

For our Environment

Umwelt 
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Spatial planning and repowering, potential in Germany

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Section I 2.3 / Renewable Energies

Outline

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1.1 Overview: Planning system in Germany

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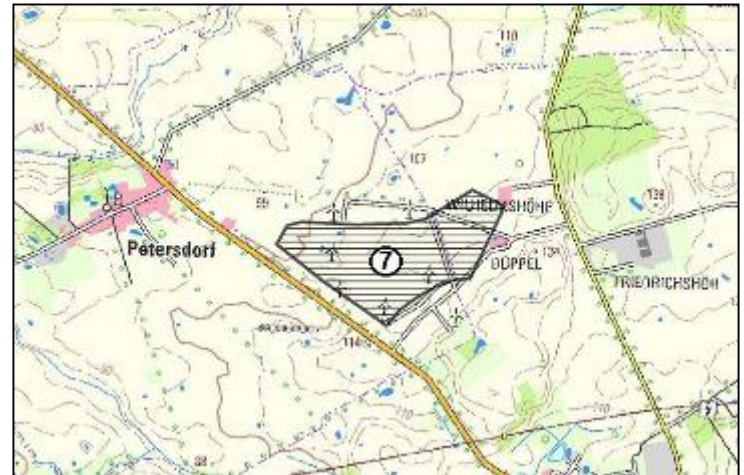
- Subsequent planning
- Instruments for repowering
- Zoning guidelines
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2 POTENTIAL OF REPOWERING

2.1 Project presentation

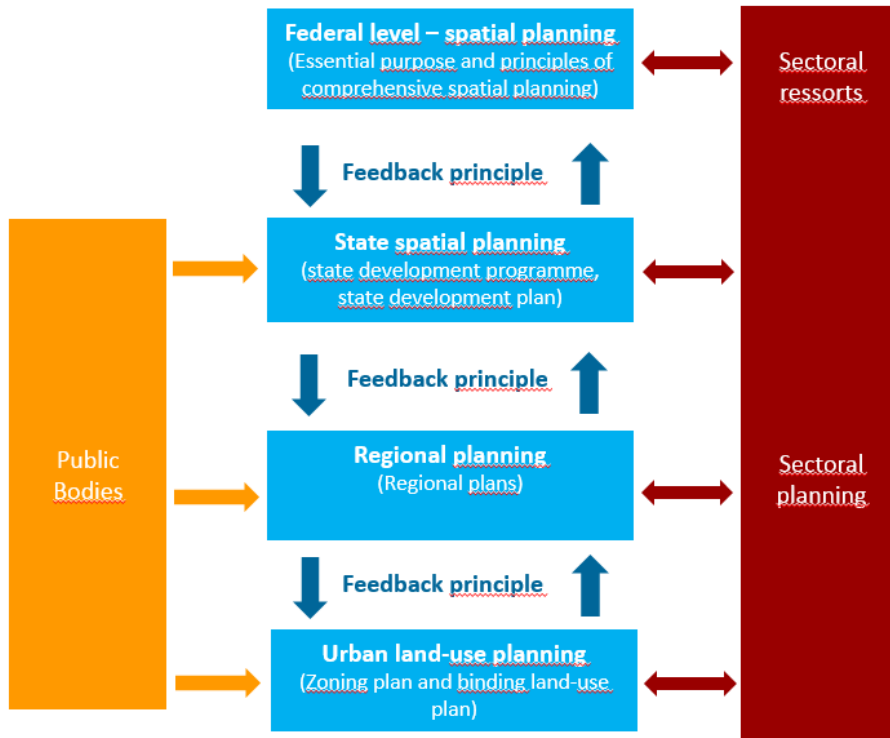
2.2 Data basis

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Source: Regional Plan
Mecklenburger-Seenplatte (Draft 2016)

1.1 Overview: Planning System in Germany



State Structure	Tiers of Planning	Legal Foundations	Planning Instruments
Federation	Spatial planning at Federal Level	Spatial Planning Act (ROG)	-
Federal States	Spatial planning at Land level	Spatial Planning Act and Land planning legislation	Spatial structure plan
	Regional Planning		Regional plan
Municipalities	Urban land-use Planning	Federal Building Code (BauGB)	Preparatory land-use plan
			Local development plan

