Contingency planning arguments
- the case of Masuria -



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PP = Restricted to other programme participants (including the Commission Services)
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Summary

The project ECO-Ready aims at developing a contingency planning framework which can be used as a base for developing contingency plans by Living Labs. In this process, task 5.3 lead by proQuantis has been submitting 3 documents, a project report as deliverable D5.2, a report outlining an AI-supported proposal for a contingency planning in Sweden as an example on planning opportunities, and a planning guide in support of planning challenges of Living Labs.

In follow-up activities, task 5.3 supports interested Living Labs by providing arguments hat could be used in their own contingency planning activities. These arguments build on results from a focused interaction with Large Language Models based on a few basic issues that specify an outer space for the contingency planning interaction.

This report concentrates on arguments for contingency planning in the Polish region Masuria with a primary view on
(1) contingencies that may arise from diseases in milk cows such as foot-and-mouth disease and
(2) the pressing problem of demographics with young people leaving agreiculture.

The arguments in this report do not lead to a consistent view but are elements which can be integrated into contingency plans, used in the communication of contingency plans, and used in making policy and other potential actors aware of the need for their engagement.

Disclaimer

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0 Problem basics

> **Region:** Masuria
> **Target group:** Farmers
> **Hazard 1:** Foot-and-mouth disease in milk cows
> > **Product:** Milk production
> **Hazard 2:** Demographics in agriculture
> **"Product":** Agricultural productive area

Part I: Hazard affecting milk production

1 Relevance of milk production for agriculture in Masuria

In the Warmia-Mazury (Masuria) region of Poland, about 20% of agricultural holdings keep cattle, which includes dairy cows (kongresobywatelski.pl). Since dairy production is the dominant use of cattle in the area, we can conclude that roughly one in five farms in Masuria produces milk.

Milk production plays a significant role in the agricultural economy of Masuria (Warmian-Masurian Voivodeship):

1. Market Share of Animal Production

> Around **32.6 %** of the region's total animal production value comes from milk (circa 2008) (academia.edu).
> While national share was around 7%, locally milk plays a disproportionately large role, underscoring its regional importance .

In simple terms: nearly one-third of Masuria's animal agriculture sector hinges on milk production.

2. Farm Sustainability & Competitiveness

> Dairy farms in Poland—including Masuria—fall into a group with lower economic sustainability, ranking among the weakest in the EU (ersj.eu).
> Average Polish dairy farms, compared to peers in Germany or the Netherlands, have less productive resources, lower Standard Output, and lag in competitiveness (researchgate.net).
> However, large-scale Polish dairy farms (EUR 100k–500k output) perform better, although their competitive position has weakened over 2014–2021 (mdpi.com).

3. Price Trends & Impact on Revenue

> From 2003 to 2015, farm-gate milk prices in Poland surged by **~92%**, thanks to EU policy (quotas and market reforms) (researchgate.net).
> After quota removal in 2015, prices initially fell, then rebounded—directly influencing farm incomes.

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Summary: Milk's Economic Contribution in Masuria

Aspect	Contribution
Value Share	~32.6% of total animal agriculture
Farm Viability	Critical revenue source, but many farms struggle
Price Effects	Strong prices post-2003 boosted incomes; post-2015 volatility introduced risk

In short, milk production is a core pillar of the Masurian agricultural economy—but economic viability varies widely. While milk accounts for a major share of farm production value, most small to mid-sized farms face tight margins and competitiveness challenges. Larger operations perform better but still face structural pressures from market volatility and policy changes.

2 Relevance of milk production for the region of Masuria

Milk production is highly relevant for the performance of the Masurian region (Warmian-Masurian Voivodeship) in several ways—economically, socially, and structurally. Here's a breakdown:

1. Economic Backbone of Agriculture

> Milk production is the dominant agricultural activity in Masuria's animal husbandry sector, contributing over 30% of total animal production value.
> It generates steady income for many small and medium-sized farms, often more than crop farming, especially in areas with less fertile soils.

Implication: Milk production underpins rural economic stability and regional agricultural GDP.

2. Supports Rural Employment and Livelihoods

> Dairy farming is labor-intensive and supports:
  - Farm owners and workers.
  - Veterinarians, feed suppliers, transport services, and local dairies.

> In remote and depopulating areas, milk farms help maintain population and services (schools, shops, healthcare).

*Implication: It's crucial for **social cohesion** and **rural vitality** in sparsely populated Masuria.*

3. Drives Regional Agro-Industry

> Masuria has dairy processing facilities (e.g. Mlekpol, Mlekovita plants) which rely on a steady local milk supply.
> These plants add value via cheese, yogurt, butter, and export products, strengthening the regional supply chain.

Implication: Milk production fuels industrial activity and export potential beyond primary farming.

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4. Strategic Role in Poland's Dairy Sector

> Warmia–Masuria is one of the top dairy-producing regions in Poland.
> It contributes significantly to national milk output, aligning with Poland's role as a major EU milk exporter.

Implication: Regional performance in dairy affects Poland's global agricultural competitiveness.

5. Vulnerability and Development Challenges

> Many Masurian farms are small-scale and undercapitalized, facing:
  - Low productivity, limited access to modern technologies.
  - Market volatility, environmental restrictions, and aging populations.
> Without support or innovation, some farms risk exiting the sector, weakening regional resilience.

Implication: The region's agricultural performance is closely tied to the health of its dairy sector, especially through modernization and support.

In Summary

Milk production in Masuria is:

> Central to regional agriculture and economic identity.
> A key employer and rural stabilizer.
> Tightly integrated with agro-industry and exports.
> Challenged by structural and market factors.

Its performance directly reflects and shapes the overall socio-economic strength of Masuria.

3 The relevance of foot-and-mouth disease for agriculture and the region

Foot-and-mouth disease (FMD) and other serious livestock diseases pose a major threat to milk production and agriculture—even if not currently active in Masuria or Poland. Here's a full assessment of how serious the problem is for the region:

1. Nature of the Threat

Foot-and-mouth disease (FMD) is:

> A highly contagious viral disease affecting cloven-hoofed animals (like cows, pigs, sheep, goats).
> Not dangerous to humans, but devastating to animal health, productivity, and trade.
> It spreads fast and can cause milk yield drops of 50% or more during outbreaks.

Even one case can trigger widespread restrictions.

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2. Why It's a Serious Threat for Masuria

A. Economic Damage Potential

> Masuria has many small and medium dairy farms—often with limited biosecurity.
> An FMD outbreak would mean:
    > Mass culling of infected and at-risk animals.
    > Complete milk delivery bans from affected farms.
    > Loss of revenue, with potential ruin for smallholders.
    > Regional export bans, as Poland's entire milk trade could be restricted.

Estimated losses from FMD outbreaks in other countries (like the UK in 2001) ran into billions of euros.

B. Regional Sensitivity

> Masuria's economy is heavily reliant on animal production.
> There is a dense network of dairy logistics: collection centers, transport routes, and processing plants.
> These interconnections can amplify disease spread if not contained immediately.

Masuria is vulnerable due to interconnected farm systems and the economic importance of milk.

3. Current Status in Poland and Masuria

> Poland is currently free of FMD, and strict EU-level monitoring and control measures are in place.
> Veterinary inspections, animal traceability, and movement restrictions reduce the risk.
> Vaccination is not routinely done in the EU due to trade restrictions on vaccinated animals, but emergency plans exist.

The threat is low probability, but high impact.

