

## KINGDOM OF BHUTAN - IHR-PVS NATIONAL BRIDGING WORKSHOP - MARCH 2018

### ASSESSMENT OF LEVELS OF COLLABORATION FOR 16 KEY TECHNICAL AREAS

Technical area (cards)	Rabies	Anthrax	H5N1	Brucellosis	Salmonellosis	Score
Finance	Red	Red	Yellow	Yellow	Red	8
<b>Risk assessment</b>	Red	Yellow	Yellow	Red	Red	8
<b>Education and training</b>	Red	Red	Yellow	Yellow	Red	8
<b>Communication w/ media</b>	Yellow	Yellow	Red	Red	Yellow	7
<b>Joint surveillance</b>	Yellow	Yellow	Yellow	Red	Red	7
<b>Coordination at local Level</b>	Yellow	Yellow	Yellow	Yellow	Yellow	5
<b>Coordination at technical Level</b>	Yellow	Yellow	Yellow	Yellow	Yellow	5
<b>Field investigation</b>	Green	Red	Yellow	Green	Red	5
<b>Human resources</b>	Yellow	Green	Yellow	Yellow	Red	5
Logistics	Yellow	Yellow	Green	Yellow	Red	5
<b>Coordination at high Level</b>	Yellow	Yellow	Green	Yellow	Yellow	4
<b>Response</b>	Yellow	Green	Yellow	Yellow	Yellow	4
Emergency funding	Green	Yellow	Yellow	Yellow	Yellow	4
Legislation / Regulation	Yellow	Yellow	Green	Yellow	Green	3
Communication w/ stakeholders	Yellow	Yellow	Yellow	Green	Green	3
Laboratory	Green	Green	Green	Green	Yellow	1

For each disease, the performance of the collaboration between the human health and the animal health sectors is color-coded: green for “good collaboration”, yellow for “some collaboration”, and red for “collaboration needing improvement”. The score uses a semi-quantitative scale (2 points for a red card, 1 for a yellow card and 0 for a green card). Technical areas marked in bold were selected and addressed in-depth throughout the rest of the workshop.

## ROAD-MAP OF JOINT ACTIVITIES TO IMPROVE THE COLLABORATION BETWEEN ANIMAL HEALTH AND HUMAN HEALTH SECTORS

Action	Timeline	Difficulty (1-3 scale)	Impact (1-3 scale)	Responsibility	Indicators
<b>COORDINATION</b>					
<b>Objective 1: Strengthen intersectoral collaboration at central level</b>					
<b>1.A. Establish and operationalize one health secretariat</b>	Dec. 2018	++	+++	RCDC, DoPH, NCAH, DoL, BAFRA, MoAF	Functional one health secretariat
<b>1.B. Conduct one health workshop annually led by MoH &amp; MoAF on alternate basis</b>	Every March	+	++	DoPH, MoH, DoL, BAFRA, OH secretariat	Workshop report & resolution
<b>1.C. Conduct consultative meeting with relevant stakeholders (private sector, farmer's group, etc.) for introducing new AH policies &amp; new disease control plans.</b>	As & when required	++	++	NCAH, DoL (lead), RCDC, DoPH, DLO, DHO, BAFRA	Meeting report No. of participants
<b>Objective 2: Institutionalize mechanism for coordination at the district level</b>					
<b>2.A. Conduct technical coordination workshop amongst the key stakeholder at the field level annually</b>	Every January	+	+++	DHO & DLO (lead on alternate basis), BAFRA, Livestock extension agents	Workshop report & resolutions
<b>2.B. Develop SOPs for formal coordination between relevant stakeholders for zoonosis at local level by first year of 12th FYP</b>	Jun. 2019	+	++	DoL (Lead), NCAH, DoPH, DMS, BAFRA, Wild life, RLDCs	SOPs developed & distributed
<b>2.C. Engage livestock owners &amp; private sector during disease containment programs of priority diseases for effective disease control</b>	As & when required	++	++	RLDCs (Lead), DVH, DoL, NCAH, RRHs, DH, DMS, RCDC, DoPH, Local gov.	No. of participants. Meeting or awareness program reports.
<b>Objective 3: Strengthen cross-border coordination</b>					
<b>3.A. Advocate for inclusion of transboundary animal diseases and public health issues in the existing border harmonization meeting between India and Bhutan</b>	Jul. 2018	++	+++	DoL(Lead), DoPH, BAFRA, Dept. law and order (India), Dept. local gov. (India)	No. of border harmonization meetings attended by AH and PH officials.
<b>3.B. Dzongkhag Livestock Sector and Dzongkhag Health sector to jointly coordinate border harmonization meeting between relevant stakeholders in Bhutan and India.</b>	Every February	+++	+++	DHO and DLO (lead) Jointly with support from NCAH, RLDC and Regional referral hospitals (RRHs)	Meeting report MoU signed between Bhutan and India

