstones that are considered necessary for sustainable development of the ERB. The JTDP, to be adopted by the ERB Board and Council and by all member-regions, will form the basis for pre-feasibility studies resulting in investment proposals of key interest for the region and its cooperating partners.

In addition to its main objectives, Seagull provides special in-depth initiatives in certain strategic areas. The needs of improved management with water resources and local and regional preparedness for participation in the implementation of the EU Water Framework Directive and the HELCOM Joint Comprehensive Action Programme are the reasons for choosing water management and water protection as such a strategic area.

The Seagull Water component uses analyses, preparatory measures and exchange of knowledge to prepare the local and regional levels for implementing the EU framework directive for water policy. One of the Water Framework Directive main objectives is getting the citizens involved more closely in water management issues. Within the work packages Seagull Water there is a special part aiming at trying, comparing and evaluating different methods for enhanced dialogue and awareness among the citizens and other local stakeholders. Practical measures will take place in one pilot river basin area in each of the ERB member countries except Denmark. In Sweden the Lyckeby River basin area has been chosen.

This study aims at analyzing what people living in the Lyckeby River basin area think; their attitudes towards water in general and towards the Lyckeby River in particular. The study describes the attitudes in the beginning of the Seagull project. It will be repeated in the end of the project. Prospective changes in attitudes and behavior during the project time will be analyzed.

Responsible for the study is Marianne Lindström, Department of Biology and Environmental Science at the University of Kalmar, Sweden; in co-operation with the Lyckeby River Water Management Association.

Kalmar in December 2003

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Acknowledgement by the researcher

Thanks to everybody who has replied to the inquiry and made this investigation possible. I am also grateful to associate professor Jan Herrmann at the University of Kalmar and to the contact persons in the municipalities involved for their valuable comments.

Summary

An investigation about attitudes towards water issues was performed within Seagull, a project partly financed by the Baltic Sea Region Interreg III B programme. Sweden is one of the participating countries together with five other countries around the Baltic Sea. Some of the objectives are an improved quality of water and an improved dialogue with the citizens. In Sweden the Lyckeby River was chosen as a case study. The investigation also analysed issues of behaviour and information. An inquiry was distributed to 300 people living within the drainage area of the Lyckeby River. 90 inquiries, replied to, returned from three counties. The result showed awareness and commitment among the people living around the Lyckeby River concerning both water problems in the world and, to a lower degree, local water issues. The mean value of the self-reported behaviour was even lower than that of the attitude issues in total. Many people used the Lyckeby River for recreation and relaxation, and most of the respondents reported that they had a sense of well-being when visiting it. This positive feeling may increase the prerequisites for implementing information and knowledge. Several respondents wanted more information, and they reported that they did not know if the quality of water of the Lyckeby River was good or bad. Increased knowledge and increased commitment may be possible if discussions are held in small groups on an idea which is of the participants' joint interest. Some people were also prepared to take part in a project. The suggestions and ideas given by the interviewees in this study could give some new ideas to projects to be performed within the ongoing Seagull project.

Background

Global and local water issues

During the year 2003 water issues are prioritized as very important by the United Nations, and the European Water Initiative sets up goals in the same direction. At the first UN Conference on Environment and Development in Rio in 1992 and the World Summit on Sustainable Development in Johannesburg in 2002 many important documents were signed by politicians from all over the world who agreed to work towards sustainable development together (UNCED, 1992; WSSD, 2002). In Johannesburg water issues were a special objective. By 2015 the proportion of the world's population who live on less than \$1 a day and the number of people living without safe drinking-water or basic sanitation should be halved (WSSD, 2002). National goals of environmental quality, of which several concern water, were agreed upon by the Swedish Government in 1999 (Ministry of Environment, 1999). Many projects on the local level have begun with the aim of increasing the awareness of water issues. People's experiences of water on the local level are analysed in this investigation as well as attitudes towards water in general and towards the water of the Lyckeby River. Experiences of the Lyckeby River and the area around, knowledge, self-reported behaviour (i.e. reported as performed) and information/education are also investigated in this study.

The Interreg IIIB-project Seagull is a project within the Euroregion Baltic (ERB), and the ambition is to work out a long-term strategy and a common developmental plan for the region. Regions in Sweden, Denmark, Poland, Russia, Lithuania and Latvia are involved in the project. It aims at contributing to social, economic and environmentally sustainable development throughout the south-eastern Baltic Sea Region. The period of the project is 2002 to 2005, and during these years several activities are planned. Each of the participating countries will choose one water catchment area and within it spread information, carry through education and support local projects with the aim of increasing the awareness and knowledge of water issues in dialogue with the inhabitants. In Sweden the area of the Lyckeby River was chosen for the Swedish investigation (Seagull website, www.eurobalt.org). The Lyckeby River is situated in the south-east of Sweden with a drainage area in three counties: Kronoberg, Kalmar and Blekinge. Information and education has already begun and information is available on Internet. Education about water in general is planned to be given at schools (Lyckeby River Water Management Association website, www.lyckebyan.org).

