

Agenda Item 14.5.1

Implementation of the ASCOBANS Triennial  
Work Plan (2007-2009)

Review of New Information on Pollution,  
Underwater Sound and Disturbance

High Speed Ferries

Document 43 Rev.1

**Assessing the Impact upon Cetaceans  
of Shipping, including Ferries, within  
the ASCOBANS Region**

**Action Requested**

- take note of the information submitted
- comment

Submitted by

Sea Watch Foundation



**NOTE:**  
**IN THE INTERESTS OF ECONOMY, DELEGATES ARE KINDLY REMINDED TO BRING THEIR OWN  
COPIES OF DOCUMENTS TO THE MEETING**



# **ASSESSING THE IMPACT UPON CETACEANS OF SHIPPING, INCLUDING FERRIES, WITHIN THE ASCOBANS REGION**

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**BACKGROUND** The 3<sup>rd</sup> Meeting of the Parties to ASCOBANS, held in Bristol, United Kingdom from 26 – 28 July 2000, invited Parties and Range States to support research into the effects of shipping and particularly high-speed ferries and into possible ways of mitigating any adverse effects (MOP 3 Resolution No. 4). Resulting from this was a report commissioned to review available evidence for possible effects of shipping upon cetaceans in the ASCOBANS region, either by direct physical damage to the animals or behavioural changes caused by sound disturbance, and to propose possible mitigation measures (Evans, 2003). This was presented to the Fourth Meeting of the Parties in Denmark in August 2003. Since then, there have been annual requests from the Secretariat to Parties for reviews, with emphasis upon high-speed ferry routes. A questionnaire has been circulated annually, and some Parties have responded by completing this.

In the lead-up to the 16th ASCOBANS Advisory Committee Meeting, five Parties (Finland, Sweden, Germany, UK and Belgium) submitted reports (Documents. AC15/Doc 24a-e). Those findings are summarized here, along with recommendations for a modification to the type of information requested.

**METHODS OF INFORMATION COLLECTION** The ASCOBANS Secretariat distributes to Parties a questionnaire on high speed ferries. This seeks information on the name and type of craft, its route (port to port), number of round trips made per day (with notes on whether this varies seasonally), the speed of the vessel, its capacity in terms of numbers of passengers and cars, the size/tonnage, and engine power. This information is then collated by the Secretariat and disseminated at Advisory Committee meetings.

A high speed ferry is defined as a vessel traveling at speeds of 30 knots or more.

**RESULTS** Five questionnaire returns were received in advance of the 16<sup>th</sup> ASCOBANS Advisory Committee Meeting in Bonn. These are summarized as follows:

**Finland:** Ten high speed ferries were recorded operating from Finnish ports, seven of these from Helsinki to Tallinn in Estonia, and two from Helsinki to Rostock. The number of round trips per day varied between 0.5 and 7, weather/ice conditions permitting. Their speeds ranged from around 30 to 40 knots.

In addition, fifteen other non high speed ferries were reported on. Most of these operated out of Helsinki, going to Tallinn and/or Mariehamn and Stockholm. Other routes included from Turku to Mariehamn/Långnas (Åland island), and Mariehamn to Kapeliskår. The number of round trips per day (where recorded) varied between one and four. Their speeds ranged from 16 knots to 27 knots.

**Sweden:** Five high speed ferries were recorded operating in Swedish waters, one between Gothenberg and Fredrikshavn, and the other four between Nynåshamn, Visby, and Oskarshamn. All ferries made between two and four round trips per day (weather permitting). Their speeds ranged from 28.5 knots to 40 knots.

**Germany:** Eight high speed ferry routes (involving four vessels) were identified as operating out of German ports. Most of these were sea cats and operating over short distances, as for example between the mainland and Helgoland or the German Wadden Sea islands, traveling from ports such as Norddeich, and Langeoog and visiting Borkum and Nordene. These ferries make anywhere between one and five round trips per day. A number of the short ferry routes operate only in summer. Speeds recorded ranged from 36.5 knots to 42 knots.

**United Kingdom:** Nine high speed ferries (operating over seven routes) were reported. The number of trips per day varied from one to twenty, with the majority of the routes being over short distances, for example between Portsmouth and Ryde on the Isle of Wight, and between Ryde and Southsea. Other routes included between Larne and Troon, Larne and Cairnryan, and Dublin and Holyhead, all in the Irish Sea. Speeds recorded ranged from 34 to 45 knots.