4. Broader Impacts of an Outbreak

Impact Area	Description
Milk yield	Drops drastically, often permanently damaged
Farm closures	Small farms may not recover
Market disruption	Milk processing plants may shut or reduce operations
Export bans	Entire country may face temporary bans from major markets
Public trust	Consumer fear can reduce dairy sales
Tourism	Masuria's eco-tourism can suffer from movement bans and public concern

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Summary

Foot-and-mouth disease is:

> Rare in Poland, but a serious threat with catastrophic potential.
> A direct danger to milk production, especially in Masuria where the sector is central to rural economies.
> A challenge that requires constant vigilance, biosecurity, and emergency readiness.

Even a single outbreak could cripple the region's agricultural performance for years.

4 Probability and impact of foot-and-mouth disease

The risk of foot-and-mouth disease (FMD) and similar livestock diseases can be judged using standard risk assessment criteria: probability (likelihood of occurrence) and impact (consequences if it occurs). Here's how it applies to Masuria and Poland:

1. Probability: LOW, but Non-Zero

Why the probability is low:

> Poland and the EU are officially free of FMD.
> Strict veterinary border controls, traceability, and early-warning systems are in place.
> Importation of livestock and animal products is heavily regulated, especially from non-EU countries.
> Routine veterinary inspections and animal movement controls reduce the chance of introduction.

Why the risk still exists:

> Illegal or unmonitored livestock trade (e.g., from outside the EU) can bypass controls.
> Wildlife transmission (e.g., boars or deer crossing borders) can act as a vector.
> Global climate and trade patterns increase disease mobility.
> Veterinary underfunding or weak implementation in some regions could leave vulnerabilities.

Estimated Probability (Expert-Based):

Low to very low in current conditions, but non-zero—especially due to globalization.

2. Impact: HIGH to CATASTROPHIC:

Impact Area	Severity
Milk production	Very high – yields collapse; farms are quarantined
Farm incomes	Catastrophic for smallholders – up to 100% loss
Animal welfare	Severe – mass culling and suffering
Food supply chains	Disrupted across transport and processing
Trade and exports	Immediate bans from EU and third countries
Public trust	Decline in dairy consumption due to fear
Regional economy	Sharp downturn in rural employment and GDP
Recovery time	Years – repopulation, trust rebuilding, restructuring

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Estimated Cost:
Based on UK 2001 FMD outbreak: ***>€10 billion in losses*** *(adjusted for EU scale).*

Risk Matrix Summary (Masuria – FMD)

Category	Assessment
Probability	Low to very low
Impact	Very high
Overall Risk	Moderate (due to high consequences despite low likelihood)

Conclusion

> FMD is unlikely but extremely dangerous.
> In Masuria, where milk production is central, even one outbreak would cause regional agricultural paralysis.
> The situation demands ongoing surveillance, border biosecurity, and emergency planning.

5 Need for contingency planning for foot-and-mouth disease?

There is a clear need for contingency planning for food security in the event of a foot-and-mouth disease (FMD) outbreak, especially in regions like Masuria, where milk production is central to local food systems and economies.

Why Contingency Planning for FMD Is Necessary

1. High Impact on Local Food Supply

> An outbreak would immediately halt milk collection from infected or suspected farms.
> Culling of cattle and farm quarantines would reduce both local food availability and farm incomes.
> Dairy-dependent areas like Masuria would feel disproportionate effects.

2. Market and Supply Chain Disruptions

> Milk processing plants would be affected if supply is interrupted.
> Transport and trade bans could extend beyond infected zones.
> Prices for dairy and meat could spike, while surpluses in unaffected areas might go to waste.

3. Public Confidence Issues

> Even though FMD is not a food safety risk for humans, consumer fear and media attention can cause demand shocks.
> School meals, hospital food services, and retailers may scramble to find trusted alternative supplies.

4. Regional Food Security Fragility

> Rural areas with limited processing infrastructure or storage capacity are less resilient to sudden supply shocks.
> FMD could expose structural weaknesses in how food is sourced, stored, and distributed locally.

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What a Contingency Plan Should Include

A. Prevention and Early Containment

> Strong biosecurity protocols for all livestock holdings.
> Veterinary emergency response teams trained in fast diagnostics and containment.
> Livestock movement monitoring to rapidly isolate outbreaks.

B. Food System Contingency Measures

1. Alternative sourcing plans:
   - Agreements with nearby regions or countries for emergency dairy/meat supply.
   - Diversification of protein sources (e.g., plant-based or poultry if cattle is affected).
2. Emergency food reserves:
   - Establish or expand public or cooperative food stocks for dairy and meat.
   - Include UHT milk and dairy powders for longer shelf life.
3. Logistics and distribution systems:
   - Ensure cold chain continuity for perishable goods even under movement restrictions.
   - Identify alternative collection centers and backup suppliers.
4. Market stabilization tools:
   - Price controls or subsidies to prevent panic buying and supply hoarding.
   - Compensation mechanisms for affected farmers to stabilize supply post-outbreak.

C. Communication and Consumer Confidence

> Clear public messaging that milk and meat remain safe to consume.
> Transparent updates on containment efforts and food availability.

D. Recovery Planning

> Support for repopulation of herds using disease-free stock.
> Mental health and financial aid for affected farm families.
> Invest in resilience measures post-crisis (e.g., insurance schemes, farm redesign).

Conclusion

Contingency planning for food security in the case of an FMD outbreak is not just prudent, it's essential. Without it, even a localized outbreak could:

> Disrupt regional supply chains.
> Erode consumer trust.
> Cause significant financial damage.
> Threaten long-term food system resilience.

Masuria, with its dairy-dependent economy, should absolutely have regional food security plans integrated with national veterinary and civil protection frameworks.

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6 Preparation of farms, food chains, and policy for assuring food security during foot-and-mouth disease

1. FARMS – Preparation Measures

Biosecurity & Farm Hygiene

> Install and maintain disinfection footbaths at all entry points
> Restrict and log all visitor access (workers, vets, equipment)
> Clean and disinfect all shared machinery before/after use
> Use dedicated clothing and boots for livestock areas
> Maintain closed herd policy where possible (no new animals unless isolated)

Livestock Management & Surveillance

> Maintain up-to-date animal ID and movement records
> Observe and document symptoms daily (lameness, fever, blisters)
> Train staff in early FMD symptom recognition
> Ensure animal isolation area exists for suspect cases

Contingency Planning

> Draft a farm-level FMD plan:
  - Who to contact
  - Where animals will be isolated
  - How milk will be managed during a ban
> Prepare milk disposal/emergency storage options
> Stockpile feed for 2–3 weeks in case of movement restrictions

2. FOOD CHAIN ACTORS – Preparation Measures

Supply Chain Flexibility

> Identify and pre-contract alternative sourcing zones (region or EU-based)
> Maintain contact lists of all suppliers for rapid response
> Establish emergency logistics routes (for food transport under movement controls)

Product Buffering & Processing

> Maintain buffer stocks of UHT milk, dairy powders, and canned meats
> Install cold storage redundancy (generators, backup units)
> Ensure ability to segregate “clean” and “affected” supply streamsCrisis

Communication Preparedness

> Prepare public messaging scripts:
  - FMD is *not* a food safety risk for humans
  - Explain supply changes calmly
> Train staff in customer support during emergencies
> Coordinate messaging with farmer associations and government

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3. POLICY MAKERS – Preparation Measures