## SURVEILLANCE & RISK ANALYSIS

### Objective 4: Strengthen the surveillance system for prioritized zoonotic diseases

<b>4.A. Conduct a workshop to revisit the prioritized zoonotic diseases and to develop a surveillance plan</b>	Dec. 2018	+	+++	DoL (Lead), DoPH/RCDC, DMS, BAFRA, DoFPS	Workshop report Surveillance plan developed
<b>4.B. Conduct a workshop to develop joint guidelines and SOPs for prioritized zoonotic disease</b>	Feb. 2019	+	+++	DoL (Lead), DoPH/RCDC, DMS, BAFRA, DoFPS	Joint guidelines and SOPs developed
<b>4.C. Conduct a training for relevant field staff at regional or Dzongkhag level (DoL/BAFRA/DOFPS/DMS) on disease surveillance strategy</b>	Apr. 2019, Apr. 2021	++	++	DoPH/RCDC (Lead), DoL, DMS, BAFRA, DoFPS	Training conducted in four regions (two times)
<b>4.D. Develop and integrate joint real time web based and SMS information system for zoonotic events</b>	Jan. 2019	++	+++	DoPH/RCDC (Lead), DoL, DoFPS	Joint web-based information system developed
<b>4.E. Indent and procure laboratory equipment and consumables in 20 Dzongkhags</b>	Sep. 2019	++	+++	DoL (Lead), DOPH/RCDC	Type and number of equipment and consumables procured
<b>4.F. Carry out surveillance on priority zoonotic diseases at human-animal-wildlife interface</b>	Oct. 2019- Sep. 2023	+++	++	DoL (Lead), DoPH/RCDC, DMS, DoFPS	Number of samples collected and tested for each disease
<b>4.G. Compute and analyze surveillance data and disseminate information</b>	Oct. 2019- Sep. 2023	+	++	DoL (Lead), DoPH/RCDC, DMS, DoFPS	Surveillance reports published

### Objective 5: Institutionalize risk analysis as a basis for decision making

<b>5.A. Conduct a joint risk analysis training on zoonotic diseases and food safety to staffs (from DoL/BAFRA/DMS/DoFPS) at regional and Dzongkhag level</b>	Jan. 2019, Feb. 2020	+++	++	DoL (Lead), BAFRA, DoPH/RCDC, DMS, DoFPS	No. of trainings conducted No. of staff trained
<b>5.B. Carry out annual joint risk assessment for prioritized zoonotic diseases and food safety issues</b>	Feb. 2019- Feb. 2023	++	++	DoPH/RCDC (Lead), DoL, BAFRA, DMS, DoFPS	No. of risk assessment reports No. of decisions made based on risk assessment

### Objective 6: Enhance safety of food of animal origin

<b>6.A. Conduct a workshop to prioritize food commodity based on food safety risk and develop action plan</b>	Dec. 2018	++	+++	BAFRA (Lead), DoL, DoPH/RCDC	Workshop conducted and action plan developed
<b>6.B. Conduct workshop to develop guidelines and SOPs on prioritized food commodities</b>	Feb. 2019	++	+++	BAFRA (Lead), DoL, DoPH/RCDC	Joint guidelines and SOPs developed
<b>6.C. Conduct training to field staff (Vet, Paravet) on food borne diseases surveillance/inspection</b>	Mar. 2019	++	++	BAFRA (Lead), DoL, DoPH/RCDC	No. of training conducted No. of staff trained
<b>6.D. Conduct an awareness program to relevant stakeholders</b>	Apr. 2019	++	++	BAFRA	Awareness program

