



FINAL REPORT ON THE COOPERATION PROGRAMME INTERREG-IIIB PROJECT

SAFECOAST

THE INFORMED SOCIETY

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List of abbreviations

ALR	Office for Rural Areas
BSH	German Federal Shipping and Hydrographic Office
HPL	High Pressure Laminate
IM	Ministry of the Interior
Infu	Institute for Environmental and Sustainability Communication
LKN	Agency for Coastal Protection, National Park and Ocean Conservation
MHW	Mean high tide level
MLW	Mean low tide level
MSL	Mean sea level
MLUR	Ministry for Agriculture, Environment and Rural Affairs for Schleswig-Holstein
NLWKN	Lower Saxony Water Management, Coastal Defence and Nature Conservation Agency
SH	Schleswig-Holstein

1. Summary

1.1 Tasks and goals of SAFECOAST - “The informed society”

The SAFECOAST project aims to answer the question: “How to manage our North Sea coasts in 2050”. The project focuses on the consequences of climate change, spatial planning for coastal protection and the security of the population from storm flood risks.

SAFECOAST is co-financed by the European Union as part of Interreg 3b North Sea Programme for transnational projects. The total budget is 2.3 million euro.

SAFECOAST involves six actions, each of which has different sets of tasks worked on by actors in Denmark, the Netherlands, Great Britain, Belgium and Germany. The following topics are covered by the actions (cf. Nooteboom 2007):

- Survey of common climate scenarios and spatial planning responses
- Risk communication
- Comparison of a number of simulation models for flooding scenarios
- Integrated master plan for coastal defence in Flanders
- Assessment of actual flood risks and of risks in 2050 in a number of pilot areas
- Compiling results in order to develop an adaptation strategy for integrated coastal management

The Action 2 of SAFECOAST “The informed society” is coordinated and co-financed by the Ministry of the Interior of the State Schleswig-Holstein, Germany, Emergency Planning & Disaster Management Division and the Schleswig-Holstein State Ministry for Agriculture, Environment and Rural Areas, Germany (Coastal Defence Division). It aims at developing a communication strategy for information about storm flood risks in Schleswig-Holstein and sensitising the public and political decision-makers by a targeted education campaign using a variety of communication media to increase over the long term the acceptance of measures for coastal and catastrophe protection and to lower the risks for inhabitants of low-lying areas at risk from flooding. In this project a booklet and an exhibition were developed, however this report is about the conception of the exhibition. The development of the leaflet and the follow-up impact study were the subject of the first final report about “The informed society” project (October 2007).

1.2 Project stages and timetable

The SAFECOAST project - “The informed society” - included in a first project stage the researching of communication activities in project partner countries, the production of a storm flood booklet, the realisation of an impact study and the development of a communication strategy. These project stages have been comprehensively documented in the first final report. This report, the second, describes the second project stage, that is largely the conception and implementation of a travelling exhibition as well as the evaluation of the existing coastal protection pavilions on the west coast of Schleswig-Holstein. The following project stages were involved in developing the travelling exhibition:

1. Literature research and analysis
2. Visiting examples of best practice
3. Developing a concept for an exhibition
4. Conducting workshops on a number of project stages
5. Developing the exhibition

6. Implementing the exhibition concept

First of all, we did literature research and analysis on the current state of curatorial practice and on the theory of informal learning (see Section 2.2). In order to supplement this theoretical investigation we visited a number of exhibition rooms in Schleswig-Holstein as examples of best-practice (e.g. “Blanker Hans Storm Flood World” in Büsum). These visits were used to talk with the exhibition curators and take advantage of their experience (see Section 3.1) During the conception phase of the exhibition, three accompanying workshops were held on the concept, design and logistics of the exhibition. Section 3.1 documents conclusively the implementation of the exhibition. Based on both theoretical and practical principles, a concept for the travelling exhibition was developed (see Section 3.2). As the opening of the exhibition took place after the end of the project, it unfortunately cannot be recorded and documented in this report.

A second building block of the action was to evaluate existing pavilions on the west coast of Schleswig-Holstein and to make recommendations concerning design.

The following stages were involved:

1. Literature research and analysis
2. Visiting pavilions on site
3. Strength-weakness analysis and focus group testing
4. Development of design recommendations and implementation of a second focus group

In a first stage, in order to develop the concept of the exhibition, we conducted literature research on (environmental/risk) communication principles of information processing and design. Members of the Institute for Environmental Communication (Infu) visited ten existing pavilions on the west coast and two on the east coast of Schleswig-Holstein to conduct a strength-weakness analysis of the pavilions and posters within them (see Section 4.2). A focus group analysis of existing posters was conducted at the end of September in order to make use of lay knowledge to develop design recommendations (see Section 4.3). Based on the findings of existing research and the strength-weakness analysis, Infu developed optimisation recommendations for the design of the pavilions (Section 4.5). The results were presented and discussed in a second focus group at the beginning of November 2007.

1.3 Summary of results

Risk communication through a travelling exhibition

The goal of government risk communication is to inform and educate its citizens about certain risks, to provide measures for precaution and to maintain a readiness of the individual to take action in the face of potential risk. The purpose of SAFECOAST - “The informed society” - is the communication of storm flood risks under conditions of climate change. Within the scope of this project a number of communication media are to be designed, implemented and evaluated. The first communication medium to be developed was a booklet supplying information about storm flood risks and advice on appropriate behaviour in case of a disaster. It was recommended in the final report of the first part of SAFECOAST to develop, in addition to the booklet, further communication media:

“For the communication strategy in Schleswig-Holstein regarding coastal and storm flood protection, we recommend realizing a target-group specific communication with a combination of different communication media. The more intensively people are aware of storm flood risks and the more interest they show in the topic, the more active they will be when searching for information.” (SAFECOAST Action 2: “The informed society” 2007:14)

The main topics to be communicated in the exhibition largely follow from the impact study in the first part of “SAFECOAST - The informed society”. The following recommendations

regarding the development of a communication strategy were made there (see SAFECOAST Action 2: “The informed society” 2007: 111ff.):

- There should be regular communication on the topic of coastal and storm flood protection (e.g. once a year) as there is a clear need for this in the population. In addition these messages should be continuously communicated to increase a long-term readiness for precautionary behaviour and achieve a greater sensitivity for the topic.
- Further communication should concentrate especially on disaster protection, on local topics relating to storm flood protection and on prevention measures. Information for behaviour following a disaster is also found to be interesting.
- Furthermore it seems that reliable education about the local impact of climate change is desirable considering the uncertainty felt in the public about the topic.
- Mass media such as radio, television and official announcements are considered to be the most important means of communication. This should be taken into greater account when expanding communication activities.
- As citizens would like opportunities to take part in decisions concerning storm flood and disaster protection, participation opportunities for the public should be expanded.

As a result a travelling exhibition was designed that, along with providing information and advice on what to do in an emergency, would address the future trends for Schleswig-Holstein’s coast and an individual’s own involvement and personal opportunities to take precautionary measures. People who visit an exhibition do so in their free time and for intrinsic reasons. Knowledge is only acquired as a side effect. This is essentially informal learning. The European Commission, Directorate-General of Education and Culture, Directorate-General for Employment and Social Affairs (2001) defines informal learning as follows:

“all learning activity undertaken throughout life, with the aim of improving knowledge, skills and competence, within a personal, civic, social and/or employment-related perspective.” (2001: 9).

Informal learning is thus a precondition for non-intentional learning. This forms a starting point for designing the exhibition and fulfils the needs of visitors. The concept of the travelling exhibition in the project “SAFECOAST - The informed society” attempts to actively involve its visitors. This is done using interactive media and provocative questions that stimulate reflection about the topic. The personal connection to the topic runs through the entire exhibition as visitors are confronted again and again by the connection between storm flood risks and their own life and surroundings. The concept of the exhibition is divided into three main themes:

- Storm floods and storm flood risks
- Coastal and disaster protection
- Climate change and rising sea levels

On the display panel units the visitor sees a varied presentation of the topic with texts, photos and graphics. A photo carpet and four life preservers are “eye-catchers” and serve as an emotional entry point for visitors at the start of the exhibition. Film clips and audio stations offer additional information or are simply an alternative to reading. Interactive children’s models on each display panel unit give school children room to playfully engage with the topic. The exhibition takes people out of their everyday life and accustomed surroundings and shows how strongly each and every person in Schleswig-Holstein is affected by storm flood protection and climate change.

Evaluation of the coastal protection pavilions

As part of “SAFECOAST - The informed society”, coastal protection pavilions on the west and east coast of Schleswig-Holstein were evaluated. The strengths and weaknesses of the pavilion posters were discussed in focus groups. The findings can be summarized as follows:

- Use less text, reduce messages to the essential

- Explain technical terms
- Use more graphics and illustrations to avoid reading fatigue
- Mention regional particularities to tie the topic into the region
- Identify the pavilions so that they can be found better

The poster recommendations also take into account the principles of informal learning as learning in free time. In the reworked versions the text was “lightened”, complicated text building blocks with technical terms were simplified and the number of illustrations and graphics was increased. Essentially, designing the display units involved similar principles as in the exhibition itself: the viewer is drawn into the topic by being actively addressed allowing a personal connection to the topic to be created. A varied illustration-text design is more attractive and eases reading.

