Environment and climate assessment of Spain's CAP Strategic Plan (Institute for European Environmental Policy, 2022)

https://www.mapa.gob.es/es/pac/pac-2023-2027/

EU food systems => 30% of Europe's GHG emission

EU CAP (created 60 years ago) ~ 30% of total EU budget

A set of 10 objectives: 1 cross-cutting on knowledge and innovation + 3 economic + 3 social + 3 environmental and climate-related

MS submit National Strategic Plans
- a shift to a performance and result-based approach
- b more flexibility to MS to adapt CAP to local conditions and needs
- c increase CAP's impact in terms of sustainability

Spanish Strategic Plan -> has not significantly increased its environmental and climate ambition for the new CAP

Improvements	**Shorts**
increased support for organic farming	the budget allocation to environmental and socio-economic objectives does not present significant differences to the previous CAP period
new requirement to register fertiliser and organic inpu	falls short of meeting the identified environment, biodiversity and climate needs.

Two sets of recommendations proposed:

1 Potential amendments in the current period
- address gaps between the identified challenges and needs and the planned interventions
- strengthen baseline GAEC in particular for GAEC 8 and GAEC 10
- review the eco-schemes to strengthen requirements and introduce payments rewarding increased levels of ambition to reward farmers (Spain currently provides flat-rate eco-schemes, with just an additional 25 euros/ha amount for two practices)
- improve coherence between the identified needs and the interventions in relation to water quantity and use
- include safeguards to take into account the potential trade-offs between environmental objectives
- introduce results-based payments for specific interventions targeting particular problems.

2 Recommendations for the next CAP and related policies:
- biodiversity- and climate-proof the CAP Strategic Plans and their interventions (considering trade-offs between environmental and climate
- increase action to reduce the agriculture sector's GHG emissions and carbon removals
- introduce environmental and climate ring-fencing for cross-cutting measures for all sectoral interventions and productive investments in the next EU regulation -> ensure min. share of budget
- accompany changes in the production systems by changes in other parts of the food systems

Introduction

EU food system =>
- 30% of EU GHG emissions
- main pressure on biodiversity: pesticide use, landscape simplification, habitat destruction
- physical, chemical, biological degradation of soil
- decrease in water quality and availability

EC -> EU Green Deal
- Farm to Fork Strategy -> fair, helathy, environmentally friendly food systems
- Biodiversity Strategy -> Europe's biodiv. on path of recovery by 2030

agricultural targets included:

50% reduction in use and risk of chemical pesticides	by 2030
25% agricultural land under organic farming	
10% agricultural land under high-diversity landscape features	
50% reduction of nutrient losses	
min. 20% reduction of fertilizer use	
contribution to the 55% GHG emission reduction target	
contribution to climate neutrality	by 2050

-> CAP has crucial role through subsidies

CAP -> created 60 years ago = main policies of EU accounting 30% of total EU budget

historically:
- increasing productivity + competitiveness
- ensuring food production, fair income for farmers, reasonable prices for consumers

-> supported intensification of agriculture -> indirectly contributed to negative impact on environment and climate

since the end of XX century:
- environmental and climat aspects gradually included

2018:
- EC -> new structure for CAP -> started operating in MS in 2023
- 10 specific objectives -> 3 related to environment and climate:
  - D: climate action
  - E: protection of natural resources
  - F: conservation of biodiversity
- new structure:
  - a. shift to performance and result-based approach
  - b. more flexibility to MS to consider local needs and conditions

