Environment and climate assessment of Poland's CAP Strategic Plan (Institute for European Environmental Policy, 2022)																			
EU food systems => 30% of Europe's GHG emission																			
EU CAP (created 60 years ago) <- 30% of total EU budget																			
	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	flexibility to MS to adapt CAP to local conditions and needs														
				c	increase CAP impact in terms of sustainability														
Polish Strategic Plan -> insufficient to respond:				largest share -> basic income support payments				not sufficiently conditioned to sustainable											
				significant funding -> coupled support				practices											
				1.5 bil+ EUR transferred from Pillar II to Pillar I								=> lack of priority							
				large nr. of intervetions that could benefit climate & environment + small budget															
		interesting interventions and improvements that could be built upon:						envi-climate commitment promoting perennial flower strips (I 8.7)											
				small budget + ill-defined implementation parameters															
Two sets of recommendations:																			
	1	Potential amendments in the current period																	
			- address gaps in intervention logic			especially regarding peatland restoration, climate adaptation, biodiversity													
			- strengthen GAEC		not wait with GAEC 2 implementation until 2025														
			- evaluate the impact of 2023 derogations from GAEC 7, 8					+ no more derogations											
			- review eco-scheme on carbon farming and nutrient management (I 4.2) after one year (as planned)								-> make the most beneficial practices attractive for farmers								
			- eco-scheme of water retention on permanent grasslands (I 4.5.) applicable everywhere							+ payment proportional to flooding time (no 12-day limit)									
			- include measures supporting grassland restoration (conversion of arable land even on floded areas), wetland buffer areas restoration and creation, peatland rewetting, transition towards paludiculture + biodiversity on arable land																
			- adjust the area targeted by envi-climate commitments in Natura 2000 to reflect PrioritisedAction Framework needs																
			- strengthen interventions for biodiv. in arable + landscape features																
			- step up support for organic farming																
			- improve targeting of some interventions to address specific regional issues (drought, soil erosion)																
			- include innovative interventions: result-based payments, collective approaches for natural resources, biodiv. preservation, training & advice																
			- increase budget for eco-schemes, envi-climate commitments, envi-climate investments, cross-cutting measures + decrease in basic income support, coupled payments																
			- fund studies, research to evaluate the impact of Strategic Plan																
	2	Recommendations for the next CAP and related policies:																	
			- 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																
			- biodiv.-climate proof CAP Strategic Plan + additional safeguards where needed (e.g. on afforestation)																
			- improve transparency (incl. publishing complete version of CAP Strategic Plan, output targets, budget for all interventions)																
			- accompany changes in production systems by change in other parts of the food systems (developing food systems strategy)																
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												
							25% agricultural land under organic farming												
							10% agricultural land under high-diversity landscape features								by 2030				
							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					historically:	- increasing productivity + competitiveness											
		accounting 30% of total EU budget						- 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						
	Poland:	9% of total EU agricultural area			1.4 mil. farms (13.7% of EU farms in 2016), 92% benefit from CAP support													
		12% of Polish population works in agric.																
		55% out of 1.5 mil. farms are small family farms < 5 ha																
		5.3% of total EU crop production value produced						most important production sectors in 2019:				cereals, milk, pigs, poultry						
		7.7% of total EU animal production value produced																
		CAP Strategic Plan of Poland approved by EC on 31.08.2021																
General overview of the CAP Strategic Plan's priorities: Does the money go to environmental and climate action?																		
	Polish Strategic Plan priorities:			- sustainable development of farms & processing sector														
				- improvment of living and working conditions in small rural areas														
				- diffusion of sustainable management practices = climate friendly, protect water, soil, air, biodiv.														
				- production & use of sustainable energy														
				- development of innovative solutions incl. digital														
				- remove barriers to rural & agric. development						-> guarantee a min. budget for benefitting public goods					= ring-fencing			
				- specific attention to provide opportunities to all (accessibility to disabled, equal opportunities for women and men)														
	CAP budget in Poland:		25 bil. EUR	= 22 bil. from EU + 3 bil. national co-funding														
			70%	Pillar I (EAGF)		-> income support		+ envi. aspects integrated since 2014 by greening/eco-schemes										
			30%	Pillar II (EAFRD)		-> rural development + climate & envi. aspects												
	EU CAP Regulation ringfencing = guarantee a min. budget for interventions benefiting public goods								-> min. 25% of budget to direct payments under eco-schemes									
									(Water Framework + Natura 2000), areas of natural constraints (50% of payments), animal welfare commitments									
	Poland:	25% direct payment budget (4.3 bil. EUR)		-> eco-schemes		-> 32% on improving animal welfare												
						-> 68% on meeting climate& envi. objectives												
		43.4% of Pillar II (2 bil. EUR)		-> envi., climate, organic, animal welfare objectives			-> 33% to investments											
							-> 22% to climate, envi., other management commitments											
							-> 20% to ANC payments											
		32.8% of total CAP budget (8.2 bil. EUR)		-> basic income support		-> increased from previous CAP (from 39.9% to 47.4% in new period)												
				coupled support increased (from 14.4% to 15%) (2.6 bil. EUR)														
		20.5% of total CAP budget (5.1 bil. EUR)		-> green objectives		= Pillar I eco-schemes on envi.& climate + 15% of sectoral fruit & vegetables interventions + Pillar II envi.& climate interv.												
