



SCIENCE AND
EDUCATION **FOR**
SUSTAINABLE
LIFE

How is wind power framed in media and by whom?

How ready are the municipalities to implement expansion?

How are important lands for reindeer affected?

How can integrated landscape character assessment improve siting?

What density of different types of protected areas are in the proximity?

What typifies wind power landscapes?

What is happening on forestlands?

What characterizes suitable and suitable sitings?

Johan Svensson & Wiebke Neumann, SLU; Therese Bjärstig et al., UMU

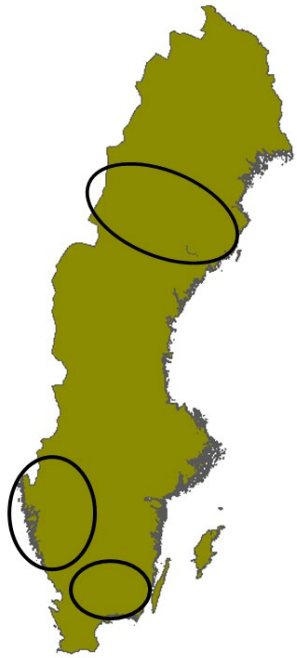
Land-use synergy, conflict and intergration in sustainable onshore wind power development

Hållbar landbaserad vindkraft – synergi, integration eller konflikt mellan riksintressen



Coverage

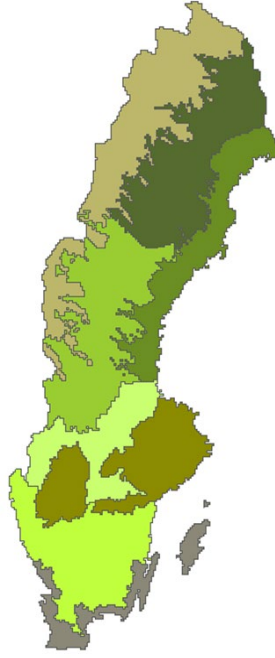
Media:
- National
- 3 regions



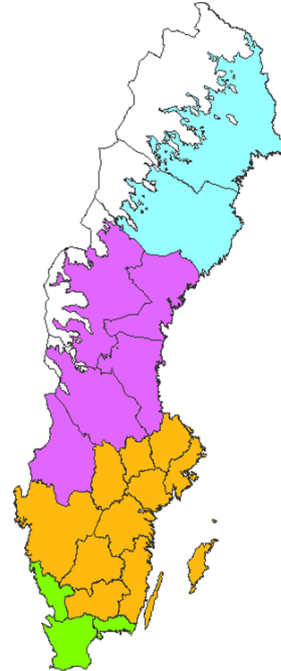
Municipality readiness:
- North Sweden
- All municipalities



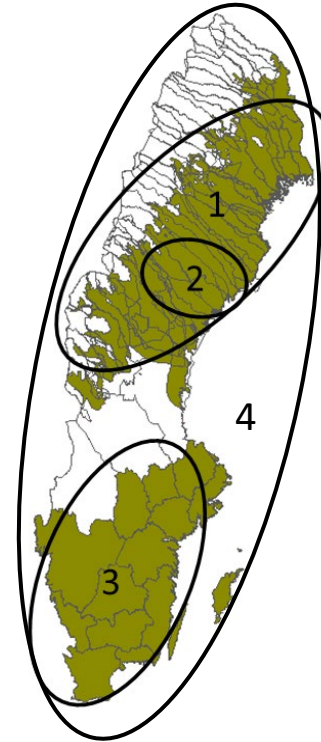
Landscapes:
- National
- 8 regions



Forestlands:
- National
- 4 regions
- All counties



Case studies:



Reindeer husbandry area below the mountain region, counties, two Sami villages

Västernorrland county, Ragunda municipality

National

Boreonemoral and nemoral regions, Skåne, Halland, Kronoberg and Jönköping counties, Falkenberg and Uppvidinge municipalities

Media and readiness analyses, conclusions

Media:

- 1999 to 2019
- 789 articles in 4 newspapers (DN, VK, SP, GP)
- Problems > solutions
- The siting is the main issue, mostly by individual persons
- State agencies, politicians and entrepreneurs focus on opportunities
- Framings become more complex over time
- Multiple use aspects become more apparent
- Local legitimacy is emphasized
- Transparent political prioritization, local planning and consultation are needed

Readiness:

- Do they have the capacity and do they use their veto?
- 96 municipalities, whereoff 48 responded
- They have not considered the strategy
- They rely on keeping the veto to ensure local legitimacy, but seldom use it
- Local wind power plans are seldom highlighted
- Municipal comprehensive plans are not functional
- The capacity is not in place

