

# Criteria and Recommendations for Improving Spatial Planning Perspectives for Renewable Energies in the BSR

Part of BEA-APP WP 2:	Optimizing spatial planning instruments for a sustainable growth of renewable energy
Project Partner:	Ministry of Energy, Infrastructure and State Development MecklenburgVorpommern

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- 1. Requirement of common spatial planning for RE
- 2. Common energy projects
- 3. Framework conditions of spatial planning for RE
- 4. Harmonizing special planning criteria?
- 5. Harmonizing spatial planning for RE?!
- 6. Recommendations and general criteria for common transnational RE spatial planning and projects
- 7. Conclusions





### Requirement of common Spatial Planning Perspectives for RE

- progressive EU integration (closer connection between regions cohesion),
- common targets (e.g. EU 20/20/20) Renewable Energy Directive (RED),
- similar/same challenges, e.g. energy safety, climate change & adaptation,
- large RE potentials and socioeconomic effects reachable only in case of cooperation

### Project (main) target

Project methods

development of **transnational recommendations** for improving the spatial planning perspectives for RE within the Baltic Sea Region (BSR)

- evaluation of project results, e.g. related to

- consultations with experts

- comparative analysis of political and professional framing conditions,

transnational criteria for spatial planning,

conflicts and spatial planning conflict solutions in the field of RE

VASAB – Visions and Strategies around the Baltic Sea (LTP):

"In 2030 the Baltic Sea Region is a wellintegrated and coherent macroregion. It has an integrated energy production and supply system with well-diversified sources of energy, including renewables."







harmonization may be profitable

for expanding RE use, ...

### Political framework conditions of spatial planning for RE

- different constituted states/political decision making,
- but in principle pro RE and climate protection
- (still pursued by individual methods, sometimes driven by citizen,
- similar legal framework for planning, building, permitting, differences in detail,

## Technical (planning) framework conditions

- similar planning systems (in principle),
  - but different hierarchies of planning levels and instruments (plans),
- sometimes with different municipal planning and permitting practices (e.g. in SE),
- country spezific systems of planning criteria,
- country spezific conflicts with similar basic patterns (e.g. conflict parties, their interest and arguments)
   e.g. related to district heating in EE/LV/LT, to wind energy in DE(M-V)/PL,
   to solar energy and preservation of historical buildings in SE/DK,
   to wood industry in FI



### ... but with sensitivity: often differences are well-founded! (e.g. traditions in legal systems related to national individuality)