		64% of total CAP budget (16 bil. EUR)		-> economic objectives														
	Overview of Polish eco-schemes:			can be combined on a given farm														
			ES 4.1.	melliferous plant areas		payment/ha	39 mil. budget, 0.23% of direct payment budget, targets 30 000 ha annually (0.21% of utilised agric. area)											
			ES 4.2.	carbon farming and nutrient management			farmers can choose between them, bringing a nr. of points											
					extensive use of PG by livestock (0.3-2 LSU/ha), maintenance of PG				5 pt.						2.8 bil. budget, 16% of direct payment budget, targets 10 mil. ha annually, 69.3% of UAA			
					intercropping or winter crop between and ban on PPP				5 pt.	obtain at least the max. point as								
					fertilisation plan based on soil analysis, liming where soil pH is too low				1-3 pt.	if they applied the highest					mandatory for farms over 100 ha			
					crop diversification away from crops that impact soils negatively				3 pt.	scoring option on 25% of their								
					incorporation of manure in arable soils within 12 hours of application				2 pt.	land								
					introduction of natural fertilisers directly into the soils				3 pt.									
					reduced tillage and strip-till cultivation				4 pt.									
					incorporation of straws in soil				2 pt.									
			ES 4.3.	integrated plant production		payment/ha (and maintenance of permanent grasslands)				40.5 mil. budget, 0.23% of direct payments, targets 29 800 ha annually, 0.21% of UAA								
			ES 4.4.	biological crop protection		payment/ha	chemical acceptable as last resort			2.2 mil. budget, 0.01% of direct payments, targets 5000 ha annually, 0.03% of UAA								
			ES 4.5.	water retention on PG		payment/ha of PG made available for water retention purpose				accepting 12 days of temporary flooding on areas already supported by envi.& climate								
			ES 4.6.	animal welfare		payment/LU												

Contribution to climate change mitigation and adaptation																		
1	GHG emission reduction																	
		State of play in Poland and resulting needs:																
			annual GHG emissions:		32.7 mil. T CO2 equiv.		= 8% of total net national emissions (below EU average 13%)											
				from agriculture:	0.35% of Poland's CO2 emissions													
					80.1% of Poland's N2O emissions			2/3 from soil, directly related to amount of N introduced in soil (mineral fertilizers, natural fertilizers from grazing animals, plant residues)										
								12.7% from manure management										
					30.7% of Poland's CH4 emissions			28.1% from enteric fermentation			decreased since 1990 due to livestock decline							
								2.6% from manure management										
					overall emissions increased between 2013-2018													
			Poland's National Energy and Climate Plan (NECP):				projects a 5% increase of emissions from agric. by 2040, increased emissions from soil and manure											
							=> objective: maintain low emissions by reducing use of fertilizers, improving manure & slurry management											
		Planned interventions:																
			GAEC standard that bans burning arable crops + 2 eco-schemes + sectoral interventions for fruit & vegetable + 2 investment aids															
			ES 4.2. carbon farming and nutrient management ->				improvments in fertiliser management											
								soil analysis on arable and PG -> fertilisation plan + fertilisation decision support systems										
								soil acidity analysis -> supported liming treatment once/4 years when pH<5.5										
						+	optimizing fertilizer consumption -> reducing fertilizer consumption -> reducing GHG emissions												
							>100 ha farms already required to have fertilization plan											
						+	eco-scheme requirement of additional soil testing				-> benefit for small farms							
								bonus on actual fertilizer reduction could improve effectiveness of measure										
						+	incorporation within 12 hours	-> better use of available nutrients + reducing emissions, but needs expensive machinery										
						-		should be supported by investment aids										
						-	farmers can choose easier-to-implemet practices instead, with no impact on GHG emissions											
						-	not encouraging farmers to adopt practices beyond minimum levels											
						-	relatively high stocking rate on PG (max. 2 LSU/ha)											
							assessment of effectiveness + review after 1 year of implementation											
							budget: 1.1 bil. EUR, 6.1% of direct payment budget, targeting 32.8% of UAA											
						-		use of natural liquid fertilizers by methods other than spraying targets 40 000 ha, 0.28% of UAA										
			ES 4.5. water retention on PG ->			+	water retention support -> reduce decomposition											
						-	only 12 days flooding required -> no guarantee of ceasing GHG emission											
						-	reducing mitigation potential by limitation to only PG under other commitments											
						-	small budget: 97 mil. EUR, 0.56% of Pillar I, small payment/ha, small targeted area: 315 000 ha, 2.2% of UAA											
			sectoral interventions:		I 7.5. fruits & vegetables		-> purchase of machineries for low-emission fertilizer application, equipment for storing natural fertilizers, air purification systems for livestock buildings											
								independent expert opinion submit required for 15% improvement										
			investment aid:		I 10.4.		-> purchase of machineries for low-emission fertilizer application, equipment for storing natural fertilizers, air purification systems for livestock buildings											
								budget: 217 mil. EUR, 2.9% of Pillar II, 1.12% of farms will receive support										