											c. increase EU ambitions in sustainability					
	Spain	15% of total EU agricultural area														
		0.9 mil. farms (9.2% of EU farms in 2022)														
		half of these farms are very small (<5 ha or less)														
		13% of total EU crop production value produced						most important production sectors in 2019:			olive oil, fruits, vegetables, wine					
		11% of total EU animal production value produced														
		between 2005 and 2017, the percentage of Utilised Agricultural Area managed intensively increased from 27% to 42%														
		CAP Strategic Plan of Spain approved by EC in August 2022														
General overview of the CAP Strategic Plan's priorities: Does the money go to environmental and climate action?																
	Spanish CAP Strategic Plan defines three main lines of action:															
				1. Greater equity in income support, through an improvement in the distribution system of direct aic												
				2. Ensure compliance with environmental commitments and targets, combining regulatory measures with payments that reward farmers' efforts beyond the baseline												
				3. Implementation of a wide range of measures aimed at contributing to the environmental, economic and social sustainability of the sector												
		Regarding environmental and climate targets and commitments:														
				Climate (SO4): minimising greenhouse gas (GHG) emissions, increasing carbon sequestration, reducing the impact of climate change												
				Resource use (SO5): reaching good status for water quality, reducing water pollution by agriculture, reducing ammonia (NH3) emissions												
				Biodiversity (SO6): reversing the negative trend in common farmland birds, maintenance and recovery of habitats, Natura 2000, and promoting sustainable production system												
	CAP budget in Spain:	34 bil. EUR		= 31 bil. from EU + 3 bil. national co-funding												
		76%		Pillar I (EAGF)		-> basic income suppo		no interventions under "risk management tools", risk is already supported via national instruments such as the Spanish Agricultural Insurance System								
		24%		Pillar II (EAFRD)		-> rural development + climate & envi. aspects										
	EU CAP Regulation ringfencing = guarantee a min. budget for interventions benefiting publi							-> min. 25% of budget to direct payments under eco-schemes								
								-> min. 35% of Pillar II to envi.& climate, organic, area specific disadvantages (Water Framework + Natura 2000), areas of natural constraints (50% of payments), animal welfare commitments								
	Spain:	23% direct payment budget (5.5 bil. EUR)		-> eco-schemes			-> 32% on improving animal welfare									
							-> 68% on meeting climate& envi. objectives									
		48% of Pillar II (3.9 bil. EUR)		-> envi., climate, organic, animal welfare object			-> most of it is directed to investments									
		45% of Pillar II		-> investments												
		36% of total CAP budget (12 bil. EUR)		-> basic income suppo			-> more than twice the eco-scheme budget and four times the budget for Pillar II environment and climate commitments									
		27% of total CAP budget (9.3 bil. EUR)		-> green objectives			includes:									
							Pillar I eco-schemes									
							15% of sectoral fruit & vegetables interventions									
							Pillar II environmental, climate and other commitments									
							investments contributing to environmental objectives									
							payments for area-specific disadvantages									
	Overview of Spanish eco-schemes:															
		9 eco-schemes linked to carbon farming and agroecology which can be grouped in 4 main categories:														
				Extensive grazing, mowing and biodiversity in pastures (2 eco-schemes)												
					P1: extensive grazing (120 days in the year)											
					P2: establishment of biodiversity isles (7% of the pasture area without mowing) or sustainable mowing (less than 2-3 times a year depending on altitud)												
				Rotations and no-tillage in cropland (3 eco-schemes)												
					P3: crop rotation on 50% of the arable area with improving species												
					P4: no tillage and direct seeding on 40% of the arable area												
				Plant cover and inert cover in woody crops (3 eco-schemes)							}	Bonus for P4 and P6, if the farmer commits for a second year in a row (only for some types of land)					
					P6: spontaneous or sown plant cover											
					P7: inert cover (mulching) on 40% of the interrrow area available											
				Landscape and biodiversity features in croplands and permanent crops (1 eco-scheme)												
					P5: establishment of landscape and biodiversity features : 7% on rainfed arable land, 4% on irrigated land, 4% on permanent crops, 3% on underwater crops or sustainable managemen												
		Combined, these categories include 7 different practices (P) which farmers can choose from														
		Spanish eco-schemes can be applied virtually on all agricultural land, rather than targeting specific regions or types of agriculture														
		The payments are area-based payments to compensate for the income forgone and the additional costs arising from the application of the practices														
		Each hectare of land can only opt for one type of practice (P)														
		It doesn't oblige farmers to commit for more than one year														
		Not all hectares of land are supported equally, the amounts paid per area are higher for irrigated land (P3, P4) as well as those under steeper slopes (P6, P7). Payments are also higher for farmers in the Islands														

