Food and Agriculture Organization of the United Nations

© byrdyak

# Bhutan Risk Communication and Community Engagement Strategy on the Prevention and Control of **African Swine Fever**

# Bhutan Risk Communication and Community Engagement Strategy on the Prevention and Control of **African Swine Fever**

**Abstract**

African Swine Fever (ASF) is a highly contagious viral disease affecting pig populations, causing severe socio-economic consequences for farmers. While ASF does not pose a direct health risk to humans, human actions significantly contribute to its spread. Bhutan has experienced 26 ASF outbreaks across 10 districts since 2021, leading to the culling of 2,898 pigs. The country's vulnerability is heightened by its porous borders with ASF-affected regions in India, informal trade practices, and biosecurity gaps among smallholder farmers.

This ASF Risk Communication Strategy aims to enhance awareness, promote best practices, and strengthen stakeholder coordination to reduce ASF outbreaks. Informed by a Knowledge, Attitude, and Practices (KAP) survey and consultative workshops with livestock officers, the strategy identifies key gaps, including poor biosecurity compliance, mistrust in compensation schemes, and misinformation about ASF.

The strategy follows a phased approach covering pre-outbreak risk communication, emergency response, and post-outbreak recovery. Key interventions include risk-based surveillance, targeted biosecurity improvements, misinformation management, and farmer training through social media, community radio, and direct outreach.

By integrating scientific best practices, behavioural change strategies, and real-time stakeholder engagement, this strategy aims to improve ASF preparedness and response in Bhutan, safeguarding pig farming livelihoods and ensuring effective disease management.

# Contents




## Acknowledgments

The development of this ASF Risk Communication Strategy for Bhutan would not have been possible without the support, expertise, and dedication of key individuals and organisations.

We extend our sincere gratitude to Dr. Vijay Raika and Bhawana Pradhan of the FAO Bhutan Country Office for their invaluable guidance and contributions. We also thank Dr. Sangay from the National Centre for Animal Health (NCAH) for his technical insights and leadership in shaping the strategy. Special appreciation goes to Dr. Domingo Caroof FAO RAP for his expert input and continued support in strengthening Bhutan's ASF response efforts.

We are grateful to the livestock officers from various districts in Bhutan who participated in the consultative workshop, providing firsthand field insights and validating key findings from the Knowledge, Attitude, and Practices (KAP) Survey. Their expertise and experiences have been instrumental in ensuring the strategy is practical and relevant to Bhutan's unique challenges.

A heartfelt thank you is also extended to the farmers and field officers from Tsirang and Gelephu, whose participation in the KAP Survey has helped shape evidence-based recommendations for ASF risk communication. Their willingness to share their experiences and challenges has provided essential insights into the realities of ASF prevention and response at the community level.

This strategy is a result of collaborative efforts, and we acknowledge the dedication of all stakeholders involved in working towards a more resilient and prepared Bhutan in the fight against ASF.


## Abbreviations and Acronyms

ASF – African Swine Fever
ASFV – African Swine Fever Virus
BFDA – Bhutan Food and Drug Authority
BVTs – Border Vigilance Teams
DDM – Department of Disaster Management
DoFPS – Department of Forests and Park Services
DoL – Department of Livestock
FAO – Food and Agriculture Organization of the United Nations
IEC – Information, Education, and Communication
KAP – Knowledge, Attitude, and Practices
LG – Local Government
MoF – Ministry of Finance
NASFPCP – National African Swine Fever Prevention and Control Plan
NCAH – National Centre for Animal Health
NICC – National Incident Command Committee
PCR – Polymerase Chain Reaction (diagnostic testing method)
RBP – Royal Bhutan Police
SWILL – Uncooked or untreated kitchen waste fed to pigs
TWGs – Technical Working Groups
VVTs – Veterinary Vigilance Teams
WOAH – World Organisation for Animal Health (formerly OIE)

# Executive Summary

African Swine Fever (ASF) is a highly contagious viral disease that has significantly impacted Bhutan's pig farming sector since its first outbreak in 2021. While ASF poses no direct health risks to humans, its rapid spread and high mortality rates in pigs have led to 26 recorded outbreaks across 10 districts, affecting 449 pigs and resulting in the culling of 2,898 pigs. Bhutan's geographical proximity to ASF-affected regions in India, informal trade practices, swill feeding, and limited biosecurity compliance among smallholder farmers contribute to its vulnerability to ASF outbreaks.

**Purpose of the Strategy**
The ASF Risk Communication Strategy aims to strengthen awareness, promote behavioural change, and improve stakeholder coordination to reduce the risk and impact of ASF outbreaks in Bhutan. It is informed by a Knowledge, Attitude, and Practices (KAP) survey, which highlighted key knowledge gaps, attitudes, and biosecurity challenges among farmers. Additionally, insights from a consultative workshop with livestock officers validated the survey findings and helped shape actionable recommendations.

**Key Findings and Challenges**
- Biosecurity Compliance Issues: Farmers often adopt biosecurity measures only when compelled, with reluctance due to costs and logistical challenges.
- Delayed Reporting of ASF Cases: Some farmers avoid reporting ASF cases due to mistrust in compensation schemes or fear of financial losses.
- High-Risk Pig Farming Practices: Traditional free-range farming, swill feeding, and poor farm biosecurityincrease ASF transmission risks.
- Cross-Border Risks: Illegal imports of live pigs and pork products from ASF-affected areas pose a major risk due to long, porous southern borders.
- Misinformation and Fake News: Farmers and the general public have misconceptions about ASF, leading to complacency or panic during outbreaks.

