

# Types of Conflicts between Recreational Use and Nature Conservation in National Parks and Biosphere Reserves

Karen Ziener

Institute of Geography  
Potsdam University, 14415 Potsdam, Germany  
E-mail: [ziener@rz.uni-potsdam.de](mailto:ziener@rz.uni-potsdam.de)

**Abstract:** Conflicts between recreational use and nature conservation vary in their causes, development and impact as well as in the people or groups involved and finally in the strategies and methods of resolution. They are neither generally avoidable nor can they be solved in an absolute way. However, most of them can be moderated by communication and discussion. The conflicts in national parks or biosphere reserves do not develop independently of each other. Usually several conflicts exist at the same time, in the same region and maybe between the same people. Therefore strategies of park management should be directed not only to an isolated conflict alone but to the entire system of conflicts in the region. Predicting and examining conflicts can help to avoid or reduce severe conflicts. The typifying of conflicts between recreational use and nature conservation in national parks or biosphere reserves can be used to describe relations between conflicts and strategies of solutions.

## THE CONCEPT OF CONFLICT

Social science speaks of a conflict only when there exist a clash over antagonistic and/or irreconcilable interests, targets or values between at least two parties. Recreational activities in sensitive landscapes and damage caused by tourism are therefore not to be considered as conflicts but rather to be regarded merely as problems, differences or potential conflicts.

Conversely, the conflicts between recreational use and nature conservation are distinguished by their subject from other fields of conflict. Subjective issues alone are not being disputed, but also the protection and utilisation of actually existing landscapes. Ecological and utilisation factors (structural conflict potentials within one region) are the grounds for conflicts as often as are the interests and targets of the subsequent parties in such a conflict. Therefore a conflict between recreational use and nature conservation can only be understood when social and regional-structural factors are considered in combination.

## STRUCTURAL CONFLICT POTENTIALS WITHIN ONE REGION

The potentials for conflict, as with conflicts themselves, consist of divergent elements, which can be characterised by the following pairs of opposites:

- The same landscape is assessed as both deserving of protection and attractive for recreation and leisure-time use.
- There exists an unfavourable balance between the sensitivity of a landscape and the intensity of its touristic use.

- The countryside and space utilisation requirements for specific activities are in opposition to nature conservation restrictions.

The qualities of deserving protection and being attractive are not objective characteristics but the results of assessment. Their similarity is based on the use of practically the same assessment criteria, in particular the proximity to nature, variety, uniqueness and rarity. These criteria are used as reasons for nature conservation as well as for the claims of its utilisation by those seeking recreation and the tourist industry. The demands for conservation and those for utilisation may be compatible or competitive, or on the contrary they may also be mutually exclusive.

The main problem of nature-related recreation and leisure utilisation exists in the relation between sensibility and intensity of use. Conflicts do not result from the tourist utilisation per se, but from the amount of utilisation, its distribution within one region, seasonal use and from the types of leisure-time activities. Here the term "utilisation" includes the tourist infrastructure as well as the activities of those seeking recreation or other leisure activities. The more sensitive a landscape is to anthropogenic influences, the sooner the critical burden is reached. Therefore the conflicts do not arise only in extremely sensitive areas or regions of mass tourism, but also in circumstances of differing intermediate phases.

Another constellation for conflict arises in cases where claims to use a special area for leisure-time activities are in contrast to legal restrictions, for example in conservation areas. Limitations arising from that do not concern only the feelings of individuals, but are much more a matter of basic rights such as the use of water resources for aquatic

sports, ski facilities or the demands for airfields for recreational flying.

### CONFLICT PROCESS AND CONFLICT MANAGEMENT

Dealing with the parties to a conflict, interactive processes, personal and situational conditions do not differ fundamentally from other fields of conflicts which have been examined more thoroughly by social science. By using sociological and social-psychological approaches and models not only important realisations about the course of conflicts and possible solutions in the fields of recreational use and nature conservation can be gained, but socio-scientific views can be introduced into a field of research which until now has been dominated by the natural sciences.