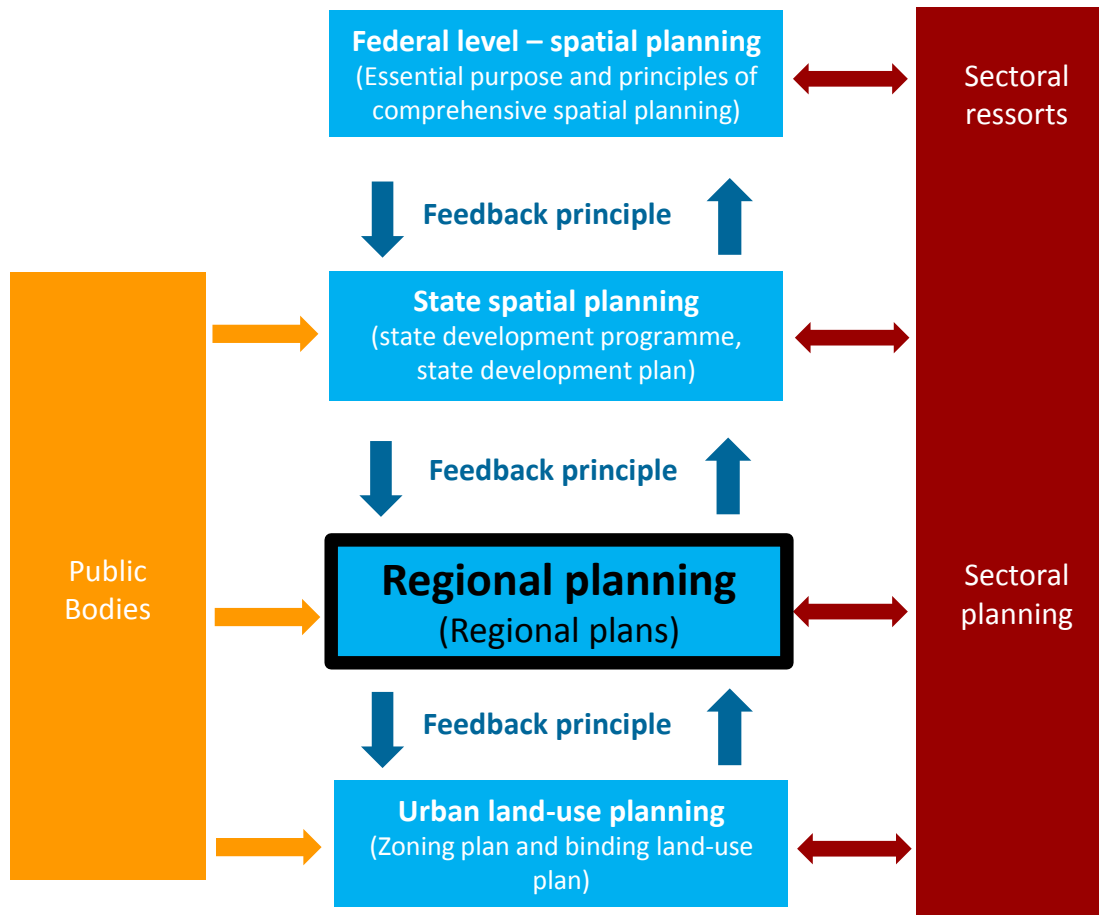
Source: own illustration

Source: Bundesamt für Bauwesen und Raumordnung (Hrsg.): Räumliches Planungssystem in Deutschland

Germany's federal system, with its three levels, plays a major part for the spatial planning in Germany.

Although each level of planning is carried out on its own distinct legal basis, the various levels of interlock with each other as an effect of the so-called „**principle of countervailing influence**“ (or „feedback principle“) as well as through the application of statutory requirements calling for the exchange of information, participation and co-ordination, and adherence to designations or guidelines contained in certain plans emanate from a higher level.

1.1 Overview: Planning System in Germany



The designation of areas for wind power plants are influenced by:

- Aims of the federal government, e.g. share for renewable energies in 2030, 2050 etc.
- Determining of aims on the federal state level, these may be ether targets for the amount of area, capacity or yeald

Implementation takes place on **regional level**.