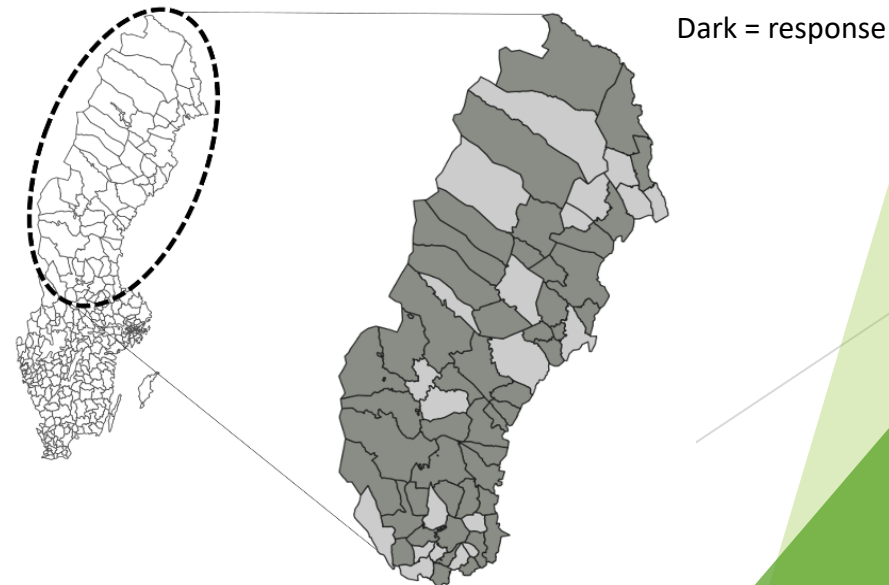


Is large-scale wind power a problem, solution, or victim? A frame analysis of the debate in Swedish media

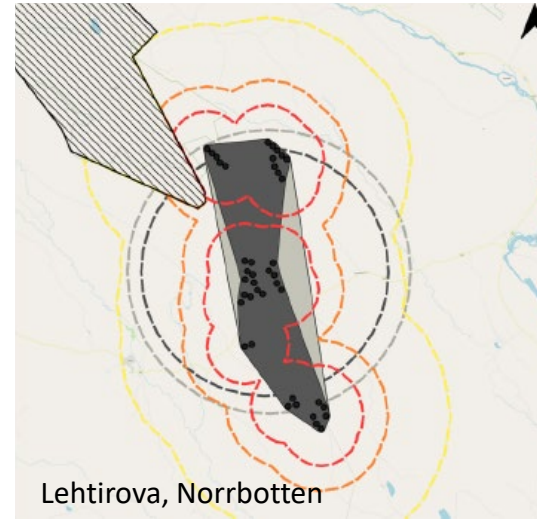
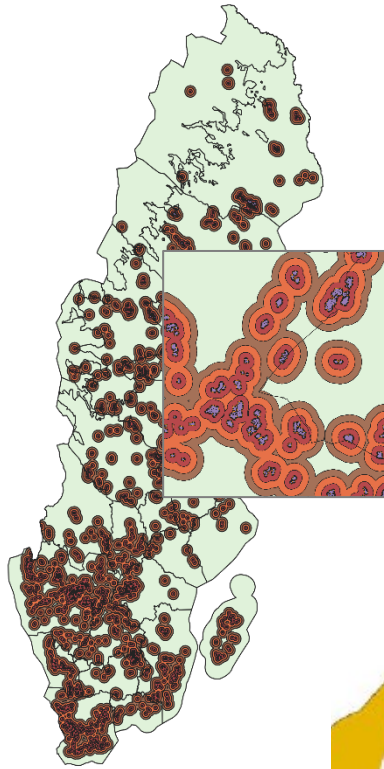
Therese Bjärstig ^a, Irina Mancheva ^a, Anna Zachrisson ^a, Wiebke Neumann ^b, Johan Svensson ^b

^a Department of Political Science, Umeå University, Umeå, Sweden

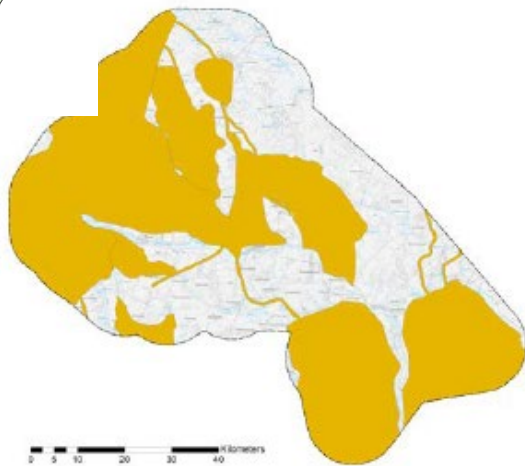
^b Department of Wildlife, Fish, and Environmental Studies, Swedish University of Agricultural Sciences (SLU), SE-901 83 Umeå, Sweden