**Key Interventions**
- Risk-Based Surveillance & Enhanced Biosecurity: Implement spatial and temporal risk assessments, enforce farm-level biosecurity upgrades, and conduct regular monitoring.
- Misinformation Management: Strengthen public trust by countering fake news and ensuring consistent, transparent messaging through media.
- Stakeholder Engagement & Training: Build capacity for veterinary staff, law enforcement, and local governments to improve ASF response.
- Community-Based Awareness & Farmer Support: Use social media, community radio, and interactive workshops to ensure farmers receive accurate and actionable information.

**Expected Outcomes**
- Reduced ASF transmission through improved biosecurity and early reporting.
- Enhanced farmer cooperation and trust in government interventions, including compensation mechanisms.
- Better preparedness and outbreak response coordination among key stakeholders.

This strategy aligns with Bhutan's National African Swine Fever Prevention and Control Plan (NASFPCP) and global best practices in animal health risk communication. By integrating science-based interventions, local engagement, and targeted messaging, it aims to safeguard Bhutan's pig farming sector from the long-term impacts of ASF.



# Introduction:
# Understanding African Swine Fever (ASF)

African swine fever (ASF) is a highly contagious viral disease that severely affects domestic pigs and wild boars, with mortality rates often reaching up to 100 percent. Caused by the ASF virus (ASFV), a large double-stranded DNA virus from the Asfarviridae family, ASF has devastating socio-economic impacts in regions where pig farming is a significant livelihood. The disease's ability to spread rapidly across borders and its resilience in various environmental conditions add to its complexity and persistence.

ASF was initially identified in Africa but has since spread across Europe and Asia. Genotype II, the variant responsible for the ongoing ASF pandemic, is particularly destructive. Transmission occurs through direct contact between infected and healthy pigs, ingestion of contaminated feed, exposure to infected carcasses, or blood. Human activities, including improper disposal of pork waste and lapses in farm biosecurity, contribute significantly to the virus's spread. Notably, ASF is not zoonotic and poses no risk to human health, but its economic implications are severe for communities reliant on pig farming.

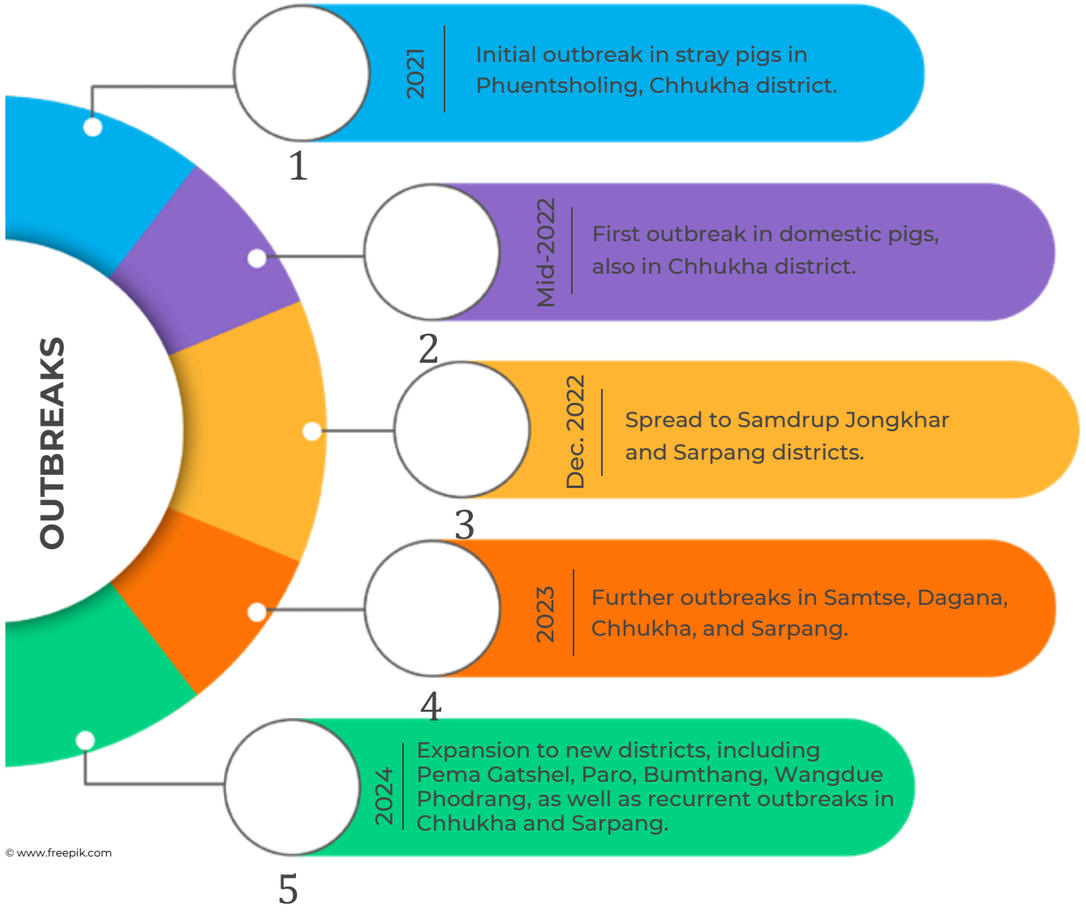


# Situation Analysis: **The ASF Challenge in Bhutan**

## 2.1 The ASF Situation in Bhutan

ASF was first detected in Bhutan in 2021, in stray pigs in Phuentsholing, a critical border town in the Chhukha district. The outbreak was linked to illegal pork imports from neighbouring India. This marked the beginning of a series of outbreaks that have since significantly impacted Bhutan's pig farming sector. Key outbreaks include:

*Figure 1. ASF outbreaks in different regions of Bhutan (2021-2024)*







© UN Geospatial/www.un.org

*Figure 2. Dzongkhags affected by ASF to date.*

To date, Bhutan has recorded 26 ASF outbreaks across 10 districts, affecting 449 pigs and resulting in the culling of 2,898 pigs. With a total pig population of 22,954, these outbreaks represent a significant challenge to the livelihoods of pig farmers, particularly in southern Bhutan.