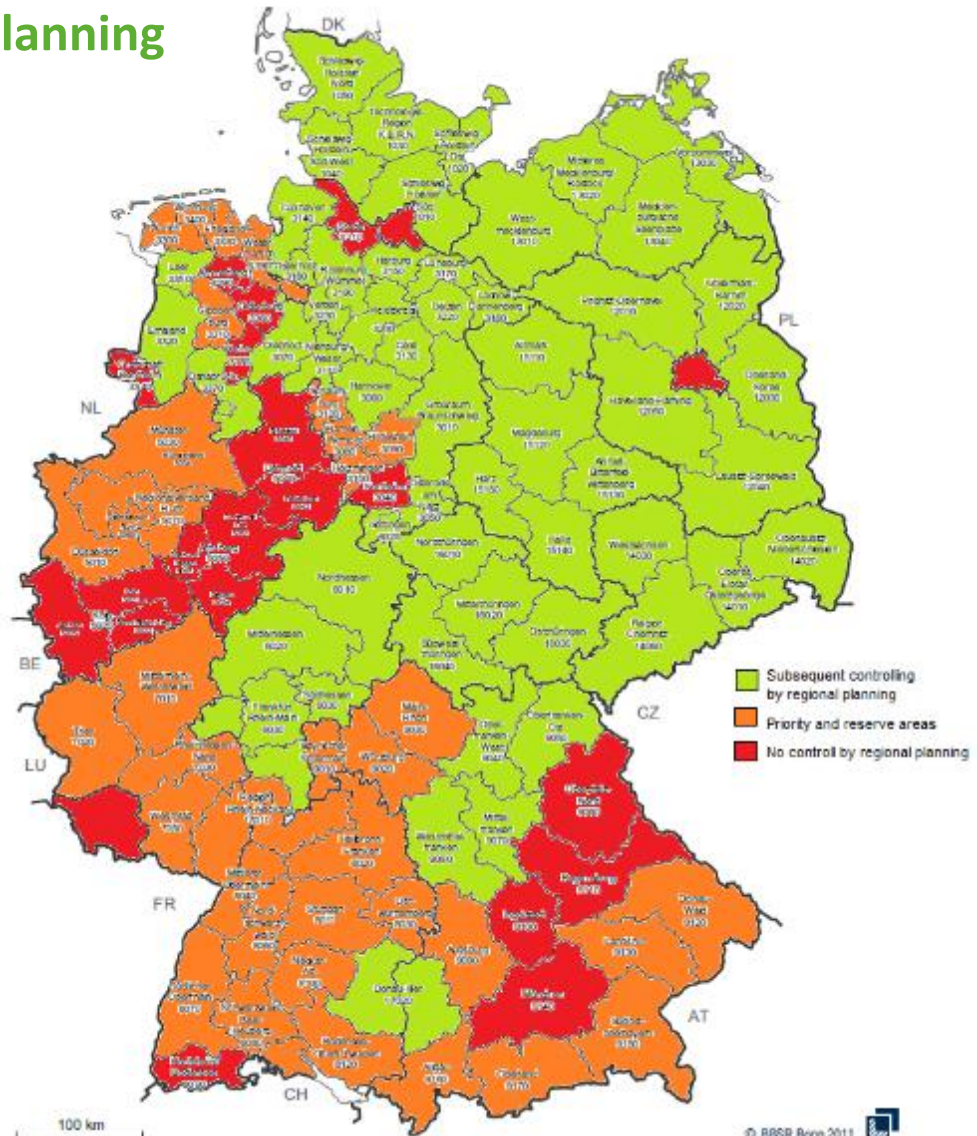
Source: Bundesamt für Bauwesen und Raumordnung (Hrsg.): Räumliches Planungssystem in Deutschland

1.2 Regional Planning – subsequent planning

Type of areas according to the Federal Regional Planning Act (Raumordnungsgesetz – ROG)

The stipulations may also refer to areas

1. scheduled for certain regionally significant functions or uses, thus excluding other regionally significant uses in this area provided that they are inconsistent with the priority functions, uses or objectives of regional planning (**priority areas**),
2. where special importance is attached to certain regionally significant functions or uses when balanced with competing regionally significant uses (**reserve areas**),
3. suitable for certain regionally significant measures which are to be assessed within the scope of urban development in accordance with section 35 of the Federal Building Code and are prohibited in another location in the planning area (**suitability areas**).



