**Transforming Czechia's Food and Land-Use Systems: A Pathway to Sustainability**

Czechia's agricultural and forestry sectors face intertwined challenges of ecosystem degradation, climate vulnerability, and structural inefficiencies. Agriculture, characterized by intensive fertilizer use, contributes substantially to non-CO₂ emissions (accounting for 60% of agricultural N₂O emissions). Large-scale monocultures and low-productivity livestock systems exacerbate soil depletion and biodiversity decline (Ministry of the Environment of the Czech Republic, 2021a). Land concentration further limits the adoption of diversified, sustainable small-scale farming practices.

The forestry sector, traditionally a net carbon sink, has faced mounting climate stresses. Bark beetle outbreaks have devastated spruce monocultures, revealing the urgent need for species diversification and closer-to-nature silviculture (Ministry of the Environment of the Czech Republic, 2021b). Water management challenges persist, with only 12.2% of surface water bodies projected to reach good ecological status by 2027 (European Commission, 2025).

**Strategic Interventions for Systemic Change:**

1. **Agricultural Transformation:**

* Scale organic farming to 25% of agricultural land by 2030
* Restore 30% of degraded peatlands by 2030 and 50% by 2050
* Reduce the use of artificial fertiliser and pesticides

1. **Forest Ecosystem Restoration:**

* Reduce annual net loss of agricultural and forest land to a maximum of 0.25% by 2030
* Increase deciduous tree share to 35.6%

1. **Water and Biodiversity:**

* Comprehensive land consolidation with regard to increasing retention capacity and ecological stability of the landscape
* Rewet 30% of degraded habitats by 2030 and 90% by 2050

1. **Policy and Economic Instruments:**

* Align CAP subsidies with climate objectives
* Expand carbon farming initiatives
* Strengthen LULUCF monitoring systems

**Key National Commitments:**

* **Climate-neutral land use by 2050: Through enhanced carbon sequestration in forests and soils**
* **Non-ETS emissions reduction: 26% reduction by 2030 to comply with Effort Sharing Regulation (ESR) sector targets**
* **Agricultural non-CO₂ emissions: 15% reduction by 2030 through improved manure and nutrient management**
* **LULUCF carbon sink: Restoration of removals to at least -827 kt CO₂e/year by 2030**

Delivering these commitments will require robust monitoring systems and adaptive management to ensure effective mitigation and adaptation across food production, water management, and biodiversity conservation systems.

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