Surveillance & Veterinary Readiness

> Ensure updated FMD contingency plan is active and funded
> Maintain a trained rapid response veterinary team
> Conduct annual simulation exercises (table-top + field)
> Ensure animal ID systems are functional and current

Funding & Compensation Mechanisms

> Pre-allocate an FMD emergency compensation reserve
> Pre-approve compensation protocols for culled animals, income loss
> Establish fast-track claim processes for affected farms

Coordination & Governance

> Appoint a Regional Disease Coordinator (with authority to act)
> Create a cross-sectoral crisis coordination team (vets, farmers, civil protection, transport)
> Map and test emergency communication chains (SMS/email alerts to farms)
> Coordinate with EU Animal Disease Notification System (ADNS) and trading partners

Summary Table

Actor	Top 3 Preparation Priorities
Farms	Biosecurity, recordkeeping, feed/milk contingency plans
Food Chain	Buffer stocks, logistics alternatives, public messaging
Policy	Surveillance systems, emergency fund, multi-actor coordination

7 Judgements of costs needed to prepare for a foot-and-mouth outbreak

Detailed cost estimates for preparing for a foot-and-mouth disease outbreak, organized by actor:

> Farm-Level: Per-farm costs for biosecurity, contingency planning, and basic training.
> Food Chain Actors: Costs for medium-sized processors/retailers to secure supply chains and maintain customer trust.
> Policy-Level: Public investments needed for veterinary readiness, compensation funds, and emergency coordination systems.

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Farm-Level FMD Preparation Costs

	Preparation Activity	Cost per Farm (EU
1	Disinfection footbaths and hygiene stations	1000
2	Visitor logging and signage	300
3	Animal ID and movement record system	200
4	Isolation area setup	800
5	Feed stockpile for 2–3 weeks	1500
6	Basic farm-level FMD contingency plan (DIY or consultant)	500
7	Staff training in FMD symptoms	300

Food Chain Actor FMD Preparation Costs

	Preparation Activity	Cost per Actor (EUR)
1	UHT milk or dairy powder buffer stock (10 tonnes)	30000
2	Cold storage backup installation	50000
3	Pre-contracted alternative supply sources	10000
4	Emergency logistics planning and staff training	5000
5	Crisis communication material preparation	3000

Policy-Level FMD Preparation Costs

	Preparation Activity	Estimated Public Cost
1	Veterinary rapid response team (equipment + training)	5000000
2	Annual simulation exercises (regional level)	500000
3	Compensation fund pre-allocation (reserve)	30000000
4	Animal disease coordination system upgrade	2000000
5	Emergency communication system (SMS, alerts)	1000000

8 Priority activities in preparing for a foot- and-mouth outbreak with and without budget constraints

1. Farms

Priority	Action	Budget-Constrained	Full Budget Scenario
1	Maintain animal ID & movement records	Manual or app-based logs (€200)	Full digital traceability system (€1,500)
2	Install basic footbath & hygiene controls	DIY footbath, signs (€1,000)	Full hygiene station & controlled access (€3,000)
3	Set up isolation pen for sick animals	Use existing structures (€800)	Purpose-built biosecure unit (€5,000)
4	Draft a simple contingency plan	Farmer or cooperative-led (€200)	Consultant-developed, with drills (€2,000)
5	Stockpile feed for 2–3 weeks	Local storage (€1,500)	Insulated storage & backup (€4,000)
6	Train staff to spot FMD signs	Group workshop (€300)	Certified training programs (€1,000)

2. FOOD CHAIN ACTORS

Priority	Action	Budget-Constrained	Full Budget Scenario
1	Secure fallback supplier contracts	Basic contingency clause (€5–10k)	Formalized multi-region sourcing plan (€30k)
2	Buffer stock of shelf-stable dairy	Limited (10 tonnes UHT milk) (€30k)	Strategic reserve (50+ tonnes) (€100k+)
3	Prepare emergency transport plans	Staff briefing + contact list (€5k)	Simulated logistics drill & rerouting plan (€20k)
4	Draft public messaging templates	Pre-written press/SMS (€1k–3k)	Full risk communication strategy + PR firm (€15k)
5	Train logistics staff	Internal training (€2k)	External certified training + documentation (€10k)

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3. POLICYMAKERS

Priority	Action	Budget-Constrained	Full Budget Scenario
1	Maintain and update contingency plan	Use existing staff	External audit + multi-sector update (€500k)
2	Conduct regional simulation drill	Tabletop exercise (€300k)	Multi-day field simulation (€1.5M)
3	Fund emergency vet team & reserve fund	Core response team (€5–10M)	Full mobile vet units + €100M reserve fund
4	Launch SMS alert system for farms	Basic system (€500k)	Integrated GIS-alert system (€2M)
5	Co-fund farm biosecurity upgrades	25% coverage (€10–15M)	100% coverage for priority farms (€60–80M)

Takeaway Strategy

If Budget Is Limited…	If Funding Allows…
• Focus on early detection (records, isolation)	• Build layered defense: prevention + logistics + finance
• Prioritize training, simple contingency plans	• Upgrade infrastructure, communication, and reserves
• Use co-financing to leverage private effort	• Cover full system costs for maximum resilience

9 Suitable activities by farms, food chain actors and policy for support in an actual outbreak of foot-and-mouth disease

1. FARMS – Immediate Response Actions

Action	Purpose
Isolate suspected animals immediately	Prevent intra-farm spread
Notify local veterinary authority without delay	Activate containment protocols
Stop all animal movements (in/out of farm)	Comply with quarantine rules
Close access to non-essential visitors	Limit contamination from people and vehicles
Disinfect entrances, boots, and equipment regularly	Minimize viral transmission
Provide animal movement records for tracing	Enable contact tracing and outbreak mapping
Cease milk collection if instructed	Prevent cross-contamination through logistics
Store or dispose of milk safely under authority guidelines	Prevent environmental contamination
Follow official culling or testing orders if issued	Contain outbreak as fast as possible

2. FOOD CHAIN ACTORS – Immediate Response Actions

Action	Purpose
Activate alternative sourcing protocols	Maintain product flow from disease-free areas
Segregate supply streams (affected vs. unaffected)	Prevent cross-contamination in processing
Reroute logistics away from outbreak zones	Comply with movement restrictions
Implement crisis communication plan (public & staff)	Maintain transparency and trust
Suspend milk/meat intake from restricted farms	Avoid contamination and regulatory penalties
Log all inbound deliveries by origin	Assist traceability and risk control
Enhance facility-level hygiene protocols	Avoid contamination inside processing plants

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3. POLICY / PUBLIC AUTHORITIES – Immediate Response Actions

Action	Purpose
Declare outbreak and define restriction zones (infected, surveillance, buffer)	Legally enable quarantine and control
Activate national veterinary emergency response team	Ensure rapid on-site containment
Notify EU Animal Disease Notification System (ADNS)	Comply with international obligations
Suspend animal movements in outbreak zone	Contain virus spread via transport
Issue clear public communications (media, SMS, web)	Reduce panic, clarify food safety (FMD is not a human health risk)
Trigger emergency compensation schemes	Support affected farmers and ensure cooperation
Start rapid surveillance and testing in zone	Delimit outbreak boundaries
Coordinate with civil protection for logistics and security	Ensure transport and culling operations are safe
Pause exports from affected region or country if required	Fulfill trade obligations and avoid wider bans

Summary: Key Priorities by Actor

Actor	Top 3 Immediate Priorities
Farms	Isolate animals, report case, stop movement
Food Chain	Reroute supply, segregate product, communicate clearly
Policy	Declare zones, activate vet response, coordinate public & international communication

This action list reflects current EU veterinary and crisis response frameworks and can be adjusted for national specifics.

