

BIO DIVER SITY

ROAD MAP

Biodiversity in Finnish
agriculture nature

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BACKGROUND



- Agri-environmental work in Finland previously mainly focused on water protection, now also climate impact and agricultural biodiversity
- SLC-MTK Climate Roadmap published in 2020. Work in progress to update the roadmap this year
- The "realistic" scenario of the Climate Roadmap, which reduces agricultural greenhouse gas emissions by -29%, is also included in the Finnish government's goal of climate neutrality in 2035.
- Main goals in Climate Roadmap: Increasing carbon sequestration on mineral soils and reducing emissions on peat soils
- Many of the objectives and measures of the Climate Roadmap go hand in hand with the measures presented now to slow down the loss of biodiversity in Finnish agricultural nature and landscape

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THE ROADMAP IS BASED ON SOLID SCIENCE



- Finland's best researchers on agricultural biodiversity from Luke (Natural Resources Institute Finland), Syke (Finnish Environment Institute) and University of Helsinki are behind the 117-page report commissioned by MTK & SLC.
- Concrete area targets for biodiversity areas:
 - 1) stop the depletion of agricultural biodiversity WAM 1 compared to the "business as usual" scenario 2022 (WEM).
 - 2) scenario WAM 2 to significantly increase the diversity of agricultural nature.
- The main policy tool is the full utilization of the Finnish national CAP plan and environmental measures and developing the system with a view to 2030 and 2050, but it will also require additional investments in policy tools to reach biodiversity goals
- Boundary conditions for the roadmap set by MTK and SLC:
 - The measures are based on maintaining the profitability of agriculture and keeping agricultural production at least at the current level

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HOW WAS BIODIVERSITY ASSESSED?



1) 3 main habitats were reviewed:

- Fields
- Edge areas between field and forest
- Care biotopes, cultural biotopes

2) Current status of the main species in the agricultural environment – causes of biodiversity loss.

3) Diversity indicators analyzed

- Soils
- Farmland birds
- Types of pollinators
- Area of HNV agricultural land
- Diversity of crop plants

	Pellot	Reuna- alueet	Perinne- ympäristöt
Linnut	+++	+++	++
Hyönteiset	+	++	+++
Kasvit	+	++	+++
Maaperäeliöt	++	+++	+++

- Uhanalaisuusarvioinnit
- Lajistoseurannat
- Tapaustutkimukset

THE CURRENT STATE OF AGRICULTURAL BIODIVERSITY



Challenges:

- Many endangered insect and plant species live in cultural, traditional habitat. Protection of these areas , goal 50 000 ha, is crucial
- Reduction and overgrowth of meadows
- Reduction of natural grazing areas
- Reduction of bird species breeding in fields, but not species breeding at forest edges
- Majority of butterfly species declining; general trend downwards
- Soil Organic Matter (SOM) in arable land is decreasing, which is detrimental to soil organisms.

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MEASURES AND THEIR IMPACT ON BIODIVERSITY

Source:
Agri-environmental
measures environmental
and cost-effectiveness
(MYTTEHO-project, final
report, 2020)



Biodiversity					
Vascular plants	Pollinators	Natural enemies of pests	Farmland birds	Soil organisms	Game animals
Environment management grasslands					
• Perennial environment grasslands	+	++	++	+++	+
• Riparian zone	++	++	+++	+++	++
• Nature management field grasslands	+++	+++	+++	+++	++
Biodiversity in arable land environments					
• Grass for green manure	0	++	++	++	+
• Catch crops	0	+	0	++	++
• Plants to be used as renovation crops	0	+	0	+	0
• Biodiversity fields (as a whole)	++	+++	++	+++	+++
-fields with game plants	+	++	+++	++	++++
-fields with landscape plants	+	++++	++	++	++
-biannual biodiversity fields established with meadow and bird plants	+++	++++	+++	+++	++
Environment contracts					
Management of wetlands	+++	++	+++	++++	X
Management of biodiversity in agricultural environment and landscape	++++	++++	++++	+++	+++
Crane, goose and swan fields	+	0	+	+++	++

SUMMARY OF THE SCENARIOS



1. "business as usual" (WEM)
 - CAP27 environmental measures are implemented as targeted in the CAP plan
 - Diversity increases slightly by 2030; soil biodiversity continues to decline.
2. halting the loss of biodiversity (WAM 1)
 - Diversity areas need to be increased, additional investment of 54 million €/year until 2030.
 - The area of field margins, edge zones and flower strips around fields should be increased.
 - The management of traditional biotopes should be ensured and the areas increased
3. How do we turn the trend into a positive one (WAM 2)?
 - Similar measures as in WAM 1, but larger areas.
 - Additional investment of €76 million/year until 2030.

BD acreage, ha	2022	2023	CAP 27* WEM	WAM1 2030	WAM1 2050
Catch crops	121 000	255 000	200 000	350 000	370 000
Nature management field grasslands	57 591	95 148	90 000	170 000	200 000
Riparian zone	43 484		39 000	45 000	45 000
Grass for green manure	16 400		30 000	60 000	90 000
Biodiversity fields (game, landscape)	23 962	45 453	25 000	55 000	63 000
Renovation crops	3 216		70 000	100 000	70 000
Biodiversity strips around field(width 3 m)	-	?		17 000	21 000
Cultural habitats	32 907			52 000	57 000

*In the CAP plan, there is a target of a total of about 300,000 ha (13 % of total area 2,25 milj ha) of biodiversity acres which are thus not utilised for food production during the growing season.

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CONCLUSIONS

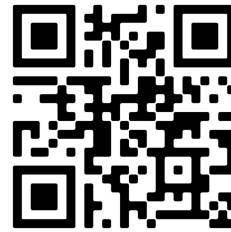


- It is possible to achieve the objectives with sufficient resources
- Diversity can be promoted in all agricultural environments. SLC/MTK objectives:
 - Increase diversity on arable land (point 5), e.g. catch crops, diversity areas and flower strips around fields (new measure in Finnish environmental scheme, target: 17 000 ha)
 - Special focus on border zones outside field bordering forest (point 6), national border zone programme proposed in roadmap.
 - Investments in the management of cultural biotopes and natural pastures (point 7). Target: 52 000 ha
- Important to promote advisory services to farmers and consider when designing future agricultural policy
- Current production volumes in agriculture can be maintained even if a certain area is directed to take better account of biodiversity benefits.
- Biodiversity measures should be economically attractive to the farmer; we do not want to worsen the economic situation of farmers. This has always been the principle for agri-environmental measures within the support system.

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THANK YOU!



The Central Union of Agricultural Producers and Forest Owners (MTK)
The Central Union of Swedish-speaking Agricultural Producers in Finland (SLC)