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**2025**

**Guideline on  
Rapid Risk Assessment  
at Local Level  
for Acute Public Health Events**

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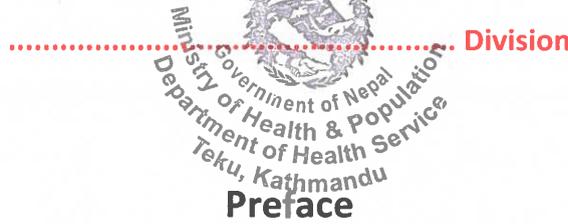
Government of Nepal  
Ministry of Health and Population  
Department of Health Services  
**Epidemiology and Disease Control Division**  
Teku, Kathmandu





Government of Nepal  
Ministry of Health and Population  
**Department of Health Services**

4-261712  
4-261436  
Fax: 4-262268



Pachali, Teku  
Kathmandu, Nepal

Ref No.:

**Preface**

It is my great pleasure to share the *Rapid Risk Assessment Guideline for Acute Public Health Events at Local Level*. Over the past decades, Nepal has faced numerous public health challenges, ranging from infectious disease outbreaks to emerging health threats exacerbated by rapid urbanization, climate variability, and mobility. These events have underscored the need for a structured, evidence-based, and rapid approach to assessing risks and mobilizing an effective response.

The development of this guideline represents a significant milestone in strengthening Nepal's public health emergency response capacity. It provides a systematic framework to evaluate the potential risks of disease outbreaks and public health events, enabling timely decision-making and coordinated interventions. The guideline has been contextualized to Nepal's federal health system, recognizing the unique epidemiological, geographical, contextual and resource realities across our provinces and local municipal levels.

Our experience has shown that early detection and risk assessment are pivotal in preventing localized outbreaks from escalating into bigger crises. This document aims to empower public health professionals, surveillance officers, and Rapid Response Teams (RRTs) and FETPs with the tools and methodologies necessary for informed action. It also reinforces the importance of collaboration between federal, provincial, and local health institutions at municipal level.

I extend my sincere appreciation to the technical team of Epidemiology and Disease Control Division (EDCD) who have dedicated their expertise to this important work. I also acknowledge the continued partnership and support from WHO and other development partners in building Nepal's preparedness and response capacities.

This guideline is one step closer to Nepal's ongoing commitment to protecting public health. I encourage all users of this document to apply it in their daily practice and to adapt its guidance to address the evolving public health challenges of our time.

Dr Tanka Prasad Barakoti  
Director General  
Department of Health Services (DoHS)

**Director General**





Government of Nepal

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# Department of Health Services

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## Foreword

In today's rapidly changing public health landscape, timely and structured risk assessment is valuable tool for effective outbreak response. The *Rapid Risk Assessment Guideline for Acute Public Health Events at Local Level* has been developed to operationalize a standardized and practical approach for assessing emerging health threats at national and subnational levels in Nepal.

It is designed to equip our Rapid Response Teams (RRTs), field epidemiologists, and public health practitioners with clear procedures and tools to identify, evaluate, and prioritize public health risks in real time. The Epidemiology and Disease Control Division (EDCD), as the national focal point for disease surveillance and outbreak response, has continually emphasized the importance of preparedness, evidence-based decision-making, and multi-sectoral coordination.

The RRA process outlined here enables assessment of hazards, exposures, and vulnerabilities, ensuring that early warnings translate into early action. The guideline also integrates lessons learned from Nepal's recent responses to cholera, dengue, COVID-19, and other past outbreaks. Importantly, it recognizes the decentralized structure of our health system, encouraging provincial and local teams to take ownership and apply RRA principles within their respective contexts.

This achievement has been possible through collaboration and technical assistance from the Epidemiology and Disease Control (EDCD) team and World Health Organization (WHO). I would like to extend my gratitude to all stakeholders, experts, and provincial experts who contributed their insights during the drafting and validation process.