**Belgium:** No high speed ferry route has existed from a Belgian port for some years now.

**Comparisons with 2002 Reporting** With only five Parties reporting ferry details in 2007, an examination of trends since 2002 has to be limited. In Finland, one new ferry on Viking Lime has just started (10 March 2008), operating between Helsinki and Tallinn at speeds of around 25 knots, but otherwise there has been little change in vessels or the speeds at which they travel. The same appears to apply to Sweden, although the questionnaire return suggests there are two more vessels operating between Nynåshamn, Visby and Oskarshamn compared with 2002. In Germany, in 2002 there were routes operating between Sylt and Helgoland, Amrum and Helgoland, and Hooksiel and Sylt, which are not reported in the 2007 returns, whilst in the UK, the number of high speed ferry routes reported have reduced from 17 to seven, although this may reflect incomplete

reporting. Speeds have also little changed. The situation in Belgium remains the same as in 2002 with no high speed ferries operating.

**DISCUSSION AND RECOMMENDATIONS** This short report clearly presents only a partial picture of the status of high speed ferries within the ASCOBANS Agreement area. Maps 1-5 illustrate the locations of high speed ferry routes in the various regional seas following more comprehensive reporting in 2002 (see Evans, 2003 for further details). Indications are that there has been little change over the last five years, with if anything a slight reduction in the number of ferry routes operating. This may reflect the more general economic downturn in the passenger ferry industry.

Ship strikes are an important conservation threat to cetaceans, particularly large odontocetes such as sperm whale and long-finned pilot whale, and some of the baleen whales, notably (in the ASCOBANS area) fin whale, and elsewhere the endangered northern right whale (Laist *et al.*, 2001; Pesante *et al.*, 2002; Koschinski, 2003; Evans, 2003). As recently as 2006, for example, a fin whale that was clearly the victim of a ship strike, was brought into port on the south coast of England.

International concern has been expressed by marine mammal scientists within a number of fora, for example IWC and IMO, where the Maritime Safety Committee and the Marine Environment Protection Committee (MEPS) has been invited to consider adding a new work item to its work programme on measures for minimizing the risks of ship strikes. ASCOBANS should therefore take this matter seriously and examine more closely actual and potential threats of physical strikes from shipping.

The current system of reporting by Parties to ASCOBANS Secretariat is of limited value in enabling an evaluation of the threat of ship strikes within the Agreement area. Besides the fact that only a minority of Parties are reporting, the emphasis upon high speed ferries limits our ability to assess the threat. It is useful to have some idea of the average speeds presently travelled by vessels, but confining this to ferries, and within those, to vessels operating at speeds of 30 knots or greater, means that surveillance is overlooking much of the shipping that can result in serious or fatal injury to cetaceans. As Laist *et al.* (2001) and others have indicated, most serious or lethal injuries appear to be caused by vessels travelling at speeds of 14 knots or more, i.e. in some cases involving speeds considerably less than the 30 knot criterion adopted for the ASCOBANS questionnaire surveys. And although ship strikes are more frequently reported from ferries, other shipping is known to be involved in collisions with cetaceans. Thus, some assessment of risk to cetaceans (particularly those species identified as being more vulnerable) should include all types of shipping.