<b>(BAFRA, Private sector/Importers) on safety of food of animal origin</b>					conducted
<b>6.E. Indent and procure laboratory equipment and consumables in 20 Dzongkhags</b>	Sep. 2019	+++	+++	BAFRA	Type and No. of equipment and consumables procured
<b>6.F. Carry out surveillance and testing of residue of food of animal origin</b>	Oct. 2019	++	++	BAFRA	No. of samples collected and tested
<b>6.G. Compute and analyze surveillance data and disseminate information</b>	Oct. 2019- Sep. 2023	+	++	BAFRA	Reports published

## COMMUNICATION WITH MEDIA

### Objective 7: Establish an efficient network for joint risk communication

<b>7.A. Develop communication guidelines and SOPs for risk communication</b>	Jun. 2019	+	++	MoH, DoL, BAFRA, NCD	Guidelines and SOPs developed and endorsed
<b>7.B. Develop TORs for media focal person at national and local level</b>	Feb. 2019	+	+++	MOH, DoL, BAFRA, NCD	ToRs developed and endorsed
<b>7.C. Identify focal points for BAFRA (20), DoL (20) and MOH (20) at district level</b>	Mar. 2019	+	++	DoL, Emergency medical services division, BAFRA	Focal person identified and appointed
<b>7.D. Conduct training of trainers to focal points (60) on risk communication</b>	Jun. 2019	++	+++	MOH, DoL, BAFRA	No. of focal points trained
<b>7.E. Training of animal health and human health workers in the districts by focal points on risk communication</b>	Dec. 2019	++	+++	Focal points of the sector concerned in the district. Lead: MOH	No. of staff trained on risk communication in all the districts.

### Objective 8: Improve effectiveness of communication tools

<b>8.A. Develop, pre-test and finalize information communication and education materials for policy makers and general public on specific notifiable zoonotic diseases.</b>	Jan. 2020	++	+++	MoH, DoL, BAFRA	No. of leaflets printed and distributed
<b>8.B. Optimize the help line numbers (124 DoL, 112 MOH, 155 BAFRA) on risk communication or develop universal helpline</b>	Jan. 2019	++	+++	MOH, DoL, BAFRA	No. of SMS or calls sent to the help line numbers
<b>8.C. Public awareness on the optimized help line numbers</b>	Mar. 2019	+	+++	Concerned agencies	No. of SMS or calls sent to the help line numbers

## FIELD INVESTIGATION & RESPONSE

### Objective 9: Strengthen the capacity for joint field outbreak investigation and response

<b>9.A. Conduct key stakeholder training on the joint field outbreak investigation and response</b>	Jun. 2018, Jan. 2019, Jan. 2020	+	++	One Health Secretariat (Lead), MOAF, MOH	No. of trainings conducted, No. of staff trained
<b>9.B. Establish in-country joint field epidemiology training program (FETP)</b>	Dec. 2019	++	++	KGUMSB & RUB (Lead), NCAH	Curriculum in place No. of cohorts trained
<b>9.C. Conduct biennial joint simulation exercise for disease outbreak management</b>	Mar. 2019	+	+++	MOAF & MoH (Lead), BAFRA, OHS	No. of simulation exercise conducted & report produced

### Objective 10: Enhance coordinated approach to field investigation and response by developing adequate enabling instruments

<b>10.A. Review the Bhutan Health bill to ensure requirements of the public health emergency measures are captured using OH approach</b>	Dec. 2018	+	+++	MOH (Lead)	Clauses on PH emergency measures are reviewed
<b>10.B. Drafting of regulation of public health emergency under the purview of Bhutan health act</b>	Dec. 2020	++	+++	MOH (Lead)	Rules and regulation documented
<b>10.C. Designate FPs from each sector and sign MoU for responding to deliberate introduction of biological or chemical threats</b>	Jun. 2019	+	++	MOAF (DoL) & MOH (Lead), RBP, RBA, NEC, BAFRA,	MoU signed and contact focal points identified
<b>10.D. Develop guidelines and SOPs on outbreak investigation and response to deliberate introduction of biological or chemical threats</b>	Dec. 2020	++	+	DoPH (Lead), DDM	Guidelines and SOPs on developed