I am confident that this guideline will serve as a cornerstone in strengthening Nepal's public health surveillance and emergency response framework. By institutionalizing rapid risk assessment, we move closer to achieving a proactive, informed, and resilient public health system capable of safeguarding the wellbeing of our community.

  
Dr Chandra Bhal Jha  
Director  
Epidemiology and Disease Control Division (EDCD)

Director



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# Introduction

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Public health events, whether arising from infectious diseases, environmental hazards, or other health-related events, require prompt identification and evaluation to mitigate their impact on affected populations. An initial Risk Assessment (IRA) at local level, also coined as Rapid Risk Assessment (RRA) is a systematic process for gathering, assessing (examining) and documenting information and data from multiple sources to assign a level of risk to inform decision making. At the local level, IRA is critical for enabling timely and effective decision-making for need of field deployment and response by the RRT teams [1].

Rapid risk assessment informs effective risk management. Its benefits include:

- justifiable **decision-making**
- for effective **deployment of RRTs**
- implementation of appropriate and timely **control measures**
- more effective **operational communication**
- more effective **risk communication**
- for effective **resource allocation**
- improved **preparedness and readiness**

## Objectives

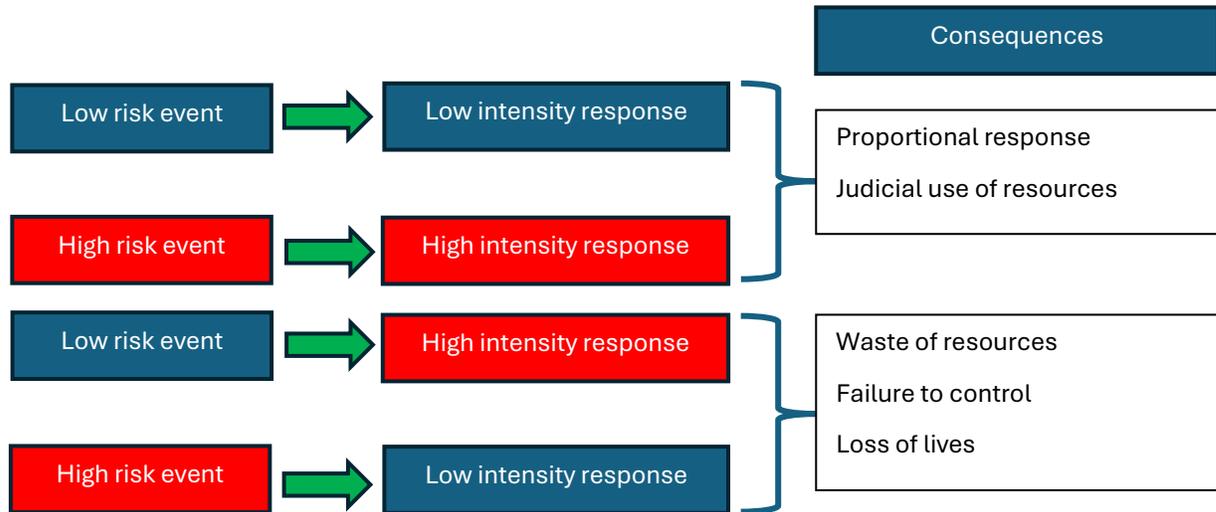
The primary objective of this document is to provide a structured framework and checklist to conduct Rapid Risk Assessments at the local level in Nepal. It is designed to assist local level Rapid Response Team (RRT), health workers, community leaders, and local authorities in identifying potential public health threats, evaluating their severity and spread potential, and determining the capacity of local health systems to respond effectively under local context. This document is intended to be user-friendly and adaptable, emphasizing practicality for field application. It includes simplified algorithm, checklists, and guidance tailored to the needs of local health workers and communities in Nepal, ensuring that every step of the assessment is accessible and actionable.

