



The Policy Instruments To Enhanced PPR Vaccination Among Rural Livestock Farmers: Roadmap for evidence-based policy

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Why PPR Vaccination Matters: Policy Goals, Objective & Targets

- Goal- improve disease control, animal health and livelihood.- broad primary outcomes

Why “over all purpose”?

- Objective Increase PPR vaccination rates among rural livestock farmers- measurable step to achieve goal-

What the specific action to achieve goal?

- Target- e.g. 80% vaccination coverage in 2 years - A specific quantifiable outcome,

How much?

Why Evidence-Based Policy

- Identifies real-world barriers (e.g., cost, access, trust)
- Prioritizes cost-effective, high-impact interventions
- Ensures inclusive design for women, youth, and pastoralists
- Aligns actors through tested institutional models

Key Questions to Identify Evidence-Based Policy

Following Questions Should Be Answered

Vaccination Coverage & Barriers

- What is the current vaccination coverage and target?
- What barriers do rural farmers face (economic, logistical, social)?
- Which policy levers—financial, regulatory, informational—could address these barriers?

Socioeconomic & Institutional Factors

- Which socio-economic factors most strongly predict farmers' decision to vaccinate?
- What funding mechanisms have proven sustainable in similar livestock programs?
- How do gender roles affect decision-making for small ruminant health investments?
- What role can local cooperatives or private veterinarians play?

Evidence Generation Methods

☐ **Literature Review:**

- Synthesize socioeconomic impacts of PPR using Systematic approach.

☐ **Field Data** (Surveys/interviews/Vaccination coverage records **if possible**):

- To assess vaccination uptake, barriers, and community perceptions.
- To Identify actors across public, private, and community sectors (Stakeholder Mapping).

☐ **Comparative Case Studies:**

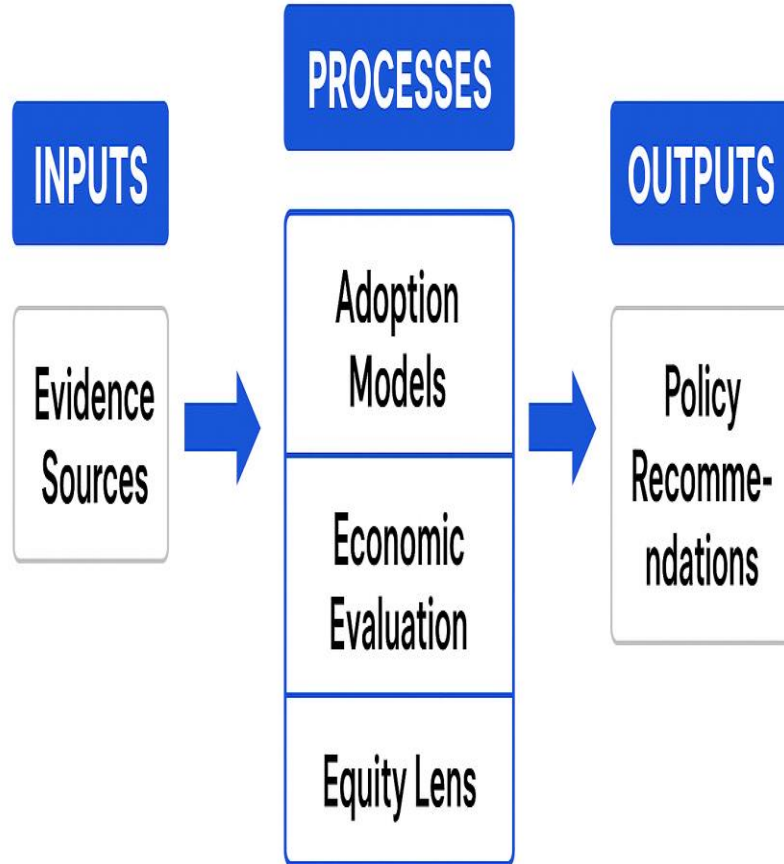
- Look at successful campaigns (e.g., Rinderpest eradication, FMD vaccination drives) for transferable lessons.