## HUMAN RESOURCES & EDUCATION

### Objective 11: Enhance diagnostic capacity for animal and human health laboratory personnel

<b>11.A. Conduct a joint training on diagnosis of high impact zoonotic diseases for laboratory personnel.</b>	Annually by 2020	+	++	RCDC (Lead), NCAH	No. of trainings conducted No. of staff trained
<b>11.B. Conduct post training evaluation of trained laboratory personnel on laboratory diagnosis</b>	End of 2020	+	++	RCDC (Lead), NCAH	No. of evaluations conducted

### Objective 12: Strengthen the epidemiological capacity of human, wildlife and animal health professionals

<b>12.A. Develop a curriculum for One Health Epidemiology Training Program (Short course for 1-3 months)</b>	Dec. 2019	++	+++	RUB (Lead), KGUMSB (Lead), NCAH, DoPH, DoF	Curriculum developed
<b>12.B. Conduct TOT on FETP for the faculty (Ex Country)</b>	Dec. 2019	+	++	DoPH (Lead), DOL, RUB, KGUMSB	No. of faculty trained (4)

<b>12.C. Conduct FETP Training program for Animal, Human health and Department of Forest (cohorts of 20 trainees)</b>	Jul. 2020	++	+++	RUB (Lead), KGUMSB-(Lead), NCAH	No. of trainees trained
<b>12.D. Conduct evaluation of trained FETP &amp; review curriculum</b>	Dec. 2020	++	++	RUB (Lead), KGUMSB-(Lead), NCAH	-Evaluation report -Revised curriculum
<b>12.E. Enhance capacity building of HR by providing Masters and PHD programs for staffs of different fields: Epidemiology, Laboratory diagnosis &amp; Food safety</b>	By End of 12th FYP	+++	+++	MoH, MoAF, other relevant agencies	No. of Master & PHD students graduated
<b>Objective 13: Upgrade knowledge &amp; skill on bio-security, bio-safety and food security</b>					
<b>13.A. Conduct a joint Training on bio-security and bio-safety for BAFRA, Health, DOL and Wildlife</b>	Annually by 2019	+	++	BAFRA	No. of trainings conducted No. of staff trained
<b>13.B. Conduct training on food safety for participants from BAFRA, Health &amp; Livestock</b>	2019	+	+++	BAFRA	No. of trainings conducted No. of staff trained
<b>13.C. Recruit Veterinarians for BAFRA</b>	End Of 12th FYP	+++	+++	BAFRA, RCSC	No. of Veterinarians recruited

*Difficulty of Implementation: Low +, Moderate ++, Very difficult +++*

*Impact: Low impact +, Moderate impact ++, High impact +++*

## PRIORITIZATION RESULTS

All participants were asked to vote individually via a mobile application and to select which five of the 13 objectives they considered as of highest priority. 44 participants participated in the vote. The objective with the least score, Objective 8, is considered a top priority by 11.5% of participants despite several biases, showing that all objectives identified in the workshop are important and none should be neglected.



## LINKAGES WITH BHUTAN'S ONE HEALTH STRATEGIC PLAN (BOHSP)

Action	The road-map actions are linked to the following BOHSP components:		
	BOHSP Strategy	BOHSP Output	BOHSP Activity
<b>COORDINATION</b>			
<b>Objective 1: Strengthen intersectoral collaboration at central level</b>			
<b>1.A. Establish and operationalize one health secretariat</b>	<b>1</b>	1.1. Details of structures and terms of reference (ToR) for committees at each level are in place	1.1.1. Printing of Bhutan One Health Strategic Plan for implementation and coordination for One Health
<b>1.B. Conduct one health workshop annually led by MoH &amp; MoAF on alternate basis</b>	<b>5</b>	5.4. Results of researches are published, and appropriate advocacy and communication messages are disseminated to stakeholders	5.4.4. Conduct annual OH national conferences/seminars
<b>1.C. Conduct consultative meeting with relevant stakeholders (private sector, farmer's group, etc.) for introducing new AH policies &amp; new disease control plans.</b>	<b>1</b>	1.5. Communication and information exchange mechanisms formalized	1.5.2. Sensitize stakeholders on information exchange protocol
<b>Objective 2: Institutionalize mechanism for coordination at the district level</b>			
<b>2.A. Conduct technical coordination workshop amongst the key stakeholder at the field level annually</b>	<b>1</b>	1.2. Institutional arrangements are in place to enable coordination on the One Health approach in Bhutan	1.2.3. Form Expert Technical Working Group & 1.2.4. Form Expert Team within respective sectors
<b>2.B. Develop SOPs for formal coordination between relevant stakeholders for zoonosis at local level by first year of 12th FYP</b>	<b>1</b>	1.1. Details of structures and terms of reference (ToR) for committees at each level are in place	1.1.2. Develop and print terms of reference for committees and stakeholders
<b>2.C. Engage livestock owners &amp; private sector during disease containment programs of priority diseases for effective disease control</b>	<b>3</b>	3.1. Disease outbreak control and prevention strategies for prioritized zoonotic diseases developed and communicated to stakeholders	3.1.2. Sensitize stakeholders on the strategy
<b>Objective 3: Strengthen cross-border coordination</b>			
<b>3.A. Advocate for inclusion of transboundary animal diseases and public health issues in the existing border harmonization meeting between India and Bhutan</b>	<b>1</b>	1.3. Memorandum of Understanding (MoU) signed between the key stakeholders	1.3.1. Develop and sign MoU
<b>3.B. Dzongkhag Livestock Sector and Dzongkhag Health sector to</b>	<b>1</b>	1.4. Planning, monitoring and evaluation	1.4.3. Conduct consultative workshops to



