

# **National Workplan for Implementation of IHR Core Capacities: Bhutan**

## **2014-2016**

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## Background

The Kingdom of Bhutan is one of the 194 countries bound by the International Health Regulations, IHR (2005) and stands firmly committed to continue to strengthen its national public health system which is critical for response to public health emergencies of national/international concern. In this regard, Bhutan has been submitting IHR (2005) self-reporting questionnaire to WHO every year for monitoring progress in the implementation of IHR core capacities; and a number of specific assessments have been conducted for furthering the agenda of IHR implementation in Bhutan with support from the World Health Organization.

The Royal Government of Bhutan has been systematically investing in setting up robust disease surveillance and response capacities in line with IHR (2005) requirements and the country's eleventh five year plan document clearly reflects the high priority being accorded to disease surveillance and International Health Regulations.

The Communicable Disease Division, Department of Public Health, Ministry of Health has been designated as IHR-National focal Point for Bhutan in 2013 and has been coordinating many activities towards strengthening core capacities under IHR (2005). These core capacities include: National Legislation and Policy assessment, Coordination and NFP Communication, Surveillance, Response, Preparedness, Risk Communication, Human Resources Capacity, Laboratory, Points of Entry, Zoonoses, Food Safety, Chemical Events and Radiation Emergencies. While this work is being largely coordinated by the Ministry of Health, compliance with IHR (2005) calls for multi-sectoral collaboration and community participation. In this regard, Ministry of Health, Bhutan has identified IHR stakeholders in other Ministries to jointly work towards enhancing public health security in Bhutan and a number of institutional mechanisms at national level are being utilized for continued high level advocacy needed for the work of IHR (2005).

This document documents progress made by Bhutan so far in advancing various core capacities under IHR (2005), examines the unfinished agenda and enlists the next steps to plug in the necessary gaps. It also highlights areas where the country would be needing technical and other support from partners and donor agencies to further its national public health security.

## Section 1

### IHR Priority areas, present status and where Bhutan plans to be by 2016

<b>Core Capacity Area 1. National Legislation, Policy and Financing</b>			
Component:		1.1 National Legislation and Policy	
Brief Description of progress	<p>Bhutan has completed a legislation assessment for the purpose of documentation of enabling laws for IHR (July 2013, with WHO support) and this has been duly documented. Legal provisions concerning water, food, medical assistance, disaster management, trade related procedures, immigration and custom procedures are in place as documented; in line as necessitated under IHR. A number of stakeholder meetings were held that indicate laws that are functional and being implemented diligently. A detailed version of the report is expected shortly from the legal consultant.</p> <p>The Communicable Disease Division under Department of Public Health has been formally designated as the new NFP in April 15, 2013. Since then, a large number of activities have been carried out for prioritization and advocacy for IHR and focal points have been specifically designated for the purpose. However for full implementation of NFP functions; more efforts are needed to implement effective coordination, communication and ownership between relevant Ministries for the purpose of IHR.</p>		
<b>Missing elements (as per 2013 update)</b>	<b>Planned Actions by 2014</b>	<b>Planned Actions by 2015</b>	<b>Target/ Goal</b>
<p><b>Recommendations following the legal assessment regarding legislation, regulations, administrative requirements/ other Govt. instruments need to be followed upon and implemented.</b></p> <p><b>Policies to facilitate IHR NFP core and expanded functions need to be fully implemented.</b></p>	<p>NFP Secretariat to strengthen available channels of communication with stakeholders designated for IHR on: national public health risks/events, potential global PHEICs for prioritization of IHR activities and continued high level advocacy.</p>	<p>Annually document high level meetings (Committee of Secretaries, Senior technical level) where IHR agenda (including legal provisions) was deliberated and actions agreed on.</p>	<p>There is in place the legal framework and policies to support IHR NFP, and agreement in roles and functions required by IHR stakeholders.</p>
Government Involvement	MoH: NFP Secretariat, DoPH, PHL	Other Ministries: All Ministries/sectors identified for the purpose of IHR.	
Partners	WHO to provide technical assistance for development of SoPs.		
Costs	CoM and other technical meeting costs--domestic budget (under 11 <sup>th</sup> FYP)		
Technical support needs	-		

<b>Core Capacity Area2. Coordination and NFP Communication <i>Priority</i></b>			
<b>Component:</b>		2.1 IHR coordination, communication and advocacy	
<b>Brief Description of progress</b>	<p>The Communicable Disease Division has been designated as IHR-NFP for Bhutan (vide Letter no MoH/HRM/DoPH/02/2013/6470) dated April 15, 2013 of the Secretary of Health, Bhutan.</p> <p>Since this designation, a number of activities have been carried out: Stakeholders for the purpose of IHR have been sensitized recently at a high level meeting (29-30 August 2013); but roles and responsibilities of specific stakeholders needs to be assigned, per SoPs (which are yet to be developed).</p> <p>Several Institutional mechanisms are in place for IHR implementation in Bhutan. These include the following:</p> <ul style="list-style-type: none"> <li>• IHR National High Level Committee (Secretary of All Ministries; meet as an when required)</li> <li>• IHR Technical Committee ( Focal persons from relevant Ministry/Department/sector; meet twice a year)</li> <li>• IHR NFP and Health Expert group ( Emergency, Clinical Lab, Medical specialist, pediatrician, PHL; meet quarterly)</li> </ul> <p>Presently NFP Secretariat do not have access to IHR information site because 24/7 availability of the IHR NFP was not established in July 2013; but they need this access urgently.</p>		
<b>Missing elements (as per 2013 update)</b>	<b>Planned Actions by2014</b>	<b>Planned Actions by 2015</b>	<b>Target/ Goal</b>
<b>Roles and responsibilities of all stakeholders need to be clearly defined for an all hazard approach.</b>	Draft SoP for effectively responding to Public Health Events under IHR along with role mapping and coordinated information flow at all levels.	Organize sensitization meeting of focal persons as needed to familiarize them on SoPs.  Test components of SoPs through a multisectoral exercise.	Clear channels of communication and ownership of IHR formalized between identified agencies/sectors/Ministries.
<b>Active IHR webpage has not been established.</b>	NFP and MoH team in collaboration with IT agency for creating webpage on IHR on MoH website.	Continue to update content (at least monthly).  -Alerts/Outbreaks -IEC material for districts -Linkage with other	Utilize IHR website as a tool for communication and high level advocacy across Ministries and partners for IHR (2005).

	<p>Start with already available information:</p> <ul style="list-style-type: none"> <li>-NFP and designated officers for IHR</li> <li>-Core capacities being strengthened with an all hazard approach</li> <li>-Legal provisions for IHR in Bhutan</li> <li>-Disease surveillance, NNDS</li> </ul>	<p>websites (PHL, other Ministries)</p> <ul style="list-style-type: none"> <li>-SoPs and Plans for IHR</li> <li>-Capacity building initiatives.</li> <li>-Meetings held for IHR</li> </ul>	
<b>Regular access and use of IHR information site needs to happen.</b>	<p>Periodic access to EIS website by NFP Secretariat and key public health event information shared with the larger IHR stakeholder group as necessary.</p>	<p>Document use of IHR decision instrument by the NFP Secretariat.</p>	
Government Involvement	MoH: NFP and MoH team to lead the process	Other Ministries: As identified under IHR, To develop/share contingency plans, update technical content, involved during vetting of the website/webpage, communicated periodically using this forum.	
Partners	WHO		
Costs for the planned activities	<p>IT support cost for webpage development.</p> <p>Meeting costs to develop SoP and carry out multisectoral exercise. USD 5000</p> <p>Documentation costs for SoPs.</p>		
Technical support needs	<p>TA for – Multisectoral exercise and vetting of SoPs</p> <p>TA- Facilitation EIS access to Bhutan NFP.</p>		

<b>Core Capacity Area3 Surveillance <i>Priority</i></b>			
<b>Component:</b>		<b>3.1 Indicator Based Surveillance</b>	
<b>Brief Description of progress</b>	<p>There is a list of priority diseases/conditions under surveillance in Bhutan. In 2009, MoH Bhutan was able to establish an indicator-based surveillance (National Notifiable Disease Surveillance) with 25 priority diseases. The surveillance system reaches from national level well into communities: Public Health laboratory (national), district health offices, hospitals, basic health units and village health workers.</p> <p>In addition there are other systems of surveillance such as measles and rubella surveillance, acute flaccid paralysis (AFP) surveillance, ARI surveillance, ILI and SARI sentinel surveillance, malaria surveillance. Specific units have been designated for monitoring surveillance: Public Health Lab is responsible for NNDS, Vaccine Preventable Disease is in charge of measles and rubella and AFP, Communicable Diseases Division of ARI. A total of 184 basic health units and 31 hospitals have been distributed printed manual for reporting.</p> <p>In 2012, a web-based notification system has been introduced in Bhutan for the purpose of notification of individual cases and outbreaks to the PHL. This web based reporting is possible from district level upwards and feedback of surveillance results is shared back with the districts via the web-based NNDS system, which cannot be currently accessed by Basic Health units and hospital staff at the moment. All this is being monitored by the Public Health Laboratory, which currently does not have epidemiological expertise available and hence can play limited role of M&amp;E. Also, this work is largely one-person dependent (Head, PHL) with some support.</p> <p>In 2013 (June-July); a focused assessment of surveillance and outbreak response capacities has been carried out by MoH Bhutan in collaboration with WHO. Presently, a lot of information flow is happening at many levels across surveillance systems (with some diseases reportedly weekly, others monthly), but there is need to review and define the need and requirements for a meaningful and robust surveillance and response for the purpose of IHR; and systematically develop mechanism for feedback and review, at all levels. A detailed work plan has been drafted by the MoH to improve surveillance and response capacities in the 11<sup>th</sup> Five year Plan, with specific mention of IHR targets to be met, and budget allocation for supporting salary of IHR Secretariat, some field travel expenses, emergency lab procurement and office running costs.</p>		
<b>Missing elements (as per 2013 update)</b>	<b>Planned Actions by 2014</b>	<b>Planned Actions by 2015</b>	<b>Target/Goal</b>
<b>Surveillance data on all epidemic prone and priority diseases are not analyzed weekly at national and sub-national levels.</b>	Review NNDS, simplify reporting formats and review case definitions for	Document findings of events tracked by indicator based	A functional indicator based surveillance with trends of diseases being

