ESPON

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MAK-RES

Making space for the Renewable Energy Transition



Source: OIR

European Approaches: From Renewable Energy Targets to Territorial Strategies

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ÖIR

idea consult
moving society

Agenda

- **Overview of the MAK-RES project**

- **Findings and conclusions on:**
  - Pillar 1 : Spatial planning and governance as central enablers
  - Pillar 2 : Land use conflicts and synergies
  - Pillar 3 : Social acceptance and local benefits

- **Synthesis and conclusion**

Overview of the MAK-RES project

Architecture of MAK-RES

Three types of results

1 **Spatial planning and governance**

2 **Land use conflicts & synergies**

3 **Social acceptance & local benefits**

Seven case studies



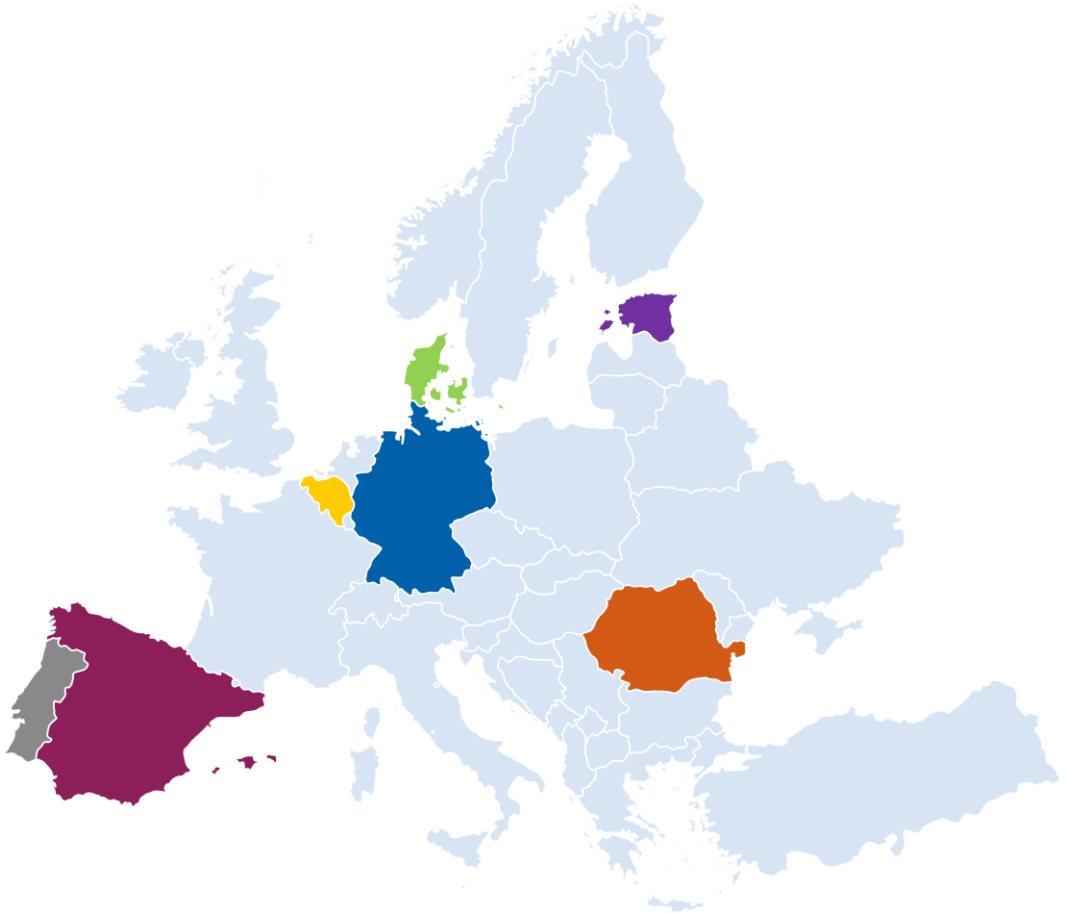
- BE: Solar park "Ostend airport", Flanders (2024)
- ES: Solar park "Talayuela II", Extremadura (2003)



