

Soil health policies for CAP and Agri-environment Directives

POLICY BRIEF

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SUMMARY

Soil is the basis for farm productivity and the health of ecosystems. The new Common Agricultural Policy (CAP) still lacks clear guidance on measures to improve and monitor soil health. With current soil health decline and the impact of agriculture on climate change and the environment, we urgently need to put soil at the forefront of agricultural policy.

SoilCare investigates and promotes the use of Soil-Improving Cropping Systems (SICS) to improve soil quality for positive effects on sustainability and profitability. SICS are a holistic approach to soil management, consisting of long crop rotations and an 'integrated' combination of inputs and management techniques. Here we present how SICS can act as a cross-cutting mechanism to improve soil health through CAP, RDP, GAECs, AECMs and multiple agri-environmental framework directives.





POLICY OPTIONS

Studies have shown several ways that policies can motivate farmers to take on better environmental and soil health management. The following options can increase uptake of soil health pracitces:

- Build SICS clearly into CAP Pillar I as cross-cutting farm practices for public goods
- Increase facilitators for farmer information exchange and training for advisors in soil health practices (e.g. via Farm Advisory Services)
- Use SICS to cross-cut policy frameworks and directives: e.g. cover crops to address both the Water Framework and Nitrogen Directive

could help
Member States
to create adequate
minimum standards
for soil related
goals



This table shows how each SICS type can contribute to policy objectives through the multiple policy instruments listed along the top of the table. The colours for each policy instrument are matched to the corresponding SICS under the 'SICS type' column.

		_	low SICS c	ontribu	How SICS contribute to policy objectives	obiectives		
	CAP - GAECs & AECMs	CAP - Rural Development Payment	Water Framework I Directive	Nitrate Directive	Nature Directive (Birds & Habitat Directives)	Sewage Sludge Directive	Pesticides I	Fertilisers Directive
SICS component			•					
Cover crops, green manures & intercropping	Help ke organic l	ep ground coverec N if leguminous; cr	dover winter when eate habitat for in	n rain and wi sects and the help fund	Help keep ground covered over winter when rain and winds can cause erosion; can reduce need for fertiliser and supply organic N if leguminous; create habitat for insects and therefore food for birds. They are also eligible under EFAs. RDP can help fund cover crop costs.	; can reduce need fo They are also eligibl	or fertiliser anc le under EFAs.	supply RDP can
Crop rotation	Rotating cu by addin infiltratio	ops with a diverse g a range of nutrie in through differen reducing the nee	mix of cash crops nts (including N) t root lengths, aid ad for chemical pe	s, legumes, flo therefore red ling with inte est and weed	Rotating crops with a diverse mix of cash crops, legumes, flowers, leys, vegetables, as well as livestock, can increase soil health by adding a range of nutrients (including N) therefore reducing the need for chemical inputs, improving soil structure and infiltration through different root lengths, aiding with integrated pest management via increasing insect and bird diversity, reducing the need for chemical pest and weed control. Associated costs could be covered by AECM.	s, as well as livestock emical inputs, impro nent via increasing in osts could be covere	c, can increase wing soil structions soil structions sect and bird d by AECM.	soil health ture and diversity,
Fertilisation / soil amendments	Adding co may also k and crop	ompost, mulch, woo be needed for acidio bestablishment, whe	odchip (fresh or c c soil. Applying ar nilst taking into co g and nutrient wa	omposted) and mendments and mendments and mention I state and the mention I state. RDP can	Adding compost, mulch, woodchip (fresh or composted) and animal manure reduce the need for chemical fertilisers. Liming may also be needed for acidic soil. Applying amendments at the right time of year in order to prepare soil for spring planting and crop establishment, whilst taking into consideration EU and Member State regulations (i.e. Nitrate Directive) to avoid leaching and nutrient waste. RDP can also help finance manure storage solutions.	luce the need for char ar in order to prepar regulations (i.e. Nitr nure storage solution	emical fertilise e soil for sprin ate Directive)	rs. Liming g planting to avoid
Soil cultivation	Reducino decline, ke	y or eliminating the eping soil microbio	e amount of ploug logy intact and re	ghing or tillag educe compac fuel use and	Reducing or eliminating the amount of ploughing or tillage of the soil can improve soil health by reducing organic matter decline, keeping soil microbiology intact and reduce compaction through less machine passes across fields as well as reducing fuel use and related emissions.	ove soil health by re chine passes across	educing organi fields as well a	ic matter as reducing
Compaction alleviation	Sub-soilir (the root	Sub-soiling can be used to alleviate compaction (increasing (the roots of which can help aerate soil and imrpove struct ti	alleviate compacti o aerate soil and i	on (increasin	ub-soiling can be used to alleviate compaction (increasing infiltration and soil health), as well as using diverse cover crops, (the roots of which can help aerate soil and imrpove structure), and reducing machinery passes across fields e.g. reducing tillage.	nealth), as well as usi nachinery passes acro	ing diverse co	ver crops, reducing
Enhanced efficiency irrigation	Drip irrig timing irrig	ation; use of crops ation to reduce su	s adapted to local conditions (e. rface evaporation; intercropping use efficiency; minimizes risks	conditions (e ; intercroppir ninimizes risk	Drip irrigation; use of crops adapted to local conditions (e.g. water conserving or non-water intensive crops in arid areas); timing irrigation to reduce surface evaporation; intercropping to reduce evaporation. Improves crop productivity and resource use efficiency; minimizes risks of salinization and desertification.	or non-water intension. Improves crop plesertification.	ve crops in ari productivity an	d areas); id resource
Controlled drainage	Re-use o	f water on farm; dit	ches etc to allow resource use	run-off; affor efficiency; mi	Re-use of water on farm; ditches etc to allow run-off; afforestation to reduce waterlogging. Improves crop productivity and resource use efficiency; minimizes the risk of waterlogging.	terlogging. Improve terlogging.	s crop produc	tivity and
Integrated landscape management	Mixed farn through d	ning and rotations ams, reservoirs. Imp	across farms; hed proves biodiversit	gerows and o	Mixed farming and rotations across farms; hedgerows and corridors for wildlife and beneficial predators; water harvesting e.g. through dams, reservoirs. Improves biodiversity, pest management and cropping systems sustainability on a landscape-scale.	nd beneficial predatı systems sustainabili	ors; water harvity on a landsc	esting e.g. ape-scale.