jointly coordinate border harmonization meeting between relevant stakeholders in Bhutan and India.		mechanisms for One Health activities in place	disseminate work plan and M & E
<b>SURVEILLANCE &amp; RISK ANALYSIS</b>			
<b>Objective 4: Strengthen the surveillance system for prioritized zoonotic diseases</b>			
<b>4.A. Conduct a workshop to revisit the prioritized zoonotic diseases and to develop a surveillance plan</b>	<b>2</b>	2.1. Emerging and re-emerging diseases for surveillance prioritized & 2.2. Joint surveillance system developed	2.1.1. Develop a list of priority diseases for surveillance & 2.2.1. Develop protocol for disease surveillance
<b>4.B. Conduct a workshop to develop joint guidelines and SOPs for prioritized zoonotic disease</b>	<b>2</b>	2.2. Joint surveillance system developed & 2.3. Standard operating procedures (SOPs) for surveillance and outbreak investigation developed	2.2.1. Develop protocol for disease surveillance & 2.3.1. Develop SOPs for surveillance and outbreak investigation
<b>4.C. Conduct a training for relevant field staff at regional or Dzongkhag level (DoL/BAFRA/DOFPS/DMS) on disease surveillance strategy</b>	<b>2</b>	2.4. Surveillance capacities in all relevant sectors and at all levels strengthened	2.4.2. Conduct trainings on surveillance
<b>4.D. Develop and integrate joint real time web based and SMS information system for zoonotic events</b>	<b>2</b>	2.5. Bhutan One Health Hub to share surveillance data, outbreak investigation data and research operationalized	2.5.1. Develop integrated One Health disease surveillance and outbreak information sharing platform
<b>4.E. Indent and procure laboratory equipment and consumables in 20 Dzongkhags</b>	<b>2</b>	2.6. Appropriate lab diagnostic facilities in all sectors to support surveillance activities strengthened	2.6.2. Procure necessary surveillance equipment
<b>4.F. Carry out surveillance on priority zoonotic diseases at human-animal-wildlife interface</b>	<b>2</b>	2.7. High-risk areas and disease hotspots mapped	2.7.1. Map out high-risk areas and disease hotspots
<b>4.G. Compute and analyze surveillance data and disseminate information</b>	<b>2</b>	2.7. High-risk areas and disease hotspots mapped	2.7.1. Map out high-risk areas and disease hotspots
<b>Objective 5: Institutionalize risk analysis as a basis for decision making</b>			
<b>5.A. Conduct a joint risk analysis training on zoonotic diseases and food safety to staffs (from DoL/BAFRA/DMS/DoFPS) at regional and Dzongkhag level</b>	<b>4</b>	4.2. Plans and modalities for cross-sectoral capacity building developed	4.2.1. Develop joint training plan based on gaps identified
<b>5.B. Carry out annual joint risk assessment for prioritized zoonotic diseases and food safety issues</b>	<b>4</b>	4.2. Plans and modalities for cross-sectoral capacity building developed	4.2.1. Develop joint training plan based on gaps identified
<b>Objective 6: Enhance safety of food of animal origin</b>			