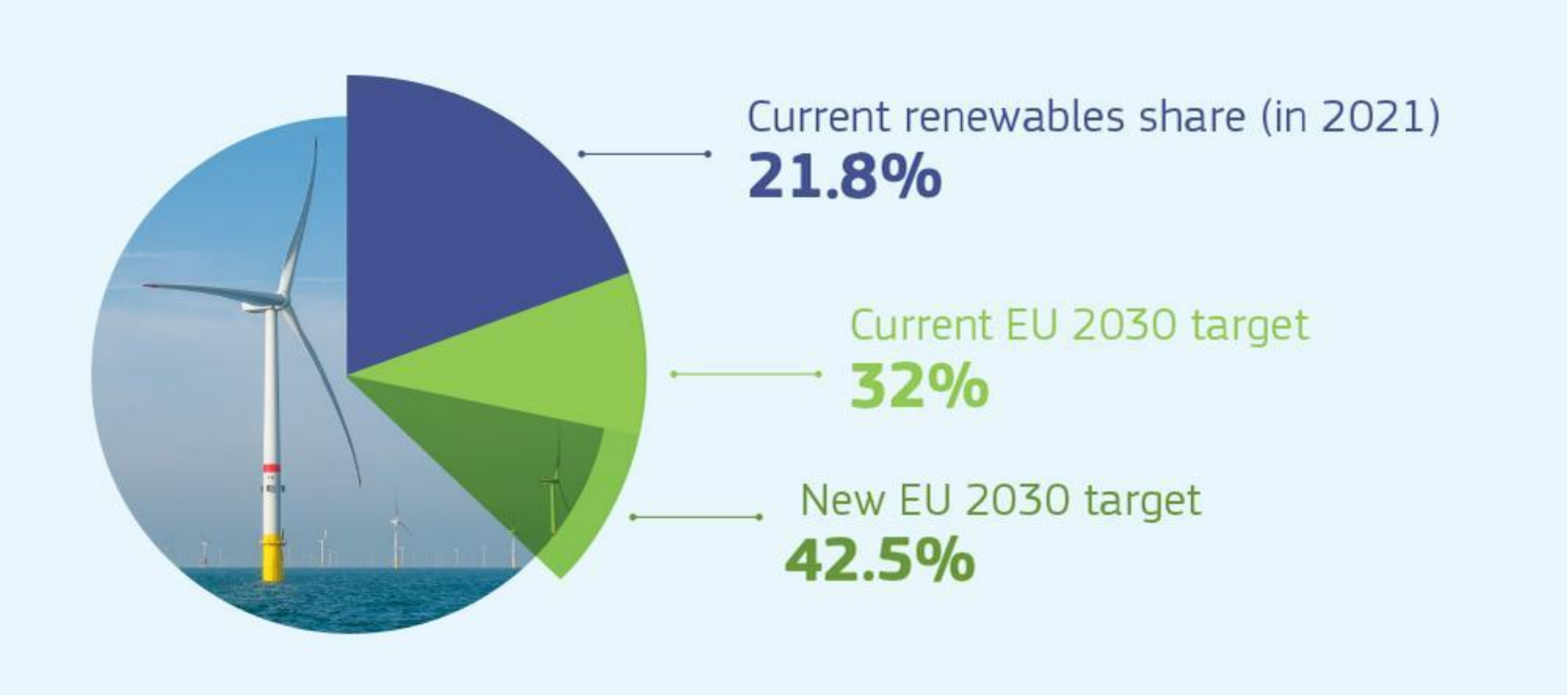
- DK: Wind park "Vibberstoft Thy til Vind", Thisted (2024)
- PT: Wind park Barão de São João, Algarve (2009)
- RO: Wind park Casimcea (2012)



- DE: Hybrid park "Energy Park Wörrstadt", RLP (ca. 1998)
- EE: Hybrid park "Sopi-Tootsi" (2024/2025)