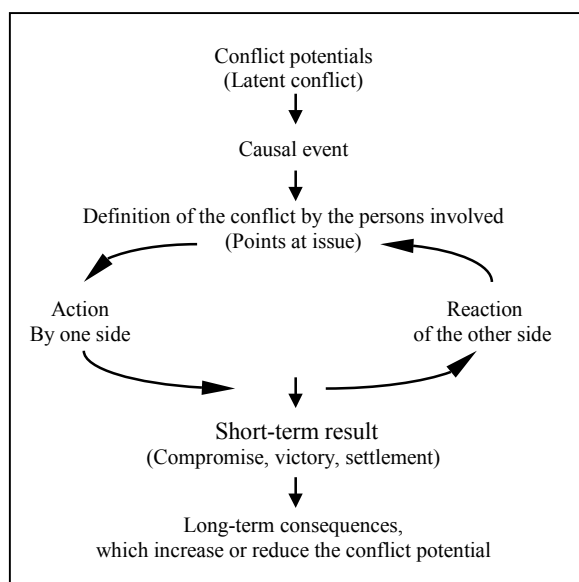


fig. 1 Conflict process according to Berkel (Berkel, 1997, p. 40 modified)

Conflicts between recreational use and nature conservation often exist over long periods of time and are rarely settled in a lasting way, but mostly by compromise, temporary or permanent regulations. Their dynamics are characterised by the alternation of phases of escalation and phases of quiet (latent conflicts). Conflict management and resolution are inherent parts of the conflict process (see fig. 1).

### TYPES OF CONFLICTS

By grouping conflicts by type typical conflict situations can be described which have common features in their causes, their course of development, in the ways and methods of their settlement and finally in the results of the conflict. It is the basis for

- the structuring of the conflict field between recreational use and nature conservation in the same region,

- identification of general tendencies and of regionally-specific arguments,
- description of affected relationships between conflicts, and the
- development of regional conflict strategies, which involve potential conflicts and their effects in planning and management from the inception.

On the one hand, the grouping is based on the characteristics of the conflict structure – subject of the conflict, conflicting parties, conflict type, relations of area and time, conflict results, conflict effects – and on the other hand on the systematisation of the subject conflicts in the regions to be examined (combination of deductive and inductive processes).

At this point the eight types of conflicts in respect of area utilisation shall be represented (see fig. 2). Conflicts of interest and aims which are the background to this have to be further analysed because of their complicated structures.

The first four types of conflicts are of a structural type and usually are present in a permanent way, even when their intensity varies. The second group of conflicts is determined more by individual actions. The third group of conflicts concerning touristic and nature conservation projects arises from expected changes in the status quo, when either disturbances to the countryside or restrictions of leisure-time and/or commercial activities are feared.

Wherever **leisure-time activities** are done in **sensitive countryside areas** the recreation and leisure-time activity demands conflict with nature conservation targets. First, conflicts arise when ecologists and environmentalists notice the over-use of waters, dangers to embankments, dry areas or swamps, and restrictions of use are demanded or announced (e. g. the closing of hiking trails, the shift of ski trails). In the wake of the implementation of nature conservation measures conflicts break out which were latent until then. They are settled by the intensified public relations work by the conservation area administration and the involvement of leisure-sports associations in revising of concepts for hiking or ski trails.

At **heavily frequented and very popular destinations for outings**, e.g. the *Brocken* (Harz mountains), the *Königsstuhl* (Rügen island) or the *Wasserkuppe* (Rhön mountains), the ecological effects of mass tourism and rivalries for utilisation between recreation-seekers and those engaging in leisure-time activities, add up to a complex web of conflicts with a multiplicity of people and entities involved (recreation seekers, the tourism industry, leisure-sports associations, communal administrations, nature conservation entities, reserve administration). Concepts for utilisation, disciplinary and regulatory measures can significantly reduce conflict potentials. However, these can be partial solutions only.