Source: own illustration

1.2 Regional planning: Instruments for Repowering

For every regional planning authority, which are actually designating priority areas with subsequent impact or suitability areas for wind power areas (subsequent controlling), following instruments are offered for dealing with existing wind parks, which are not corresponding to the actual zoning criteria:

- Selection and structuring of soft exclusion criteria
- Planning exception (according to § 6 para 2 ROG)
- Designation of reserve areas or „white areas“ (also in regions in which soft criteria in principle are opposed to a designation), additional to priority or suitability areas



Source: Regional Plan
Mecklenburger-Seenplatte (Draft 2016)

1.2 Regional planning: Zoning guidelines

Evaluation items distinguish between **hard** and **soft exclusion criteria** and **restrictions**.

The hard exclusion criteria e.g. be derived from the federal or state law, so as e.g. nature conservation areas.

Soft exclusion criteria are defined by the regional planning. These criteria are finally considered, e.g. the distance from the wind energy plant to housing development of 1.000 m.

Restrictions are also defined by the regional planning and are case-by-case decisions, e.g. the distance to existing wind farms of 5.000 m



Güterglück - Änderung der Festlegung im REP A-B-W, Segment Plan p. 66



Güterglück - informelle Darstellung der Erfordernisse der Raumordnung des REP A-B-W, Segment Plan p. 66

Source: REP A-B-W, Segment Plan

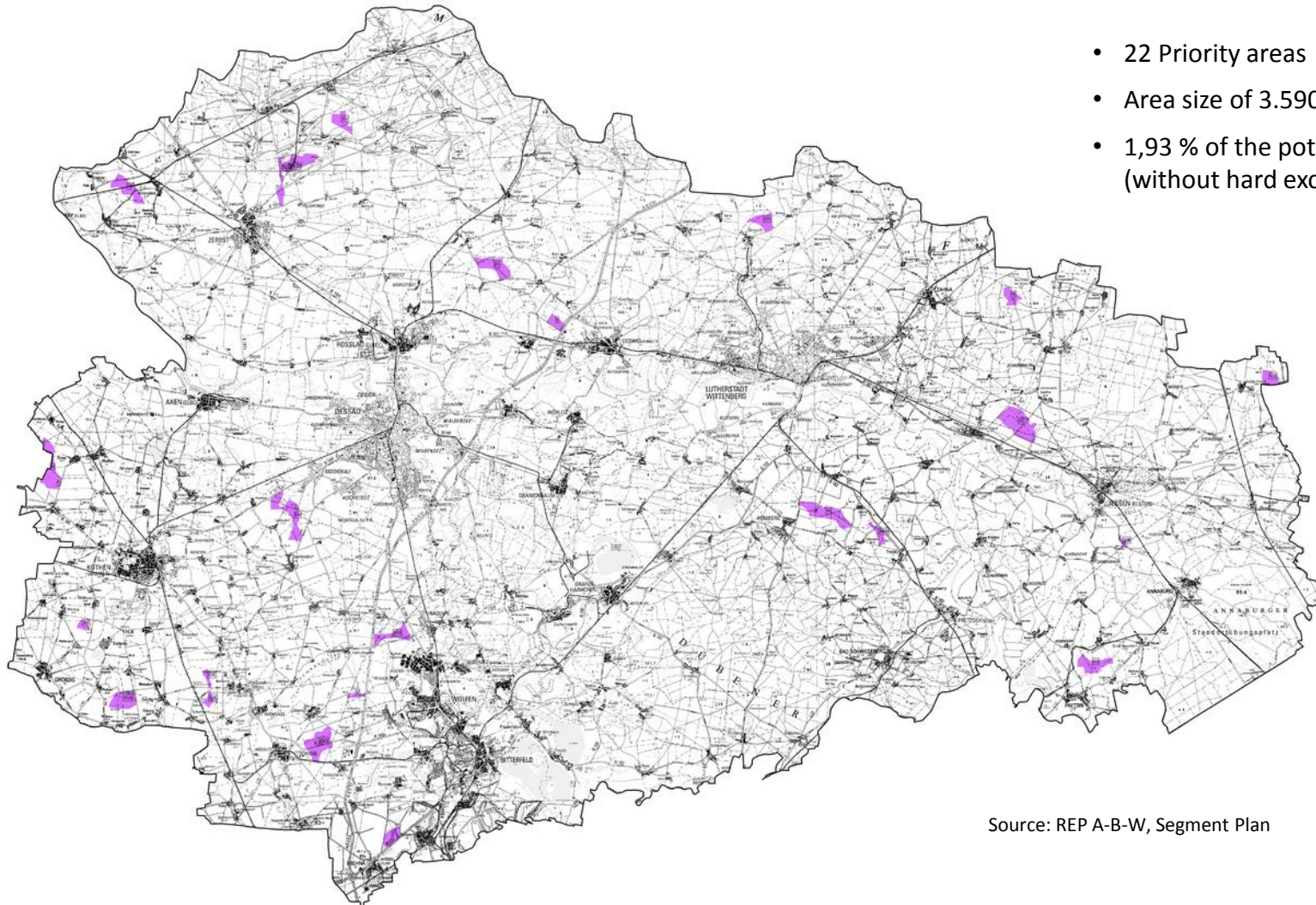
1.2 Regional planning: Zoning guidelines