<b>6.A. Conduct a workshop to prioritize food commodity based on food safety risk and develop action plan</b>	<b>2</b>	2.2. Joint surveillance system developed	2.2.1. Develop protocol for disease surveillance
<b>6.B. Conduct workshop to develop guidelines and SOPs on prioritized food commodities</b>	<b>3</b>	3.2. SOPs and contingency plans for management of disease outbreaks developed	3.2.2. Develop disease specific SOPs
<b>6.C. Conduct training to field staff (Vet, Paravet) on food borne diseases surveillance/inspection</b>	<b>2</b>	2.4. Surveillance capacities in all relevant sectors and at all levels strengthened	2.4.2. Conduct trainings on surveillance
<b>6.D. Conduct an awareness program to relevant stakeholders (BAFRA, Private sector/Importers) on safety of food of animal origin</b>	<b>3</b>	3.1. Disease outbreak control and prevention strategies for prioritized zoonotic diseases developed and communicated to stakeholders	3.1.2. Sensitize stakeholders on the strategy
<b>6.E. Indent and procure laboratory equipment and consumables in 20 Dzongkhags</b>	<b>2</b>	2.6. Appropriate lab diagnostic facilities in all sectors to support surveillance activities strengthened	2.6.2. Procure necessary surveillance equipment
<b>6.F. Carry out surveillance and testing of residue of food of animal origin</b>	<b>2</b>	2.7. High-risk areas and disease hotspots mapped	2.7.1. Map out high-risk areas and disease hotspots
<b>6.G. Compute and analyze surveillance data and disseminate information</b>	<b>2</b>	2.7. High-risk areas and disease hotspots mapped	2.7.1. Map out high-risk areas and disease hotspots
<b>COMMUNICATION WITH MEDIA</b>			
<b>Objective 7: Establish an efficient network for joint risk communication</b>			
<b>7.A. Develop communication guidelines and SOPs for risk communication</b>	<b>6</b>	6.1. Communication and advocacy modalities for OH approach institutionalized	6.1.1. Develop a framework for communication & advocacy on OH
<b>7.B. Develop TORs for media focal person at national and local level</b>	<b>6</b>	6.1. Communication and advocacy modalities for OH approach institutionalized	6.1.1. Develop a framework for communication & advocacy on OH
<b>7.C. Identify focal points for BAFRA (20), DoL (20) and MOH (20) at district level</b>	<b>6</b>	6.1. Communication and advocacy modalities for OH approach institutionalized	6.1.2. Identify focal points for One Health communication & advocacy
<b>7.D. Conduct training of trainers to focal points (60) on risk communication</b>	<b>6</b>	6.3. Knowledge and skills on communication and advocacy strengthened	6.3.1. Training on communication skills
<b>7.E. Training of animal health and human health workers in the districts by focal points on risk communication</b>	<b>6</b>	6.3. Knowledge and skills on communication and advocacy strengthened	6.3.1. Training on communication skills
<b>Objective 8: Improve effectiveness of communication tools</b>			
<b>8.A. Develop, pre-test and finalize information communication and education materials for policy makers and general public on specific notifiable zoonotic diseases.</b>	<b>6</b>	6.1. Communication and advocacy modalities for OH approach institutionalized	6.1.3. Develop communication materials on One Health
<b>8.B. Optimize the help line numbers (124 DoL, 112 MOH, 155 BAFRA) on risk communication or develop universal helpline</b>	<b>6</b>	6.1. Communication and advocacy modalities for OH approach institutionalized	6.1.1. Develop a framework for communication & advocacy on OH

8.C. Public awareness on the optimized help line numbers	6	6.2. Holistic behavioural changes brought about in line with OH approach for cost effective, sustainable, and long-term control strategies are developed for prioritized diseases	6.2.1. Conduct awareness campaign on OH
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## FIELD INVESTIGATION & RESPONSE

### Objective 9: Strengthen the capacity for joint field outbreak investigation and response

9.A. Conduct key stakeholder training on the joint field outbreak investigation and response	3	3.3. Capacity for field response to disease outbreaks strengthened	3.3.3. Conduct training for field staffs
9.B. Establish in-country joint field epidemiology training program (FETP)	3	3.3. Capacity for field response to disease outbreaks strengthened	3.3.1. Develop training module for disease outbreak response
9.C. Conduct biennial joint simulation exercise for disease outbreak management	3	3.4. Simulation exercise on preparedness, response and management of priority diseases conducted as and when required	3.4.1. Develop protocol for simulation & 3.4.2. Conduct simulations