Attitudes towards water – previous research

Attitudes towards sustainable development have been analysed in an interview investigation among the public, municipal employees and politicians in four Swedish municipalities (Kalmar, Nybro, Västervik and Mörbylånga). Issues of fresh water, of coasts and seas were included in this investigation. To protect and economize fresh water was considered as very important by all of the groups. Among 20 statements about sustainable development the respondents ranked this issue No 1 as important to the world, No 2 as important to the municipality and No 3 as important to the family. The people interviewed also experienced that individuals, as well as local politicians, governments and global organisations, all were responsible for protecting fresh water (Lindström, 2003). People living in the coastal area of a Baltic Sea fjord, called Gamlebyviken in the municipality of Västervik, were interviewed about their experiences of the quality of water of the fjord. The respondents knew few facts about this, but nevertheless they thought that the protection of the quality of its water was very important (Adolfsson Jörby, 2002). In order to increase the commitment and the interest among people, an informational work started, especially for people living around the fjord (Adolfsson Jörby, 2000; Adolfsson Jörby, 2002; Fröberg och Lindberg, 2002; Lindström och Adolfsson Jörby, 2000).

Global issues may sometimes be perceived as abstract and might therefore be considered as more important than issues on the local level (Lindström, 2003; Uzzell, 2000). People might feel unsure and worried when being introduced to global environmental problems. Therefore it is important to make these global matters as concrete as possible on the local level, so people feel that the difficulties are manageable (Lindström, 2003). Information and education may change their attitudes, but there is no guarantee for a change of their behaviour. On a short-term level education can help people to overcome some obstacles. According to Ajzen (1988) and Eagly and Chaiken (1993) it is not enough to inform and educate people in order to change their behaviour, as social and personal norms as well as values are also influential. Educational programmes, where people feel they are involved or where they work in small groups in a joint interest, are more effective in order to change behaviour, according to Gardner and Stern, (1996).

Feelings towards Nature

People sometimes search for places to relax and to get away from attention, from work, from phone calls and from other sounds. An experience of calm and comfort might be found in Nature. Many people are fascinated

how beautiful it is and this might add to the feelings of well-being. Experiences of being "one with nature" may give positive feelings and create inspiration and energy (Kaplan and Kaplan, 1989).

Aim

This study (study I) aims at analysing people's attitudes towards water in general and towards the Lyckeby River in particular. Experiences of the Lyckeby River and the area around it, knowledge as well as self-reported behaviour are analysed. Issues of information, education and the way people would like to be informed about the Lyckeby River are also investigated in this study. Informative and educational efforts will be made and projects on the Lyckeby River will be performed during the period in question. Prospective changes in attitudes and behaviour will be analysed at the end of the project.

Method

Area of the investigation

People living in the drainage area of the Lyckeby River were chosen as a suitable group for the investigation. A map showing this area was used as basic material. Computer lists of people living within the area were not accessible at the municipalities involved. In order to find people's addresses the latest telephone directories of Karlskrona, Emmaboda and Lessebo/Hovmantorp were used. Every tenth person was selected, and the names of those living within the drainage area were noted. The same number of men and women were chosen for the investigation. This study will be followed up by a new study at the end of the project.

Material

An inquiry in order to investigate the public's attitudes towards water in general and towards the Lyckeby River in particular was made. It included 21 statements about water in general (question 1), 20 statements about the Lyckeby River (question 2), 15 statements about self-reported behaviour (question 3), 13 questions about information and participation as well as issues about gender, age, education, domicile etc. The reply alternatives of questions 1-3 ranged from 1="do not agree at all" to 4="totally agree". A letter, which guaranteed the anonymity of the respondents, and a map of the drainage area were sent with the inquiry.

Procedure

300 inquiries were distributed in June 2003 to people living within the drainage area of the Lyckeby River (150, 90 and 60 in the counties of Kalmar, Blekinge and Kronoberg respectively). An addressed and stamped envelope was enclosed. 15 questionnaires were returned because the addressees were unknown or dead (3, 6 and 6 in the counties of Kalmar, Blekinge and Kronoberg respectively). 285 inquiries remained after the external drop-out. A reminder was sent out in August 2003 to people living in the county of Kalmar, which had the lowest reply frequency. This time four questionnaires, replied to, were returned; three other came back with the message that 2 people were dead and 1 lived too far from the Lyckeby River. The reply frequency in total was based on 282 questionnaires (144, 84 and 54 in the counties of Kalmar, Blekinge and Kronoberg respectively). In September 2003, 90 questionnaires, replied to, were returned from 46 men and 41 women (3 missing), aged between 24 and 88 years. The total reply frequency was 32 % (90/282).

Table 1.
The investigated group. County, gender, age, education and reply frequency are shown.

Country	Returned quest.	Reply frequently	Gender*		Age, m	Education*		
			Women	Men		Years at school	<9	<12
Kalmar	39	27 %	16	22	52	13	15	11
Blekinge	36	43 %	21	14	52	10	10	12
Kronoberg	15	30 %	4	10	57	5	5	2
Total	90	32 %	41	46	53	28	30	25

*7 people did not reply to education, 3 did not reply to gender

Among the people, replying to the questionnaires, 19 % live in the country, 43 % in small villages and 34 % in large villages (4 % did not answer). The respondents have been resident close to the Lyckeby River for 28 years on average (mean). Several live less than 1 km from the Lyckeby River (40 %) or between 1 and 5 km (43 %). Only 14 % live further away (2 % did not answer). 81 % are connected to municipal water and 12 % have water of their own. 3 % have replied that they have both and another 3 % did not reply,

Statistics

In order to calculate the result the statistical programme SPSS has been used. Analyses of Variance (MANOVA) were performed for differences between groups and Pearson's r was used for correlation between different variables.

