

PartiSEApate

Spatial Offshore Grid Plan Baltic Sea

**Speaker: Anna Hunke, Federal Maritime and
Hydrographic Agency**

13 November, 2013, Vilnius, Lithuania



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Content of Presentation

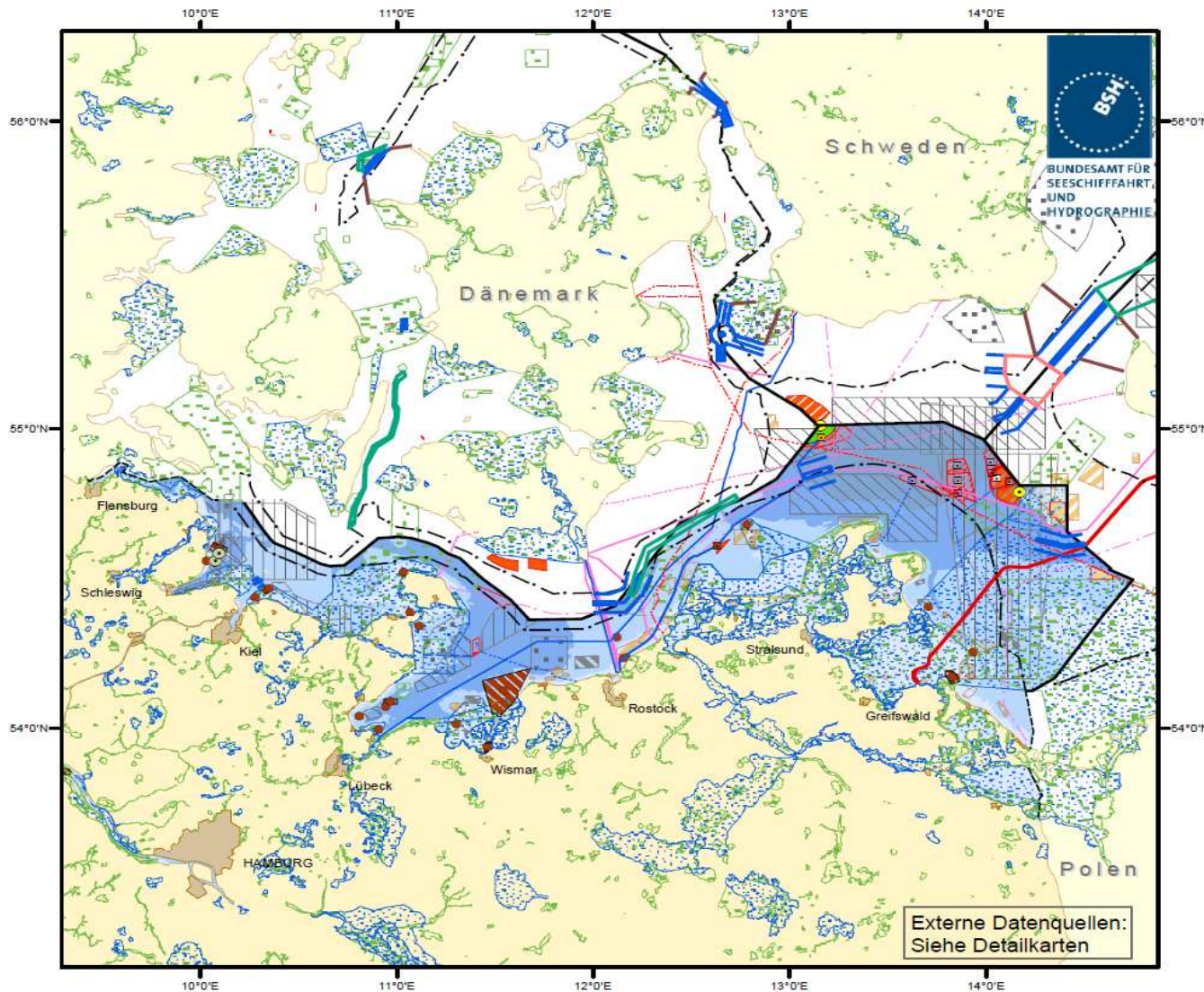
I. Background Spatial Offshore Grid Plan Baltic Sea

- Aim of the Plan
- Legal basis

II. Summary of drafting procedures

III. Main stipulations of the Plan

Baltic Sea – all uses



“Traditional”

- Shipping
- Fisheries
- Oil and gas industry
- Sand and gravel extraction pipelines
- Electricity & telecommunication cables
- Military training
- Scientific research
- Nature conservation sites

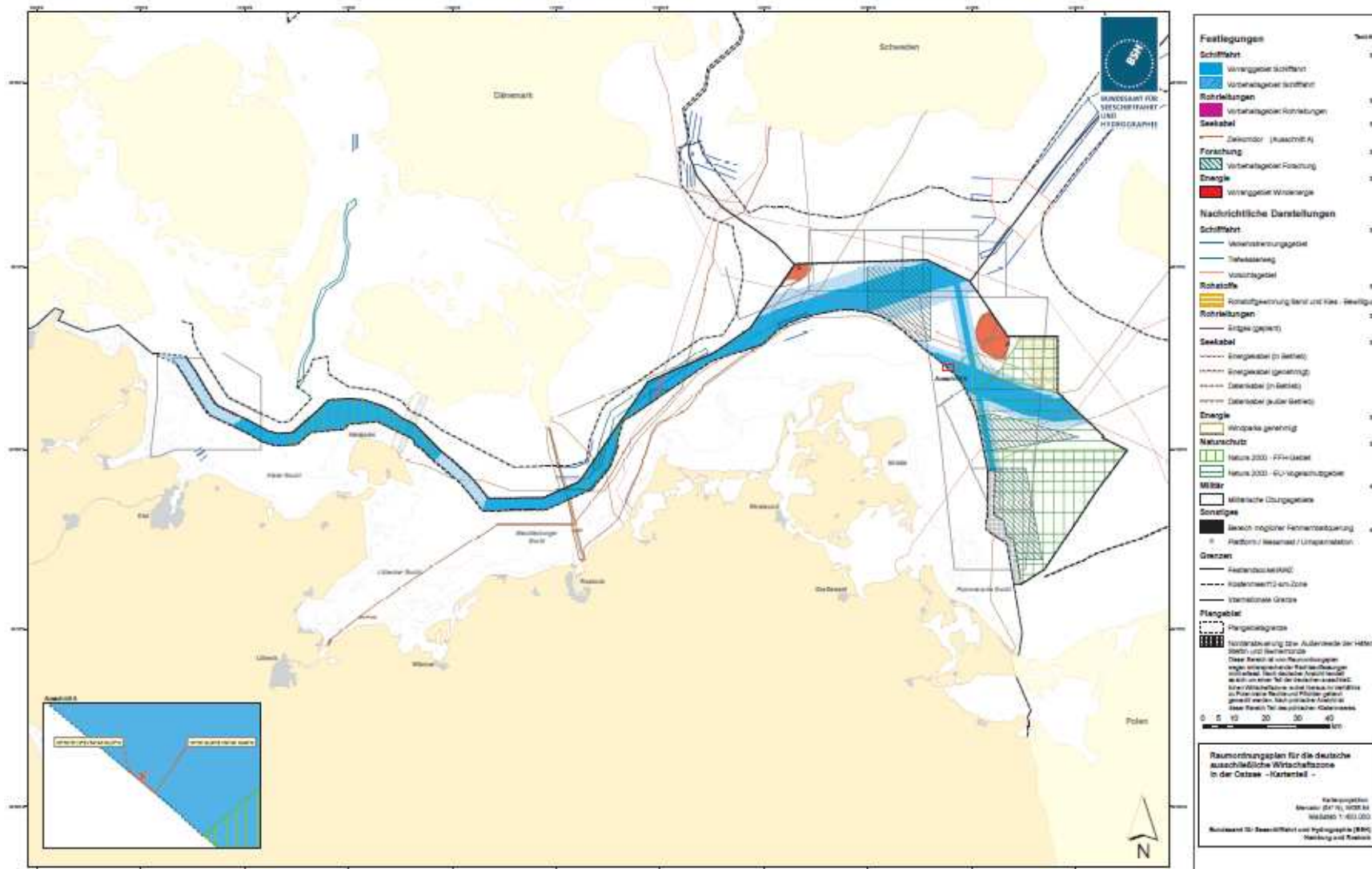
“New”