					I 10.2.		-> investments in new equipment for the production of energy from agric. biogas, solar energy, heat pump systems, energy storage & management											
								-> improving energy efficiency of buildings										
			coupled income support for cattle (females over 24 months + males & females below 24 months up to 20 heads)								-> to counter declining of cattle in small herds (up to 20 heads, 84.3% of farms)							
					- does not contribute to emission reduction													
					- maintaining livestock on small farms in areas specialised for crop production -> envi. benefit of closed N cycles													
		=>	focus on	- reducing non-CO2 emissions from agric. soils -> fertilisation & manure management														
				- reducing CO2 emissions through renewable energy prod., energy efficiency														
2	Carbon storage																	
		State of play in Poland and resulting needs:																
			Ministry of Climate and Environment:			LULUCF sector = net carbon sink in Poland		15 mil. T CO2 equiv. (MtCO2e) -> copensation of 3.8% of total GHG emissions of Poland										
						-15 MtCO2e (72.6% of LULUCF) by forests												
						-0.9 MtCO2e (4.4% of LULUCF) by cropland												
						-0.1 MtCO2e (0.5% of LULUCF) by grassland												

						LULUCF carbon removals:		1988 - 2004	increasing										
								2003 - 2005	decreasing by 20.8%	<= changes in forest growth									
								2012 - 2014											
								2017 - 2019	decreasing by 25%										
						grasslands share in Polish UAA:		21-22%	stable since 2000	below EU average (31%)									
			possibilities to increase carbon removal in agricultural land:					support for agroforestry											
								introduction of trees in UAA											
								conversion of arable fields int grassland											
								creation of wetland buffer zones											
								carbon farming practices in arable land											
								permanent crops (intermediary, interim crops, soil cover)											
			emission from peatlands drained for agric. purpose not included					23.5 mil. T CO2 emission from drained peatland				+ other GHG emissions		= 30.3 MtCO2e global warming potential annually					
						peatlands cover 9.6% of Polish soils													
							1 110 500 ha in agric. use	need to be rewetted		=> Poland = largest EU peatland emitter									
						-> Polish LULUCF would be a net GHG emission source (15 MtCO2e)													
							rewetting of 4% agric. land would save up to 41% of agric. GHG emissions												
							healthy peatlands not consistent with conventional agric. land use												
							maintaining agric. use on peatland needs paradigm shifting -> paludiculture					Polish Wetland Strategy							
		Planned interventions:																	
			GAEC 8	derogation for 2023 + excemptions for small and organic farms					=> small area of non-productive features, like in the case of the green payment in previous CAP										
				weighting factors >1 for most types of non-productive features															
				limited list of landscape features															
			investment aids:		I 10.11. afforestation support			small budget, negligible area targeted											
					I 10.12. trees in agric. fields					may finance the compliance with GAEC 8									
					I 10.13. agroforestry systems														
					I 10.4. envi.& climate protection investments				217 mil. EURO, 2.9% of Pillar II budget, 1.12% of farms will receive support										
			envi. & climate commitments:			I 8.8. maintenance and management of afforested areas, trees and agroforestry on agric. land							low budget						
						I 8.4. maintenance and management of traditional orchards													
			-> carbon storage investments = 0.42% of Pillar II budget																
			dependence on further tree use (benefits may be reversed by tree harvesting)																
			GAEC 1, GAEC 9	-> maintenanceof permanent grasslands															
					definition of PG allows ploughing, tilling, reseeding				-> reduction of potential benefits										
					no system for limiting grassland conversion before the treshold of 5% of total existing area (on national level, not regional/holding level) (in France treshold is 2% on regional level)															
					no ban on pesticides, fertiliser use, drainage														
					discrepancy between area of environmentally-sensitive PG protected under GAEC 9 (269 000 ha) and habitat area declared under Prioritised Action Framework (PAF) for Natura 2000 (523 540 ha)															
			eco-schemes:	I 4.2. carbon farming and nutrient management															
						extensive PG management bans ploughing but allows high stocking rates (2 LSU/ha)													
						efficiency depends on farmers' choices													
						crop diversification criteria: sets max. for use of cereals, rapeseed, crops bad for SOM, min. for crops good for SOM, but crops not specified													
					-> implementation will be assessed after 1 year														
					1.9 bil. EURO budget for 6 practices (11.3% of direct payments), 40.6% of UAA targeted														
				I 4.5. water retention on PG			limited to PG with other commitments												
							required to be wet only 12 days then can be drained												
			envi.& climate commitments aiming nature conservation:																
				I 8.1. species and habitats protection in Natura 2000 areas				result-based component included, but not described		237 mil. EURO budget, 3.1% of Pillar II budget, but low payment			364 000 ha targeted, 1.8% of Polish UAA, 11.4% of PG						