	diseases/syndromes to be routinely captured under web-based surveillance. Reflect these changes in surveillance manual.	surveillance system under NNDS and challenges.	monitored at all levels.
	Clearly define specific roles and responsibilities of stakeholders for surveillance and response to communicable diseases at all levels (BHU, Hospitals, DHO, PHL, and DoPH).		
<b>Baseline estimates, trends, and thresholds for alert and action have not been defined at various levels yet as not sufficient data analysis capacity.</b>	Bring in a consultant to evolve a short term FETP course for district level functionaries based on identified competencies.	Pilot test the FETP course for district level functionaries.	Sub-national M& E of indicator based surveillance.
<b>Timeliness and completeness of reporting not ensured presently from at least 80% of reporting units due to lack of M&amp;E at various levels.</b>		Build in components of districts providing regular feedback to hospitals and basic health units on timeliness and completeness of response.	
Government Involvement	MoH: DoPH, PHL, Royal Institute of Health Sciences	Other Ministries:	
Partners	WHO, CDC		
Costs for the planned activities	Surveillance review workshop TA (Consultant )– evolve 2 week FETP model for Bhutan Training costs- FETP pilot M& E : field component (travel costs)		USD15,000
-Technical Support needs	TA (Consultant )– evolve 2 week FETP model for Bhutan Training costs- FETP pilot		





<b>Core Capacity Area3 Surveillance <i>Priority Area for Bhutan</i></b>			
Component:	3.2 Event Based Surveillance		
Brief Description of progress	<p>The event based surveillance system in Bhutan was integrated into the indicator-based surveillance system (NNDS) in 2012. Trigger events for all 25 notifiable diseases and additionally for unusual events were defined. Staff from Basic Health Units (BHUs) or hospitals reports such events via phone or other means of communication (paper based reporting) to the DHO staff; that in turn counterchecks the information and forwards the information to PHL (through the web-based mechanism). This system could pick up 37 outbreaks in the year 2012. Additionally, information is also received from staff of MoH/community/media about public health events, although this needs some standardization. ILI/SARI and ARI surveillance systems need some level of integration for timely outbreak detection and effective response; although the ARI surveillance system has been changed to a weekly system in 2010 with all BHUs and hospitals having to report weekly on it.</p> <p>Although the PHL has taken over the responsibility for development and establishment of comprehensive surveillance system, there is need for formal recognition for this critical role and HR/financial resources needed for this purpose. Many different surveillance systems co-exist in Bhutan: NNDS(25 diseases), malaria surveillance, VBD surveillance, ARI surveillance; and measles and rubella surveillance; resulting in many formats and different deadlines for staff at DHO, BHU and hospitals.</p>		
<b>Missing elements (as per 2013 update)</b>	<b>Planned Actions by 2014</b>	<b>Planned Actions by 2015</b>	<b>Target/ Goal</b>
<b>There is need to identify different information sources for public health events and risks; integrate data across sources for picking up early warning signals for public health events.</b>	Draft an integrated and robust EBS for Bhutan by simplification of formats for different levels in line with WHO surveillance assessment report.	Review and assess functionality of EBS.	Event-based surveillance is established and functioning

<b>There is need to strengthen component of data review and trend analysis at all levels and build adequate capacity for review of surveillance and response.</b>	Build in mechanisms and strengthen capacity for surveillance review and feedback at all levels.	Review strengthened and documented.	
<b>IHR decision instrument needs to be used for event analysis at national and sub-national level; and its use documented.</b>	Increase awareness on IHR decision instrument among stakeholders at national and sub-national level	Add this component to all training programmes for sub-national /district staff.	
<b>Other than the established surveillance system, no additional mechanisms are in place at national and/or sub-national levels for capturing public health events from a variety of sources.</b>	Establish a functional mechanism for capturing data on public health events from community.	Establish a Media scanning and monitoring system to capture news on health and other events related to IHR from Bhutan national and local newspapers/TV/Radio.	
Government Involvement	MoH: DoPH, PHL, RIHS		Other Ministries:
Partners	WHO, CDC		
Costs	USD 3,000		
Technical support needs	TA_ monitoring of surveillance and response capacity		

<b>Core Capacity Area4 Response</b>			
<b>Component:</b>		<b>4.1 Rapid Response Capacity</b>	
<b>Brief Description of progress</b>	<p>Bhutan has established RRTs and these have been trained to respond to AI outbreaks but need generic outbreak investigation training. Some staff trained in other FETP courses; have thus moved on and there is need for continued training of the RRTs.</p> <p>Public health emergency response procedures have been established as part of : National Influenza Pandemic Preparedness Plan. The National Disaster and Emergency Contingency Plan (2011) has been drafted and needs to be finalized.</p> <p>The operational manual of NNDS provides some information; but specific portions on outbreak investigation and response need to be reviewed and finalized. Feedbacks on the events need to be made accessible to all through the web-reporting system. Case management guidelines exist for priority conditions.</p> <p>Equipment for the SHOC room has been procured with WHO support, but a space needs to be identified within MoH to set it up.</p>		
<b>Missing elements (as per 2013 update)</b>	<b>Planned Actions by 2014</b>	<b>Planned Actions by 2015</b>	<b>Target/ Goal</b>
<b>Resources for rapid response during public health emergencies of national or international concern are not accessible, except for AI.</b>	IHR Secretariat to include this issue in a high level meeting for securing budget for response activities against significant public health events.		Public health emergency response mechanisms are established and functioning.
<b>No Functional, dedicated, command and control center in place.</b>	Obtain high level signoff for setting up an Strategic Health Operations Centre	Systematically build and use SHOC for information sharing with sub-national level for	

	(SHOC). Obtain necessary systems and enable TC and VC. Develop a roster of IHR stakeholders in various sectors in Bhutan with contact numbers/e mail addresses/fax numbers.	outbreaks/ emergencies/ IHR alerts.  Maintain Directory of IHR stakeholders in various sectors at SHOC and communicate periodically.	
<b>Rapid response teams need to be trained for managing public health events.</b>	Finalize outbreak investigation manual.	Plan and conduct specific RRT trainings on outbreak management and response.	
Government Involvement	MoH: DoPH,	Other Ministries: Disaster Management, Ministry of Agriculture and forest, National Environment Commission	
Partners	WHO, other UN agencies		
Costs for the planned activities	Infrastructure costs for setting up SHOC and maintaining functionality would have to be assessed. Printings costs (outbreak investigation manual) RRT Trainings  USD 5000		
Technical support needs	Yes -		

<b>Core Capacity Area4 Response</b>			
Component:		4.2 Infection Prevention and Control	
Brief Description of progress	<p>The IPC program is under the Department of Medical Services. All 32 hospitals and 188 basic health units have infection prevention and control focal person (nursing superintendent). Each department of the tertiary hospitals has one IC focal person as well. Nurses receive training in IPC.</p> <p>A "Technical Guideline for IC and Health Waste Management" (2006) is available and has been shared with all the hospitals that are responsible for development of IPC SOPs and protocols. Hospitals have to generate an annual report on waste generated but some (especially in the remote areas lack autoclaves for waste disposal, although the Waste Management Act mandates hospitals for safe disposal (after autoclaving).</p> <p>As a pilot project, surveillance of health-care-associated infections was established in four hospitals with microbiology laboratories, (1 National and 2 Regional Hospitals and Puntsholing) in November 2012, Focal Point is Head of Microbiology Lab at National Hospital. There is policy to vaccinate health workers for Hepatitis B and hospitals are expected to record needle stick injuries and offer necessary post exposure prophylaxis. Recently, as per RGoB order, districts have to fund their own IPC activities (this was earlier being supported by Department of Medical Services); and districts are experiences some resource constraint issues for IPC.</p> <p>No recent trainings/evaluations of IPC at Hospital level has been carried out in Bhutan.</p>		
Missing elements (as per 2013 update)	Planned Actions by 2014	Planned Actions by 2015	Goal/Target
<b>There is presently no surveillance within high risk groups to promptly detect and investigate clusters of infectious disease patients, as well as unexplained illnesses in health workers.</b>	<p>Address this gap while reviewing the Event based surveillance in Bhutan.</p> <p>Implement programme for protecting health care workers in collaboration with Occupational Health Program.</p>	Surveillance of health events in high risk groups included as part of national surveillance plan.	Infection Prevention and Control (IPC) is established and functioning at national and hospital levels.

<b>Infection control measures and effectiveness is not regularly evaluated and published.</b>		Conduct a baseline review of IPC in a few hospitals in Bhutan and document findings.	
Government Involvement	MoH: Department of Medical Services	Other Ministries: Ministry of Labour and Human Resources	
Partners	WHO		
Costs for the planned activities	No domestic budget available for evaluation of IPC, Evaluation of IPC in Bhutan (USD 10,000)		
Technical Support needs	TA needed from WHO on IPC evaluation.		

