

Fehmarn Belt

A large flock of geese is flying over a white and blue Scandlines ferry ship on the water. The geese are in various stages of flight, with some wings spread wide. The ferry ship is moving through the water, leaving a white wake. The sky is a clear, pale blue.

*Review of
a fixed link*

Crossing

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Financial, ecological and transportation policy risks of the planned Fehmarn Belt Fixed Link

The brochure at hand presents crucial arguments against a fixed link across the Fehmarn Belt and is intended to illuminate the background to the issue.

The Kingdom of Denmark plans to build a Fixed Link from Roedby in Denmark to Puttgarden on the Baltic Sea island of Fehmarn (Germany) starting in 2012. If the Project goes ahead as desired by the Danish government, its four lanes road and two tracks railway should be completed by 2018. The 19-km wide Fehmarn Belt, a heavily plied international maritime area that is under special protection as Particularly Sensitive Sea Area (PSSA), will be crossed by either a bridge or a tunnel.

Fundamental expert opinions, robust cost estimates on the German side as well as an updated and conclusive overall makro-economic evaluation, on the part of the project planners, are not available. By the ratification of the state treaty, Germany virtually surrenders its responsibility for and potential influence on the further planning and risks of the Project. Despite that, in the case for example of a ship average, Germany will bear half or even all of the ecological risks and costs.

In the judgement of the Citizens' Action Committee Against the Fehmarn Belt Fixed Link, there exist many serious reasons against the Fixed Link, one of the largest infrastructure projects in Europe.

The Citizens' Action Committee welcomes enquiries for more information.

Infrastructure and transport

Transport routes are shifting from the north-south to the west-east axis. The expansion of the EU is leading to stronger demand in eastern and southeastern Europe. Traffic there will increase. Future growth is expected by many traffic experts not along the north-south axis but only in the “Central Transport Corridor” (Rostock/Sassnitz) of the Baltic Sea region. The significance of the “West Transport Corridor” (Fehmarn Belt) with its orientation towards south and western Europe will, in contrast, diminish.

The Fixed Link across the Fehmarn Belt can generate no additional traffic: Harbour transshipments from Luebeck and Kiel will be reduced, to the detriment of those cities. Sassnitz-Mukran (Ruegen) has been developing alongside Rostock in recent years as a ferry terminal for Scandinavia and the Baltic republics, as well as for Russia, while showing strong rates of growth.

In contrast, the transport hub of Hamburg is already congested. Sufficient resources for constructing the Expressways A7, A20 or a western and additional eastern bypass around Hamburg are not available over the medium term. Traffic delays in this region are expected to cause significant economic losses.

The Puttgarden-Roedby ferry line is running at an average annual capacity load of less than 40 per cent and operates in almost all weathers. In 2008, Scandlines ferries experienced a clear decrease of 4.5 per cent in transport numbers for the first time, on account of the economic crisis.

Ferryline competition: Since the Scandlines firm was sold to a private investor consortium in 2007, the company has taken a strong position against a Fixed Link. Scandlines intends to declare war on this plan through a scaled down but reasonably priced ferry service. Nonetheless, hundreds of jobs in the Region will be lost.

Forwarding agents: Apart from the bridge tolls, the 20 km stretch of new road will lead to greater wear-and-tear on the vehicles and increased emissions. There are no “budgeted” resting periods on board the ferries, only in the parking lots before and after the belt crossing. For most freight trucks there will be no time savings.

The two-lane bottleneck at the Fehmarn Sound Bridge: Where the planned four-lane federal highway, the B 207/ E 47, meets the bridge, the two-lane roadway across the sound will form a bottleneck. Funds for upgrading

the sound crossing (estimated at 300 million euros) have not been budgeted for. Faced with forecasts of lower traffic, the German Federal Ministry of Transport does not see this as a priority for Germany. The bridge, which is a protected historical monument, cannot be widened.