As a result we can say that the conceptual design of exhibitions involves largely the same criteria as the design of coastal protection posters. The visitor is in a holiday mood and is not prepared to ingest a lot of information. Topics have to be presented in an interesting, even fascinating way, so that facts are picked up “by the way”. Complicated or incomprehensible sentences have a deterrent effect and should be avoided at all costs. The same holds true for technical terms that, if used, need to be explained.

2. Theoretical considerations for the conceptual design of coastal and disaster protection

For most people not living directly on the Schleswig-Holstein coasts, the importance of coastal and disaster protection is far removed from everyday life. Those people living farther from the coast only think about how their coasts are protected when there is an acute risk. Since it is however - especially in regard to climate change - crucial for people to have a permanent sensitivity for this topic, we have to find appropriate communication channels to keep the idea of coastal and disaster protection in the public’s minds. (Travelling) exhibitions and information pavilions are potential instruments of government risk communication that could help to enhance risk awareness and, where necessary, to bring about appropriate behaviour. The value of these communication channels will be assessed in the following sections using theoretical-conceptual approaches to risk communication and informal education.

2.1 Risk communication

The Federal Institute for Risk Assessment describes risk communication as a continuous and interactive process characterized by participative dialogue with varied target groups. Risk communication is described as the early communication of information to the public about possible health risks, proven knowledge and findings.¹ The goal of government risk communication is also to continually remind individuals of risk, to inform them and so to maintain the willingness to take action. (cf. Ruhrmann & Kohring 1996: 17). According to Covelto et al. (1987: 112f.) the various tasks for risk communication can be summarized and formulated as follows:

- Information about and explanation of risks (improving knowledge about risks, emphasis on education)
- Initiating behavioural change and precautionary measures
- Information during emergencies and disasters

¹ <http://www.bfr.bund.de/cd/1798>

- Joint problem and conflict resolution by political decisions-makers and scientists with public participation

Mertsch (2004: 45) also pointed out that “the creation of a permanent sensitivity for the sudden occurrence of natural disasters and the lasting sensitisation to their cause and effects [...] are an] important basis for a strategy to reduce and avoid harm and damages. Only with a public sensitised to the danger of flooding can regional and national precautionary and structural flood protection, sufficient self-protection and joint disaster protection be implemented.”

Everyone is now talking about climate change and the topic has been, especially through the media, firmly established on the political agenda. Though the changing climate is an omnipresent topic in the media, only few people can claim to experience current problems, such as the melting of the Greenland ice sheet or the expansion of the desert. Knowledge is generated through a medial public sphere which transports corresponding information. Since it is often no longer possible in a more and more complex world to interpret physical phenomena directly, perception and personal opinion are developed through interpretative processes of meaning construction in the public (cf. Peters/Heinrichs 2005: 2). Many people are not aware of the consequences of their personal decisions and how they could become active themselves and take steps to minimize risk in their own surroundings (e.g. by reducing CO₂ emissions). That is why it is particularly important to draw public attention to a topic like this so that people have the chance to become aware of it and take action. (cf. Luhmann 1986: 63; Peters/Heinrichs 2005: 2) The discussion about climate change is not an exception here. It is thus important to communicate storm flood protection and to describe precautionary measures and emergency situations in order to develop a public understanding. In doing so we are concerned not only with mitigation, the minimizing of risks, but also adaptation, the adapting to risks. Rising sea levels increase risks for coastal inhabitants who can adapt to environmental changes by taking appropriate security measures.

The discussion about climate change and its consequences enters into the debate about disaster and coastal protection in Schleswig-Holstein. The coastal protection master plan for Schleswig-Holstein makes the same point:

“Even if the effects of climate change on water levels is not verifiable, we still have to be prepared for the likelihood that water levels, as well as the frequency and strength of storm floods, will increase.” (2001: 16)

Coastal areas are endangered by its edges being eroded and require expensive measures to secure them (see Schleswig-Holstein Ministry of Agriculture, Environment and Rural Areas, 2001: 32).

Exhibitions and information display panels are suited to communicating such messages when they show the consequences of personal actions, within the context of climate changes in Schleswig-Holstein, and offer concrete ideas and recommendations to each person on how to minimize risks.

The communication of risks using exhibitions and information display panels has as its goal making people aware of certain aspects of risk and involving them in the identification, assessment and management of risks (cf. Wiedemann & Schütz 2006: 3). Public communication by government agencies about risks from storm floods, due to their remoteness from everyday life, is crucial to risk awareness by individuals. The problem of remoteness from everyday life also exists for communication about climate change, as this is also a phenomenon which so far can hardly be experienced by an individual.

This is what must be captured in exhibitions and information display panels: climate change within the context of coastal protection as risk for the future of the population. Information display panels are located on particular sites and travelling exhibitions are also conceived so as to “pick up” people in their accustomed surroundings and then make them aware of how great the risk there is and how they are affected by it. Exhibitions and information display panels present information directly to the appropriate target group.

2.2 Informal learning

An exhibition as medium of communication is especially appropriate when a large number of people should be reached in a particular location. A travelling exhibition can be considered an informal learning measure. By informal learning, a term from the Anglo-American region, is meant a process that promotes learning outside the formal educational system. (cf. Wohlers 2001: 3). The term informal learning arrived relatively late in the sciences in Europe (cf. Dohmen 2001: 62ff.). Informal learning is described as a style of learning for everyday life - it is "learning for life". It can also be described as non-institutional learning, since the visitor (e.g. of an exhibition) is "picked up" where he is, namely in his accustomed surroundings. This type of learning accounts for about 70% of everyday learning processes of an adult.

Learning processes become a social event when they involve visiting a museum or an exhibition, since most visitors come with their families and consider the activity recreation or entertainment together with others. Visiting an exhibition is done voluntarily, that is people look at an exhibition, are intrinsically motivated, are in a holiday mood and so are only partially willing to actively learn something.

This form of learning is of special importance for a travelling exhibition because it draws together many types of communication methods. Veverka (1998: 9) describes these requirements in a number of his "learning principles":

- People learn better when they're actively involved in the learning process.
- People learn better when they're using as many senses as appropriate.
- People prefer to learn that which is of most value to them in the present.

The didactic approach to an unknown public in a holiday mood is a challenge for any exhibition developer (Ham 1992: 3 ff.). The formulation of information goals and the communication of core messages are central to a good exhibition and in the planning process it is critical to define one or more goals. Goals have a structuring and result-orientation function, without which it would be impossible to measure the success of the exhibition. Goals that are set too high cannot serve the development of the exhibition as the contents will be watered down and it will not be clear what is supposed to be communicated. It is also essential that goals be set in advance otherwise the success of the exhibition cannot be evaluated (cf. Wohlers 2001: 42). Visitors have only a relatively limited period in which they can pay attention. Visitors to an exhibition spend only about one third of their time reading. What the exhibition is about, its core message, should be made quickly apparent to the reader. In most cases visitors will not have any prior knowledge about the topic and in an informal learning perspective none is assumed. As a result a core message should be formulated which is then further developed in sub-messages in order to focus the topic (cf. Wohlers 2001: 92 ff.; Lewis 1980: 17).

Technical information must be edited so that it is as easy to understand as possible and entertaining (ibid.). Entertaining means here (following Veverka's learning principles) that the visitor, as a result of the topic being properly prepared, is able to immerse himself in the topic and so successfully acquire new knowledge. This is already important at the level of language. The interest of the visitor is awakened most easily when active verbs are used ("Climate change causes the sea level to rise" is better than "The sea level is raised by climate change.") (cf. Ham 1992: 11). Similarly metaphors and provocative references to the personal world of the visitor increase the interest of the reader (ibid.). Veverka's third learning principle supports this when it emphasizes the importance of an individual's own valuation of a topic. What the visitor finds important for his own life now has the best chance of being learned.

In addition, the visual appearance of the information needs to be considered, that means that the size of the typeface and the number of words per text unit must be carefully considered (cf. Trapp et al. 1994: 8 ff.). As a rule of thumb, about 70 words per text unit is the upper limit for the attention of a visitor (cf. Trapp et al. 1994: 37 ff.). There is a similar limit for audio-visual information. An acoustic or visual message should never be longer than 3 minutes, as if it were any longer it would be unlikely that a visitor not already interested in the topic would follow it until the end (Trapp et al. 1994: 35).

Alongside audio-visual media, both graphics and photos play an important role, since by illustrating or visualizing information they help the reader to better understand and interiorise a message (cf. Trapp et al. 1994: 37). Again, Veverka supports this in his second principle: that people learn better when they use more senses to process the stimulus. This is also a reason for staging the exhibition in a way that appeals to more than one sense (cf. Klein/Wüsthoff-Schäfer 1990: 12). In the 1970s research showed that an exhibition with only text would not succeed in achieving its educational objectives. In order to reach different demographic classes, staging was used as a means of communication (ibid.). It helps the visitor find access to the exhibition pieces and messages in an exhibition by placing the objects in a larger context. This can take place by means of thought provoking items, deliberately confusing statements, contrasts and such like (see Klein/Wüsthoff-Schäfer 1990: 22). By staging we also understand the creation of a dynamic moment. This can be especially effective with children by providing models with moveable parts or interactive objects (Klein/Wüsthoff-Schäfer 1990: 8). In general we can speak of reanimating a “dead device” (ibid.).