- Offshore Wind farms

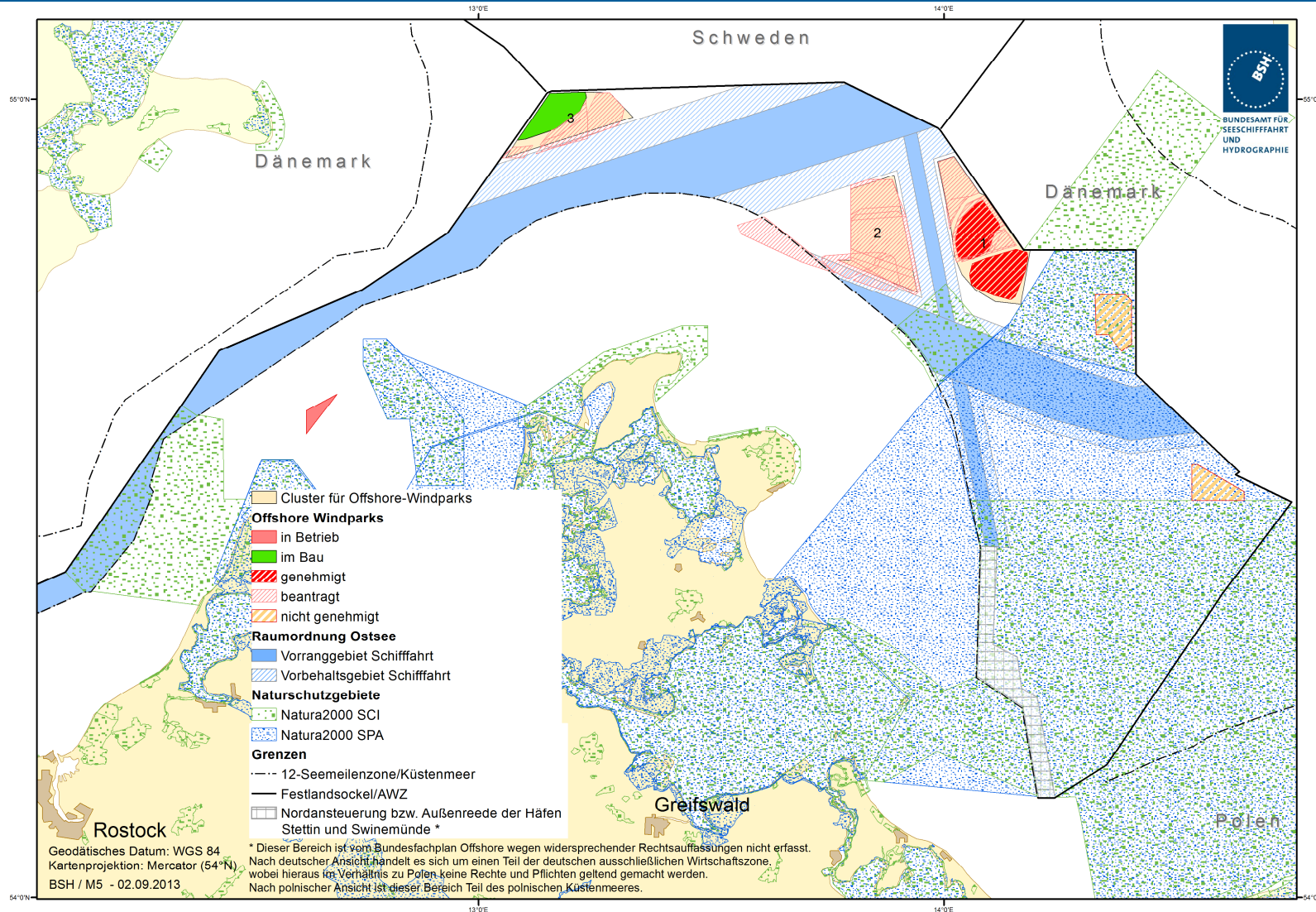
Maritime Spatial Plan EEZ Baltic Sea



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State of offshore wind energy EEZ Baltic Sea



Offshore wind farms

- 25 GW target by 2030
- 1 project being built
- 2 approved projects
- several projects applied for

→ No integrated planning approach for grid infrastructure in the past

I. Spatial Offshore Grid Plan

Aim of the Plan and legal basis

Spatial Offshore Grid Plan

**New role for BSH given by Federal Energy Act in 2011,
amended December 2012:**

**Development and yearly update of a Spatial Offshore Grid
Plan**

- for the German EEZ of North and Baltic Sea
- in consultation with the Federal Network Agency, the coastal states and the Federal Agency for Nature Conservation

**→ Ensuring coordinated and consistent spatial planning of
grid infrastructure - especially for offshore wind farms**

Spatial Offshore Grid Plan

Definition of

- **Offshore wind farms in spatial context and suitable for collective grid connections (“clusters”)**
- **Corridors for grid connections of offshore wind farms**
- **Gates for cables crossing the border between EEZ and the territorial sea**
- **Sites for converter platforms or transformer substations**
- **Corridors for interconnectors**
- **Corridors for possible cross-connections**
- **Standardized technical rules and planning principles**

II. Status of the draft procedures

Draft procedures

Draft and consultation procedures

- First draft Grid Plan and structure of Strategic Environmental Assessment (SEA)
- Scoping April 2013
- Elaborated draft Grid Plan and SEA
- National and international consultation
- Public hearing September 2013
- Optional international hearing January 2014
- Public announcement and publishing of final Grid Plan
- Yearly update