		Most of the practices supported under these eco-schemes build on the mandatory requirements from conditionality															
		Spain has not used the full potential of eco-schemes to implement innovative or additional practices and boost the environmental and climate performance of the CAP															
Contribution to climate change mitigation and adaptation																	
1	GHG emission reduction																
		State of play in Spain and resulting needs:															
			annual GHG emissions from agriculture:														
					10% of total EU agricultural emissions (the third largest agricultural GHG emitter in the EU)												
					11% of Spains's CO2 emissions												
					The increase in GHG emissions from the agricultural sector in Spain has been higher than the EU average												
		Planned interventions:															
			GAEC 3, which places a ban on the burning of stubble (avoiding CO2 emissions)														
			GAEC 10, contributing to achieving sustainable fertilisation (thus reducing N2O emissions)														
			4 main types of interventions targeting reductions in GHG emissions:														
					Eco-schemes												
						Eco-schemes on carbon farming and agroecology: rotations and no-tillage											
						Eco-schemes on carbon farming: cover crops and inert covers (mulching) on woodycrops											
					Environmental and climate commitments for the promotion and sustainable management of pastures												
					Aid for productive investments												
					Sectoral intervention for Fruit and Vegetables												
2	Carbon storage																
		State of play in Spain and resulting needs:															
						LULUCF sector = net carbon s	38 mil. T CO2 equiv. (MtCO2e) -> Spain is a net remover of GHG										
							-3 MtCO2e by cropland										
			possibilities to increase carbon removal in agricultural land:				crop rotations on non-irrigated land										
							conservation of valuable traditional grasslands, orchards and agroforestry systems										
							limiting soil erosion										
							increasing carbon sequestration and capture capacity										
							introduction of no-till and cover crops in cropland										
		Planned interventions:															
			Spain expects to have approximately 32% of its UAA under commitments to enhance carbon storage														
			Intervensions:														
			Woody landscape	Environmental and climate commitments to maintain forestry and agroforestry systems													
				Sectoral intervention for Fruit and Vegetables: actions to mitigate and adapt to climate change													
			Arable land (soils)	Eco-schemes on carbon farming and agroecology: rotations and no-tillage													
				Eco-schemes on carbon farming: cover crops and inert covers (mulching) on woody crops													
				Environmental and climate commitments for soil improvement and erosion control practices													
				Environmental and climate commitments for soil improvement and erosion control practices													
				Aid for productive investments													
			Permanent grassland (soils)	Eco-schemes on extensive grazing, mowing and biodiversity in wet pastures and Mediterranean grassland areas pastures													
				Environmental and climate commitments for the promotion and sustainable management of pastures													
				Aid for non-productive investments													
			Permanent crops (soils)	Aid for productive investments													
				Non-productive forestry investments in afforestation and agroforestry systems													
3	Climate adaptation																
		State of play in Spain and resulting needs:															
			Spain is one of the most vulnerable regions in the EU to the effects of climate change														
				rise of temperatures (+1.7°C since pre-industrial times)	}	hydric stress											
				changes in precipitation patterns													
				changes in seasonality have led to the progress of a semi-arid climate, which has increased by 6% of the national territory coverage over the last 40 years													
				Overall, heat waves, water stress and extreme weather events will impact crop and livestock productivity													
		Planned interventions:															
			two sets of interventions														
				1st: aims to reduce the impact of climate change on agricultural production through nature-based solutions													
					focus mostly on arable land												

there are also interventions targeting pastures, agroforestry and particularly vulnerable sectors such as the fruit and vegetable and the wine secto

aim to build resilience by increasing soil quality and reducing the impact of extreme weather events

2nd: seeks to promote adaptation of crops and livestock by switching to varieties and breeds that can tolerate the new conditions

are addressed under sectoral interventions

included in aid to productive investments

in terms of livestock, the main interventions focus on extensive grazing (cattle in particular), by addressing sustainable grazing practices

Interventions:

Crops systems	Eco-schemes on carbon farming: cover crops and inert covers (mulching) on woody crops on different slopes
	Sectoral intervention in the fruit and vegetable sector. Actions to mitigate and adapt to climate change
	Sectoral intervention in the wine sector. Vineyard restructuring and conversion
	Environmental and climate commitments on soil improvement and erosion control practices
	Environmental and climate commitments on agricultural land under organic agriculture
	Aid for productive investments in agricultural holdings linked to contributing to climate change mitigation-adaptation, efficient use of natural resources and animal welfare
Livestock systems	Eco-schemes on extensive grazing, mowing and biodiversity in wet pastures and Mediterranean grassland areas pastures
	Environmental and climate commitments for the promotion and sustainable management of pastures
	Aid for non-productive investments in agricultural holdings linked to climate change mitigation-adaptation, efficient use of natural resources and biodiversity

Contribution to the protection of natural resources

1 Water quality and availability

State of play in Spain and resulting needs:

2015: 87% of surface water bodies in good chemical c
69% of groundwater in good chemical condition } Spain is the Member State with the lowest share of groundwater resources with good quality

Water quality is affected by diffuse pollution due to nitrate from mineral fertilisers and pesticides

Pollution caused by nitrates is still widespread and nitrate vulnerable zones (NVZ) represent 35% of the agricultural area

Irrigation alone is responsible for 80% of freshwater consumption in the country, and 50% of the final crop output is produced in irrigated lan

81% of groundwater bodies in Spain are in “good quantitative status”, however in some regions, great exteent of groundwater bodies have a “poor quantitative status

70% of Spanish river districts monitored are already facing risks of water scarcity

Freshwaters are also affected by salinisation, which concerns more than a quarter of Spanish streams and rivers

Planned interventions:

Interventions:

Water quality (nutrients and pesticides)	Environmental and climate commitments targeting integrated productior
	Environmental and climate commitments targeting sustainable cultivation commitments
	Environmental and climate commitments targeting maintenance of habitats and preservation of biodiversity
	Environmental and climate commitments targeting soil improvement and erosion control practices
	Aid for investments with environmental objectives
	Area-specific disadvantages resulting from certain mandatory requirements
	Sectoral intervention in the fruit and vegetable sector: investments in tangible and intangible assets, research and experimental and innovative production method
	Wine sector: Vineyard restructuring and conversion
Water quantity	Environmental and climatecommitments targeting integrated productior
	Environmental and climate commitment targeting maintenance of habitats and preservation of biodiversity
	Aid for productive investments linked to climate change mitigation-adaptation, efficient use of water resources and animal welfare
	Aid for investments in irrigation infrastructure with environmental objectives

2 Soil quality

State of play in Spain and resulting needs:

Spanish soils store 2.1 billion tonnes of carbon

threats:

loss of soil organic mater (SOM)	
loss of soil organic carbon (SOC)	88% of the Spanish provinces have SOC contents lower than 2%
	agricultural soils are the ones that have lost the most SOC from a historical perspective
erosion	soil losses due to erosion processes average 3.73 t/ha/y, much higher than the average losses in the EU (2.4 t/ha/y)
	of special concern are soil losses on woody crops, where soil is kept uncovered and soil losses can amount to 47 t/ha/y
	erosion risk affects up to half of the exploitations eligible for CAP funding, with soil loss rates higher than 25 t/ha/y
	degradation processes increase desertification risk and threaten the productive capacity of soils
salinisation and acidification	two other important issues linked to the intensive use of fertilisers and unsustainable irrigation practices

