FOOD SECURITY

CONTINGENCY PLAN

THALLA LIVING LAB | CENTRAL GREECE

Drought and wildfire preparedness, emergency response and resilience-building for rural food systems

Decision-ready draft for regional authorities, municipalities, cooperatives and food-chain actors

Document control

Item	Details
Document title	Food Security Contingency Plan - Thalla Living Lab, Central Greece
Primary hazards	Prolonged drought and wildfire, including compound events
Primary audience	Regional and municipal authorities, civil protection, agricultural directorates, cooperatives, processors, researchers and funding bodies
Planning status	Decision-ready draft for validation and operationalization
Source material	ECO-READY contingency planning arguments - the case of Central Greece (June 2025)
Prepared for	Policy actors and decision makers in the Region of Central Greece

Important planning note

The source report intentionally provides planning arguments rather than a single definitive plan. This document converts those arguments into an operational draft. Quantitative figures are indicative estimates and should be validated against current ELSTAT, ELGA, DARD and municipal data before formal adoption.

How to use this document

This plan is designed for rapid use during preparedness discussions and for structured implementation after formal approval. The first six sections are sufficient for executive decision making. Later sections provide operational detail, a resilience pathway, a proposed coordination model, and a draft Memorandum of Understanding.

Reader	Use these sections first
Regional decision makers	Executive summary; decision sheet; budget and governance
Municipalities and civil protection	Activation levels; local action cards; coordination duties
Cooperatives and processors	Resilience hubs; feed, water and dairy continuity actions
Funders and programme managers	Investment package; phased roadmap; KPIs

Contents

Fast navigation

For an immediate funding or activation decision, go directly to the Executive decision sheet on the next page and the €50,000 priority pilot package in Section 7.

Executive summary

Central Greece has a diverse agricultural economy spanning plains, irrigated lowlands, uplands and mountain areas. The most important contingency challenge is not a single hazard in isolation, but the interaction of prolonged drought, wildfire, water scarcity, pasture damage, feed shortages, power interruptions and logistics failures. A compound drought-fire event can destabilize farm livelihoods and regional food chains at the same time.

> **Core recommendation**
> Adopt AgroShield Central as a multi-level contingency framework. Protect mixed crop-livestock farms first, mountain pastoralist systems second and traditional olive groves third, while maintaining continuity for vegetables and dairy products that are important for nutrition and urban supply.

Executive decision sheet

Decision required	Recommended decision	Immediate effect
Governance	Nominate the Region of Central Greece - Directorate of Agricultural & Rural Development (DARD) as regional lead and convene the AgroShield Central Task Force.	Creates a single operational owner and reporting line.
Pilot assets	Approve a first €50,000 shared-asset package: feed bank, emergency water storage and pumps, mobile milk cooling and shared fire-response equipment.	Protects livestock, priority crops and dairy continuity in a pilot cluster.
Local readiness	Establish Municipal Resilience Committees in one pilot area and complete inventories of feed, water points, cold-chain assets, fire equipment and vulnerable farms.	Converts a general plan into deployable local action.
Alerts	Launch a basic SMS/radio alert protocol while a digital dashboard is prepared.	Enables action even in low-connectivity mountain areas.
Medium-term transformation	Prepare a 10-year co-funded resilience programme for mixed farms and pastoralist households.	Reduces future dependence on emergency support.

Headline planning indicators

Indicator	Planning value	Interpretation
Priority farm systems	Mixed crop-livestock; mountain pastoralist; traditional olive groves	Highest combined food-security, environmental and cultural value.
Estimated mixed crop-livestock farms	~5,300 holdings	Indicative estimate; verify with farm-registry and census data.
Estimated mountain pastoralist farms	~2,650 holdings	Indicative estimate; verify locally, including seasonal mobility.
Broad annual drought losses	~€7.5 million	Regional planning estimate.
Broad annual wildfire losses	~€9.0 million	Regional planning estimate.
Detailed losses for mixed + mountain farms	~€10.8 million/year	Different scope from broad regional estimate; use as a targeted planning estimate.
Coordination platform cost	€132,000 in Year 1; €95,000 recurring	Covers local, regional, national coordination and platform functions.

1. Regional food-security risk profile

The Thalla Living Lab region sits within Central Greece (Sterea Ellada), where agricultural production is shaped by fertile plains, irrigated zones, fragmented olive landscapes and mountain pastures. This diversity is a strength, but it also creates multiple points of failure during drought and wildfire emergencies.

1.1 Product groups and their contingency relevance

Product group	Indicative regional value	Why it matters during a crisis	Primary vulnerabilities
Livestock and dairy	~€70 million/year	Protein supply, milk and cheese chains, village income and pasture management.	Feed shortages, water scarcity, heat stress, pasture fire, cooling disruption.
Olive oil	~€46 million/year	Storable food, income buffer, landscape protection and cultural value.	Tree loss, prolonged recovery after fire, drought stress and wind damage.
Vegetables	~€18 million/year	Fresh-food availability for regional and urban markets.	Irrigation failure, labor disruption, fuel prices and perishability.
Cereals	~€12 million/year	Food, feed and emergency reserve role; important for mixed farms.	Yield loss, water stress and input-price shocks.
Cotton	~€1.9 million/year	Farm-income relevance in plains and rural employment.	Water demand and input costs; lower emergency food-security priority.

The values above are indicative estimates from the source report and are best used to establish relative priorities rather than as audited regional accounts.