				I 8.2. species and habitats protection outside Natura 2000 areas						301 mil. EURO budget, 4% of Pillar II budget, but low payment			350 000 ha targeted, 2.4% of UAA, 11% of PG						
				I 8.3. extensive meadows and pastures in Natura 2000 areas						17.7 mil. EURO budget, 0.23% of Pillar II budget			31 358 ha targeted, 0.2% of UAA						
					if mowing is impossible due to high water level -> previous years' support needs to be returned														
					=> encourages drainig the lands														

				I 8.11. organic farming		includes additional premium if stocking rate 0.5-1.5 LSU/ha					905 mil. EURO budget, 11.9% of Pillar II budget						
					-> will not alloe to reach Farm to Fork target of 4.5% UAA targeted by support (currently 3.5% under organic farming)												
			GAEC 2	implemented from 2025													
				rules not yet defined		may be interpreted only as ban on ploughing organic soils covered by PG, but not prohibit continuation f drainage											
			no intervention on support for peatland rewetting, paludiculture					-> counter to the needs									
			target:	38% of Poland's UAA under declared commitments				-> majority covered by I 4.2. eco-scheme + I 8.11. organic farming					-> impact on carbon storage unclear				
			GAEC 7	derogation for 2023 + excemptions for small and organic farms, farms with >75% PG/leguminous+fallow													
				mandatory on 40% of land													
3	Climate adaptation																
		State of play in Poland and resulting needs:															
			Ministry of Environment of Poland:			winters wetter + warmer, summers hotter + diyer											
						increasing frequency of extreme weather events: heavy rains + droughts					affects agriculture						
					EC:	increasing soil erosion											
			temperature changes =>		extended growing season -> improving conditions for corn, soy, sunflower, vines, wheat												
					risks: early spring, late frost, summer heat waves												
					increasing occurence of pests, diseases												
					risk of heat stress in animals, impact on livestock by feed, water, pathogens												
			increased frequecy, intensity of droughts =>				impact onproduction of arable crops -> income										
							demand for irrigation -> pressure on water sources, reducing the suitability of rainfed crop production										
			excess precipitation events =>			crop damage, soil erosion											
			past mistakes in water management =>			vulnerability of agroecosystems to extreme weather conditions increased											
				- drainage of most peatlands													
				- extensive drainage systems without water retention possibilities													
				- excessively deepened rivers													
				- continuous "river maintenance" works -> increasing water flow													
				- wetland degradation													
				- general lack of nature-based solutions													
			Necessary adaptation to new climate and geographical conditions:					- relocating production									
								- adapting cultivated crop types: drought-resilient, less water intensive									
								- supporting practices that reduce infection risk by pathogens: crop-rotation									
								- cooling systems in stables and shelters									
								- improving floodplain management									
								- adapting soil helath enhancing practices: promoting nature-based solutions									
		Planned interventions:															
			I 8.4. orchards of traditional varieties of fruit trees				might be more resilient to climate change		budget: 0.7 mil EUR = 0.01% of Pillar II, max. 497 ha/year < 0.01% UAA								
			I 8.5. traditional and rare crop species						limited to 5 ha/holding		budget: 6.8 mil EUR = 0.09% of Pillar II, max. 6833 ha/year = 0.05% UAA						
			I 8.6. traditional animal breeds						budget: 101.8 mil EUR = 1.3% of Pillar II budget, max 35 252 LSU/year = 23.8% of LSU								
			->	low budget for support			impact likely negligible										
				limited targeted total area													
			=>	should be extended to support the transition of more farms													
				should target regions most sensitive to climatic hazards: drought													
				should be provided support for drought-resilient, less water intensive crops													
			GAEC 7	crop rotation/diversification													
					- crop rotation required only on 40% of agric. area												
					- diversification = previous green payment criteria, already weak												
					- derogation for 2023, using weighting factors, excemtion of small/organic farms												
			GAEC 2	ban on new ploughing, degradation by continuing ploughing & drainage still allowed													
			I 4.2. carbon farming and nutrient management														
					- at least 3 different crops: not ambitious enough												
				+	- limits the area allocated to crops with negative impact + promotes beneficial crops												
					- no specification: which crops are good or bad for SOM, which are drought tolerant												
			investment aids & sectoral interventions:				installations improving venillation/lowering temp. of livestock buildings other than pigs, cattle										
			I 7.5. sectoral interventions for fruit and vegetables				improvement of water efficiency, independent expert opinion needed to prove mi. 15% improvement								no budget		
			I 4.5. water retention on PG		- limited target area & need for other commitments				budget: 97 mil EUR = 0.56% of Pillar I, targeted area: 315 000 ha/year = 2.2% of UAA					-> maybe not sufficient to manage floods			

		=>	- no intervention for water-saving crops															
			- no limitations for areas dedicated for water-intensive crops															