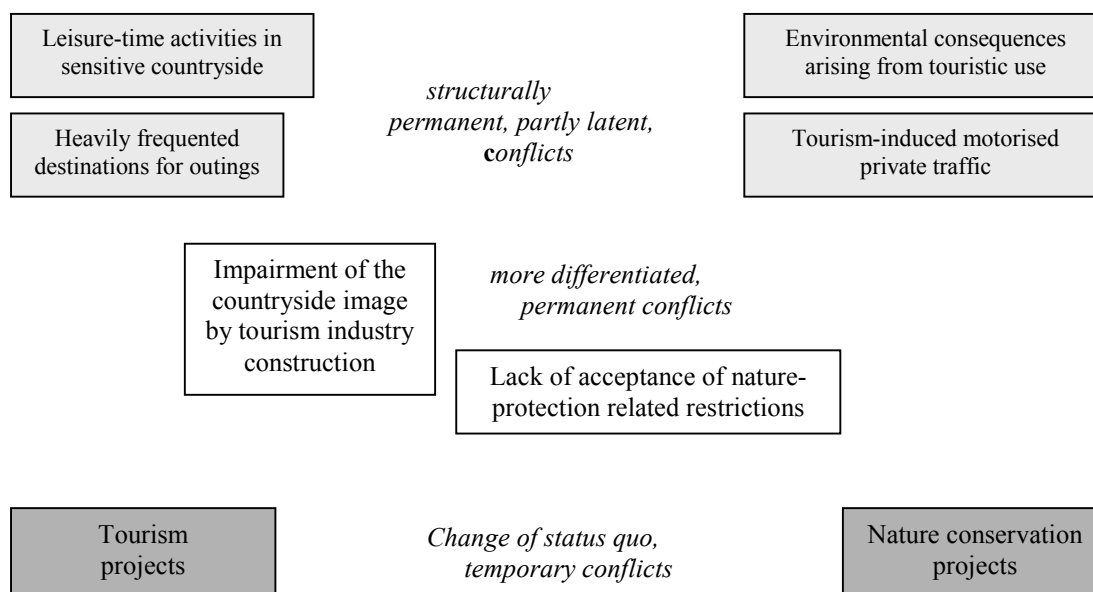


fig. 2 Types of conflict

Conflicts concerning **consequences for the environment because of the use for tourism** are still too seldom topics for discussion, especially in consideration of the increased use of countryside and consumption of resources and problems of waste disposal and dumps. When water pollution could be significantly reduced through implementation of sewage plants, other conflicts, as for instance about drinking water production or surface impoundment, flare up only sporadically. Most the time they are not solved completely but are rather neglected after the more serious problems have been dealt with.

The **impairment of a countryside's image by constructions for the tourism industry** is still a potential for conflicts despite the general improvement in construction design. Attracting criticism, for example, are the dimensions of leisure-time facilities or the increasingly dense construction of more and more buildings along the coasts of the Baltic Sea. More aesthetic aspects make the dispute much more difficult than it would be in cases of pure scientifically provable ecological interrelations. They require an individual assessment of the concrete regional situation. These conflicts are more latent, proceed less dramatically and can be resolved at least in the long term.

Conflicts, which arise due to the disregard of regulations to stay on paths, or leaving ski trails or unleashed dogs, are the result of a **lack of acceptance of nature conservation based restrictions**. Often they are to be disputed only with individual – a majority of the time – domestic recreation seekers and leisure-time users. However, they can further escalate (up to a lawsuit) and can diminish the acceptance of the conservation reserve or its administration. Such conflicts cannot be solved but can be reduced by intensified information and clarification.