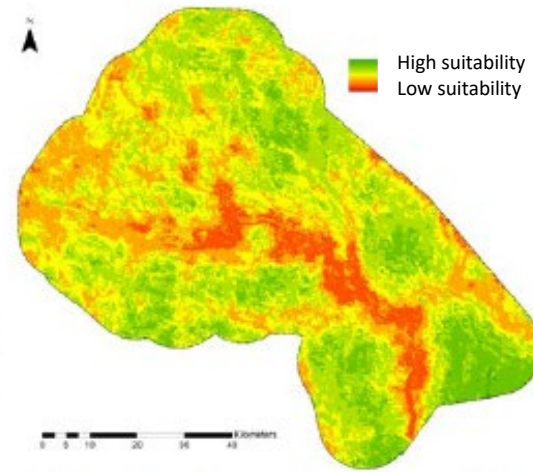
Core approach



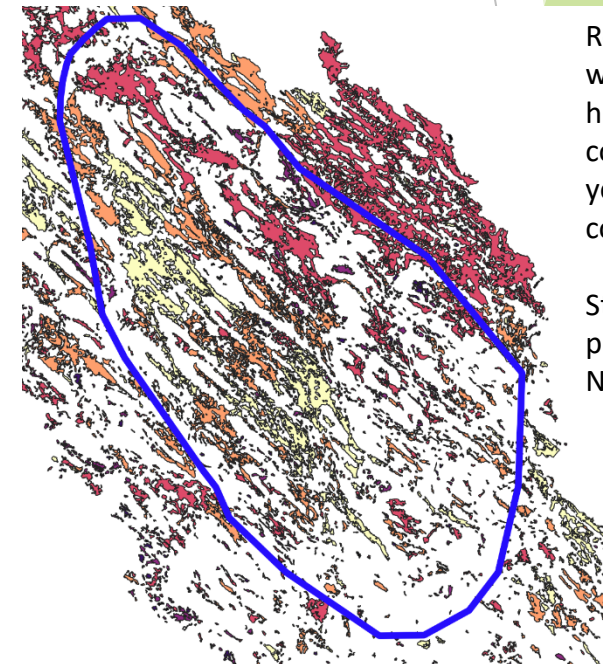
- Site area (convex/concave)
- Planning area
- 1 km, 3 km, 4 km, 8 km, 10 km, 12 km
- Municipalities, counties, regions, Sweden



Reindeer husbandry national interests, Ragunda



Analytical hierarchy process, Ragunda



Relative contribution of wetland complexes to high-value wetland connectivity, with yellow showing highest contribution.