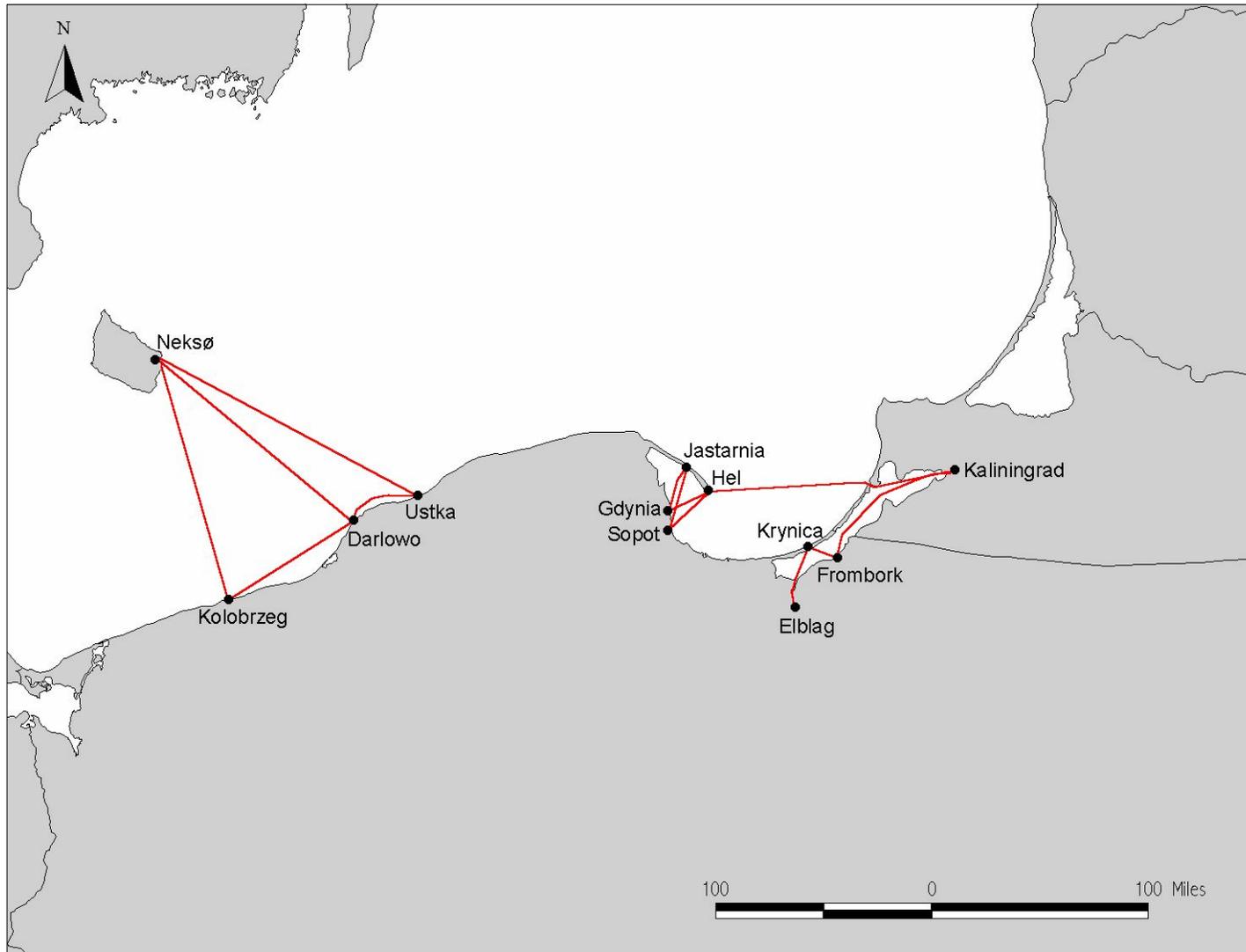
Nowadays, there is increasing opportunities to use AIS (automatic identification system), an automatic surveillance system that operates in most countries, and provides information on all shipping movements above a certain size (excluding fishing vessels), including their speed, tracks, times off departure and arrival, etc. The AIS Live network provides real time information from over 1,250 locations around the world. It currently

shows the live positions of circa 14,000 vessels. The position of each vessel within the areas of coverage is displayed on a chart and is updated every 3 minutes, 24 hours a day. Simply by clicking on a vessel, additional details are available, such as IMO number, MMSID, latitude, longitude, course, speed and next port. The network grew by 300% in 2006 and continued to expand in 2007. More than 103,000 users have registered to use the application so far.

