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Stichting SOS Dolfijn
F.a.o.: Mrs. Annemarie van den Berg - director
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Datum

Datum digitale handtekening

Ons kenmerk

'23.10.23_Additional
questions SOS Dolfijn EMR'

Bijlage(n)

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Datum Datum digitale ondertekening
Onderwerp Additional questions tot he SOS Dolfijn EMR consortium
regarding 'Gedrag van bruinvis gerelateerd aan vibro
piling' met referenties '4703/Doedijns'
en 'TN 425016'

Dear Mrs Van den Berg,
Beste Annemarie,

Thank you for your interest in consultation from Wozep to perform research on the effects of alternative foundation techniques, in particular vibropiling, on harbour porpoises.

We have held meetings with all interested parties for this research. These meetings helped us a lot and we thank you and your consortium partners for the useful discussions.

For a proper evaluation of this process we still have some remaining questions to the interested consortia. These questions directly relate to the research question we formulated (see below). We hope you can give us more insight on your proposition.

We foresee experiments in a controlled environment. These questions relate to the Fjord&Bælt facilities in Denmark:

- Can you give a description of the facilities, like the dimensions of the basin?
- Can you share the acoustical properties of the facility and how these acoustical properties were determined?
- We have some concern on the presence of noise from the nearby harbour. Can you indicate the magnitude of this issue and how you want to address this in the research?
- Are the audiogram of the harbour porpoises in this facility available?
- Can you indicate the role of the different consortium partners in contributing to answering the research questions listed below?

We are looking forward to your response.

Best regards, on behalf of the Wozep research team,

Stefan Doedijns
Adviseur Kennisinkoop

Research question from the consultation (July 2023):

1.1. Questions

Research should be directed towards answering the questions listed below. Where particular research needs to be conducted in a particular order because of interdependencies, this should also be indicated. The sound signal required for this research will be provided if needed.

- What effects on porpoise hearing (TTS, PTS and masking, see Southall *et al.*, 2021) and fitness in the evolutionary sense (death, disturbance and also TTS, PTS and masking, see Southall *et al.*, 2021) are most likely and what is the range in which they occur?
- What is the duration of these effects and at what level are effects on so-called vital rates (Fig 2) likely?
- How can the magnitude of these effects on the individual be measured?
- How can the effects on the individual be calculated that they form the input for the model used by the Dutch government to calculate the effects of Wind at Sea on the population of the harbour porpoise?

Form of consultation

Parties wishing to express interest in this research must have the following facilities, experience and qualifications:

- Parties are asked to indicate their ability to conduct this research to answer the government's questions.
- Parties must have suitable facilities to conduct such a study under controlled conditions; for example, a research facility in which acoustic and behavioural studies can take place that is quiet enough so that influences of outside noise on the results can be excluded, and whose acoustic properties are known.
- Parties must be able to provide the necessary specifics on these facilities.
- In the case of research with live animals, parties must have one or more porpoises with normal representative hearing as evidenced by an audiogram (Kastelein *et al.*, 2017) and behaviour. These porpoises must be trained to participate in hearing and behavioural studies.
- Parties must have the technical means for generating low frequencies of sound corresponding to vibration noise.
- Furthermore, knowledge and experience in acoustic and behavioural research on porpoises is preferred, for example by reports and publications on similar research conducted by researchers still associated with the company.
- Parties can enter into a collaboration to be able to supplement parts of these requirements that they do not have with facilities or expertise from other parties.

The research must be completed by the end of 2024