COMMISSION OPINION

of 6.12.2011

delivered upon request of Germany pursuant to Art. 6(4) sub par. 2 of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, concerning the deepening and widening of the ship fairway Unter- and Außeneelbe (river Elbe) to the port of Hamburg (Germany)
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I. The legal framework

Article 6(3) of directive 92/43/EEC (the 'Habitats Directive') requires that any plan or project not directly connected with or necessary to the management of a Natura 2000 site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of its implications for the site and subject to the provisions of paragraph 4, the competent national authorities may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

According to Art. 6(4) of directive 92/43/EEC, a plan or a project may be carried out in spite of a negative assessment of the implications for a Natura 2000 site, in the absence of alternative solutions, if it is justified for imperative reasons of overriding public interest, including those of a social or economic nature. In this case the Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected and it shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species, and if considerations relating to human health, public safety or beneficial consequences of primary importance for the environment cannot be invoked, the project can be justified, further to an opinion from the Commission, by other imperative reasons of overriding public interest.

II. The German request

On 4th January 2011, the Commission received a letter dated 28th December 2010, together with accompanying technical files, from the German Permanent Representation requesting an opinion from the Commission pursuant to Art. 6(4) of the Habitats Directive concerning the authorization of the deepening and widening of the ship fairway Unter- and Außenelbe (river Elbe) to the port of Hamburg (Germany).

III. The project

The main purpose of the project is to enable entry into the Hamburg port of the so-called "benchmark container vessel" (in German: "Bemessungsschiff") with a 14,5 m draught in sea water, 46 m width and 350 m length. As the port is situated about 130 km upstream of the Elbe estuary, the waterway between the estuary mouth and the port needs improvement in order to reach the required depth (see fig. 1a). Consequently, the main element of the project is the deepening of the riverbed and the deposit of the dredged material. Some other measures connected with the waterway deepening will also be carried out.
The project consists of several extension parts and construction work:

1. **Deepening of the ship fairway**

   Within the 136 km long construction zone (km 755.3 – 619.5) the existing waterway will be deepened. The fairway will be widened by 20 m from the estuary of the river Stör (Schleswig-Holstein) to the upper part of the Hamburg port (see fig. 1b). This will enable navigation of ships with 13.5 m draught independently and from 13.5 to 14.5 m dependent on the tides.

2. **Construction of the siding and waiting places**

   Between km 644 and 636 the waterway will be widened to the South to serve as a siding place (see fig. 1b). At km 695 a waiting place will be established near the port Elbehafen Brunsbüttel.

3. **Deepening of the harbour entrance**

   Parts of the Hamburg port will be adjusted accordingly to the draught of the waterway.

4. **Establishment of underwater deposits and groynes**

   Part of the dug out material will be placed at underwater deposits (German abbreviation in fig. 1 *UWA: Unterwasserablagerungsfläche*). The purpose of this measure is to lower the changes in the tide increase caused by the project and to lower the speed of water flow. The following UWAs and their capacities are planned: Medemrinne-Ost (12.3 mio. m³), Neufelder Sand (10.2 mio m³), St. Margarethen (1.3 mio m³), Scheelenkuhlen (2.3 mio m³) und Brokdorf (0.75 mio m³).

   Another part of the deposit will be stored at reloading sites (German abbreviation in fig. 1 *UL: Umlagerungsstellen*) which lower the tide energy temporarily. The following ULs and their capacities are foreseen: Medembogen (2.5 mio m³) and Neuer Lüchtergrund (12.5 mio m³).

5. **Maintenance digging**

   As a result of the project, the total amount of dug out material during the waterway maintenance will be increased by approximately 10% compared to the yearly average amount of the years 2003-2005.

**IV. The sites**

Nine Sites classified as Special Protection Area (SPA) pursuant to the Birds Directive 2009/147/EC, have been assessed. It was concluded that no SPA would be adversely affected by the project.

17 Sites of Community Importance (SCI), designated under the Habitats Directive, have been assessed (see fig. 2) from which four sites have been considered to be affected by the project:

- DE 0916-391 "Nationalpark Schleswig-Holsteinisches Wattenmeer und angrenzende Küstengebiete",
• DE 2323-392 "Schleswig-Holsteinisches Elbästuar und angrenzende Flächen",
• DE 2018-331 "Unterelbe" (Niedersachsen),
• DE 2424-302 "Komplex NSG Neßsand und LSG Mühlenberger Loch" (Hamburg).

All four sites (SCI) are situated in the Atlantic bio-geographical region and cover together 491.219 ha.