#### Criteria and Recommendations for Improving Spatial Planning Perspectives for RE in the BSR



Wind	Specified areas	Capacity or height	Size-dependent planning process	Environmental conditions (e.g. wind conditions)	Technical aspects - network capacity	Other technical aspects
Finland	In case of 10 or more wind turbines, the wind farm is of regional relevance and object of the regional land use planning.	In case of 10 or more wind turbines, the wind farm is of regional relevance and object of the regional land use planning.	No. If land use planning is a decision-making process, the process may vary.	Wind conditions (are investigated in the wake of the regional land use plan based on wind atlas)	Regional land use plan evaluates network connection for wind farms of regional relevance	No specification
Sweden	Strategic planning identifies suitable areas (not legally binding). Generally, a permit can be requested for each site.	Wind turbines are always subject to approval. Altitude criteria are usually taken into consideration, the performance not (anymore).	No, decision-makers are the cities or counties. Larger wind turbines have larger conflict potential and need stronger grid connections.	Wind conditions	Some plans take network capacity into account, but ultimately leave this to the market	<ol> <li>Noise emissions near resi- dential buildings.</li> <li>Transport possibilities du- ring the construction phase.</li> </ol>
Germany	Suitable areas with a minimum area of 35 ha.	Height is a criterion in the approval procedure.	Wind turbines up to 50 m in height require a building permit. Individual wind turbines over 50 m high and wind farms require Federal	Wind conditions (the designation of the suitable area takes these into account, but the project developer has the final decision)	The grid connection must be defined in the technical specifications of the project.	Noise (thresholds depend on area type), shading. Flight safety navigation lights, wind turbine shutdown for species protection (birds, bats).
Latvia	No specification	Wind turbines must have a minimum distance between each other of 3 rotor diameters. The minimum distance to housing development is 500 m	Wind turbines of 20 m or higher require EIA with special investigation for birds/bats. Wind farms from 125 kW upwards require approval	Wind atlas	Secure energy flow in the network	Reference to EIA and permission (specific requirements)
Poland	No specification	No specification	No room planning for wind turbines <40 kW, wind turbine locations must be planned for in the local spatial management plan; if necessary,	Wind conditions	No specification	Gradual increase in the scope of planning with wind farm output
Denmark	No specification	The height of the wind turbines defines the minimum distances (to buildings at least height x4, up to 25 m height the minimum distance is 100m).	Special rules apply to wind turbines on private land with a maximum height of 25 m. Commercial wind turbines require an EIA and a local plan.	Detailed investigation of the wind conditions by the project developer (wind potential is being carried out by the Danish Energy Agency)	Project developers may have to contribute to the costs of network reinforcement measures.	No specification
Lithuania	No specification	Network access (thresholds and restrictions must be set for each project)	The scope of the planning process depends on capacity and height.	Wind velocity in specific locations	No specification	No specification
Estonia	No specification	No specification	Wind turbines < 10 kW are subject to simplified requirements (type approval).	Coasts and open countryside are preferred locations, also earlier open pit mines.	Project developers may have to contribute to the costs of network reinforcement measures.	Wind turbines < 10 kW are subject to simplified requirements (type approval).



= consent

= defeat

common RE policy guidelines cooperation for implementation between countries/regions, common RE projects BSR-own RE targets (EU-targets!), BSR-own energy policy, BSR-own RE strategie, BSR-wide RE monitoring

common development/use of informal instruments	harmonization of spatial planning and spatial plans		
harmonization of planning criteria (for all RES – general)	standardization of laws, planning guidelines, instruments		
common development of advanced	standardization of instruments		

RE conflict management methods

tandardization of instruments for RE conflict management



set of general

Secure lasting

consensus / Transnational success

planning criteria





#### A. Criteria for Planning

- Specific areas designated
- Standard planning procedure
- Possibility to develop RE in categories

#### **B.** Natural conditions

Natural conditions (regarded in the spatial planning process)

#### **C.** Technical aspects

- Grid capacity regarded in spatial planning
- Capacity or height of installations regarded in spatial planning
- Other technical aspects regarded in spatial planning

#### D. Society (e.g. acceptance)

Models for public participation in spatial planning

#### E. Economy

– Financial participation models for people living near RES installations

#### F. Other aspects

- Impacts on the landscape or the cityscape regarded in spatial planning
- Emissions regarded in spatial planning
- Logistic aspects regarded spatial planning

#### **G.** Conflict potential

- Main conflicts known
- Potential of conflicts in *categories* (high/low)

The *categories* in A. and G.

#### declare land use types, e.g.:

- Residential areas in cities, villages
- Area for commerce and industry
- Military facilities
- Tourism key areas

- ...



- R: gradual improvement of planning systems and their legal bases best practices, exchange of planning experiences, learning from one another
- R: expansion and empowerment to plan cooperatively for an increasingly collective energy supply (RE locations and grids)

### C1: Strengthening of national political will to expand RES!

R: Develop common energy policy guidelines!

R: Establish a joint institution for the development of transnational RE projects!

### C2: Translating this political will into national and joint spatial planning!

R: Strengthen RE in the Common Baltic Sea Strategy!

R: Strengthen and intensify informal cooperation in spatial planning!

### C3: Design RE expansion in coordination with EU objectives and Energy Union!

R: Develop common RE projects, use EU cohesion promotion funds!

C4: Spatial planning further development!

R: Improve methods, criteria and data basis for transnational spatial planning!



- Common spatial planning for RE is a favorable way to reach RE-/CP-targets (EU, VASAB, national), and RE-driven increase of net domestic product,
- Common energy projects are EU practice; BEA-APP-states have similar (but not identical) framework conditions of spatial planning for RE (differences: e.g. in legal framework, special RE planning criteria).
- Harmonization (even standardization) of political and technical framework conditions?