Result

Global and local attitudes – a comparison

The interviewed people thought that water issues in general were very important. The mean values of the statements were on average high. Most of the statements showed a mean value above 3.5 (reply alternatives between 1 and 4). The first part of the inquiry (question 1) included attitudes towards water in general. An index was made for 10 statements, that is they were put together and named "global attitudes" (table 2). Another index, including 8 statements, was made for question 2 and was named "local attitudes", that is attitudes towards the Lyckeby River (table 3). In order to investigate differences in attitudes towards water issues on the global level and on the local level an analysis of Variance was calculated. The result showed that the respondents prioritized water issues on the global level ($m=3.68$) to those on the local level ($m=3.39$). There was a significant difference, $p=.015$. Self reported behaviour (total) was even lower than global and local attitudes ($m=2.60$), (Figure 1). On the other hand there were no major differences between global and local attitudes in total concerning gender, education or age nor in attitude depending on which county people lived in or how far they lived from the Lyckeby River.

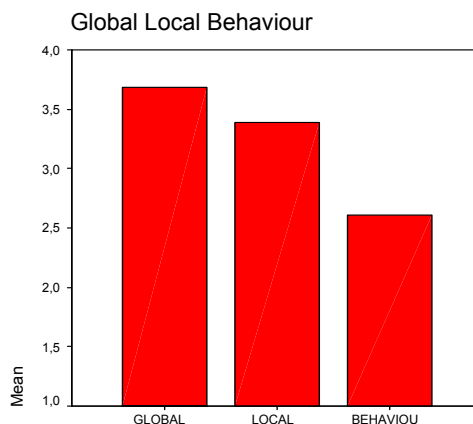


Figure 1.
Indices of attitudes towards global and local water issues and self reported behaviour. Mean values are shown, 1=do not agree at all, 4=totally agree.

A special analysis was made for global attitudes. Every statement was investigated concerning differences in attitude between gender, age, education, in which county and how far from the Lyckeby River the people lived.

Table 2.
Global attitudes, mean values of the whole group's replies to each statement and significant differences and comments to these are shown, N=90.

Statements	m	Sign.
Drinking-water is a scarce resource in many places all over the world	3.96	
All water must be protected and used in a not polluting way	3.89	
Water is essential to us	3.86	
A large part of the world's population lack clean drinking-water today	3.78	
Clean water is vital to animals and plants	3.77	
It is important to economize on drinking-water	3.72	
Water is a scarce resource	3.72	
Today people pollute water without caring about future generations	3.58	
People waste too much drinking-water today	3.42	
I worry about the scarcity of water in the world*	3.12	p=.019*
<i>* People over 50 years (m=3.29) were more worried than younger people (m=2.89).</i>		

In general, the people interviewed perceived global water issues as very important. The mean values were high for the whole group. Almost everybody agreed to: "Drinking-water is a scarce resource in many places all over the world". The statements that "all water must be protected and used in a not polluting way" and "water is essential to us" were also agreed upon by most of the respondents. The group had different opinions of one of the statements: People over 50 were more concerned about the scarcity of water of the world than younger people (see Figure 2). A special analysis was made for local attitudes, that is attitudes towards the Lyckeby River (Table 3).

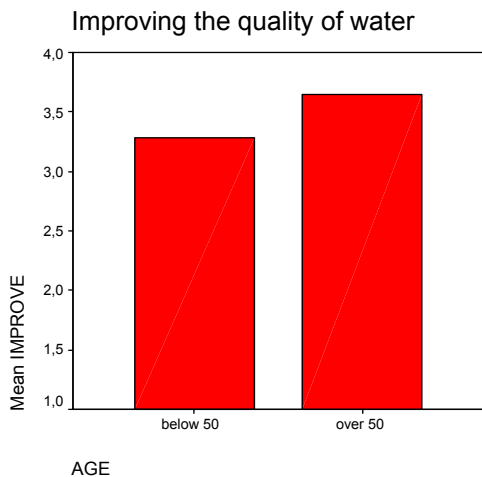
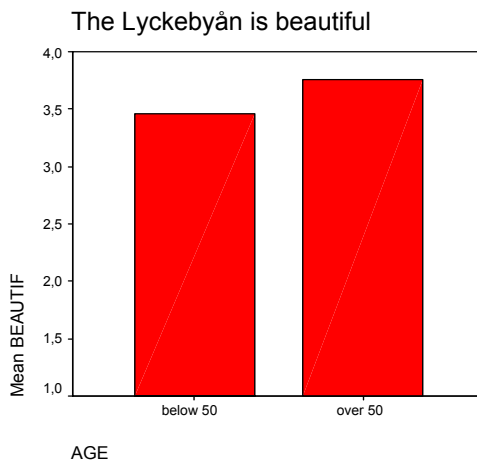
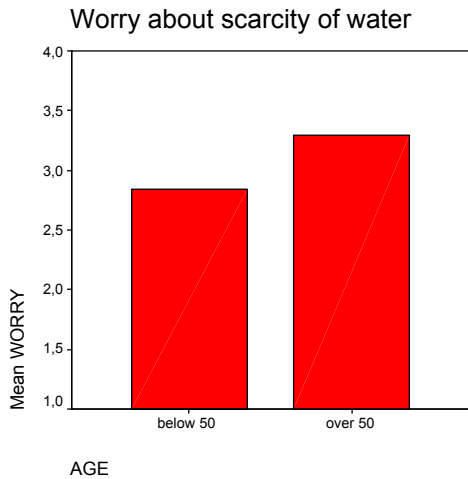


Figure 2.
 Attitudes towards the scarcity of water in the world, towards the Lyckeby River and to improving the quality of water in the Lyckeby River. Perceptions among people below and over 50 years are shown. Mean values are presented, 1=do not agree at all, 4=totally agree.