Entertainment is essential to an informal learning event such as a travelling exhibition. In the last few years the term “edutainment” has emerged from a concern with learning that is also entertaining (cf. Klein 1984: 179; Ham 1983: 12). It emphasizes the importance of how a message is communicated, since facts that are presented in an entertaining fashion are more likely to be learned by a visitor and will reach a broader audience by awakening curiosity (ibid.).

This is also true for coastal and disaster protection, as mentioned at the beginning of the section. In order to make the topic as tangible and comprehensible as possible and to emotionalise it, the message has to penetrate into the life of the visitor. That means that people will only really concern themselves with things if they can see a relationship to their own lives.

The most important requirement then is to make clear the importance of the topic for the visitor. The topic coastal and disaster protection has enormous potential in this regard, as it affects the people living in the coastal lowlands of Schleswig-Holstein directly, even if not all of them are not aware of it. The travelling exhibition has a good chance of addressing this deficit and overcoming it. How this was implemented in the coastal protection exhibition is comprehensively described in Section 3.2.

2.3 Risk communication and informal learning

The theoretical-conceptual perspectives of risk communication and informal learning are appropriate for orienting the conception and evaluation of targeted communication and information instruments such as a travelling exhibition and an information pavilion.

A central aspect of risk communication is the information and education about risk-related topics. This involves information in case of emergencies and disasters which then initiates changes in behaviour and preventive measures. Finally, the arising problems and conflicts must be resolved jointly, that means by political decision-makers, scientists and with the participation of the public. Informal learning plays here an especially important role as it has in each of the points mentioned here a decisive function, whether the acquisition of knowledge about risks and emergencies that are part of everyday life or the initiation of intrinsically motivated changes in behaviour. The exchange with other interest groups is founded on this assumption.

If we begin with the integrative perspective of risk communication and informal learning as an orientation for the design of a travelling exhibition and an information pavilion, then we need a systematic approach to the topic. Following Gutteling/Wiegmann (1996) it is the perception of a risk (that is to be communicated in order to solve a related problem or at least ameliorate it) that is the starting point. The next step is a thorough preparation and development of a communication strategy containing concrete plans for dealing with the problem. If there is not enough data then further studies must be undertaken, and interviews with individuals important for the topic must be held. When the topic preparation and the communication methods have been decided upon then we proceed to

the next phase of communication design. This is where plans and methods relating to content, sources and channels are clearly defined. The following points must be addressed in communication planning:

- The communication goal and purpose must be clearly defined in the message
- The risk information cannot be misleading. It must be logical and represent the current state of scientific research. The communicator must be able to provide evidence for the truth of his claims.
- If there is some doubt about the scientific basis of a claim, the public should be made aware of it, otherwise a loss of confidence arising from scientifically incorrect statements would mean the end of a successful communication strategy.
- Risk information must be comprehensive and no important details should be left out.
- Risk comparisons or the use of statistical information or numerical values should be handled with care

The framework developed in this section provides a basic orientation for the conceptual development of the travelling exhibition and the evaluation of the information pavilion presented in the following section.

3. The travelling exhibition "What's that got to do with me!?"

3.1 Methodological approach

As part of the project "Wat geiht mi dat an?" (What's that got to do with me?) the Infu visited other best practice exhibitions. With the help of the experts at these places we were able to gain an overview of exhibition halls in Schleswig-Holstein, including the "Blanke Hans" in Büsum, the "Multimar Watt Forum" in Tönning, the "Nissen House" in Husum and a number of other small museums that also deal with the topics of storm floods and coastal protection. In addition we talked with experts such as Bernd Pilgrim at NLWKN or at the Ill Oldenburg Dike Association.

In order to plan our own exhibition we held a total of three workshops. They were organized by the Institute for Environmental Communication and Sustainability (Infu) and took place in the Ministry of the Interior (IM), in the Ministry for Agriculture, Environment and Rural Affairs for Schleswig-Holstein (MLUR) in Kiel and in the Agency for Coastal Protection, National Park and Ocean Conservation (LKN) in Husum.

As part of the first workshop on 14 September 2007 in MLUR we discussed concepts and their implementation. In addition to the project partners (MLUR, IM, Infu) the following experts took part in this workshop: Axel Hilker, MLUR, Department 4, responsible for public relations for the Water Framework Directive and Dr. Hendrik Brunckhorst, then active in the Wadden Sea National Park Office, today in the Staff Office Public Relations of the LKN. In the course of the workshop the following points relating to the exhibition were discussed:

- Target group definition
- Goals of the exhibition
- Core message
- Public involvement
- Exhibit pieces
- Organisation/marketing

All these points were discussed together with the experts. The goal of the workshop was to present the state of research and the status of work undertaken and then to define the contents of the individual points and, if necessary, modify them.

The second workshop took place on 9 November 2007 in the IM and mainly dealt with the design of the exhibition. With the help of experts the design elements and the implementation of the travelling exhibition were to be specified. Two experts were invited: Prof. Manfred Schulz of the Muthesius Academy of Fine Arts and Design, Department of Design, co-responsible for the "Ocean of the Future" exhibition and Marion Jahnke, designer and exhibition designer from Kiel. The following points were discussed:

- Presentation of the general concept
- Detailed discussion of the design of the exhibition pieces
- Schedule and assignment of tasks

With the help of the experts, the status of the exhibition pieces were examined and improvements in the design were proposed. In addition an overview of costs was presented and it was discussed to what extent they were realistic and necessary. The participants presented their schedule and the experts gave an opinion as to whether it could be realistically kept to.

The third workshop took place on 12 December 2007 in LKN in Husum. The experts were invited again as well as contact persons from the potential exhibition halls, where the planned travelling exhibition would be exhibited for a period of time. The contact persons included Dr. Astrid Fick from the North Sea Museum (Nissen House) in Husum, Dr. Hendrik Bruckhorst from LKN (Staff Office of Public Relations), Dr. Gerd Meurs, Director of the Multimar Watt Forum in Tönning, Sonja Schukat from Blanker Hans in Büsum and Dr. Matthias Strasser from the Erlebniszentrum Naturgewalten in List on Sylt.

One of the purposes of this workshop was to explain the concept and main topics of the exhibition to the venue organizers, and the other was to discuss the logistical aspects. The exhibition venue organizers were asked whether they would be able to arrange for the transport to and from the locations, as well as setting up and taking down the exhibition, as the federal state government would not be able to provide any financial aid for these purposes. The exhibition venues were greatly interested in the exhibition but had reservations concerning the main topics, as these overlap to an extent with their own exhibitions. Some of the experts were of the opinion that the travelling exhibition could lose its effectiveness if its topics were repeated in some of the exhibition venues. As a result it was agreed upon not to cooperate with these venues, but instead to put the logos of the exhibition venues on the rear side of the travelling exhibition panels in order to draw the visitor's attention to the more comprehensive presentation of the topic storm flood risks and coastal and disaster protection provided in these locations.

A design agency was contracted for the layout and production of the exhibit pieces. Due to the topic focus and the good references in the area of coastal and wadden sea protection, the Marion Jahnke design agency in Kiel was entrusted with the work. Ms. Jahnke has been involved since 1993 with designing exhibitions about nature conservancy in Schleswig-Holstein, especially about coastal lowlands and the wadden sea.

In mid-March the layout of the travelling exhibition was finished and the data was forwarded to the construction company Westag-Getalit in Stuttgart, who were to build and print the exhibition pieces. At the same time Ms. Jahnke had the carpet made with the photo of a map of Schleswig-Holstein and the flood-endangered area (see Section 3.2). The exhibition construction company Herrmann Jahnke, after the production and printing of the display panels was completed, built in the multimedia objects and did the remaining milling work.

The unified appearance of the whole travelling exhibition was developed by Ms. Jahnke (see Appendix). The colours were chosen to complement the topic. Since the exhibition is about storm floods and coastal areas, the dominant colour chosen was dark blue that together with a matt green in the illustrations and text connectors emphasized the contrast between sea and land. The green forms a frame for the photos and screens and looks like a hallig, a small island, washed by the ocean. In the lower part of the display panels a stylised wave was drawn, which supports the blue symbolising water. The organisation of the multimedia stations (e.g. screens, MP3 audio stations and background sound) and the purchase of a life jacket as an introductory element to the exhibition were also done by Ms. Jahnke.

3.2 Concept

The exhibition concept was divided into the following subpoints:

1. Goals of the exhibition
2. Target group(s)
3. Methodology/Structure
4. Organisation
5. Corporate Design

In the following each point will be explained.