**Tourism projects** – in this category medium-sized and large projects are especially considered. They do not only have effects on the environment but also on economy and society. Thus not only environmental organisations reject them. Conversely, **nature conservation projects** (e.g. designation of national parks or biosphere reserves, plans for extensive state-sponsored nature conservation projects) evoke resistance from the users involved. In both cases the conflicts are dealt with in an open fashion. They include many people in the region and can escalate quickly. The parties in the conflict form coalitions for or against the project. However, such conflicts exist only for a limited period and will be settled (e.g. by modifying the project, by imposing constraints, by compromises in the regulations or by the project's refusal).

#### TOURISTS IN NATIONAL PARKS AND BIOSPHERE RESERVES

Comparable interviews of tourists in five regions under examination shall further complete the image of tourists in national parks and biosphere reserves:

- Spreewald (534 interviewees),
- Rügen (Rügen island 530 interviewees and Hiddensee island 306 interviewees),
- Neusiedler Lake (401 interviewees),
- Harz mountains (640 interviewees) and
- Rhön mountains (589 interviewees).

Main areas of investigation were the characterisation of groups of leisure-time users, cognition of nature conservation measures and protective territories and the use of various means of transportation within the region (see Ziener 2001).

| Given alternatives                   | all inter-<br>viewees | Spree-<br>wald | Rügen<br>island | Hidden-<br>see island | Neusiedler<br>Lake | Harz<br>mountains | Rhön<br>mountains |
|--------------------------------------|-----------------------|----------------|-----------------|-----------------------|--------------------|-------------------|-------------------|
| Recreation                           | 87                    | 83             | 87              | 89                    | 89                 | 89                | 85                |
| Nature – walking/bicycling           | 83                    | 88             | 77              | 93                    | 75                 | 88                | 81                |
| Country and people – museums/culture | 68                    | 74             | 63              | 75                    | 62                 | 69                | 68                |
| To be active, sports                 | 34                    | 33             | 32              | 27                    | 48                 | 34                | 33                |
| Variety of leisure-time offers       | 27                    | 28             | 25              | 11                    | 28                 | 35                | 26                |

Table 1 Holiday interests of people seeking recreation and leisure-time activities (shares in percent)

| Spreewald      |    | Rügen island   |    | Hiddensee island |    | Neusiedler Lake |    | Harz mountains |    | Rhön mountains |    |
|----------------|----|----------------|----|------------------|----|-----------------|----|----------------|----|----------------|----|
| Prohibitions   | 11 | Prohibitions   | 17 | Coastal          | 37 | Prohibitions    | 22 | Signs          | 13 | Signs          | 15 |
| Streams        | 8  | Signs          | 13 | protection       |    | Signs           | 12 | Forest         | 13 | Prohibitions   | 10 |
| Signs          | 7  | Coastal        | 11 | Barriers         | 28 | Landscape       | 11 | measures       |    | Landscape      | 9  |
| Infrastructure | 6  | protection     |    | Signs            | 22 | preservation    |    | Barriers       | 10 | preservation   |    |
| Cleanliness    | 5  | Barriers       | 7  | Prohibitions     | 10 | Barriers        | 10 | Prohibitions   | 8  | Infrastructure | 8  |
| Nature         | 5  | Protected      | 7  | Infrastructure   | 8  | Nature          | 5  | Re-            | 7  | Nature         | 4  |
| conservation   |    | areas          |    |                  |    | conservation    |    | naturalisation |    | conservation   |    |
| Landscape      | 5  | Infrastructure | 6  |                  |    | Waste           | 5  | Infrastructure | 5  | Barriers       | 4  |
| preservation   |    | Cleanliness    | 4  |                  |    | disposal        |    | Nature         | 3  | Forest         | 4  |
| Barriers       | 3  |                |    |                  |    | Infrastructure  | 4  | conservation   |    | measures       |    |
| Re-            | 3  |                |    |                  |    |                 |    |                |    | Visitor        | 4  |
| naturalisation |    |                |    |                  |    |                 |    |                |    | guidance       |    |
|                |    |                |    |                  |    |                 |    |                |    | Named places   | 3  |