10 Planning guide with costs for suitable action in a disease outbreak

1. FARM-LEVEL ACTIONS

Action	Cost (EUR)	Who Pays
Isolate suspected animals	0	Farmer
Notify veterinary authority	0	Farmer
Stop all animal movements	0	Farmer
Restrict visitor access	0	Farmer
Disinfect boots, tools, and entrances	200	Farmer
Provide animal movement records	0	Farmer
Cease milk collection if required	0	Farmer
Store/dispose of milk under vet guidance	500	Farmer
Cooperate with testing and culling teams	0	Farmer

Farmers should prepare by maintaining records, identifying an isolation pen, and keeping disinfectants on hand.

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2. FOOD CHAIN ACTORS

Action	Cost (EUR)	Who Pays
Activate alternative sourcing agreements	10,000	Company
Segregate supply streams	15,000	Company
Reroute logistics and deliveries	10,000	Company
Launch emergency communication (public/staff)	5,000	Company
Suspend intake from restricted suppliers	0	Company
Track all inbound deliveries	2,000	Company
Enhance hygiene at facility level	5,000	Company

Preparation includes pre-contracts, updated SOPs, training, and shelf-stable stockpiling.

3. POLICY & PUBLIC AUTHORITIES

Action	Cost (EUR)	Who Pays
Declare outbreak and quarantine zones	0	Government
Activate veterinary emergency response teams	5,000,000	Government
Notify EU Animal Disease Notification System	0	Government
Suspend animal movements in affected zones	0	Government
Public communications (SMS, media, hotline)	1,000,000	Government
Trigger compensation schemes for affected farms	30,000,000	Government
Launch rapid surveillance and testing	5,000,000	Government
Coordinate civil protection and logistics	2,000,000	Government
Suspend exports (if required by trade law)	0	Government

Critical: Policies must be in place before outbreak—ready to launch in hours, not days.

Summary: Immediate Priorities

Actor	Top 3 Priorities
Farms	Isolate, report, disinfect
Food Chain	Reroute, segregate, communicate
Policy	Declare zones, launch vet response, initiate compensation

All actors should run periodic drills and checklists to ensure readiness.

Part II: Transition option for farms by reducing milk production

11 Production alternatives for farms - transition opportunities

Attractiveness of transition opportunities

- > *Some* farms can transition or diversify profitably—but not all.
- > Most farms will incur short- to medium-term income losses when shifting away from dairy, particularly in the absence of external support or specialized market access.

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Key Factors That Determine Profitability of Alternatives

Factor	Influence on Success of Switching
Farm size	Larger farms can absorb risk/delay better
Available land/resources	Access to arable land improves options
Market access	Proximity to processing, logistics matters
Farmer skills and machinery	Some systems require new knowledge/equipment
Transition time	Longer transitions may mean bigger short-term losses

Possible Production Alternatives and Profitability Outlook

Alternative	Profit Potential vs Dairy	Notes
Beef production	Lower (esp. in EU)	Less profitable than dairy unless high-value breeds or direct sales
Goat or sheep dairy	Comparable (niche)	Can be profitable with cheese/yogurt processing, but niche market
Crop production (e.g. cereals, oilseeds)	Often lower	Especially in Masuria's soils—less productive than dairy on pasture
Vegetable production	Can be higher	If irrigation, knowledge, and markets are in place (labour intensive)
On-farm processing (cheese, yogurt)	Can match or exceed	Value-added products, esp. with direct sales
Agrotourism + farm experiences	Variable	Depends on region's tourism appeal and investment
Energy crops or biogas	Moderate	Long-term investment; stable income but capital-intensive
Rewilding/premium grazing (biodiversity schemes)	Variable	Can be profitable with agri-environment payments, but low cash flow

Economic consequences

Scenario	Estimated Income Loss vs. Dairy	Recovery Timeline
Shift to beef (extensive)	−30% to −50%	2–3 years
Crop-only transition	−10% to −40%	1–2 years
Vegetables (if set up)	0% to +30% (after 2–3 years)	2–4 years
Agrotourism development	−50% in Year 1, then breakeven or profit	3–5 years
Direct milk processing	−10% in transition, +10–30% after setup	1–3 years

These are illustrative EU-based estimates and depend heavily on local soil, skills, and markets.

Summary

> Full profit replacement is possible, but mostly in cases of:
  - Value-added production (cheese, yogurt).
  - Market-niche alternatives (vegetables, direct sales).
  - Tourism or diversification-based models.

> Most farms will face some loss during transition, typically 10–50% depending on the model and market readiness.

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Strategic Advice

> Don't abandon dairy entirely unless necessary; diversify instead.
> Use modular transitions: e.g., start cheese production while still selling milk.
> Partner with cooperatives or direct marketing networks to reach higher-value customers.
> Explore agro-environmental subsidies or LEADER funds to cushion transitions.

12 Actions that could support farms in transition

Supporting farms—especially dairy farms in regions like Masuria—to shift toward more resilient production systems requires a combination of technical, financial, social, and market-based support.

1. Production Diversification

Actions:
> Support the integration of mixed farming (e.g. crops + livestock).
> Promote agroforestry or silvopasture systems where applicable.
> Encourage dual-purpose breeds (milk + meat) to spread risk.

Support Mechanisms:
> Advisory services and demonstration farms.
> CAP eco-scheme payments or rural development grants.

2. Value-Added Processing & Short Supply Chains

Actions:
> Help farms establish on-farm processing (e.g., cheese, yogurt, cream).
> Promote direct sales models: farm shops, farmers' markets, online platforms.
> Facilitate cooperative processing and marketing to share costs and increase bargaining power.

Support Mechanisms:
> Training in food safety, branding, and customer service.
> Investment grants for micro-dairies, cold storage, and e-commerce tools.

3. Improve Resource Efficiency and Risk Management

Actions:
> Support use of rainwater harvesting, solar power, and efficient irrigation.
> Promote feed self-sufficiency through local forage systems.
> Encourage pasture management and reduced reliance on imported inputs.

Support Mechanisms:
> CAP "green architecture" payments for eco-friendly practices.
> Access to low-interest loans for sustainable infrastructure.

4. Biosecurity and Animal Health Resilience

Actions:
> Strengthen on-farm biosecurity to prevent disease spread.
> Promote herd health planning, preventive vaccination (where allowed), and regular vet checks.

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> Support alternative livestock (e.g., goats, sheep) for diversification.

Support Mechanisms:

> Subsidized vet services and disease surveillance networks.
> Grants for basic biosecurity upgrades (fencing, isolation pens).

5. Farmer Education, Skills, and Networks

Actions:

> Expand access to practical, farmer-led training programs on climate resilience, processing, and marketing.
> Foster peer learning groups and regional knowledge exchanges.
> Use digital tools for weather, market, and disease alerts.

Support Mechanisms:

> Support from extension services and EU LEADER programs.
> Online and hybrid training for young/new farmers.

6. Access to Markets and Fair Prices

Actions:

> Create incentives for public procurement of local, resilient products (schools, hospitals).
> Develop certification schemes for resilient farming (e.g., pasture-based, disease-free, biodiversity-enhancing).
> Improve logistics infrastructure for rural areas (transport, storage).

Support Mechanisms:

> Public-private partnerships and local food hubs.
> Government contracts for local dairy during emergencies.