<b>Core Capacity Area5 <u>Preparedness Priority</u></b>			
Component:		5.1 Public Health Emergency Preparedness and Response	
		<p>Assessment of capacity has been done for PoE, EHA benchmark assessment in 2013.            Bhutan has developed action plan for IHR implementation.            Resources can be mobilized from both national/sub-national levels if needed.            Surge capacity available for disasters and AI.            Assessments of 2009 and 2011 earthquakes jointly conducted by UNDP and disaster management team.</p>	
<b>Missing elements (as per 2013 update)</b>	<b>Planned Actions by 2014</b>	<b>Planned Actions by 2015</b>	<b>Eventual Goal</b>
National Public health emergency response plan has not been developed incorporating IHR related hazards and PoE	Draft PHE Plan-Bhutan	Plan finalized and agreed upon by all stakeholders.	Priority public health risks and resources are mapped and utilized
Government Involvement	MoH: DoPD, NFP Secretariat, DoMS, FETP trained officials.	Other Ministries: disaster management , all ministries designated for other hazards	
Partners	WHO, UN agencies		
Costs for the planned activities	Expert group meeting for finalizing action plan for IHR implementation.		
Technical support needs	-		



<b>Core Capacity Area5 Preparedness</b>				
Component 5.2:		Risk and resource management for IHR preparedness		
Brief Description of progress	An expert list is available for avian influenza, and DoPH is developing a directory of health experts. Risk assessment has been done for natural disasters with limited mention of disease outbreaks. National profiles done for natural disasters but not on infectious disease threats or other IHR related hazards. Stockpiles available for AI, disease outbreaks and post-disaster situations.			
<b>Missing elements (as per 2013 update)</b>		<b>Planned Actions by 2014</b>	<b>Planned Actions by 2015</b>	<b>Eventual Goal</b>
<b>National resources have not been mapped for IHR.</b>		IHR secretariat to coordinate with other Ministries to map national resource for IHR.	Document and plan effective usage of resources for IHR.	Priority public health risks and resources are mapped and utilized
<b>National risk assessment does not include IHR related threats.</b>		Review disaster management plan for inclusion of IHR related threats.	Develop Bhutan's risk assessment for infectious disease, zoonotic, food safety and other threats.	
Government Involvement	MoH: DoPH and PHL,		Other Ministries: Ministry of Home Culture and Home Affairs, BAFRA, other ministries for specific hazards.	
Partners	WHO, UN agencies			
Costs for the planned activities	Meeting support costs. Risk assessment for infectious disease and other IHR threats			
Technical support needs	TA- Risk assessment mapping- Bhutan ( all hazard approach)			

<b>Core Capacity Area6 Risk <u>Communication Priority</u></b>			
Component:		6.1 Policy and procedure for public communication	
Brief Description of progress	<p>Health Promotion Division of MoH is working together with different partners. Spokesperson for AI outbreak from MoH and MoAF were identified.</p> <p>Risk communication plan does not exist; but communication strategy for health is under development.</p> <p>IEC material does exist for different diseases and different target groups. However, not for epidemic prone disease or PH events.</p> <p>Regularly updated information is shared with media, TV, newspapers, during events.</p> <p>No systematic evaluation has been done for risk assessment during an outbreak.</p>		
<b>Missing elements (as per 2013 update)</b>	<b>Planned Actions by 2014</b>	<b>Planned Actions by 2015</b>	<b>Target/ Goal</b>
<b>Evaluate risk communication following outbreak for timeliness, transparency and appropriateness of communication.</b>	Contract out this work to a communication agency and evaluate a past outbreak	Share findings and FU on recommendations.	Mechanisms for effective risk communication during a public health emergency are establishment and functioning.
<b>Senior IHR technical staff across sectors and NFP not sufficiently trained on risk communication</b>		Technical staff and NFP trained on essentials of risk communication	
<b>No SoPs available for clearance and use of information during an event.</b>	Develop a risk communication plan for public health emergencies		
Government Involvement	MoH: DoPH, NFP, PHL , Health Promotion unit	Other Ministries/agencies identified for other hazards.	
Partners	WHO, John Hopkins University, other communications agency ( Bhutan/India), UNICEF		
Costs for the planned	TA-communication expert [ 1-2 day training programme on risk communication) USD 10,000		

activities	
Technical support needs	Support Risk comm. Training and assessment [ USD 10000]

<b>Core Capacity Area7 Human Resource Capacity</b>				
Component:		7.1 Human Resource Capacity		
Brief Description of progress	<p>The Human Resources Division of the MoH has been engaged in a general needs assessment, but not specific to IHR. This includes a training plan for public health and epidemiology in the MoH five year plan. Additionally specific IHR assessments done for PoE and surveillance have revealed specific training gaps for which capacity building is being planned in this extension period.</p> <p>Bhutan has access to FETP in collaboration with WHO, that is being conducted in Thailand and India. The DoPH has a list of FETP trained personnel; however these people largely come back and serve as clinicians due to shortage of doctors in Bhutan.</p> <p>In addition, DoPH also has technical staff trained in MPH courses.</p> <p>No specific programs exist with allocated budgets to train workforce for IHR relevant hazards, but this is a small component under several programmes and needs donor support.</p>			
<b>Missing elements (as per 2013 update)</b>		<b>Planned Actions by 2014</b>	<b>Planned Actions by 2015</b>	<b>Target/ Goal</b>
<b>A needs assessment has not been conducted to identify gaps in human resources and training to meet IHR requirements</b>		Assess gaps in HR and training to build core capacities under IHR, as contingency plans are drafted for various IHR related hazards, and surveillance strategies refined.	Document the HR and training needs, and plan specific trainings as necessary.	Trained HR available to implement IHR core capacity requirements.
Government Involvement	MoH: Department of Public Health, NFP Secretariat,		Other Ministries: Ministries involved in the multihazard approach to IHR.	
Partners	WHO, FAO, CDC			
Costs for the planned activities	Costs of specific trainings as necessary.			
Technical support needs	Specifically addressed in individual core capacities.			

<b>Core Capacity Area8 Laboratory Priority</b>				
<b>Component</b>		<b>8.1 Laboratory Diagnostic and Confirmation Capacity</b>		
<b>Brief Description of progress</b>	<p>A total of 17 out of 25 diseases in the NDSS can be diagnosed and verified in Bhutan. For the rest (and newer threats), the PHL has access to other laboratory networks in the Region: AFRIMS (Bangkok), NCDC and NIMHANS (India).</p> <p>An inventory of testing capacities of public health laboratories exists in Bhutan.</p> <p>PHL has accreditation for some diseases specific labs (not entirely).</p> <p>International guidelines are followed for sample packaging, but no national guidelines exist.</p> <p>In case of an event, the HL has to send the sample collection and transportation kits to the BHUs and hospitals (and geographic distances often make timely support difficult)</p>			
<b>Missing elements (as per 2013 update)</b>		<b>Planned Actions by 2014</b>	<b>Planned Actions by 2015</b>	<b>Target/ Goal</b>
There are no national guidelines for sample packaging and transport		Draft national guidelines for sample collection, packaging and transport. Include testing for food samples as well (jointly with BAFRA).	Share widely and continue to build capacity as needed.	Laboratory Services are available to test for priority health threats
Sample collection and transportation kits are not pre-positioned at appropriate levels for immediate mobilization during a public health event.			Assess sub-national levels where sample collection kits can be pre-positioned for use during an event.	
<b>Government Involvement</b>	MoH: DoPH, PHL		Other Ministries: BAFRA, Zoonoses(Health and Dept of livestock)	

Partners	WHO		
Technical support needs and c	---		

<b>Core Capacity Area8 Laboratory Priority</b>				
Component:		8.2 Laboratory Biosafety and Biosecurity		
Brief Description of progress	<p>WHO Biosafety manual is available at PHL but not at other laboratories.</p> <p>Inspection of biosafety equipment is largely done by the laboratories themselves and no institution/agency has been identified to do this work.</p> <p>No laboratories have carried out biosafety risk assessment, although one staff member from PHL has been trained on Biorisk management.</p>			
<b>Missing elements (as per 2013 update)</b>		<b>Planned Actions by 2014</b>	<b>Planned Actions by 2015</b>	<b>Eventual Goal</b>
No national Biosafety and biosecurity guidelines have been developed		Develop national biosafety and biosecurity guidance	Share widely and sensitize laboratory staff.	Laboratory biosafety and biosecurity (Biorisk management) practices in place and implemented.
No agency has been identified for inspection, certification of biosafety equipment for laboratories in Bhutan		Identify an institution with a capacity to do this work in Bhutan (or in the Region, that can provide services in Bhutan)		
No biorisk assessments have been conducted in laboratories to guide and update procedures and practice.			Plan a biorisk assessment of PHL in collaboration with WHO.	
Govt agencies	MoH:		Other Ministries:	
Partners	WHO, CDC			
Costs for the planned activities	Printing costs of biosafety manual	Contract an agency/institution for inspecting biosafety equipment	PHL bio risk assessment USD 8000	
Technical support needs	WHO ( Biorisk assessment of PHL)			

<b>Core Capacity Area9 Points of Entry</b>		<i>Priority</i>	
Component:		9.1 General Obligations Required at Points of Entry	
Brief Description of progress	<p>Bhutan has designated Paro airport, Thimpu and the Puntsholing ground crossing (Bhutan-India border) as designated PoE for the purpose of IHR. The Health Office in Paro International airport communicates and exchanges information with Paro District Hospital. As Bhutan is a landlocked country, there are no seaports. Both designated PoE have been comprehensively assessed by WHO and ICAO team in March 2011. Relevant legislations, regulations and procedures to facilitate IHR implementation at PoE have also been assessed to be adequate. No priority conditions for surveillance at designated ports have been identified, although coordination between the IHR NFP and PoE has been strengthened in 2013.</p> <p>No competent authority has been designated for implementation of core capacities at PoE in Bhutan. No SoPs are in place for communication and coordination with the IHR NFP. No designated PoE in Bhutan has been jointly designated with another country for core capacity development.</p>		
<b>Missing elements (as per 2013 update)</b>	<b>Planned Actions by 2014</b>	<b>Planned Actions by 2015</b>	<b>Target/ Goal</b>
<b>No priority conditions for surveillance at designated ports have been identified.</b>	Address this gap during review of Event based surveillance and response in Bhutan.	Establish Disease surveillance reporting mechanism at PoE in line with national surveillance systems.	General obligations at PoE are fulfilled for coordination and communication between PoE and NFP.
<b>Updated health documents (health part of the Aircraft General Declaration, international certificate of vaccination) need to be implemented at Paro airport.</b>		Build capacity of health staff at Paro airport to implement health documents.	
<b>No joint designation with another country for core capacity development.</b>	Explore bilateral mechanisms of joint designation with India at the Puntsholing ground crossing for capacity development.		
	Develop a strong cross-border information sharing mechanism, through annual meetings.		