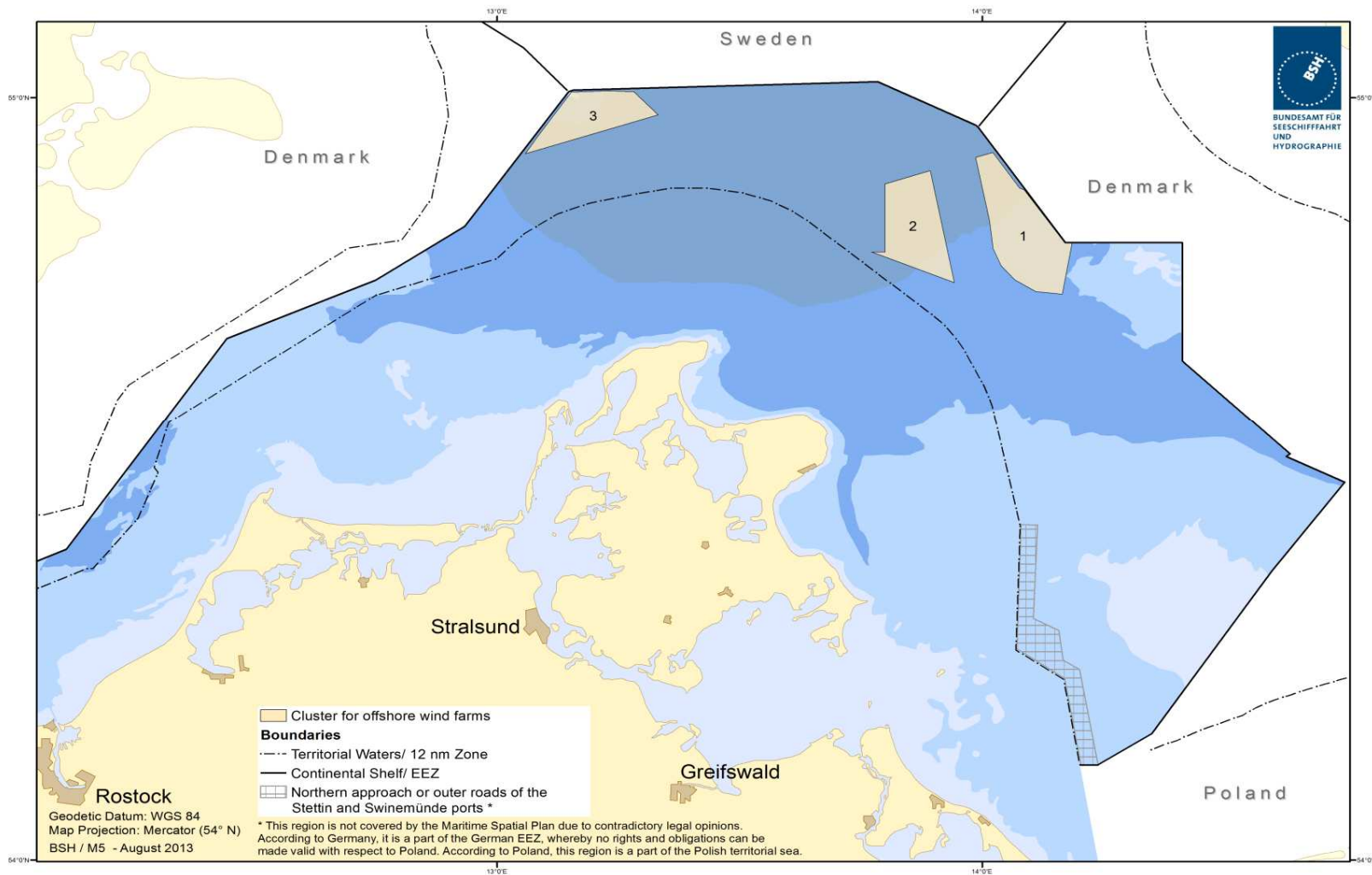
Status:
Baltic Sea: national consultation concluded

III. Spatial Offshore Grid Plan Baltic Sea

Stipulations

Offshore Grid Plan Baltic Sea: clusters for offshore wind farms: approx. 4 GW capacity

Clusters for offshore wind farms in the Baltic Sea EEZ



III. Offshore Grid Plan Baltic Sea

**Standardized technical
rules and planning
principles**

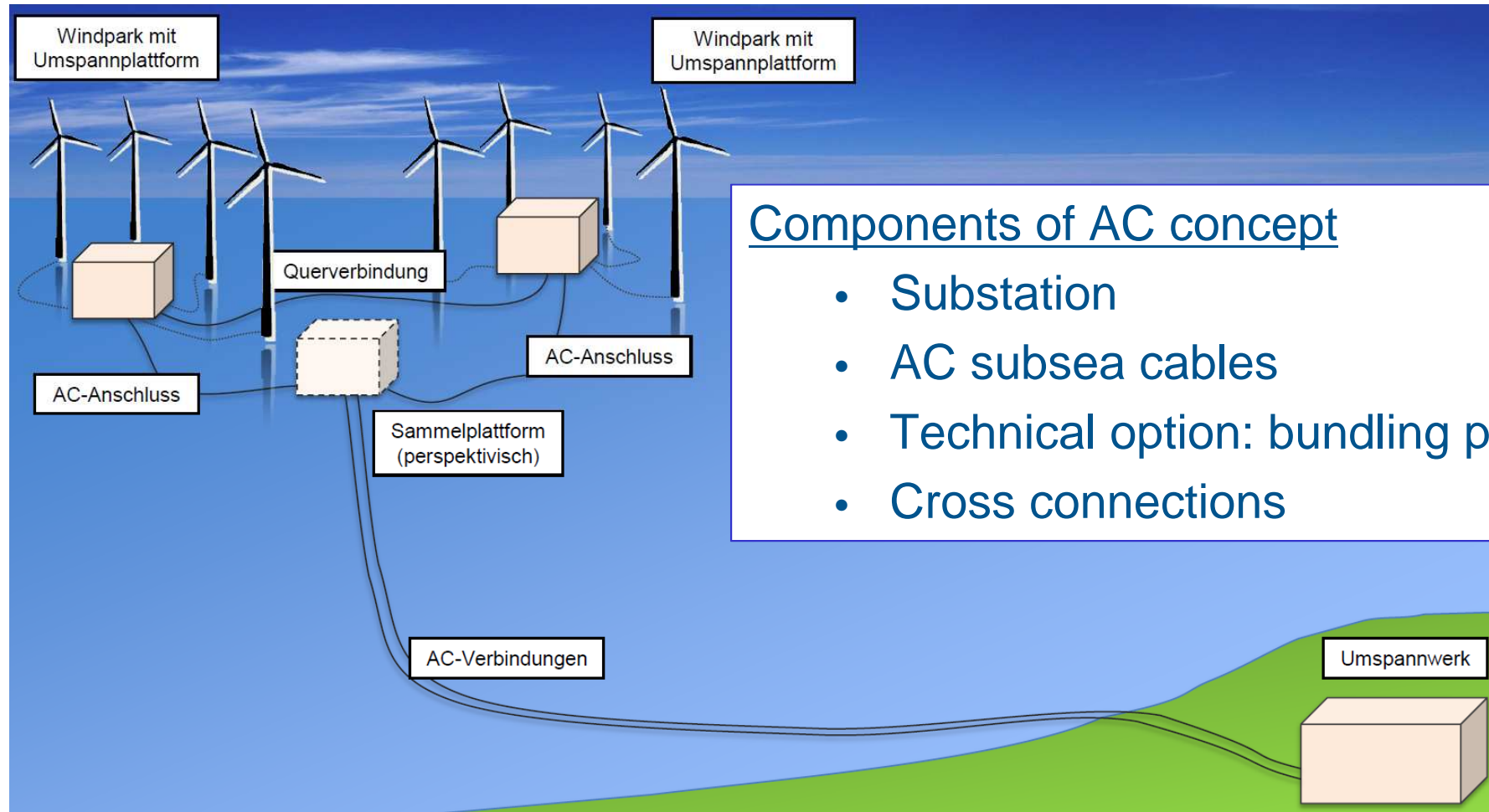
Standardized technical rules and planning principles