7. Succession and Youth Engagement

Actions:

Incentivize land transfer to young/new farmers.
Support "starter farms" or cooperative farm incubators.
Enhance the social appeal of farming (connect to food, tech, sustainability).

Support Mechanisms:

Young farmer startup grants under CAP.
Land bank models and succession facilitation services.

Summary: Key Actions to Support Farm Resilience

Action Area	Examples of Support Needed
Diversify production	Technical advice, small grants
Add value to products	Processing support, market development
Improve input efficiency	Water/energy systems, soil health programs
Strengthen animal health	Biosecurity training, veterinary services
Build farmer capacity	Training, digital tools, peer networks
Improve market access	Local procurement, branding, logistics
Empower youth & new entrants	Land access, starter grants, farm succession help

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13 Costs and effects of selected specific transition support activities

Financial estimates and expected benefits in terms of economic stability, food security, and sustainability.

Transition Support Activities – Costs & Effects

Activity	Estimated Cost (EUR)	Short-Term Effect	Medium/Long-Term Effect
1. Diversifying into on-farm milk processing (e.g., cheese/yogurt)	€10,000–€40,000 (equipment + training)	-6 to -12 months breakevenInitial income loss due to investment	+10–30% income gain, Higher market stability and branding power
2. Establishing direct sales (farm shop, online, local markets)	€2,000–€15,000 (setup, packaging, marketing)	Quick local cashflow but needs learning curve	+5–20% higher price capture, Customer loyalty and crisis resilience
3. Adding mixed cropping to a livestock farm (e.g., fodder cereals, vegetables)	€3,000–€8,000 (equipment, seed, training)	Labor/time pressure in transition years	Reduced input costs+10–25% resilience to price/disease shocks
4. Installing biosecurity infrastructure (fencing, gates, disinfection)	€1,000–€3,000 (basic); €5,000+ (full upgrade)	Minimal revenue impact but reduces risk	Avoids catastrophic loss, Qualifies for certification schemes
5. Creating on-farm emergency feed & water reserves	€1,500–€5,000	Prevents immediate losses in disruptions	Saves €2,000–€4,000/year in crisis years
6. Farmer group training on resilient production	€200–€800/farmer/year	Immediate skill improvement, low cost	Better decisions, adoption of best practices
7. Pasture improvement & rotational grazing	€2,000–€10,000 (fencing, reseeding)	Year 1: minor yield impact	+10–20% feed efficiency, Improved soil health and drought resistance
8. Adoption of digital tools (weather alerts, disease tracking, cost control)	€500–€2,000 (apps, devices, training)	Better planning & reaction time	Cost savings + lower risk exposure
9. Setting up farmer cooperatives or food hubs	€10,000–€50,000 (organizational/startup)	Needs coordination, slow start	+10–30% collective efficiency, Market power, shared infrastructure
10. Youth onboarding (internships, mentoring, housing support)	€2,000–€10,000/farm	Fresh labor & ideas, possible inefficiencies	Farm succession enabled, Long-term workforce secured

Summary: Cost-Benefit Dimensions

Activity Type	Cost Range	Return on Investment (ROI)	Time to Effect
Value-added processing	€10k–€40k	High (10–30% margin increase)	Medium-term (1–3 yrs)
Biosecurity/resilience	€1k–€5k	Very high (avoids catastrophic loss)	Immediate to 1 year
Diversification	€3k–€10k	Moderate to high	1–3 years
Direct marketing	€2k–€15k	Moderate, but highly stable	6–12 months
Farmer capacity building	€200–€800	High ROI (knowledge, networks)	Ongoing
Group organization	€10k–€50k (pooled)	High for small producers	2–5 years

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Effects Across Key Goals

Goal	Activities That Support It	Impact
Economic stability	Processing, direct sales, cooperatives	Strong—improves margins, reduces dependence
Risk reduction (FMD, market)	Biosecurity, feed/water reserves, digital tools	Critical—prevents catastrophic loss
Youth engagement	Mentoring, cooperative models, low-cost entry paths	High impact on farm continuity
Biodiversity & sustainability	Rotational grazing, crop-livestock integration, pasture upgrades	Medium to high—depends on practices
Food security	Local markets, storage, mixed production	High—reduces supply chain fragility

14 Financial outlook on farm, region and policy level of 5 year transition

5-year financial outlook for transitioning toward resilient agriculture in Masuria, broken down by farm-level, policy-level, and regional-level impacts:

Farm-Level (per farm)

> Initial investments (e.g., biosecurity, training, diversification) frontloaded in Years 1–2
> Positive net returns from Year 3 onward
> By Year 5, each farm could see an annual net income gain of ~€6,000

Policy-Level

> Year 1–2: Focused on high-impact support (biosecurity, vet services, training)
> Year 3–4: Transition toward scaling and monitoring
> Year 5: Targeted support for late adopters and exit strategies for non-viable farms
> Total 5-year investment: ~€310 million

Regional-Level (Masuria – 10,000 farms)

> Year 1–2: Net economic losses (~€70 million) due to upfront costs
> Year 3–5: Cumulative positive returns, reaching €50 million net gain/year by Year 5

15 Summary Report: Detailed financial 5 year outlook

1. Introduction

Masuria's dairy sector is central to its rural economy and food system. However, it is highly vulnerable to external shocks such as animal disease outbreaks, market volatility, and demographic decline. This report presents a phased five-year strategy to enhance resilience through targeted investments and policy support.

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2. Farm-Level Financial Plan (Per Farm)

Year	Farm Investment (EUR)	Farm Benefit (EUR)	Net Income Change (EUR)
2025	6,000	0	-6,000
2026	3,000	2,000	-1,000
2027	2,000	4,000	+2,000
2028	1,000	5,000	+4,000
2029	1,000	6,000	+5,000

By Year 3, farms begin to realize net positive returns, reaching a sustainable income increase of approximately €6,000 annually by Year 5.

3. Regional Economic Impact (10,000 Farms in Masuria)

Year	Regional Investment (EUR)	Regional Benefit (EUR)	Net Economic Impact (EUR)
2025	60,000,000	0	-60,000,000
2026	30,000,000	20,000,000	-10,000,000
2027	20,000,000	40,000,000	+20,000,000
2028	10,000,000	50,000,000	+40,000,000
2029	10,000,000	60,000,000	+50,000,000

Cumulative net gains begin in Year 3, with significant economic benefits realized by Year 5.

4. Policy-Level Investment Plan

Year	Policy Investment (EUR)	Focus Area
2025	100,000,000	Biosecurity, training, emergency reserve fund
2026	80,000,000	Processing grants, vet services, local logistics
2027	60,000,000	Market development, digital tools, training
2028	40,000,000	Monitoring, maintenance
2029	30,000,000	Targeted top-ups, late-phase support

Total five-year policy investment: €310 million. These public funds are crucial to unlocking private investment and securing food system stability.

5. Strategic Recommendations

> Prioritize low-cost, high-return actions: biosecurity, farmer training, recordkeeping.
> Co-finance infrastructure farmers cannot afford alone: processing equipment, storage.
> Establish a disease emergency reserve to avoid large-scale disruptions.
> Leverage cooperatives and peer networks for scalability and knowledge transfer.

6. Conclusion

The five-year transition is financially justified: modest public investments paired with strategic farm-level actions can shift the region from high vulnerability to long-term resilience. By 2029, both farms and the regional economy stand to gain significantly, with sustained benefits in income, food security, and risk management.