Table 3.
Local attitudes, mean values of the whole group's replies to each statement for the whole group and significant differences and comments are shown, N=90.

Statements	m	Sign.
The quality of water means a great deal to the flora and fauna there	3.84	
It is important that the water of the Lyckeby River is used properly not to be polluted	3.81	
The Lyckeby River is beautiful* <i>*People over 50 (m=3.76) thought the Lyckeby River was more beautiful than younger people (m=3.46).</i>	3.64	p=.013
It is important to improve the quality of water of the Lyckeby River* <i>*People over 50 (m=3.65) thought it was more important than younger people (m = 3.29).</i>	3.49	p= .019
I like living close to the Lyckeby River	3.49	
It is nice to experience the bird life of the Lyckeby River	3.07	
The vegetation along the Lyckeby River is pleasant and varied	3.01	
The Lyckeby River is of a great cultural-historical value to me	2.75	

Some statements had very high mean values, like: "The quality of water means a great deal to the flora and fauna there" and "It is important that the water of the Lyckeby River is used properly not to be polluted". The people who replied did not think that the Lyckeby River had much cultural-historical value to them. Opinions differed about: "It is important to improve the quality of water of the Lyckeby River". Older people thought it was more important than younger people. People over 50 perceived the Lyckeby River to be more beautiful than younger people did, though all of the respondents had a high mean value in their answers.

Five statements in question No 2 (attitudes towards the Lyckeby River) were analysed separately and were named recreation and well-being (Table 4).

Table 4.
Recreation and well-being. Mean values of the whole group's replies are shown (N=90).

Statements	m
The environment of the Lyckeby River gives me pleasure	3.23
I feel relaxed when I visit the Lyckeby River	3.08
The Lyckeby River means recreation to me	2.88
It is relaxing to go fishing in the Lyckeby River	2.80
I enjoy bathing in the Lyckeby River	1.56

Most of the people thought that the area around the Lyckeby River makes them feel well-being, relaxation and recreation. No significant differences in any of these statements were found according to gender, age, education, in which county or how far from the Lyckeby River they lived. All of them had about the same experiences of the Lyckeby River. The mean value was rather high on average, $m=2.72$. Almost nobody reported that they enjoyed bathing in the Lyckeby River.

Four statements of the inquiry dealt with different strategies to make people aware of water issues. They are shown in table 5.

Table 5.
Strategies for involving people in water issues. Mean values of the whole group's replies is shown, N=90.

Statements	m
It is important to educate people in water issues	3.72
To increase the understanding of the importance of water, a change in attitude is necessary	3.59
If drinking-water was more expensive, people would decrease their consumption	2.79
New technique can solve the problems with the supply of water in the world	2.74

The result of the investigation showed that most of the interviewees perceived education to be the most important way to increase the awareness of water issues. They also thought that a change of attitude has to be reality. Technical and economic solutions were lower prioritized. There

were no significant differences in any of these statements about gender, age, education, in which county they lived or how far they lived from the Lyckeby River. In table 6 below there are statements of knowledge and to what degree the interviewed people perceived that they could influence the water issues.

Table 6.
Statements about knowledge and perceptions of how they themselves could influence water issues are shown. Mean values of and significant differences in perceptions of influence are shown, N=90.

Statements	m	Sign.
The access to clean drinking-water is a matter of course to me	3.64	
I know where my drinking-water comes from	3.63	
People know too little of water issues today	3.18	
We who live around the Lyckeby River can improve the quality of water together	3.09	
I can contribute to improving the quality of water of the Lyckeby River	2.63	
It is important that I decrease my consumption of water	2.58	
I can contribute to improving the quality of water in the world	2.56	
My own actions influence the state of the Lyckeby River* <i>*People higher educated (m=2.88), estimated their own actions higher than people lower educated (m=2.11).</i>	2.53	p=.031
The quality of water of the Lyckeby River is good	2.39	
My family and I would save a lot of money if we used less water	2.19	
The water of the Lyckeby River has deteriorated during the last few years	2.15	
I will decrease my use of water within the near future	1.92	
We do not need to economize drinking-water in Sweden	1.83	
All of us who live around the Lyckeby River do not need to save water	1.64	

Most of the respondents know very well where their drinking-water comes from. They also perceived that the access to clean drinking-water was a matter of course to them. Several replied that they could improve the quality of water in the Lyckeby River together, but, all by themselves,

they could neither influence the quality of water of the Lyckeby River nor that in the world in the same degree. The respondents were unsure if the quality of water in the Lyckeby River was good or bad and if it had deteriorated during the last few years. Several did not answer to these two statements (8 % resp. 11 % drop-out). Most of the interviewees were not prepared to decrease their use of water within the near future. People who were higher educated perceived their actions to be more influential on the state of the water of Lyckeby River than people lower educated. Other background variables showed no significant differences.

Self-reported behaviour – combination – individual issues

Question No 4 of the questionnaire dealt with behaviour. The people were asked to report to what degree they agreed to the 15 statements concerning environmental behaviour. An index of these was made and named self-reported behaviour. In order to calculate the index the negative statement was turned positive. There were no significant differences in self-reported behaviour (total) concerning gender, education or age. There was a difference between age concerning specific issues as economizing washing detergent. People older than 50 years ($m=3.44$) economized on washing detergent to a higher degree than younger people ($m=2.81$), $p=.001$. Women ($m=2.61$) had to a higher degree than men ($m=2.02$) tried to decrease their water consumption the last year ($p=.006$), (see Figure 3 and Table 7). Behaviour differed also depending on in which county and how far from the Lyckeby River the respondents lived. People in the county of Blekinge ($m=2.75$) reported higher mean values of behaviour than those in the counties of Kalmar ($m= 2.61$) or Kronoberg ($m=2.15$). This difference was significant, $p=.001$. Significant differences were also found in self-reported behaviour depending on how far from the Lyckeby River they lived. People living less than 1 km from the Lyckeby River ($m=2.86$) reported a higher mean value of behaviour than people living 1–5 km ($m=2.45$) or more than 5 km away ($m=2.46$), $p=.001$.