Table 2 Groups of measures which were stated by at least 3 percent of the interviewees (in percentages)

When questioned "What is of special importance for you when you make holidays?", the interviewees were not to answer with individual leisure-time activities, but were presented structured sets of interests to choose from. The result was a clear differentiation (see table 1). One half of the interviewees exclusively want recreation, want to move outside in the natural environment and/or want to visit cultural events or sites. Sports and various other leisure-time activities were of interest primarily for young people under 30 years of age, who visited the region only for daytrips or short holidays. From the combination of these holiday interests six groups of leisure-time users could be derived:

- Recreation, nature and culture related interests (31 % of the interviewees, primarily elder interviewees from 50 years +),
- Variety of holiday interests (28 % of the interviewees, more elder interviewees from 50 years + and families),
- Recreation and nature-related interests (13 % of the interviewees, more elder interviewees from 50 years +),
- Recreation, nature and sports or the variety of activities on offer (7 % of the interviewees, primarily younger interviewees, under 30 years of age),
- Recreation, sports or the variety of activities on offer (4.5 % of the interviewees, more younger interviewees, under 30 years of age, and families),
- Recreation only (3.5 % of the interviewees, rather younger interviewees, under 30 years of age).

The responses when asked about the acceptance of nature conservation related restrictions or the extension of protective measures, shows that tourists often do not know enough about regulations for protected areas to be able to decide about them. For this reason, these tourist interviews started by mentioning measures of nature conservation and landscape preservation one step before (open question, without multiple-choice answers). More than half of the interviewees, on Hiddensee island even three quarters, could name conservation and preservation measures which they had taken place in the region. However, it became obvious that the perception of nature conservation measures depends upon subjective factors (e.g. personal interests in nature conservation, receptivity), as well as depending upon objective conditions in the region (e.g. ability to perceive them in the countryside, local information).

#### MODEL OF A PUBLIC TRANSPORTATION SYSTEM WHICH IS BASED ON ASPECTS OF TOURISM

Even though tourist traffic should not be considered in isolation from other types of traffic (e.g. commuters, through traffic), a public transportation system which takes into account aspects of tourism can be regarded as a contribution to solving traffic problems in tourism regions. First approaches for such a model for the nature park and biosphere reserve regions examined here shall be explained by the example of Rügen island.

In respect of the development of the public transport system Rügen island has a favourable