Poor contributions to the implementation of the Trans-European Network (TEN-T):

In the EU Decision No. 884/2004/EC for the TEN-T program, the Fehmarn Belt axis (Hamburg-Malmoe) is

designated a conventional railway project. As the railway service contributes only limited funds to the refinancing of the Fxed Link, Denmark must seek to maximise road traffic, particularly that of freight transport. Deutsche Bahn as well attaches no priority to improving the route.

The budget for constructing the double track railway line and its electrification from Bad Schwartau to Puttgarden is quoted at 840 million euros (without the Fehmarn Sound Bridge). According to transport planners' ratings this is far too little to allow for a traightened alignment of the two tracks so as to support higher design speeds (160 km/h for passenger trains, 120 km/h for freight trains), to redress the Luebeck bottleneck and for noise-reducing bypasses, e.g. around the seaside resorts on the Luebecker Bucht (Luebeck Bay) as well as Lensahn, Oldenburg or GroBenbrode.

In view of other important German infrastructure projects, the German Federal Ministry of Transport, Building and Urban Affairs will not commit additional money to the aforementioned 840 million euros. Focus has thus shifted to improving the road link to four lanes and the comparatively slow implementation of a railway line, first a single track line and later a double track. Whether the second track will be built at all before 2025 remains open to question because of funding shortfalls. Neither the expansion of the much-delayed railway connection that is still under development nor the preference given to the road tally with the measures set forth in the European transportation policy.



Transport forecasts for the railway assume 40 passenger trains daily carrying a total of 4,000 passengers. It is doubtful whether a state enterprise being up for privatisation will be willing to operate express trains carrying only average 100 passengers each. Given the official forecasts, profitability in freight transport is an equally remote prospect.

Time savings: The Treaty between Denmark and Germany ensures a vehicle speed of 160 km/h for passenger and 120 km/h for freight trains only “on the Fehmarn Belt Fixed Link” itself. Since the hinterland links are considerably underfunded, a “significant shortening of travel time between Hamburg and Copenhagen” cannot be achieved.



The bottleneck of the Fehmarn Sound Bridge

Costs and refinancing

In an evaluation of the project (October 2008) the Bundesrechnungshof (German Federal Audit Authority) points out the following deficiencies:

- missing information on costs for the German link to the hinterland and the associated lack of transparency with regards to the budget exposure;
- the fact that DB Netz AG is not bound by the Treaty and in consequence will claim the the costs of the railway infrastructure from the federal government;
- significant improvidence in the body of the treaty text concerning costs, liabilities, preliminary research etc.;
- the fact that large projects eventually result in cost overruns of 60 to 100 per cent than planned for;
- overly optimistic traffic forecasts and consequentially high risks for the cost recovery of the Project;
- despite the assumption of risk by Denmark, pressure will be brought to bear on Germany to participate in the financing of the overall Project.

Denmark is currently revising its cost estimates (2008)

upwards by 800 million euros (4.4 billion for the bridge, 1.2 billion for the hinterland links.)

According to a study by Prof. Breitzmann (Institut für Marketing, Verkehr und Tourismus at the University of Rostock) the cost-benefit analysis of the bridge is 1:0.65 (report from August 2007). In this result, secondary effects, such as start-ups of new businesses, have already been considered. Thus, significantly higher socio-economic costs than benefits are expected and will lead to a significant loss of welfare. The Institute also criticises erroneous reference scenarios in the official economic evaluations.

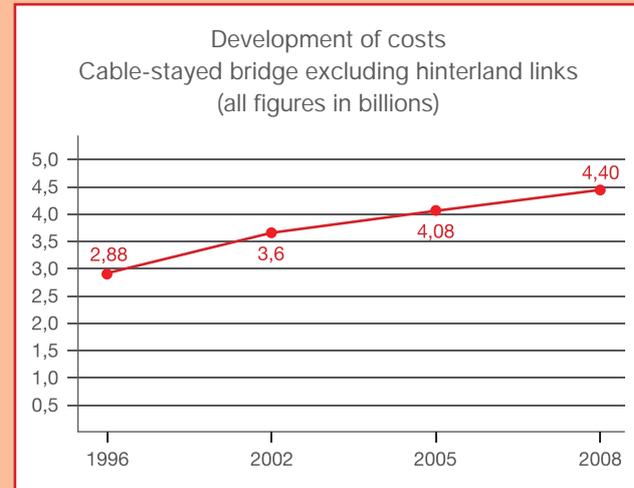
According to the agreement, Denmark will assume the costs for the construction of the Fixed Link structure.