V. Implications of the project on the site

An appropriate assessment according to Art. 6(3) of the Habitats Directive was carried out for the project. It concluded that there will be significant impacts on the Natura 2000 sites "Nationalpark Schleswig-Holsteinisches Wattenmeer und angrenzende Küstengebiete", "Schleswig-Holsteinisches Elbästuar und angrenzende Flächen", "Unterelbe" and "Komplex NSG Neßsand und LSG Mühlenberger Loch". Particularly affected will be one habitat type and one priority species of Community interest, i.e. 1130 "Estuaries" and the endemic plant Oenanthe conioides (NOLTE) LANGE (in German: "Schierlings-Wasserfenchel"). Although there is no loss of the habitat type 1130 in the sites directly, the assessment concluded that there will be a disadvantage to the ecological value by changing physical and morphological parameters, i.e. underwater topography, tidal dynamic, salinity and water turbidity. This was evaluated as having a "virtual loss" of 320.7 ha. This loss will have a significant effect on the integrity on three out of the four sites, i.e. "Nationalpark Schleswig-Holsteinisches Wattenmeer und angrenzende Küstengebiete", "Schleswig-Holsteinisches Elbästuar und angrenzende Flächen" and "Unterelbe".

The German authorities consider that the deepening of the river Elbe will cause a shift of the brackish water zone towards 1000-1900 m upstream. As a consequence, the salinity of the water will raise by approximately 0,4 PSU (practical salinity unit), a tendency which was confirmed by previous deepening of the Elbe in the past according by the German authorities. However, as the natural dynamic of salinity in the estuary at the river Elbe is already very high, Oenanthe conioides might tolerate a modest variability in salinity. On the other hand, as result of the nature and goals of the project, bigger ships will increase the energy of the waves and will change water stream dynamics affecting the shorelines of the river Elbe where Oenanthe conioides grows. Therefore, and keeping in mind that Oenanthe conioides mainly exists in fresh water areas which are nonetheless influenced by the tides, the assessment took a precautionary approach. It concluded that there will be a disadvantage to the ecological value of the habitats of Oenanthe conioides through the "virtual loss" of an area equivalent to 59,15 ha. This loss will have a significant effect on Oenanthe conioides on three out of the four sites, i.e. "Schleswig-Holsteinisches Elbästuar und angrenzende Flächen", "Unterelbe" and "Komplex NSG Neßsand und LSG Mühlenberger Loch".

As the project will adversely affect the integrity of Natura 2000 sites hosting protected habitat types, including one priority species, the project may only be authorised if it satisfies the requirements set down in Article 6(4) of the Directive.
VI. Fulfilment of the requirements under Art. 6(4)

- Alternative solutions

The German authorities assessed six potential alternatives to reach the objective, together with the zero alternative. Three of them did not meet the objective at all or appeared to be unrealistic: (1) Reduction of speed of ships and the use of sea-tugs, (2) additional dams with locks and floodgates on the river Elbe and its tributaries to increase the water level and (3) international convention limiting the size of overseas ships.

In alternative (4), the competent authorities assessed different options to the requested dimensions of the project. The proponent already reduced the required dimensions enabling ships with the draught of 15.50 to 16 m to enter Hamburg port by the "benchmark container vessel" (in German: "Bemessungsschiff") with a reduced size of 14.5 x 46 x 350 m. If the dimensions of the proposed project were further reduced, the project would fail in its purpose as the ratio of costs/effects would be much lower due to increased dependence of the "reference ship" on the high tide. The alternatives (5), division of loading and transportation directions via a cooperation between German ports, and (6), partial unloading of the containers in other sea ports located downstream Hamburg, have been rejected because of time losses during the unloading of part of the containers in the sea ports. Such an economic disadvantage would prevent ships going to Hamburg at all because that port would be seen being unattractive and the complete cargo would be unloaded at the alternative port.

Concerning the assessment of the zero alternative, the competent authorities argue that the Hamburg port is situated 130 km upstream of the estuary. Transport by ships in general is one of the most favourable modes in economic and ecologic terms. Ship dimensions, especially in overseas transport, are increasing. If the fairway of the river Elbe were not adjusted accordingly, the demand for higher volumes of cargo and increased size of ships, would mean that Hamburg port and the region of Hamburg as a result would lose competitiveness.

The competent authorities therefore consider that the current proposed solution is the best balance between ecological and economic objectives.

- Imperative reasons for overriding public interest

The German authorities submitted detailed analyses of the economic importance of the Hamburg port for the Hamburg metropolitan region as well as for the whole country and its function as a major transport hub for international and EU trade. It is apparent that there are hundreds of thousands of jobs directly or indirectly dependent on its prosperity. The assessment calculated that the loss of 1 mio TEU (Twenty-foot Equivalent Unit; standard container) per year leads to direct loss of 10.500 jobs. This figure represents a realistic scenario aimed at avoiding further diminishing the economic weight of the Hamburg port which might be caused by not adjusting the fairway of the river Elbe to the needs of increased ship capacities.