§ 17a Abs. 1 Satz 2 Nr. 7 Federal Energy Act

Spatial Offshore Grid Plan contains **standardized technical rules and planning principles**

- basis for spatial stipulation of routes and corridors for subsea cables and platforms
- includes assessment of alternative routing
- character of guidelines

Technical concept



Components of AC concept

- Substation
- AC subsea cables
- Technical option: bundling platform
- Cross connections

Quelle: TSO – Offshore Network Developmentplan

Standardizes technical rules and planning principles

Standardized technical rules:

- AC technology
- voltage level 220 kV (250 MW per cable system)

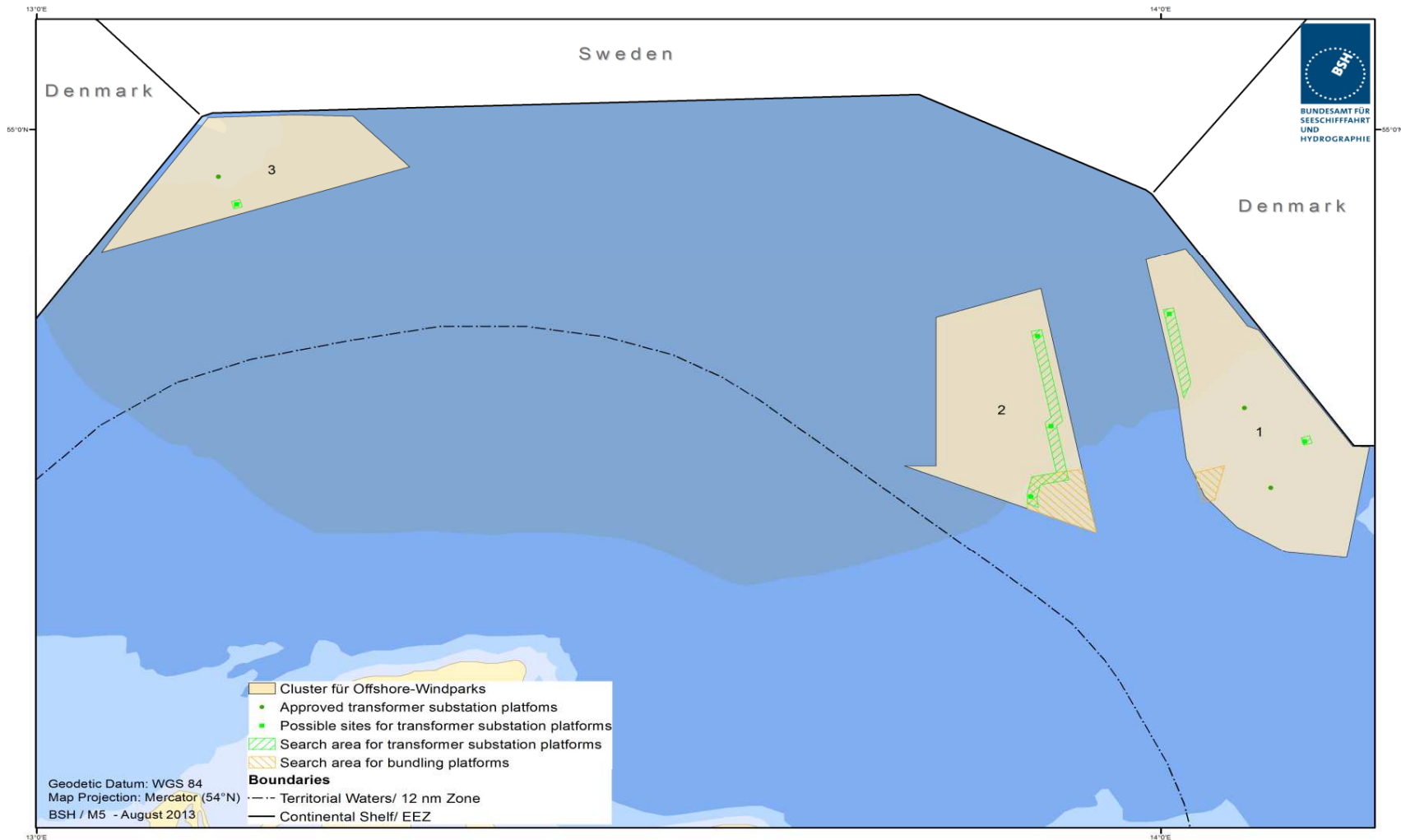
Planning principles:

- Space requirements of 100 m x 100 m for platforms
- Maximum bundling and parallel routing of subsea cables
- Distance between cables
- Routing cables through gates
- Avoidance of crossings