Storlandet gross planning area, Norrbotten

Transformed landscapes become further transformed



Onshore wind power is the latest, and now ongoing, major landscape transition

Take place in already transformed landscapes

Cumulative effects in an already (over) crowded landscape

A legacy of mistrust

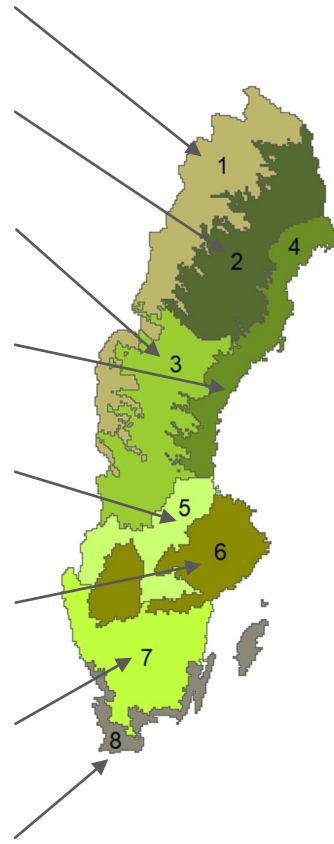
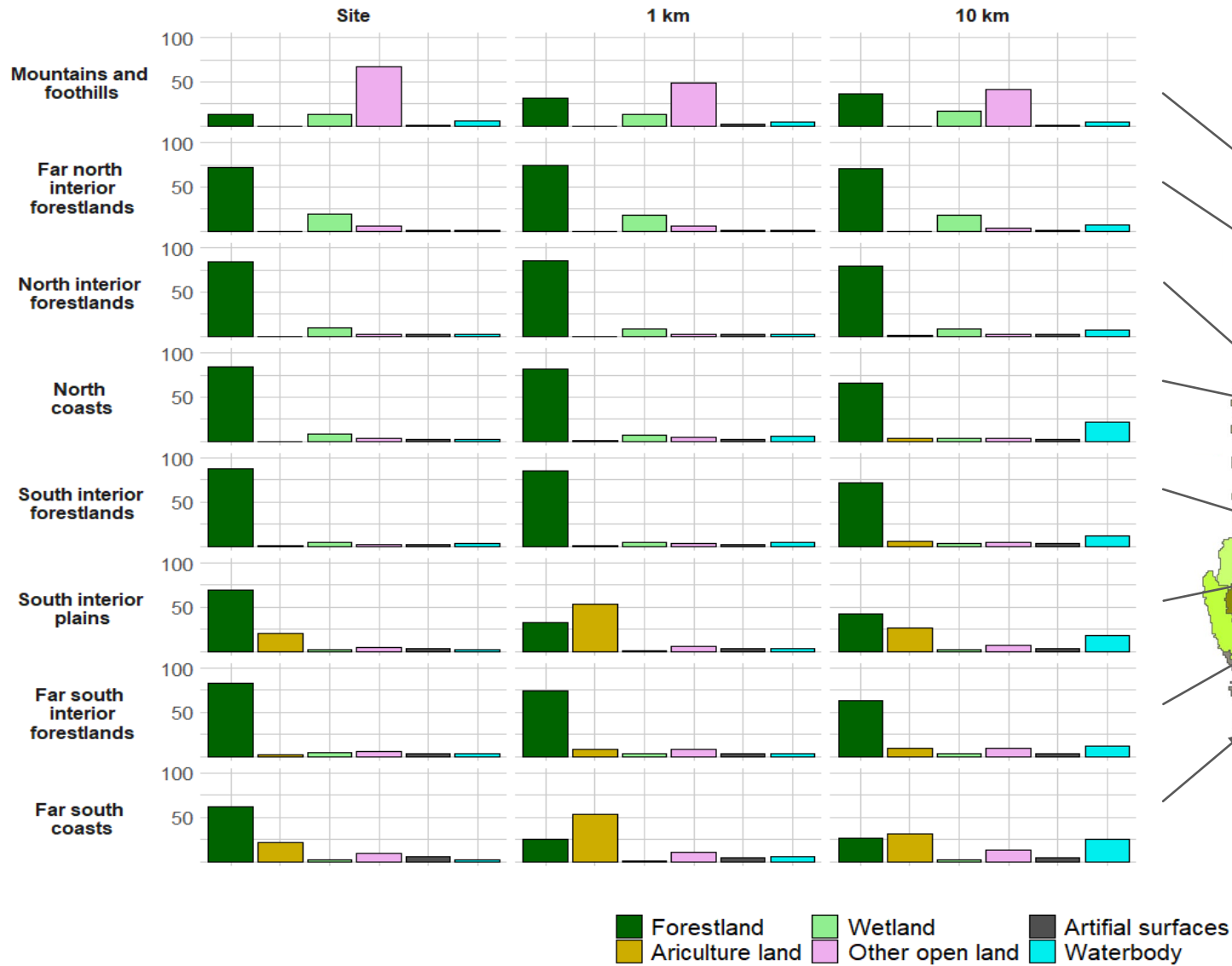
A center to periphery concern, at multiple scales