- Impact mitigation

Mitigation measures such as speed limits for ships to reduce the intensity of their waves have been confirmed by the German authorities for conserving the priority plant species *Oenanthe conoides* and the priority habitat type 91E0 *Alluvial forests with Alnus glutinosa* and *Fraxinus excelsior* (Alno-Pandion, Alnion incanae, Salicion albae).
Other mitigation measures, such as postponing the time frames for dredging work or prohibition of dredging during spawning times, larval phases and nesting seasons will limit the extent of negative impacts to other species. Additional mitigation measures are confirmed by the German authorities for conserving the fish *Alosa fallax*.

**- Compensatory measures**

The expected impacts of the project on the coherence of the Natura 2000 network, the two affected target features – habitat type 1130 and the priority plant species *Oenanthe conioides* – will be compensated. The former by creation of new areas exposed to the tide and subsequent renaturalization of the riverbed of the river Elbe, the other one by creating new habitats in ditches and river banks at two sites identified as suitable for successful compensations. The German authorities concluded that concerning the priority plant species *Oenanthe conioides* the area upstream of Hamburg at the river Elbe (Spadenlander Busch/Kreetsand and Zollenspieker) has a factor 13 times higher ecological value than the area downstream of Hamburg. As consequence, *Oenanthe conioides* will have a much higher chance for further development than downstream Hamburg. The extent of the proposed measures corresponds in proportion to at least 3 times the potentially affected area and the number of species of the affected target features.

The measures, like the creation of new shallow water areas and the improvement of the aquatic system, are planned in the following areas (see fig. 3): Schwarztonnensander Nebenelbe, Insel Schwarztannensand, Allwördener Außendeich, Siethfeld, Kellinghusen, Neuenkirchen, Wewelsfleth, Bahrenfleth, Hodorf, Oelixdorf, Spadenlander Busch/Kreetsand and Zollenspieker.

**VII. Opinion of the Commission**

According to the information submitted by the German Authorities, the deepening and widening of the ship fairway Unter- and Außeneelbe (river Elbe) to the port of Hamburg is justified as an essential project of overriding public interest for which there are no viable alternatives. Mitigation measures will be implemented which will limit the negative effects of the project. However, the project will still have significant impact on the integrity of Natura 2000 sites, in particular on the priority plant species *Oenanthe conioides* and on the habitat type 1130 "Estuaries". These effects will be compensated for by the creation of equivalent habitats on a total area that will be larger or more ecologically valuable than the area that will be affected. The measures will be implemented during the construction period but outside of the breeding and resting season.

Taking into account that Germany has a particular responsibility to ensure the conservation of the species *Oenanthe conioides* as it is an endemic plant species which only occurs at the Unterelbe, the Commission furthermore appreciated the fact that the German Authorities have decided to develop additional measures in favour of *Oenanthe conioides*. The area of "Alter Moorburger Hafen" will be restored and cleaned up as this territory is known of having been a habitat for *Oenanthe conioides* in the past. The area of "Spadenländer Spitze" and "Overhaken" will be ecologically adjusted by the creation of a tidal channel restoring a suitable habitat for *Oenanthe conioides*. These additional measures include authorisation, land preparation, financial coverage and appropriate monitoring and reporting to the broad public via internet and to the European Commission.

The protection of the overall coherence of the Natura 2000 network will be ensured.
On the basis of the detailed information and explanations provided by the German authorities and taking into account in particular the issues set out in the present document, the Commission is of the opinion that the adverse effects of the deepening and widening of the ship fairway Unter- and Außenelbe (river Elbe) to the port of Hamburg (Germany) are justified by imperative reasons of overriding public interest.

The opinion is subject to the following conditions:

– The compensatory and the additional measures will be financed, timely implemented and monitored as described in the documents submitted to the Commission by the German authorities.

– Detailed reports on the implementation and monitoring of these measures will be made available to the broad public via internet as committed by the German authorities and submitted to the Commission on a biannual basis. The first report is due in the end of 2012. Concerning *Oenanthe conioides* the monitoring will be at least 12 years according to the agreed time intervals starting after the implementation of the measures and will continue until a viable plant population is established.

– The results of the accompanying monitoring programme regarding Natura 2000 sites will be taken into account in that it may, if need be, lead to appropriate rectification of the project design or to additional compensation and/or mitigation measures.

– The Annex of this opinion forms an integral part of the opinion.

Done at Brussels, 6.12.2011

*For the Commission*

*Janez Potočnik*

*Member of the Commission*
Figure 1: Overview of the construction project (map no. 1 of the plan approval document).

Figure 1a: Current state and planned depth of the fairway (fig. 1, page 5 of the plan approval document).
Figure 1b: Current state and planned width of the fairway (fig. 2, page 5 of the plan approval document).

Figure 2: Sites of Community Importance in the construction zone (map no. 2 of the plan approval document).
Figure 3: Location of some of the compensatory measures (map no. 5 of the plan approval document).