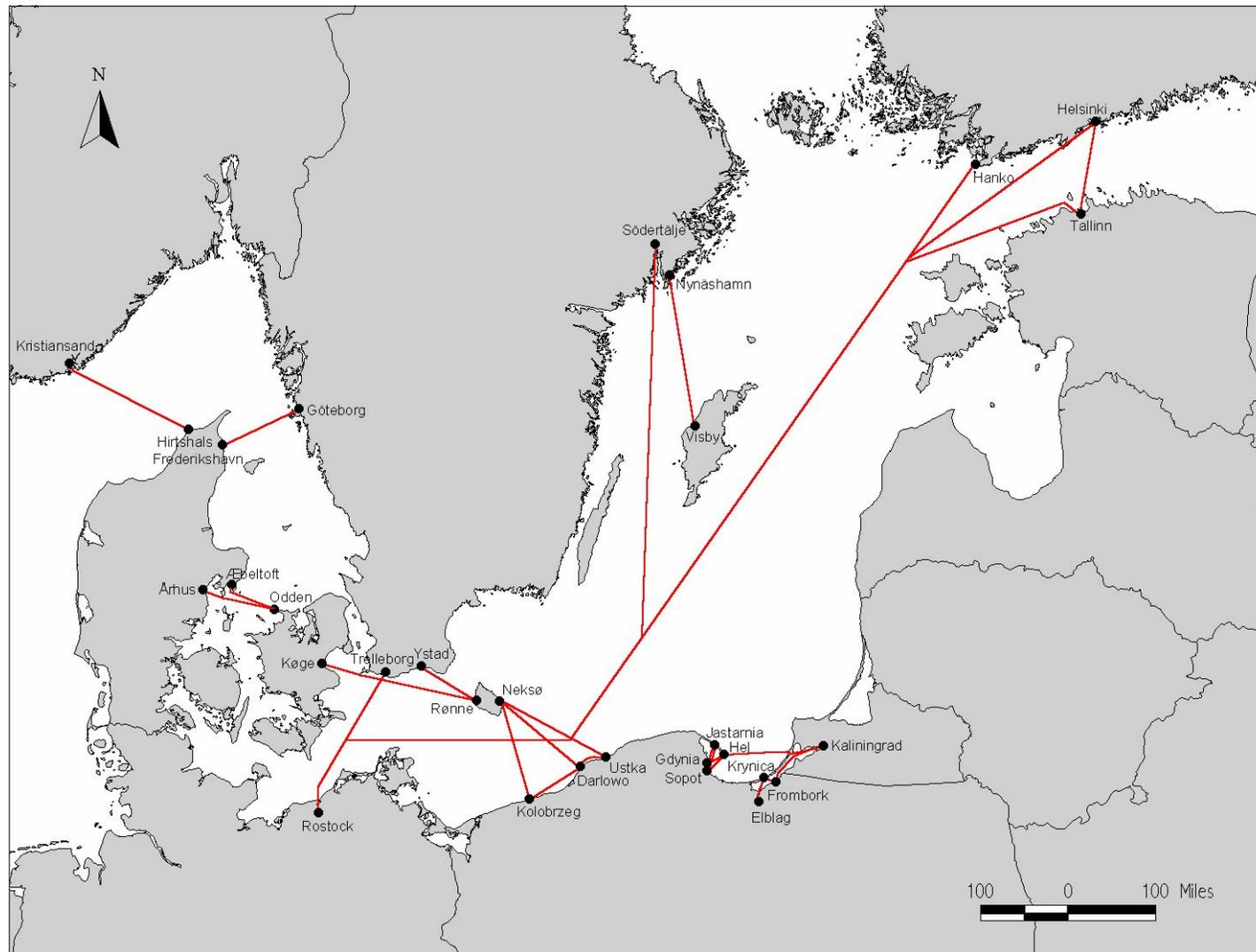
It is recommended that ASCOBANS should attempt to obtain such information so that a more useful risk assessment can be undertaken that relates shipping movements of various types to cetacean “hot spots” as identified from effort based cetacean survey data. There is potential further to undertake temporal comparisons, both seasonally and over longer time periods. A qualitative assessment of shipping trends within the ASCOBANS area may still be useful, however, but emphasis should be placed upon making a critical assessment of potential and actual threat to cetacean populations in the region, including a listing of all known cases of injury or mortality. This need not be done annually, but could usefully be performed once in every Work Triennium.