1. Goals of the exhibition

The goal of the action “The informed society” is to increase over the long term acceptance in society for coastal risk management. The condition for this is knowledge about potential natural hazards and their consequences. The public should receive background information about coastal protection as well as information about preventive measures in case of an extreme storm flood. The visitor should be made aware of the vital importance of storm flood protection for Schleswig-Holstein in a period of climate change. The topic of climate change and rising sea levels is presented by means of scientific evidence (by expert interviews) in order to guard against unscientific disaster theories. The core message of the exhibition can be summarized as: “Storm flood protection in Schleswig-Holstein is of vital importance - today and in the future!” The sub-message can be formulated in the four topical units that were introduced in this section (see Section 3 Methodology/Structure).

2. Target group(s)

Both the inhabitants of the coastal lowlands in Schleswig-Holstein and the indirectly affected population of Schleswig-Holstein (as taxpayers) are defined as target groups. Tourists from the rest of the nation were disregarded, as people not from the region have a different access to the topic of storm floods and would need a different thematic preparation. The challenges among the target groups are extremely varied. The table below attempts to reveal the complexity.

Target groups	Challenges
Population of SH affected and showing interest in the topic and aware of risks	“Refresh” awareness Expand knowledge Give advice for action
Population of SH affected, but uninterested	Awaken interest Sensitise for the topic
Non-affected population of SH (taxpayers)	Solicit acceptance for coastal protection

Table 1: Challenges in the communication with varying target groups (adapted from: SAFECOAST Action 2: “The informed society” 2007: 114)

To the extent that the affected population has a variety of interests in the topic of storm flood protection, when preparing the topic we have to respond to the challenges listed in the table. Different strategies are used depending on how much people already know about the topic so that they are oriented to the needs of each target group. On the one hand the exhibition is targeted at people who are already familiar with the topic of storm floods and coastal protection and who simply need to have the topic refreshed. Other population groups are just as much affected, but do not consider themselves to be and are disinterested in the topic. Here the challenge is to awaken interest in the importance of storm flood protection in their own lives. The third target group are citizens of Schleswig-Holstein who do not live in the endangered coastal lowland areas but as taxpayers need to be sensitised to the need for coastal protection so that their acceptance of (expensive) adaptation measures is increased.

3.3 Methodology/Structure

The design and the methodological background of the exhibition is oriented towards a varied and attractive mix of methods and contents that are self-explanatory and refer to the life of the visitors. It is important to make sure that the topics are communicated in a way that is neutral, objective, simple, targeted and comprehensive (Hofstede *et al.*, 2005).

The exhibition is made up of a number of different elements. The key element in the exhibition is a display panel that is united by a number of “topic suitcases” (see Figure 1). The visitor at first sees a dike from the land side as illustrated on the stabilising rear panel side (pillars made of HPL panels) that connect the individual topic suitcases together. The visitor is given the impression that he is on the protective interior side of a dike. This should make it clear that the dike protects us from the power of the ocean. This message is reinforced by the sound of a storm. The pillars with the dike photo serve as a unifying element of the individual exhibition pieces, making clear what the topic of the exhibition is. On the panel walls there are audio and visual stations. Other elements of the exhibition are a photo carpet and life preservers on clothes stands, which serve as eye-catchers.

The four topic units in the form of movable walls projecting into the room deal with the following points, sub-messages, of the exhibition:

→ Display panel unit “People and floods”: Here the visitor can read how storm floods in the North and Baltic Seas are generated and whether he lives in a flood-endangered area. The visitors to the exhibition should understand at this point that not only those living directly next to the sea are exposed to risks from flooding but a much greater part of the population, that is all those living in the coastal lowlands of Schleswig-Holstein. An attraction for children here is a storm flood memory game.

→ Display panel unit “Coastal protection”: The history of dike construction over the centuries is presented as well as current maintenance and protective measures to secure the dikes. In addition there is an explanation of how advance warnings of a storm flood are given (risk minimization) and what people who work in coastal and disaster protection actually do. This is accomplished by texts and audio stations. The importance of coastal protection by functioning dikes are at the centre of the communication of this display panel unit. It should develop an understanding and an acceptance for the work done in coastal protection. There are two comics here as an attraction for children.

→ Display panel unit “Self-protection”: Tips are given here for people to help themselves, what to do in an emergency and what precautions should be taken (checklist). A film is also shown of people in Schleswig-Holstein taking part in a survey and talking about storm flood risks, coastal protection and climate change forecasts. This display panel unit highlights how the population can help itself by taking precautionary measures. The attraction for the children is a suitcase that can be packed with both sensible and useless things when evacuating, as well as a spinning disk with pairs of pictures that have to be matched.

→ Display panel unit “Future scenarios”: The coming climate change is presented using the opinions of experts, who discuss the situation of Schleswig-Holstein and countries bordering the North Sea. By extending to the North Sea region we want to emphasize that climate change and possible adaptation strategies are not merely a national challenge, but have an international, European dimension. This complies with the goals of the EU-funded INTERREG programme. In addition 40 tips for “Helping to make a better climate” are provided so that visitors have practical advice they can take action on. In the children’s attraction, children from around the world are given a voice so that they can tell how climate change is affecting their part of the world in comparison to northern Germany. This last display panel unit is meant to encourage thinking about the future and the safety of the domestic coastline. By using expert interviews the topic of climate change with all of its risks is communicated competently.

The rear side of the pillars is printed with a variety of photos that given an impression of a “view out to sea” and convey a emotional and lyrical introduction to the ocean and its coast through stories, poems, etc. Photos of past floods, maps showing the changing coastline and other emotional photos, including aerial photos, or proverbs and popular sayings are shown on this side.

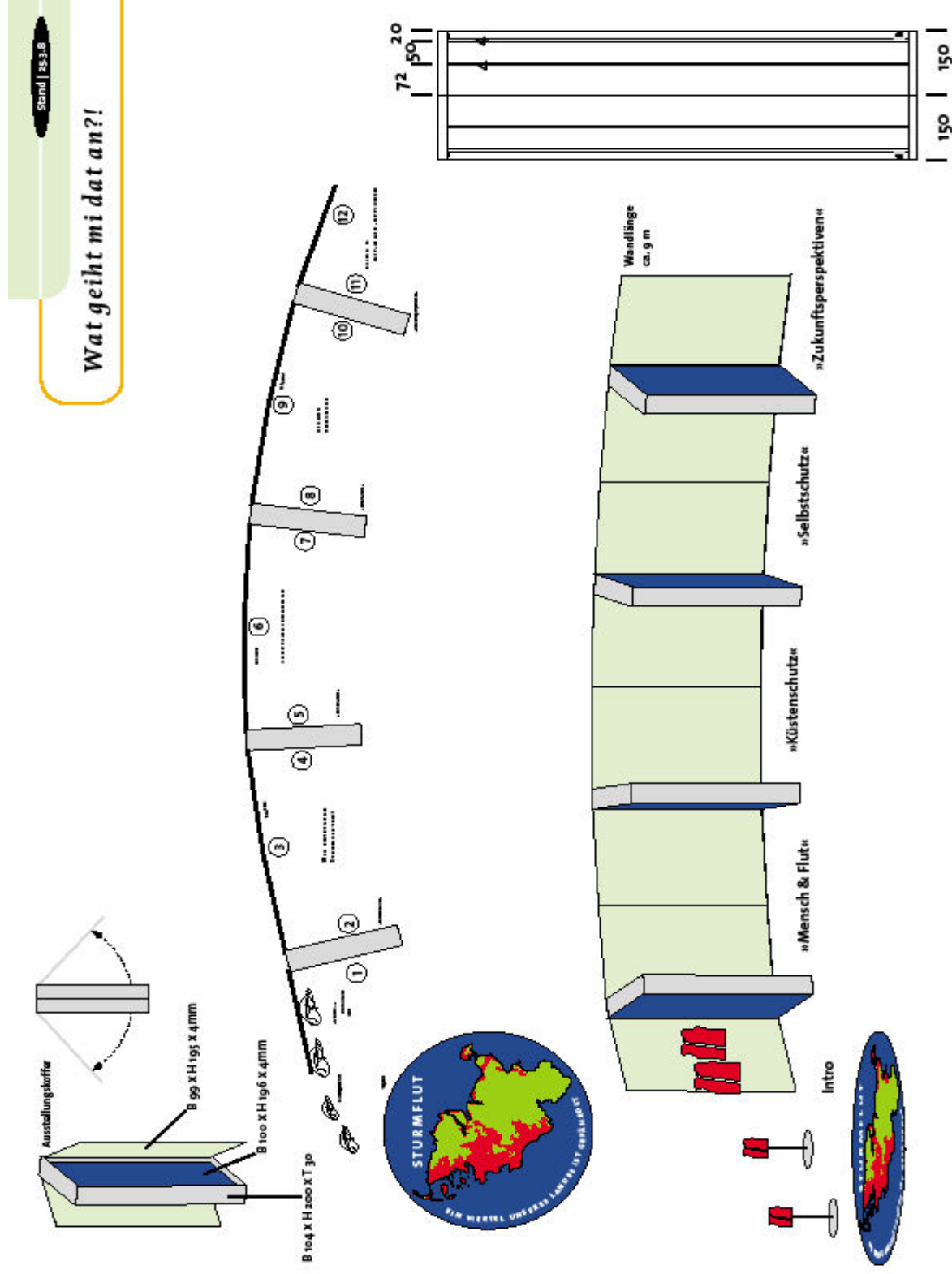


Figure 1: Exhibition sketch (Marion Jahnke on 25.03.2008)

4. Organisation

It is planned to show the exhibition in a number of “everyday locations” on the Schleswig-Holstein North and Baltic Sea coasts. The choice of the target groups determines where the exhibition will be shown. In all likelihood this will be in government authorities and agencies (e.g. local emergency management agencies), town halls or the local savings banks. The length of the exhibition will depend on the location it is being showed at and on the organizer. The exhibition will be advertised in local newspapers and (if possible) in local event magazines.