			- weak requirements for practices beneficial for farm resilience															
			- no support for wetland/peatland rewetting															
			- GAEC 2 delayed until 2025															
Contribution to the protection of natural resources																		
1	Water quality and availability																	
		State of play in Poland and resulting needs:																
			2015:	70% of surface water bodies in less than good ecological status														
				26% of surface water bodies not good chemical status														
				8% of groundwater not in good chemical status														
				96% of groundwater in good quantitative status				fourth lowest renewable freshwater resources/1000 habitants in EU (1.6 mil m3/year)										
					=> low water retention capacity													
			2018:	withdrawal for agricultural irrigation (incl. aquaculture) = 9% of overall water abstraction														
			2010-2016:	share of irrigated land increased by 191%														
			nutrient inputs + pesticide use =>			main pressure on inland water quality												
						contributes to eutrophication of Baltic Sea												
			1995 - 2017:	nitrogen surplus increased by 45%			sabilizing at 45 kg/ha/year (EU average: 46.5 kgN/ha/year											
			Ministry of Agric. and Rural Devel.:			4-5% of groundwater contaminated by nitrates, lowest share of monitoring stations with poor quality waters in the EU												
			General Directorate for Environment Protection (2022):				excessive nitrate levels in 22% of river water bodies (2016-2021)											
							excessive phosphorus levels in 17% of rivers (2016-2021)											
			1995-2006:	phosphorus surplus increased then decreased														
			2016-2018:	phosphorus balance: 2.2 kgP/ha/year (> EU average of 0.5 kgP/ha/year)														
			Water Framework Directive:		no exceedances of pesticide concentrations above treshold in waters (2013-2020)													
					pesticide sales increased (2011-2017)													
					risk associated with use of more hazardous substances increased since 2012													
		=>	- support needed to further reduce nitrogen, phosphorus balances															
			- reduction of agricultural runoff needed															
			- maintaining low pesticide use and water abstraction for irrigation															
				- incorporation of legumes														
				- crop rotation														
				- improved fertilisation management														
				- soil management practices for water retention capacity improvement (hedges, soil cover, reduced tillage)														
				- water saving practices														
				- maintenance + restoration + creation of buffer zones														
		Planned interventions:																
			GAEC 4	3 m wide buffer strips		-> positive effect on nutrient leaching, runoff												
					ban on fertilizers and PPP													
					no requirement on vegetation type													
					buffer strips not required along less than 5 m wide drainage ditches													
					no additional requirements beyond Nitrate Programmes													
			I 8.11. organic farming		additional premium for stocking rate < 1.5 LSU/ha				significant budget: 905 mil EUR = 11.9% of Pillar II, targeted area: 4.5% of UAA				only 3.5% of UAA under organic farming in 2020, declining since 2012 => not able to reach Farm to Fork target of 25% UAA under organic farming					
			I 4.3. integrated plant production methods			use of chemical pesticides still allowed in some cases => not sure if it will lead to pesticide decrease				budget: 40.5 mil EUR = 0.23% of Pillar I, targeted: 24 500 - 29 800 ha/year = 0.2% of UAA								
			I 4.4. biological crop protection ES															
			investment aids	-> machinery/equipment to reduce pesticide and fertiliser use + promote mechanical and biological pest management														
			I 4.2. carbon farming and nutrient management ES			-> fertilisation management plan based on soil analysis				budget: 803.7 mil EUR = 4.6% of direct payment budget, targeted: 3.6 mil ha = 25% of UAA								
			GAEC 7	crop rotation only on 40%														
					no incentive for introducing legumes													
			I 4.2. ES		improve water retention	only well supported budget			corp diversification -> shift towards less water-intensive crops if well designed									
			I 4.5. ES		capacity by nature based			implementation	budget: 97 mil EUR = 0.56% of Pillar I, targeted: 315 000 ha/year = 2.2% of UAA									
			I 8.8. climate commitment		solutions => trees on agric.			details do not	budget: 32 mil EUR = 0.42% of Pillar II, targeted: 10 410									

			I 10.11. investment aid		land				guarantee positive effect	ha = 0.07% of UAA							
			I 10.12. investment aid														
			I 10.13. investment aid														
			I 10.4. investment aid for farmers					-> water storage, water recycling installations		budget: 217 mil EUR = 2.9% of Pillar II, 0.81% of farmers targeted							
			I 7.5. investment aid for fruit and vegetable producer organisation							expert opinion needed on improvement by 5%							
			I 8.1. conservation of valuable species and habitats in Natura 2000					result-based component included, but not detailed		mowing impossible due to high water level -> payment needs to be returned -> encourages drainage			budget: 237 mil EUR = 3.1% of Pillar II, reaching >364 000 ha in 2028 = 1.8% of UAA				incoherence: 364 000 ha assumed - 559 593 ha identified in PAF
			I 8.2. protection of valuable species and habitats in Natura 2000										budget: 301 mil EUR = 4% of Pillar II, reaching >350 000 ha in 2028 = 2.4% of UAA				
			I 8.3. extensive use of PG in Natura 2000										budget: 17.7 mil EUR = 0.23% of Pillar II, targeted area: 31 358 ha in 2028 = 0.2% of UAA				