Energy goals and RES development

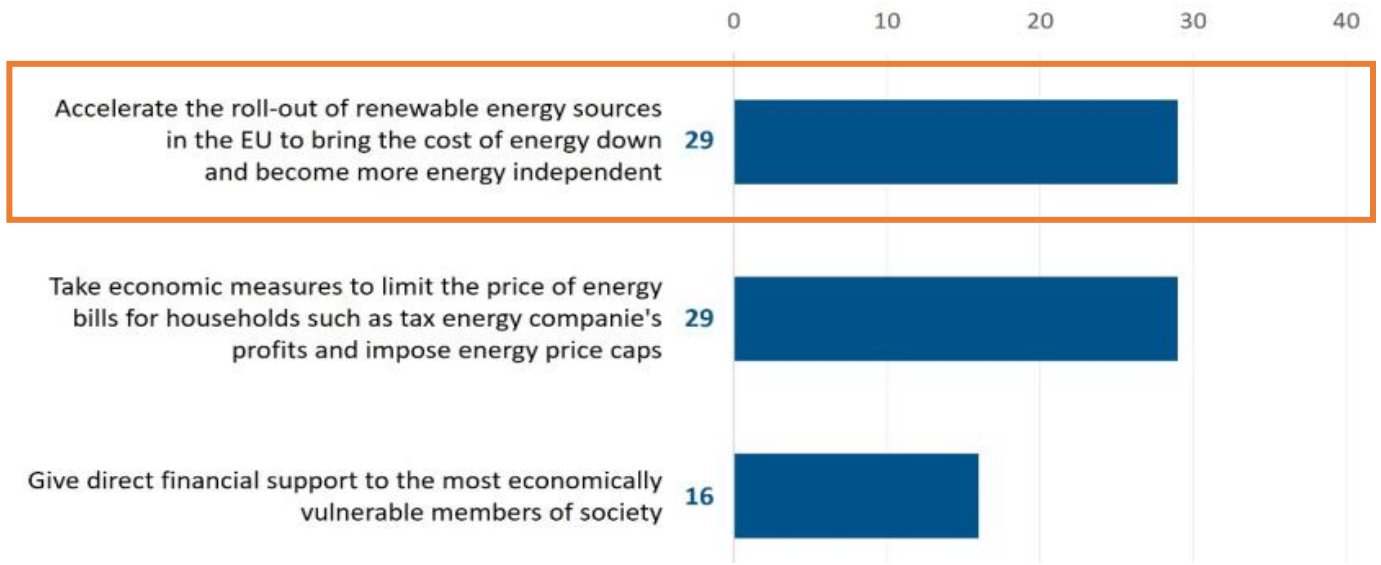


Source: European Commission — energy.ec.europa.eu

Citizens support the roll-out

"How should governments respond to the economic pressure of the energy crisis?"

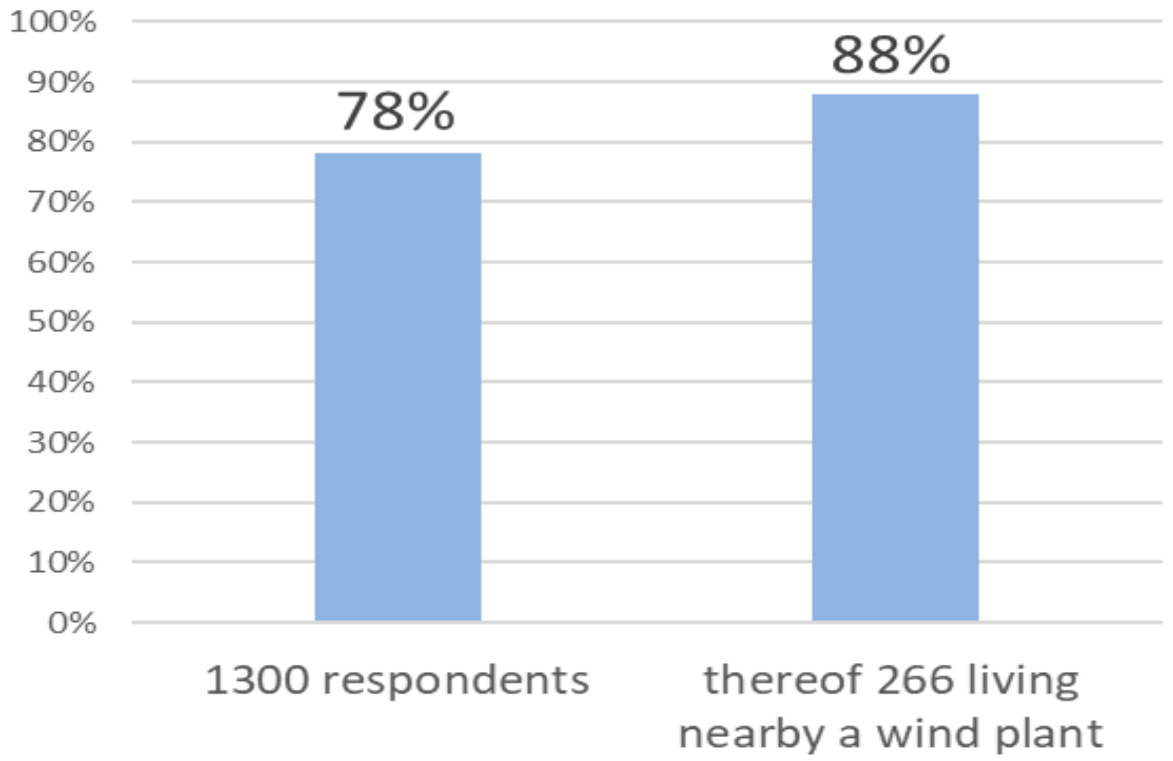
→ Accelerate the roll-out of renewable energy sources in EU