The exhibition opening will be June 2008 in the Kiel town hall with an opening event. After about a three-week exhibition period (including the Kieler Woche, a sailing event) the travelling exhibition will be moved to either the County Administration in Husum (Registration Office) or to the Nord-Ostsee-Sparkasse (NOSPA savings bank) and stay there for four to six weeks. In June Katharina Koch (thesis student at the University of Lüneburg) will oversee the exhibition. She will conduct an evaluation in the form of a survey questionnaire of visitors to the exhibition.

4. Evaluation of coastal protection pavilions on west coast of Schleswig-Holstein

4.1 Current situation

On the west coast of Schleswig-Holstein there are currently about ten coastal protection pavilions of the LKN (until 31.12.07 Husum Office for Rural Affairs). They portray the tasks of coastal protection on eight posters (see illustration of the posters in the Appendix). The task of Infu was to conduct a strength-weakness analysis using relevant research as well as the results of the two focus groups and then to give design recommendations.

4.2 Strength-weakness analysis of the pavilion at the harbour in Büsum

In this section the strengths and weaknesses of the pavilion in Büsum are analysed using the research findings of a literature survey. Since the posters and the construction of the individual pavilions do not vary much (except for one poster that shows regional elements), the results of the analysis of the pavilion in Büsum can be transferred to the other pavilions. Following the analysis conducted by the Infu, the results of the focus groups concerning the pavilions will be presented in order to give a final evaluation of the strengths and weaknesses of the pavilion. Based on these results recommendations for the redesign of the pavilions will be developed. The first recommendations were discussed in the second focus group (see Section 4.3).

The pavilion in Büsum is at the end of the harbour pier. As it stands with its rear side facing the footpath (see figure 2), it is impossible to see what function the pavilion has. It is not identified by a flag or a logo. The contents are first revealed when the visitor enters the shelter. For many pedestrians the pavilion will be noticed very late. People who are staying in Büsum do not have an opportunity to learn that there is a pavilion about coastal protection as there is no advertising.



Figure 2: Coastal protection pavilion in Büsum



Figure 3: View of the pavilion from the footpath

The following topics are addressed on eight posters in the pavilion:

1. Tasks of coastal protection
2. Mission of coastal protection

3. Official district of the ALR Husum
4. Dike construction then and now
5. Dike maintenance
6. Sand dredging and pumping
7. Work on dike foreshore
8. Construction of dike tops
9. Dike reinforcement
10. Halligen (regional poster of islands; changed to fit each location)

The headings of each poster are serially numbered, making a fixed progression for the panels. All together there is much more text than illustrations and reading all of the text would take at least 20 minutes. This amount of text seems very extensive, considering that research shows that a visitor would read no more than 70 words per text unit. Some of the text passages however have more than 100 words. The core message in the panels is not clearly explicated. The text should confine itself to the most important information and the sentences should also be shortened (preferably no more than 12 words per sentence). Regarding the poster, this means that the long text passages without headings do not encourage the visitor to read but have a deterrent effect (see Tesche 2005: 124). The text appears even more compact and bulky because the space between the text blocks is very small (see Figure 4). In addition the font size in the text has a similar size. This does not help reader orientation as the headings do not contrast with the text. The text should be in a larger font size that can still be read from a distance of 1.5 metres. The headings should orient the reader and explain the contents of the text.

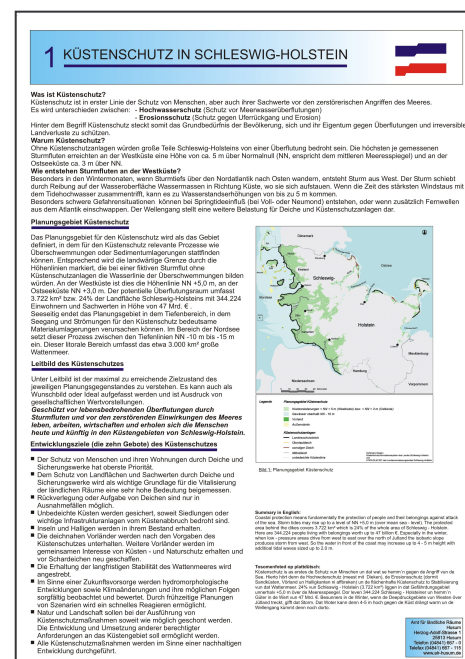


Figure 4: Poster coastal protection in Schleswig-Holstein (Office for Rural Affairs)

Questions are, for example, a good way of making a heading (see Poster in Figure 4). Research shows that provocative headings or ambiguous ones encourage people to read and that the text is more entertaining (see Ham 1992). Headings like, for example in the poster on dike construction, “Definition of terms” or “Composition of flotsam” sound too technical or academic. As described in Section 2.2, visitors to these pavilions are in a holiday mood and do not particularly want to spend time thinking hard about the topic of coastal protection.

The texts should be so interesting that people will want to read them even though they may never have heard of the topic and may not be extrinsically motivated to learn about coastal protection. The “entertainment element” is missing from the poster in that too many technical terms are used

(e.g. hydromorphological development, sediment redistribution, state protective dike, above mean sea level, clay mastic asphalt topping etc.). Too many lists tire the reader as well; technical data is listed in great detail even though the relevance for the reader is questionable (e.g. “sod dimensions” in the poster on dike construction). Some of the posters did not fit into the frames and so part of the text was cut off and so illegible.

Some of the illustrations are not easy to understand (see Figure 4). Concise and easy to understand information that would explain the graphic is missing. In some cases the colours

of the illustrations have faded over time and are now unattractive. Bright colours in the headings or coloured backgrounds for the texts could function as an “eye-catcher” and increase attention.

At the bottom of the poster there is a translation of the text into English and Low German. This translation is effective as it allows foreign tourists to understand the texts. However it should be remembered that only about 1.1% of the tourists on the west coast of Schleswig-Holstein come from abroad (see Business - Das Themenportal für Tourismusmarketing o.J.).

4.3 Results of the focus groups in Büsum

Eleven persons took part in the first group discussion on 28.09.2007. They had been approached on the street and had agreed to participate in such a discussion. The group was fairly heterogeneous in terms of age and where they were from. There were people aged between 25 and 67 and they came from all parts of Germany (Brandenburg, Baden-Württemberg, Ruhr area, Bremen). Unfortunately there were no local residents, as those who had said they would take part did not come on the day of the discussion.

The second focus group took place on 2.11.2007, about four weeks after the first discussion. There were two local residents and five tourists taking part, including individuals who were working, retired, students and one doing community service.

After a brief introductory session both groups were taken to the pavilions at the end of the pier in Büsum and were given about 20 minutes to look at the posters and read them. After this time period the groups returned and began, guided by non-directive moderators, talking about the posters. The moderator only introduced topics (which form the basis for the discussion contents given below). The first group talked only about the pavilion in Büsum. The second focus group was used to get a second opinion about the pavilions in their current state. In addition this group was shown three new draft posters designed by Infu and asked to comment on them. In the following we will first present the results from both discussion groups on the pavilion posters from the LKN Husum then we will describe the comments of the second group to the Infu posters.

First impression: Quick comment responses

At the beginning the participants of both groups were asked to give quick comments on what they remembered about the posters they had looked at. It was often said that the posters had too much text and the reader was overwhelmed by the amount of information. One person however was positively surprised by high intellectual standard - the information was good and interesting. The illustrations and diagrams were considered to be good, but they should be more colourful and there should be more of them. In addition the number of technical terms was criticised as being unintelligible by most. The location was described by a large majority as being unfavourable. A number of times the recommendation was made to set up the panels individually.

Texts and graphics: Everything read and understood?

The texts were judged to be too long and too difficult to understand. One respondent said, “I had to read it twice because there were so many words that I didn’t understand.” Another person said spontaneously, “The text was just too much!” Two members of the first group thought that they would not have understood the text correctly if they had not been at the Museum of the Ocean in Büsum the day before. One of the participants of the second group argued that more attention could be gained by working with, as she put it, “highlights”, meaning pithy colourful headings with a concise, explanatory text. This “tabloid newspaper” format would go down better with most people. Another participant thought that in the first poster (coastal protection in Schleswig-Holstein) the topic planning area for coastal protection was difficult to understand, especially the classification of flood-endangered areas. The overall concept of coastal protection was also difficult for him to understand. All of the participants of both groups wanted less text and text that was easier to understand.