1.2 Farm systems that matter most

Farm system	Typical characteristics	Food-security role	Planning priority
Mixed crop-livestock farms	Family-run diversified holdings with cereals, olives, vegetables and sheep/goats.	Staples, feed, milk, meat, olive oil and village stability.	Highest
Mountain pastoralist farms	Extensive sheep/goat systems in remote and fire-prone uplands.	Milk, cheese and meat; biodiversity and landscape maintenance.	Very high
Traditional olive groves	Fragmented, often terraced, culturally important groves.	Storable food and farm-income safety net; erosion control.	High
Irrigated vegetable farms	High-output open-field or greenhouse production near market corridors.	Fresh-food and nutritional continuity.	High for supply continuity
Dairy farms	Input-dependent cattle, sheep or goat production and processing links.	Year-round protein supply and processing continuity.	High for cold-chain continuity

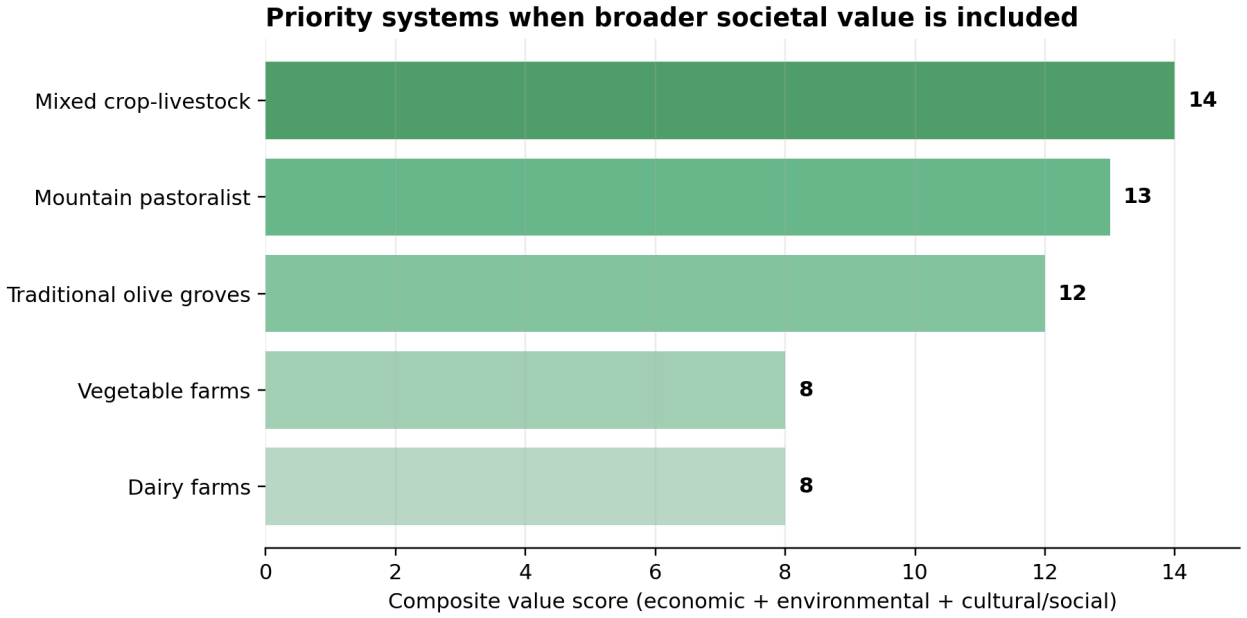


Figure 1. Composite scores in the source report combine economic, environmental and cultural/social value. They support a broader policy lens than output value alone.

1.3 Hazard profile and compound-risk logic

Hazard	Most exposed systems	Food-security pathway	Priority preparation
Prolonged drought	Mixed farms, vegetables, dairy, cereals and olives	Lower yields; reduced feed; milk decline; irrigation failure; higher pumping costs.	Water inventories, priority irrigation, drought-tolerant rotations and feed reserves.
Wildfire	Mountain pastoralists, olive groves and mixed farms	Pasture loss; herd evacuation; burned feed or buildings; long-term olive-tree damage.	Firebreaks, safe feed locations, access routes, water points and mutual-aid agreements.
Input and market shocks	Vegetables, dairy, cotton and cereals	Margin collapse; delayed harvest; reduced processing continuity.	Bulk purchasing, logistics agreements, local sourcing and monitoring.
Storms and sudden events	Olive groves, greenhouses and perishables	Tree and greenhouse damage; disrupted harvest and distribution.	Asset inspections, emergency repair kits and alternative routes.
Animal and plant disease	Livestock and intensive vegetables	Product rejection, mortality, veterinary costs and supply disruption.	Veterinary links, disease reporting and biosecurity protocols.

Compound-event principle

The plan should assume that drought and wildfire may occur together. Drought reduces water and pasture availability before a fire begins; wildfire then destroys remaining feed, damages access routes and increases the need for rapid livestock movement. This is why shared water, feed and communications assets are central to the plan.