		=>	- no intervention for water-saving crops														
			- no limitations for areas dedicated for water-intensive crops														
			- no support for wetland/peatland rewetting														
2	<u>Soil quality</u>																
		State of play in Poland and resulting needs:															
			threats:	loss of soil organic mater (SOM)			varies on soil	PG: 182.6 t/ha SOM = 22% of UAA, cropland: 31.6 t/ha, permanent crops: 50.9 t/ha									
				loss of soil organic carbon (SOC)			types	low quality: 21.9g/kg mean SOC (EU average: 43.1 g/kg SOC)									
				erosion	1.4% of agric. soils affected (below EU average: 7%)												
					2010-2016:	unchanged											
					2016:	95% arable under conventional tillage											
						45% uncovered in winter											
					highest level of soil loss in Southern mountain fringes												
					models:	10% of soils face moderate-strong erosion hazard											
				contamination (pollution)		83% of sampled soils contain residues of at least 2 pesticides											
							none are free from pesticide residue										
			over 70% of agric. area ->		acidic soils + low humus content => low fertility + low water storage capacity + high sensitivity to drought and erosion												
			sustainable agric. practices standardisation beneficial -> increase SOC, SOM, reducing erosion:							- soil cover							
										- intercropping							
										- doversification away from root-crops							
										- direct seeding, reduced tillage							
										- maintenance + creation of PG							
		Planned interventions:															
			GAEC 5	requirements for slopes>14%			minimal										
					no crops with ridges along slope								mandatory for federal states in the new funding period => erosion risk will be increased				
					no bare fallow during autumn + winter												
				no requirements for slopes<14% - however erosion can be a risk													
			GAEC 6	soil cover for 3.5 months in winter (Nov.1 - Feb.15) by plant cover/mulch/plant residues									optional for federal states -> if not considered, erosion risk can be				
					mulch/plant residues -> does little against erosion												
					only on 80% of arable												
			I 4.2.	winter crops, intercrops, crop diversification, reduced tillage					substantial budget: 870 mil EUR = 5% of direct payment budget, targeting: 2.2 mil ha = 15% of UAA								
		->	other benefits from interventions			-> not targeting specifically the most vulnerable regions											
			I 4.3.	tackling contamination													
			I 8.11.														
			I 4.2.	tackling loss of SOC/SOM													
			I 4.3.														
<u>Contribution to the protection of biodiversity</u>																	
		State of play in Poland and resulting needs:															
			common farmland bird trend		can be used as indicators for health of agric. ecosystems												
			grassland butterfly populations														

			2000-2017:	farmland bird index decreased by 20% (EU average trend: -17.5%)																					
			2000-2022:	farmland bird index decreased by 22% in total																					
			2000-2020:	wet meadow breeding wader decrease by 60%																					
			no info/data collection on grassland butterfly index/wild pollinators																						
			EU nature directives reports:		20% of community interest habitats				in FV status in 2013-2018																
					38% of community interest species																				
				grasslands = 13% of community interest habitats				85% in unfavorable status		2013-2018		(EU verage: 77%)			share of grasslands in bad status increased by 14% between 2007-2012, 2013-2018									
				peatlands = 7% of community interest habitats				80.2% in unfavorable status																	
			agric. threats responsible:		- intensification of land mangement																				
					- pollution (chemicals input)																				
					- simplification of landscape (loss of landscape features)																				
					- modifications of hydrological systems (drainage)																				
			2011-2017:	pesticide sales increased																					
			2020:	3.5% of UAA under organic farming (EU average: 9.1%)																					
			since 2014:	organic area decreased by 4.2%																					
				fallow = 1.7% of UAA (EU average: 4.1%)																					
				average hedge density: 1.05 km/km2 (EU average: 1.05 km/km2)																					
				permanent crops: 1.13 km/km2																					
				managed grassland: 3.32 km/km2																					
				linear woody element length decline: 9.3%				in Wielkopolska region																	
				nr. of linear woody element decline: 7.4%																					
				solitary tree decline: 14.6%																					
			needs:	- limit the intensification of agric. practices																					
				- develop organic farming sector																					
				- diversify landscape: increase biodiv.-rich landscape features, decrease plot size																					
				- promote maintenance, creation, good management of PG																					
				- extensive restoration of drained peatland				1 mil ha needs to be restored																	
				- development of alternative farming systems: paludiculture																					
			threat of abandonment:		over 600 000 ha abandoned since 1980s:			least fertile soils																	
								highly fragmented ownership (small farms)																	
								significant natural constraints (high altitude mountain meadows)																	
								= often of high natural value																	
				=> loss of biodiv.																					