Zoning guidelines segment plan „Use of Wind Power in planning region Anhalt-Bitterfeld-Wittenberg“

Hard exclusion criteria	Soft exclusion criteria	Restrictions
Human settlements, protection zone of 500 m	Protection zone of 1.000 m around human settlements	Distance from FFH and SPA areas (individual case examination)
Traffic areas	FFH area	
Nature conservation areas, protected landscape elements	Forest areas according to §§ 2 WaldG LSA 1994	Drinking Water protection zone III, priority area for water extraction
Bird reserves according to RL 2009/147/EG	UNESCO World Heritage areas	Areas for agriculture
Landscape reserves with construction ban for wind farms	Flood plains according to § 99 WG LSA	Areas for raw material extraction
Forest areas according to §§ 16 – 18 WaldG LSA 1994	Surface water (streams 1. order, stagnant water > 1 ha)	Distance of 5.000 m between priority areas for wind power plants and already existing wind farms
Drinking Water protection zone I and II		Local plans (FNP, B-Plan)
Areas for raw material extraction (near surface), officially approved		Technical infrastructure

Overview of the evaluation items, segment plan

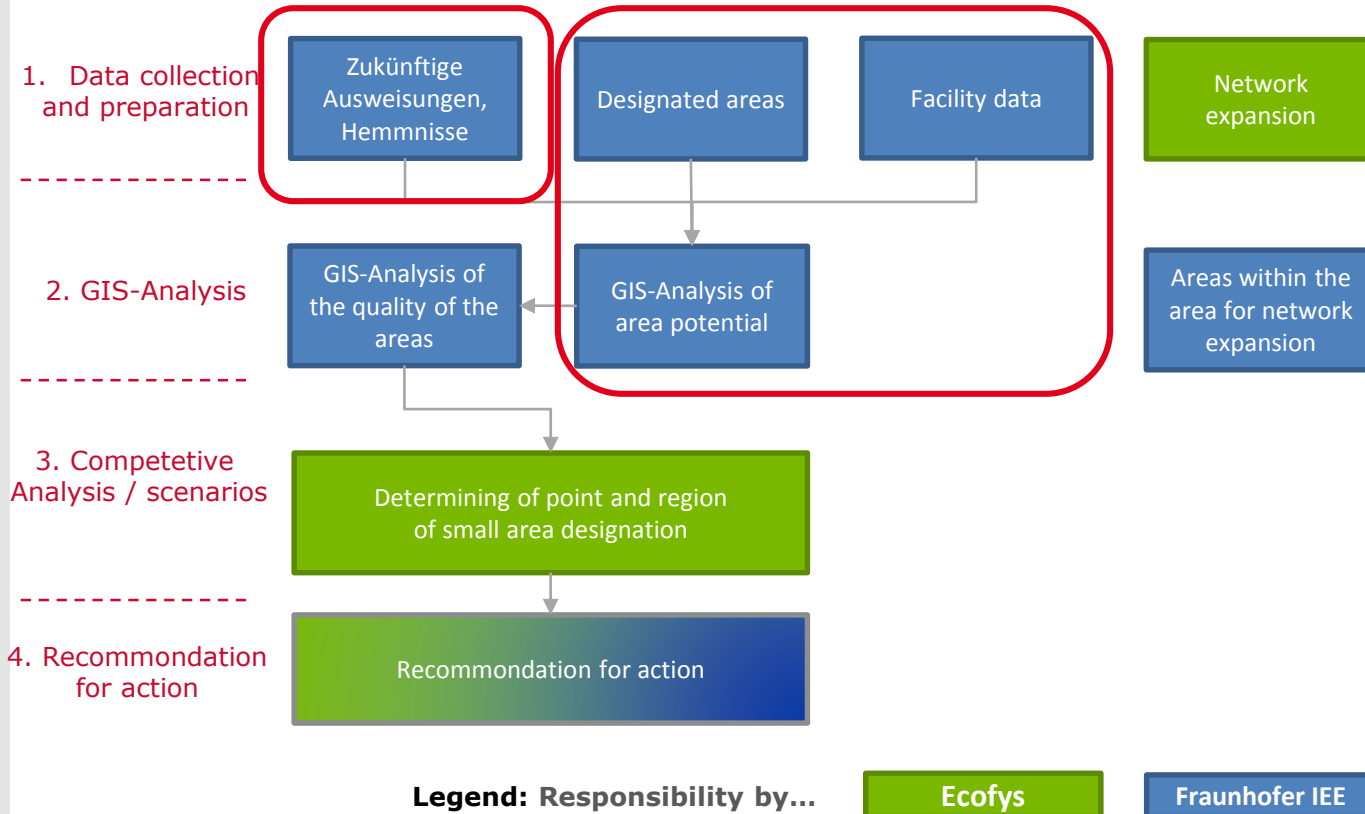
1.2 Regional Planning: Segment plan „ Use of Wind Power in the planning region Anhalt-Bitterfeld-Wittenberg“



- 22 Priority areas
- Area size of 3.590 hectare
- 1,93 % of the potential area (without hard exclusion criteria)

Source: REP A-B-W, Segment Plan

2.1 Project presentation



Network expansion

Areas within the area for network expansion

EVUPLAN-Project of the German Environment Agency „Analysis of short and medium term availability of areas for the wind energy onshore“

Joint Development by Ecofys and Fraunhofer IEE (formaly IWES Kassel; in a subcontract)