Source: Eurobarometer / European Commission, 4th report on progress of renewable energy in the EU

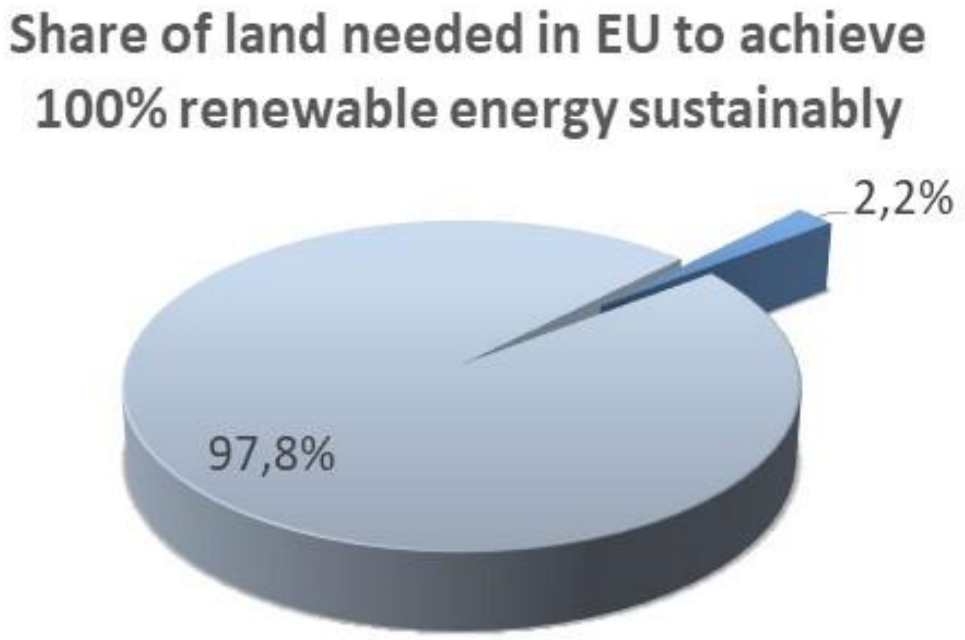
…and proximity does not reduce acceptance

"Would you agree to a wind park development in your municipality?"



Source: Hampl, Sposato, Dworzak, Schneider (2021): Studie zur Akzeptanz von Windenergie, Universität Klagenfurt