All of the participants thought that the font size of the letters was adequate, even those wearing glasses. In contrast to the text the illustrations and graphics were found by both groups to be good and understandable. However they wanted larger graphics and explanations. One person said about a graphic, “I wish someone would have explained it to me.” In the second group one person commented that it should have been easier to see which photo the texts referred to.

Another topic was the technical terminology. Both groups thought it would be better to explain the terms in a glossary, but did not think that non-Germanic words should be removed. One participant summarised it like this, “It seems the experts wrote the text - the content is too technical.”

The translation of the texts into English and Low German pleased the participants in both groups very much. They would have liked such a concise text in German.

Layout: The background of the poster (pure white) was considered too “outmoded and without imagination”. One person wished that the background had some colour to it, for example a pale yellow or a colour fading out to the top or bottom. There were also complaints that the pavilions were not handicapped accessible for wheelchair users, as the texts were hung too high up. Images and texts should be at least partly made accessible to the visually handicapped. It was also mentioned that the posters should be attractive for children too.

Topic choice: The topics were thought to be of current interest, however it was criticised that there was no image of storm floods. The first group came up with the idea to design a panel about the rescue procedure by coast guard ships. In addition the participants would have liked to have specific information on what to do in case of an emergency, as this might be of particular interest to local residents. One person suggested a display panel on regional fauna and flora. A number of participants in the first group were in favour of doing without the pavilions all together and instead having the panels set up individually so that “each topic could sink in”. Also in the second group there was a discussion about whether the posters should be arranged as a “coastal protection path”, that is separate from each other. The reason for this was that it would be easier to take in the information on an educational walkway. It was critically commented on thought that the unity of the posters might not be recognized.

The numbering of the posters and so the predetermined sequence was unnecessary, according to one participant.

A member of the second group agreed with the topic choice of the posters because they did not go into the history of coastal protection but portrayed its current status. The suggestion was made to use fewer technical data.

The moderator had the second focus group make suggestions for redesigning the panels. The participants were given the following list of poster topics and asked to make comments on them.

Poster 1: Coastal protection (current proposal)

Poster 2: Storm floods (current proposal)

Poster 3: Dike construction (current proposal)

Poster 4: Other tasks of coastal protection (foreland work, dike maintenance, ...)

Poster 5: Erosion (sand pumping)

Poster 6: Climate change and the North Sea area

Poster 7: Regional topics

Poster 8: Children’s poster

One participant made the suggestion to combine posters four and five as one poster about erosion because he thought that two posters provided too much detail.

The children's poster (Nr. 8) was thought to be necessary and important by one participant. She made the suggestion to show how children can become involved in coastal protection (e.g. don't run on the dike, play etc.). Another participant could not imagine dealing with the topic on just one poster for children. He was in favour of having a "children's corner" on each poster.

One participant complained that the list did not contain nature conservation.

Location: Both groups complained about the sign-posting of the pavilion location. One participant said, "I never noticed that there was something inside". The sign-posting needs to be improved. "The pavilion should be recognizable from far away. There should be a flag on the roof or a logo", said one participant. The dark paint of the pavilion was thought to be unattractive. One participant said, "I would begin by painting it blue, white and red and then write 'Info' in big letters on it.". The location itself was "not bad, it fits the topic". Also the pavilion should be accessible without a spa ticket, that is free of charge. More advertising should be made for the pavilion, for example in the Büsum information flyer or sign-posting downtown or on entry tickets for other attractions (e.g. the Blanker Hans Storm Flood World in Husum). At dark the pavilion should be lighted up and there should be seating.

The flyer with information about wadden sea tours, which can be taken from a box in the pavilion, should be replaced by topic-specific information.

4.4 Summary of strengths and weaknesses

In this section in Table 2 we provide an overview of the strengths and weaknesses from the Infu analysis and both focus groups.

Area	Strengths	Weaknesses
Contents/Layout of the posters in general	Panels informative, Scientific facts of basic interest	Too much information packed together, too much at one time
	Topic choice interesting	Topic storm flood and what to do in storm floods missing
		No contents appropriate for children
		Layout of the poster unattractive
Text	English and Low German summaries	Too much text, too few headings, paragraphs too close
		Too much technical terms and information
Photos, Illustrations	Photos and illustrations generally interesting	Photos and illustrations too little colour and not always easy to understand
		Photos and illustrations too small

Location	Seaside location fits topic	Not handicapped accessible, especially for wheelchair users
		Location unfavourable as pavilion not easily found by visitors and no advertising made
		Pavilion too inconspicuous (no identification, no lighting)
		Posters too close to each other

Table 2: Strengths and weaknesses of the pavilions

The members of the focus groups agreed that the topic pavilions on coastal protection are basically interesting and that although the panels are informative, they are overwhelmed by the amount of information, technical details and non-Germanic words. The graphics and illustrations were considered helpful, however they are too small and the lack of a connection between the texts and the graphics causes confusion. The texts and illustrations on the posters might not be read or only skimmed as a result. The panels do not provide information appropriate for children. As a result families will probably not spend time at the posters. Since the pavilions are not readily identifiable, many visitors to Büsum are unaware of the posters. In the winter reading the posters would be difficult in the dark.

Based on the weaknesses of the posters and the location of the pavilions, we formulate in the following recommendations for redesigning the pavilions and show how they can be implemented in three examples.

The following recommendations are based on findings by the focus groups and analysis by the Infu:

- Shorten texts noticeably and reduce them to the most important information
- Explain technical terms separately (e.g. in a box)
- Introduce further graphs and illustrations to lighten up the text. The graphs should be in colour. The illustrations must be attractive and create an emotional entry point to the topic. The illustrations should be somewhat larger and the relationship to the text more clear.
- Introduce further topics: the origin of storm floods, what to do in case of a disaster. Regional posters could point out further opportunities to gain information in the region.
- Signpost the pavilion in the centre of Büsum. In addition the pavilion itself should be identified by a flag or a sign.

4.5 Production of draft posters based on theoretical research and the advice from the first focus group

Based on the strength-weakness analysis, three posters were re-designed as examples to show new design possibilities. These revised posters were meant as a basis for discussion in the second focus group and so the contents were not proofread and would need further work. However they do show possibilities that could be used when the posters are ultimately revised. Two of the three posters are oriented towards the posters of the LKN (Posters 1 and 3), the third one deals with the origin of storm floods, a topic that was proposed in the focus groups and had not yet been dealt with.

4.5.1 Poster 1: What does coastal protection mean for Schleswig-Holstein?

The text for this draft poster is adapted from the existing Poster 1 on coastal protection in Schleswig-Holstein. An effort was made to reduce the text to the most essential information so as to shorten its length. The heading of the poster is formulated as a question in order to encourage the reader to read the following text. After reading the

text, the reader should know whether he is living in a flood-endangered area and why storm flood protection is necessary for Schleswig-Holstein.

Two technical terms (MSL and primary protective dikes) are explained in a separate box, as suggested by the first focus group. Three photos give the visitor a visual entry point to the tasks of coastal protection. The graphic was taken from the existing poster, but on a provisional basis as the colours are too pale. We have entered a number of places in the map, but more are needed for a better orientation. The map will be reworked for the exhibition and will be then used when the poster is revised.

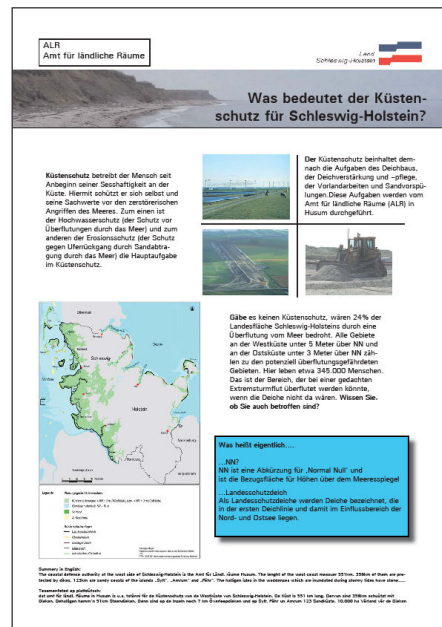


Figure 5: Poster coastal protection (revised)

4.5.2 Results of focus group 2 on the poster “coastal protection”

All of the participants approved of this first draft poster: “That’s already an improvement”, said one participant. The short texts and the explanations for the terms “MSL” and “primary protective dikes” were considered to be important improvements. The clear and simple German in the text was easily understood. And the question at the end was considered effective. The comment of one participant was: “I’d like to read more now.”

The map however was criticized by the group. The participants could not for example find Büsum on the map. It was recommended that richer and brighter colours be used. The endangered lowlands (under 5m/3m below sea level) were difficult to recognize. The legend was not very helpful either. This advice will be taken into account when the map is revised for the exhibition.

