ENVIRONMENTALLY AND SOCIALLY SUSTAINABLE CLIMATE POLICY IN AGRICULTURE

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The report draws on previous research and explores what a socially acceptable as well as economically and environmentally sustainable climate policy in agriculture could be like. The starting point is that the measures taken should be effective both economically and environmentally. Furthermore, measures most acceptable to farmers should be favoured.

Agricultural GHG emissions make up approximately 20% (14.3 million metric tonnes of carbon dioxide equivalents) of Finland's overall emissions. The national emission reduction target for agriculture is 13% and is only focused on the so-called agricultural sector, where nitrous oxide emissions from organic soil cultivation and methane emissions from ruminant livestock are the highest emission sources. The reduction target does not cover CO2 emissions from soil or emissions from agricultural energy consumption.

Reaching the reduction target solely by decreasing the use of fertilisers and adjusting the number of ruminant livestock is difficult and expensive. The perspective of agricultural climate policy should be expanded to cover solutions associated with land use because reducing emissions from soil is relatively inexpensive. It would also be prudent to consider whether increasing renewable energy and energy consumption efficiency in agriculture could be accredited to the agricultural sector instead of the energy sector. Changes in reporting would add transparency to the farmers' efforts and increase motivation to reduce GHG emissions.

The most cost-efficient measures to reduce GHG emissions include decreasing the need to clear land for cultivation, particularly through the advancement of solid-liquid manure separation, the long-term fallowing or grass cultivation of organic soils, and the reforesting of fields and pastures redundant for food security. Biogas production may become profitable if certain farm-specific factors are suitable for smallscale production or the farm's immediate surroundings have enough demand for heat produced on a larger scale.

Farmers are ready to internalise the targets of climate policy, providing that they do not add to bureaucracy, limit production opportunities or complicate the control system and that they provide positive incentives. From this angle, it would appear that investment subsidies (solid-liquid manure separation, biogas) or subsidising long-term fallowing or grass cultivation would work best. It is also necessary to ensure that all aspects of agricultural policy, CAP farm subsidies, national subsidy policies and the environmental direction of the agricultural programme all aim for the same targets in an environmentally sustainable way.

Global warming is changing the conditions of agricultural production. In plant production, synergy between adaptation and mitigation come from measures that increase the production of plant biomass per surface area or decrease the use of nitrogen fertilisers without reducing yields. The effects of adaptation measures often remain minor, thus giving no reason to abandon any adaptation measure based on its effect on emissions.