## REFERENCES

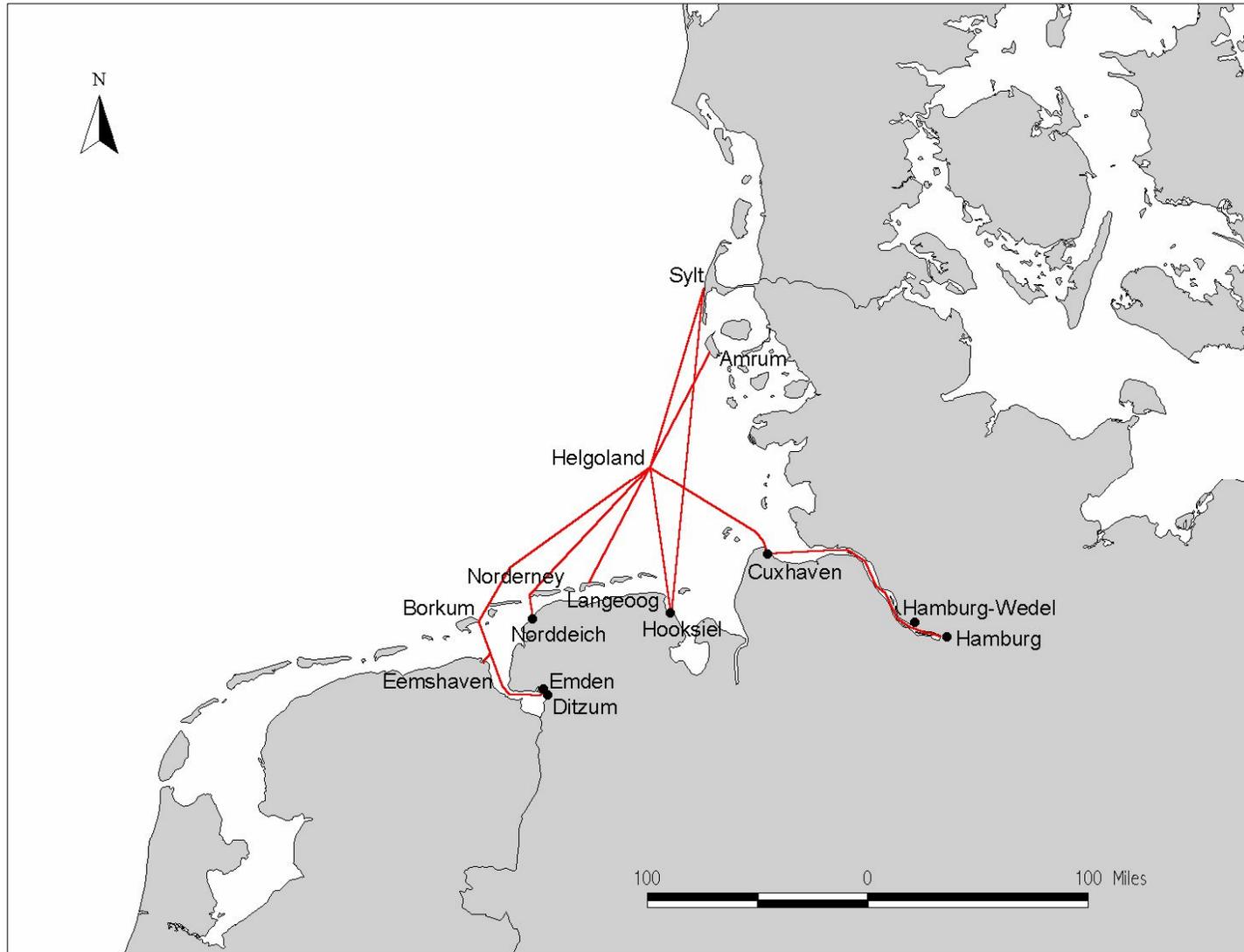
- Evans, P.G.H. 2003. *Shipping as a possible source of disturbance to cetaceans in the ASCOBANS region*. ASCOBANS 4<sup>th</sup> Meeting of the Parties, Esbjerg, Denmark, 19-22 August 2003. Document MOP4/Doc. 17(S). 85pp
- Laist, D.W., Knowlton, A.R., Mead, J.G., Collet, A.S. and Podesta, M. 2001. Collisions between ships and great whales. *Marine Mammal Science* 17(1):35-75.
- Koschinski, S. 2003. Ship collisions with whales. ASCOBANS 10<sup>th</sup> Advisory Committee Meeting, Bonn, Germany, 9-11 April 2003. *ASCOBANS Document AC10/Doc. 7(P)*. 19pp.
- Pesante, G., Collet, A., Dhermain, F., Frantzis, A., Panigada, S., Podesta, M. and Zanardelli, M. 2002. Review of collisions in the Mediterranean Sea. Pp. 5-11. In: *Collisions between cetaceans and vessels: Can we find solutions?* (eds. G. Pesante, S. Panigada and M. Zanardelli). ECS Newsletter no. 40 (Special Issue).