				contamination (pollution	66% of Spanish soils assessed in a recent study had traces of at least two pesticides
					none are free from pesticide residue
				compaction	
		Planned interventions:			
			measures are expected to cover 43% of the UAA		
			Interventions:		
			Erosion and soil loss	Environmental and climate commitment targeting integrated productior	
				Environmental and climate commitment targeting sustainable cultivatior	
				Environmental and climate commitments on soil improvement and erosion control practices	
				Environmental and climate commitment targeting organic farming	
				Coupled aid for olive groves with specific constraints and high environmental value	
				Non-productive forestry investments in afforestation and agroforestry systems	
				Aid for non-productive investments in agricultural holdings linked to contributing to environment, climate and animal welfare	
			Contaminati on (pesticides)	Environmental and climate commitments targeting integrated productior	
				Environmental and climate commitments targeting sustainable cultivation commitments	
				Environmental and climate commitments targeting maintenance of habitats and preservation of biodiversity	
				Environmental and climate commitments targeting soil improvement and erosion control practices	
				Aid for investments with environmental objectives	
				Area-specific disadvantages resulting from certain mandatory requirements	
				Sectoral intervention in the fruit and vegetable sector: investments in tangible and intangible assets, research and experimental and innovative production method	
				Wine sector: Vineyard restructuring and conversion	
			Loss of SOC/SOM	Eco-schemes on carbon farming and agroecology: rotations and no-tillage	
				Eco-schemes on carbon farming: cover crops and inert covers (mulching) on woody crops	
				Environmental and climate commitments for soil improvement and erosion control practices	
				Environmental and climate commitments for soil improvement and erosion control practices	
				Aid for productive investments	
				Eco-schemes on extensive grazing, mowing and biodiversity in wet pastures and Mediterranean grassland areas pastures	
				Environmental and climate commitments for the promotion and sustainable management of pastures	
				Aid for non-productive investments	
				Aid for productive investments	
				Non-productive forestry investments in afforestation and agroforestry systems	
Contribution to the protection of biodiversity					
1	Common species related to agricultural landscapes				
		State of play in Spain and resulting needs:			
			common farmland bird tren	can be used asbarometers of the l	
			grassland butterfly populat		
			2000-2017:	farmland bird index decreased by 33% (EU average trend: -17.5%)	
				European Grassland Butterfly Index also shows a declining trend	
		Planned interventions:		include a large number of interventions contributing to biodiversity objectives, many of which support general sustainable agricultural management practices but lack effective target	
			interventions aims to increase the surface of landscape features		
			interventions focuses on helping farmers shift, or maintain, low input intensity systems (that reduce chemical inputs		
			interventions that could increase the presence of common species in permanent grassland is linked to extensive livestock		
			environment and climate commitment on beekeeping for biodiversity		
			Interventions:		
			Extensive livestock / HNV farming	Eco-schemes on extensive grazing, mowing and biodiversity in wet pastures and Mediterranean grassland areas pastures	
				Environmental and climate commitments for the promotion and sustainable management of pastures	
				Environmental and climate commitment for the promotion of beekeeping for biodiversity	
			Low input intensity systems	Environmental and climate commitment for integrated production	
				Environmental and climate commitment for sustainable cultivation	
				Environmental and climate commitment for the protection of birdlife	
				Environmental and climate commitment for alternatives to chemical control	
				Environmental and climate commitment in organic farming	
			Landscape features	Environmental and climate commitment on the maintenance or enhancement of traditional habitats and farming activities that preserve biodiversity	
				Eco-scheme: biodiversity hotspots in croplands and permanent crops	
				Aid for non-productive investments in agricultural holdings linked to climate change mitigation-adaptation, efficient use of natural resources and biodiversity	