Table 7.

Self-reported behaviour. Mean value of the group's replies to each statement is shown. Significant differences in self-reported behaviour concerning gender, age, education, in which county and how far from the Lyckeby River the respondents live.

Statements	m	Sign.
I mind what I throw in the plughole	3.60	
I always wash with a full machine	3.29	
I economize on washing detergent* <i>*People over 50 years (m=3.44) economized washing detergents to a higher degree than younger people (2.81)</i>	3.20	p=.001
When I wash, I always use environmentally friendly detergents	3.17	
I never wash up with water running	2.96	
I never brush my teeth with water running	2.79	
I only use environmentally friendly products when I wash my car	2.67	
In my family we use water-saving showers	2.57	
I have tried to decrease my consumption of water during the last year* <i>*Women (m=2.61) thought of decreasing the consumption of water to a higher degree than men (m=2.02)</i>	2.31	p=.006
I often walk along the Lyckeby River in order to have a bit of peace and quiet* <i>*People living close (m=2.81) more often walked along the Lyckeby River than people living far away (m=1.36). People living in Blekinge (m=2.69) more often walked along the Lyckeby River than people in Kalmar (m=2.13) and in Kronoberg (m=1.46).</i>	2.26	p=.000 p=.002
I use the Lyckeby River for leisure activities* <i>*People higher educated (m=2.50 and 1.96) used the Lyckeby River for leisure activities to a higher degree than people lower educated (m=1.70).</i>	2.11	p=.018
I can consider to invest in some alternative to water toilets	1.83	
I water my lawn in summer	1.36	
I often go canoeing on the Lyckeby River	1.30	
In summer I often bathe in the Lyckeby River <i>*People living close (m=1.53) more often bathe in the Lyckeby River (m=1.08 resp. 1.18).</i>	1.27	p=.013

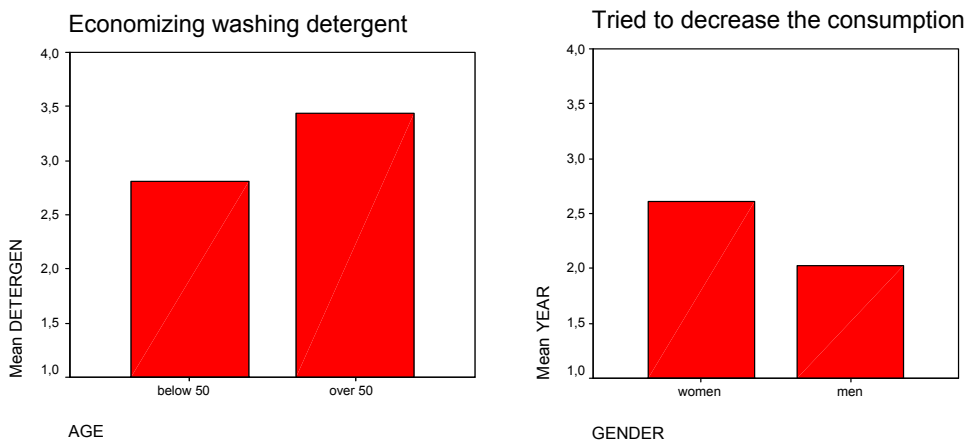


Figure 3. Differences in self reported behaviour concerning the issues “economizing on washing detergent” (the diagram to the left – differences in age) and “tried to decrease the consumption of water” (the diagram to the right – differences in gender). Mean values are shown, 1=do not agree at all, 4=totally agree.

Correlation between attitudes and behaviour

The mean value in total of behaviour was much lower than that of attitudes ($m=2.60$). The mean value of global attitudes was 3.68 and of local attitudes 3.39. There was a correlation between attitudes and behaviour. People who reported a very positive attitude also reported a more environmentally friendly behaviour. This significant correlation was highest in attitudes towards Lyckeby River, that is local attitudes, and self-reported behaviour ($r=.452, p=.000$). People valuing the Lyckeby River very high also handled water in their daily life in a more environmentally friendly way.

Information

Some of the issues of the inquiry were about what kind of information people living the drainage area of the Lyckeby River had received about the Lyckeby River and about how they would like to be informed in the future. One question dealt with how they benefit from it today.

Most of the people, replying to the inquiry (67 %), had not heard of the Lyckeby River Water Management Association. 74 % had not received any information at all about the Lyckeby River, though men perceived that they had received more information than women about it ($m=1.37$ males, $m=1.10$ females, $p=.002$).

The daily newspapers were the main source of information (61%) to those who had any at all (26 %). Some had been informed by leaflets (14 %), by the officials of the municipalities (11 %) and by the Lyckeby River Water Management Association (9 %). Hardly anyone had been given facts by the children at school, Internet, study circles or by participating in projects. The information they had gained was mostly about the quality of water in the Lyckeby River, how to save water and economize resources. As many as 34 % did not reply to the question if they were satisfied with the information or not. 32 % replied that they were not because it was too meagre. Some people answered that there was no information to be found and that they did not know of any water association.