However, robust estimates of those costs or the costs of the German hinterland links are not yet available. A report by Vieregk & Rössler (for NABU, 2008) predicts a doubling of the currently stated construction costs by the time of project completion in 2018 (prices of raw material and energy). (Download: www.nabu.de)

Vieregk & Rössler criticise the incomplete basis for calculation (railway: passengers and freight as well as trucks and automobiles) used in the transport forecasts. The strong growth in low-cost airline traffic between Scandinavia and large German airports as well as the competition from cargo ships was not taken into account.



In a comparative study carried out on behalf of the Danish Traffic Advisory Council in 2002 (Oere Sound- and Storebelt links with the Fehmarn Belt Crossing) the universities of Lund (Sweden), Aalborg (Denmark) and Karlsruhe (Germany) conclude that mega-projects are for the most part prestige projects, invariably costlier than planned for, and unprofitable (Transrapid, Channel Tunnel, etc.). The costs of the bridges at Store Belt and Oere Sound increased by 30 to 50 per cent. The actual participation of investors in the financial risk is not taking place on either the Danish or the German side. In conclusion, "Considerable evidence suggests that the basic principle of transparency demand clear performance specifications and the integration of private risk capital. In conclusion: It can hardly be expected, however, that the endorsement of these principles by science will lead to a radical change in thinking on the part of the politicians."



Source:

- 1996 - Ministry of Science, Economic Affairs and Transport of Schleswig Holstein, Germany
- 2002 - construction costs only, Fehmarnbelt Development Joint Venture for German and Danish ministries of transport
- 2005 - Environmental Consultation Report 2006, German and Danish ministries of transport (2006)
- 2008 - Femer Baelt A/S

Around 1,500 jobs on the island of Fehmarn and in the Region are threatened:

- For Scandlines Ferries
(around 300 jobs due to reduced ferry operations)
- For subcontractors of Scandlines Ferries
(around 100 jobs due to reduced ferry operations)
- Due to a slump in tourism, a loss of 1,200 jobs based on a 50 per cent decline

The government of Schleswig-Holstein conjectures that 1,700 new jobs connected to the Fixed Link will be created. Jobs will be created (if at all) not on Fehmarn but at best in the surroundings of Hamburg or Copenhagen/ Malmö. It is the view of the state government that East Holstein will hardly benefit from the Fixed Link.

The "Fehmarn Belt transport axis" as competition to freight transport by rail and ship: Luebeck would be

most affected, Kiel less so, and, depending on the degree of economic development, Rostock and Sassnitz as well. Impact: Job losses. Moreover, many billions of euros in infrastructure investments (A 20, the Rostock harbour) will be obliterated.

Despite a doubling of the transport volumes between Luebeck and Puttgarden in the last ten years, according to a statement by the Ostholstein Entwicklungsgesellschaft (East Holstein Development Company), no establishment of business can be traced back to this increase. The outlook for effects on the region is thus uncertain.



Tourism on Fehmarn

The Fehmarn Island is one of the most tourist-intensive regions of Germany. On Fehmarn Island about 80 per cent of the population is directly or indirectly dependent on tourism. The island's landscape and natural setting have special significance, lending Fehmarn great appeal as a natural and recreation destination for families with children and for yachtmen, surfers and fishers. Islanders' income depends predominantly on holiday lets. Over 3 million overnight stays per year (reported by Wenzel & Partner) make tourism a decisive economic factor for the island.