☐ **Economic Modeling:** *Quantify cost-benefit of vaccination program*

Linking Policy Questions to Evidence Sources & Methods

Policy Question	Data Source / Method
Current vaccination coverage & targets	National veterinary service reports, FAO/WOAH databases, household surveys
Barriers faced by rural farmers	Qualitative interviews, focus groups, socioeconomic surveys, extension service records
Policy levers (financial, regulatory, informational)	Policy document analysis, stakeholder consultations, comparative case studies
Socio-economic predictors of vaccination decisions	Econometric modeling, regression analysis of survey data, livelihood profiles
Sustainable funding mechanisms	Review of livestock program financing (FAO, AU-IBAR), donor reports, meta-analysis of interventions
Gender roles in decision-making	Gender-disaggregated survey data, participatory rural appraisal, ethnographic studies
Role of cooperatives/private veterinarians	Cooperative records, veterinary service delivery data, PPP case studies
Impact of regional trade policies	Policy/legal reviews, trade permit data, cross-border livestock movement studies

ANALYTICAL FRAMEWORK



INPUTS

Evidence Sources

- Literature review
- Field data (surveys, interviews, vaccination records)
- Comparative case studies
- Economic modeling

PROCESSES

Adoption Models

- Diffusion of innovations
- Behavioral economics

Economic Evaluation

- Cost-benefit analysis
- Resource allocation

- Efficiency vs. equity trade-offs

Equity Lens

- Gender dynamics
- Wealth stratification
- Livelihood systems

OUTPUTS

Policy Recommendations

- Regulatory instruments
- Economic/market-based instruments
- Behavioral/social instruments
- Institutional/delivery instruments

Analytical Framework for Evidence-Based Policy; Processes

To ensure policy design is grounded in the lived realities of diverse communities.

☐ **Adoption Models**

- Diffusion of Innovations: How new practices (e.g., vaccination) spread among livestock keepers
- Behavioral Economics: Nudges, risk perception, and decision heuristics influencing uptake

☐ **Economic Evaluation**

- Compare financial, regulatory, and informational policy tools
- *Efficiency vs. Equity Trade-offs*: Assess resource allocation and long-term sustainability

☐ **Equity Lens**

- *Gender Dynamics*: Who makes health decisions in small ruminant households?
- *Wealth Stratification*: Access and affordability across income groups
- *Livelihood Systems*: Differences between pastoralist and settled communities

What Works: Tools to Boost Vaccination Uptake

- **Policy instruments** are the specific tools or mechanisms that governments or institutions use to achieve a policy goal—in this case, increasing **PPR vaccination among rural livestock farmers**.

Policy instruments

1. Regulatory / Legal Instruments

☐ *Set rules or requirements*

- **Mandatory vaccination in high-risk zones:** Legal requirement with phased or targeted enforcement.
- **Movement or market certification:** Animals need a vaccination certificate to be sold or moved across states/borders.
- **Quality control standards:** Regulation of cold-chain handling and vaccine potency to build farmer trust.

Policy instruments

2. Economic / Market-Based Instruments

❑ Reduce cost barriers and create positive financial incentives

- **Subsidies or vouchers:** Government or donor covers part of the vaccine or service cost so farmers pay less.
- **Conditional cash transfers / rebates:** Farmers receive a small payment or rebate for vaccinating.
- **Public–private partnerships (PPPs):** Government co-finances private veterinary pharmacies or mobile vets to supply vaccines reliably.
- **Tax or fee exemptions:** Remove import tariffs on vaccines or waive movement fees for vaccinated herds.