## Bhutan's ASF Prevention and Control Strategy

Bhutan's approach to ASF prevention and control is guided by its National African Swine Fever Prevention and Control Plan (NASFPCP). This plan incorporates lessons learned from past outbreaks and integrates emerging strategies to strengthen the country's response. The NASFPCP is underpinned by a "stamping out" approach, which encompasses the following key components:

### Risk-Based Surveillance

- Implementation of spatial and temporal risk assessments targeting both wild boars and domestic pigs.
- Enhanced epidemiological surveillance to monitor and predict outbreak patterns effectively.

### Enhanced Biosecurity Protocols

- Mandatory measures for all pig farms, including:
  - Boundary fencing to prevent contact with wild boars.
  - Foot dips at entrances to reduce pathogen spread.
  - Compulsory disinfection stations at strategic farm entry points.
- Regular biosecurity compliance audits conducted by veterinary officers.

### Swill Feeding Control

- Prohibition of feeding uncooked or untreated kitchen waste (swill) to pigs.
- Mandated boiling of swill to 70°C for 30 minutes before feeding, with penalties imposed for non-compliance.

### Regulatory and Awareness Measures

- Stricter quarantine protocols for imported pigs and pig products, including specific protocols for managing rescued pigs (Tshethar pigs).
- Comprehensive awareness campaigns using television, radio, social media, and community meetings, with ASF education integrated into school curricula in high-risk areas.

## 2.2 Key Risks Associated with ASF in Bhutan

The ASF outbreaks in Bhutan have evolved over time, both in scope and geographic spread. Initially confined to stray pigs in Phuentsholing, outbreaks quickly escalated to affect domestic pigs and expanded into new districts. The recurrence and increasing frequency of outbreaks, particularly in southern districts like Chhukha and Sarpang, highlight Bhutan's vulnerability to ASF. Key risks identified in the NASFPCP include:

i. Cross-Border Movement of Pigs and Pork Products:
- Bhutan shares porous borders with ASF-affected regions in India, facilitating the illegal movement of pigs and pork products. Enhanced surveillance by Border Vigilance Teams (BVTs) aims to mitigate this risk.

ii. Biosecurity Gaps:
- Smallholder and semi-commercial farms often lack resources and technical capacity to implement robust biosecurity measures. The NASFPCP has introduced mandatory protocols, including boundary fencing, controlled farm access, and disinfection stations.

iii. Swill Feeding Practices:
- The practice of feeding untreated kitchen waste to pigs is a significant risk factor. The NASFPCP enforces strict prohibitions on uncooked swill feeding and mandates penalties for non-compliance.

iv. Wild Pig Interactions:
- The overlap of domestic pig populations with wild boars increases transmission risks. Collaborative surveillance between the Department of Livestock and the Department of Forests and Park Services (DoFPS) focuses on monitoring morbidity and mortality in wild boar populations.

v. Surveillance and Diagnostic Capacity:
- Limited infrastructure for rapid diagnostics, particularly at the local level, delays early detection. Recent upgrades include the procurement of real-time PCR kits and the training of field staff.

vi. Outbreak Management Challenges:
- Zoning protocols introduced during outbreaks designate infected, protection, and ASF-free zones to contain the spread. Humane culling, standardized disposal, and compensation mechanisms have been established to support containment.

vii. Awareness and Trust Deficits:
- Farmer hesitancy to report outbreaks due to fear of financial loss and distrust in government interventions poses a significant challenge. Transparency in compensation schemes and consistent messaging aim to rebuild trust.



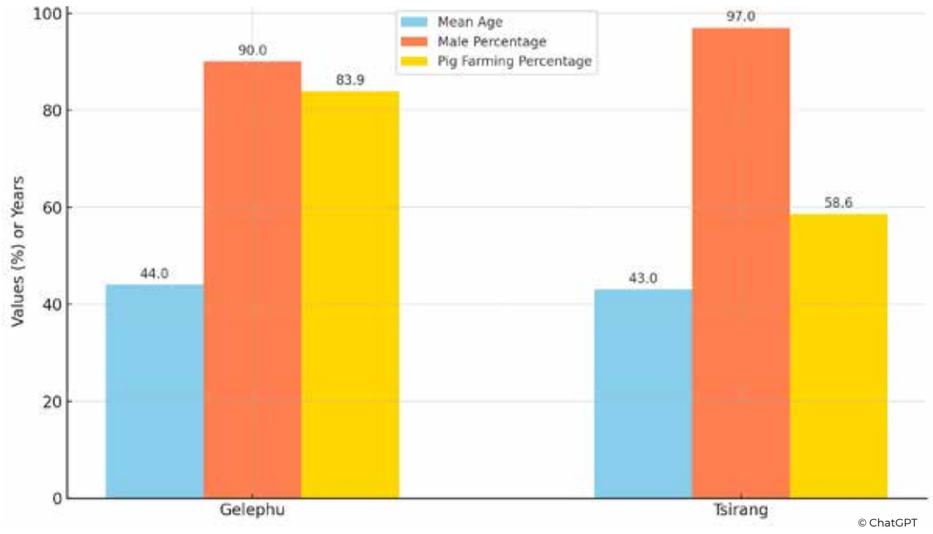
## 2.3 Knowledge, Attitude, and Practices on ASF Among Bhutanese Farmers

### Findings from the KAP Survey

A Knowledge, Attitudes, and Practices (KAP) survey was conducted among farmers in two districts of Bhutan—Gelephu (an area that has experienced ASF outbreaks) and Tsirang (a district yet to encounter outbreaks). The survey aimed to assess how farmers perceive ASF risks, their preparedness, and their biosecurity practices.