<b>No competent authority has been designated for overall coordination of IHR core capacity development at PoE.</b>	Identify a single agency to coordinate the PoE work in Bhutan.		
<b>No SoPs are in place for communication and coordination with IHR NFP and other agencies (water, sanitation, vector control, medical care, food safety, immigration and customs, public health, animal health).</b>	Draft SoPs to formalize coordination between PoE, NFP and other agencies.		
Government Involvement	MoH agencies : DoPH, NFP Secretariat, PHL	Other Ministries: Civil Aviation, Immigration and Customs, BAFRA, Ministry of Home and Cultural affairs	
Partners	WHO, ICAO		
Costs for the planned activities	\$3000		
Technical support needs	WHO to facilitate joint designation of ground crossing between India and Bhutan for the purpose of capacity development.		

<b>Core Capacity Area9</b> Points of Entry <i>Priority</i>			
Component:		9.2 Core Capacities required at all times	
Brief Description of progress	<p>The Health Office at Paro International airport communicates and exchanges information with Paro District Hospital. The officials from the Health office are available at Paro airport and this office has regular coordination with the Paro district health officials where sick travelers can be referred and transported in case of emergency. This hospital also has basic laboratory facilities and more advanced facilities are available at National Public Health Laboratory, Thimpu.</p> <p>No SoPs in place for inspection program to ensure safe environment at facilities, including vector and reservoirs. Staff at PoE does not have adequate knowledge of vector surveillance needed at PoE.</p> <p>A comprehensive assessment done by WHO experts in March 2011 of these PoE revealed that a variety of legislations are in place to regulate cross-border trade and animal movement Informal mechanisms exist for cross-border dialogue and communication that have in past addressed multiple agencies that are responsible for various activities and cross-border collaboration is challenged by weak and inadequate health infrastructure at both the PoE. There is no single competent authority as responsible agency for implementation of core capacities required at all times.</p>		
<b>Missing elements (as per 2013 update)</b>	<b>Planned Actions by 2014</b>	<b>Planned Actions by 2015</b>	<b>Target/ Goal</b>
<b>No SoPs in place to coordinate an inspection program to ensure a safe environment at facilities( potable water, eating establishments, flight catering, public washrooms, appropriate solid and liquid waste disposal services and other risks).</b>	SoPs drafted for an inspection program to ensure safe environment at PoE; with clear demarcation of roles.	Build capacity of PoE staff to carry out periodic inspection.	Routine capacities and effective surveillance established at PoE.
<b>Build capacity of PoE health staff to carry out vector surveillance at PoE.</b>	The DoPH and health staff at PoE to jointly	Carry out training activity for PoE health	

	review this component and plan to build capacity for vector surveillance.	staff.	
Government Involvement	MoH: DoPH, health staff at PoE.	Other Ministries: BAFRA, Civil Aviation, Immigration, Revenue and customs, Drukair corporations	
Partners	WHO, ICAO,		
Costs for the planned activities	Training PoE staff : USD 3000		
Technical support needs	-		

<b>Core Capacity Area9 Points of Entry <i>Priority</i></b>			
Component:		9.3 Core Capacities for Response responding to public health emergencies at PoE.	
Brief Description of progress	<p>Bhutan has designated Paro airport, Thimpu and the Puntsholing ground crossing (Bhutan-India border) as designated PoE for the purpose of IHR.</p> <p>The Health Office at Paro International airport communicates and exchanges information with Paro District Hospital. The officials from the Health office are available at the Paro airport and this office has regular coordination with the Paro district hospital where sick travelers can be referred and quarantined in case of emergency. It is possible to apply entry and exit controls at Paro airport due to limited flight operations. A comprehensive assessment done by WHO experts in March 2011 of these PoE revealed that a variety of informal mechanisms exist for cross-border dialogue and communication.</p> <p>Multiple agencies are responsible for various activities and cross-border collaboration is challenged by weak and inadequate health infrastructure at both the PoE. Bhutan does not have a contingency plan to manage and effectively respond to a public health event at PoE, although there is Airport contingency Plan.</p>		
Missing elements (as per 2013 update)	Planned Actions by 2014	Planned Actions by 2015	Target/ Goal
<b>No SoPs and contingency plan at designated PoE.</b>	Draft contingency plan for Paro airport, and formalize SoP for coordination between different agencies.	Draft SoP for coordination between agencies at the Puntsholing ground crossing.	Effective response at PoE is established.
<b>Staff at PoE, health attendants and drivers not trained to transfer highly infectious patients.</b>		Organize a one day training programme for staff at PoE for this <del>purpose</del> <u>Purpose</u> .	

<b>Gov involvement</b>	MoH: DoPh, NFP	Other agencies: Other Ministries: BAFRA, Civil Aviation, Immigration, Revenue and customs, Drukair corporations	
<b>Costs for planned activities</b>	\$1000		
<b>Technical support needs</b>	Technical guidance from WHO		

<b>Core Capacity Area10 Zoonotic Events</b>			
Component:		10.1 Capacity to detect and respond to Zoonotic events of national or international concern	
Brief Description of progress	<p>Subsequent to several outbreaks of avian influenza, good coordination has been established between animal health authorities and public health department in Bhutan, although there is no SoP for communication. This coordination also happens for rabies and anthrax. (the three diseases are included as priority diseases in the web-based surveillance system, NDSS, for which feedback goes to the district).</p> <p>Following a project of creating One Health hub in Bhutan in collaboration with Massey University, the concept of “one Health’ is well understood by concerned stakeholders at national level, although no focal point for wildlife is designated for the purpose of IHR. At the district level, the field veterinarian shares information on zoonoses outbreak with District medical officer and district Health officer leading to joint investigations. A robust surveillance system for HPAI in animals has been set up with support from FAO.</p> <p>Community level sensitization has been done for biosecurity of farms that own backyard poultry; and is also done following outbreaks of anthrax and scrub typhus; although there is no strategy for comprehensively addressing zoonoses prevention and control. In terms of roster of experts: a list of RRT and clinicians exists for avian influenza and this list needs to be expanded).Regular exchange of information on rabies in dogs and animal bites in humans happens between the Animal health and human health authorities. With regards to animal health laboratories, the country has set up a BSL-2 plus laboratory (which has been recently assessed by FAO). There is need to strengthen field diagnosis of animal diseases and continue to build capacity of field veterinarians, and build effective linkages with Points of Entry.</p>		
<b>Missing elements (as per 2013 update)</b>	<b>Planned Actions by 2014</b>	<b>Planned Actions by 2015</b>	<b>Target/Goal</b>
<b>Map zoonoses experts in Bhutan</b>	Expand list of experts in AI to also include for other zoonoses		Mechanisms for detecting and responding to zoonoses and potential zoonoses

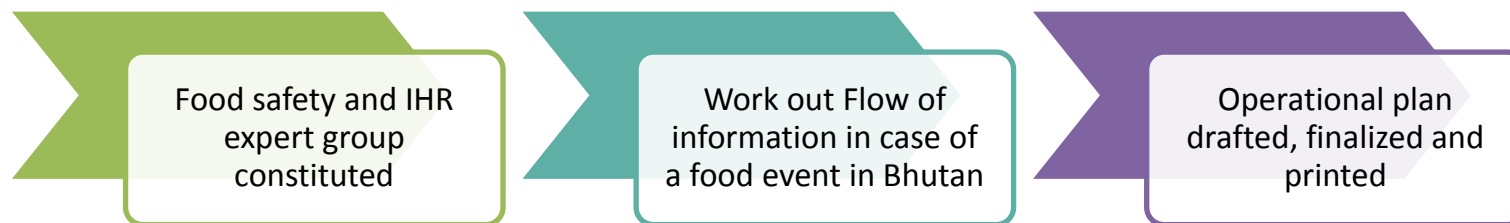
			are established and functional.
<b>Assess timeliness of zoonoses outbreak response</b>	Document zoonoses outbreaks in Bhutan in 2014 with a review of timeliness of response.	Document zoonoses outbreaks in Bhutan in 2015 with a review of timeliness of response.  Build capacity of public health and animal health authorities for joint outbreak investigation of zoonoses.	
<b>No SoPs for information sharing with the IHR NFP</b>	Draft SoPs for a formal mechanism of communication with IHR NFP in the event of a zoonotic outbreak in animals.		
Government Involvement	MoH: Department of public health, Avian Influenza Division, PHL	Other Ministries: Agriculture and Health and Forests, BAFRA	
Partners	WHO, FAO, CDC		
Costs for the planned activities	Documentation support needs Training costs ( 5,000 USD)		
Technical support needs	TA for joint training on Outbreak investigation and response and coordination for “one Health’ at district level.		