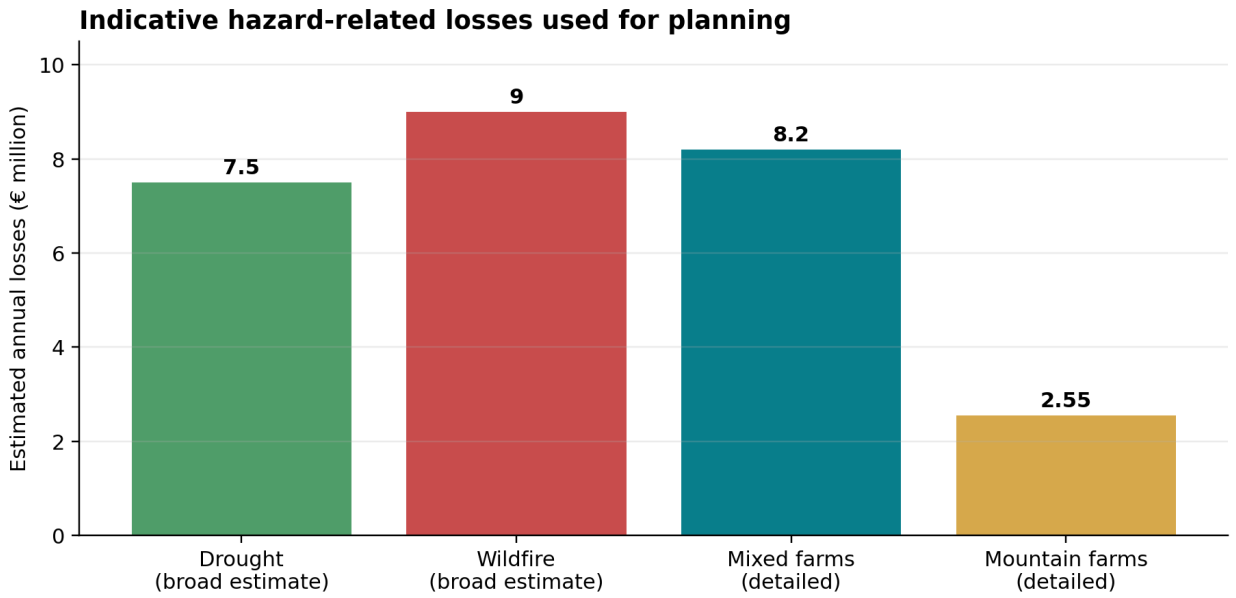


Figure 2. The report contains broad regional loss estimates and a more detailed estimate for mixed and mountain farm types. These figures use different scopes and should not be added together.

2. Strategic priorities

The plan prioritizes systems that combine food-security relevance, high vulnerability and broader value to rural society. Prioritization is necessary because not every asset can be protected at the same time during a drought-fire emergency.

2.1 Priority order for protection and continuity

Rank	Farm system	Protect first	Reason for priority
1	Mixed crop-livestock farms	Feed stocks, livestock water, cereal and olive continuity, dairy logistics.	Backbone of village food systems; diversified but vulnerable to simultaneous shocks.
2	Mountain pastoralist systems	Pasture access, safe movement corridors, emergency fodder, watering points and milk collection.	Highly exposed to fire and isolation; strong cultural and environmental value.
3	Traditional olive groves	Firebreaks, pruning, access, post-fire grafting and erosion control.	Long recovery time after tree loss; economic and heritage value.
4	Irrigated vegetable farms	Priority irrigation, fuel, packaging, labor and rapid distribution.	Essential for fresh-food availability; highly perishable supply.
5	Dairy and other input-dependent farms	Cooling, collection, fodder and energy continuity.	Important protein chain; rapid productivity losses during heat and logistics failures.

2.2 Geographic emphasis

Area	Risk level	Key systems	Emergency emphasis
Boeotia plains	High	Cereals, cotton and dairy	Protect irrigation systems and emergency feed supply.
Phthiotis mixed zones	High	Cereals, sheep/goats and olives	Pasture restoration, feed reserves, water and dairy support.
Evrytania mountain areas	Very high	Goats and sheep	Remote access, pasture-fire damage, herd movement and emergency fodder.
Phocis upland-coastal areas	Moderate	Olives and mixed livestock	Olive-grove fire protection and mixed-system buffers.

2.3 Assets to protect first

- Water sources: springs, boreholes, irrigation canals and emergency storage.
- Feed storage and distribution networks, located in safe and accessible zones.
- Vegetable hubs and logistics links supplying regional and urban markets.
- Cold chains for dairy and perishables, including mobile backup capacity.
- Firebreak zones around olive groves, stables, pasture edges and village interfaces.

3. Activation framework

The source report identifies preparedness tools and governance functions. The following four-level activation framework converts these ideas into a practical operating sequence. Exact thresholds should be finalized by DARD, municipal committees and civil-protection authorities using current meteorological, fire-risk and water-supply data.

Level	Situation	Operational decision	Required actions
GREEN - seasonal readiness	Normal operations, with rising seasonal hazard awareness.	Maintain readiness and update inventories.	Refresh farm registry; inspect water points and firebreaks; test alert channels; update feed, cooling and equipment inventories; schedule training.
YELLOW - elevated risk	Drought stress, reduced spring flow or high fire danger is forecast.	Pre-position resources and contact vulnerable farms.	Move feed to safe sites; fill mobile tanks; verify herd routes; prioritize irrigation zones; issue SMS/radio guidance; prepare cooling units.
ORANGE - emergency activation	Acute water shortage, wildfire proximity, pasture loss or logistics failure affects farm operations.	Activate hubs and local incident coordination.	Open feed banks; deploy tanks and cooling; support herd movement; protect vegetable and dairy corridors; report needs to regional task force.
RED - crisis and recovery	Major wildfire, multi-season drought or widespread farm losses.	Mobilize regional and national support and start recovery.	Damage registry; emergency buffer fund; temporary logistics contracts; replanting and erosion control; compensation alignment; recovery monitoring.

