

Coastal risk perception and public participation in the North Sea region - DE

1. Policy Objective & Theme

- ADAPTATION TO RISK: Managing impacts of climate change and safeguarding resilience of coasts/coastal systems
- ADAPTATION TO RISK: Integrating coherent strategies covering the risk-dimension (prevention to response) into planning and investment

2. Key Approaches

- Integration
- Participation

3. Experiences that can be exchanged

Flood risk perception and the modes of risk communication were analysed to improve the knowledge-base of the locals and raise awareness and personal preparedness.

4. Overview of the case

The perception of risk and participation methods in the flood-prone community St. Peter-Ording was surveyed.

5. Context and Objectives

a) Context

St. Peter-Ording is situated at the northern German North Sea coast in a flood-prone area. It is protected by dunes and dykes. It covers 2,825 ha which are protected by beach dunes (mainly in the north) and wide sandbanks, and partly by dykes. The hinterland is low-lying (0-2.5 m). About 4,000 permanent residents plus 3,200 temporary residents live in the community. The economy is based on tourism and local services. The greater part of the Wadden Sea and its coastal ecosystems are protected, three national parks along the total German coast cover most of the German Wadden Sea. Participatory activities have been in progress.

Schleswig-Holstein state authorities are responsible to manage flood protection based on the valid flood protection master plan in the area. The State Ministry of the Interior is responsible for the primary dykes, regional water boards are responsible for secondary dykes. A cross-sectoral advisory board is participating in strategic planning. Larger local planning projects require public participation in the course of the planning procedure. A period of 100 years for major storm surges defines the minimum safety standard. The last severe storm surge occurred in 1976. Tidal and wind effects act together when it comes to a storm flood.

b) Objectives

The main objective was to analyse in detail the perception of storm flood risk in a North Sea community. This was to include the personal involvement of the locals that live in such flood-prone areas in flood defence planning.

6. Implementation of the ICZM Approach (i.e. management, tools, resources)

a) Project Management

The Coastal Defence Division of the Schleswig-Holstein Ministry of the Interior organised the initiative together with scientists from the Institute of Geography of the University of Kiel.

b) ICZM tools

The methods for doing this inventory in a comparable way in several countries were discussed at an international expert meeting at the beginning. Press-releases and explanatory notes were written to accompany the actual surveys. Experts were to answer a questionnaire that considered the evaluation of information and participation methods. From 12th to 22nd October 2003 the questionnaires were distributed in St. Peter-Ording.

Participation and integration were elements of the study. The analysis of the results leads to a list of recommendations to improve information and participation in coastal protection management. Results of other projects had been taken into account to discuss methods and questionnaires. The public questionnaire was designed as a postal mailing. Despite the risks that individual questions may not be filled out, and personal reactions could not be accounted for, mailing was chosen as the most efficient method due to its relatively low effort. A pre-requisite was that the questions are very clear and need no additional explanations. Households were chosen randomly (1/3 in the city centre, 1/3 close to dykes and dunes, 1/3 further away from the protected shore-line but all in flood-prone areas): letters were distributed personally. A pre-paid envelop for sending back the filled out documents was included in the mailings. An introductory letter accompanied the questionnaire and a press-release to local media was published some days ahead of the polls. Regional and local authorities were informed about the survey.

Twelve questions about risk perception, nine about participation, and three demographic questions were to be answered, taking about 20 minutes. People had to mark their home area in a rough map (not depicting streets) as additional information. The poll was anonymous. A questionnaire ideally starts with a simple question to reduce barriers followed by "tougher" questions. The demographic questions at the end of the questionnaire do not require great attention anymore. Different types of questions were applied: open questions to be answered with a free text and closed types: a) identification-type (name a time, number, group, ...), b) to select one from presented alternatives, c) multiple choice (one or more answers possible), d) ranking on a 4-scale ruler (not including "don't know" and neutral), e) yes-no answers, and f) hybrid of selection-type (g) plus space for own remarks. Additional information such as recent and historical storm flood disasters in the area were included to evaluate the results. Additionally, experts from authorities, universities and research institutes, consultants, and stakeholders were asked (by e-mail) to answer 12 questions concerning the evaluation of information tools, experience with and evaluation of participation procedures. The questions were organised as multiple choice, ranking and open questions.

The survey results in St. Peter-Ording revealed that a majority of people were not prepared for a flood event and did not know how to react in such a case or how to get proper information, and about 20% were not aware that they lived in a flood-prone area. Correspondingly, only a small percentage of people had taken personal measures to be prepared for a storm flood. Almost no person had ever participated in a participatory process concerning coastal protection, though almost 50% wished to give their opinion. And, at least one participatory event had taken place. However, most people did not know how to accomplish that, and many people thought that the public had no influence anyway. A high percentage (42%) would like to be actively involved, 34% by participating in an information evening, 18% would even work regularly as a volunteer. The experts thought that information and participation tools are equally important but are still not commonly applied. The involvement of local press and participation procedures within planning approval procedures were seen as important instruments for participation but also inquiries, public hearings, working groups or workshops depending on the circumstances. Making coastal protection a topic at school was seen as an important information tool besides informing the press and offering excursions, many more tools were suggested. Most participation procedures were evaluated as a success for the acceptance of a coastal protection measure. Experts suggested to have external/ independent chairs and to involve the public earlier, so that a certain measure would be the output and not the input of a participation process. About 80% thought that participation may cause trouble for the involved administration (extra cost and time). Proper communication was assumed as a key aspect for information and participation. Coastal defence, disaster management and prevention should be dealt with as connected topics. The internet is seen as suitable additional information but not a participatory tool.

7. Cost and resources

The total survey cost €503,000 of which 50% was financed by ERDF funds.

8. Effectiveness (i.e. were the foreseen goals/objectives of the work reached?)

32 recommendations to improve information and participation were developed from the results of the public and the expert survey. The return rate of the public questionnaires was in a range that is expected for a postal mail survey (21.3% of 400 questionnaires). The return rate of the expert questionnaires was very heterogeneous but relatively high (35%). The public survey revealed that a lack of proper information was prevalent and that most people trusted radio and television (29%), prevention or fire brigades (22%), and authorities (19%) to provide information on protective measures in case of a storm flood. Even experts seem to suffer from a lack of information. Maps seem to be misinterpreted by many people and thus not necessarily a suitable instrument to inform the general public.

9. Success and Fail factors

No correlation between risk awareness and personal experience or demographic factors was found. However, people were at least partly aware of the fact that sea level rise influences flood risk. The study revealed a need for more and better information on flood risks and risk reduction. The expert survey revealed that a mixture of information and participation instruments should be applied depending on the circumstances.

10. Unforeseen outcomes

The study revealed no correlation between risk awareness and personal experience or demographic factors, as had been assumed from the literature. It showed that knowledge alone does not necessarily lead to immediate understanding or action. Another unexpected result was that many people seem to have problems with reading maps. About half of the people were not interested to voice their opinion in a participatory process concerning coastal protection (though, the other half were). The internet has not been established itself as an information tool in this area. Instruments considered more innovative such as future workshops or citizen's jury have not yet been accepted as valuable instruments by experts. Even many of the experts suffered from a lack of information on several topics.

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13. Sources

- COMRISK-Subproject 3 Public perception of coastal flood defence and participation in coastal flood defence planning (September, 2004). Kaiser, G., Reese, S., Sterr, H., Markau, H.-J., Department of Geography of the University of Kiel for the Schleswig-Holstein State Ministry of the Interior - Coastal Defence Division.
- <http://comrisk.hosted-by-kfki.baw.de/>



COMRISK_SP3_perception (4.15 MB)