The respondents put forward several proposals for how they would prefer to be informed: by daily newspapers with repeated information, leaflets to the households, lectures, excursions, facts sent with the water bill, meetings, the municipal website and so on.

Only 10 % were involved in a project connected to the Lyckeby River today, but 16 % could think to commit to projects in the future. These could deal with ways of increasing the awareness of how we influence the quality of water in the Lyckeby River, of improving the environment around it, of inventories of plants and fishes living there, the quality of water, of protection etc. Eight people wrote that they wanted to be contacted.

The investigated people replied to the question how they used the Lyckeby River themselves: for walks along it, for fishing and baths in it, for pleasure and recreation and for the natural scenery.

Discussion

At the beginning of the Seagull project the aim of this investigation is to analyse what attitudes people living around the Lyckeby River have towards water issues, that is before information and education about it is given on a large scale. This will be provided later in dialogue with the people concerned. The result of the study showed that those who replied to the inquiry thought water issues to be more important on the global than on the local level. This is in line with what other researchers have found. People often perceive global problems as abstract, and these may therefore be experienced as more worrying than problems on the local level (Lindström, 2003; Uzzell, 2000). The connection between local and global environmental problems should be made more obvious to individuals (Lindström, 2003).

In spite of the low reply frequency the people who had replied did so very accurately to most of the questions. This basic material can only show the opinions of importance among a small number of people living around the Lyckeby River. The low reply frequency must be considered, and any conclusions of attitudes among the whole population cannot be drawn here. The average age was fairly high (53 years) so an investigation of attitudes among young people would be a valuable complement to this study. The respondents' education was rather equal from primary school to university. In the county of Blekinge the reply frequency was the highest, and this may be due to the neighbourhood of the Lyckeby River, which makes the inhabitants more engaged.

Most of them thought that it was important not to pollute the water of the Lyckeby River and to improve its quality, which influences animals and plants very much. Many commented that they did not know if the quality of water in the Lyckeby River was good or bad. This result was in line with findings made by Adolfsson Jörby (2002) in an investigation about Gamlebyviken. The people living around the Lyckeby River were not very prepared to lower their own consumption of water, and most of them wrote that clean drinking water was a matter of course to them (see Figure 4). This result shows that information, education and local projects would be effective to increase the awareness by uniting neighbours of the Lyckeby River in a common matter and in joint goals (see Adolfsson Jörby, 2000). The investigation made clear that the interviewees experienced education and a change of attitude as the most important strategies in order to engage people. They also meant that "we who live

around the Lyckeby River can improve the quality of water together” more than what they could do on their own. According to Gardner and Stern (1996) discussions in small groups on a common interest is an effective strategy in order to change behaviour step by step.

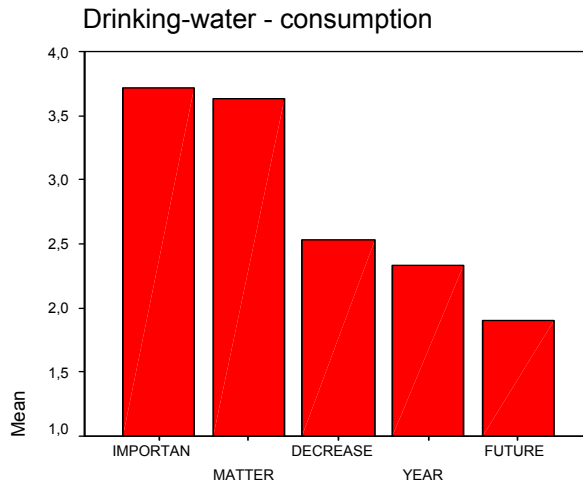


Figure 4.
Diagram concerning the statements: “It is important to economize on drinking-water. The access to clean drinking-water is a matter of course to me. It is important that I decrease my consumption of water. I have tried to decrease my consumption of water during the last year. I will decrease my use of water within the near future.”

The interviewed people thought that the Lyckeby River was beautiful and that they enjoyed a feeling of well-being, recreation and relaxation when they visited the Lyckeby River. Comments on the question how they themselves benefited from the Lyckeby River showed that many people used it for walks along it, for recreation and pleasure. The result showed that there may be a need for finding places, which can give feelings of relaxation, and maybe the Lyckeby River and the area around, can become such an oasis in the future. Several investigations show that people often prefer places with water or watercourses (Bell, et.al, 1996). Older people agreed to a higher degree than younger ones to the statements “The Lyckeby River is beautiful” and “It is important to improve the quality of water in the Lyckeby River”. They were also more worried about the scarcity of water in the world than younger people were.

There was a difference in behaviour and age as to economizing washing detergents. The explanation might be that older people have more time than younger people to visit the Lyckeby River and that their experiences of saving reflect the water issues to a higher degree. The investigation also showed that women more than men try to decrease their consumption of water. Some other studies show that women may have a higher environmental concern than men (Lundqvist, 2003; Merchant, 1992).

Closeness to the Lyckeby River showed to be significant as regards the behaviour. People living less than 1 km from the Lyckeby River reported a higher value of environmental behaviour than people living further away did. People in the county of Blekinge reported the highest mean value of self-reported behaviour, and they walked more often along the Lyckeby River in order to feel peace and quiet compared to people in the other counties. A previous study showed that people in an inland municipality prioritized issues about “protecting coasts and seas from discharge” considerably lower than people living on the coast (Lindström, 2003).