Tipping points are approached

Not fully known impact

Clean energy immediately needed – not time to minimize conflict risk and maximize integration and synergy opportunities

Wind power today and in the near future



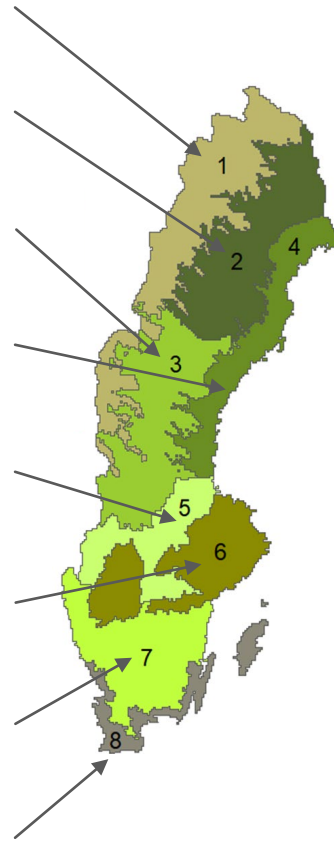
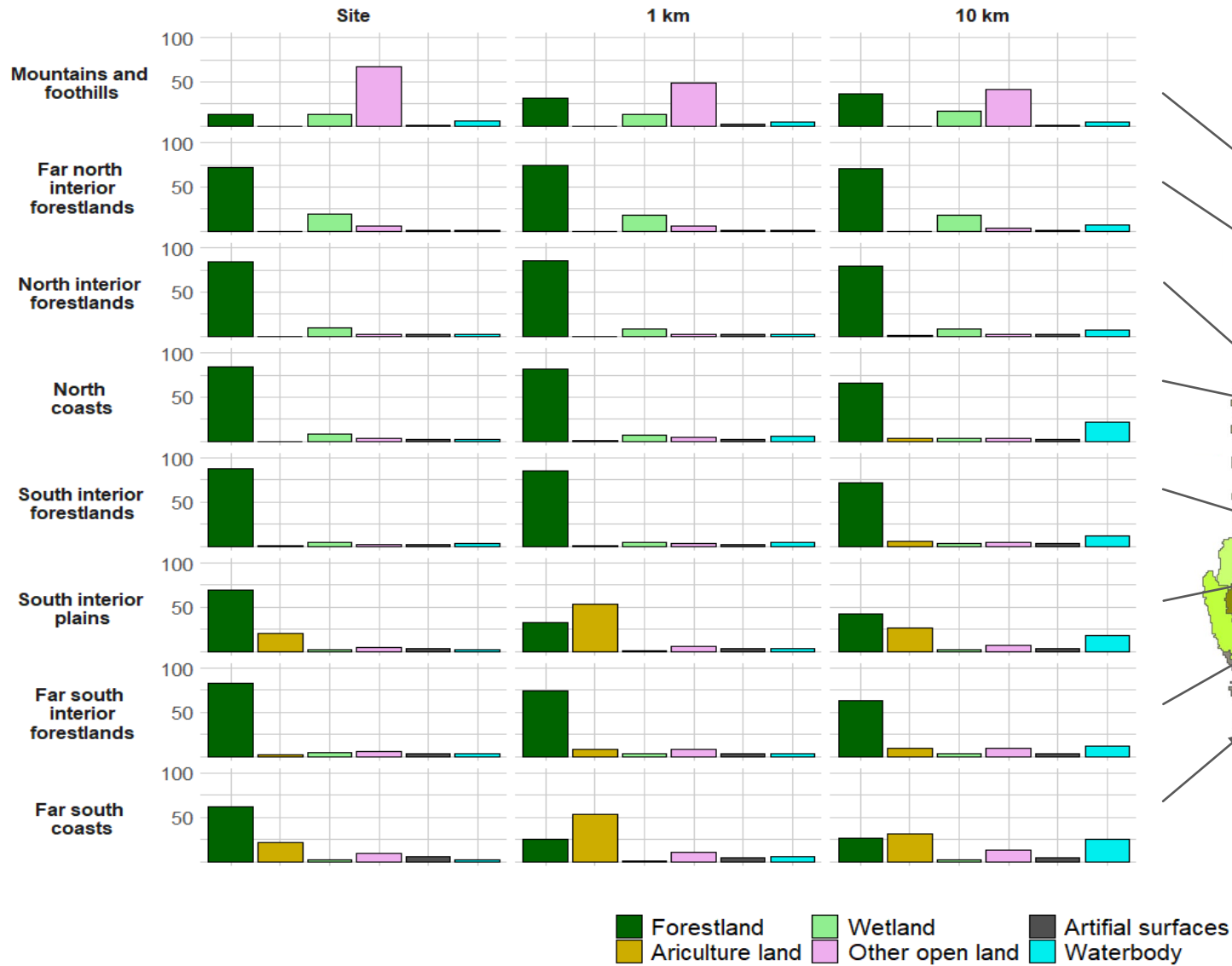
Wind power is built on forestlands