		Planned interventions:																							
			I 8.11. organic farming				targets 4.5% of UAA																		
			I 4.3. integrated plant production		target reduction of chemical inputs		possibility of chemicals use in some cases		budget: 40.5 mil EUR = 0.23% of Pillar I, targeted: 24 500 - 29 800 ha = 0.2% of UAA																	
			I 4.4. biological pest control																						
			I 4.2. carbon farming				large area but options possibility		budget: 1.2 bil EUR = 6.7% of direct payment, targeted: 4.7 mil ha = 32.4% of UAA																
				does not support zero tillage -> limiting herbicide input																					
			I 4.1. melliferous plants		small budget: 39.5 mil EUR = 0.25% of Pillar II, 30 000 ha/year targeted = 0.2% of UAA																				
			I 8.1 .	supporting extensive practices, addressing needs of specific habitats and rare species			ony some selected bird species are protected	for species and habitats protection	targeted: meadows, mires, 8 endangered bird species		low payment	budget: 237 mil EUR = 3.1% of Pillar II, reaching >364 000 ha in 2028 = 1.8% of UAA											incoherence: 364 000 ha assumed - 559 593 ha
			I 8.2.									budget: 301 mil EUR = 4% of Pillar II, reaching >350 000 ha in 2028 = 2.4% of UAA											
			I 8.3.					extensive management of meadows in Natura 2				budget: 17.7 mil EUR = 0.23% of Pillar II, targeted area: 31 358 ha in 2028 = 0.2% of UAA											
			+	scope of measures targeting protection of breeding endangered bird secies habitats extended to national level from only Natura 2000																					
			-	I 8.1. + I 8.3. -> targeting 295 790 ha in 2028 = 1/2 of habitats identified in Prioritised Action Framework (559 593 ha)																					
			-	in not environmentally sensitive PG: ploughing, tilling, reseeding is allowed, use of fertiliser permitted																					
			->	reducing potential benefits for biodiv.																					
			GAEC 1	maintain PG ratio at national level																					

				allows destruction of PG if compensated elsewhere				=> not preventing loss of high nature value PG outside Natura 2000											
			I 4.2. extensive use of grassland	permits stocking rate up to 2 LSU/ha															
			GAEC 8	landscape elements															
				4% non-productive elements incl. fallow/7% non-productive areas incl. catch-crops or N-fixing crops															
				limited list of landscape features + farms exempted															
			->	reducing potential benefits for biodiv.															
			I 8.7.	climate commitments	support in field trees, flower strips, biodiv. gardens		-> most of them small budgets	intervention on perennial flower strips				limited area targeted							
			I 8.8.																
			I 10.12.	investment aids															
			I 10.13.																
			I 10.14.																
			-	no support for maintenance/creation of other landscape features															
			-	low target set: 0.23% of UAA															
			-	estimate: maintain/restore landscape elements on 2.5-3.26% of agric. land				-> far from 10% needed											
			-	derogation from GAEC 8 for 2023															
			-	not enough measures to significantly prevent the wild pollinator habitats															
			-	no plan on reshape plot sizes to help biodiv.															
					landscape level crop diversity benefits for biodiv. is ambiguous: landscape heterogenity, not crop diversity helps biodiv., pollinators, birds															
			Polish Society for Protection of Birds:		recommends interventions for "skylark plots" = foraging plots for Alauda arvensis, Emberiza hortulana, Emberiza calandra, birds of prey												like in Germany, UK, Sweden		
			-	no effective measure for maintenance and restoration of wetlands: no effective measures for waterbirds, waders															
			-	ban on new drainage systems but continuation of existing ones															
			I 4.5.	design shortcomings															
			-	no support for active rewetting, transition to paludiculture															
			-	no result-based payments	unlike France, Germany														
			I 7.5.	no support for irrigation -> limits water extraction															
			I 8.11. organic farming	significant budget: 905 mil EUR = 11.9% of Pillar II, targeted area: 4.5% of UAA															
			I 10.4.	budget: 217 mil EUR = 2.9% of Pillar II, 0.38% of farmers will receive payments															
			GAEC 9	only includes valuable grasslands			discrepancy between area of environmentally-sensitive PG protected under GAEC 9 (269 000 ha) and habitat area declared under Prioritised Action Framework (PAF) for Natura 2000 (523 540 ha)												
Cross-cutting and innovative measures																			
1	Cross-cutting mesures		=	- support for co-operation															
				- knowledge exchange + dissemination + advisory services															
		- can provide also harmful advice																	
		- impact determined by details and knowledge disseminated -> impossible to predict the effect																	
		EIP	European Partnership for Innovation		budget: 109 mil EUR = 1.44% of Pillar II														
					- not specified the share to climate and natural resource protection investments														
					- no min. share for these investments														
				investments in previous CAP:	Diversification of protein sources for animal feed by insect rearing														
					Innovative technology for vegetable growing in a closed water cycle														
		knowledge exchange interventions:		I 14.1. support for professional development of farmers															
				I 14.2. advisory services		budget: 1.8% of Pillar II													
				I 14.3. development of advisory staff	budget: 0.12% of Pillar II														
				I 14.4. development of demonstration farms															
			-	low target set in nr. of recipients: 20 000 beneficiaries/year in 2028 = 1.2% of annual working units in agric.															