### Objective 10: Enhance coordinated approach to field investigation and response by developing adequate enabling instruments

10.A. Review the Bhutan Health bill to ensure requirements of the public health emergency measures are captured using OH approach	3	3.1. Disease outbreak control and prevention strategies for prioritized zoonotic diseases developed and communicated to stakeholders	3.1.1. Develop strategy for prevention and control of prioritized diseases
10.B. Drafting of regulation of public health emergency under the purview of Bhutan health act	3	3.1. Disease outbreak control and prevention strategies for prioritized zoonotic diseases developed and communicated to stakeholders	3.1.1. Develop strategy for prevention and control of prioritized diseases
10.C. Designate FPs from each sector and sign MoU for responding to deliberate introduction of biological or chemical threats	3	3.1. Disease outbreak control and prevention strategies for prioritized zoonotic diseases developed and communicated to stakeholders	3.1.1. Develop strategy for prevention and control of prioritized diseases
10.D. Develop guidelines and SOPs on outbreak investigation and response to deliberate introduction of biological or chemical threats	3	3.2. SOPs and contingency plans for management of disease outbreaks developed	3.2.1 Review and develop contingency plan for disease outbreak management for priority diseases (2 diseases in 5 years)

## HUMAN RESOURCES & EDUCATION

### Objective 11: Enhance diagnostic capacity for animal and human health laboratory personnel

<b>11.A. Conduct a joint training on diagnosis of high impact zoonotic diseases for laboratory personnel.</b>	<b>4</b>	4.4. A common laboratory (BSL-2 Plus) with advanced facilities like virus isolation, cell culture and bioinformatics instituted and run by scientists from all relevant sectors	4.4.3. Training of laboratory staff of health and veterinary (30 per year)
<b>11.B. Conduct post training evaluation of trained laboratory personnel on laboratory diagnosis</b>	<b>4</b>	4.5. Monitoring and evaluation of the trainings conducted	4.5.1. Conduct M & E periodically

### Objective 12: Strengthen the epidemiological capacity of human, wildlife and animal health professionals

<b>12.A. Develop a curriculum for One Health Epidemiology Training Program (Short course for 1-3 months)</b>	<b>4</b>	4.2. Plans and modalities for cross-sectoral capacity building developed	4.2.1. Develop joint training plan based on gaps identified
<b>12.B. Conduct TOT on FETP for the faculty (Ex Country)</b>	<b>4</b>	4.2. Plans and modalities for cross-sectoral capacity building developed	4.2.1. Develop joint training plan based on gaps identified
<b>12.C. Conduct FETP Training program for Animal, Human health and Department of Forest (cohorts of 20 trainees)</b>	<b>4</b>	4.2. Plans and modalities for cross-sectoral capacity building developed	4.2.1. Develop joint training plan based on gaps identified
<b>12.D. Conduct evaluation of trained FETP &amp; review curriculum</b>	<b>4</b>	4.5. Monitoring and evaluation of the trainings conducted	4.5.1. Conduct M & E periodically
<b>12.E. Enhance capacity building of HR by providing Masters and PHD programs for staffs of different fields: Epidemiology, Laboratory diagnosis &amp; Food safety</b>	<b>4</b>	4.1. Capacity gaps assessed and human resources mapped	4.1.1. Assess human resource capacity within the sectors

### Objective 13: Upgrade knowledge & skill on bio-security, bio-safety and food security

<b>13.A. Conduct a joint Training on bio-security and bio-safety for BAFRA, Health, DOL and Wildlife</b>	<b>4</b>	4.2. Plans and modalities for cross-sectoral capacity building developed	4.2.1. Develop joint training plan based on gaps identified
<b>13.B. Conduct training on food safety for participants from BAFRA, Health &amp; Livestock</b>	<b>4</b>	4.2. Plans and modalities for cross-sectoral capacity building developed	4.2.1. Develop joint training plan based on gaps identified
<b>13.C. Recruit Veterinarians for BAFRA</b>	<b>4</b>	4.1. Capacity gaps assessed and human resources mapped	4.1.1. Assess human resource capacity within the sectors