Other landcovers are increasing at close distance – mainly wetlands in the north and agricultural lands in the south

In the mountain region- impact on forestland is increasing on distance – the Scandinavian Mountain Green Belt intactness is threatened



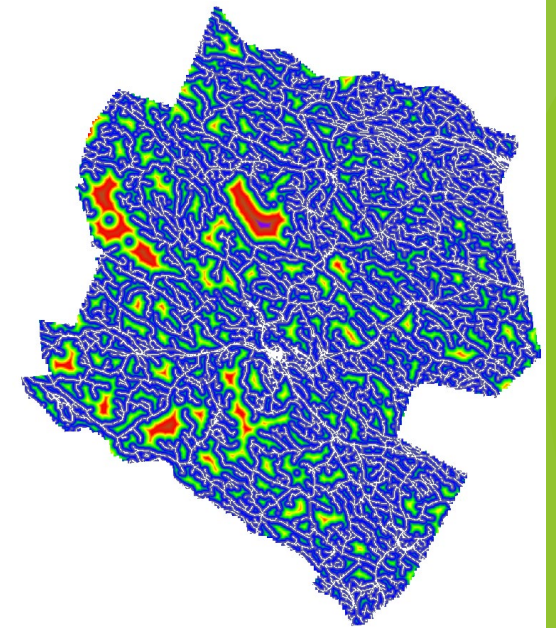
Wind power today and in the near future



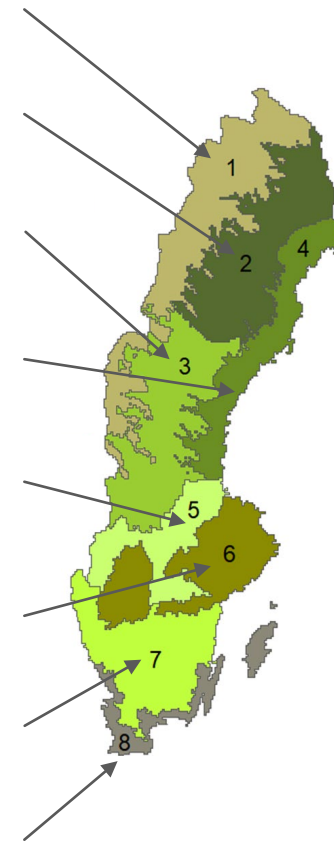
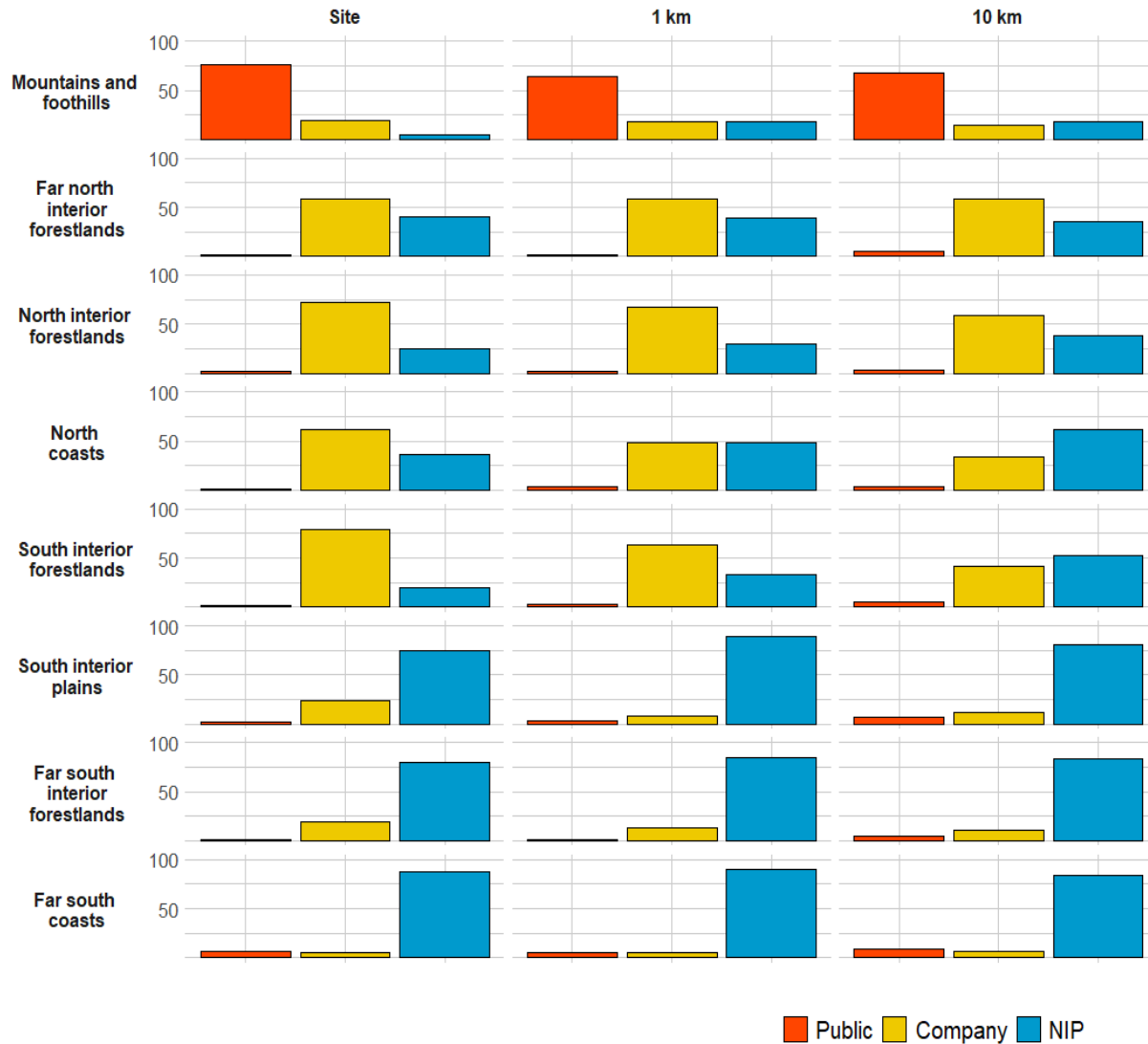
Wind power is built on forestlands

Other landcovers are increasing at close distance – mainly wetlands in the north and agricultural lands in the south

In the mountain region- impact on forestland is increasing on distance – Remote areas become explored



Wind power today and in the near future



Wind power is built on forest company forestlands in the north...

