

CONTINGENCY PLAN

FOOD SECURITY IN SWEDEN

Maintaining access to leafy greens and herbs during a fertilizer-price shock

Enhanced policy-submission draft

Hazard scenario

A short-term 50% increase in fertilizer prices affecting traditional farms, greenhouses, vertical farms, supply chains and the affordability of fresh produce for low-income households.

50% fertilizer-price increase	9% illustrative annual shock probability	15-18% families classified as low income	60-70% annual import share
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Document use	Specification
Primary region	Sweden - national framework with county and municipal implementation fields to be completed.
Prepared for	Policy makers, regional and municipal authorities, producer organisations, retailers, social organisations, food-bank networks and food-system decision makers.
Status	Enhanced operational draft. Quantitative estimates, thresholds, actor assignments, legal bases and financial envelopes require Swedish stakeholder validation before adoption.
Source basis	ECO-READY supplement: Potential LLM Planning Support for Living Labs - Sweden demonstration case. This plan converts the report into a decision-oriented operating format.
Version	2.0 June 2026

Important evidence note The source report is a planning demonstration based on LLM feedback. It explicitly requires review and approval by experts, affected stakeholders and responsible actors. This plan distinguishes source-based estimates from proposed operational design.

A How to use this plan

A rapid response tool and a structured basis for stakeholder validation

Decision use Use this plan in two settings: (1) preparedness workshops before a shock and (2) rapid activation when a significant fertilizer-price increase is emerging. The plan separates actions that can start immediately from measures requiring costing, legal review or formal actor nomination.

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Practical principle Activate the smallest package that can prevent harm. Expand support only when dashboard evidence shows that prices, access, availability or producer viability are worsening.

1 Executive decision brief

What decision makers should approve before the next shock

A 50% fertilizer-price increase is unlikely to create a staple-food emergency. It can nevertheless become a targeted food-security concern because it may reduce access to nutrient-dense fresh produce among low-income households and weaken smaller domestic producers of leafy greens and herbs.

The recommended approach is proportionate: protect vulnerable households first, stabilise exposed producers only where avoidable capacity losses are credible, use existing delivery channels, and convert selected short-term measures into nutrient-efficiency and resilience investments.

Recommended decision

Approve a targeted, three-stage response Authorise preparedness work now; activate market monitoring and coordination when a shock emerges; launch household-access and conditional producer measures only when evidence-based thresholds are met; review every measure against sunset dates and measurable outcomes.

First 30-day priorities

- Convene a temporary Food-Security Coordination Cell and validate the shock magnitude, expected duration and affected fertilizer types.
- Publish a weekly dashboard covering fertilizer prices, wholesale and retail prices, product availability, producer exposure and access indicators.
- Prepare targeted vegetable vouchers or retailer discounts for low-income households through existing delivery routes.
- Open a temporary producer-support window for small and strategically relevant farms, tied to nutrient-efficiency actions and continued production.
- Mobilise retailers, food banks and donation partners to redirect surplus fresh produce rapidly.
- Launch fast-track advice and small grants for alternative nutrients, cooperative purchasing and efficient nutrient-management systems.

What not to do

Avoid	Reason
Permanent blanket fertilizer subsidies	High leakage, weak targeting and risk of locking in inefficient input use.
Broad price controls without legal and market review	May reduce supply incentives or shift pressure elsewhere in the chain.
A 100% import strategy	Would erode domestic capacity and increase exposure to global disruptions.
Untested large-scale vertical-farm investment	Requires credible business cases, energy scenarios and phased scaling.
Complex green conditions that delay urgent access support	Biodiversity additions should strengthen, not block, rapid protection.

2 Scenario, scope and evidence status

The planning assumptions that must be understood before activation

Element	Planning assumption	Evidence status / action
Hazard	Short-term fertilizer-price increase of 50%.	Source scenario. Confirm affected products, price index, start date and duration.
Product focus	Leafy greens and herbs.	Source scenario. Add locally important product categories and substitutes.
Region	Sweden, with local delivery through counties and municipalities.	National framework. Insert the specific implementation region(s).
Primary vulnerable group	Low-income households, especially those reducing fresh-produce purchases.	Source focus. Confirm eligibility and delivery routes.
Production groups	Traditional farms, greenhouses and vertical farms.	Source focus. Validate registered producers and regional exposure.
Food-security dimension	Diet affordability, accessibility, diversity and local resilience - not staple-calorie availability.	Policy framing derived from the source report.
Time horizon	Immediate response up to 30 days; seasonal stabilisation up to 6 months; resilience investments up to 24 months.	Proposed operating design for validation.

Indicative baseline from the source report

Indicator	Source estimate	Use in the plan
Illustrative annual probability of a 50% shock	9%	Preparedness signal only; validate with Swedish price data.
Low-income families	15-18%	Targeting reference; confirm with official household data.
Annual import share	60-70%	Shows import dependence and seasonal exposure.
Traditional farm share of domestic production	70-80%	Prioritise exposure assessment of conventional producers.
Greenhouse share	10-15%	Include in producer mapping and energy-cost review.
Vertical-farm share	10-15%	Treat as a complementary resilience option, not a stand-alone solution.
Possible retail price effect	5-15%	Use as a monitoring range, not an automatic outcome.