### Demographics

*Figure 3. Data showing how farmers perceive ASF risks, their preparedness, and their biosecurity practices.*




### Knowledge

Farmers from both districts demonstrated strong knowledge of ASF, but critical gaps persist:

- **ASF as a Viral Disease**: Nearly all farmers (Gelephu: 77.4%; Tsirang: 100%) correctly identified ASF as viral.

- **Non-Zoonotic Nature:**
  - Gelephu farmers were more aware, with only 9.7% believing ASF could affect humans.
  - Tsirang farmers showed more misconceptions, with 31% mistakenly thinking ASF was zoonotic and 17% unsure.

- **Environmental Persistence:**
  - Only 52% of Gelephu farmers and 69% of Tsirang farmers knew ASF could survive in pork products and the environment for weeks or months.

- **Post-Outbreak Restocking:**
  - None of the farmers in either district were aware of the recommended 1–3 month waiting period before restocking pigs.

### Attitudes

- **Concern About ASF Risks:** Farmers across both districts expressed high levels of concern (Gelephu: 100%; Tsirang: 97%) and acknowledged the importance of biosecurity measures.

- **Perception of Government Intervention:**
  - Gelephu farmers were more critical of government interventions, with many highlighting financial losses and inconsistencies in guidelines.
  - Tsirang farmers viewed interventions more favourably but noted concerns about fairness and costs.

### Practices

- **Biosecurity Measures:**
  - Both groups adhered to key practices like cleaning pig pens daily (100%) and properly disposing of carcasses through burial (100%).
  - Gelephu farmers were slightly more diligent with tool disinfection (61% vs. 52% in Tsirang).

- **Visitor Control:**
  - Tsirang farmers were stricter, with 55% enforcing strict no-visit policies compared to 19% in Gelephu.

- **Veterinary Engagement:**
  - Tsirang farmers were more likely to call a vet immediately (69%) than Gelephu farmers (58%).

### Comparison of KAP Results with Identified Risks

**The KAP survey findings align with the risks identified in Bhutan's National ASF Control Strategy:**

a. Cross-Border Movement of Pigs and Pork Products:
- Farmers in both districts understood the importance of fencing and restricting pig movement but lacked awareness of how porous borders and illegal imports contribute to ASF spread.
- Communication must target these gaps by emphasising cross-border risks and preventive measures.

b. Biosecurity Gaps in Smallholder Farms:
- Most farmers recognised the importance of biosecurity, but gaps in tool disinfection (39% in Gelephu; 48% in Tsirang) and feeding practices (3% in Gelephu; 10% in Tsirang still using kitchen waste) persist.
- Messages should focus on affordable biosecurity solutions and highlight the risks of untreated feed.

c. Surveillance and Reporting:
- Gelephu farmers were less likely to report ASF cases to authorities immediately (48%), possibly reflecting distrust from past outbreak experiences. In contrast, 100% of Tsirang farmers expressed readiness to report.
- Building trust through transparent communication and timely compensation mechanisms is crucial.

d. Cultural Sensitivity:
- Traditional beliefs influenced practices more in Tsirang, suggesting that culturally sensitive communication approaches will be essential for effective outreach.



© Ngedrup

## 2.4 Lessons from Consultative Workshop with Livestock Field Officers

After the completion of KAP analysis findings from Tsirang and Gelephu, a consultative workshop with field and livestock officers from various dzongkhags was organised to validate the KAP findings as well as understand their field experiences in ASF management.

### A. Observations on Farmer Practices and Biosecurity

- **Compliance with Biosecurity Measures:**
  - Farmers implement biosecurity measures reluctantly, often only under compulsion.
  - Financial constraints and the fact that biosecurity guidelines were introduced after farm construction make adherence difficult.
  - Farmers' attitudes also play a critical role; some rely on government compensation and avoid taking ownership of prevention measures.
  - There's a perception among some farmers that pig farming's significance in southern Bhutan makes government intervention inevitable.

- **Situational Interest:**
  - Farmer awareness and interest in biosecurity are heightened during ASF outbreaks but diminish in the absence of immediate threats.

- **Challenges with Compensation:**
  - Farmers are aware of compensation schemes but lack clarity on eligibility criteria, amounts, and procedures.
  - Documentation requirements disqualify some farmers, leading to dissatisfaction and reduced compliance.

- **Farm Size and Biosecurity:**
  - Larger farms tend to implement higher levels of biosecurity compared to smallholder or backyard farms.

## B. KAP Survey Validation by Livestock Officers

- Knowledge Validation:
  - Farmers in general are aware of ASF and its viral nature but lack detailed understanding of:
    - Environmental persistence of ASF.
    - Restocking protocols post-outbreak.
  - Majority recognise ASF symptoms only after observing them in their pigs.

- Practices Validation:
  - Biosecurity practices such as tool disinfection are inconsistent and poorly implemented, with cost cited as a major barrier.
  - Vehicle sharing among farmers remains common, contributing to the potential spread of ASF.