→ Basis to determine necessary number of grid connection systems

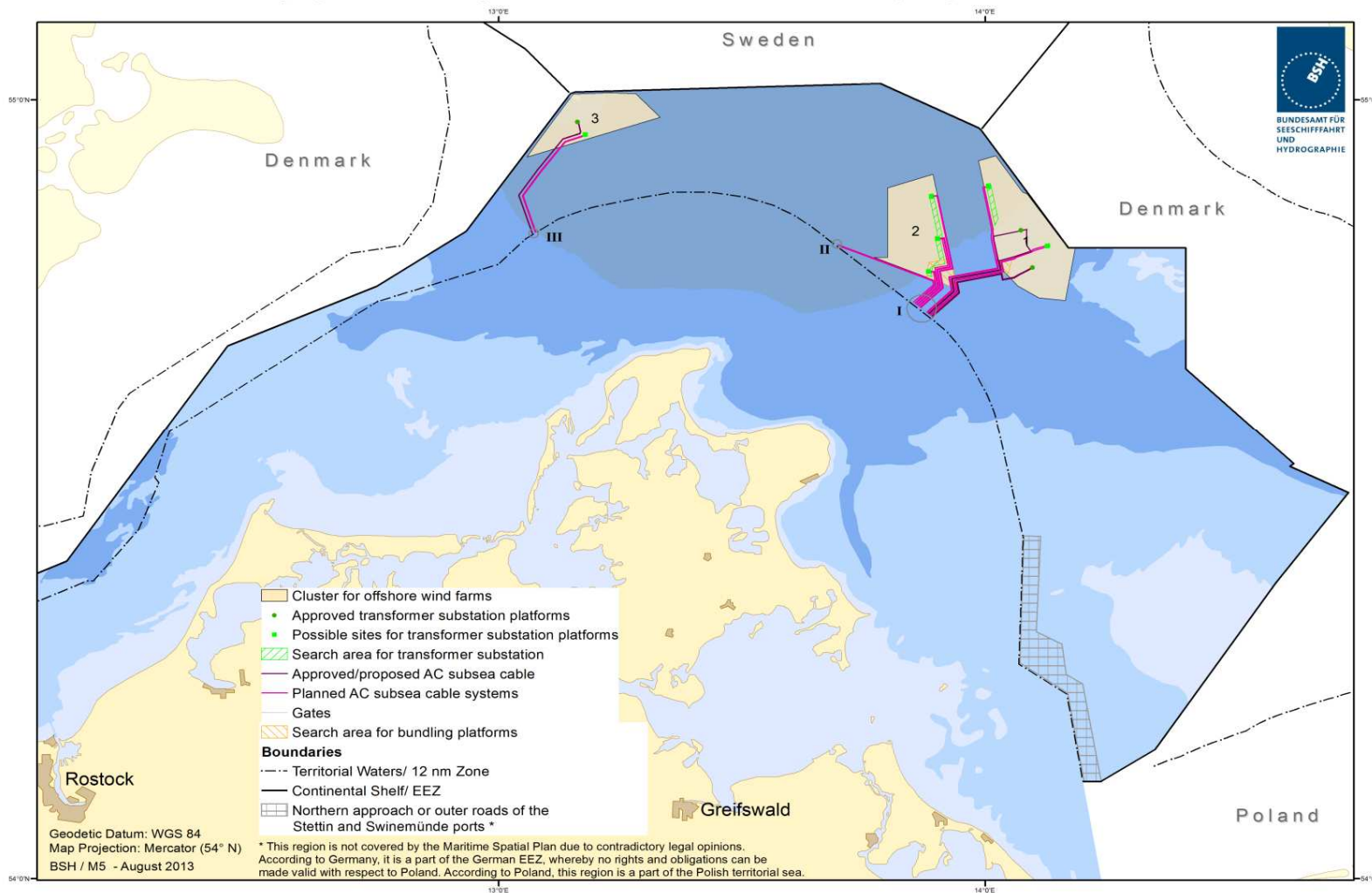
Spatial Offshore Grid Plan Baltic Sea: search areas for platforms

Baltic Sea: Search Areas for transformer substaion platforms and bundling platforms



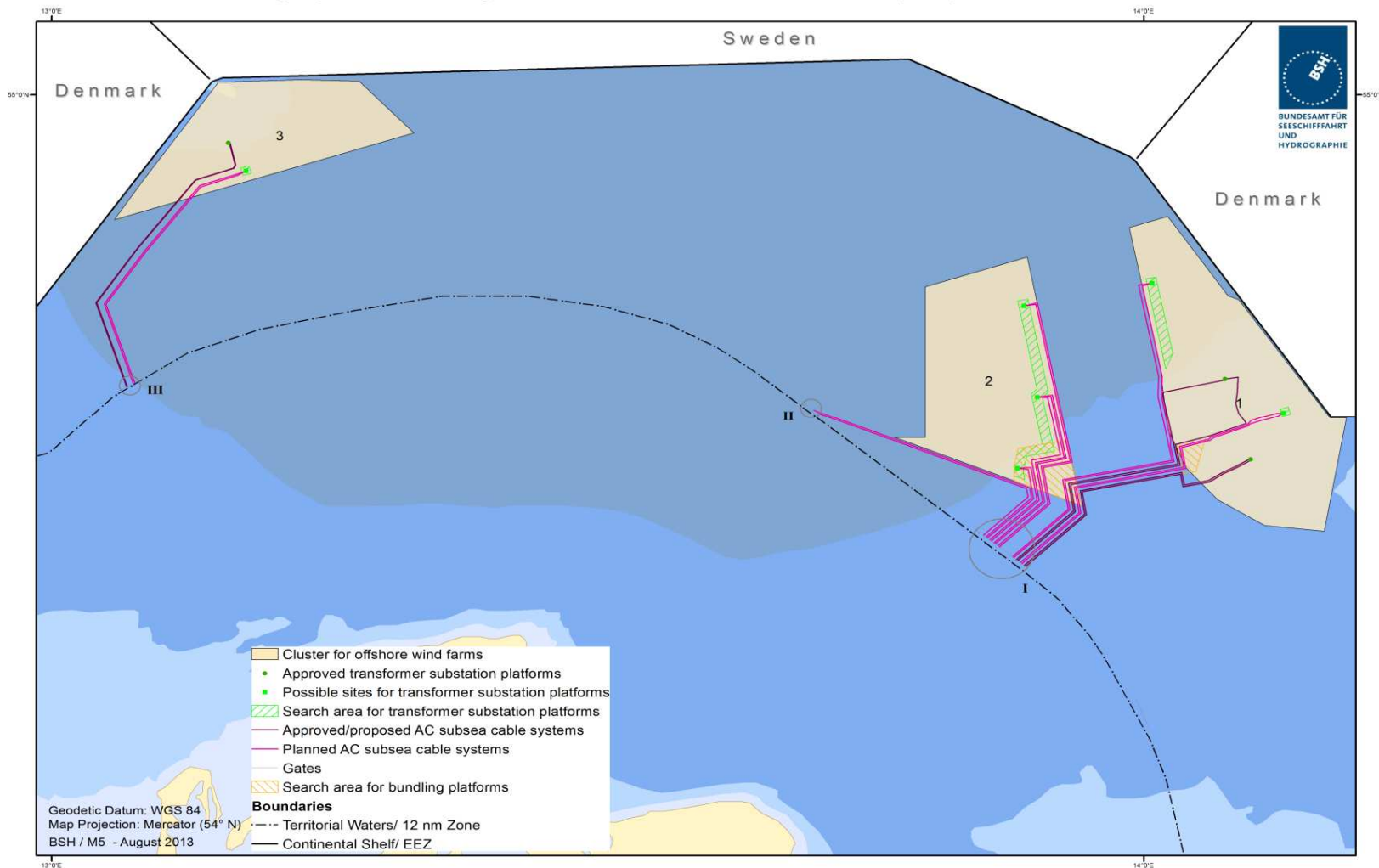
Spatial Offshore Grid Plan Baltic Sea: routes and corridors for AC subsea cables (2030)

