

”Høringssvar til Lillebælt Syd Vindmøllepark” , ”journalnummeret: 2019-351”

3.1 Bekymring miljøpåvirkning - elektromagnetisk påvirkning af dyr

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Underområde: 3.1 Bekymring miljøpåvirkning - elektromagnetisk påvirkning af dyr

Art: Bekymring

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Resume

Lillebælt er et ret smalt farvand og i LillebæltSyd projekt området er der knapt 13 km fra kysten på Als til kysten på Helnæs.



Projektområdet er placeret midt iblandt flere Natura2000 og Ramsar områder

Fra <https://edit.mst.dk/media/apqb3ioj/n112-natura-2000-plan-2022-27-lillebaelt.pdf>

En stor del af det smukke ved (og herlighedsværdien af) Helnæs er det frie, ugenerte og rolige udsyn over vand både dag og nat.

Helnes opfylder behov i retning af stilleområde, uforstyrret natur og om natten – dark-skye og udgør derved et attraktivt område for natur-turisme(hvorfor der også er flere erhvervsaktive på halvøen indenfor dette).

Fra https://www.mdpi.com/2077-1312/9/7/776?trk=public_post_share-update_update-text ses bl.a. «*The current study investigated the effects of different strength Electromagnetic Field (EMF) exposure (250 μ T, 500 μ T, 1000 μ T) on the commercially important decapod, edible crab (*Cancer pagurus*, Linnaeus, 1758). Stress related parameters were measured (l-Lactate, d-Glucose, Total Haemocyte Count (THC)) in addition to behavioural and response parameters (shelter preference and time spent resting/roaming) over 24 h periods. EMF strengths of 250 μ T were found to have limited physiological and behavioural impacts. Exposure to 500 μ T and 1000 μ T were found to disrupt the l-Lactate and d-Glucose circadian rhythm and alter THC. Crabs showed a clear attraction to EMF exposed (500 μ T and 1000 μ T) shelters with a significant reduction in time spent roaming. Consequently, EMF emitted from MREDs will likely affect crabs in a strength-dependent manner thus highlighting the need for reliable in-situ measurements. This information is essential for policy making, environmental assessments, and in understanding the impacts of increased anthropogenic EMF on marine organisms.* »

og videre «*There are both social and environmental concerns with the development of MREDs (Marine Renewable Energy Devices) including habitat loss, perceived aesthetic problems, collision risks, increased anthropogenic noise, and exposure to increased electromagnetic fields (EMF)* »

og «*The number of subsea power cables connecting turbines, storage banks and export cables to shore will subsequently rise with the increase in deployments. These cables generate both an electric field (E-field) and a magnetic field (B-field) [10]. Through industry standard insulation, E-fields can be successfully contained within the cable with no leakage, however, there is no industry standard insulation that is able to prevent B-field leakage [10]. The leaked B-field interacts with surrounding cables emissions, due to common cable configurations, leading to the creation of an induced electromagnetic field (iE-field) which is subsequently influenced by saltwater ions moving via underwater currents i.e., Lorentz force [14].*» og «*A commonly utilised cable operating at 1600 A is expected to produce an EMF of 3200 μ T in a perfect wire, at the cable surface [17]. As with all EMF, the values will decrease with distance from the source, resulting in a field strength of 320 μ T and 110 μ T at 1 m and 4 m respectively [17].* »

videre «*The crab, Cancer pagurus, are the second most important shellfish fishery in the UK [24]. Studies have shown that, given the life cycle and behavioural patterns of this species, they are highly likely to experience subsea power cables, either by attraction to EMF [13] or by the creation of scour protection zones around turbine bases, which may subsequently act as artificial reefs [25,26,27,28,29].* » og «*Previous studies on C. pagurus have concluded that exposure to EMF, at strengths of 2.8 mT and 40 mT, elicits both behavioural and physiological changes in commonly used stress parameters [13]. In crustaceans, analysis of haemolymph enables the detection of abnormalities in internal chemical processes caused by increased stress, allowing accurate assessment of stress response via l-Lactate, d-Glucose, and THC [35,36,37,38]. Behavioural and response parameters (shelter preference, time spent roaming/resting) have been shown to be reliable indicators of stress, particularly in relation to EMF exposure [13].* »

Fra en anden kilde(fra 2022) <https://www.dailymail.co.uk/news/article-10770107/Lobsters-deformed-left-unable-swim-wind-farm-power-cables.html> hedder det bl.a. «*Lobsters are being deformed and left unable to swim because of electromagnetic fields from undersea wind farm power cables*

- **Researchers recorded deformities in lobsters in a controlled study**
- **They exposed eggs to electromagnetic fields similar to underwater cables**
- **When the eggs hatched, deformities were recorded three times more often**

Lobsters are being deformed by wind farm cables and being left unable to swim, a new study has claimed.

Electric magnetic fields created by the cables which transport energy from offshore wind farms make lobster larvae three times more like to grow deformed - with bent tail sections most common, according to Heriot-Watt University scientists.»

Jeg er klar over, at jeg ikke kan pryde mig med lånte miljø-forsker-fjer men en simpel google søgning efter elektromagnetisk indflydelse på hav levende dyr førte til en hel del hits med alarmerende forsker rapporter om fundne sammenfald af EMF påvirkning og skader på hav levende dyr. Med min begrænsede indsigt på området in mente vil jeg mene, at en seriøs behandling af emnet stadig er udestående og nødvendig, de mange dokumenter og sider i høringsmaterialet til trods.

Bekymring

Jeg er bekymret over, at et projekt af disse dimensioner i et lille nødlidende bælt kan komme så langt hen imod en etablering UDEN en seriøs behandling af miljøpåvirkning overhovedet.

Kan man fra projektets side fremlægge seriøst gennemarbejdet dokumentation for foretagne undersøgelser in-situ, altså ikke svagt og løst formulerede vurderinger på et meget snævert grundlag. Her tænker jeg på en miljøpåvirkning på ALLE de levende organismer der er i Lillebælt (specielt hvad der er nævnt på udpegningsgrundlaget for de omkringliggende Natura2000/Ramsar områder).

Jeg finder det dybt bekymrende, at SONFOR(med medinvestorer) ønsker at etablere en HAVvindmølle farm med disse karakteristika midt i et smalt og meget smukt bælt delt mellem flere kommuner.

At det overhovedet overvejes i ENS-regi og ligeledes i MST-regi er meget urovækkende, givet det faktum at de selvsamme møller kan placeres langt ude i nordsøen og samtidigt give SONFOR (med medinvestorer) den eftertragtede publicity.

Afhjælpning

En opsættelse af disse HAVvindmøller langt ude i nordsøen fjerner desværre ikke deres miljøpåvirkningspotentiale, men vil klart hjælpe med til ikke yderligere at stresse Lillebælt. HAVvindmøllefarmes erkendte miljøpåvirkninger understreger behovet for at placere disse industriinstallationer med omhu og med respekt for den natur, de placeres i.