A tourism study carried out by the Schleswig-Holstein Ministry of Economic Affairs confirmed that “in particular on the Baltic Sea island of Fehmarn the risks to the tourist trade” clearly outweigh the opportunities. Above all, during the construction phase, tourism will experience “long-lasting adverse effects.”

Over the estimated eight to nine years of construction, the exposure to Europe's largest construction site – noise, large vehicle traffic, water pollution and deterioration of water quality for bathing through the spread of suspended solids and sediments – will have a substantial impact on the Island's resort qualities. The movement of guests to more attractive regions would follow.



Fehmarn will lose its island character and will be degraded from an attractive destination to a mere transit route. An enormous bridge structure (from 60 – 270 meters high) will drastically impair the landscape and tower above even the windmills and the arch of the Fehmarn Sound bridge.

After the completion of the project, an increased shift of tourism (particularly of camping) towards the East is feared. Tourism from the sparsely populated Nordic countries will have only marginal effects on Schleswig-Holstein, since the travel costs imposed by bridge tolls will continue to be a deterrent.

Nature and the environment

A high risk of collision with the 70 bridge piers by the 66,000 annual ships on the heavily plied Fehmarn Belt:

Both single-hulled oil tankers and freighters carrying bunker oil will be seriously endangered by the bridge structure. Until now, ships are passing the international seaway of the Fehmarn Belt at a width of around 10 km without compulsory pilotage. The cable-stayed bridge, favoured for cost reasons, features only three passages of 700 meters each, and for that reason is opposed by German and Danish pilots for being too risky. According to a COWI-Lahmeyer study (1999), the danger of collision with the bridge is one accident per year without a vessel traffic service (VTS) and one collision every three years with VTS. At the high traffic volumes, even a suspension bridge with a span of around 1,600 meters likewise poses problems for supertankers up to 350 m in length and having stopping distances of several kilometres. The authority

responsible for assessing the navigational risks, the International Maritime Organisation, has not yet been officially consulted on the possible interference with the "efficiency of maritime traffic".

An official Danish report (2006) on the Formal Safety Assessment of shipping in one of the world's most sensitive maritime areas is not yet available. In an



information brochure published in 2009 by the Danish state-owned project executing corporation, the Femern Bælt A/S, this rather central issue is not mentioned.

In collisions in the Fehmarn Belt, oil spills or sea pollution by chemicals must be expected to have catastrophic consequences for the entire Baltic Sea ecosystem, also involving serious impacts on Baltic Sea tourism.



The bridge project (North-South) crosses one of the world's most important migration routes for around 20 million waterfowl:

Particularly in conditions of poor visibility, thousands of birds are threatened with death at the bridge. A study by COWI-Lahmeyer (1999) stated that "... a great number of several hundred thousand waterbirds, on long-shore autumn migration over open water in the Fehmarn Belt are flying at altitudes at the height of the bridge." They also fly intuitively by night and in low visibility, expecting no obstacle ahead. Regarding the effectiveness of the bird scaring and barrier effects to migratory birds associated with the planned Danish offshore windfarm Roedesand II, the German Federal Maritime and Hydrographic Agency points out that the Bundesamt fuer Naturschutz (BfN, the German Federal Agency for Nature Conservation) has advocated that in view of the bird migration the Belt region should be kept free of further installations.

An additional obstacle to water exchange between the northern and eastern Baltic Sea:

The Leibnitz Institute for Baltic Sea Research in Warnemünde has already observed that the vital water exchange through the Oere Sound and Store Belt bridge has been impeded. In the assessment of the scientists, another bridge over the Fehmarn Belt with 70 supporting piers can accelerate the dying of the Baltic Sea. The consequences for the marine fauna and flora and for tourism are incalculable.

Cold, oxygenated and deep-flowing water from the North Sea will well upwards prematurely once it hits the bridge piers and will not penetrate into the whole of the eastern Baltic. The inland sea is dependent for its oxygen and salt influx entirely on the North Sea. A complete exchange of water takes place over a period of 30 to 35 years.