<b>Core Capacity Area11 Food Safety Priority</b>	
Component: 11.1 Capacity to detect and respond to food safety events that may constitute a public health emergency of national or international concern	
Brief Description of progress	<p>Food safety in Bhutan is under the Ministry of Agriculture and Forests and is managed by the technical agency BAFRA. The Food Act of Bhutan 2005 and its subsequent Food Rules and Regulations of Bhutan since 2007 are in place. Bhutan has concerns about import of GMO and is planning for Biosafety and biosecurity Act to control of importation of GM crops into Bhutan.</p> <p>BAFRA has local offices in all districts, at major official entry points and other strategic locations, where livestock, plant and food regulatory and quarantine inspectors are being placed. Food inspectors ensure regulatory compliance at food establishments and restaurants. BAFRA has a national food testing lab (NFTL) which has a functional basic capacity (staff strength: 15 Lab and other officers and Head). The NFTL under BAFRA is ISO 17025 accredited and performs basic chemistry and microbiological tests (counting of yeast, mould, coliform and other bacteria). There are laboratory tie-ups with Central Food labs in India (through Export Council) and some labs in Bangkok for referral of samples if necessary. The Ministry has planned for a few satellite labs at points of entry (Paro airport, and 4 ground crossings) in its 11<sup>th</sup> FYP.</p> <p>There are 4 National Focal Points (NFPs) nominated for the purpose of INFOSAN in Bhutan ( 1 in BAFRA, 2 in Livestock, 1 in Public Health)). Presently, there is some coordination between DoPH and BAFRA for responding to food-borne events; and this can be further improved. All commercial food handlers have to undergo a one day training programme on basic food hygiene to obtain the food handlers license to sell food with a validity of 3 years, following which a refresher training course is needed. Recently, with WHO support; a nationwide community awareness programme on food safety was undertaken through street play and theatre. Response to food events by BAFRA is ad-hoc and needs to be systematized. No operational plans exist as of now to respond to food safety events and SoPs need to be developed. Sample collection at district level needs some strengthening in development of good sampling manual and in transportation of sample to National Food Testing Laboratory.</p> <p>Events relating to unsafe food/failure to comply with the regulatory requirements are being informed to BAFRA through its toll free hotline 155. A focal officer for the toll free hotline is stationed at the BAFRA head office who communicates to the Officer Incharge of the BAFRA district office in which the event was reported. The concerned BAFRA district office investigates the matter and takes necessary action within 24 hours of the reporting of event. Creating awareness to the public on the toll free hotline is an on-going process.</p>



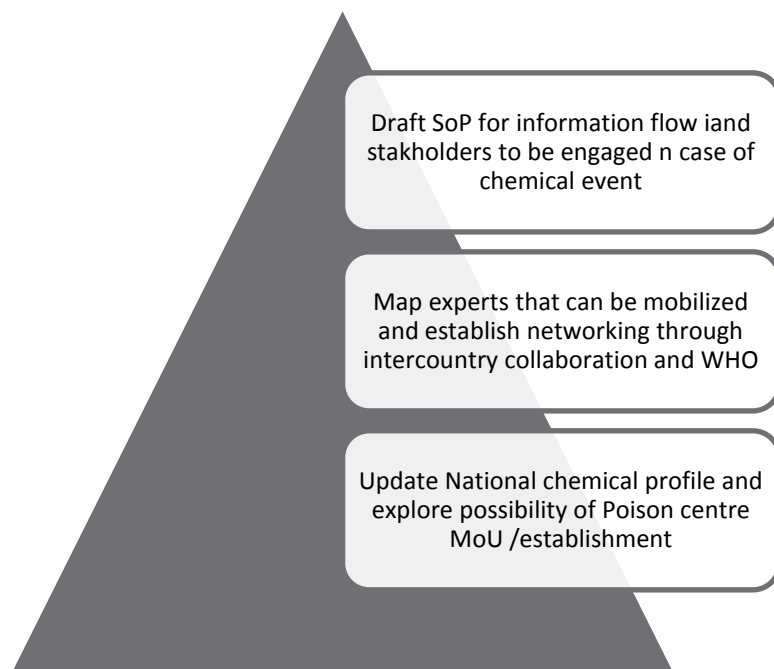
Missing elements (as per 2013 update)	Planned Actions by 2014	Planned Actions by 2015	Target/ Goal
<b>As of now, there is no SoP and operational plan for responding to food safety events in Bhutan.</b>	BAFRA in collaboration with DoPH to draft an operational plan for effectively responding to a food safety event.	Sensitize all necessary stakeholders on the operational plan for food safety.	Mechanisms are established and functioning for detecting and responding to foodborne disease and food contamination
<b>Timely and systematic information exchange between food safety authorities, surveillance units and other sectors regarding food safety events.</b>	Constitute a 'Technical working group on food safety' and meet twice a year.	Directory of food safety experts in Bhutan developed.	
<b>A list of priority foodborne events <u>and guidelines on the surveillance, assessment and management of same</u> to be developed in consultation with public health authorities and hospitals.</b>	Convene an expert group meeting to prioritize foodborne events, Bhutan.	Build laboratory and epidemiological capacity to investigate and respond to foodborne events in the country.	
Government Involvement	BAFRA to lead this core capacity work in Bhutan MoH: DoPH, PHL, Avian influenza,	Other Ministries: Ministry of Agriculture and Forest, BAFRA, Civil Aviation, Paro airport, ground crossings, Department of Revenue and customs.	
Partners	WHO, FAO		
Costs for the planned activities	USD 10,000		
Technical support needs	TA-Foodborne event prioritization and capacity building (lab, epi) Laboratory technical support: upgrading National food <a href="#">testing</a> lab capacity, BAFRA		

Figure: Sequential steps for building stronger collaborative linkages between Food safety authorities and IHR



<b>Core Capacity Area12 Chemical Events <i>Priority</i></b>			
Component:	12.1 Capacity to detect and respond to chemical events of national or international concern		
Brief Description of progress	<p>National chemical profile was drafted by NEC in 2009 through UNEP fund as part of SAICM and is in update process at the moment (through SAICM Project). It still needs to be endorsed as well. This project deals only with carcinogenic chemicals (and not all chemical hazards) and is a one year project (likely to be extended by another year).</p> <p>There have been 4 multi-stakeholder consultations on chemical safety in Bhutan (with NEC as organizing Secretariat) under this project which have highlighted some gaps: notably, that expertise on chemical safety is not there in Bhutan (and hence no consultant could be recruited for this project); poison centers are not available and no SoPs exist for coordinated response in case of a chemical event in Bhutan.</p> <p>The chemical safety Focal point at NEC has been sensitized about IHR in the recently conducted high level IHR meeting in 2013. Following WHO assessment, 5 chemicals have been prioritized as carcinogens for Bhutan (asbestos, formaldehyde, diesel fumes, trichloro-ethylene and benzene) and preventive interventions are needed for cancer prevention.</p>		
<b>Missing elements (as per 2013 update)</b>	<b>Planned Actions by 2014</b>	<b>Planned Actions by 2015</b>	<b>Target/ Goal</b>
<b>No SoPs available for coordinated emergency response to a chemical event in Bhutan.</b>	Draft SoPs in collaboration with NEC, IHR NFP and disaster management authority.	Finalize SoPs and sensitize concerned stakeholders.	Mechanisms are established and functioning for detection, alert and response to chemical emergencies that may constitute a PHEIC.
<b>Experts have not been identified for public health assessment and response to chemical events</b>		Explore and map available expertise on chemical safety to Bhutan in the case of an event.	
<b>National Chemical Profile is not yet finalized and printed</b>	Finalize National Chemical Profile		
<b>Poison Centers are not available in Bhutan</b>	Feasibility assessment of establishing a poison center in Bhutan and establishing MoU with existing poison centers		

	in the Region.		
Government Involvement	NEC to lead this core capacity area along with other stakeholders MoH: Department of Public Health, Department of Non-communicable diseases Ministry of Labour, Ministry of Agriculture and Forests, Ministry of Economic Affairs, Ministry of Finance		
Partners	WHO, International Programme on Chemical Safety (IPCS)		
Costs for the planned activities	Sensitization meetings for SoP for coordinated response to a chemical event in Bhutan Poison center: MoU costs, establishment cost to be determined following feasibility assessment.		
Technical support needs	WHO to support Bhutan for mapping available expertise on chemical safety at regional level (that can be mobilized in case of event). WHO to support Bhutan for exploring possibility for setting up a poison center. Follow up on recommendations of WHO assessment on Priority carcinogenic chemicals, Bhutan		



Chemical safety, Bhutan

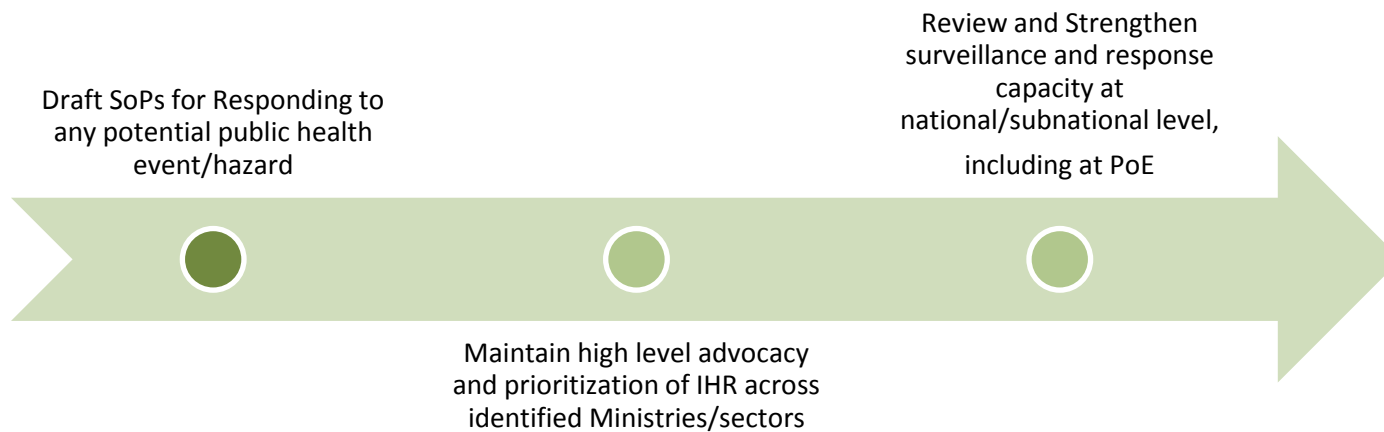
<b>Core Capacity Area 13 Radiation Emergencies <i>Priority</i></b>			
Component: 13.1 Capacity to detect and respond to radiological and nuclear emergencies that may constitute a public health event of national or international concern			
Brief Description of progress	As of now no experts have been identified for public health assessment and response to radiological and nuclear events, although there are medical doctors working in Radiology department of the National Hospital can be designated for this purpose. The Radiology department has got contact with Bhabha Atomic Research Centre (BARC), Kolkata, India, although there is no formal mechanism for collaboration.		
<b>Missing elements (as per 2013 update)</b>	<b>Planned Actions by 2014</b>	<b>Planned Actions by 2015</b>	<b>Eventual Goal</b>
No experts have been designated for public health assessment and response to radionuclear and chemical events.	Designate competent experts to take this agenda forward in Bhutan in collaboration with IHR NFP.  Explore collaboration with BARC for mobilizing experts in case of event.	MoU signed with BARC.	Mechanisms are established and functioning for detecting and responding to radionuclear and nuclear emergencies.
No SoP exist for managing radiation emergencies in Bhutan and there is no radiation emergency response plan.	Draft SoP and contingency plan for a coordinated response in case of a radiation emergency in Bhutan jointly with disaster management authorities.		
There is no national policy or plan document that	Review disaster	Develop plan for	