Evidence hierarchy Level 1: verified official and market data. Level 2: validated stakeholder information. Level 3: source-report estimates and scenario assumptions. Dashboard reporting should display the evidence level for each indicator.

3 Risk assessment and activation triggers

Moving from preparedness to intervention

Risk pathway

1. Input shock	2. Producer response	3. Market effect	4. Household impact	5. Strategic effect
Fertilizer prices rise sharply	Margins fall; nutrient use or planted area may decline	Local supply weakens; retail prices may rise	Low-income households substitute away from fresh produce	Diet inequality and import dependence increase

Proposed trigger matrix - validate before adoption

Stage	Illustrative trigger	Purpose	Core response
Stage 0 - Preparedness	No material shock; mechanisms not yet active.	Maintain readiness.	Quarterly review, actor map, dashboard design, voucher rules and pre-approved procedures.
Stage 1 - Alert	Price increase $\geq 20\%$ or credible market warning; uncertainty about duration.	Verify and monitor.	Weekly dashboard, producer dialogue, retailer coordination and public information.
Stage 2 - Targeted intervention	Price increase $\geq 35\%$ plus evidence of producer cost pressure, retail price pass-through, access problems or supply decline.	Prevent avoidable harm.	Targeted discounts/vouchers, conditional producer support, surplus redirection and advice.
Stage 3 - Resilience transition	Price increase $\geq 50\%$, persistence beyond one production cycle, repeated shocks or structural vulnerability.	Reduce future exposure.	Circular nutrients, low-input systems, viable greenhouse/vertical investments and biodiversity add-ons.
De-escalation	Prices and access indicators stabilise; supply risk recedes.	Exit responsibly.	Close temporary measures, publish review, retain only justified resilience actions.

Trigger rule A fertilizer-price increase alone does not justify broad spending. Escalation requires evidence of household-access risk, avoidable supply loss or producer viability problems.

4

Objectives and operating principles

The criteria for choosing and reviewing measures

Operational objectives

1. Maintain affordable access to leafy greens, herbs and suitable nutritious substitutes for low-income households.
2. Limit avoidable loss of viable local production capacity, especially among exposed small and medium-sized farms.
3. Prevent disproportionate market distortion, fiscal leakage and unnecessary administrative burden.
4. Use temporary support to accelerate nutrient efficiency, alternative inputs and resilient supply arrangements.
5. Integrate biodiversity improvements when they do not delay urgent support or exclude vulnerable households.
6. Operate with a transparent dashboard, regular review points and clear exit criteria.

Decision principles

Targeted Direct support to demonstrated needs rather than the entire market.	Temporary Use time limits, review dates and sunset clauses for crisis measures.
Additional Build on existing delivery channels, retailer systems and advisory services.	Conditional Link producer support to continued production, monitoring and efficiency actions.
Proportionate Match response intensity to verified access, price and supply risks.	Biodiversity-positive Add ecological value where feasible without slowing urgent protection.
Transparent Publish assumptions, indicators, spending and review recommendations.	Adaptable Allow counties and municipalities to tailor delivery within a common framework.

5 Prioritised response package

A modular portfolio that can be activated in layers

Priority	Action package	Activation trigger	Timing	Lead function	Relative cost
P1	Coordination cell and weekly market dashboard	Stage 1 alert	Within 72 hours	Secretariat / market intelligence	Low
P1	Retailer pact for monitoring, discounts and availability	Retail price or availability pressure	Within 7 days	Retail liaison	Low
P1	Targeted vegetable discounts or vouchers	Confirmed access risk for low-income households	Within 2-4 weeks	Consumer-access function	Medium
P1	Surplus redirection to food banks and social channels	Available surplus and access gaps	Within 7 days	Food-bank / logistics liaison	Low
P2	Temporary conditional input support	Credible avoidable supply loss or farm-exit risk	Within 2-4 weeks	Producer-support function	Medium
P2	Advisory sprint on nutrient efficiency and alternatives	High producer exposure	Within 2 weeks	Advisory / resilience function	Low
P2	Cooperative purchasing and logistics support	Fragmented demand or small-farm cost pressure	Within 1 month	Producer organisation liaison	Low-Medium
P3	Efficient nutrient systems and circular-input pilots	Repeated or persistent exposure	Months 2-24	Resilience function	Medium
P3	Urban and community production initiatives	Local access gaps and feasible municipal partners	Months 2-24	Municipal liaison	Low-Medium
P3	Viable greenhouse and vertical-farm pilots	Positive business case including energy scenarios	Months 2-24	Investment / innovation function	Medium-High
P4	Biodiversity add-ons	No delay to urgent support; measurable co-benefits	Progressively	Biodiversity function	Medium

Budget sequence Protect household access and establish coordination first. Fund producer measures only where the dashboard shows credible avoidable harm. Convert selected measures into resilience investments after the immediate shock has been reassessed.