- Attitudes Validation:
  - Farmers' willingness to report outbreaks varies significantly. Fear of financial losses often deters early reporting.

## C. Regional Experiences with ASF

- Sarpang:
  - During the first outbreak, farmers cooperated well, but delays in reporting during the second outbreak caused significant losses. Emotional reactions included panic and anxiety.
- Paro:
  - Resistance to culling was reported, with one farmer escalating the issue to local authorities, creating tension between government officials and farmers.
- Chukha and Samtse:
  - Advocacy and awareness programmes have been conducted regularly. WhatsApp groups were created to share ASF updates and biosecurity reminders.
- Darla:
  - Teams frequently visit farms to reinforce biosecurity measures.
- Thimphu:
  - Advocacy sessions occur three to four times per year.

## D. Challenges Identified

- Farmer Awareness:
  - While farmers know about ASF, they lack depth in understanding the disease's symptoms, risks, and preventive measures.
  - Backyard farmers present unique challenges due to informal practices and poor biosecurity.
- Compensation Issues:
  - Lack of clarity on compensation schemes contributes to mistrust and non-compliance.
- Biosecurity Deficiencies:
  - Farmers often neglect key practices such as tool disinfection and vehicle hygiene.
  - Expenses and logistical challenges deter adoption of minimum biosecurity standards.
- Resistance to Culling:
  - Some farmers resist culling measures, citing emotional and financial reasons.
- ASF Communication:
  - Advocacy success varies based on incentives. Farmers are more likely to attend sessions when rewards are offered.



## E. Role of Key Agencies in ASF Prevention and Control

- Bhutan Food and Drug Authority (BFDA):
  - Regulates illegal markets and inspects pig products.
  - Conducts situational updates and enforces biosecurity standards.
- Royal Bhutan Police (RBP):
  - Assists in border checks and movement restrictions.
  - Participates in simulations and public awareness campaigns.
- Forestry Department:
  - Monitors wild pig populations and collects ASF-related samples.
  - Trains staff on wildlife health and biosecurity.
- Local Government:
  - Disseminates information within communities.
  - Facilitates logistics and links farmers to relevant agencies.
  - Acts as a social policing mechanism through community leaders (e.g., Tshogpas and Gups).
- Department of Livestock (DoL):
  - Leads technical interventions, including surveillance and outbreak response.
  - Conducts capacity building and emergency preparedness.
  - Collaborates with BFDA and local governments.

© Ngedrup

### F. Recommendations for Risk Communication and Advocacy

a. Pre-Outbreak (Risk Communication)

- Conduct sensitisation workshops to educate farmers on ASF symptoms, biosecurity, and government policies.
- Emphasise the importance of farm registration and feed management.
- Create a network of trained "biosecurity champions" among farmers.

b. During Outbreak (Emergency Communication)

- Lock farms and enforce movement restrictions.
- Prohibit pork sales from affected areas and sharing of feed.
- Heighten biosecurity standards and inform farmers about their roles in outbreak control.

c. Post-Outbreak (Recovery Communication)

- Maintain surveillance for at least 42 days post-outbreak.
- Provide clear guidelines on restocking and observe downtime periods.
- Strengthen biosecurity monitoring and record-keeping systems.

d. Building Trust

- Improve transparency in compensation schemes and advocate for policy changes to incentivise early reporting.
- Use local leaders and trusted community figures to disseminate accurate information.

### G. Additional Strategic Suggestions

- Develop simulation exercises to prepare stakeholders for ASF outbreaks, with separate guidelines for response and recovery phases.
- Create targeted videos and visual materials to explain stakeholders' roles, responsibilities, and the implications of non-compliance.
- Build a collaborative risk communication team involving all relevant agencies to ensure cohesive messaging.

# 3. Theoretical Framework and Guiding Principles

**Theoretical Framework**

The "quiet" nature of ASF presents unique challenges for risk communication. Unlike zoonotic diseases, ASF poses no direct health risks to humans, which can lead to complacency in disease prevention and control measures. However, this very characteristic makes ASF particularly insidious. Human behaviours—such as handling infected carcasses, improper disposal of pork waste, or feeding untreated food waste—play a significant role in spreading the virus to other pigs, exacerbating outbreaks.

The economic risks of ASF disproportionately affect farmers, as outbreaks can devastate livelihoods through high pig mortality rates and culling measures. Moreover, communities may unknowingly contribute to the disease's spread due to misconceptions, misinformation, or mistrust in government interventions. The following elements define the theoretical foundation of the ASF Risk Communication Strategy:



1. Emphasising ASF's "Quiet" Threat:

- ASF's lack of zoonotic potential creates a false sense of safety in human interactions with infected pigs and pork products. Messaging must highlight that while humans are not directly harmed, their actions can perpetuate the disease cycle.
- Messaging can also draw upon the risk of zoonotic transfer, i.e., the chance that ASF viruses might eventually mutate to affect humans.

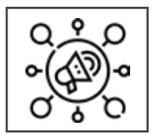
2. Addressing Mistrust in Reporting:

- Findings from the KAP survey in Gelephu reveal that farmers may isolate sick pigs instead of reporting them to authorities. This behaviour reflects distrust in government processes and fear of financial losses, which can lead to delayed interventions and rapid disease spread within close-knit farming communities.

3. Promoting Collective Responsibility:

- Risk communication must instil a sense of shared accountability. Farmers, community leaders, traders, and consumers all have roles to play in preventing ASF. Messages should focus on how individual actions—such as reporting suspicious cases, practising biosecurity, and safe disposal of pork—can protect the entire community.
- Findings from a consultative workshop with livestock officers indicate that local leaders and networks, such as WhatsApp groups, successfully reinforce biosecurity compliance.