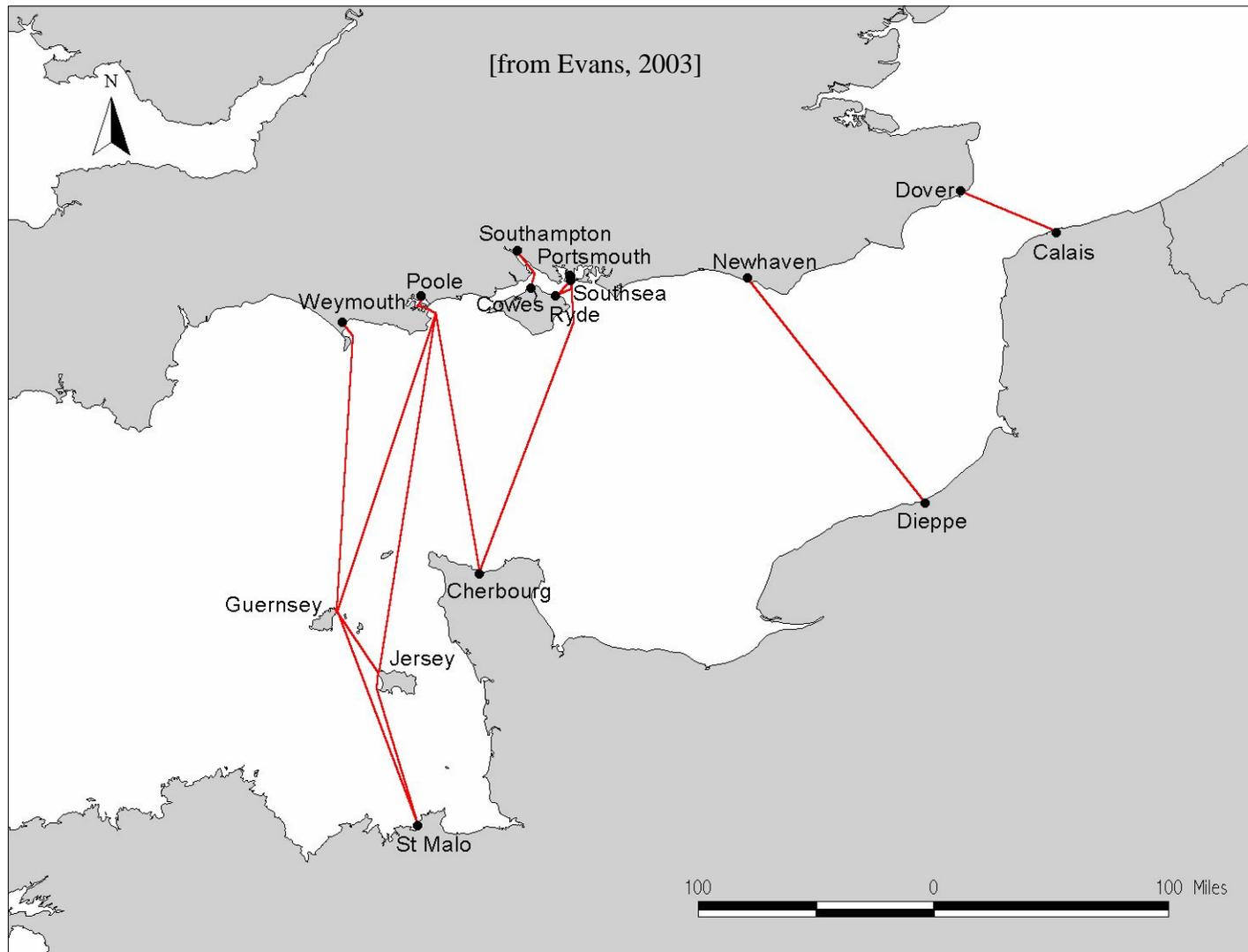
Map 1. Routes of high-speed ferries operating in Poland [from Evans, 2003]