has been established for detection, assessment and response.	management plan, Bhutan for addressing radiation safety event in Bhutan	detection, assessment and response.	
The country does not have access to laboratory capacity to detect and confirm presence of radiation for potential hazards.	Explore collaborative mechanism with BARC, India for access to laboratory support (Bilaterally/ with WHO support)	Build capacity of identified staff for first response to a radio-nuclear event, in collaboration with BARC.	
Government Involvement	MoH: IHR NFP and DoPH	Other Ministries: ministry of home affairs,	Ministry of labour, economic affairs.
Partners	WHO, other UN agencies		
Costs for the planned activities	TA- development of contingency plan for radiation emergencies Training costs- Emergency Response to a radio-nuclear event.		
Technical support needs	WHO : support Bhutan for exploring collaborative mechanisms for contingency planning for radio nuclear safety Support capacity building, as necessary		

## Section 2

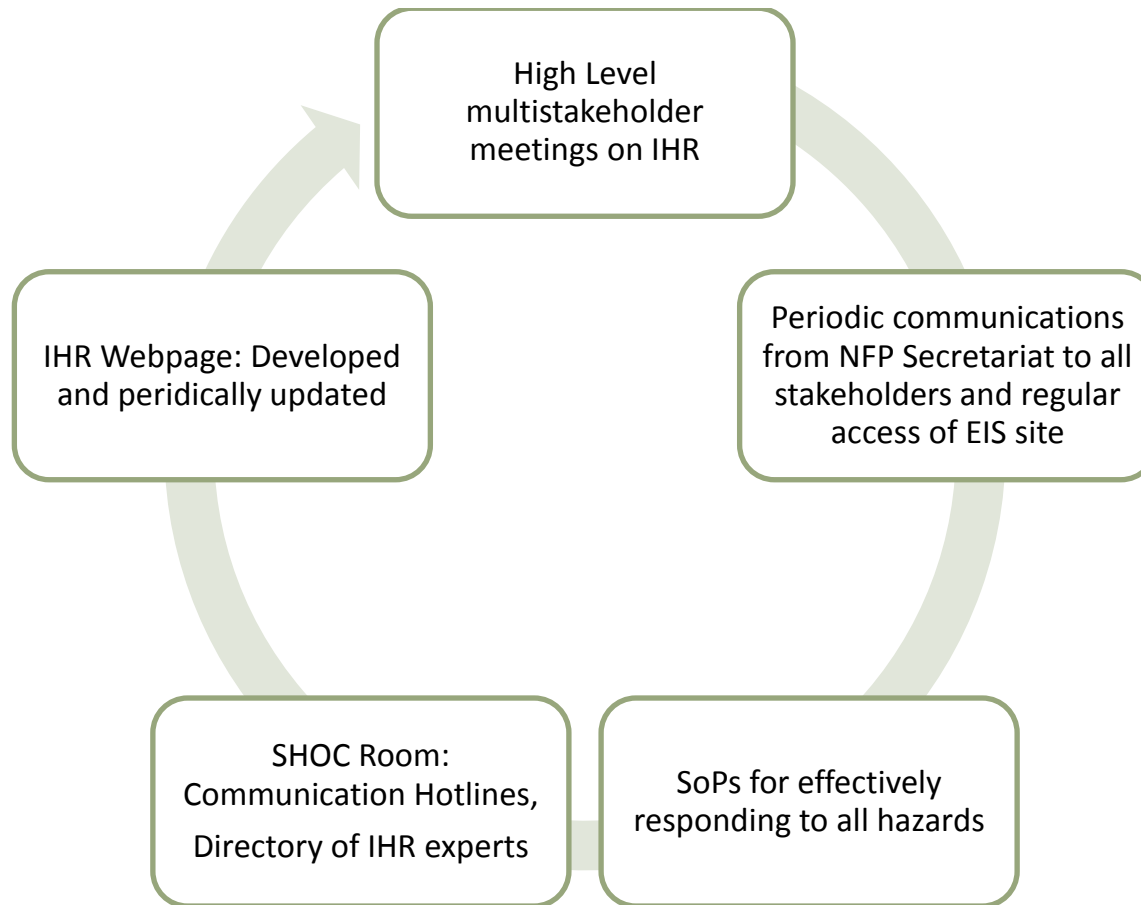
**This section summarizes the key activities Bhutan needs to carry out to strengthen core capacities under IHR (2005) and provides a more detailed overview of the priority actions needed.**

The assessment carried out in 2013 and subsequent discussions during evolution of this document has revealed that Bhutan has to focus on 3 major activities in the extension period (2014-2016) to be better prepared for any IHR related event/potential PHEIC. This is as shown in the figure below:



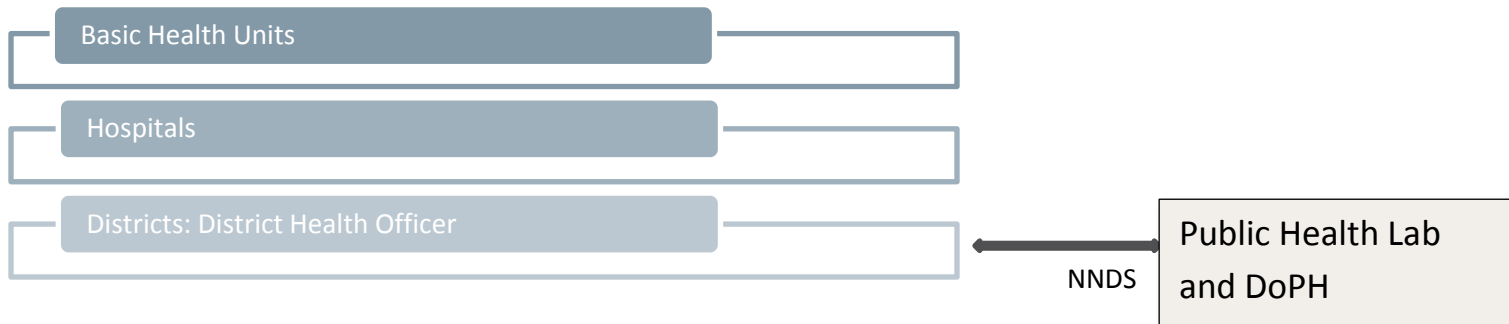
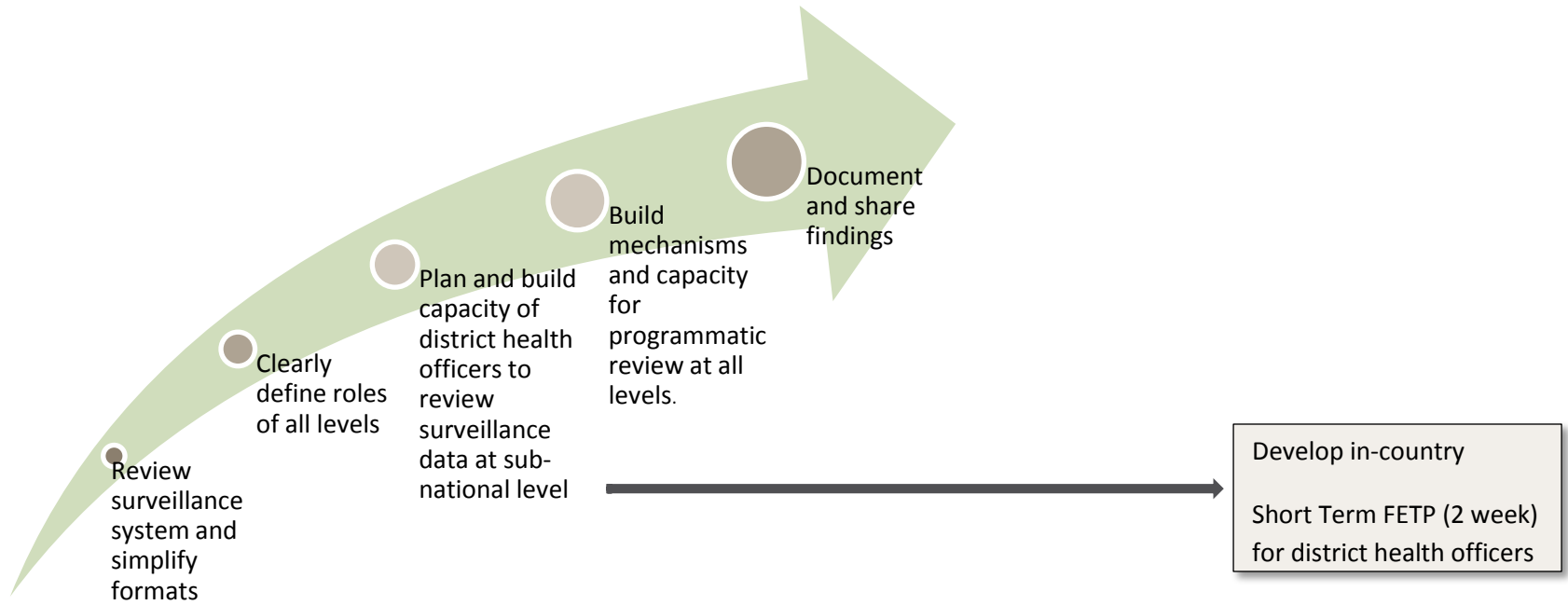
*Figure: Top Priorities for IHR, implementation, Bhutan (2014-2016)*