6 Consumer protection package

Maintaining access to nutritious fresh produce

Recommended consumer measures

Measure	Design	Trigger	Delivery route	Safeguard	Indicator
Targeted produce vouchers	Time-limited value earmarked for vegetables, leafy greens, herbs and approved substitutes.	Reduced access, price pressure or social-sector reports.	Existing municipal or social-support channels; retailer redemption.	Simple eligibility; dignified access; avoid excessive paperwork.	Redemption rate; household reach; basket mix.
Retailer discount pact	Temporary discounts on selected fresh produce and substitutes; monitor stock-outs.	Retail price rise or availability concern.	Participating retailers and local markets.	Transparent product list and reporting.	Price differential; availability; take-up.
Fresh-produce surplus redirection	Rapid transfer of suitable unsold produce to food banks and social supermarkets.	Surplus exists while access gaps are reported.	Retail, farm and food-bank logistics.	Food safety and cold-chain checks.	Volume redirected; spoilage rate; delivery reach.
Affordable-substitute communication	Promote frozen/canned vegetables, root vegetables, legumes and dried herbs where suitable.	Price pressure or shortages.	Municipal, retailer and community information.	Avoid implying that fresh-produce access is no longer important.	Reach; reported uptake; substitution quality.
Community-growing support	Starter kits, compost, seeds and local gardening advice.	Stage 3 or feasible local initiative.	Municipalities, NGOs and community groups.	Voluntary; complementary to access measures.	Participating households; harvest estimates.

Consumer-access dashboard

Question	Metric	Frequency	Decision use
Are prices becoming unaffordable?	Retail price index for leafy greens, herbs and substitutes	Weekly	Activate or adjust discount/voucher package.
Is product access worsening?	Availability, stock-outs and social-sector reports	Weekly	Target logistics and retailer response.
Are measures reaching households?	Voucher redemption, discount take-up and fresh-produce volumes	Monthly	Improve targeting or delivery routes.
Are substitutions nutritionally acceptable?	Basket mix and guidance uptake	Monthly / quarterly	Adjust approved product list and messaging.

7 Producer and supply stabilisation

Preventing avoidable capacity loss without over-subsidising the market

Producer segmentation

Producer group	Exposure and role	Priority treatment	Recommended support
Small and family farms	Often limited ability to absorb sudden input-cost increases; may reduce area or exit.	High where supply relevance and exposure are demonstrated.	Temporary input support, advice, cooperative purchasing and logistics.
Traditional vegetable farms	Source report indicates possible 5-15% production-cost increase and 10-20% yield decline if fertilizer use falls.	High where planted area and local supply are at risk.	Conditional support linked to production continuity and nutrient-use plans.
Greenhouses	Controlled production but exposed to both nutrients and energy costs.	Medium to high after energy-cost review.	Efficiency advice, technology upgrades and alternative-input support.
Vertical farms	More nutrient efficient but exposed to fixed and energy costs; direct production impact may be smaller.	Selective; investment requires a business case.	Precision nutrient systems, alternative nutrients and viable scale-up pilots.
Organic / regenerative producers	Potential resilience and biodiversity value; transition is not an immediate fix for every farm.	Selective and progressive.	Low-input practice incentives, compost systems, training and sourcing links.
Community / urban initiatives	Local access and learning benefits; not a substitute for commercial supply.	Local add-on.	Starter grants, space access, inputs and guidance.

Conditions for temporary producer support

- Proof of exposure to the fertilizer-price shock and relevance to the product group.
- Commitment to maintain production or avoid unjustified withdrawal of planted area.
- A simple nutrient-use plan identifying immediate efficiency opportunities.
- Participation in cost, production and supply monitoring.
- Priority for farms serving local, urban or vulnerable-household markets.
- A time limit, review after one production cycle and explicit exit conditions.

Core safeguard Do not compensate normal market risk automatically. Support only credible, avoidable supply losses or resilience investments with measurable public value.

8

Biodiversity-positive resilience pathway

Adding long-term value without slowing urgent support

The source report distinguishes a basic low-budget response from a biodiversity-preference response. Biodiversity-focused measures can require higher upfront investment but may improve soil health, water retention, local ecosystem services and resilience.

Action	Immediate food-security value	Biodiversity contribution	How to apply
Seasonal vouchers for local or biodiverse produce	Supports household access and local demand.	Can reward crop rotation, intercropping and lower-input practices.	Add progressively after urgent access is secured.
Community gardens and urban growing	Provides local access, learning and social value.	Creates habitat, supports insects and improves urban resilience.	Use compost, native or locally suitable plants and companion planting where feasible.
Training on low-input gardening	Low-cost knowledge support for households and groups.	Improves soil health, water retention and local biodiversity.	Combine with starter kits and local advice.
Regenerative and organic practice incentives	May stabilise production costs and reduce future fertilizer exposure.	Supports soil organisms and ecosystem resilience.	Fund measurable practices, not labels alone.
Agroecological food hubs	Improves distribution to low-income consumers.	Supports diversified cropping systems and local ecosystems.	Pilot where producer and logistics capacity exists.
Fresh-produce food-bank partnerships	Directs suitable produce to vulnerable households.	Can create demand for biodiversity-friendly farms.	Apply sourcing preference only when supply and cost allow.