The level of risk assigned to an event is based on assessment of the characteristics of the **hazard**, the people at risk of **exposure** to the hazard, and the **environment** (context) in which the event is occurring using multi-source information from different sector as mentioned in the figure below. Hence, risk-based approach is needed for appropriate public health action.

## Risk Based Approach

A risk-based response approach emphasizes the importance of aligning response intensity with the assessed risk level of an event. The level of risk, determined through a rigorous Rapid Risk Assessment (RRA) process, dictates the

necessary response measures. Based on this assessment, appropriate decision-making at the local level ensures that responses are proportionate and, if required, can trigger effective management at the provincial or federal level.



## The All-Hazards Approach and International Health Regulations (IHR)

The all-hazards approach is a comprehensive strategy used in emergency and disaster management to address a wide range of threats, including natural disasters, biological hazards, chemical exposures, and radiological incidents, whether they occur naturally, accidentally, or deliberately. This approach is adopted because any hazard, regardless of its origin, ultimately has potential health impacts that require timely and effective intervention. The approach is central to the International Health Regulations (IHR), revised in 2005, which require countries to develop core capacities for surveillance and response to protect public health from events of international concern. The all-hazard approach also contributes to reporting of notifiable hazards like public health emergency of international concern. Through the RRA decision tool countries are encouraged to establish risk assessment capacities at both national and sub-national levels, integrating them into their prevention, surveillance, and response systems. [2,3]. The risk assessment process contributes reporting on IHR notifiable disease.

# Rapid Risk Assessment in National Alert and Response

## Framework

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Risk assessment at the local level plays a crucial role in the alert and response framework, enabling prompt detection, evaluation, and response to public health threats. The Rapid Risk Assessment (RRA) process is customized to fit the specific context, utilizing local resources and expertise to effectively identify and manage risks. The alert and response framework follows a structured approach, where local health authorities and Rapid Response Teams

(RRTs) serve as the first line of defense. Alerts can originate from various sources, including community-based surveillance, healthcare facilities, laboratories, and environmental monitoring. When an alert is activated and verified, a local-level RRA is performed to assess the severity, likelihood, and potential impact/consequences of the threat. This involves gathering real-time data, analyzing occurrence patterns, and evaluating factors such as population vulnerability, healthcare infrastructure capacity, and environmental risks. At the local level, RRA should be done in close coordination with community, ensuring that information is both collected from and shared with the affected population. This approach aids in accurate risk identification and enhances public trust in the response measures. Local health authorities act based on RRA findings, implementing early containment strategies like isolation, quarantine, contact tracing, and targeted communication campaigns. The local RRA process is simple and adaptable, aligning with the broader alert and response framework to ensure smooth information flow from the ground level to provincial and national systems. This integration is essential for scaling up responses when risks surpass local capabilities. In summary, local-level RRA within the alert and response framework is critical for delivering timely, evidence-based, and community-centered public health interventions [1,5].

### **Hazard Assessment**

Hazard assessment at the local level involves identifying the hazard or potential hazards causing a public health event and understanding the associated adverse health effects. These hazards may be biological, chemical, physical, or radio nuclear which may immediately or ultimately impact health . The process begins by identifying possible hazards based on clinical, epidemiological, and environmental information and the known burden of disease in the community (can be referred to provincial hazard reports of for respective provinces/districts and local level). In straightforward cases with clear laboratory confirmation or well-characterized clinical features, hazard assessment starts with a known or strongly suspected cause. However, in complex situations, a broad list of potential hazards (for eg, lists of 52 notifiable infectious diseases) is referred for and narrowed down as more information becomes available. Factors such as clinical presentation, timing, fatality rates, geographical distribution, and the affected population are used to assess the likelihood of each hazard. This systematic approach ensures that local RRTs can prioritize risks effectively, guiding timely and targeted interventions [1,2]. The respective levels can refer to their own hazard profile that will help them to perform RRA.