And the land needed is small

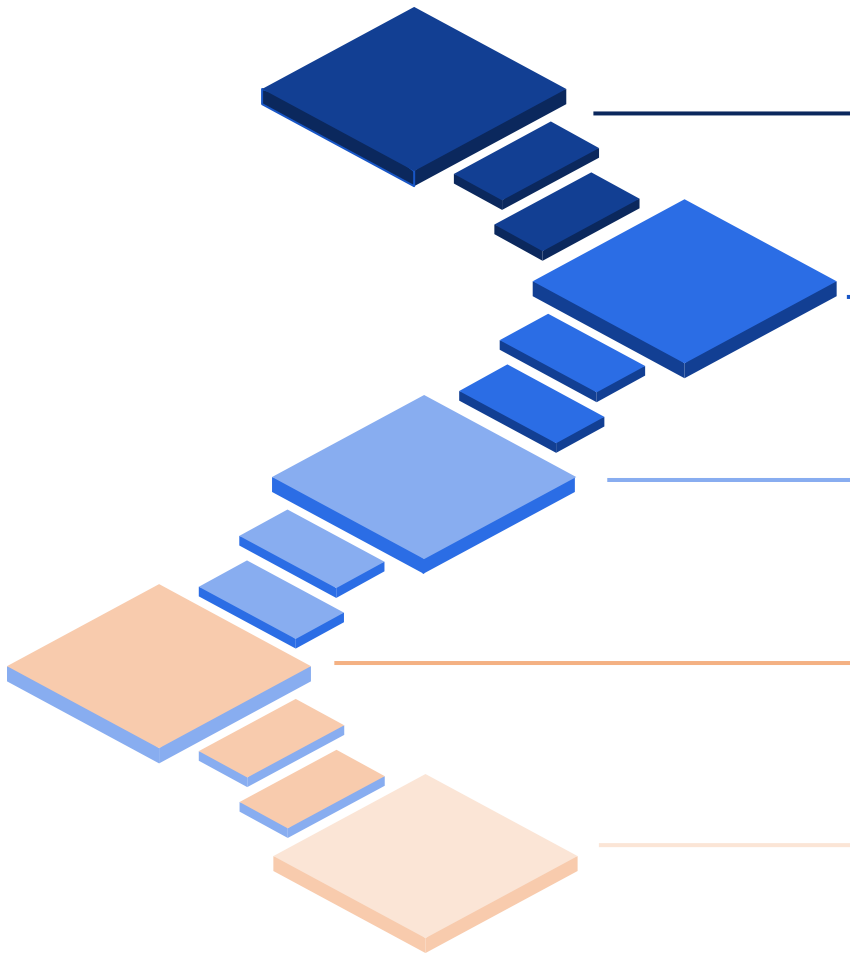


Source: EEB (2024) Briefing on spatial requirements for a sustainable energy transition in Europe

So why is it so difficult?

Strong ambition. Public support. A modest land requirement. And yet: slow, contested, often blocked deployment.

From European energy goals to concrete RE plants…



		Decision level
1	Energy goals	**National, regional**
2	National/regional zoning	**National, regional**
3	Land use plan	**Local**
4	Strategic environmental evaluation	**Environment authority**
5	Planning permission	**Approving authority**

Source: OIR

Missing link: energy goals and space

Example of Denmark

EU objectives

42,5% renewable energy by 2030

→

National objectives

70% reduction of GES

55% of energy needs covered by Renewables

→

Territorial / Local

?

Sources: European Commission; stateofgreen.com

Architecture of MAK-RES

Three types of results

1 **Spatial planning and governance**

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Municipalities vs. developers

- Developers are usually the driving force in identifying suitable areas
- Municipalities end up reacting to proposed projects rather than anticipating them.
- Municipalities are overstrained with the responsibility of implementing energy goals

→ The responsibility was transferred implicitly : never formally assigned, never resourced.



Source: OIR, Mollay

A reading grid: what does a municipality actually hold?

1

Formal competence

Who holds the legal power to decide? Is zoning a municipal, regional or national matter?

2

Practical capacity

Does the municipality have the staff, technical tools and financial means to exercise that competence seriously?

3

Governance innovation

What does the municipality do beyond the legal minimum to build genuine local legitimacy?

Denmark : Thisted and the "Thy model"

FORMAL COMPETENCE No binding regional plan: municipalities identify suitable areas and write them into their own plans.

1

The framework

Local zoning : 3 zones
- Forbidden
- Accepted under conditions
- Welcomed

2

Open call

Developers, landowners and local energy groups apply.

3

Municipal review

Assessment of technical and environmental feasibility

4

Residents' vote

Affected residents vote

5

Formal planning

Approved projects only

PRACTICAL CAPACITY

INNOVATION

Estonia : competence without capacity

SOPI-TOOTSI

- Municipalities hold broad zoning competence : Estonia has no binding national or regional zoning system.
- But the local authority is described as too small, too isolated and too politically exposed to carry a project of this scale alone. Citizen engagement remained minimal.

→ Lack of qualified staff is identified as one of the major obstacle for local authorities.