Most of the respondents did neither know of the water association of the Lyckeby River nor had been informed about the Lyckeby River. So far daily newspapers had supplied information. In the future people wanted information more continuously in their daily newspapers, for example in a continuously repeating “informative square”. Suggestions about meetings, lectures, leaflets to the households were also given to spread information. Some could think to engage in future projects in order to increase the awareness of how people can influence the quality of water of the Lyckeby River.

The investigation as a whole shows that there is an awareness and an active interest among the people living around the Lyckeby River concerning the water problems of the world. They thought of them at the local level as well, though to a somewhat lower degree. The value of self-reported behaviour was further lower than that of the issues of attitude in total. The local problems of water should therefore be more attached to the global ones so that the wholeness is emphasized. In order to transfer the over all positive attitude into behaviour it is important that people should feel involved and that they should discover their own ability to influence.

Many people used the Lyckeby River for recreation and relaxation, and most of them reported that they had feelings of well-being when visiting it. This positive feeling may increase the prerequisites for implementing information and knowledge. Several people reported that they did not know anything about the quality of water of the Lyckeby River. Increased knowledge and increased commitment could be possible if discussions

are held in small groups on an idea that all the participants care about. Many wanted more information about the Lyckeby River, and some were also prepared to participate in a project. Information and education is therefore very important. The suggestions given by the interviewees in this study can inspire new projects to be performed within the ongoing Seagull project.

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Enclosure

Compilation of the replies of the questionnaire in percentages

1. According to the EU directive on water, all of us shall protect our water. What do you think is important to take into consideration when dealing with water in general? Please tick the appropriate box.

1 = do not agree at all 2 = partly agree 3 = agree on the whole 4 = totally agree

	1	2	3	4	Miss- ing
It is important to economize on drinking-water	1.1	5.6	13.3	80.0	
Drinking-water is a scarce resource in many places all over the world	0	0	4.4	95.6	
All water must be protected and used in a not polluting way	0	1.1	8.9	90.0	
People waste too much drinking-water today	3.3	7.8	32.2	56.7	
Water is a scarce resource	2.2	3.3	14.4	80.0	
Today people pollute water without caring about future generations	0	6.7	28.9	64.4	
I worry about the scarcity of water in the world	6.7	13.3	41.1	38.9	
Water is essential to us.	0	1.1	12.2	86.7	
New technique can solve the problems with the supply of water in the world	4.4	35.6	38.9	18.9	2.2
A large part of the world's population lack clean drinking-water today	0	2.2	17.8	80.0	
It is important to educate people in water issues	0	0	27.8	72.2	
Clean water is vital to animals and plants	0	1.1	21.1	77.8	
To increase the understanding of the importance of water, a change in attitude is necessary	1.1	3.3	31.1	64.4	
We do not need to economize drinking-water in Sweden.	53.3	16.7	23.3	6.7	
It is important that I decrease my consumption of water	13.3	35.6	31.1	20.0	
My family and I would save a lot of money if we used less water	28.9	35.6	21.1	13.3	1.1
If drinking-water was more expensive, people would decrease their consumption	6.7	34.4	32.2	26.7	
I can contribute to improving the quality of water in the world	13.3	38.9	26.7	21.1	
The access to clean drinking-water is a matter of course to me	1.1	3.3	25.6	70.0	
I know where my drinking-water comes from	3.3	7.8	11.1	77.8	
People know too little of water issues today	1.1	21.1	36.7	41.1	

2. How do you experience the Lyckeby River today and to what degree do you feel that you can influence the water of the Lyckeby River? Please, tick the appropriate box.

1 = do not agree at all, 2 = partly agree, 3 = agree on the whole, 4 = totally agree

	1	2	3	4	Mis- sing
It is important to improve the quality of water of the Lyckeby River	1.1	8.9	27.8	57.8	4.4
The environment of the Lyckeby River gives me pleasure	3.3	12.2	40.0	41.1	3.3
The Lyckeby River is beautiful	0	3.3	28.9	65.6	2.2
The Lyckeby River means recreation to me	11.1	24.4	24.4	35.6	4.4
I feel relaxed when I visit the Lyckeby River	3.3	23.3	32.2	37.8	3.3
It is nice to experience the bird life of the Lyckeby River	7.8	20.0	26.7	42.2	3.3
I like living close to the Lyckeby River	1.1	10.0	26.7	60.0	2.2
The quality of water means a great deal to the flora and fauna there	0	1.1	13.3	84.4	1.1
The quality of water of the Lyckeby River is good	12.2	34.4	41.1	3.3	8.9
All of us who live around the Lyckeby River do not need to save water	56.7	25.6	10.0	5.6	2.2
It is important that the water of the Lyckeby River is used properly not to be polluted	1.1	3.3	8.9	85.6	1.1
The water of the Lyckeby River has deteriorated during the last few years	22.7	37.8	20.0	7.8	12.2
My own actions influence the state of the Lyckeby River	18.9	31.1	21.1	24.4	4.4
The Lyckeby River is of a great cultural-historical value to me	11.1	33.3	22.2	31.1	2.2
It is relaxing to go fishing in the Lyckeby River	20.0	14.4	22.2	35.6	7.8
I can contribute to improving the quality of water of the Lyckeby River	10.0	38.9	23.3	23.3	4.4
We who live around the Lyckeby River can improve the quality of water together	2.2	21.1	37.8	34.4	4.4
I will decrease my use of water within the near future	32.2	43.3	15.6	4.4	4.4
I enjoy bathing in the Lyckeby River	64.4	12.2	10.0	6.7	6.7
The vegetation along the Lyckeby River is pleasant and varied	2.2	25.6	37.8	31.1	3.3