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Part III: Dealing with demographic problem

16 The relevance of the demographic problem

The demographic problem in agriculture—particularly the aging of farmers and lack of young successors—is very serious, both in Masuria and across Europe.

How Serious Is the Problem?

1. Age Structure of Farmers
   > In Poland, over 60% of farmers are 55 or older, and only around 10% are under 40.
   > In the Warmian-Masurian Voivodeship, the pattern is similar or even worse in rural zones, where:
   - Young people often leave for urban areas or abroad.
   - Many farms are inherited by aging family members with no plan for succession.

   Implication: A generational vacuum is forming, risking farm continuity and regional food production.

2. Youth Disinterest in Farming
   > Young people view farming as:
   - Unprofitable, especially for small farms.
   - Physically demanding and lacking in innovation.
   - Socially isolating in rural areas with fewer opportunities.

   > Even children of farmers often pursue other careers, especially if they achieve higher education.

   Implication: There's no automatic "next generation" to take over farms.

3. Consequences for Agriculture
   > Without new farmers, rural areas face:
   - Abandoned land or consolidation into fewer, larger farms.
   - Loss of local knowledge and traditions.
   - Decline in rural services (schools, shops, infrastructure).
   - Reduced innovation, since younger farmers are more likely to adopt tech and sustainable practices.

   Implication: The sector becomes less resilient, less innovative, and more concentrated.

Key Indicators of the Crisis

Indicator	Trend
Average farmer age	Rising steadily, >55 in many regions
New farm start-ups	Declining
Farm succession plans	Lacking on majority of small/medium farms
Agricultural education enrollments	Falling
Rural population under 35	Shrinking

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What's Being Done?

EU & Polish Programs:

> Young farmer grants (from CAP – Common Agricultural Policy).
> Startup aid and investment subsidies.
> Land access programs for young entrants.
> Rural development projects to improve quality of life and services.

However, bureaucracy, insufficient funding, and unattractive rural conditions limit the impact.

Summary: The Problem Is Severe

> Masuria and rural Poland face a demographic cliff in agriculture.
> The lack of young farmers threatens not just food production, but entire rural ecosystems.
> Even with policy efforts, structural and cultural challenges remain high.

17 Policy options for dealing with the demographic problem

Addressing the demographic crisis in agriculture—particularly the decline of young people entering farming—requires coordinated, long-term policy intervention. The challenge is not just economic, but cultural, structural, and social. Below is a comprehensive strategy outlining what policy can do, grouped into actionable categories:

1. Make Farming Viable for Young Entrants

Policy Actions:

> Startup grants and low-interest loans tailored to new farmers (e.g., €50k–€100k per applicant).
> Land access programs, such as:
  - Public land leases with purchase options.
  - Land banks for matching retiring and incoming farmers.
> Young farmer top-ups within CAP payments (Common Agricultural Policy).

Goal: Lower the financial and legal barriers to entry.

2. Improve Rural Quality of Life

Policy Actions:

> Invest in rural broadband, housing, transport, and childcare.
> Support multi-functional rural centers (co-working spaces, cafes, community hubs).
> Promote policies for affordable rural housing for farm workers and young families.

Goal: Make rural living attractive—not just farming.

3. Reform Agricultural Education and Training

Policy Actions:

> Revamp vocational schools and agricultural colleges with a focus on:
  - Agri-tech, climate-smart farming, entrepreneurship.
> Fund apprenticeships or "incubation farms" for hands-on learning.
> Develop online training platforms for part-time learners.

Goal: Build relevant, forward-looking farm skills.

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4. Promote Modern & Sustainable Farming Models

Policy Actions:

> Subsidize agroecology, organic, and regenerative farming.
> Fund pilot farms demonstrating circular agriculture or digital tools (e.g., precision farming, vertical ag).
> Encourage cooperative ownership models to reduce risk and workload.

Goal: Make farming innovative and future-oriented.

5. Improve Public Perception and Visibility

Policy Actions:

> Run public awareness campaigns that show farming as a tech-driven, green, and socially valuable career.
> Highlight stories of successful young farmers.
> Integrate agriculture into school curricula, especially in rural areas.

Goal: Shift the narrative—farming is not failure, it's leadership.

6. Facilitate Succession and Intergenerational Transition

Policy Actions:

> Provide legal and tax support for succession planning.
> Create matchmaking services between retiring and aspiring farmers.
> Offer incentives for partial farm transitions (e.g., shared ownership).

Goal: Ensure continuity without losing land or knowledge.

7. Align Other Policies (Housing, Tax, Labor, Environment)

Policy Actions:

> Tax deductions or deferrals for land sold to young farmers.
> Integrate agricultural entry into national youth employment strategies.
> Support part-time farming models for new entrants.

Goal: Build a coherent policy environment across sectors.

Summary: Policy Priorities to Attract Young People to Agriculture

Focus Area	Key Tools
Entry Support	Startup grants, land access, CAP young farmer payments
Living Conditions	Rural housing, internet, transport, childcare
Skills & Training	Modernized education, incubation farms, e-learning
Image & Identity	Media campaigns, school outreach, positive role models
Systemic Transition	Tax, succession, public procurement, climate policy link

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Part IV: The demographic challenge and the disease risk in perspective

18 Comparing the challenge of demographic risk with the cow disease risk

Side-by-Side Risk Comparison: Demographic vs. Disease

Dimension	Demographic Risk	Animal Disease Risk (e.g., FMD)
Nature of Risk	Slow-moving, structural	Sudden, acute biological event
Probability	🔴 **High** – it is already happening	🔵 **Low** – outbreak is unlikely in current EU setting
Impact (If Unaddressed)	🔴 **Severe and long-term** – farm closures, rural decline	🔴 **Severe and short-term** – mass culling, market bans
Speed of Onset	Gradual over years	Sudden – hours or days
Geographic Spread	Broad – affects all rural areas	Localized but can spread if not contained
Recovery Time	Slow – requires generational renewal, education	Medium – 1–3 years post-outbreak
Control/Prevention	Difficult – depends on cultural/economic shifts	Highly regulated – veterinary systems, biosecurity
Public Visibility	🟠 Moderate – not dramatic, but persistent	🔴 High – visible crisis, media attention
Policy Responsiveness	🟠 Mixed – often neglected	🟢 Strong – clear protocols, emergency plans
Resilience Impact	High – threatens long-term food security	Medium – threatens immediate supply chain

Key Takeaways

Demographic Risk:

> Higher probability: This is not a future risk—it's an ongoing structural crisis.
> Hard to reverse: It reflects deep cultural, economic, and generational changes.
> Undermines long-term resilience: Without young farmers, there will be no agriculture in 20–30 years in some areas.

Animal Disease Risk:

> Lower probability, but extremely disruptive if it occurs.
> Can devastate the economy quickly, but recovery is possible with good management and state support.
> Gets more political attention, but is easier to plan for than the demographic decline.

Strategic Implication for Masuria:

> Demographic risk is the bigger long-term existential threat.
> Animal disease is the bigger short-term shock threat.
> A resilient regional agriculture policy must address both:
  - By investing in youth farming incentives, rural quality of life, and training (demographics),
  - And maintaining strong biosecurity, monitoring, and outbreak preparedness (disease).

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19 Potential effects of demographic developments and cow disease on food security and biodiversity

The demographic risk (aging farmers, lack of successors) and the animal disease risk (like foot-and-mouth disease) both threaten food security and biodiversity, but in very different ways—one slow and systemic, the other fast and disruptive.