Baltic Sea: Summarising representation of grid connection for offshore wind farms (2030)



Spatial Offshore Grid Plan Baltic Sea: routes and corridors for AC subsea cables (2030)

Baltic Sea: Summarising representation of grid connection for offshore wind farms (2030)

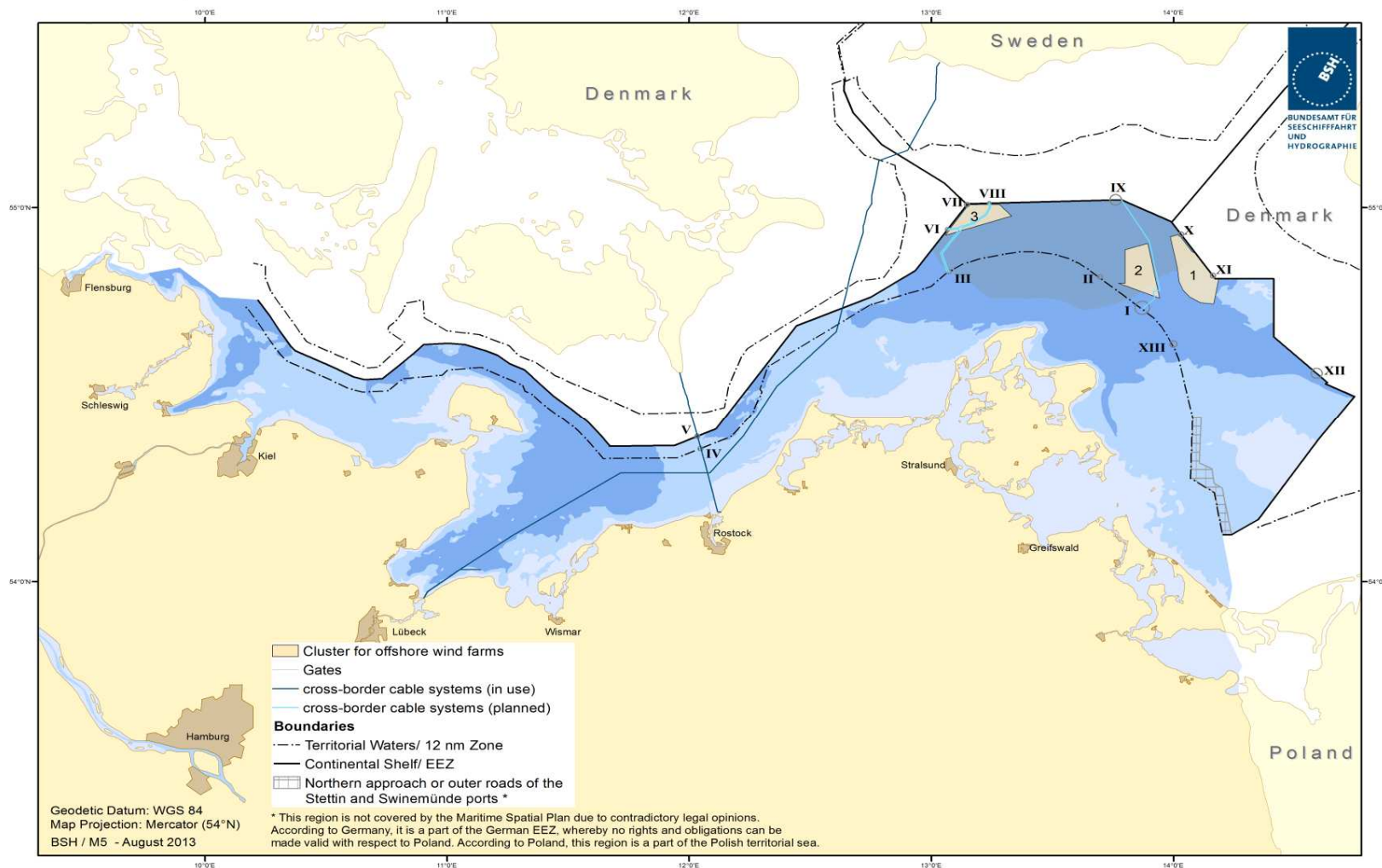


III. Spatial Offshore Grid Plan: crossborder subsea cables

Crossborder subsea cables

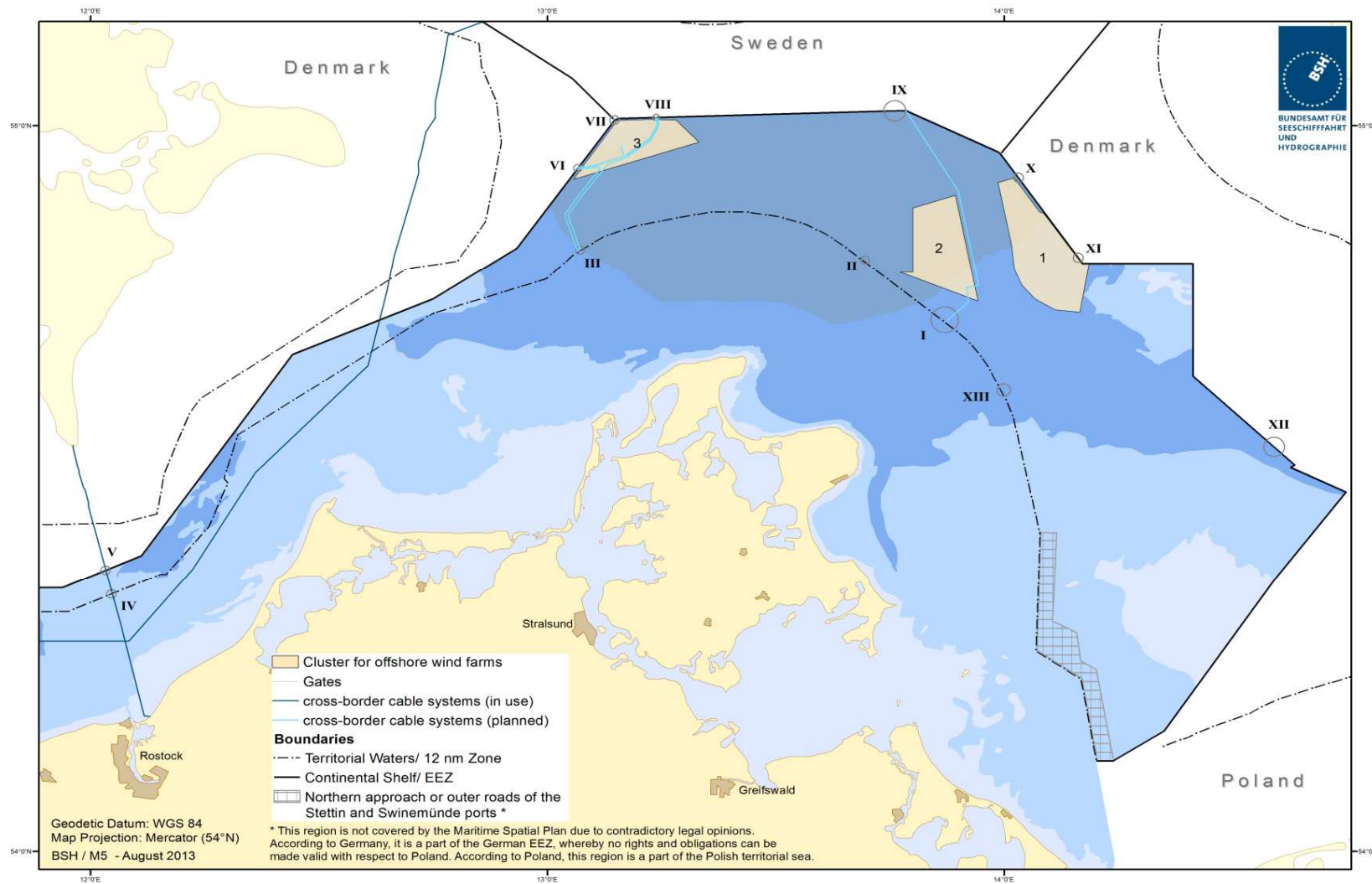
Spatial Offshore Grid Plan Baltic Sea: crossborder subsea cables