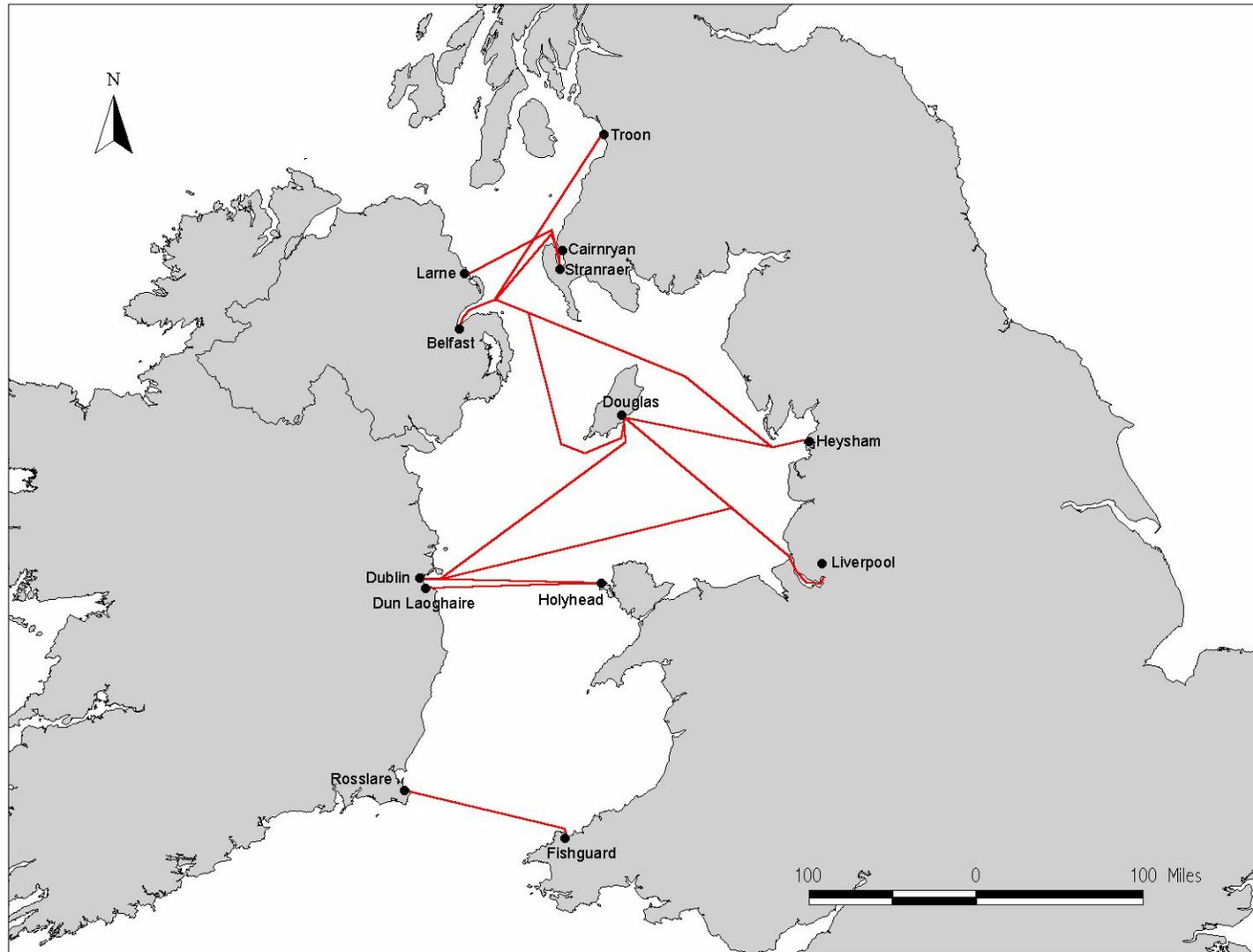
Map 2. Routes of high-speed ferries operating in the Skagerrak, Kattegat, Belt and Baltic Seas.  
[from Evans, 2003]



Map 3. Routes of high-speed ferries operating in the North Sea.



Map 4. Routes of high-speed ferries operating in the English Channel  
[from Evans, 2003]



Map 5. Routes of high-speed ferries operating in the Irish Sea  
[from Evans, 2003]