North Sea Energy

offshore system integration

Designing synergy

Smarter multi-use of the North Sea

The North Sea is a hub of human activity and natural value. It hosts offshore wind farms, fishing, shipping routes, pipelines, and protected ecosystems. All within a limited space. With growing demands for energy, food, and nature restoration, space in the North Sea is under pressure. Multi-use planning ensures activities can coexist, minimizing conflicts and maximizing sustainability. Synergy happens when different activities or marine protected areas (MPAs) support rather than hinder each other. It turns potential competition into collaboration.

Multi-use today

Two-thirds of Dutch, German, and Belgian waters already combine multiple uses.

Most overlap includes:

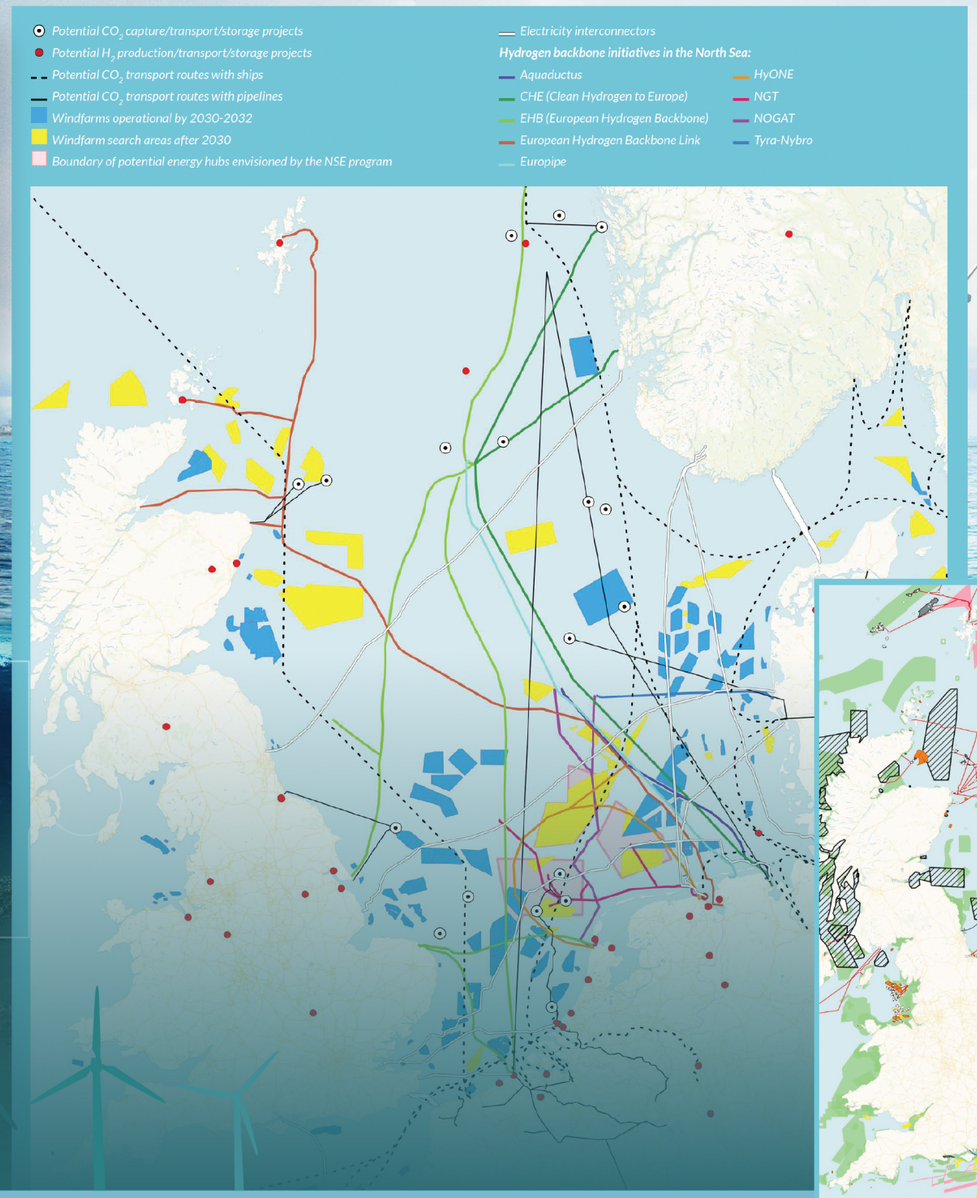
- **Fishing** with MPAs or military / shipping zones
- **Wind farms** with fishing and nature areas
- **Cables and pipelines** crossing MPAs.

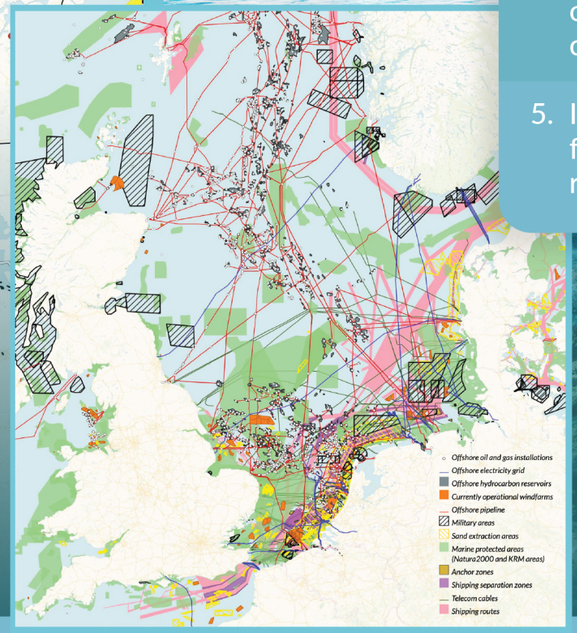
Nearly 25% of the North Sea is ecologically protected, yet open to various uses.

What the future holds

- Massive growth of wind farms, hydrogen and CO_2 infrastructure
- More overlap with fishing grounds, MPAs and shipping routes

Increased complexity calls for smarter spatial planning





Our recommendations

1. Co-locate activities an a way that reduces cumulative pressure onthe ecosystem
2. Include all sectors and Marine Protected Areas in spatial planning
3. Actively share knowledge and marine data
4. Strive for synchronized legislations on multi-use among the North Sea countries
5. Invest in research and pilot projects for multi-use to advace commercial readiness

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