### Maintaining High Level advocacy for IHR in Bhutan (2014-2016): Key Actions Needed

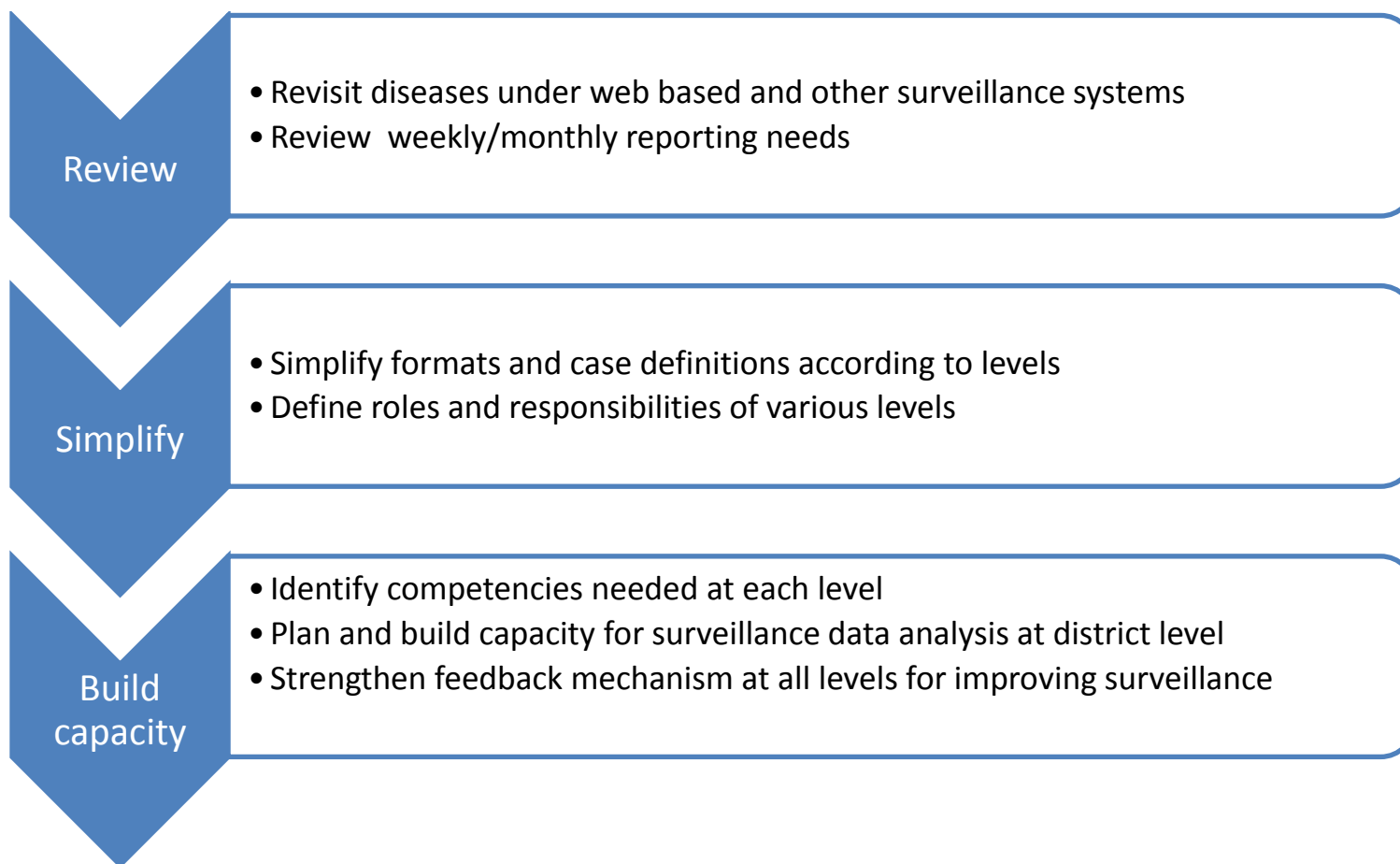




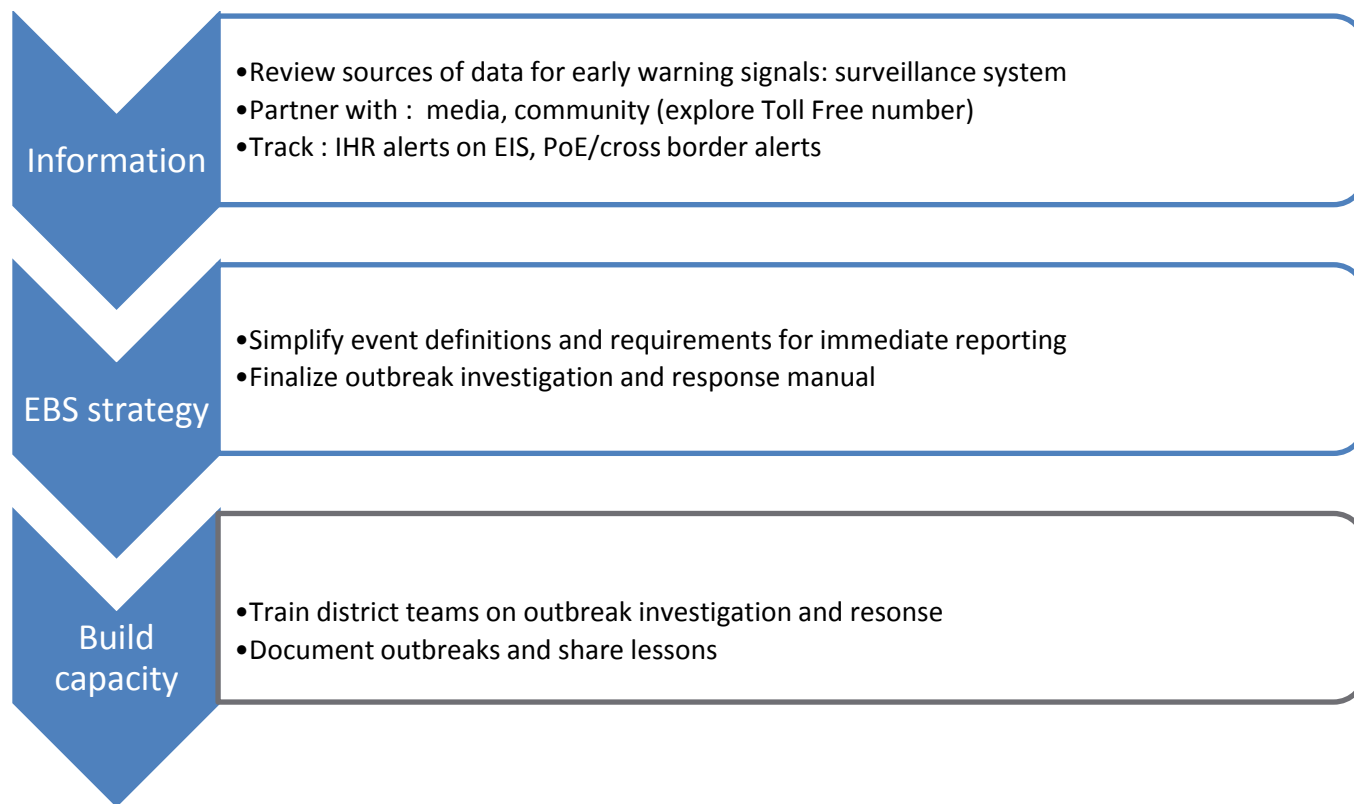
### Strengthening Disease surveillance and response in Bhutan: Roadmap (2014-2016)