3.1 First 72 hours after ORANGE or RED activation

Time window	Regional lead tasks	Municipal and cooperative tasks	Food-chain continuity tasks
0-12 hours	Confirm affected zones; activate task-force contact list; issue regional alert.	Confirm vulnerable farms, routes and water access; open local coordination point.	Contact dairies, feed suppliers and transporters; identify cold-chain risks.
12-24 hours	Prioritize water, feed and cooling deployments; coordinate civil-protection access.	Deploy local assets; support livestock movement; report damage and unmet needs.	Redirect collection routes; secure fuel and packaging; prioritize fresh-food dispatch.
24-72 hours	Launch rolling dashboard report; request national support where needed.	Maintain inventories; register losses; organize mutual aid and volunteer support.	Stabilize procurement; communicate expected disruptions and alternative supply routes.

4. Emergency action portfolio

The emergency portfolio is built around localized Drought-Fire Resilience Hubs. Each hub serves a cluster of surrounding villages and combines shared infrastructure, communications and mutual aid. The source report proposes a service radius of roughly 10-15 km.

4.1 Localized Drought-Fire Resilience Hubs

Hub component	Function for mixed farms	Function for mountain pastoralists	Indicative setup cost
Emergency feed bank	Stores local cereals and hay for livestock and crop-rotation needs.	Provides backup fodder when pasture fails.	€20,000
Water reserve units and pumps	Maintains minimum irrigation for priority crops and olives.	Supplies mobile troughs and emergency livestock water.	€15,000
Mobile cooling tank	Maintains dairy collection and prevents spoilage.	Stabilizes sheep/goat milk for cheese chains.	€7,500
Shared fire-equipment cache	Protects stables, feed stores, olive groves and field edges.	Supports pasture-edge and enclosure defense.	€5,000
Dashboard and alert functions	Supports soil-moisture, fire-risk and resource monitoring.	Provides radio/SMS-compatible advice in low-connectivity areas.	€25,000 region-wide setup

4.2 Product-specific action cards

System or product	Emergency objective	Preparedness actions	Emergency actions
Cereals and feed	Prevent livestock losses and maintain basic reserves.	Pre-identify barley, hay and forage stocks; agree interregional supply options.	Release reserves; prioritize dual-use crops; support transport from less-affected areas.
Milk and dairy	Prevent spoilage and preserve local protein chains.	Map collection routes, cooling assets and backup power.	Deploy mobile cooling; redirect collection; support heat-stress and feed measures.
Vegetables	Preserve fresh-food availability.	Identify priority irrigation zones, fuel needs and alternative distribution routes.	Allocate irrigation and fuel; prioritize short-cycle crops and rapid dispatch.
Olive groves	Reduce catastrophic tree loss and speed recovery.	Pruning, firebreaks, equipment checks and safe access.	Defend priority zones; distribute grafting/replanting material; control erosion after fire.
Pasture and herds	Avoid herd mortality and uncontrolled displacement.	Rotational plans, safe-zone maps, corridors and mobile water access.	Enable early movement; deploy fodder and tanks; coordinate access and animal welfare.

4.3 Joint training, mutual aid and self-help

Shared infrastructure is most effective when farmers and local responders have trained together. The plan therefore combines equipment with repeatable routines and farm-level adjustments.

Measure	Lead	When	Expected effect
Cross-training for fire defense and herd movement	Municipal committees, fire service and cooperatives	Before each fire season	Improves response speed and protects assets across farm types.
Mutual-aid agreements between neighboring farms	Cooperatives and local leaders	Preparedness phase	Provides labor and equipment support during a fire or evacuation.
Agroecological workshops	Agronomists, universities and cooperatives	Annual programme	Reduces water and input dependency.
Safe feed-storage protocol	Cooperatives and civil protection	Before YELLOW activation	Avoids loss of reserves during wildfire.
Low-cost farm adjustments	Individual farms supported by extension services	Continuous	Generates resilience even when public funds are constrained.

No-public-funds option

The source report identifies modest farm-level adjustments of roughly €200-€700 per measure, with potential annual income gains of up to about €1,200. These can include low-input irrigation, pasture zoning, diversified rotations and small value-adding steps. Such actions do not replace shared emergency assets, but they reduce vulnerability and improve self-reliance.

5. Actor responsibilities

The contingency plan requires a broad coalition, but responsibilities must remain clear. The table below separates strategic ownership, operational delivery and supporting functions.

Actor	Primary responsibilities	Preparedness contribution	Emergency contribution
Region of Central Greece - DARD	Regional lead; convenes the AgroShield Central Task Force; supervises dashboard and reporting.	Planning, budget alignment and technical coordination.	Sets priorities, consolidates needs and mobilizes higher-level support.
Municipal governments	Local site readiness, water and access coordination, local committee leadership.	Inventories, permits, inspections and local communications.	Deploy local assets, coordinate routes and report needs.
Fire Service and Civil Protection	Fire-risk zoning, prevention advice and emergency protocols.	Simulation exercises, safe-zone planning and firebreak review.	Incident command, access control and emergency support.
Farmer cooperatives and associations	Manage shared assets and represent farms.	Maintain feed banks, tank inventories and training participation.	Open hubs, mobilize mutual aid and communicate farm status.
ELGA	Insurance and compensation alignment.	Clarify reporting and evidence requirements; share risk data.	Support damage registration and recovery criteria.
Ministry of Rural Development & Food	National policy and funding alignment.	Link CAP and rural-development measures.	Mobilize reserve mechanisms and recovery support.
Processors and agri-suppliers	Continuity of markets, bulk procurement and technical solutions.	Contracts, bulk-feed options, cooling and logistics readiness.	Redirect collection, transport, input and storage support.
Universities and research institutes	Risk monitoring, extension and evaluation.	Dashboard design, indicators and training.	Rapid technical advice and post-event assessment.
NGOs and rural networks	Participation, inclusion and local facilitation.	Engage smaller farms, youth and remote communities.	Support communications, volunteers and recovery inclusion.