Baltic Sea: Representation of interconnectors



Spatial Offshore Grid Plan Baltic Sea: crossborder subsea cables

Baltic Sea: Representation of interconnectors

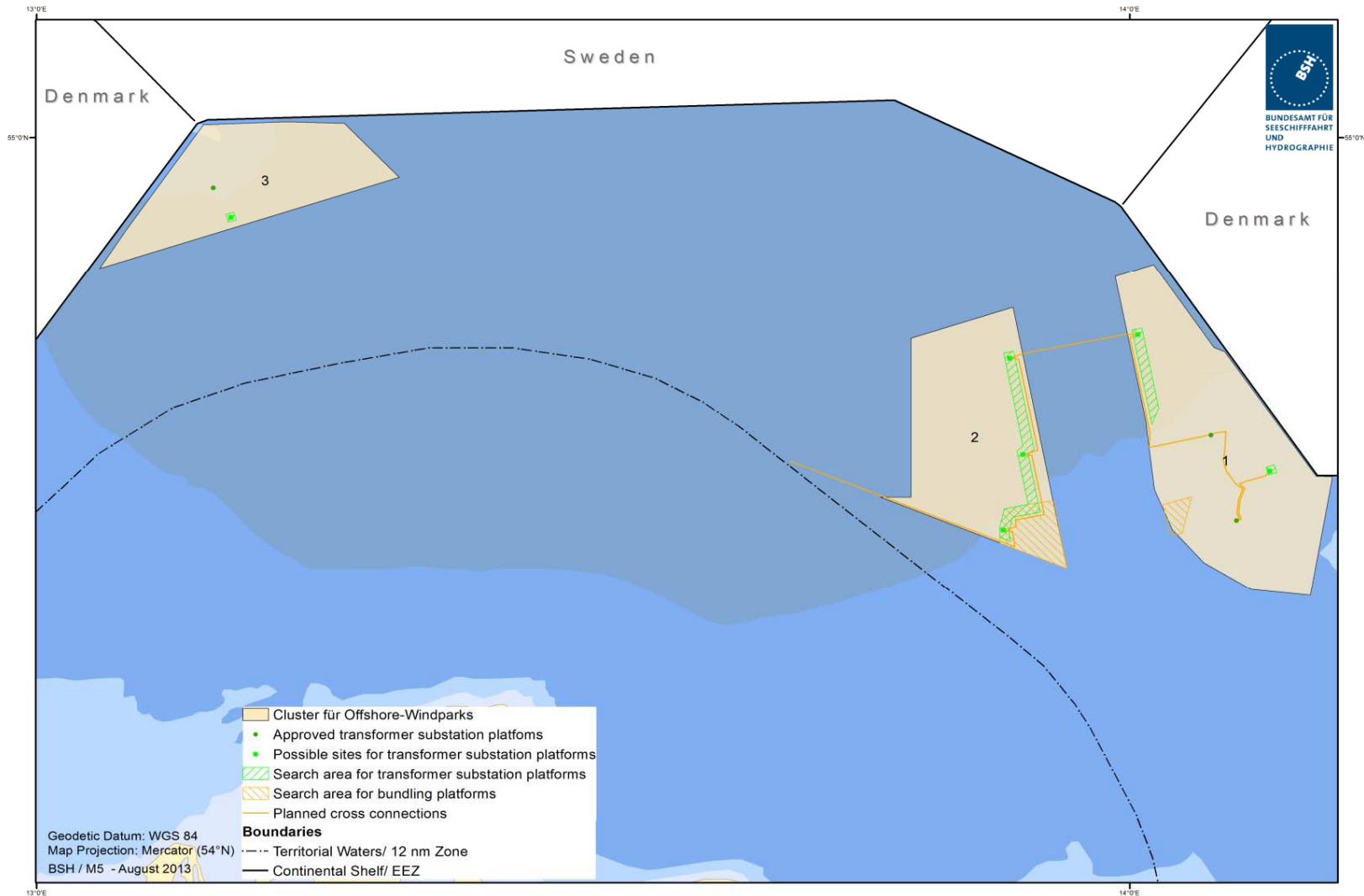


III. Spatial Offshore Grid Plan Baltic Sea: cross connections

Cross connections

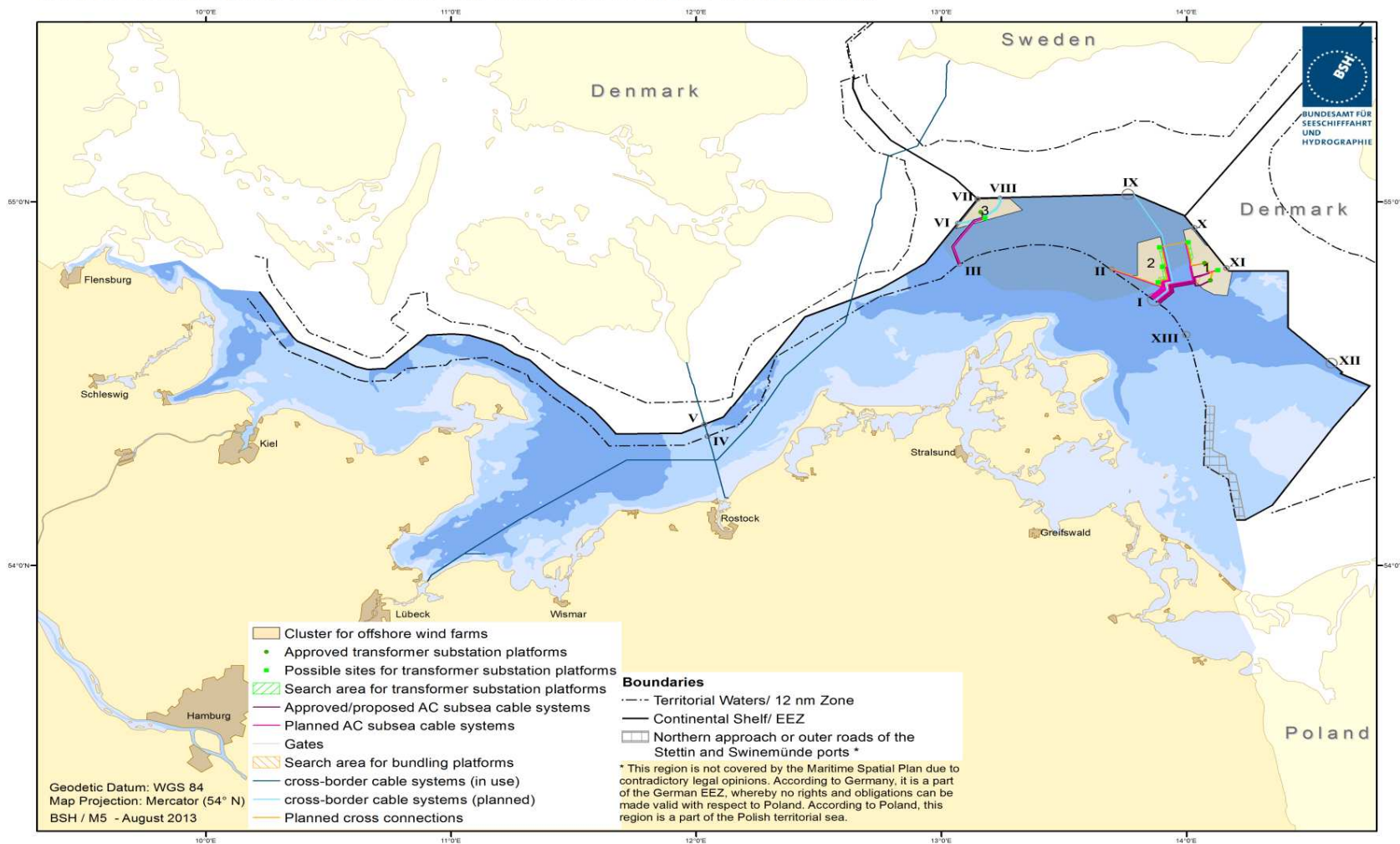
Spatial Offshore Grid Plan Baltic Sea: cross connections

Baltic Sea: Representation of cross connections