Decision rule for biodiversity conditions

Apply progressively First secure affordable access and prevent avoidable supply loss. Then add biodiversity preferences where they are practical, measurable, locally suitable and do not slow urgent delivery.

Basic limited-budget response	Biodiversity-positive addition
Any suitable fresh-produce source for urgent vouchers.	Progressive preference for local, agroecological or biodiverse sources when supply is sufficient.
General starter kits for community growing.	Compost, native or locally suitable plants, intercropping and low-input guidance.
Temporary producer support based on exposure.	Additional points for measurable nutrient reduction, soil-health or circular-input actions.

9 Governance and actor roles

A temporary coordination structure with clear functional ownership

Actor-nomination rule The source report does not assign named Swedish organisations. The table defines functional roles that must be mapped to responsible organisations during stakeholder validation. Each role needs a lead, deputy, contact details and decision authority.

Temporary Food-Security Coordination Cell

Role	Core responsibility	Actor category to nominate
Political sponsor	Approve activation stage, budget envelope and escalation decisions.	National or regional policy authority.
Coordination-cell chair	Convene meetings, resolve cross-sector issues and propose decisions.	Designated authority with food-system mandate.
Secretariat	Maintain action log, dashboard, minutes, expenditure overview and review dates.	Administrative support team.
Market intelligence	Track fertilizer prices, wholesale and retail prices, availability and substitution indicators.	Analytical unit, market-information partner or research body.
Producer-support lead	Map exposure, manage dialogue, assess applications and monitor conditions.	Agricultural authority, advisory partner or producer-facing body.
Consumer-access lead	Design household support, municipal routes and access monitoring.	Social-policy authority or municipal network.
Retail and logistics liaison	Coordinate retailer pact, stock information, donations and cold chain.	Retail, wholesale and logistics representatives.
Food-bank liaison	Map capacity, redirect surplus and report delivery bottlenecks.	Food-bank and social-supermarket networks.
Resilience and biodiversity lead	Develop circular-input, low-input and biodiversity-positive measures.	Advisory, innovation, environmental or research actors.
Regional / municipal liaison	Adapt implementation to local needs and coordinate municipal delivery.	County, regional and municipal representatives.
Communications lead	Publish clear updates, eligibility guidance and public information.	Authority communications function.

Coordination cadence

Stage	Meeting rhythm	Required output
Stage 0	Quarterly	Readiness review, actor map and dashboard test.
Stage 1	Weekly	Market dashboard, risk statement and next-step recommendation.
Stage 2	Twice-weekly operational call; weekly decision meeting	Delivery report, expenditure overview, access indicators and escalation decision.
Stage 3	Monthly strategic review	Investment pipeline, resilience indicators, biodiversity additions and exit strategy.

10 RACI responsibility matrix

Who leads, supports, approves and receives information

R = Responsible | A = Accountable | C = Consulted | I = Informed

Action	Sponsor	Chair	Market	Producer	Consumer	Retail / logistics	Municipal	Resilience
Activate Stage 1 dashboard	A	R	R	C	C	C	I	I
Launch retailer pact	I	A	C	C	C	R	C	I
Launch targeted discounts / vouchers	A	C	I	I	R	C	R	I
Redirect fresh-produce surplus	I	C	I	C	C	R	R	I
Open conditional producer-support window	A	C	C	R	I	C	I	C
Run nutrient-efficiency advisory sprint	I	C	I	R	I	I	C	R
Approve resilience investments	A	C	C	C	I	I	C	R
Add biodiversity conditions	I	C	I	C	C	I	C	R
Publish weekly public summary	I	A	C	C	C	C	C	C
Recommend de-escalation or exit	A	R	C	C	C	C	C	C

Decision rights

Decision	Minimum evidence	Approver	Review point
Move from Stage 0 to Stage 1	Credible fertilizer-price increase or warning signal.	Political sponsor or delegated chair.	Within 7 days.
Activate household-access support	Price/access evidence and feasible delivery route.	Political sponsor on coordination-cell recommendation.	Monthly.
Activate producer support	Exposure evidence, avoidable supply-risk assessment and conditions.	Political sponsor or delegated programme authority.	After one production cycle.
Approve resilience investment	Business case, implementation capacity and monitoring plan.	Relevant programme authority.	Quarterly.
De-escalate or exit	Indicators stabilise and remaining measures no longer add value.	Political sponsor.	At each decision meeting.

Operational requirement Before adoption, replace actor categories with named organisations and insert direct contact details for the lead and deputy of every critical role.