## Exposure Assessment

Exposure assessment evaluates the extent to which individuals or populations are exposed to identified hazards during a public health event. The primary goal is to estimate the number of people exposed and their susceptibility. Key factors include modes of transmission (e.g., human-to-human, animal-to-human), dose-response relationships, incubation periods, case fatality rates (CFRs), and the potential for further transmission (e.g., R0). Vaccination status and duration of exposure also play critical roles in understanding risk levels. Also, exposure depends on the vulnerability of the communities (people who are more likely to be disproportionately affected by hazards due to social, economic, health, or environmental factors.) These communities often have limited capacity to prepare for, respond to, and recover from emergencies. Vulnerability can stem from factors such as poverty, limited access to healthcare, inadequate infrastructure, low literacy levels, language barriers, geographic isolation, disability, congregated settings, age (very young or elderly), chronic illness, pregnancy, indigenous communities or displacement. In many cases, these communities also have reduced political representation or social capital, which further limits their ability to advocate for resources and protection. Identifying and prioritizing the needs of vulnerable communities is a critical component of the all-hazards approach.

For certain hazards, such as infectious agents, chemical agents, or heavy metals, the magnitude of exposure depends on factors like contact duration or ingestion levels. Exposure dynamics may vary within households, occupational settings, or social networks, as seen with diseases like measles, SARS, and sexually transmitted infections. In vector-borne and zoonotic diseases, additional data on vector species, distribution, density, and animal hosts are crucial for assessing vulnerability in affected areas. This systematic evaluation helps determine the likelihood and impact of hazard transmission, guiding targeted prevention and response strategies at the local level [1,2].

## Context Assessment

Context assessment examines the broader environment in which a public health event occurs, considering physical, social, cultural, political and infrastructural factors that may influence vulnerability, risk and impact. This includes evaluating the physical environment (e.g., climate, vegetation, water systems), population health (e.g., nutrition, disease burden, and past outbreaks), infrastructure (e.g., healthcare systems, transport), and cultural practices or beliefs. Beyond scientific and technical aspects, a comprehensive context assessment considers **social, technical, economic, environmental, ethical, and political** factors (summarized as **STEEEP**) that may increase or decrease exposure risks or their consequences.

Critical questions include identifying environmental or cultural factors that increase vulnerability, assessing those that might reduce risk, and evaluating the feasibility of identifying all cases and implementing preventive measures or treatments. This holistic evaluation helps tailor public health responses to the specific challenges and resources of the affected population, ensuring a more effective and context-sensitive approach to managing risks [1,2].

**Key indicators for RRA:**

This document is divided into key indicators essential for comprehensive risk assessment:

**Signal or Event:** Identifying and verifying the occurrence of unusual health events and their sources.

**Pattern:** Determining whether the event is unusual or exceeds expected levels.

**Spread Potential:** Assessing the likelihood of wider geographical spread or significant case increase.

**Severity:** Assessing the severity of public health event which is usually done by mortality or severe morbidity

**Exposure:** Evaluating ongoing or future exposure risks within the community.

**Capacity:** Reviewing the availability of local resources and systems for prevention, response, and control.

By addressing these indicators systematically, the RRA enables local-level health authorities to prioritize actions, mobilize resources, and escalate issues to higher authorities when necessary. This approach aligns with Nepal's national health policies and alert and response framework and international frameworks such as the International

Health Regulations (IHR, 2005) to strengthen health security and reduce vulnerability to public health threats. The rapid risk assessment is done by the rapid response team (RRT).