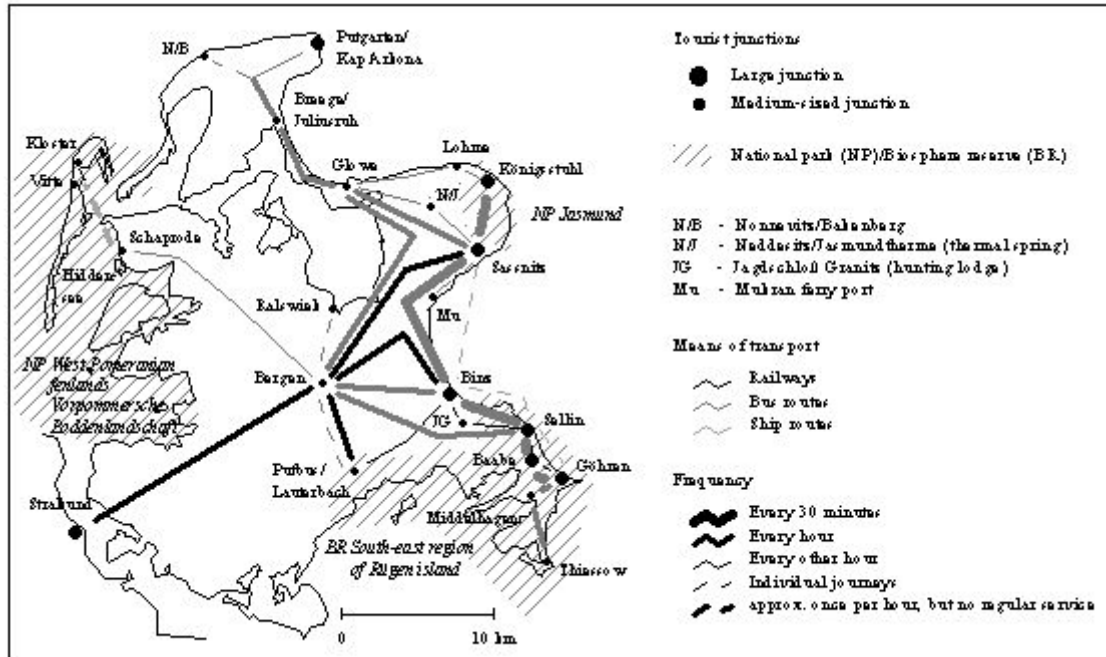


Fig. 3: Public transportation connections between tourist junctions on Rügen island, summer 1999, Mondays through Fridays (source: Rügen Transport timetable, RügenVerkehr, summer 1999)

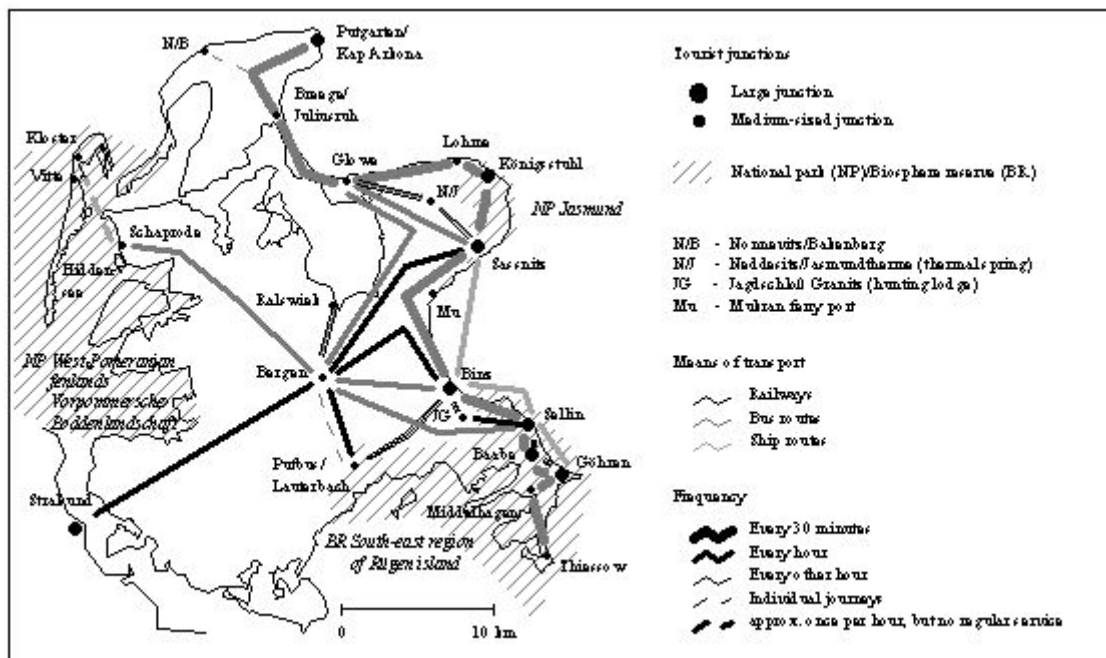


Fig. 4: Model of a tourist-orientated public transport system on Rügen island

touristic structure. Most of the bigger centres of tourism concentrate along the east coast. The Rügen causeway is the only one important access to the island. As the rural district of Rügen is a political and administrative unit, the conditions for organisational measures are also good. However, the previously existing transport agency which combined the various transport carriers has been wound up.