11 Implementation roadmap

Sequencing measures from first alert to structural resilience

Time window	Main actions	Decision gate	Required evidence
Preparedness - before the shock	Nominate actors; test dashboard; map producers, retailers, food banks and municipal delivery routes; draft voucher rules; pre-approve fast-track procedures.	Can the core response launch within 2 weeks?	Actor contacts, data sources, delivery routes and legal checklist.
Days 1-3 after alert	Convene coordination cell; verify fertilizer products and price index; open producer and retailer dialogue; define evidence gaps.	Is the warning credible?	Price data, expected duration, product exposure.
Days 4-7	Publish first dashboard; assess low-income access; map supply and surplus; confirm communication line.	Is the shock material and likely to persist?	Retail and wholesale prices, availability, access reports.
Days 8-30	Launch discounts or vouchers if justified; open conditional producer window; activate advice; redirect surplus; prepare budget update.	Are prices, access or supply conditions worsening?	Take-up, farm exposure, planted area, availability and social-sector feedback.
Months 2-6	Review support; scale cooperative purchasing, alternatives and efficient nutrient systems; pilot community initiatives; add feasible biodiversity conditions.	Which measures produce measurable value?	Outcome and cost data by measure.
Months 6-24	Retain only justified measures; develop circular nutrient systems; scale viable greenhouse/vertical pilots; update resilience strategy.	Which investments reduce future vulnerability?	Business cases, resilience indicators and independent review.

First operational meeting - fast-start checklist

- Confirm shock magnitude, start date, expected duration and affected fertilizer types.
- Identify the most exposed producer groups, crops and regions.
- Check wholesale and retail prices, product availability and substitute prices.
- Assess food-bank, social-supermarket and cold-chain capacity.
- Decide whether Stage 1 monitoring is sufficient or Stage 2 measures should be prepared.
- Assign an owner, deadline and next review date to every activated action.

12 Monitoring, reporting and review

How to know whether the plan is working

Core dashboard

Dimension	Indicator	Evidence level	Frequency	Owner function	Decision use
Hazard	Fertilizer-price index, product coverage and volatility	L1 market data	Weekly	Market intelligence	Confirm magnitude and persistence.
Supply	Domestic output, planted area, availability and stock-outs	L1/L2	Weekly / monthly	Producer support	Detect avoidable decline.
Prices	Wholesale and retail prices for leafy greens, herbs and substitutes	L1/L2	Weekly	Market intelligence	Detect pass-through and access pressure.
Access	Voucher use, discounts, food-bank volumes and municipal reports	L1/L2	Monthly	Consumer access	Assess household reach.
Producer viability	Participation, cost pressure, margin signals and exit risk	L2	Monthly	Producer support	Target or end producer measures.
Efficiency	Nutrient-use plans, alternative inputs and technology uptake	L2	Quarterly	Resilience	Track reduced exposure.
Biodiversity	Compost use, low-input practices, intercropping and local initiatives	L2/L3	Quarterly	Resilience / biodiversity	Track added ecological value.
Finance	Committed, disbursed and administrative costs by measure	L1	Monthly	Secretariat	Control value and leakage.
Communication	Public updates, queries and misinformation issues	L2	Weekly	Communications	Maintain trust and adapt messaging.

Review rules

Decision	Review question
Continue	Does the measure still address a confirmed access or supply problem?
Adjust	Can targeting, delivery or conditions be improved?
Scale	Is the measure cost-effective, feasible and clearly beneficial?
Exit	Has the shock receded or has the measure become ineffective, distortionary or unnecessary?
Convert	Does the action reduce future exposure and deliver measurable resilience value?

Reporting format Use one weekly dashboard, one action log and one short public summary. Separate validated data, stakeholder observations and assumptions clearly.

13 Budget strategy and financing template

Prioritising value when resources are limited

The source report does not provide a validated monetary implementation budget. It distinguishes relative cost levels and recommends low-cost, high-impact action first. The plan therefore uses a layered budget model and a fill-in financing template.

Layered budget model

Layer	Purpose	Included measures	Relative cost	Funding rule
Layer 1 - Essential access and coordination	Protect vulnerable households and create a functioning response.	Dashboard, coordination cell, retailer pact, surplus redirection, targeted discounts or vouchers.	Low-Medium	Fund first.
Layer 2 - Production stabilisation	Avoid unnecessary loss of domestic capacity.	Conditional producer support, advisory services, cooperative purchasing and alternative inputs.	Medium	Fund where evidence shows avoidable harm.
Layer 3 - Resilience investment	Reduce vulnerability to future shocks.	Circular inputs, low-input practices, urban/community production and viable greenhouse/vertical pilots.	Medium-High	Require business case and monitoring plan.
Layer 4 - Biodiversity preference	Add ecological co-benefits to suitable measures.	Compost, locally suitable seeds, regenerative practices, biodiversity training and sourcing preferences.	Medium-High	Add progressively without delaying urgent support.

Financing template for completion

Measure	Volume assumption	Unit cost	Budget ceiling	Funding source	Approval date	Review date
Dashboard and secretariat	[insert]	[insert]	[insert]	[insert]	[insert]	[insert]
Targeted discounts / vouchers	[households x value x months]	[insert]	[insert]	[insert]	[insert]	[insert]
Fresh-produce surplus logistics	[tonnes / deliveries]	[insert]	[insert]	[insert]	[insert]	[insert]
Conditional producer support	[eligible farms / ha / cycles]	[insert]	[insert]	[insert]	[insert]	[insert]
Advisory sprint and alternative inputs	[farms / workshops]	[insert]	[insert]	[insert]	[insert]	[insert]
Resilience and biodiversity pilots	[projects]	[insert]	[insert]	[insert]	[insert]	[insert]

Budget rule Do not approve open-ended support. Every spending line needs a purpose, target group, ceiling, responsible owner, review date and exit condition.