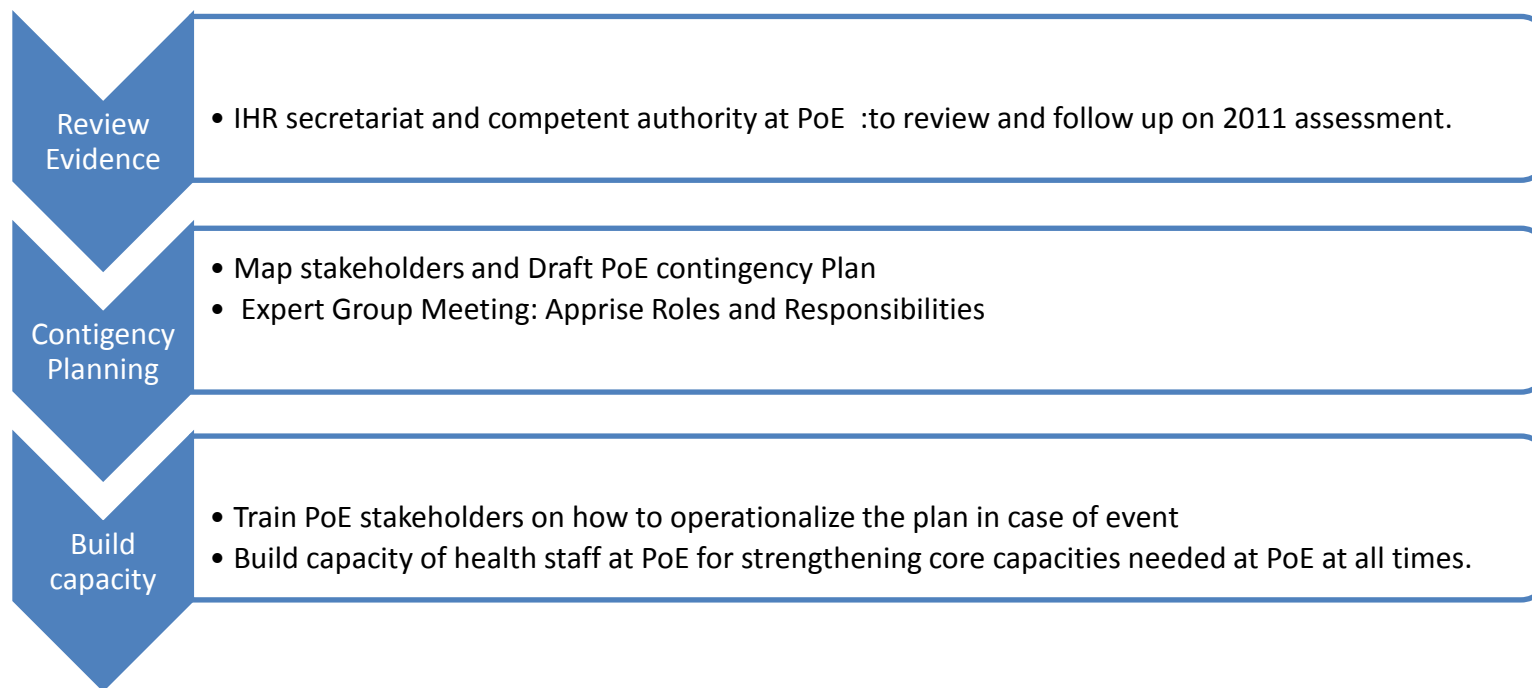
## Indicator based surveillance system, Bhutan: Key Actions Needed



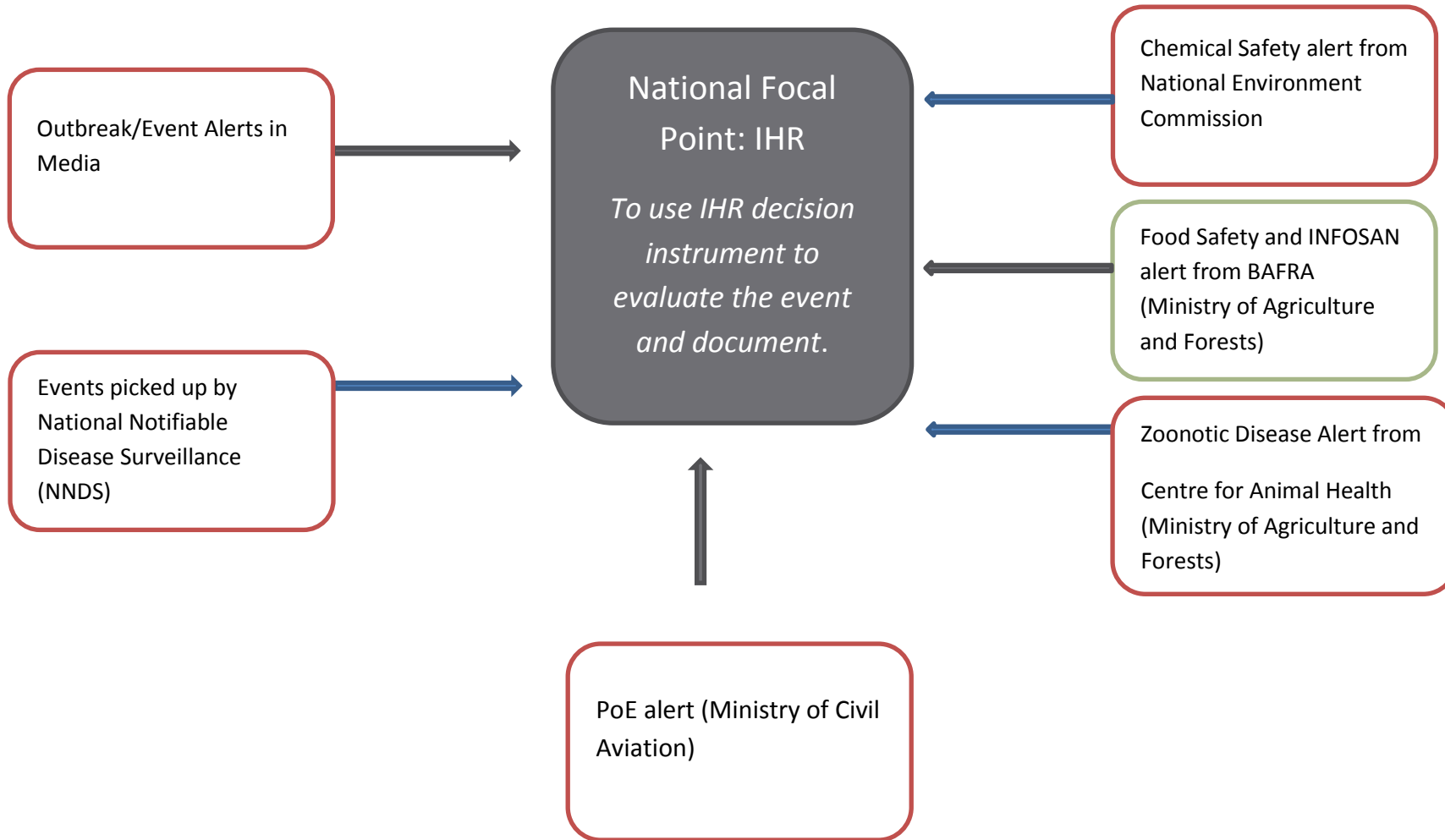
## Strengthening Event Based Surveillance in Bhutan: Key Actions Needed



## Building capacity for responding to IHR events, Points of Entry: Key Actions Needed



### Operational Plans for responding to any public health event/ IHR related hazard, Bhutan



### **Section 3: Abbreviations used in this document**

BAFRA: Bhutan Agriculture and Food Regulatory Authority

DoPH: Department of Public Health

DoMS: department of Medical Services

IPCS: International Programme on Chemical safety

NNDS: National Notifiable Disease Surveillance

NEC: National Environment Commission

PoE: Points of Entry

RIHS : Royal Institute of Health Sciences

SAICM: Strategic Approach to International Chemical Management

BARC: Bhabha Atomic Research Centre

## Section 4: Acknowledgements

The action plan for IHR was drafted jointly by the Ministry of Health, Bhutan in collaboration with WHO.

Dasho Nima Wangdi, Secretary, Ministry of Health, and Dr. DORJI Wangchuk, DG-Department of Public Health, Ministry of Health provided strategic leadership for evolution of this document. This plan evolved over a week long technical discussions on IHR agenda in Bhutan with key stakeholders identified by the Ministry of Health for the purpose of IHR (2005) under the guidance of National Focal Point-IHR Bhutan, Dr Karma Lhazeen; culminating in a multi-stakeholder IHR workshop on January 24, 2014 for review of the action plan for IHR (2014-2016).

Technical and drafting support was provided by Dr. Ritu Singh Chauhan, National Professional Officer, WHO Country office for India as part of her Terms of Reference: 'To provide technical support for the development of new IHR implementation plan for Bhutan'.

References for this were provided by WHO SEARO (Dr. Bardan Rana), WHO HQ (Dr. Rajesh Shreedharan) and WHO Country office for Bhutan (Mr. Kinley Dorji, Dr Nima Wangchuk).

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- Dr Sonam Wangchuk, Chief, Public Health Laboratory, DoPH
- Mr. Kencho Wangdi, Program officer, MoH
- Mr Karma Wangdi, Zoonotic Disease/Occupational Health, DoPH
- Mr. Tashi Duba, EMS, DoPH, MoH
- Mr. Chador Wangdi, PO, EMS
- Ms. Tshering Choden, National Environment Commission
- Mr. Jambay Dorji, Emergency contact Point for INFOSAN, BAFRA
- Mr. Jamyang Phuntsho, Chief laboratory Officer, BAFRA and team
- Ms. Pem\_zam, Infection Control Program officer, Dept of Medical Services
- Dr. Kinzang Dukpa, Department of Livestock, Min of Agriculture and Forests
- Mr. Nado Rinchen, Civil Aviation, Paro Airport and Ms. Tshering Choden, Immigration
- Tshering Doma, Visa officer, Dept of Immigration

## Section 5: References

- IHR Core Capacity Monitoring Framework: Questionnaire for Monitoring Progress in the Implementation of IHR core capacities in State Parties, 2013 Questionnaire ( as filled in by NFP, Bhutan)
- Surveillance and Outbreak Response capacities in Bhutan: Focused Assessment by Dr. Christian Winter (WHO), June-July 2013
- Bhutan: IHR implementation Monitoring, 2013
- Report of the High Level IHR (2005) coordination and Sensitization Meeting at Jambayang Resort, Thimphu, 29-30 Aug 2013.
- Review of Public Health Legislations for the Implementation of IHR (2005) in the Kingdom of Bhutan. Sunita K. Shreedharan, SKS Law Associates
- Operational Guideline of National Notifiable Disease Surveillance and Outbreak Investigation, Public Health Laboratory, Bhutan
- Technical Assistance to core capacity assessment at selected points of entry in Bhutan (12-21 March 2011, Bhutan)
- National workshop report on Chemicals safety, January 6-8, Paro, Bhutan

In addition to above, reference documents from WHO on IHR (2005) were used extensively for drafting this document.