			Diversified systems / landscapes	Commitments to maintain forestry and agroforestry systems	
				Non-productive investments in basic services in the natural environment	
				Non-productive forestry investments in afforestation and agroforestry systems	
2	Specific habitats and species				
		State of play in Spain and resulting needs:			
			Spain is a country rich in biodiversity, with 26% of the species protected under the EU's Birds and Habitats Directives, and 55% of the habitats protected under the Habitats Directive		
			40% of the species and 48% of the habitats protected under EU law in Spain are associated with agricultural landscapes		
			Spain has the largest share of total EU Natura 2000 area in the EU (18%), a large percentage of it (17%) is found in agricultural areas, including natural grassland		
			Only 19% species and less than 9% of the habitats protected under the Habitats Directive are in good conservation status (2013-2018		
			The main threats to protected habitats in Spain are considered to relate to agricultural intensification (use of pesticides, homogenisation of the landscape, habitat fragmentation and the increase of infrastructure		
			EU recommendations consider that Spain should focus on halting and reversing the loss of biodiversity, including protected species and habitats		
		Planned interventions:			
			The Spanish Plan has programmed an intervention to directly address the EC's recommendations on halting biodiversity loss and improving landscape connectivity and diversity of landscape element		
			This is named Non-productive investments in basic services in the natural environment		
			This intervention supports investments in Natura 2000 site as well as other rural areas with specific conservation needs		
			It has a total allocation of 190 million euros (2.3% of Pillar II budget)		
			The majority of the interventions discussed in the Section above (Common species related to agricultural landscapes) also contribute to the protection of specific habitats and species		
			The co-existence between livestock and large carnivores is also something addressed in the Plan		
			The Plan also includes compensatory payments for areas with specific disadvantages linked to the Natura 2000 network and the Water Framework Directive		
Cross-cutting and innovative measures					
1	Cross-cutting mesures		=	- support for knowledge exchange and dissemination, advisory services and co-operation	
			The Spanish Plan specifies that knowledge sharing must focus on the protection of nature, the environment and the climate		
		EIP	European Partnership for Innovation		budget: 162 mil EUR = 2% of Pillar II
					can drive research on environmental and climate questions
					no specific contribution to objectives 4, 5 and 6 is mentioned in the Plan.
				investments in previous CAP:	Control of emissions in manure management and treatment
					Tomato industry footprint
					Innovative cropping systems based on grain legumes
					New alternative sources of animal feed
			The Plan also considers that advisory services can play a central role in achieving higher environmental and climate performance in agriculture		
2	Innovative approaches				
		Innovative interventions design:			
			Spain has not introduced result-based payments in the CSP and the large majority of payments remain management and area-based		
			(however Navarra has opted to include a result-based payment for intervention in HNV pastures)		
		New technologies:			
			Spain has included funding opportunities for the acquisition of equipment to reduce GHG emissions, limit pollution, and improve resource use, including		
					modernisation of livestock buildings to reduce GHG emissions and in general to increase energy efficiency
					the use of information technology to improve water management, as well as fertiliser and pesticide application
			Digitalisation is a word that appears often in the Spanish Plan and has been assessed as one of the needs		
Conclusions					
Spanish CAP Strategic Plan:			The budget allocation and interventions programmed in the Spanish CAP Strategic Plan fall short of the needs identified in the Plan itsel		
			Total budget dedicated to envi.&climate objectives = 27% of total CAP budget		
			Spain has exceeded the minimum required spending for environment and climate in Pillar II (47%, vs. 35%		
			GHG emissions mitigation and climate adaptation, which come as a high priority in the Plan, are not effectively addressed		
			Spain has introduced a new GAEC (10) requiring farmers to plan and record nutrient and organic carbon inputs on their land		
			Many of the environment and climate commitments in Pillar II have been taken up by a small number of Autonomous Communities and have small budgets		
			Spain has also not used the opportunity to introduce innovative schemes such as results-based payments		
			Mid-term review scheduled on 2026		
1	Recommendations for amending the Spanish Plan:				
			Address the gaps between the identified challenges and needs and the planned interventions		
			Strengthen GAEC requirements (GAEC 8 , GAEC 10)		
			Review the eco-schemes to strengthen requirements and introduce payments rewarding increased levels of ambition		
			Improve coherence between the identified needs and the interventions in relation to water quantity and use		
			Include safeguards to take into account the potential trade-offs between environmental objectives and strengthen the requirements and safeguards on potentially harmful measures		
			Introduce results-based payments for specific interventions targeting particular problems		

2	Wider recommendations:															
			Biodiversity- and climate-proof the CAP Strategic Plans and their interventions													
			Increase action to reduce the agriculture sector's GHG emissions and carbon removals in the 2023 revision of Member States' National Energy and Climate plans													
			Introduce environmental and climate ring-fencing for cross-cutting measures, all sectoral interventions, and productive investments in the next EU regulatio													
			Accompany changes in the production systems by changes in other parts of the food systems													
Spain has not used the flexibility provided within the new CAP structure to significantly increase its environmental and climate ambition. Rather, the current Plan does not present significant differences, in terms of budget allocation to environmental and socio-economic objectives, than the previous CAP period. Novel interventions like eco-schemes, if properly re-designed and rewarded, as well as revised conditions for coupled income support and investments for irrigation systems could provide an opportunity to improve the environmental and climate ambition of the CAP in Spain and support farmers to better contribute to the objectives set by the Green Deal. The revision of the interventions and budgets proposed in the EU Regulation															