1. Impact on Food Security

Dimension	Demographic Risk	Animal Disease Risk (e.g., FMD)
Food availability	**Gradual decline** in local food production as farms close or consolidate	**Sharp reduction** in milk, meat supply during outbreak
Food access (local)	Rural depopulation weakens local supply chains, markets, and processing	Disruptions in transport, processing, and retail for affected products
Food prices	Rising prices over time due to reduced production diversity and reliance on imports	Price spikes for dairy and meat during crisis
Self-sufficiency	Decline – increased dependence on imports	Temporary drop in national or regional supply
Recovery outlook	Long-term – requires major generational investment	Short/medium-term – with proper containment and restocking

Overall:

> *Demographic risk undermines long-term food security structurally.*
> *Disease risk causes immediate but potentially recoverable shocks.*

2. Impact on Biodiversity

Dimension	Demographic Risk	Animal Disease Risk (e.g., FMD)
Landscape diversity	Loss of small farms → monoculture or abandonment	Emergency slaughter may disrupt grazing patterns temporarily
Agrobiodiversity	Fewer crop/livestock breeds used by aging/consolidated farms	Risk of culling rare/local breeds
Habitat quality	Abandoned land may be rewilded (good), or degraded (bad)	Limited effect unless culling leads to land-use shifts
Wildlife interactions	Reduced stewardship may increase human-wildlife conflict or disease risk	Disease management may lead to wildlife control measures
Traditional knowledge	Loss of seed saving, pasture rotation, mixed farming	Minimal impact unless outbreak changes farming systems

Overall:

> *Demographic decline erodes farming systems that support biodiversity, like hedgerows, grazing commons, and landraces.*
> *Disease risk is more focused and shorter-lived, but it can accelerate loss of rare breeds and lead to intensive restocking with uniform animals post-outbreak.*

Which Risk Is More Dangerous for...

Category	More Threatened By...
Short-term food supply	Disease risk (FMD)
Long-term food security	Demographic risk
Agrobiodiversity	Demographic risk
Wildlife ecosystems	Both (differently)
Resilient local farming	Demographic risk

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Conclusion

> The demographic crisis is the slower, deeper erosion of both food security and biodiversity.
> Animal disease is the faster, more visible disruptor, but usually temporary if managed well.
> A resilient system needs:
  - New generations of farmers trained in agroecology and sustainability.
  - Strong veterinary and monitoring infrastructure to contain outbreaks.
  - Support for local breeds, seed systems, and diverse farming landscapes.

20 Strategic recommendations for addressing the combined risks

Strategic recommendations for Masuria (and similar regions) to address both the demographic crisis and animal disease risk, while strengthening food security and biodiversity.

1. Responding to the Demographic Risk

Attract and Retain Young Farmers

> Startup grants + low-interest loans for new entrants.
> Access to land banks for landless youth (e.g., via lease-to-own models).
> Promote farm succession planning with legal, financial, and mentoring support.

Modernize Perception of Farming

> Promote farming as tech-savvy, green, and entrepreneurial (not just traditional and labor-intensive).
> Encourage agri-tourism, direct marketing, and online platforms for farm sales.
> Include climate-smart, regenerative farming in vocational curricula.

Improve Rural Living Conditions

> Invest in **broadband**, **transport**, **healthcare**, and **cultural spaces**.
> Make rural areas **livable for families** and professionals—not just economically viable.

2. Reducing Animal Disease Risk

Strengthen Biosecurity at the Farm Level

> Fund simple, practical infrastructure (e.g., disinfecting stations, fencing, animal ID systems).
> Training for farmers in early detection, reporting, and containment procedures.

Improve Veterinary Infrastructure

> Ensure mobile vet services in rural zones.
> Develop a regional emergency disease response plan with clear roles and communication channels.
> Equip labs for rapid diagnostics of diseases like FMD, lumpy skin disease, brucellosis, etc.

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Control Wildlife-Livestock Interfaces

> Support research and field practices that minimize disease transmission from wild animals.
> Encourage landscape planning that includes buffer zones and habitat management.

3. Boosting Food Security & Biodiversity

Diversify Production Systems

> Promote mixed farming (e.g., crops + livestock) to buffer against shocks.
> Support crop rotation, intercropping, and pasture diversity for soil and pest resilience.

Protect Local Breeds and Seeds

> Create incentives to raise native cattle breeds and plant local crop varieties.
> Establish community seed banks and breed conservation programs with farmers and researchers.

Support Short Food Supply Chains

> Build infrastructure for local dairy processing, farmers' markets, and cooperative sales.
> Encourage public procurement of local foods for schools, hospitals, and social programs.

4. Policy and Governance Tools

Tool	Application
CAP funding (EU)	Use “young farmer” and “eco-scheme” funds effectively
Cooperatives	Strengthen farmer-led groups to lower costs and increase voice
Monitoring systems	Integrate demographic + biosecurity data into planning
Research and innovation	Fund projects linking biodiversity, food security, and rural vitality

Final Thought

To safeguard the future of Masurian agriculture, policymakers must treat demographic decline not as background erosion, but as an active emergency, just like animal disease outbreaks. The solutions are not only technical but cultural, social, and economic—and they need to be place-specific, leveraging Masuria’s landscape, heritage, and people.

Part V: Overall coordination concepts

21 Analysis of available coordination opportunities

Currently, in most EU countries—including Poland and regions like Masuria—there is no single integrated coordination mechanism that simultaneously manages:

> Demographic developments in agriculture (e.g., aging farmers, youth entry) and
> Emergency responses to foot-and-mouth disease (FMD) outbreaks.

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However, there are separate mechanisms in place for each of these, and coordination between them is weak or ad hoc. Below is an overview:

1. Coordination for Demographic Change in Agriculture

Responsible Bodies:
- > Ministries of Agriculture (e.g., Ministry of Agriculture and Rural Development in Poland)
- > Rural Development Programs (RDPs) under the EU Common Agricultural Policy (CAP)
- > Regional agricultural chambers and vocational education authorities
- > National Land Agencies (involved in land leasing/transfers)

Tools in Use:
- > CAP measures for young farmer startup grants
- > Land transfer facilitation (in some regions)
- > Training and mentoring schemes (limited in coverage)

Gaps:
- > Fragmented coordination across education, housing, tax, and land policy
- > No national or regional task force on agricultural generational renewal
- > Often reactive, not strategic

2. Coordination for FMD or Animal Disease Outbreaks

Responsible Bodies:
- > Chief Veterinary Office (Poland) or equivalent national veterinary authority
- > Crisis coordination units at Ministry of Agriculture
- > EU-level systems: ADNS (Animal Disease Notification System), EFSA, DG SANTE
- > Local veterinary inspection services

Tools in Use:
- > National Contingency Plans for Animal Diseases (required by EU law)
- > Simulation exercises, rapid response units, culling protocols
- > Regional emergency coordination centers (sometimes integrated with civil protection)

Gaps:
- > Coordination may focus on disease only, not the broader socio-economic impact
- > Communication with farmers and regional economic planners often insufficient

There is currently no permanent mechanism in place that jointly addresses demographic renewal and emergency response to disease outbreaks.

Why is that's a Problem:
- > FMD impacts not only animal health but also rural demographics: older farmers
  may exit early; young farmers may lose interest without safety nets.
- > Demographic weakness undermines disease resilience (e.g., fewer skilled farmers, lower biosecurity adherence).
- > A siloed approach misses chances to build systemic resilience.