FIGURE 1 FACTORS/ PROCESS CONSIDERING FOR RISK ASSESSMENT

## **Role of Rapid Response Team in Rapid Risk Assessment (RRA):**

Rapid Response Teams (RRTs) are essential for assessing risks at inception or start of acute phase public health emergencies, disease outbreaks, and during disasters. Their main task is to quickly gather and analyze data from epidemiological, clinical, environmental, and laboratory sources to understand the extent, severity, and nature of the health threat. By identifying hazards like causative agents and sources of exposure, RRTs can determine how the disease spreads and identify potential hotspots. They evaluate the vulnerabilities of affected populations, considering factors such as age, existing health condition, socioeconomic status, and the capacity of the healthcare system. This thorough analysis helps assess the potential health, economic, and social consequences, allowing for the prioritization of risks that require immediate attention. RRTs also play a vital role in sharing evidence-based information with stakeholders, which informs public health actions like isolation, quarantine, vaccination efforts, and other containment strategies. Additionally, they decide how frequently the assessments is updated and continuously monitor and reassess the situation to ensure that risk evaluations stay accurate and relevant as new information becomes available. Through activities such as RRA, RRTs support evidence-based decision-making, improve resource allocation, and enhance the overall effectiveness of public health responses, ultimately reducing the impact of health emergencies on communities [1,4].

### **Frequency of RRA**

Risk assessments should be dynamic processes that are reviewed and updated frequently, particularly in the early days of a response, when the situation is rapidly evolving.

- Immediately upon detection or notification of the event (first 24–48 hours).
- Repeatedly as new information becomes available or the situation evolves—often every 24 to 72 hours during the acute phase.

Guide to address risk questions at each step of the algorithm (English).

| Question   | Answer  | Instruction   |
|--|---|---|
| <p><b>1. Is the disease/ signal/events/ cluster verified and usual?</b></p> <p>The disease/ signal/events/cluster which can be detected at local level or the disease where outbreak have occurred previously.</p> <p>(e.g. with a similar presentation, affecting a similar population and geographical area, over the same time period)?</p> <p>Unusual events refer to any <b>unexpected patterns, behaviors, or characteristics.</b></p> <p>(e.g. <b>Sudden rise in cases</b> in a short period, <b>unusual symptoms or severity, unexpected age groups or populations affected, High case fatality rate</b>)</p>  | <p><input type="checkbox"/>Yes</p> <p><input type="checkbox"/>No/</p> <p><input type="checkbox"/>Unknown</p>  | <p>If "yes" go to question 4.</p> <p>If "no or unknown" go to question 2.</p> |
| <p><b>2. Any identified hazard or source of origin?</b></p> <p>- Identified sources means:</p> <ul style="list-style-type: none"> <li>• Contaminated water supply (e.g., unsafe drinking water, sewage leakage).</li> <li>• Food contamination eg intake of contaminated meat, contaminated chemicals)</li> <li>• Airborne sources (e.g., industrial pollutants, mold, allergens)</li> <li>• Behavioral factors like unsafe hand hygiene, open defecation or unsafe public health measures</li> <li>• Recent travel history of affected individuals to areas with known transmission.</li> <li>• Close contact with sick individuals (e.g., in families, schools, workplaces).</li> <li>• Contact with domestic or wild animals</li> <li>• Insect bites (e.g., mosquitoes or tick or other insects).</li> <li>• Dead or affected animals in the area.</li> </ul> | <p><input type="checkbox"/>Yes</p> <p><input type="checkbox"/> No/</p> <p><input type="checkbox"/>Unknown</p> | <p>If "yes" go to question 4.</p> <p>If "no or unknown" go to question 3.</p> |