6. Coordination and governance

The report identifies an institutional gap: Greece has relevant agencies and frameworks, but no dedicated cross-sector coordination scheme for farm-system-level agro-climatic contingency planning. The recommended solution is a three-level coordination platform under the operational title AgroShield Central.

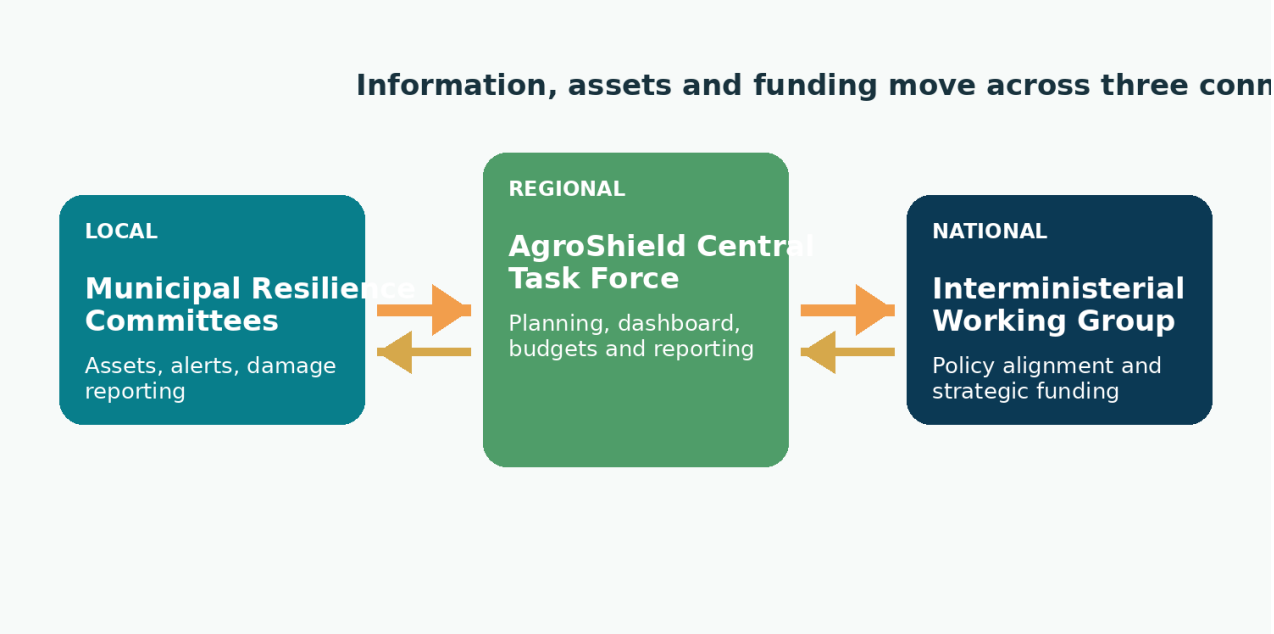


Figure 3. Recommended multi-level coordination structure. Two-way flows are essential: local conditions inform regional decisions, while funding, policy and strategic support flow downward.

6.1 Governance levels

Level	Coordinating entity	Chair	Core duties
Local	Municipal Resilience Committee	Deputy Mayor for Civil Protection or Rural Affairs	Maintain inventories; issue local alerts; coordinate water, feed and routes; report needs and damage.
Regional	AgroShield Central Task Force	Director of Regional DARD	Coordinate investments, dashboard, risk maps, funding alignment, plans and reports.
National	Interministerial Working Group	Ministry of Rural Development & Food with Civil Protection	Align CAP, disaster law, environmental policy and strategic funds.