Policy instruments

3. Informational / Behavioral Instruments

❑ *Improve knowledge, trust, and uptake*

- **Mass communication & social marketing:** Radio, community theatre, SMS reminders explaining benefits and schedules.
- **Community animal health workers (CAHWs):** Train local agents—especially women or trusted pastoral leaders—to vaccinate and advocate.
- **Demonstration herds / model farmers:** Publicize success stories to encourage neighbors (*peer champion models*).
- **Behavioral nudges:** Default enrollment in vaccination drives, appointment reminders, or small non-cash rewards (e.g., animal-health kits).

Policy instruments

4. Enabling / Institutional Instruments

❑ *Build delivery capacity and infrastructure*

- **Cold-chain investment:** Provide refrigerators, portable coolers, and logistics funding.
- **Integrated planning:** National PPR Task Force to coordinate ministries, NGOs, and donors.
- **Data systems & animal ID:** Improve surveillance and traceability to target high-risk herds (“smart vaccination”).

Key Policy Instruments

Category	Examples of Policy Tools	Rationale/Mechanism
Economic / Market-based	Subsidies for vaccines, cost-sharing schemes, conditional cash transfers, micro-insurance tied to vaccination	Reduces financial barriers and incentivizes participation
Regulatory / Legal	Mandatory vaccination laws, movement control, certification for market access	Ensures compliance and reduces spread
Social & Behavioral	Community-led vaccination campaigns, peer champions, gender-sensitive outreach, traditional leader endorsements	Builds trust, addresses cultural or gender barriers
Institutional / Delivery	Public-private partnerships for vaccine distribution, mobile veterinary clinics, training community animal health workers	Improves service access in remote areas

Why Policy Instruments?

☐ Fix Market Gaps:

- Improve access and affordability
- Enable behavior change and service delivery

Output

- ❑ Policy brief summarizing key instruments and recommendations for government stakeholders
- ❑ Decision-support matrix comparing instruments by cost, feasibility, and impact.