|  |  |  |
|--|--|--|
| <ul style="list-style-type: none"> <li>Exposure to chemicals, toxins, or hazardous waste or radio-nuclear agents</li> <li>Natural disasters or events that could disrupt sanitation or food supply</li> </ul>  |  |  |
| <p><b>3. Can further outbreak/ event investigation be performed ?</b></p> <ul style="list-style-type: none"> <li>Do local response teams have the trained expertise to carry out epidemiological surveys, interviews, or environmental assessments? Eg, local RRTs and FETPs <b>AND</b></li> <li>Are local laboratories equipped to collect, transport, receive, test, and detect samples for cause identification?</li> </ul>   | <input type="checkbox"/> Yes<br><input type="checkbox"/> No/<br><input type="checkbox"/> Unknown | <p>If "yes" go to question 6.</p> <p>If "no or unknown" go to question 8.</p>  |
| <p><b>4. Is it more than expected?</b></p> <ul style="list-style-type: none"> <li>A significant increase in the number of cases compared to baseline levels (e.g., seasonal averages, previous years, threshold levels).</li> <li>Even one unusual presentation of symptoms, age groups, or severity or sudden deaths.</li> <li>Outbreaks outside their typical geographic or temporal patterns.</li> </ul>  | <input type="checkbox"/> Yes<br><input type="checkbox"/> No/<br><input type="checkbox"/> Unknown | <p>If "yes" go to question 6.</p> <p>If "no or unknown" go to question 5.</p>  |
| <p><b>5. Is further exposure likely to take place?</b></p> <ul style="list-style-type: none"> <li>What is the likely cause (etiology) of the event?</li> <li>Are the sources of disease/transmission/events still active? (e.g., contaminated water, ongoing transmission, or outbreak continuing, propagated transmission).</li> <li>Is there evidence of ongoing spread in the community or nearby areas like spread to other wards and local levels?</li> <li>Is the population susceptible that could result in high exposure</li> </ul> | <input type="checkbox"/> Yes<br><input type="checkbox"/> No/<br><input type="checkbox"/> Unknown | <p>If "yes" go to question 6.</p> <p>If "no or unknown" go to question 8a.</p> |
| <p><b>6. Has hospitalization/ and OR death increased over a period of time?</b></p>  | <input type="checkbox"/> Yes<br><input type="checkbox"/> No/                                     | <p>If "yes" go to question 7.</p>  |

|  |  |  |
|--|--|--|
| <ul style="list-style-type: none"> <li>• Number of affected hospitalized from the events.</li> <li>• Number of deaths caused due to exposure</li> <li>• For chemical, toxic and radiological assessment assess dose-response and fatalities</li> </ul>   | <input type="checkbox"/> Unknown   | If "no or unknown" go to question 8a.                              |
| <p><b>7. Would a high number of cases and deaths or geographical spread be expected in future?</b></p> <ul style="list-style-type: none"> <li>• Is there evidence of rapid case increase of new cases in previously unaffected areas?</li> <li>• Are there super spreader events (e.g., festivals, mass gatherings) contributing to transmission?</li> <li>• Are affected individuals traveling to unaffected areas?</li> </ul>  | <input type="checkbox"/> Yes<br><input type="checkbox"/> No/<br><input type="checkbox"/> Unknown | If "yes" go to question 8b<br>If "no or unknown" go to question 8a |
| <p><b>8. Are the capacity for prevention and response, control measures in place?</b></p> <ul style="list-style-type: none"> <li>• Are trained health workers and response teams available for investigation?</li> <li>• Are healthcare facilities equipped to handle the caseload (e.g., beds, isolation wards)?</li> <li>• Are there local response plans and protocols for outbreaks or chemical and radiological events?</li> <li>• Are guidelines for diagnosing and treating cases in place?</li> <li>• Are there adequate teams for clinical case management?</li> <li>• Are there referral services in place for case management e.g. Availability of ambulances?</li> <li>• Are environmental risks (e.g., contaminated water, vectors) being addressed?</li> <li>• Can communities actively engage in prevention and response efforts?</li> <li>• Are there specific guidelines for infection prevention and control?</li> </ul> | <input type="checkbox"/> Yes<br><input type="checkbox"/> No/<br><input type="checkbox"/> Unknown | Follow the algorithm for Risk level and response                   |