6.2 Coordination tools

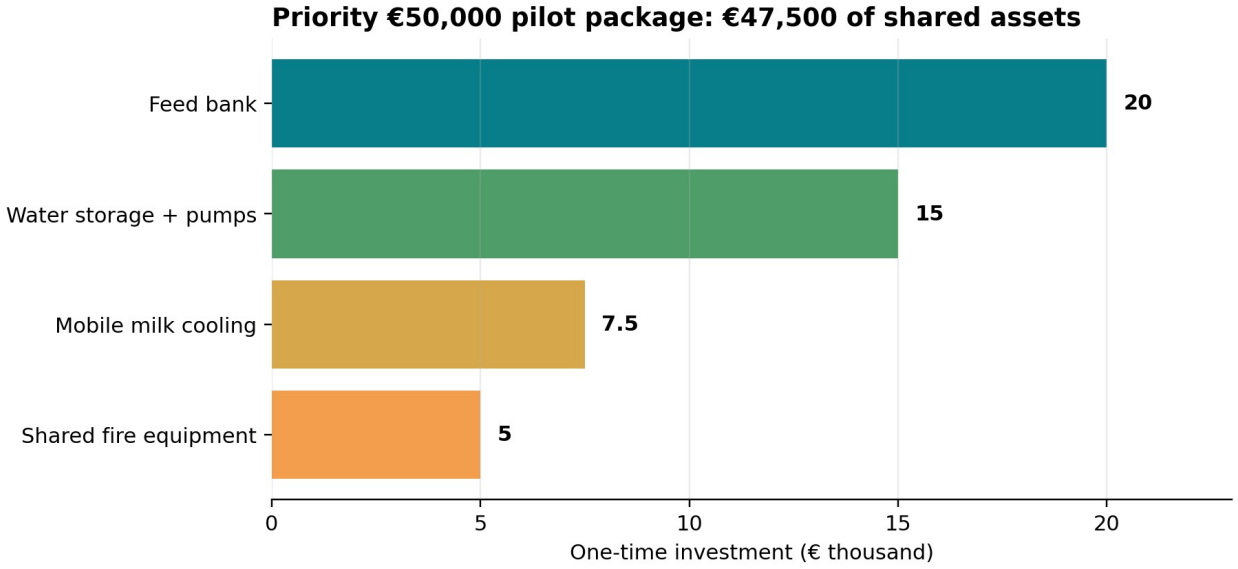
Tool	Purpose	Minimum implementation standard
Regional risk dashboard	Maps drought, fire, water, feed and farm-status indicators.	Start with a basic shared reporting template; add GIS and sensor functions incrementally.
SMS, app and radio alert system	Reaches farmers in connected and low-connectivity areas.	Maintain radio/SMS fallback and contact lists tested before fire season.
Annual contingency roundtable	Aligns workplans and funding across levels.	Hold before the high-risk season and record decisions and owners.
Joint simulation exercise	Tests actual deployment routines.	Run at least one pilot exercise annually.
Multi-year resilience budget	Links emergency readiness with longer-term investment.	Track asset ownership, maintenance and co-financing.

7. Financing and investment packages

Financing should distinguish between a rapid pilot, recurring coordination costs and a longer-term regional transformation programme. This helps decision makers start quickly while preserving a credible path toward resilience.

7.1 Priority €50,000 pilot package

Under a limited public budget, the source report prioritizes four shared assets with strong direct effects. Their combined indicative cost is €47,500, leaving a small contingency margin within a €50,000 envelope.



Asset	Indicative one-time cost	Suggested owner	Operational purpose
Feed bank infrastructure	€20,000	Cooperative or municipal cluster	Protects livestock and dairy continuity during pasture and forage shortages.
Water storage and pumps	€15,000	Municipal cluster with cooperative use protocol	Maintains critical irrigation and livestock hydration.
Mobile milk cooling unit	€7,500	Dairy cooperative or producer group	Prevents spoilage and protects value chains.
Shared fire-response equipment	€5,000	Municipal committee / cooperative cache	Supports rapid farm-level protection and safe-zone defense.
Total	€47,500		

7.2 Coordination-platform cost

Coordination component	First-year estimate	Recurring annual estimate	Purpose
Municipal Resilience Committees	€20,000	Included in recurring total	Local preparedness and asset coordination.
Regional AgroShield Central Task Force	€33,000	Included in recurring total	Regional planning, budget and reporting.
National working-group support	€19,000	Included in recurring total	Policy and funding alignment.
Secretariat and digital platform	€60,000	Included in recurring total	Data, communications and operational administration.
Total	€132,000	€95,000	First year includes setup; recurring total is lower after setup.

7.3 Ten-year resilience programme

The source report outlines a 10-year initiative for mixed crop-livestock and mountain pastoralist farms. It targets more than 500 mixed smallholders, more than 200 pastoralist families and more than 30 cooperatives or producer groups as a scalable programme rather than a complete census-wide rollout.

Phase	Period	Public-share request	Primary use
1. Stabilization	Years 1-2	€500,000	Feed banks, water storage, fire-prevention kits, mobile dairy cooling, training and cooperative formation.
2. Diversification	Years 3-5	€750,000	Drought-resilient crops and forage, pasture plans, breeds, processing and digital advisory tools.
3. Integration	Years 6-10	€600,000	Territorial branding, logistics hubs, fire corridors, ecosystem contracts, agro-tourism and heritage trails.
Total		€1.85 million	Matched by an indicative €1.2 million in co-investment.

Funding logic

The pilot package and coordination platform are immediate operational investments. The 10-year programme is a separate transformation pathway. Funding options referenced in the source report include CAP Pillar II, LIFE, Cohesion instruments, national resilience funds and in-kind contributions.

8. Resilience pathway

The long-term aim is not merely to recover after each shock. It is to reduce the exposure of farms, diversify income and inputs, and integrate farms into a resilient territorial food economy.