The model shall certainly not cover nor organise the entire public transport on Rügen island, but rather re-structure the tourism-related transport by

using an user-specific approach which is based on the directions tourists take. The operationalisation was done by

- determination of big, medium and small touristic junctions by a quantitative and qualitative assessment of all the single tourist destinations,
- determination of the most popular places for outings within the region and
- secondary analysis of discoveries about tourist activities and on the transport corridors they

move along (e.g. evaluation of survey results and studies).

Streams of tourists are supposed to occur only between big and medium touristic junctions. Therefore only these streams have been taken into account for the model, and till now only the high season times have been investigated.

The traffic relations between junctions of tourism and their schedule frequency and the central contents of the model are shown in fig. 3 and 4. Here the main schedule frequency between 9 a.m. and 6 p.m. was used; on weekends the public traffic offers sometimes are clearly reduced. In the case of parallel traffic lines crossovers have been created (e.g. in Sagard - between Sassnitz, Bergen and Glowe), and so the whole structure of the public transport system became even much more complicated.

The model's main contents are (see fig. 4):

- Introduction of a transport frequency of every half hour for the whole route between Thiessow and Putgarten/Cape Arcona: This bus line connects 14 of the 22 large and medium junctions (with about two thirds of the overnight stays in this rural district), with the two most popular tourist destinations on Rügen island, *Königstuhl* hill and Cape Arcona, among them. Rügen's most beautiful beaches (Schaabe, Schmale Heide, Großer Strand), the Hagen car park near the Jasmund national park are linked by this route, and if need be also the Mikran ferry port (possibly a shuttle service). The permanent availability of public transport is an essential condition for its use for outings across the island (see Ziener, 2001). For bathers a through busline is more attractive than a bus shuttle (in the early '90s this was a plan to solve transport problems around Schaabe).
- A through bus line from Binz or Thiessow through Bergen to Schaprode. Regarding outings to Hiddensee island, the private automobile can only be substituted by bus transport if there exist through lines from Sassnitz, Binz, Northern and South-East of Rügen or short transfer times between the lines.
- Regular ship lines between the Baltic Sea spas of Göhren, Sellin, Binz and the city of Sassnitz (so-called pier line), at first every other hour, at later times preferably every hour. Because of the island's geographic situation near the GDR's border line, ship lines between the spas don't enjoy a long tradition. However, they could be an important supplement by sea to the bus transport along the island's east coast which is marked by a strong tourism industry.
- Flexible solutions for Ralswiek and Neddeseitz. The remote *Jasmundtherme* is located between the island's main traffic lines. The town of Ralswiek is known by tourists because of the *Störtebeker* festivals which take place on a

natural stage; public transport connections should be available especially in the evenings (currently exist only outing offered by bus companies).

- Regular rides during evening hours. Depending on the traffic relation, the busses should go until 8 p.m., 10 p.m. or even later.

The realisation of this model will be implemented primarily in the medium term and only in consideration of the real demand. It requires active marketing efforts. Usually car drivers do not inform themselves about bus transport, so they have to be provided this information.

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## APPENDIX

*ad Figures 3 and 4*

National park (NP)/Biosphere reserve (BR)  
NP Jasmund  
NP West Pomeranian fenlands *Vorpommersche Boddenlandschaft*  
BR South-east region of Rügen island

Tourist junctions  
Large junction  
Medium-sized junction

Means of transport  
Railways  
Bus routes  
Ship routes

Frequency  
Every 30 minutes  
Every hour  
Every other hour  
Individual journeys  
approx. once per hour, but no regular service

N/B - Nonnevitz/Bakenberg  
N/J - Neddesitz/Jasmundtherme (thermal spring)  
JG - Jagdschloss Granitz (hunting lodge)  
FM - Mukran ferry port

0 10 km