Incorporating SICS into EU policy

Agricultural Policies

The proposed post-2020 CAP includes three overarching environmental objectives which directly relate to soil and therefore provide opportunities for its incorporation more strongly via SICS:

- Contribute to climate change mitigation, adaptation and sustainable energy
- ► Foster sustainable development and efficient management of natural resources like soil, water and air
- Contribute to the protection of biodiversity and enhancing ecosystem services

Within CAP's Pillar 1 instrument, the incorporation of greening measures into compulsory Good Agricultural Environmental Conditions (GAECs) offers a greater chance for soil protection. These include using cover crops as a part of the rotation; acting as protection from erosion and adding nutrients. Cover crops are also a key part of SICS. In the Pillar 2 instrument, the new agrienvironment climate measures (AECM) pose opportunity to address current declining soil health; soils regenerated through SICS can become carbon stores and mitigate climate change effects. It must be ensured that Member States allocate enough of the transferable Pillar 1 & 2 budget to soil health measures. Key to this will be having the long-term vision proposed by the European Commission and used in SICS.



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SICS example

Cover crops with reduced N fertiliser

Improves:

Soil structure, biodiversity, nutrient use efficiency; leaching & erosion

Frameworks and Directives

The Frameworks and Directives in the table overleaf can be addressed jointly by using several SICS components. Efforts therefore need to regulate and incentivise their uptake by farmers through increasing awareness and facilitation of farmer groups working together at a landscape scale.

Withdrawal of the Soil Framework Directive means that EU soil policy remains without coherent legislation to address the issue of soil in its own right. Within the EU, only a few countries have a specific legislative or policy instrument with soil protection as a primary goal. European soil degradation is increasing, indicating that current policies are not effective. Farmer uptake is key and may be adversely affected by poor policy and advice, as well as socio-economic and environmental factors. See more info here: https://www.soilcare-project.eu/resources/deliverables