The German Federal Agency for Nature Conservation has declared, in an official report, that a further impairment of the water exchange by “only” 0.3 per cent (bridge) or 0.1 percent (tunnel) can have a negative impact on the Baltic Sea. In contrast, the official information brochure (01/2009) of the Danish project implementing corporation Femern Bælt A/S see no potential for risk. The studies of the Leibnitz Institute for Baltic Sea Research commissioned by Denmark are not yet concluded.



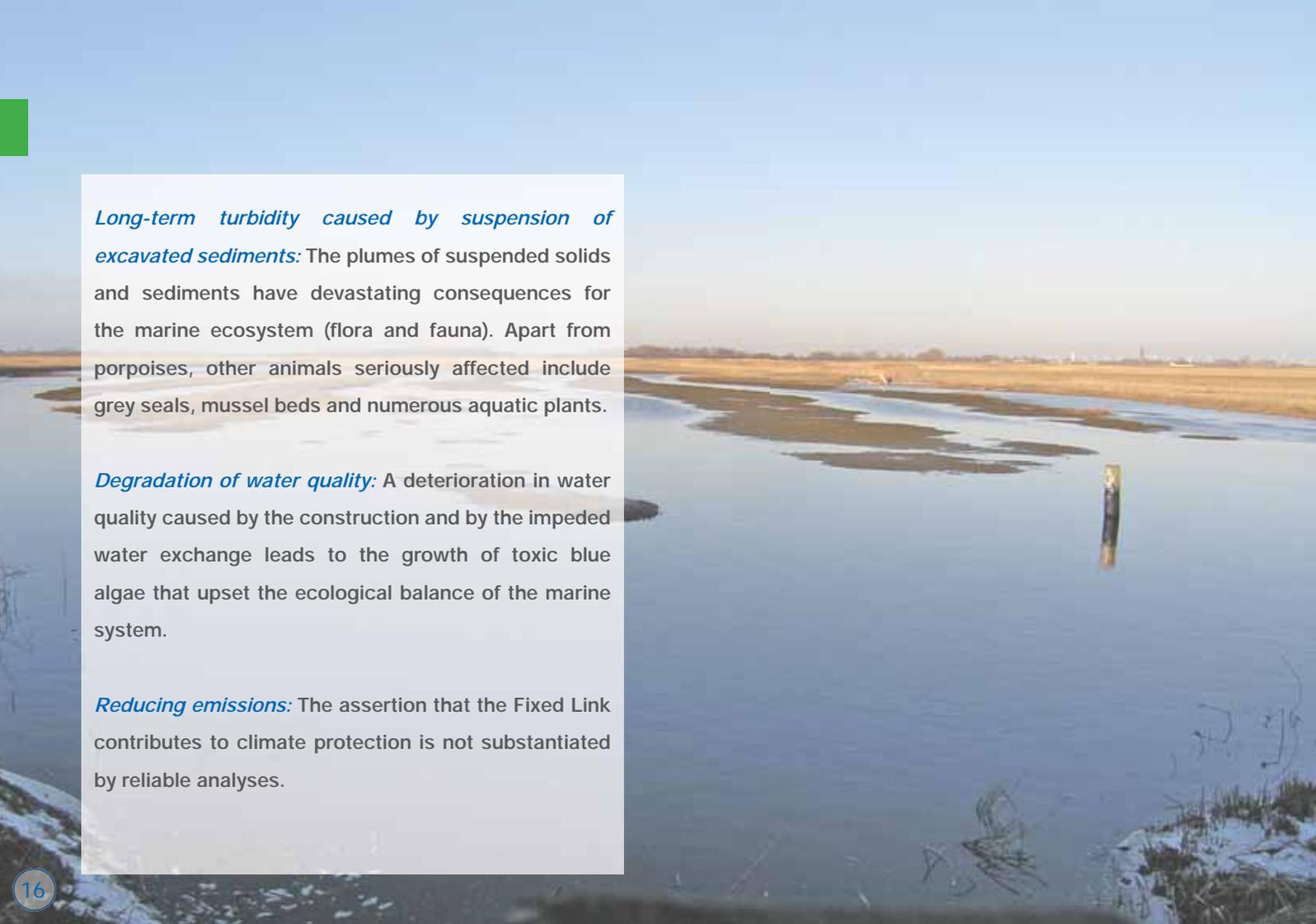
Strong winds: Owing to increasing storms (the Baltic Sea area is exposed to a westerly flow), more bridge closures are to be expected. The Fehmarn Sound bridge is already closed to unloaded transport trucks and camper trailers for average 60 days in a year, and it is closed temporarily to all traffic on account of accidents for around 20 days. The roadway of the Fehmarn Belt bridge will lie some 3.5 times higher, where the wind is stronger and the danger of accidents correspondingly greater.