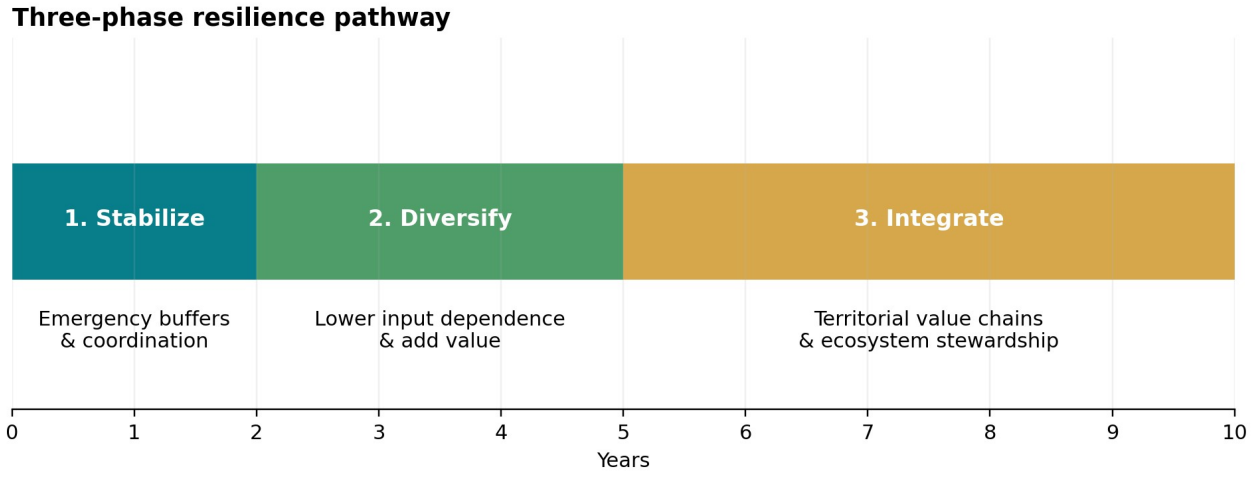


Figure 4. Phased development pathway for mixed crop-livestock and mountain pastoralist systems.

8.1 Phase actions and outcomes

Phase	Actions	Expected outcomes
1. Stabilization (1-2 years)	Feed banks, mobile water tanks, grazing corridors, basic insurance or buffer fund, emergency training and cooperative clusters.	Physical and financial buffers; coordinated early warning; reduced losses during drought and fire episodes.
2. Diversification and risk reduction (3-5 years)	Drought-tolerant rotations, pasture reseeding and rotation, low-input irrigation, heat-tolerant livestock, on-farm processing and basic digital tools.	More stable production, lower input dependency, higher value added and greater adaptive capacity.
3. Integration and value-chain strengthening (5-10 years)	Territorial brands, cooperative infrastructure, climate finance, agro-tourism and landscape-level fire management.	Farms become anchor enterprises, balance social and ecological functions, attract youth and reduce aid dependency.

8.2 Development levers

Lever	Practical focus	Resilience effect
Cooperative development	Shared infrastructure, pooled procurement and mutual aid.	Risk sharing and lower unit costs.
Agroecological practices	Rotations, forage diversity, mulching, pasture restoration and intercropping.	Reduced input dependence and better water retention.
Digital inclusion	Alerts, simple farm logs, dashboard reporting and low-connectivity options.	Improved preparedness and targeted decisions.
Territorial marketing	Regional brands, local processing and heritage-based products.	More stable and diversified income.
Landscape partnerships	Joint fire corridors, pasture management and water planning.	Collective management of risks that individual farms cannot control.

9. Monitoring, evaluation and review

A contingency plan remains credible only when responsibilities, assets and thresholds are reviewed regularly. Monitoring should cover readiness, activation performance, avoided losses and longer-term resilience outcomes.

9.1 Core monitoring dashboard

Dimension	Indicator	Frequency	Lead
Readiness	Share of pilot municipalities with updated feed, water, route and vulnerable-farm inventories.	Before each high-risk season	Municipal committees / DARD
Asset readiness	Feed-bank stocks, tank capacity, cooling availability and equipment checks.	Monthly in risk season	Cooperatives and municipalities
Communications	Share of priority farms reachable by SMS, app or radio fallback.	Quarterly and before exercises	Municipal committees
Response speed	Hours between ORANGE activation and local asset deployment.	After each event or exercise	Regional task force
Continuity	Milk collection maintained, livestock losses prevented, priority crops irrigated and vegetable routes sustained.	During event and post-event	Cooperatives, processors and DARD
Recovery	Damage registry completion, grants or compensation processing and restoration progress.	Monthly after major event	DARD, municipalities and ELGA
Transformation	Hectares under resilient rotations, pasture plans, low-input irrigation or intercropping; farms using value-added channels.	Annual	DARD and programme partners

9.2 Review cycle

- Annual performance review before the main fire season.
- After-action review after each major activation or simulation exercise.
- Community-based scorecards to capture practical problems faced by smaller and remote farms.
- Mid-term strategic review in Year 3 and final review in Year 6 for the formal coordination framework.
- Periodic update of the longer 10-year resilience programme based on results and funding conditions.

Validation priority

Before formal adoption, update farm counts, locations, water points, feed stocks, cold-chain assets, transport routes, vulnerable households and current funding instruments. The plan should become a maintained operational dataset, not a static report.

Annex A. Draft Memorandum of Understanding

Title: Coordinated Framework for Agro-Climate Contingency Planning in Central Greece

Parties: Region of Central Greece - Directorate of Agricultural & Rural Development (DARD); Municipal Civil Protection Authorities; Farmer Cooperatives and Agricultural Associations; Ministry of Rural Development & Food; Greek Agricultural Insurance Organization (ELGA); Ministry of Climate Crisis & Civil Protection; Local Universities and Research Institutes.

A.1 Purpose

This Memorandum of Understanding establishes a collaborative coordination scheme for contingency planning related to drought, wildfire and other climate-related hazards affecting agricultural systems in Central Greece. The parties agree to implement and manage the AgroShield Central initiative, with initial emphasis on mixed crop-livestock and mountain pastoralist systems.

A.2 Objectives

- Establish integrated risk-governance structures at municipal, regional and national levels.
- Improve early warning, emergency response and resilience-investment planning.
- Coordinate risk monitoring, resource sharing and recovery strategies across agencies.
- Enhance the adaptive capacity of rural farms while protecting livelihoods and food security.