14 Communications and information protocol

Maintaining trust, reducing uncertainty and protecting sensitive data

Information-sharing protocol

- Use a single dashboard with agreed definitions, cut-off dates and evidence levels.
- Separate validated statistics from stakeholder observations and modelling assumptions.
- Record decisions, owners, deadlines, expenditures and unresolved issues in one action log.
- Aggregate commercially sensitive farm data and restrict access to detailed applications.
- Publish a short public summary explaining the situation, activated measures and next review date.
- Provide clear eligibility guidance for households and producers before launching support.
- Correct misinformation promptly and avoid language that creates unnecessary panic buying.

Communications matrix

Audience	Message	Channel	Timing	Owner
Policy decision makers	Risk stage, evidence gaps, options, costs and decision requests.	Decision brief and coordination meeting.	Weekly or at escalation.	Chair / secretariat.
Producers	Eligibility, evidence requirements, support conditions and advisory routes.	Producer organisations, advisory channels and direct notices.	At Stage 1 and when measures open.	Producer-support lead.
Low-income households	Available discounts, vouchers, products and access routes.	Municipal, retailer and social-sector channels.	Before launch and during delivery.	Consumer-access lead.
Retailers and logistics actors	Data request, stock monitoring, surplus redirection and reporting.	Retailer pact and operational calls.	Within first week; update regularly.	Retail / logistics liaison.
Public and media	Confirmed facts, proportional response, availability guidance and next review date.	Web update, press note and FAQs.	After each major decision.	Communications lead.
Stakeholders and experts	Assumptions requiring validation and feedback routes.	Workshop and written review.	Preparedness and post-response review.	Secretariat.

Public message principle Explain that the plan protects dietary access and local resilience. Avoid describing the scenario as a staple-food shortage unless evidence shows a broader emergency.

15 Safeguards, feasibility and validation agenda

What must be confirmed before full-scale adoption

Key safeguards

Safeguard	Reason	Control
Dignified access	Avoid stigma and low take-up among eligible households.	Use simple, familiar routes and clear communication.
Competition neutrality	Avoid favouring a single supplier or production model without evidence.	Use transparent eligibility and multiple delivery partners.
Temporary support	Prevent dependency and fiscal drift.	Sunset dates, review points and exit criteria.
Legal feasibility	Some tools, especially price intervention, may require legal review.	Complete legal checklist before launch.
Food safety and cold chain	Fresh-produce redirection can create operational risk.	Assign food-safety and logistics controls.
Data protection	Farm and household data may be sensitive.	Aggregate reporting and restrict detailed access.
Administrative capacity	Complex schemes may delay action.	Prefer existing systems and test readiness in advance.
Environmental proportionality	Green conditions should not delay urgent support.	Add biodiversity requirements progressively.

Validation agenda

Issue	Why it matters	Validation action	Owner to nominate
Hazard probability	The 9% value is illustrative and assumption-driven.	Validate with Swedish fertilizer-price data, analysts and scenario modelling.	Market intelligence.
Farm counts and production shares	Broad ranges may not match current registers.	Verify with official statistics and producer organisations.	Producer-support lead.
Low-income exposure and expenditure	Voucher design depends on accurate household and diet data.	Confirm with household-expenditure, nutrition and municipal sources.	Consumer-access lead.
Price transmission	Production-cost increases do not automatically pass through at the same rate.	Track wholesale and retail prices by product and region.	Market intelligence.
Vertical-farm savings	The report notes wide ranges and uncertainty.	Require investment-grade cases with energy scenarios.	Resilience lead.
Biodiversity benefits	Benefits depend on location and practice quality.	Define practical eligibility criteria and indicators.	Biodiversity lead.
Regional implementation	Delivery capacity differs across counties and municipalities.	Map local routes, partners and bottlenecks.	Regional / municipal liaison.

16 Longer-term scenario choices

Using the shock to test future production strategies

The source report explores three extreme scenarios. They are strategic stress tests, not immediate policy prescriptions. The plan recommends a mixed resilience portfolio rather than a single production model.

Scenario	Potential benefits	Main risks and cautions	Recommended position
100% imports	Possible short-term flexibility if external supply is available.	Loss of domestic capacity, jobs and resilience; greater exposure to disruption, transport and environmental costs.	Avoid as a strategic objective. Diversify imports while protecting viable domestic capacity.
National self-sufficiency	Resilience, local jobs, innovation and reduced external exposure.	High production, infrastructure and energy costs; benefits depend on assumptions and crop seasonality.	Use as a direction for selective capacity building, not an absolute target.
Predominantly vertical production	Efficient nutrient and water use; urban proximity; reduced waste; innovation potential.	High investment, energy dependency and uncertain commercial scalability.	Support proven pilots and scale only credible models as part of a mixed system.
Mixed resilience portfolio	Combines traditional farms, greenhouses, viable vertical capacity, circular inputs and diversified imports.	Requires coordination and selective investment discipline.	Preferred strategic approach.

