

Wind development scenario in Portugal -A perspective

Wind Energy within the institutional framework for the protection of biodiversity 2023/03/08 Athens



Paulo Cardoso and Miguel Mascarenhas

The context



The wind energy development in Portugal in the last two decades

How the process was conditioned by our regulatory framework, the natural and the geographical contexts

BE

The opportunities and challenges





Wind Resource

Ę

Wind Resouces inside

PA Network &

Sensitive areas



Leave out agreement

Development inside PA Network

- Guided by PA Spatial Planning and regulatory constraints
- Binding decision from Nature Conservation Authority

Gerês & Montesinho

National Park

Natural Reserve

PA network + Sensitive Areas

Mean Power Density



https://globalwindatlas.info/en/area/Portugal



Wind farms and PA Network

2021 5,7GW 288 windfarms 2640 turbines



BE

Follow the licencing process

- Evaluate Efects
- Distinguish impacts at

population level

• Dialog and transparency

BE

- Planning and Restrictions
- EIA (1y of baseline studies)
- Monitoring at least 3 y (1 + 3 y)

Long Term Monitoring: project life time



Measuring Effects

Fatalities and the

Protected Areas

Full dataset

- **106** monitoring studies **2005 2020 1112** turbines surveyed (**42%**)
- 86 025 searching trials



Fatalities

- 659 bird fatalities
 - 8% Accipitriformes
 - 8% Falconiformes
- 83% ID to species level



Impacts at population level

Ę



Impacts at population level

Ę



Call for action

Speed up the Energetic Transition

Reduce dependency on external sources

Review legal framework and simplify licensing

Moving towards a go- no-go approach

REPOWER EU increase the EU's 2030 target for renewables from the current **40% to 45%**

Potência (MW)

2021 **2030 PNEC** 5,7 GW installed (wind) 8,50 GW 31% Gross Final Consump. 47% 25k https://www.apren.pt/pt/energias-renovaveis/potencia 20k 15k 10k 5k 0 2000 2001 2002 2003 2004 2005 2006 2001 2008 2009 2010 2011 2012 2013 2014 2015 2016 2011 2018 2019 2020 2021 2022

https://energy.ec.europa.eu/system/files/2019-

06/pt_swd_en_0.pdf

https://energy.ec.europa.eu/system/files/2019-06/necp_factsheet_pt_final_0.pdf

Solar

Biomass



Challenges and Oportunities



Challenges

- A common requirement we need to develop renewables
- Already inside PA Network How to deal with repowering and the go- no-go planning?
- Hybridization (wind+solar) to take advantage of connection points – increase footprint = increase threats?
- At the same time, we need to reverse biodiversity loss and restore habitats?

Opportunities

- Better EIA studies baseline, effects, impacts
- Better and effective tools for mitigation (technology)
- Know how to implement net gain actions

Go- No-Go areas is the way to move forward? Q: Can we mitigate effects and create positive impacts? A: Why not?

Challenges and Oportunities



Challenges

- A common requirement we need to develop renewables
- Already inside PA Network How to deal with repowering and the go- no-go planning?
- Hybridization (wind+solar) to take advantage of connection points – increase footprint = increase threats?
- At the same time, we need to reverse biodiversity loss and restore habitats?

Opportunities

- Better EIA studies baseline, effects, impacts
- Better and effective tools for mitigation (technology)
- Know how to implement net gain actions

Go- No-Go areas is the way to move forward? Q: Can we mitigate effects and create positive impacts? A: Why not?



Challenges and Oportunities



Challenges

- A common requirement we need to develop renewables
- Already inside PA Network How to deal with repowering and the go- no-go planning?
- Hybridization (wind+solar) to take advantage of connection points – increase footprint = increase threats?
- At the same time, we need to reverse biodiversity loss and restore habitats?

Opportunities

- Better EIA studies baseline, effects, impacts
- Better and effective tools for mitigation (technology)
- Know how to implement net gain actions

Go- No-Go areas: install inside PA?

Q: Can we mitigate effects and create positive impacts?A: Why not?