Output: Policy brief

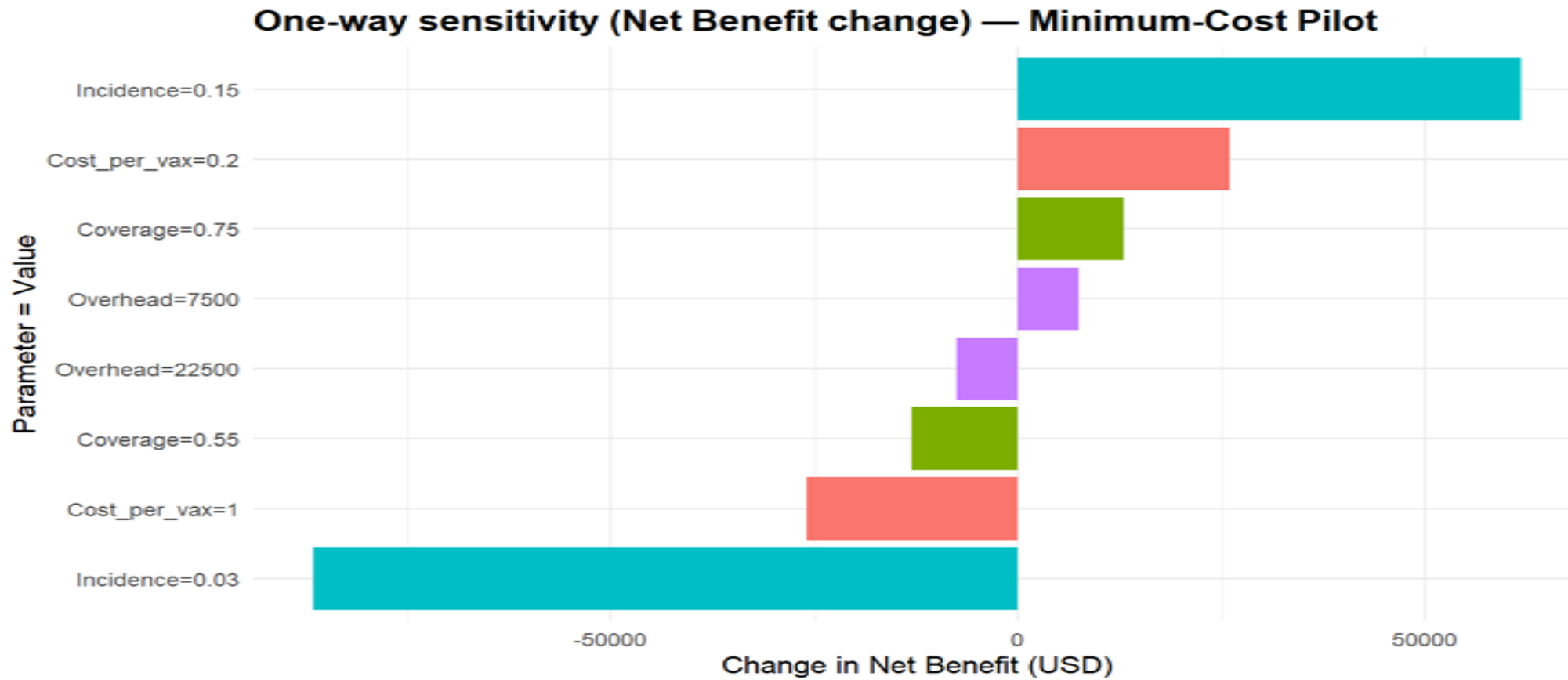
- ❑ Format: 2 pages (policy brief) or 800–1200 words (commentary). Clear, evidence-based, and visually focused.
- ❑ Suggested structure
 - Title + one-line summary (takeaway).
 - Executive summary (3–4 lines).
 - Why it matters (context & impact).
 - What we did (one-paragraph methods).
 - Key findings (bullet points with numbers — e.g., “Full subsidy could avert X deaths and yield BCR = Y”).
 - Policy implications & recommendations (3-4 actionable items).
 - Annex: short methods box & table of scenario results.