Not everything, not in detail, ...

but in general and for common (large) RE projects!

 Consens within the BEA-APP partners: For common RE projects advanced spatial planning and intensified informal cooperation are usefull! For this ...



a set of general planning criteria,



recommendations for improving spatial planning

are developed.



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	Political Framework			Technical Framework		
Area	Strengthening of po- litical commitment	Information and Communication	Participation and Involvement	Spatial Planning and Renewables	Planning criteria	Conflict Management
1	2	3	4		7	8
Baltic Sea Region (BSR – transnational)	<ol> <li>development of joint guidelines and imple- mentation strategies for RE policy,</li> <li>establishment of joint institutions and platforms</li> </ol>	<ol> <li>integration of RE into the Baltic Sea Strategy,</li> <li>establishment of a VASAB subgroup "terrestrial (RE) spatial planning"</li> </ol>	<ol> <li>competitions for joint RE projects,</li> <li>initiating R&amp;D co- operation between universities and colleges for accompanying research</li> </ol>	<ol> <li>strengthening of links between RE and spa- tial planning and bet- ween RE and infra- structural planning,</li> <li>(further) develop- ment of procedures and methods for transnational, i.e. cooperative planning</li> </ol>	<ol> <li>further development of the set of general planning criteria,</li> <li>harmonisation of the specific planning criteria for the planning of RE plants</li> </ol>	<ol> <li>development of guidelines for joint RE projects,</li> <li>development of balancing mecha- nisms for diverging interests,</li> </ol>
BSR countries (BSR – national)	<ol> <li>(further) develop- ment of informal instruments for spatial planning for renewable energies</li> </ol>	<ol> <li>8. information on country contribution to cohesion and its shared benefits,</li> <li>9. information on the demand for RE projects</li> </ol>	<ol> <li>invite proposals for location audits for the establishment of joint RE projects (demonstration sites and projects)</li> </ol>	<ol> <li>7. developing planning methods for transnational energy projects,</li> <li>8. linking transnational planning with national planning systems</li> </ol>	<ol> <li>9. development of checklists for RE special locations and grids,</li> <li>10. improving the geo database for RE spatial planning</li> </ol>	<ol> <li>studies on national interests that may impede joint RE interests,</li> <li>development of instruments to strengthen local balancing discourses</li> </ol>
Regions (BSR – regional/local)		<ol> <li>information on possibilities of participation on RE special sites and grids,</li> <li>development of regional discourse on special sites and grids</li> </ol>	<ol> <li>13. development of participation models for actors at special locations with largescale RE plants and grids,</li> <li>14. invitations to regional project competitions</li> </ol>	<ol> <li>13. development of intergovernmental concepts for sites with large renewable energy installations,</li> <li>14. development of concepts for their connection to grids/pipelines</li> </ol>	15 16	17, 18

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Baltic Sea Region (BSR)	transnational-several BSR countries projects for the expansion of energy networks
special sites (national)	transnational-several BSR countries large-scale projects for the generation of BSR- wide usable high-quality energy sources *)
border regions (intergovernmental)	Intergovernmental – at least 2 BSR countries large-scale projects for the generation of electri- city/heat from biomass, for the storage of energy
Sites (urban and rural areas)	national/regional/local individual RE-production projects for regional and local energy supply

<sup>\*)</sup> In order to be economically viable, such projects - e.g. bio refineries, hydrogen terminals – must have a minimum size/plant capacity which may exceed the possibilities and/or requirements of individual countries (use of economies of scale).





### **Combined Grid Solution (CGS)**

project of common interest (PCI)

connects the Danish region of Sjælland and German Mecklenburg-Western Pomerania

capacity of 400 MW

route length 8 km

### FUNDING

The project will receive funding up to 150 million Euros from the European Energy Programme for Recovery (EEPR).

Co-financed by the European Union European Energy Programme for Recovery



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Priority of conflicts in the planning fields

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