4.5.3 Poster 2: What causes a storm flood?

The topic storm flood was recommended by the first focus group and was then developed into a draft poster as an example. The text was kept short and explained by the illustrations. The reader should understand how high and low tides on the west coast of

Schleswig-Holstein originate and what conditions lead to extreme storm floods. So that the visitor can find further information himself there is a reference to the internet page of the German Federal Hydrographic Office.

The graphics and illustrations are meant to help readers access the topic. The illustration visualises the water levels at MWL and MHW and how high an extreme storm flood surge can be. The blue box is raised and so attracts attention.

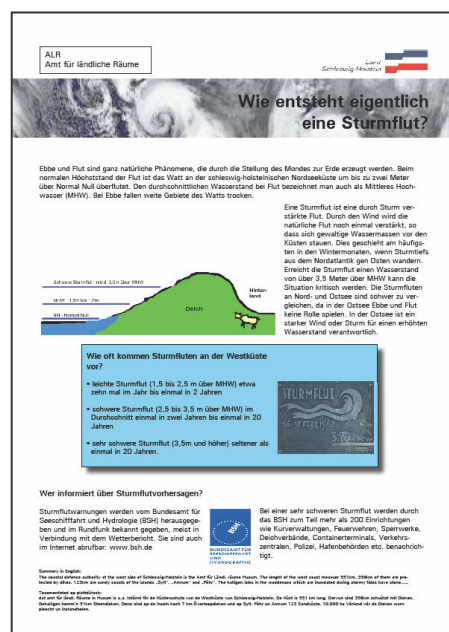


Figure 6: Poster storm flood (revised)

4.5.4 Results from focus group 2 on the poster “storm flood”

The participants of the second focus group also found the topic of the poster both important and interesting. One participant said, “The storm flood topic has to be part of it. After discussing the topic a comment was made about the illustration of the dike and the water levels and that it would be better to have a single reference point. The participant suggested referring all values to MWL so that it would be easier to relate heights.²

A comment was made that the blue box containing a list of the likelihood of storm floods happening was difficult to understand and that instead the height of previous storm floods (e.g. in Büsum) be given. This would then avoid having to express frequency in probability terms. There was also a criticism that the illustration in the box was not spectacular enough and it was recommended to use a more dramatic image (e.g. a break in the dike).

The satellite photo was criticised as being too abstract a portrayal of storm and wind. The black heading was hard to read on the satellite photos and should be in white. Formulating the heading as a question was approved of. And in general there was approval of the poster as shown in a number of comments: “I think the page is well done.” Another participant agreed, “I think so too. Good.” Another participant: “The texts are easily understood.”

² The change has not yet been made in the new poster, which still has the value “MHW”.

4.5.5 Poster 3: How is a dike built?

The content of this draft poster is related to the existing poster 3 on dike construction. First the history of dike construction is described, then information about current construction techniques. The blue box shows how dike construction is affected by climate change. This poster also attempts to use images to visualise the contents of the text (see graphic showing the size of dikes over the centuries). A blue box was also inserted for the sake of clarity.

As with the other posters there is a Low German and an English summary of the text.

4.5.6 Results of focus group 2 on the poster “dike”

One participant did not connect the sentence “The form of the dike is convex” with the illustration because the dike there is not clearly convex. The formulation was not clear because the bulge only refers to the upper part of the dike.



As a result of the illustration there was a discussion about the reasons for the sea level rising and the conclusion was that the text should address this issue.

The graphic was found by all the participants to be clear and good: It was the best of all because it was visually attractive.

One participant suggested using a saying from Low German, for example “Wer nicht will dieken, muss wieken.” Roughly translated: if you don’t build dikes then you’ll have to get out of the way.

Figure 7: Poster dike construction (revised)

5. Conclusion and outlook

Climate change confronts coastal and disaster protection, if it is to continue to safeguard the population over the long term, with a major challenge. The rise in sea level will affect the coast of Schleswig-Holstein as well, which is why it is especially important to develop a comprehensive government risk communication strategy so that the importance of the topic is recognized and understood by each person. A decisive role is played by providing information, education and the capability to take precautionary action. But also possibilities for dialogue-orientated communication and participation have a long-term role to play in storm flood protection (see Heinrichs & Grunenberg 2007: 29f.). As already discussed in Section 2.1 an important part of risk communication according to Covello et al. (1987: 112f.) involves the following points:

- Information about and explanation of risks (enhancing knowledge about risks, giving priority to education)
- Initiating change in behaviour and precautionary actions
- Information in emergencies and disasters
- Joint problem and conflict resolution by political decision-makers and scientists with public participation

The travelling exhibition “Storm flood - What’s that got to do with me!?” is a means of communication that can be seen as a part of this strategy. It should be considered an important contribution to risk communication because it goes beyond the booklet developed in the first report “The Informed Society” that was only distributed in the coastal lowlands in addressing new target groups. It also communicates very graphically the topics storm flood risks, coastal and disaster protection and climate change. The risk is clearly described using text, illustrations, audio and visual stations. By involving the public through surveys the knowledge, ideas and wishes of individuals are included in the project. In the final report SAFECOAST Action 2: “The informed society” (2007: 118)

“By involving the population [...] and including their recommendations, the needs of the public can be better met and as a result the acceptance for measures can be increased over the long term.”

This recommendation was made use of in the concept development of the exhibition. Implementing the exhibition involved using the approaches of risk communication and informal learning. When developing a strategy for risk communication, the goal and message, the target group, the sender of the information, the means of communication and the style of language are generally important to be considered. This is also reflected in the theoretical approach towards informal learning. Before a communication strategy can be planned it is necessary to clarify the goal and the message. The goals in implementing the travelling exhibition were to increase over the long term the acceptance for coastal risk management. It is important to remember that visitors go to a travelling exhibition voluntarily and undertake it on their own terms. So it is important to limit the amount of attention needed, especially for reading texts. The organisers of an exhibition must adapt it to the visitor’s needs and provide a variety of media (texts, illustrations, graphics, audio and visual stations) that awakens the interests of the viewer. This is especially true for the style of language. Active verbs, provocative sayings and a personal form of address are more likely to gain the interest of the visitor and keep his attention for a longer period of time. This is an important point since exhibitions often have problems in that people do not want to read lots of text but want to be entertained. Edutainment (see Section 2.2), a combination of education and entertainment, plays a decisive role because emotion is more effective than pure information in reaching people. Children should become familiar with a topic through play, i.e. in an exhibition by attractions that can be touched, tried out and thought about.

Under the supervision of the Institute for Environmental Communication and Sustainability at the University of Lüneburg, part of a final thesis will involve an evaluation of the exhibition in order to gain further knowledge about the exhibition and the needs of the public. This method should help us to find out to what extent an exhibition is able to

communicate the goals of risk communication, as related to storm flood protection, and encourage informal learning.

In order to ensure that the exhibition is seen by a large number of visitors, the exhibition will stop in a large number of places and will be well advertised. Good organization is essential - especially in logistics - to transport the exhibition from one place to the other and have already done sufficient advertising. If this cannot be guaranteed then there is a danger that the exhibition will not receive enough attention or will not even be shown. It is important to have planned a route for the exhibition to follow so that there are no gaps in the schedule. It is a good idea then to make arrangements with those institutions in Schleswig-Holstein that have already demonstrated great interest.

In regards to the information pavilions on the west coast it should be noted that there is an overlap between the results from the focus groups and with the research findings. In Section 4.2 we saw that the text was too long and the number of illustrations and graphics was too small. This alone would justify revising the posters, because the focus groups pointed out these weaknesses. That the posters are no longer up to date (e.g. LKN instead of ALR) would be another reason. We strongly recommend that the posters be further developed and improved. Exemplary design possibilities and recommendations have been given as part of this report and can be considered recommendation for their layout.

Generally speaking the federal state government should consider further communication strategies about the topic of storm flood risks and coastal protection management. Which media should be used in the future should be discussed, especially considering their implementation and purpose.

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7. Appendix

Panel 1: Introduction

Panel 2: People and floods

Panel 3: Coastal protection

Panel 4: Self-protection

Panel 5: Future scenarios

Panel 6: Rear side

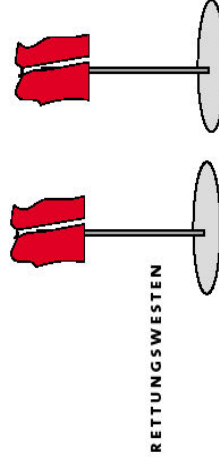
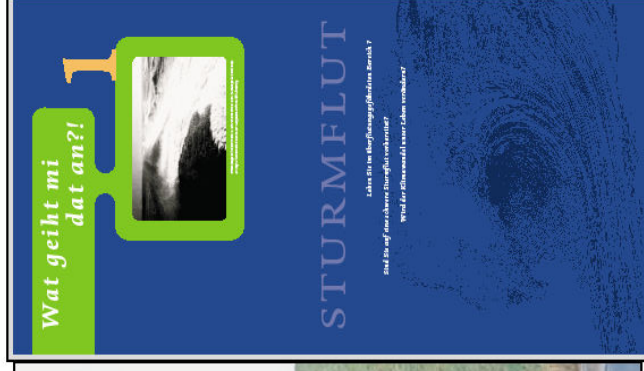
Wand 1

»Intro«

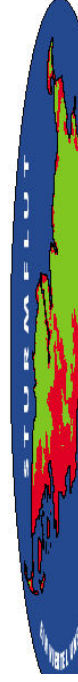
Wat geiht mi dat an?!