Output: Scenario-Based Cost-Benefit Analysis for PPR

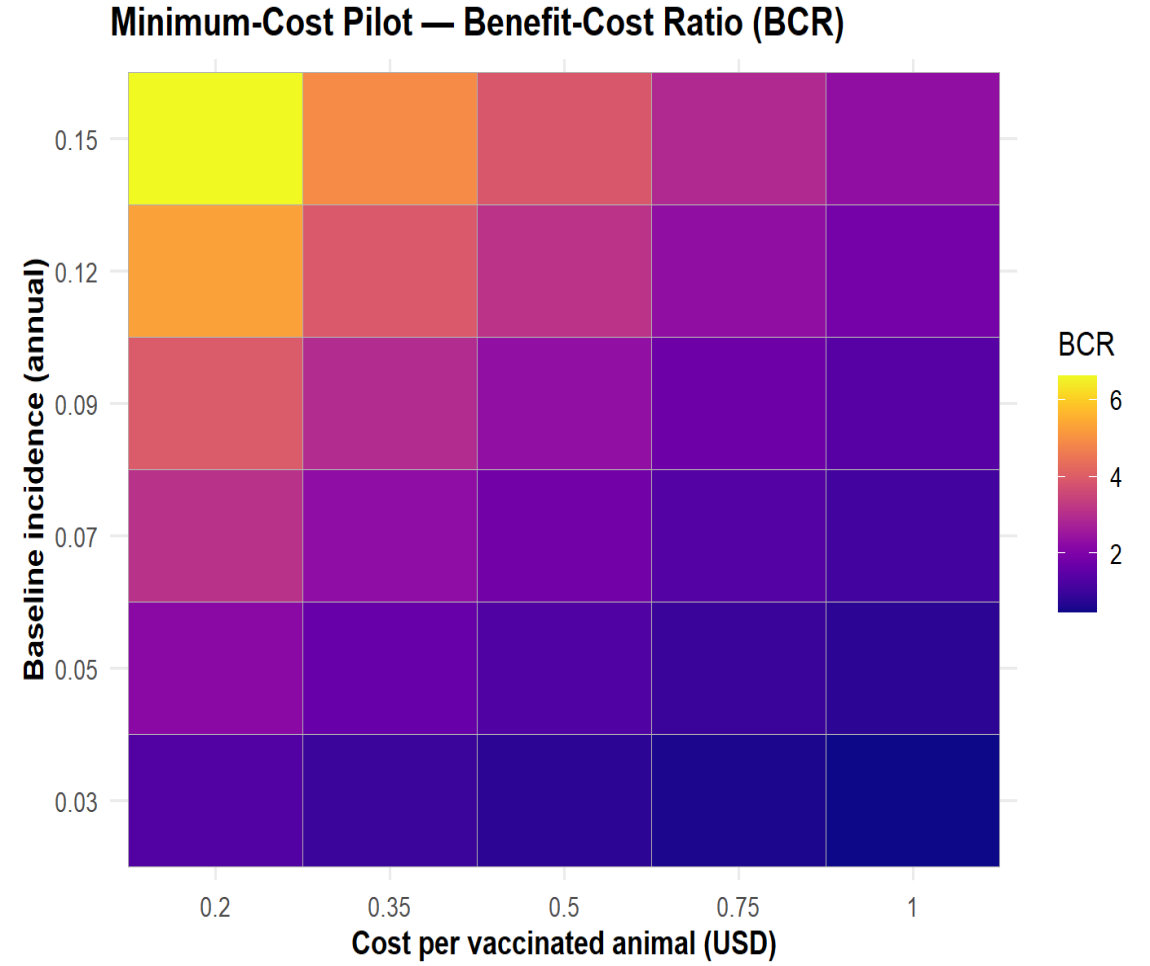
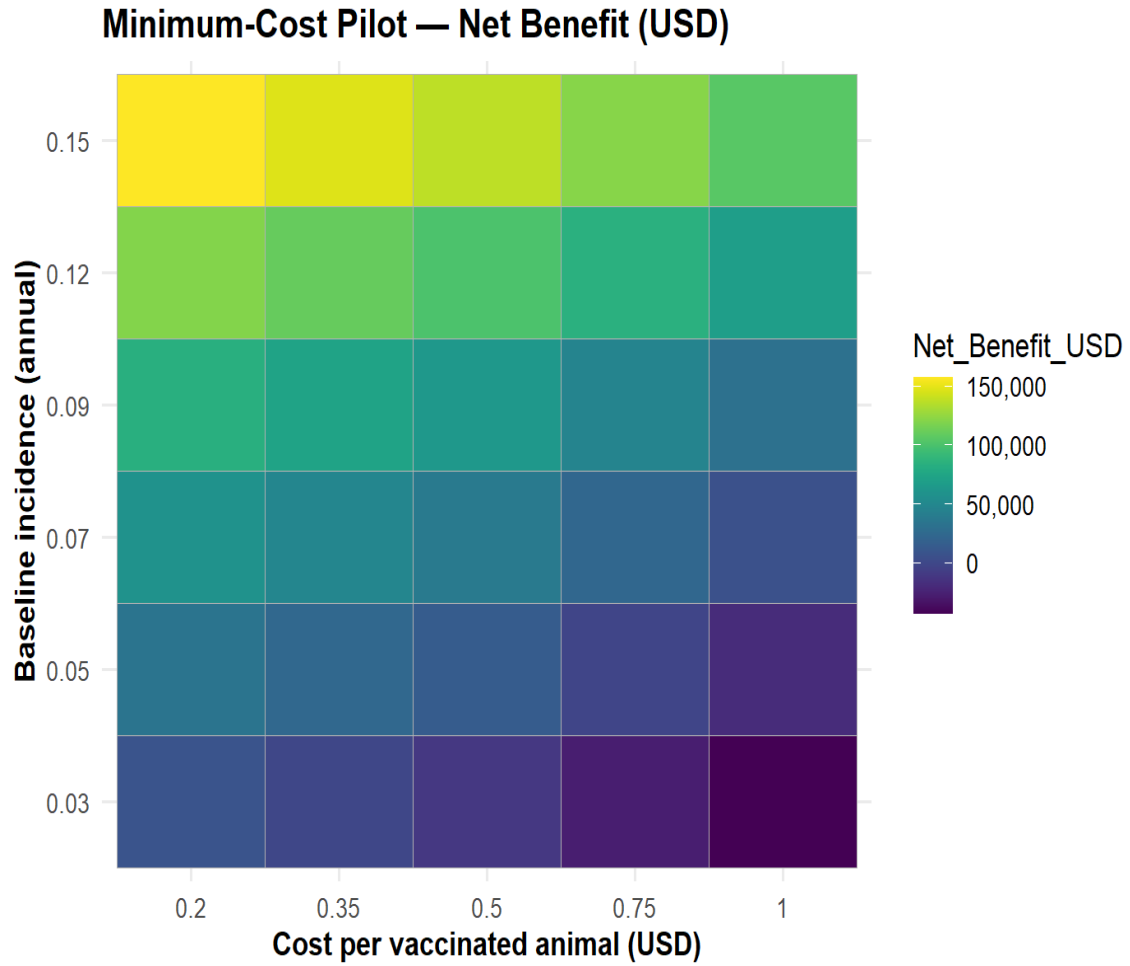
Vaccination: Sudan Case Study:

Scenario	# Animals targeted	Coverage %	Assumed cost per vaccinated animal (USD)	Estimated total cost (USD)	Estimated cases averted per year	Estimated benefits (USD)	Net benefit (USD)	BCR (Benefit-Cost Ratio)
Minimum-Cost Pilot (e.g., one state)	100000	65%	0.40	41,000	6175	123500	82500	3.0
Smart-Rollout (multiple high incidence/trade corridor states)	1000000	80%	0.50	520,000	60800	1094400	574400	2.1
National Acceleration	~50 million small ruminants	90%	0.50	32,000,000	2992500	44887500	12887500	1.4

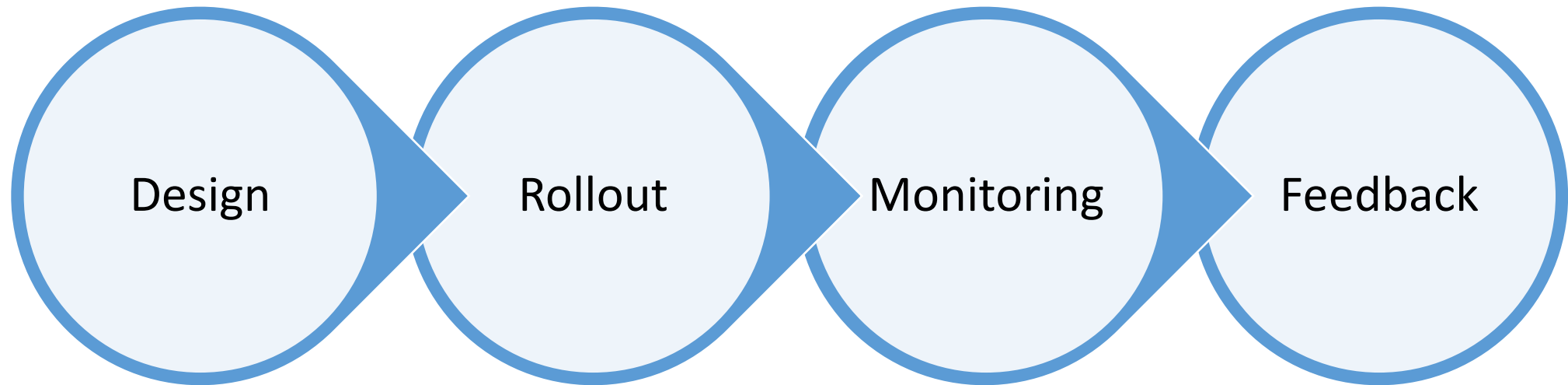
Output:



Output



Implementation Strategy



Implementation Strategy

1. Policy Design

- ❑ *Principles: Inclusivity, regional coherence, and gender equity*
- ✓ Identify high-burden districts
- ✓ Co-design with pastoralist associations
- ✓ *Embed within broader rural development and food security agendas*
- ✓ *Ensure gender-sensitive and inclusive approaches to reach women livestock keepers*
- ✓ *Align with regional frameworks.*

Implementation Strategy

2. Rollout

- ❑ Modality: Phased, adaptive, and community-driven
- ✓ Pilot Programs: Test instruments in selected districts with high PPR burden
- ✓ Capacity Building: Train local animal health workers and extension agents
- ✓ Digital Tools: Use mobile platforms for vaccine tracking and farmer engagement
- ✓ Community Engagement: Launch community-led campaigns

Implementation Strategy

Monitoring and Evaluation

- ❑ Metrics: Livelihood outcomes, vaccination coverage, outbreak reduction
- ✓ Develop KPIs: Vaccination coverage, outbreak reduction, livelihood improvements
- ✓ Conduct periodic impact assessments and policy reviews
- ✓ Use dashboards for real-time data visualization

Implementation Strategy

Feedback

- ❑ Mechanism: Iterative learning and regional knowledge sharing
- ✓ Create feedback loops with communities and field staff
- ✓ Adjust instruments based on evidence and stakeholder input
- ✓ Share lessons through National & regional platforms

Key Takeaway

- ❑ Evidence-based policy ensures that scarce resources are properly utilized and allocated where they deliver the greatest impact—protecting livelihoods, strengthening animal health, and accelerating PPR eradication.

Let Us Commit To Turning Evidence Into Action

Research Gap & Future Research Needs

❑ **Vaccination Coverage Mapping & Equity Analysis**

- **Gap:** Limited disaggregated data on who gets vaccinated (by gender, income, geography).
- **Research Need:** Conduct geo-referenced household surveys and gender-disaggregated coverage studies.
- **Policy Impact:** Enables targeted subsidies and outreach for underserved groups.

❑ **Behavioral Drivers of Vaccination Decisions**

- **Gap:** Sparse data on how risk perception, trust, and social norms affect uptake.
- **Research Need:** Use behavioral economics and ethnographic methods to study decision heuristics.
- **Policy Impact:** Informs design of nudges, peer champion models, and culturally sensitive messaging.

Research Gap & Future Research Needs

❑ **Gendered Decision-Making in Small Ruminant Health**

- **Gap:** Insufficient understanding of intra-household dynamics and women's role in animal health.
- **Research Need:** Conduct participatory rural appraisals and gender-focused surveys.
- **Policy Impact:** Supports gender-sensitive outreach and CAHW recruitment.

❑ **Institutional Delivery Models & PPP Effectiveness**

- **Gap:** Limited evaluation of public-private partnerships and mobile veterinary services.
- **Research Need:** Comparative case studies of PPPs in Ethiopia, Kenya, and Uganda.
- **Policy Impact:** Strengthens institutional design and service reliability.

❑ **Digital Tools for Vaccine Tracking & Engagement**

- **Gap:** Limited evidence on mobile platforms for vaccine scheduling, reminders, and reporting.
- **Research Need:** Pilot digital dashboards and SMS-based systems in pastoralist regions.
- **Policy Impact:** Enhances monitoring, feedback loops, and adaptive rollout.

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