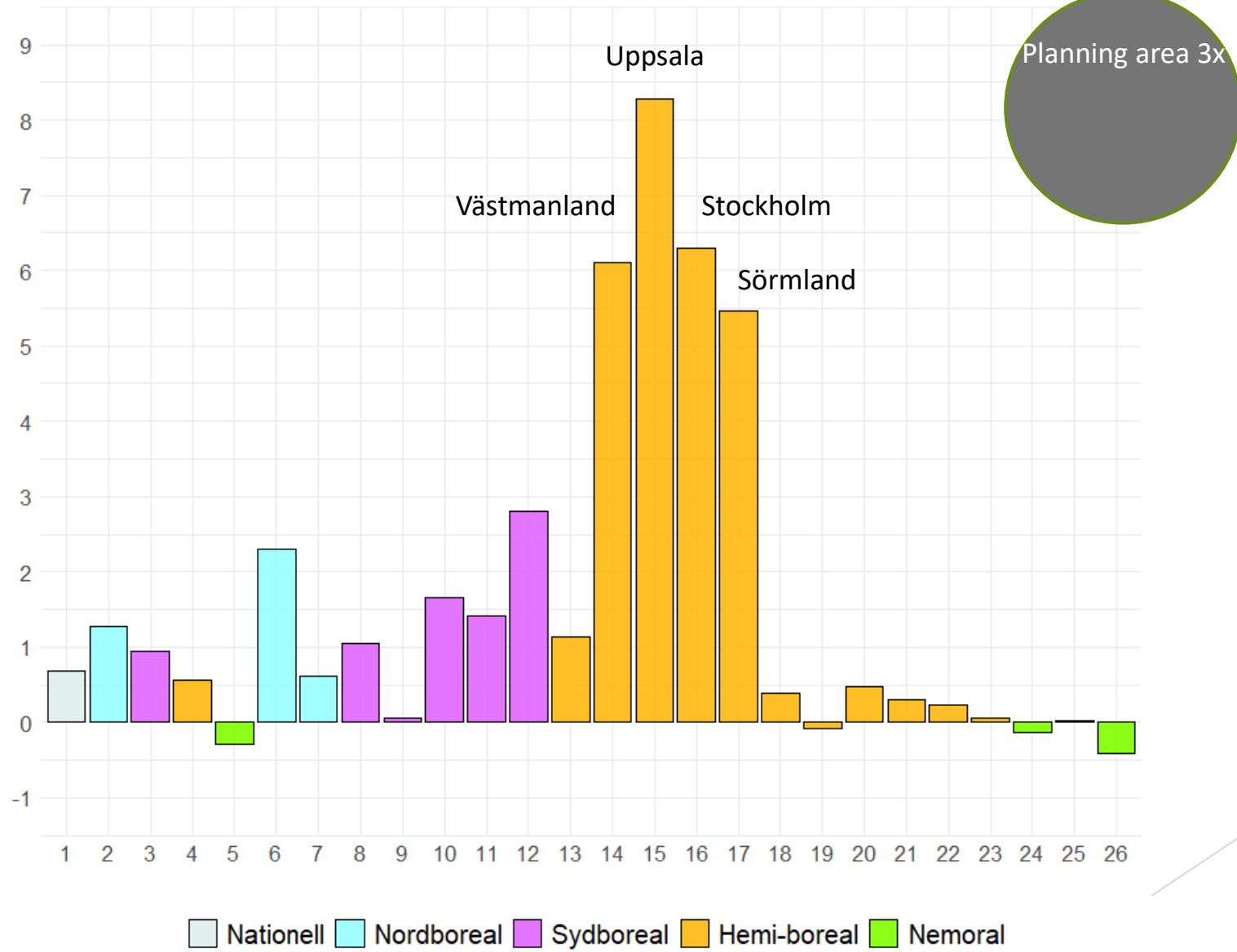
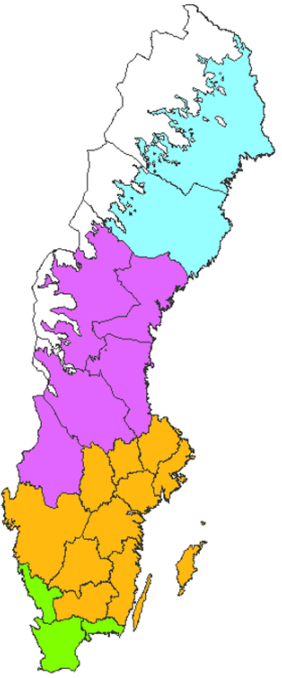
... and on private household forestlands in the south.

Private household forestlands increase at close distance

Public lands not commonly used, except in the mountain region.

A local center to periphery issue

Forestlands in 2040 compared with presently

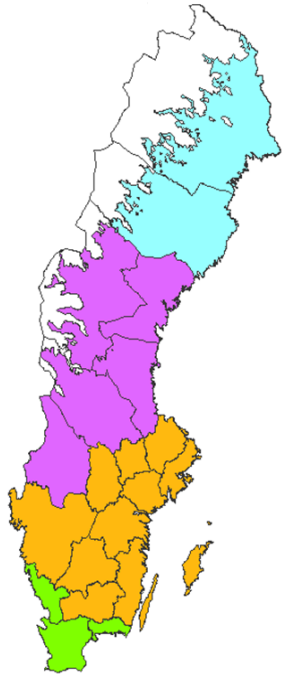


Large but very varying change.