A.3 Governance structure

Level	Body	Chair
Local	Municipal Resilience Committees	Deputy Mayor
Regional	AgroShield Central Task Force	DARD
National	Interministerial Working Group	Ministries of Rural Development and Civil Protection

A.4 Roles and responsibilities

Party	Responsibility
DARD	Convene stakeholders, supervise dashboard tools and manage regional reporting.
Municipal committees	Coordinate emergency logistics, firebreak maintenance and farm-level communications.
Farmer cooperatives	Maintain feed and water inventories, report risk status, manage shared assets and support training.
ELGA	Align compensation criteria with pre-risk measures and share relevant data with local teams.
Civil Protection	Provide fire-risk assessments and strategic emergency planning.
Universities and research institutes	Supply modelling, early-warning research, training and participatory evaluation.

A.5 Information sharing

- Share drought, fire, crop and livestock risk data regularly.
- Contribute to the regional risk dashboard and local inventories.
- Disseminate alerts and updates to farm-level actors through SMS, mobile app or radio.
- Record resource deployment, damage and recovery needs after activation.

A.6 Funding and resource mobilization

- Coordinate public investments through DARD.
- Seek co-financing from relevant CAP, LIFE, Cohesion and national resilience instruments.
- Recognize in-kind contributions from universities, civil protection, municipalities and cooperatives.
- Maintain transparent records of shared assets, owners, maintenance obligations and deployment rules.

A.7 Monitoring and evaluation

- Hold annual performance-review meetings.
- Use community-based monitoring scorecards.
- Conduct a mid-term strategy review in Year 3 and a final review in Year 6.
- Publish a brief after-action review after significant activations or exercises.

A.8 Validity and termination

This Memorandum of Understanding is proposed for a six-year period from the date of signing. Any party may withdraw with three months' written notice. The parties should review the MoU after major institutional or legislative changes.

> **Adoption step**
> The MoU text should be reviewed by the legal and administrative units of the participating organizations. The operational annex should list named contact points, escalation rules, asset locations and maintenance responsibilities.

Annex B. Technical assumptions and validation needs

The source report provides useful planning estimates, but several values are derived from broader datasets, proportional assumptions or typical farm structures. Formal adoption should be preceded by a focused data-validation exercise.

Planning item	Indicative figure or assumption	Validation action
Mixed crop-livestock farms	~5,300 farms	Verify with ELSTAT, DARD registry and municipal farm lists.
Mountain pastoralist farms	~2,650 farms	Verify locally, including seasonal and transhumant systems.
Broad annual drought losses	~€7.5 million	Compare with ELGA claims, DARD assessments and historical event records.
Broad annual wildfire losses	~€9.0 million	Compare with civil-protection and agricultural damage records.
Detailed mixed + mountain losses	~€10.8 million/year	Treat as a targeted farm-type estimate; refine exposure and frequency assumptions.
Priority asset costs	Feed bank €20k; water €15k; cooling €7.5k; fire equipment €5k	Obtain current supplier quotations and define specifications.
Coordination costs	€132k first year; €95k recurring	Define staffing model, platform scope and in-kind contributions.
10-year programme	€1.85m public share + €1.2m co-investment	Develop a detailed financing plan and eligibility check.

Scope note on loss estimates

The report presents a broad regional estimate of approximately €16.5 million per year for drought and wildfire losses and a more detailed estimate of approximately €10.8 million per year for mixed and mountain farm systems. They use different scopes. The detailed estimate should be used for targeted pilot design, while the broader estimate supports regional risk awareness.

Annex C. Buckwheat pilot concept

Buckwheat is proposed in the source report as a pilot resilience crop for dry, non-irrigated or marginal plots. It should be tested as one element of a broader drought-resilient rotation strategy, not treated as a universal replacement crop.

Characteristic	Potential resilience benefit
Short growing season	Matures in roughly 70-90 days and may avoid peak drought periods.
Low water needs	Suitable for rainfed trials and marginal zones.
Dual use	Can support grain, green fodder or green-manure strategies.
Soil cover	Supports erosion control and weed suppression.
Pollinator value	Potential biodiversity contribution in olive and grazing landscapes.

Farm system	Pilot use
Mixed crop-livestock farms	Use in dry cereal rotations, as fallback fodder or green manure.
Mountain pastoralist systems	Test on suitable upland plots as an emergency feed reserve.
Olive groves	Trial intercropping or cover-cropping approaches where agronomically appropriate.

C.1 Pilot design

- Select a small number of dry, non-irrigated plots across mixed, pastoralist and olive systems.
- Compare buckwheat with chickpeas, lentils, millet, sorghum and other drought-resilient options.
- Track yield, water use, input cost, feed value, soil cover, fire-risk implications and market access.
- Use cooperative aggregation and university support for cleaning, processing and market tests.
- Review results after two growing cycles before scaling.

Closing statement

Central Greece does not need to choose between emergency preparedness and long-term resilience. The recommended approach begins with a modest, deployable set of shared assets and a clear governance owner, then builds toward cooperative risk reduction, diversified production and stronger territorial food chains. The first practical step is to appoint the regional lead, establish a pilot municipal committee and approve the €50,000 shared-asset package.

Recommended first formal decision

Authorize DARD to convene an inception meeting within 30 days, select a pilot cluster, validate local data and prepare the asset-procurement and MoU approval package.

Prepared from: ECO-READY project report, “Contingency planning arguments - the case of Central Greece”, Living Lab Thalla, June 2025. This document is a synthesized contingency-plan draft for discussion and validation.