Protected Area for Porpoises: The Fehmarn Belt was declared by Germany's then Environment Minister Trittin as a Protected Area for porpoises and designated by the IMO (International Maritime Organisation of the UN) as a Particularly Sensitive Sea Area. From a former population of around 15,000, only a few hundred marine mammals, that are highly sensitive to sound, survive in the Baltic Sea, today. The porpoises migrate from the east through the

Fehmarn Belt to overwinter in the warmer waters of the Kiel Bight and use the area around Fehmarn Island to raise their young.



Second World War munitions in the Belt Region (Stern 34 / 2007). Excavation works increase the danger of explosions or the washing up of dangerous substances from the Second World War on the beaches of the Baltic. Old munitions lead frequently to accidents involving children, who are unaware of the dangers.



Long-term turbidity caused by suspension of excavated sediments: The plumes of suspended solids and sediments have devastating consequences for the marine ecosystem (flora and fauna). Apart from porpoises, other animals seriously affected include grey seals, mussel beds and numerous aquatic plants.

Degradation of water quality: A deterioration in water quality caused by the construction and by the impeded water exchange leads to the growth of toxic blue algae that upset the ecological balance of the marine system.

Reducing emissions: The assertion that the Fixed Link contributes to climate protection is not substantiated by reliable analyses.

Political valuations and framework conditions

German Transport Minister Tiefensee appears little interested in the Project because of the hesitant planning and has also made this clear in the negotiations with Denmark.

German Environment Minister Gabriel called the planned Fixed Link a „barmy idea“.

The German Federal Agency for Nature Conservation (BfN) warns of possible negative impacts on the water exchange (see above “Nature and the environment”).

Motorist associations against the Fixed Link across the Belt:

ADAC and VCD oppose the Fehmarn Belt Fixed Link. The traffic forecasts are considered to be much too high compared to the expected demand. As Germany must pay the costs of the hinterland links, money will be diverted from other more important road construction work.

The ratification of the State Treaty is carried out with no knowledge of the entire Project and its costs. At present, a preliminary study to review the question of whether a bridge or tunnel link should be considered is being prepared. The viability of the solution decided upon is to be tested only in the subsequent feasibility study.

Following ratification by the German Parliament, the project approval procedure begins. In this procedure, nature conservation associations and other stakeholders affected have a direct right of action. NABU and BUND have already announced legal steps.

The final decision following the conclusion of the project approval procedure will be made through a building act in the Danish Folketing (Parliament) without German participation.

Review of the bilateral Treaty

The Treaty poses a host of questions.

We would be pleased to send you a detailed appraisal.

Preamble

- In the absence of reliable traffic forecasts, a purported improvement in transportation between the two countries remains purely speculative, as does the refinancing based on toll receipts.
- The bridge toll cements the barrier to transportation and continues to hinder close and sustainable cooperation among the Regions.
- The hoped-for effects of economic development through enhanced railway traffic between the Continent and Scandinavia are also speculative.
- In fact, to maximise the toll receipts, Denmark is forced to divert goods transport from the less remunerative railway onto the road. This action thwarts the objectives of TEN-T (“The Fehmarn Belt Railway Axis“), as well as the purpose of extending the second railway track starting from 2025.
- In the preamble, common objectives are addressed without clear definitions of same.
- In view of the still unresolved issue of collision risks, it remains uncertain whether a bridge or a tunnel will be built.
- Germany’s acknowledgement of the need for close cooperation could permit Denmark to demand from Germany a financial contribution towards the building of the Fixed Link.