Strategic recommendation

Build a mixed resilience portfolio Retain efficient traditional and greenhouse production, enable viable vertical-farm growth, strengthen circular nutrient use, expand low-input practices and maintain diversified imports without allowing domestic capability to erode.

Investment-screening questions

- Does the proposal reduce fertilizer exposure measurably?
- Is the energy requirement credible under stress scenarios?
- Does it strengthen access, supply resilience or both?
- Can the investment scale commercially without permanent subsidy?
- Are biodiversity and environmental claims measurable?
- What is the exit route if the pilot underperforms?

Annex A

Activation decision checklist

A one-page aid for policy and operational actors

Question	Yes / No	Action if Yes	Owner	Deadline
Has a material fertilizer-price increase been confirmed?		Move to Stage 1; validate magnitude, affected inputs and expected duration.	[insert]	[insert]
Are producer costs, planting decisions or supply volumes being affected?		Open producer dialogue and prepare conditional support.	[insert]	[insert]
Are retail prices or availability worsening for leafy greens, herbs or substitutes?		Activate consumer-access monitoring and retailer pact.	[insert]	[insert]
Are low-income households reporting reduced access?		Launch targeted discounts, vouchers or fresh-produce support.	[insert]	[insert]
Is fresh-produce surplus available while access gaps exist?		Activate safe surplus redirection and logistics coordination.	[insert]	[insert]
Is the shock likely to persist beyond one production cycle?		Move to Stage 3 resilience investment appraisal.	[insert]	[insert]
Can biodiversity-positive additions be applied without delaying urgent support?		Add Layer 4 incentives and monitoring criteria.	[insert]	[insert]
Do indicators support de-escalation?		Close temporary measures and publish a review.	[insert]	[insert]

Decision record

Decision date	Stage	Measures activated / changed	Budget ceiling	Approver	Next review
[insert]	[insert]	[insert]	[insert]	[insert]	[insert]
[insert]	[insert]	[insert]	[insert]	[insert]	[insert]
[insert]	[insert]	[insert]	[insert]	[insert]	[insert]

Use at every meeting Complete the checklist, record the decision and set the next review date. Unresolved issues remain visible in the action log.

Annex B

Operational action register

A fill-in management tool for implementation

ID	Action	Trigger	Lead	Support	Start	KPI	Exit / review
A1	Convene coordination cell	Stage 1	[insert]	[insert]	72h	Meeting held; action log opened	Weekly review
A2	Publish dashboard	Stage 1	[insert]	[insert]	7d	Dashboard issued	Weekly
A3	Activate retailer pact	Price / availability pressure	[insert]	[insert]	7d	Retailers reporting; product list agreed	Weekly
A4	Prepare / launch vouchers	Access risk	[insert]	[insert]	2-4w	Households reached; redemption	Monthly
A5	Redirect suitable surplus	Surplus + access gap	[insert]	[insert]	7d	Volume redirected; spoilage	Weekly / monthly
A6	Open producer dialogue	Stage 1	[insert]	[insert]	7d	Exposure map complete	Weekly
A7	Open conditional producer support	Avoidable capacity-loss risk	[insert]	[insert]	2-4w	Farms supported; output retained	After cycle
A8	Run advisory sprint	Producer exposure	[insert]	[insert]	2w	Farms advised; plans agreed	Monthly
A9	Support cooperative purchasing	Small-farm cost pressure	[insert]	[insert]	1m	Participants; input savings	Quarterly
A10	Launch circular-input pilots	Persistent exposure	[insert]	[insert]	2-6m	Pilots; nutrient savings	Quarterly
A11	Launch community-growing initiatives	Local access opportunity	[insert]	[insert]	2-6m	Sites; participants	Seasonal
A12	Appraise greenhouse / vertical pilots	Positive screening	[insert]	[insert]	2-12m	Business cases approved	Quarterly
A13	Add biodiversity conditions	Feasible without delay	[insert]	[insert]	progressive	Eligible measures; indicators	Quarterly
A14	Close temporary measures	De-escalation	[insert]	[insert]	as needed	Exit review published	At exit

Action-log fields to maintain

- Decision reference and legal basis.
- Named owner and deputy.
- Budget ceiling and funding source.
- Delivery route and dependencies.
- Evidence level and KPI.
- Next review date, exit rule and unresolved issues.