4. Targeting Behavioural Change:



- The strategy will incorporate behaviour change models to motivate adherence to biosecurity practices, prompt timely reporting, and discourage unsafe behaviours, such as feeding kitchen waste to pigs or consuming ASF-infected meat.

## Guiding Principles

The ASF Risk Communication Strategy is grounded in globally recognised principles of effective risk communication, adapted to Bhutan's unique socio-cultural and agricultural context. The guiding principles draw inspiration from the Uganda One Health Risk Communication Strategy and the "Seven Cardinal Rules" of risk communication.

a. Transparency and Consistency:
- Provide timely, accurate, and consistent information to stakeholders.
- Communicate the rationale behind interventions such as culling and compensation to build trust and understanding.

b. Cultural Sensitivity and Inclusivity:
- Tailor messages to align with cultural norms, traditional beliefs, and local languages.
- A portion of Bhutanese farmers in the KAP survey still expressed a belief in faith's impact on animal health.
- Involve community leaders in message dissemination to enhance credibility and reach.

c. Empathy and Respect:
- Acknowledge the economic and emotional toll ASF outbreaks take on farmers.
  - Highlight some stories of farmers impacted by ASF on a national level so as to engage people's emotions.
- Frame messages in a way that respects farmers' knowledge and experiences, to foster collaboration rather than compliance.
- Incorporate farmer testimonials and recovery stories to personalise messaging.

d. Clarity and Actionability:
- Use simple, clear language to convey risk and recommended actions.
  - Organise key messages nationally, and ensure all regulators and government agents are providing similar advice.
- Focus on what farmers can do immediately to mitigate risks, such as isolating sick pigs, reporting cases, and practising biosecurity.

e. Building Trust:
- Engage communities through participatory approaches that involve farmers in decision-making.
- Provide transparency in compensation schemes and government interventions to reduce mistrust.
  - During the KAP survey, some farmers expressed dissatisfaction with the size of compensation for culling.

f. Community Ownership:
- Encourage local responsibility by empowering farmers and communities to lead biosecurity efforts.
- Train community-level "biosecurity ambassadors" to serve as trusted sources of information. This could be added onto the Community Resource Personnel pilot that MoAL and FAO have already initiated through FSAPP.

g. Integrated and Multi-Sectoral Approach:
- Coordinate communication efforts across sectors, including agriculture, public health, and local governance.
- Foster collaboration between veterinary services, extension workers, and community leaders.



## Seven Cardinal Rules of Risk Communication

i. Acknowledge Public Concerns:
- Recognise farmers' fears of financial loss and cultural resistance to culling as valid concerns that require empathetic responses.

ii. Be Honest and Open:
- Provide transparent updates about ASF outbreaks and government measures to control them.

iii. Coordinate Messages:
- Ensure consistent messaging across all stakeholders, from government officials to community leaders.

iv. Speak Clearly and with Compassion:
- Avoid technical jargon and frame messages in a way that demonstrates understanding of farmers' challenges.

v. Plan for Media Engagement:
- Use appropriate media channels (e.g., Facebook, radio) to reach different segments of the farming community.

vi. Evaluate and Adapt:
- Continuously monitor the effectiveness of communication efforts and adjust strategies based on feedback.

vii. Empower Communities:
- Equip farmers with the knowledge and tools to protect their livelihoods, creating a sense of shared responsibility.

*Figure 4. Evaluating communication effectiveness, and empowering communities with knowledge and tools.*

# 4. Strategic Goals and Objectives

### Strategic Goals

a. Increase awareness and knowledge of ASF among:
- Farmers, with a focus on biosecurity measures and recognising early signs of ASF.
- The general population, particularly on ASF's quiet nature and the risks their actions might pose.

b. Address knowledge gaps, mistrust and practice inconsistencies.

c. Demonstrate identified risks from the National ASF Control Strategy and make them relatable to stakeholders.

d. Address attitudes and practices highlighted in the KAP survey, particularly mistrust in government interventions and misconceptions about ASF control measures.

e. Encourage effective, coordinated actions by stakeholders to prevent and respond to ASF outbreaks.

f. Build stakeholder capacity to engage in risk communications and promote behaviour change through clear, consistent messaging.

g. Strengthen trust between farmers and the government, focusing on transparency, integrity, and expertise.

h. Provide guidance for message development, answering key questions: who, what, where, when, why, and how.

### Objectives

a. Raise awareness of biosecurity measures, targeting gaps identified in the KAP survey (e.g., tool disinfection, restricting pig movement, and feeding practices).

b. Raise awareness of tool disinfection, clear restocking timelines, and reporting mechanisms.

c. Encourage farmers to report suspicious ASF cases immediately to authorities.

d. Enhance understanding of ASF risks among the general public, focusing on behaviours that could inadvertently spread the virus.

e. Provide timely and accurate information during ASF outbreaks to combat misinformation and promote rapid action.

f. Offer clear, actionable guidance on post-outbreak recovery measures, including restocking timelines and continued surveillance.

g. Build a dedicated ASF Risk Communication Team to coordinate messaging and ensure consistency across districts.