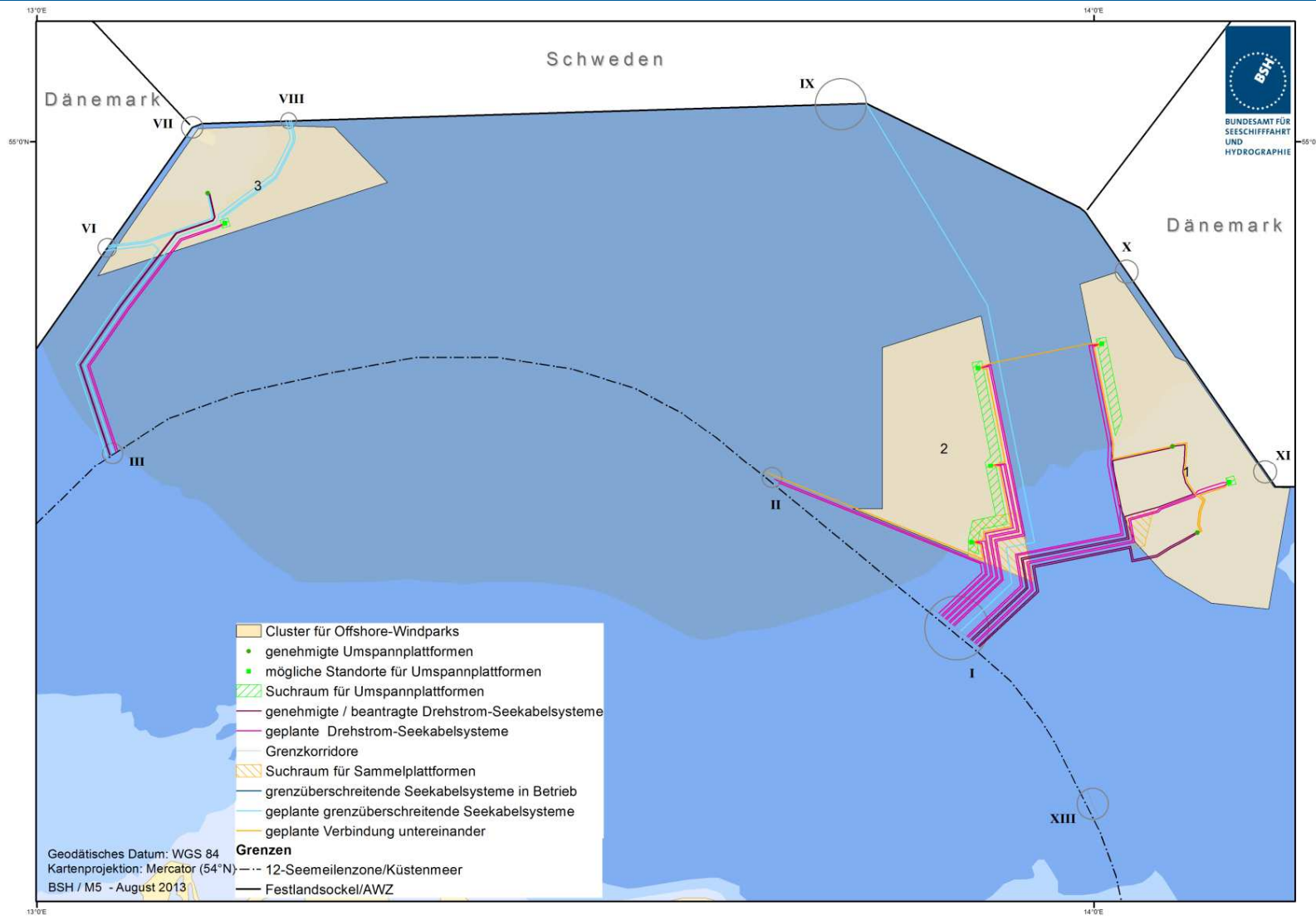


Spatial Offshore Grid Plan Baltic Sea: revised draft 2013 - overall planning

Revised Draft of Spatial Offshore Grid Plan Baltic Sea EEZ 2013 overall planning



Spatial Offshore Grid Plan Baltic Sea: revised draft 2013 - overall planning



Thank you for your attention!

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Thank you!



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