3. How do you handle water in your daily life? Please tick the appropriate box.

1 = do not agree at all, 2 = partly agree, 3 = agree on the whole, 4 = totally agree

	1	2	3	4	Missing
I have tried to decrease my consumption of water during the last year	24.4	32.2	27.8	13.3	2.2
In my family we use water-saving showers	34.4	11.1	15.6	37.8	1.1
I economize on washing detergent	3.3	18.9	31.1	45.6	1.1
I always wash with a full machine	3.3	16.7	26.7	52.2	1.1
I can consider to invest in some alternative to water toilets	43.3	35.6	8.9	8.9	3.3
I never wash up with water running	10.0	26.7	20.0	42.2	1.1
I water my lawn in summer	73.3	14.4	3.3	4.4	4.4
When I wash, I always use environmentally friendly detergents	6.7	22.2	17.8	52.2	1.1
I mind what I throw in the plughole	2.2	5.6	22.2	70.0	
I never brush my teeth with water running	26.7	14.4	11.1	46.7	1.1
I only use environmentally friendly products when I wash my car	14.4	30.0	22.2	27.8	5.6
I often walk along the Lyckeby River in order to have a bit of peace and quiet.	32.2	28.9	15.6	21.1	2.2
I use the Lyckeby River for leisure activities	38.9	26.7	14.4	17.8	2.2
In summer I often bathe in the Lyckeby River	81.1	8.9	5.6	2.2	2.2
I often go canoeing on the Lyckeby River	77.8	12.2	5.6	2.2	2.2

4. Below you find a few questions dealing with the Lyckeby River and with yourself. Please reply to them by ticking the appropriate boxes.

Have you heard of the Lyckeby River Water Management Association? Yes 33 % No 67 %

I have received information about the Lyckeby River. Yes 24 % No 74 %
Missing 1.1 %

In most cases I have been informed about the Lyckeby River by
(several ticks are possible):

- Daily newspapers	Yes 61 %	No 39 %
- Study circles		No 100 %
- Children at school	Yes 2 %	No 98 %
- Participating in projects	Yes 2 %	No 98 %
- Information leaflets	Yes 86%	No 14 %
- Other ways		
- The Water Association of the Lyckeby River	Yes 9 %	No 91 %
- The officials of the municipality	Yes 11 %	No 89 %
- The Internet	Yes 4 %	No 96 %
- What was the information about?		
- Are you satisfied with this information?	Yes 32 %	No 33 %
	Missing 34 %	

Please/give your reasons:

How would you prefer to be informed about water issues
(see above) in the future?

Are you involved in some project concerning the Lyckeby River yourself? Yes 4 % No 90 %
Missing 6 %

If Yes, what does the project deal with?

If no, can you consider to commit yourself to some project concerning
the Lyckeby River? Yes 16 % No 72 %
Missing 12 %

What would you like that project to deal with?

May we contact you? If so, please write your address below

In what way do you benefit from the Lyckeby River?

Some information about yourself :

- Male 47 % , Female 51 % , Missing 2 %

- Mean age 53 years (from 24 – 88 years)

- Education:

Up to 9 years 31 %

Up to 12 years 33 %

More than 12 years 28 %

Missing 8 %

-Domiciled:

Blekinge county 40 %

Kalmar county 43 %

Kronobergs county 17 %

- Do you live:
- in the countryside 19 %
- in a small society 43 %
- in a town 34 %
- missing 4 %

For how long have you been living near the Lyckeby River?

- 28 years on average

How far from the Lyckeby River do you live?

- Less than 1 km 40 %
- 1 - 5 km 43 %
- more than 5 km 14 %
- missing 2 %

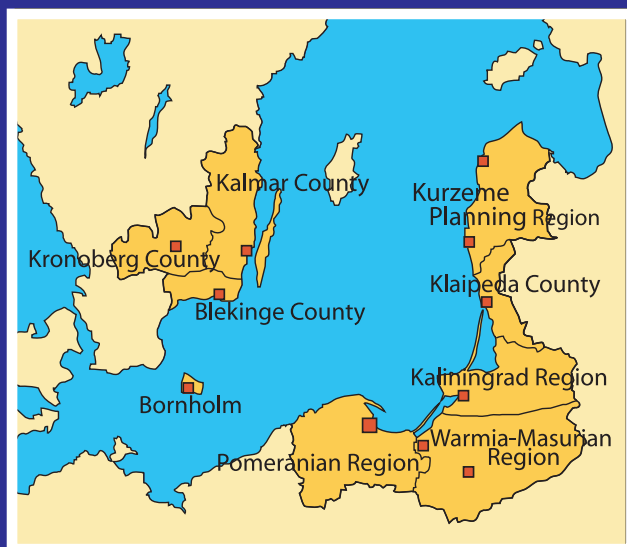
Do you have:

- municipal water 81 %
- water of your own 12 %
- both 3 %
- missing 3 %

Thank you for your participation!

Seagull is a project for the Euroregion Baltic (ERB) with the main purpose of developing and anchoring a long-term strategy and a joint transnational development programme (JTDP) for the region. The programme will form the basis for future investments in the environment and infrastructure, for building networks of innovative environments such as science parks, for development and cooperation of industrial clusters in the region, etc. It will thereby contribute to social, economic and environmentally sustainable development throughout the region.

www.eurobalt.org



This report describes what people in the Swedish water pilot area think, their attitudes towards water issues in general and towards the Lyckeby River in particular.



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