# 5. Target Audiences

1. **Pig Farmers**
2. **Meat Vendors**
3. **General Public**
4. **Hoteliers**
5. **DoL/NCAH**
6. **Feed Agents**
7. **Local Governments**
8. **BFDA**
9. **RBP**
10. **Forestry Officials**
11. **Department of Disaster Management (DDM)**
12. **Ministry of Finance (MoF)**
13. **International Agencies (FAO, WOAH)**

# 6. Communication Channels and Tools

**Media Usage Patterns Among Farmers**

1. Gelephu:
   - Social Media Platforms:
   - 26 out of 31 farmers (84%) use Facebook.
     - 19 farmers (61%) use Telegram.
     - 8 farmers (26%) use WhatsApp.
     - 2 farmers (6%) do not use social media at all.
   - Engagement Levels:
     - 71% of farmers use social media lightly (0.5–1 hour/day).
     - A minority (13%) use it for more than 3 hours daily.

2. Tsirang:
   - Social Media Platforms:
     - All 29 farmers (100%) use Facebook.
     - 25 farmers (86%) use Telegram.
     - 20 farmers (69%) use WhatsApp.
     - TikTok and Instagram are used by 4 farmers each (14%).
   - Tsirang farmers have broader platform adoption compared to Gelephu, reflecting a potential for more diverse media engagement.



**Communication Strategy Recommendations**

1. Platform-Specific Messaging:
   - **Facebook:** Prioritise Facebook for reaching both Gelephu and Tsirang farmers, given its universal usage in Tsirang and high penetration in Gelephu. Use:
     - Informative posts with visuals explaining ASF transmission and prevention.
     - Short videos about biosecurity key points.
     - Short videos or testimonials from local farmers who implemented effective biosecurity measures.
   - Telegram and WhatsApp:
     - Use Telegram and WhatsApp for direct dissemination of ASF updates, short audio messages, and infographics. These platforms are well-suited for farmers with limited daily social media engagement.

2. Leverage Light Usage Patterns:
   - Farmers in both areas primarily use social media lightly. Craft concise, engaging content that delivers key messages in under 1–2 minutes, such as:
     - Short videos: Explain critical steps to prevent ASF or show safe waste disposal practices.
     - Infographics: Visually highlight dos and don'ts of biosecurity and feeding practices.

3. In-Person is Key:
   - Although all respondents said they thought ASF was serious, the communications strategy should not try to compete in the attention economy against other more interesting topics and influencers by creating content for organic postings.
     - Use content that can be shown to farmers during trainings
     - Develop activities on in-person learning

4. Interactive Content:
   - Encourage local veterinary officers or government representatives to participate in these forums, addressing common doubts and misconceptions.

5. Market Engagement:
   - Distributing messages at livestock markets and feed supply stores.
   - Collaborating with feed suppliers on farmer education.

# 7. Stakeholder Risk Communications Matrix

| Stakeholder | Peace Period | Outbreak Period | Post Outbreak Period |
|---|---|---|---|
| **Pig Farmers** | • Biosecurity practices (disinfection, limiting pig movement), especially on the biosecurity guidelines and farm registration procedures.<br>• Emphasise reporting suspicious pig deaths.<br>• Raise awareness of ASF risks and transmission pathways.<br>• Clarify compensation policies and eligibility. | • Report suspicious signs immediately.<br>• Follow strict biosecurity measures (lock farms, restrict visitors).<br>• Cooperate with culling and disposal measures.<br>• Stop sharing equipment and feed.<br>• Know what to do as an index farmer and as a neighbour to an index farmer | • Ensure adherence to restocking timelines.<br>• Re-emphasise biosecurity measures.<br>• Participate in post-outbreak training and recovery planning. |
| **Meat Vendors** | • Raise awareness about safe handling and legal sourcing of pork.<br>• Provide training on risks of illegal meat imports.<br>• Promote registration of meat transportation vehicles.<br>• Form registered vendors-farmer partnerships to put peer pressure on illegal importers | • Halt sale of pork products from affected areas.<br>• Ensure strict compliance with government restrictions.<br>• Report illegal imports. | • Continue safe handling practices and compliance.<br>• Support public awareness on legal meat sourcing and food safety. |
| **General Public** | • Educate on ASF's non-zoonotic nature but emphasise the role of human actions in spreading ASF.<br>• Show the impact of their ASF illiteracy on farmers lives<br>• Advocate safe handling of pork and waste disposal. | • Avoid purchasing pork from affected areas.<br>• Follow government advisories.<br>• Report suspicious meat sales or pig deaths. | • Avoid complacency.<br>• Promote continued awareness of ASF risks and prevention measures. |
| **Hoteliers** | • Awareness of risks from untreated pork waste.<br>• Encourage proper disposal of kitchen waste. | • Restrict sourcing of pork from affected areas.<br>• Ensure kitchen waste is not used as pig feed. | • Maintain proper waste disposal practices.<br>• Support community awareness efforts on ASF prevention. |
| **DoL/NCAH** | • Conduct farmer training on ASF risks, symptoms, and biosecurity.<br>• Strengthen surveillance systems and laboratory capacity.<br>• Become the authority on ASF-related news, regionally and nationally; issue regular updates on ASF both on social media as well as through strategic channels.<br>• Provide clear guidance and communications training for all outbreak personnel on outbreak response protocols. | • Lead outbreak response (surveillance, diagnosis, and containment).<br>• Coordinate with other agencies and stakeholders.<br>• Issue clear public advisories. | • Facilitate restocking guidelines and monitoring.<br>• Conduct post-outbreak debriefs with all stakeholders.<br>• Evaluate response effectiveness and improve guidelines. |
| **Feed Agents** | • Ensure farmers are educated on safe feed practices.<br>• Provide biosecurity materials (disinfectants). | • Cooperate with authorities in monitoring feed sales, specifically to affected areas | • Promote continued use of biosecure feed.<br>• Collaborate in community awareness efforts. |