2	Innovative approaches																		
		Innovative interventions design:																	
			I 4.2.	point based system in which farmers can choose															
			result based approach in 2 interventions aiming to protect and restore habitats				-> more compensation for flooding than support intentional flooding												
			no collective approaches to jointly apply		unlike in Netherlands, Ireland		-> will reduce effectiveness of measures												
		New technologies:																	
			I 10.4. investment measure	-> aquisition of equipment to reduce GHG emissions, reduce pollution, incl. precision farming tools				specific reduction targets of 15%											
			I 7.5. sectoral intervention																
Conclusions																			
Polish CAP Strategic Plan:			- insufficient to respond to climate & environment needs																

			basic income support		-> largest share of budget		-> not sufficiently conditioned on sustainable practices														
			coupled support																		
			- total budget dedicated to envi.&climate objectives = 20.5% of total CAP budget																		
				64% supports economic objectives																	
				1.5 bil EUR transferred from Pillar II to Pillar I																	
				cutting Pillar II budget by 30%																	
				many climate&envi. measures but with small budget																	
			=>	lack of priority given by government																	
			- GAEC with low ambition																		
			- interesting new interventions:		I 8.7. perennial flower strips																
					I 4.5. water retention on PG		weak requirements, low target area														
			- mid-term review scheduled on 2026																		
1	Recommendations for amending the Polish Plan:																				
		- address gaps in the intervention logic (needs vs. propoed interventions), especially:																			
						peatland restoration															
						climate adaptation (droughts)															
						biodiv. (landscape features, fallow)															
		- strengthen GAEC, especially:		GAEC 1	maintaining PG ratio at regional level, ban ploughing																
				GAEC 2	prohibiting further degradation of peatlands by continuation of drainage and ploughing							implemented ASAP, without derogation									
				GAEC 4	creation of strips along all water bodies with no ploughing																
				GAEC 5	define requirements for slopes< 14%																
				GAEC 7	crop rotation on total farm area																
				GAEC 8	10% landscape features, removing weighting factors, adjusting protected landscape element list																
		- evaluate impact of derogations for GAEC 7,8 in 2023 + no further derogations																			
		- review I 4.2. eco-scheme on carbon farming after 1 year as planned + most beneficial options made most attractive to support adoption of practices beyond min. level																			
		- correct implementation details of I 4.5. water retention on PG: applicable everywhere + payment proportional to flooding time + no penalties due to high water levels																			
		- include measures to support grassland restoration (incl. arable conversion to grassland in flooded areas) + wetland buffer zones restoration and creation + rewetting peatlands + transition to paludiculture																			
		- adjust the area targeted by climate& envi. commitments in Natura 2000 to reflect Prioritised Action Framework																			
		- strengthen interventions supporting biodiv. on arable land: increase targeted area of I 8.7. + landscape features																			
		- step up support for organic farming																			
		- improve targeting of some interventions to address regional issues (soil erosion, droughts)																			
		- include result-based measures, bonuses, collective approaches + training & advice beneficial in natural resource protection																			
		- increase budgets for eco-schemes, envi.&climate commitments, envi.&climate investments, cross-cutting measures + corresponding decrease in basic income support and coupled support																			
		- fund additional studies+research to evaluate the potential impact of CAP Strategic Plan on envi. and climate																			
2	Wider recommendations:																				
		- introduce envi.&climate ring-fencing for cross-cutting measures, sectoral interventions, investments to ensure a min. share																			
		- biodiv.&climate proof the CAP Strategic Plan + include additional safeguards where needed (like in afforestation)																			
		- improve transparency, publishing complete version of all CAP Plans + otput targets + budgets for all interventions																			
		- accompany changes in production systems by changes in food system strategy incl. targets on meat + dairy consumption, sustainability standards on import -> limit carbon leakage outside EU																			