Annex C

Weekly dashboard template

A concise evidence pack for the coordination cell

Indicator	Current value	Previous value	Trend	Evidence level	Comment / decision implication
Fertilizer-price index	[insert]	[insert]	[insert]	[L1-L3]	[insert]
Affected fertilizer types	[insert]	[insert]	[insert]	[L1-L3]	[insert]
Expected shock duration	[insert]	[insert]	[insert]	[L1-L3]	[insert]
Wholesale leafy-greens index	[insert]	[insert]	[insert]	[L1-L3]	[insert]
Retail leafy-greens index	[insert]	[insert]	[insert]	[L1-L3]	[insert]
Retail herb index	[insert]	[insert]	[insert]	[L1-L3]	[insert]
Substitute-vegetable index	[insert]	[insert]	[insert]	[L1-L3]	[insert]
Availability / stock-outs	[insert]	[insert]	[insert]	[L1-L3]	[insert]
Producer cost-pressure signal	[insert]	[insert]	[insert]	[L1-L3]	[insert]
Planted-area / output signal	[insert]	[insert]	[insert]	[L1-L3]	[insert]
Voucher / discount take-up	[insert]	[insert]	[insert]	[L1-L3]	[insert]
Fresh-produce redirection volume	[insert]	[insert]	[insert]	[L1-L3]	[insert]
Food-bank capacity signal	[insert]	[insert]	[insert]	[L1-L3]	[insert]
Committed budget	[insert]	[insert]	[insert]	[L1-L3]	[insert]

Weekly recommendation

Current stage	Recommended stage	Measures to start / stop / adjust	Decision required	Next review date
[insert]	[insert]	[insert]	[insert]	[insert]

Dashboard discipline Do not allow a single indicator to drive escalation automatically. Use the dashboard to assess the combined effect on access, supply, prices and producer viability.

Annex D

Source-based quantitative summary

Indicative figures from the ECO-READY Sweden demonstration case

Topic	Indicative estimate from source report	Policy use	Validation need
Hazard	50% fertilizer-price increase; illustrative annual probability 9%.	Preparedness scenario and alert design.	Validate with Swedish fertilizer-price series and stress modelling.
Low-income group	15-18% of families; food spending estimated at 20-30% of household income.	Targeting reference for household support.	Confirm official definition, population size and delivery routes.
Diet and substitution	Lower-income households may substitute frozen/canned vegetables, root vegetables, dried herbs, legumes and staples.	Design substitute list and communication.	Confirm nutrition guidance and local preferences.
Imports	60-70% of annual leafy-greens and herb consumption.	Assess external exposure and seasonal supply.	Validate by product and season.
Traditional farms	350-950 farms; 70-80% of domestic production; possible 5-15% cost increase and 10-20% yield decline if fertilizer use falls.	Prioritise exposure mapping and conditional support.	Verify farm register, crop mix and actual cost structure.
Greenhouses	10-15% production share.	Include energy and nutrient exposure in mapping.	Verify current share and cost structure.
Vertical farms	50-150 farms; 10-15% share; estimated direct production reduction of 0.25-1% under the shock.	Treat as selective resilience option.	Verify numbers, commercial status, energy exposure and scaling limits.
Consumer price effect	Possible 5-15% increase.	Use as monitoring range.	Track actual transmission by product and region.
Strategic vertical scenario	Possible annual savings of approximately SEK 1+ billion to SEK 2.8 billion, with wide uncertainty.	Stress-test investment options only.	Require investment-grade business cases and independent review.

Source caution These figures are not validated official statistics. They are scenario estimates from the source report and must be replaced or confirmed through the stakeholder-validation process.

Source reference

ECO-READY supplement: Potential LLM Planning Support for Living Labs - An example for demonstration - Sweden case, especially pp. 3, 7-20 and appendices A1-A11.

Annex E

Preparedness workshop agenda

Turning the draft into an adopted regional operating plan

Recommended workshop duration: one full day plus a short follow-up approval meeting.

Session	Purpose	Expected output	Lead to nominate
1. Confirm scope and region	Define the geographic implementation area, product list, target group and time horizon.	Approved scenario statement.	Chair.
2. Validate the baseline	Replace source estimates with official, market and stakeholder data.	Validated baseline table and evidence levels.	Market intelligence.
3. Nominate actors	Assign lead, deputy, contacts and authority for every critical function.	Actor map and contact sheet.	Secretariat.
4. Agree triggers	Review Stage 1-3 thresholds and de-escalation criteria.	Approved trigger matrix.	Coordination cell.
5. Design household support	Select delivery channels, eligibility, product list and communication route.	Launch-ready consumer package.	Consumer-access lead.
6. Design producer support	Define exposure evidence, conditions, monitoring and exit rules.	Launch-ready producer package.	Producer-support lead.
7. Complete budget template	Insert volumes, unit costs, ceilings, sources and approval routes.	Layered financing plan.	Finance function.
8. Review resilience add-ons	Select circular nutrients, low-input measures, community initiatives and viable investment pilots.	Prioritised resilience pipeline.	Resilience lead.
9. Test communications	Draft public summary, FAQs and stakeholder notices.	Communication pack.	Communications lead.
10. Run tabletop exercise	Simulate a 50% shock and test the first 30 days.	Gap list, corrective actions and approval date.	Chair / secretariat.

Approval package after the workshop

- Named actor and contact sheet.
- Validated baseline and trigger matrix.
- Completed budget envelope and approval route.
- Launch-ready household and producer schemes.
- Dashboard data sources and reporting calendar.
- Public communication pack.
- Tabletop-exercise gap list and corrective-action schedule.

Final status After stakeholder validation, replace all [insert] fields, update the source-based estimates and issue an adopted regional version with named actors, contacts, legal bases and financial envelopes.