| | | | |
|---|---|---|---|
| **Local Governments** | • Monitor meat markets and illegal imports.<br>• Conduct inspections and awareness campaigns on legal sourcing of pork | • Implement bans on illegal pork imports.<br>• Enforce compliance in meat handling and distribution.<br>• Provide regular updates on affected areas. | • Resume regular inspection cycles.<br>• Support implementation of updated biosecurity guidelines.<br>• Conduct awareness sessions for vendors and consumers. |
| **BFDA** | • Act as community link between farmers and government. | • Restrict sourcing of pork from affected areas.<br>• Ensure kitchen waste is not used as pig feed. | • Maintain proper waste disposal practices.<br>• Support community awareness efforts on ASF prevention. |
| **RBP** | • Assist in monitoring cross-border movement of pigs and pork products.<br>• As Point of Entry personnel, heed DoL advisories on outbreaks in the region and ramp up surveillance | • Enforce movement restrictions for pigs and pork products.<br>• Support containment zones.<br>• Coordinate with DoL in outbreak areas. | • Continue monitoring border movement.<br>• Evaluate enforcement strategies for future outbreaks. |
| **Forestry Officials** | • Monitor wild pig populations for potential ASF spread.<br>• Train officials on sample collection and disease surveillance so as to not require redundant trips by DoL personnel. | • Assist with surveillance of wild pig habitats near outbreak areas.<br>• Prevent human-wildlife interactions that could exacerbate ASF spread. | • Continue monitoring wildlife for disease re-emergence.<br>• Maintain collaboration with veterinary and public health agencies. |
| **Department of Disaster Management (DDM)** | • Coordinate with DoL and local governments for emergency response planning.<br>• Assist in capacity building and resource allocation. | • Support logistics for emergency operations (e.g., culling, waste disposal).<br>• Ensure timely dissemination of outbreak updates. | • Evaluate disaster response effectiveness.<br>• Advocate for budget allocations to strengthen future outbreak preparedness. |
| **Ministry of Finance (MoF)** | • Ensure budget availability for biosecurity and outbreak response measures. | • Facilitate timely disbursement of compensation to affected farmers.<br>• Monitor and disburse expenditures for ASF response activities. | • Assess financial impact of the outbreak.<br>• Support adjustments to compensation policies to promote biosecurity and reporting. |
| **International Agencies (FAO, WOAH)** | • Provide technical support and training on ASF prevention and control.<br>• Disseminate global best practices for risk communication. | • Collaborate with national agencies to support outbreak containment.<br>• Facilitate emergency resource mobilisation. | • Assist in post-outbreak evaluations and recovery planning.<br>• Support updates to national ASF prevention strategies based on global insights. |

## 7.1 Countering Fake News

The objective of countering misinformation about African Swine Fever (ASF) is to prevent misconceptions that could undermine control measures and public trust. Key messages must emphasise that while ASF poses no direct health risk to humans, it can devastate livelihoods by severely affecting pig populations. It is crucial to clarify that safe consumption of pork does not eliminate the risk of ASF spreading through improper handling, waste disposal, or contaminated materials.

To achieve this, media stakeholders play a critical role in disseminating verified information, debunking rumours, and ensuring public access to accurate and timely updates. Simultaneously, the government must maintain transparency by issuing clear, consistent, and evidence-based communications, fostering trust and cooperation among farmers, consumers, and other stakeholders.

### The Challenge of Misinformation and Fake News on ASF

ASF outbreaks globally have been accompanied by significant misinformation, which often complicates control measures and stokes public fear. Bhutan is not immune to this trend, especially as rumours and misinformation spread quickly through social media channels and across borders.

a. **Public Fear and Economic Panic:** Misinformation around ASF often leads to unnecessary panic among consumers and farmers. For instance, unfounded claims linking ASF to human health risks have led to changes in pork consumption patterns and market destabilisation in other regions, such as China and Vietnam. Despite ASF posing no risk to human health, Bhutan may face similar economic disruptions if such narratives take hold.

b. **Rumours About Control Measures and Their Consequences:** Across Europe and Asia, control measures like culling infected pigs have been sensationalised as “inhumane” or misrepresented as military interventions. Bhutan’s control strategies involve culling to prevent disease spread, and any public misunderstanding of these methods could hinder compliance and lead to resistance among farmers and community members.

c. **Fraudulent ASF Treatments and Vaccines:** Globally, some entities have taken advantage of ASF outbreaks to promote counterfeit ASF vaccines or ineffective treatments. In regions such as China, scams involving fake ASF vaccines have led to significant economic losses for farmers. Bhutan’s pig farming community may be similarly vulnerable to misinformation regarding unverified ASF treatments, especially as desperation grows during repeated outbreaks.

d. **Cross-Border Misinformation and Its Impact:** In neighbouring countries, exaggerated claims about ASF-linked environmental impacts, like rivers allegedly contaminated by infected pig carcasses, have fuelled environmental concerns. In Bhutan, similar misinformation could impact trust in government responses and create unnecessary fear about agricultural and environmental safety practices.



To effectively address the risk of ASF on Bhutan’s farmers, Bhutan’s National Control Strategy emphasises comprehensive biosecurity, border controls, and targeted farmer education. Addressing the spread of misinformation is also critical, as inaccurate narratives can undermine both public confidence and compliance with control measures. Strengthening public awareness, enhancing biosecurity on smallholder farms, and ensuring accurate, timely information dissemination will be essential to mitigating ASF’s impact on Bhutan.

Food and Agriculture Organization of the United Nations

UN House
Peling Lam, Kawajangsa, Thimphu, Bhutan
www.fao.org/bhutan