- Contractually regulated definitions, together with infrastructure components, are absent.

Unclear or incomplete contract clauses

- An unambiguous cancellation clause is absent; cancellation possible only with the agreement of Denmark in the case of significant alteration of the project conditions.
 - Heavily interpretive circumlocution: “clear other development”, “substantial cost increases” and suchlike.
 - Speeds of 120 or 160 km/h for freight respectively passenger trains contractually stipulated only for the Fixed Link. The underfinanced and lower-speed railway sections of the German hinterland link level out the central objective: time savings.
- The term “shipping” is absent. It is unclear whether safety measures necessary for safe navigation will form a self-contained project independent of the Fixed Link and are to be financed through cost sharing between Germany and Denmark.
 - In contrast to the Oere Sound Bridge agreements, there is no clause concerning the complete prevention of a qualitative and quantitative alteration in water exchange.



- Article 14, para. 3: a security concept should already be in place to be followed by the engineering design of the fixed link structure. Protective measures against a terrorist attack are missing.

Inaccurate assertions

- Contrary to the representations made in the bill, there emerge significant burdens on the social security system. During the construction period, losses of from 300 to 800 million euros are to be expected on Fehmarn alone due to income losses in tourism, trade and small industry.
 - Considering the reliable and exceptionally cost-effective ferry system, the claim that no alternative to the Fixed Link exists is incorrect.
- In Section D, details on the financial ramifications of the project are missing. Likewise, the costs for the necessary security measures for shipping go unmentioned.

The Federal Performance Commissioner (the President of the Bundesrechnungshof) criticises the Treaty for:

- the absence of statements on the burden on the federal budget and on public enterprises;
- the absence of references to the risks inherent in the Danish refinancing concept;
- the risk of cost renegotiations should Denmark be faced by financing difficulties.

Interested in various reports or further information?

Send us an email at: fehmar@beltquerung.info

Citizens' Action Committee Against the Fehmarn Belt Fixed Link

The Citizens' Action Committee was founded 15 years ago with the aim of preventing the Fixed Link over the Fehmarn Belt, in principle.

Co-founders is among others the Environmental Council of the Island of Fehmarn. The Citizens' Action Committee is a network of active individuals, businesses, organisations, unions and parties and is supported by a very broad majority of the inhabitants of Fehmarn. Citizens' Action Committee spokesperson is Jürgen Boos.

Among the active members are conservationists, farmers and owners of holiday lets, operators of caravan and holiday facilities, representatives of retailers,

restaurants and the ferry service, captains, project managers, economists, engineers, workers, works councils and trade union representatives, politicians and engaged citizens. Fehmarn entrepreneurs, including larger tourism operators and other service providers, also support the Citizens' Action Committee.



The following organisations are Citizens' Action Committee members:

- Naturschutzbund Deutschland (NABU) • Wasservogelreservat Wallnau
- Bund für Umwelt und Naturschutz Deutschland (BUND)
- Inselnaturschutzring Fehmarn (INR) • Nautischer Verein Vogelfluglinie (NVV)
- Gewerkschaft Transnet • Gewerkschaft der Eisenbahner Deutschland (GdED)
- Gewerkschaft Nahrung, Genuß, Gaststätten (NGG) • Bürger für Fehmarn (BfF)
- Bündnis für Großenbrode (BfG) • DIE LINKE, Kreisverband Ostholstein
- Vereinte Dienstleistungsgewerkschaft, Ostholstein (Ver.di)
- Verkehrsclub Deutschland, Schleswig Holstein (VCD)
- Bündnis 90 / Die Grünen, Kreisverband Ostholstein
- Sozialdemokratische Partei Deutschland, Ortsverein Fehmarn (SPD)

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