Aim of the project: Identifying of land shortages, bottleneck areas

Term: 01/2017 – 12/2018

2.2 Input data: Designated areas for the use of wind power

Federal State	Subsequent Planning	Completed Data on the regional Level	Areas with absent datas
BB			
BE		No areas	
BW			
BY			1 region
HB		Land-Use-Plan	
HE			
HH		Land-Use-Plan	
MV			
NI			4 regions
NW			
RP			
SH			
SL		Land-Use-Plan	
SN			1 region
ST			1 region
TH			

Hierarchy of types of area datas:

1. Areas from actual drafts (State 31.12.2017)
2. Areas from valid regional plans
3. Datasets, which are not on the actual state: Lüchow-Dannenberg, Braunschweig

Legend
Yes
No
Only land-use-planning level

Conclusion

- The federal system in Germany is also very present in the planning system.
- On regional level there are around hundred planning regions, which are planning areas for wind power with different criteria and liabilities (subsequent v.s not subsequent designation).
- To what extent regional planning will use specific instruments to enable repowering in existing windparks remains to be seen. Until now there are just a few appropriate regulations existing.
- Based on current information about half of the existing wind turbines are inside of designated areas and therefore repowering is possible. This share may increase. Reasons could be not subsequent planning, use of specific instruments or repowering inside the 100 meter buffer zone.
- It can be assumed that deconstruction takes place more intensified up from 2021.

**Thank you very much for
your attention!**

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<https://www.umweltbundesamt.de/themen/klima-energie/erneuerbare-energien/windenergie>