Wörrstadt in Germany : the region frames, the commune drives

- Formal competence : Shared with the region, which designates wind priority areas; the municipality applies them in its land-use plan.
- Practical capacity : Two decades of continuity: a 2007 goal reached in 2012
- Governance innovation : Citizen cooperatives, voluntary operator payments



→ A municipality does not need full planning competence to lead.

Pillar 1 : What MAK-RES recommends

→ **Clarify who carries what**

→ **Give a legible framework**

→ **Fund local capacity**

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Dual land use: four families of solutions



Agrivoltaics



Hybrid parks



Biodiversity-oriented plants



Brownfield / already sealed surfaces

Dual land use: four families of solutions

Agrivoltaics

Hybrid parks

Biodiversity-oriented plants



Brownfield / already sealed surfaces

Where to put RE : using the built environment and sealed surfaces



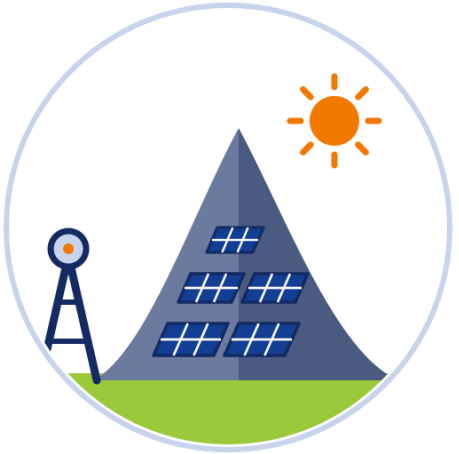
Buildings

Spain



Near infrastructure

Germany
Belgium



Poor soil quality

Romania

Dual land use: four families of solutions



Agrivoltaics

Hybrid parks



Biodiversity-oriented plants

Brownfield / already sealed surfaces

Agri-PV and biodiversity: promise and reality

Agrivoltaics



Remains marginal

Impact on cultures needs to be studied

Pilots project

Biodiversity-oriented plants



Need to be planned from the beginning

Condition to make the project happen

WHO ORGANISES MULTI USAGES ?

GERMANY
Regional level

SPAIN
Developer

DENMARK
Local level

Pillar 2 : What MAK-RES recommends

→ **Support multi-usage of soil**

→ **Make mitigation credible**

→ **Decide where to build early**

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Timing matters as much as content

- Engagement should start before the permit application
- If consultations are too late, key decisions are already taken and participation becomes symbolic



→ Early engagement for every affected public, residents and environmental stakeholders alike is what turns participation into ownership.

Local benefits: money mostly set above the commune

PUBLIC AUTHORITIES

Spain, Portugal

Municipal taxes for local infrastructures

PUBLIC AUTHORITIES + POPULATION

Estonia

Benefits for people living close to wind turbines

PUBLIC AUTHORITIES + POPULATION
→ LOCAL RULES

Denmark

At least 30% of shares for the local population and companies
Community fund (1% of gross revenue)

→ In two of the three, the sharing is set by national law or the tax framework : not by a deliberate municipal policy.

Beyond money: benefits negotiated case by case

Affordable energy → In Belgium → Developer's initiative
In Romania → Negotiated by the commune

Local infrastructure → In Romania and Denmark

→ None of these benefits is institutionalised. They are negotiated case by case, on a voluntary basis and the municipal frameworks that support them do not travel beyond their own territory.

Pillar 3 : What MAK-RES recommends

→ **Engage early, engage everyone**

→ **Share benefits**

Synthesis

PILLAR 1 GOVERNANCE

A missing link

National targets are rarely translated into territorial responsibility. Municipalities carry the decision without the mandate, unless competence, capacity and governance innovation align, as in Denmark and Germany.

PILLAR 2 LAND USE CONFLICTS

Two conditions, never combined

Reusing already artificialised land is the strongest lever against land-use conflict. Yet across seven cases, no project combines strong municipal agency with a no-net-land-take logic.

PILLAR 3 SOCIAL ACCEPTANCE

Built, not decreed

Acceptance comes from early engagement and a tangible share of the value created, not from limiting nuisances alone. Proximity does not reduce support; exclusion does.

Thank you

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Link to MAK-RES

https://www.espon.eu/publications/mak-res-final-report