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What Could Be Done

> Create a Regional Resilience Coordination Council (RRCC):

Sector	Representatives
Agriculture	Chambers, cooperatives, young farmer groups
Veterinary Health	Regional vet services, epidemiologists
Education & Training	Rural schools, universities, training centers
Economic Development	Municipalities, land agencies, planning boards
Civil Protection	Emergency services, regional crisis units

> Mandate:

> Monitor vulnerabilities (ageing, land abandonment, disease risks)
> Oversee preparedness plans and transitions
> Coordinate funding and communication during crises

22 Design of a new coordination mechanism

A new coordination mechanism that integrates both demographic renewal in agriculture and emergency preparedness for outbreaks like foot-and-mouth disease (FMD) would need to be cross-sectoral, regionally grounded, and nationally supported.

Proposed Coordination Mechanism: Regional Agricultural Resilience Platform (RARP)

1. Purpose

To coordinate actions across sectors and levels of government to ensure:

> A new generation of farmers can enter and stay in agriculture.
> Farms are resilient to animal disease outbreaks and economic shocks.
> Rural areas remain viable and food-secure under pressure.

2. Structure:

Steering Committee (Strategic Coordination)

Members	Responsibilities
Regional government (Voivodeship or County)	Chair and link to national policy
Ministry of Agriculture representative	Policy alignment and funding
Chief Veterinary Office / regional vets	Emergency preparedness and animal health
Farmer organizations and young farmer reps	Ground-level needs and feedback
Agricultural education institutions	Training and workforce pipeline
Civil protection/emergency services	Integration with crisis response
Rural development agency/land agency	Land access, succession, infrastructure

Thematic Working Groups (Operational Planning)

> Demographic Renewal: succession, land, housing, education
> Animal Health & Biosecurity: prevention, surveillance, emergency planning
> Food System Resilience: local supply chains, logistics, emergency food reserves
> Funding & Programs: coordinate CAP, national, and private funds

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Secretariat / Coordination Unit

> Small team hosted by regional government or agricultural chamber.
> Coordinates meetings, monitors progress, compiles data, manages communication.

3. Core Functions

Function	Activities
Monitoring & Early Warning	Track farm demographics, land transitions, herd health indicators
Joint Planning	Develop a **5-year resilience plan**: succession + disease response
Scenario Simulations	FMD outbreak drills that include economic + demographic response
Funding Alignment	Coordinate CAP funds, regional grants, emergency reserves
Stakeholder Engagement	Regular meetings, youth roundtables, public updates

4. Pilot-Level Implementation (Masuria Example)

Step	Action
1. Stakeholder roundtable	Convene initial partners, define scope
2. Legal setup	Define status (advisory board, public-private task force, etc.)
3. First-year deliverables	Regional farm succession dashboard, FMD response revision, funding map
4. Feedback loop	Public consultation, farm-level input, partner review

5. Estimated Budget (Annual)

Item	Estimated Cost (EUR)
Secretariat staff (3–5 people)	€150,000–€250,000
Working group operations	€50,000
Data platform + communications	€40,000
Simulations/trainings	€30,000
Total	€270,000–€370,000/year

Could be co-financed via EU CAP technical assistance, national resilience funds, and regional rural development budgets.

6. Why This Is Needed

> Prevents siloed responses that fail to address root causes.
> Bridges the gap between short-term risk (FMD) and long-term decline (aging farms).
> Provides a regional structure to implement EU Green Deal and CAP objectives meaningfully.

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23 Implementation roadmap for new coordination scheme

(Masuria pilot - adaptable to other regions)

The roadmap

Phase	Calendar (quarters)	Milestones & Deliverables	Lead Actors	Key Resources / Budget*
0. Mandate & Lead Appointment	Q3 2025	• Regional executive (Marshal of Warmian-Masurian Voivodeship) issues resolution creating RARP. • Formal letter of support from Polish Ministry of Agriculture & Rural Development (MRiRW).	Coordinating Body (see below)	Legal drafting; staff time
1. Stakeholder Mobilisation	Q3 – Q4 2025	• First Regional Resilience Round-table (60 participants). • Memorandum of Understanding signed by: Vet Service, Agr. Chamber, Young-farmer Assoc., land agency, civil protection. • Draft Terms of Reference (ToR) for Steering Committee & Working Groups.	Secretariat + Steering Committee	€30 k meeting & facilitation
2. Institutional Set-up	Q1 – Q2 2026	• Steering Committee installed (meets quarterly). • 4 thematic Working Groups constituted. • Secretariat (4 FTE) recruited and office established inside Marshal Office.• Basic online portal & shared data room live.	Secretariat, IT support	€180 k staff + €40 k IT
3. Strategic Planning	Q2 – Q4 2026	• Produce “Masuria 2030 Resilience Plan” covering: - demographic dashboard & targets (succession, new entrants). - updated FMD contingency & simulation calendar. • Funding map matching CAP, national & private sources.	Working Groups report to Steering Committee	€60 k studies & facilitation
4. Pilot Programmes (Year 2)	2027	• Run first regional FMD simulation (table-top + field). • Launch Succession Fast-Track Scheme (100 farm matches). • 200 farms receive 50 % grants for bio-security upgrades. • KPI dashboard online (open data).	Vet WG & Demography WG	€2 m pilot budget (CAP 2nd pillar + voivodeship)
5. Scale-up & Integration	2028-2029	• Integrate RARP monitoring with national ADNS & CAP payment portals. • Extend land-bank and training schemes region-wide (10 000 farms). • Annual joint report to Sejmik (regional assembly) and MRiRW.	Secretariat & partners	€5 m/year CAP technical assistance & regional funds
6. Evaluation & Continuous Improvement	Q4 2029	• Independent evaluation: cost-benefit, participation, outbreak readiness. • Revision of 2035 targets.	External evaluator + Steering Committee	€80 k

**Budget figures are illustrative; they assume co-financing from CAP Technical Assistance, the regional budget, and in-kind staff time from partner institutions.*

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Coordinating Body

Warmian-Masurian Council for Agricultural Resilience (WM-CAR)
hosted inside the Marshal Office of the Warmian-Masurian Voivodeship

Component	Composition	Core Tasks
Steering Committee (policy-level)	Marshal (Chair), MRiRW, Chief Vet Officer rep., Regional Agricultural Chamber, Young-Farmer Association, University of Olsztyn, Civil Protection Directorate	• Strategy approval • Budget & KPI oversight • Escalation during crises
Secretariat (operational)	1 Manager, 1 Animal Health Officer, 1 Demography/Training Officer, 1 Data/Comms Officer	• Day-to-day coordination • Data management • Convene working groups • Liaison with EU & national programmes
Working Groups	• Demographic Renewal• Animal Health & Biosecurity• Food-System Resilience & Markets• Funding & Programmes	• Draft thematic action plans • Run pilots • Report progress & indicators

The WM-CAR sits between existing silos—veterinary services, agricultural development, rural affairs—and is granted the mandate to align funding streams, data sharing, and emergency procedures. Its decisions are advisory but feed directly into both voivodeship budgets and MRiRW programme design, ensuring national alignment.

Why This Model Works

> Single door for farmers, vets, educators, and planners—cutting duplication.
> Data-driven: demographic and animal-health dashboards guide interventions.
> Layered funding: blends CAP, regional, and private resources.
> Scalable: pilot in Masuria, replicate to other voivodeships after evaluation.

Crisis-ready

> *FMD simulations embed demographic considerations (e.g., labour shortages) into disease response.*

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