STAND | 25.3.2

Stele 1



SH-TEPPICH MIT
ÜBERFLUTUNGSGEBIETEN



STURMFLUT-FILM

THE INFORMED SOCIETY

»Mensch & Flut«

Wat geht mi dat an?!

STAND | 25.3.8

Stele 2

Stele 3

Stele 4

WO LEBEN SIE?

Woher das Wasser in einen Bereich?

1. Welche Länder sind in der Karte rot markiert?

2. Welche Länder sind in der Karte blau markiert?

3. Welche Länder sind in der Karte grün markiert?

SEHEN SIE ROT?

Allein nach dem Aussehen der Karte und der Karte selbst ist es nicht möglich, die Ursache der roten Markierung zu erklären. Welche Ursachen könnten es sein?

1. Welche Länder sind in der Karte rot markiert?

2. Welche Länder sind in der Karte blau markiert?

3. Welche Länder sind in der Karte grün markiert?

DEICH GÄNGER

Einmal-gewiss-erwartet

Einmal-gewiss-erwartet

Einmal-gewiss-erwartet

WAS IST EINE STURMFLEUT?

Was ist eine Sturmfleut?

Einmal-gewiss-erwartet

Einmal-gewiss-erwartet

Einmal-gewiss-erwartet

KINDER-SPIEL: WASSERSTANDSKURBEL

6 SCHIEBETAFELN

3 DREHROLLEN AN DER STIRNSEITE

KINDER-MEMORY

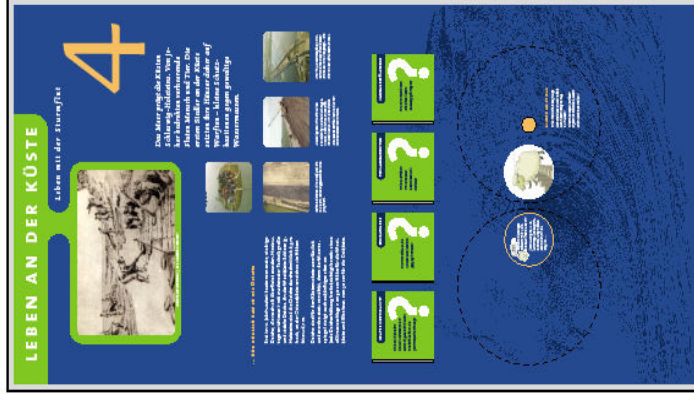
Wand 3

»Küstenschutz«

Wat geiht mi dat an?!

STAND | 25.3.8

Stele 5



Stele 6



Stele 7



2 DREHRÄDER MIT
Schafoamic

HÖRSTATIONEN
SUCHSPIEL FÜR KINDER

THE INFORMED SOCIETY

STAND | 25.3.8

»Selbstschutz«

STAND | 25.3.8

MEINER MEINUNG NACH

WIR HABEN UNS GEFÜGT

FILM MIT INTERVIEWS

Wie gut kann eine solche Interviewführung sein? Wie ist die Interviewführung? Was ist eine Interviewführung? Welche Ergebnisse werden erzielt? Wie wird das Interview gestaltet?

DARF ICH SIE MAL WAS FRAGEN?

- 1. Interviewführung ist eine Kunstform, die sich nicht lehren lässt, sondern nur durch Übung erlernt werden kann.
- 2. Interviewführung ist eine Kunstform, die sich nicht lehren lässt, sondern nur durch Übung erlernt werden kann.
- 3. Interviewführung ist eine Kunstform, die sich nicht lehren lässt, sondern nur durch Übung erlernt werden kann.
- 4. Interviewführung ist eine Kunstform, die sich nicht lehren lässt, sondern nur durch Übung erlernt werden kann.
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- 7. Interviewführung ist eine Kunstform, die sich nicht lehren lässt, sondern nur durch Übung erlernt werden kann.
- 8. Interviewführung ist eine Kunstform, die sich nicht lehren lässt, sondern nur durch Übung erlernt werden kann.
- 9. Interviewführung ist eine Kunstform, die sich nicht lehren lässt, sondern nur durch Übung erlernt werden kann.
- 10. Interviewführung ist eine Kunstform, die sich nicht lehren lässt, sondern nur durch Übung erlernt werden kann.

THE INFORMED SOCIETY

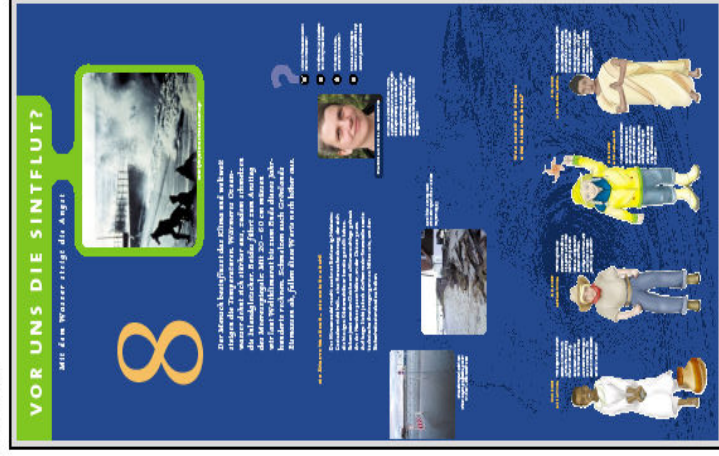
Wand 5

»Zukunftsszenarien«

Wat geiht mi dat an?!

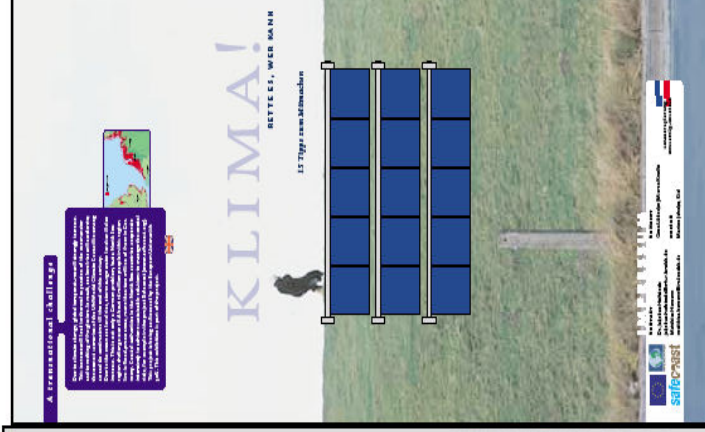
STAND 25.5.8

Stele 11



4 KINDER DIESER WELT
ERLEBEN DEN KLIMAWANDEL

Stele 12



TIPPS ZUM
CO₂-SPAREN

vorn hinten

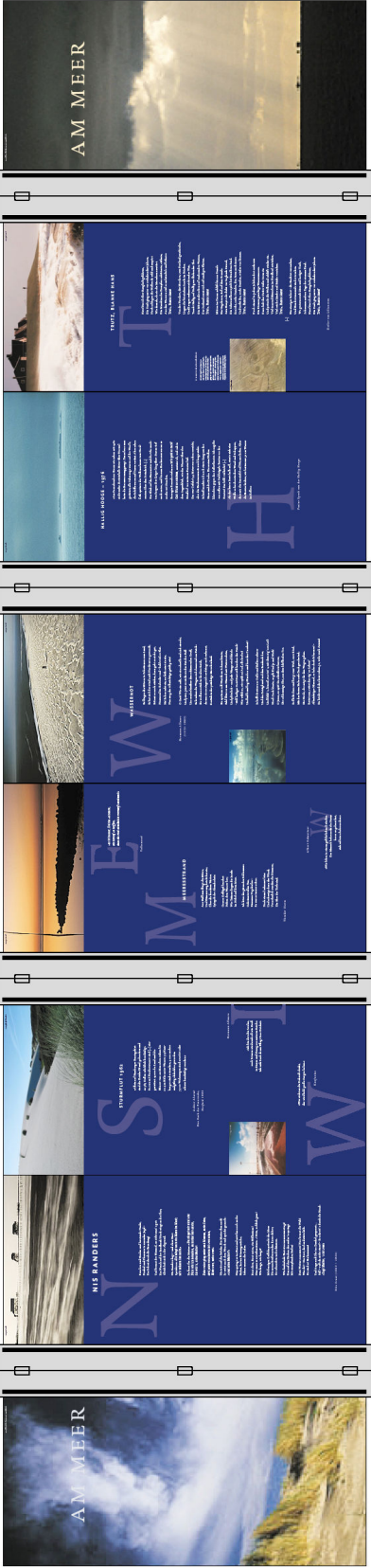


15 Stk.



11 X 11
Front hinter
2mm Acryl

Rückseite





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