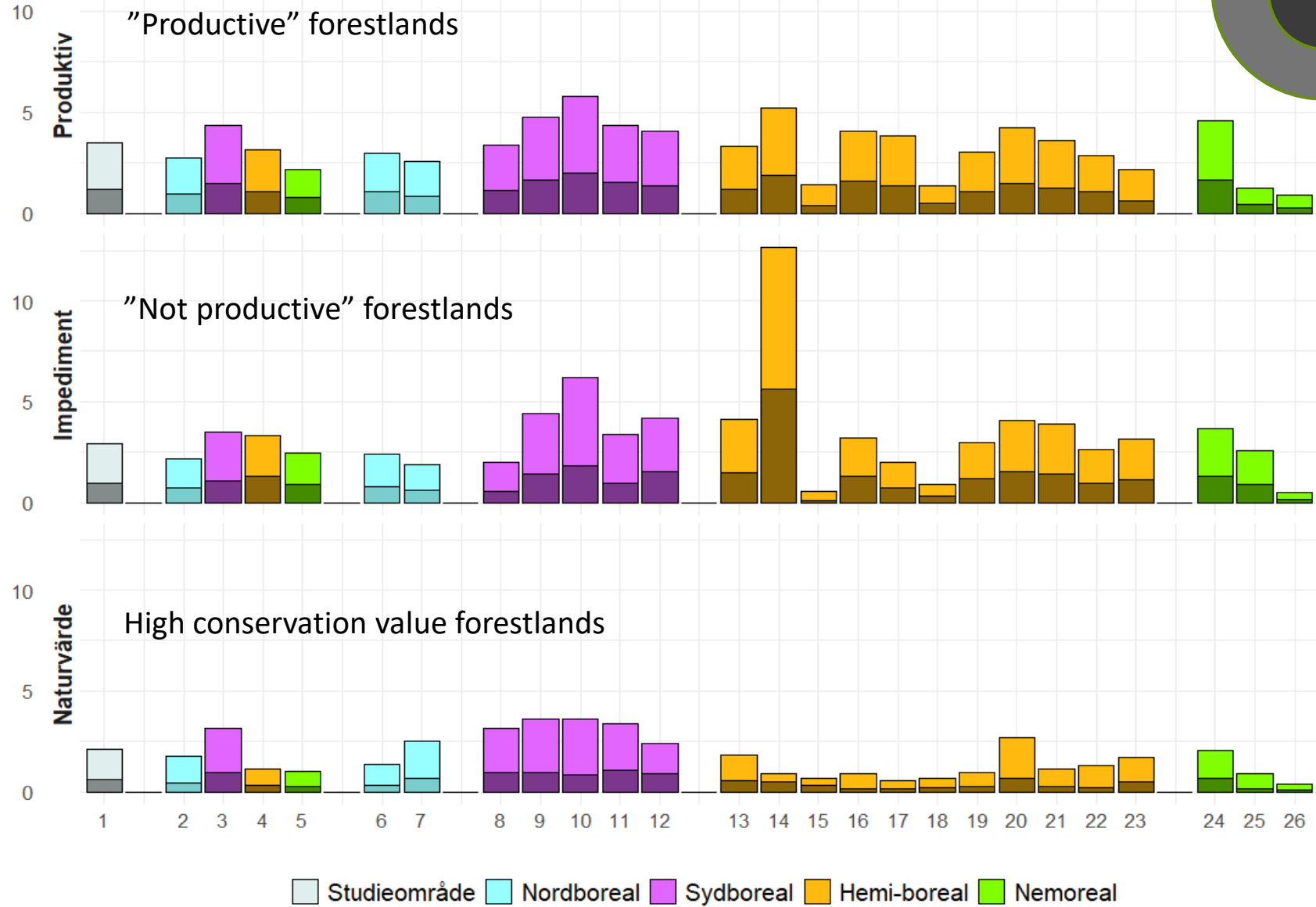
In particular large changes in counties with in comparison small forestland area

In particular large changes in boreonemoral region

Forestlands in 2040 compared with presently



Planning area 3x
Site area 1x



Forest in use for forestry and forest not in use for forestry, but also forests with high conservation value.

For the latter in particular in the south boreal region.

Sustainable landscape planning is essential, on all scales and administrative levels

How is wind power framed in media and by whom?

How ready are the municipalities to implement expansion?

How can integrated landscape character assessment improve siting?

How are important lands for reindeer affected?

What typifies wind power landscapes?

What is happening on forestlands?

What characterizes suitable and suitable sitings?

What density of different types of protected areas are in the proximity?

Johan Svensson & Wiebke Neumann, SLU; Therese Bjärstig et al., UMU

Land-use synergy, conflict and intergration in sustainable onshore wind power development

Hållbar landbaserad vindkraft – synergi, integration eller konflikt mellan riksintressen



Map the interactions between Sustainable Development Goals

Måns Nilsson, Dave Griggs and Martin Visbeck present a simple way of rating relationships between the targets to highlight priorities for integrated policy.

Next month in New York, the United Nations' 2030 Agenda on Sustainable Development will have its first global progress review. Adopted by the UN General Assembly in 2015, the agenda represents a new coherent way of thinking about how issues as diverse as poverty, education and climate change fit together; it entwines economic, social and environmental targets in 17 Sustainable Development Goals (SDGs) as an 'indivisible whole'.

Implicit in the SDG logic is that the goals depend on each other — but no one has specified exactly how. International negotiations gloss over tricky trade-offs. Still, balancing interests and priorities is what policymakers do — and the need will surface when the goals are being implemented. If countries ignore the overlaps and simply start trying to tick off targets one by one, they risk perverse outcomes. For example, using coal to improve energy access (goal 7) in Asian

GOALS SCORING

The influence of one Sustainable Development Goal or target on another can be summarized with this simple scale.

Interaction	Name	Explanation	Example
+3	Indivisible	Inextricably linked to the achievement of another goal.	Ending all forms of discrimination against women and girls is indivisible from ensuring women's full and effective participation and equal opportunities for leadership.
+2	Reinforcing	Aids the achievement of another goal.	Providing access to electricity reinforces water-pumping and irrigation systems. Strengthening the capacity to adapt to climate-related hazards reduces losses caused by disasters.
+1	Enabling	Creates conditions that further another goal.	Providing electricity access in rural homes enables education, because it makes it possible to do homework at night with electric lighting.
0	Consistent	No significant positive or negative interactions.	Ensuring education for all does not interact significantly with infrastructure development or conservation of ocean ecosystems.
-1	Constraining	Limits options on another goal.	Improved water efficiency can constrain agricultural irrigation. Reducing climate change can constrain the options for energy access.
-2	Counteracting	Clashes with another goal.	Boosting consumption for growth can counteract waste reduction and climate mitigation.
-3	Cancelling	Makes it impossible to reach another goal.	Fully ensuring public transparency and democratic accountability cannot be combined with national-security goals. Full protection of natural reserves excludes public access for recreation.