**Algorithm को प्रत्येक चरणमा जोखिम सम्बन्धी प्रश्नहरूको जवाफ दिनको लागि मार्गदर्शन**

| Question  | Answer   | Instruction   |
|---|--|---|
| <p><b>१. के रोग/जनस्वास्थ्यका घटनाहरू वा संकेतहरू ज्ञात, प्रमाणित र सामान्य हुन् ?</b></p> <p>स्थानीय स्तरमा यस अघि भएका वा पहिचान गर्न सकिने महामारीजन्य रोगहरू, जनस्वास्थ्यका घटनाहरू वा उस्तै प्रकृतिका संकेतहरूको समूह हुन् (उदाहरणको लागि, उस्तै प्रस्तुति, उस्तै जनसंख्या र भौगोलिक क्षेत्रलाई समयावधिमा असर गर्ने)?</p> <p><b>असामान्य घटनाहरू</b> भन्नाले कुनै पनि अप्रत्याशित तवर, रूप वा व्यवहार वा विशेषता जनाउँछ।</p> <p>(जस्तै: छोटो अवधिमा केसहरूमा अचानक वृद्धि, असामान्य लक्षण वा गम्भीरता, अप्रत्याशित उमेर समूह वा जनसंख्यामा संक्रमण देखिनु, उच्च मृत्युदर हुनु) ।</p>   | <input type="checkbox"/> हो<br><input type="checkbox"/> होइन/<br><input type="checkbox"/> थाहा छैन | <p>यदि "हो" भने प्रश्न ४ मा जानुहोस्।</p> <p>यदि "होइन अथवा थाहा छैन" भने प्रश्न २ मा जानुहोस्।</p>   |
| <p><b>२. के पहिचान गरिएको कुनै कारक तत्व (Hazard) अथवा कारक तत्वको उत्पत्तिको स्रोत ज्ञात छ त?</b></p> <p>पहिचान गरिएका कारक तत्व (Hazard) अथवा कारक तत्वको उत्पत्तिको स्रोत स्रोतहरू भन्नाले:</p> <ul style="list-style-type: none"> <li>• दूषित पानी आपूर्ति (जस्तै, असुरक्षित पिउने पानी, ढल चुहावट)।</li> <li>• प्रदूषित खाना जस्तै दूषित मासुको सेवन।</li> <li>• वायुजन्य स्रोतहरू (जस्तै, औद्योगिक प्रदूषकहरू, मोल्ड, एलर्जीहरू)।</li> <li>• असुरक्षित व्यक्तिगत सर-सफाई, जस्तै हातको स्वच्छता, खुला दिसा वा जनस्वास्थ्यका दृष्टिकोणले असुरक्षित व्यवहारहरू।</li> <li>• महामारी फैलिएको क्षेत्रमा प्रभावित व्यक्तिहरूको हालैको यात्रा इतिहास।</li> <li>• बिरामी व्यक्तिहरूसँग नजिकको सम्पर्क (जस्तै, परिवार, विद्यालय, कार्यस्थलहरूमा)।</li> <li>• घरेलु वा जंगली जनावरहरूसँग सम्पर्क।</li> <li>• कीराको टोकाइ (जस्तै, लामखुट्टे वा टिक वा अन्य कीराहरू)।</li> <li>• प्रभावित क्षेत्रमा अप्रत्याशित रूपमा मरेका वा प्रभावित पंक्षी वा जनावरहरू।</li> <li>• रसायन, विषाक्त पदार्थ, वा खतरनाक फोहोर वा रेडियो-धर्मी पदार्थहरूको जोखिम।</li> <li>• सरसफाई वा खाद्य आपूर्तिमा बाधा पुऱ्याउन सक्ने प्राकृतिक प्रकोपहरू।</li> </ul> | <input type="checkbox"/> हो<br><input type="checkbox"/> होइन/<br><input type="checkbox"/> थाहा छैन | <p>यदि "हो" भने प्रश्न ४ मा जानुहोस्।</p> <p>यदि " होइन अथवा थाहा छैन " भने प्रश्न ३ मा जानुहोस्।</p> |
| <p><b>३. के रोग प्रकोप/घटनाको स्रोत वा जोखिम पहिचान गर्न थप अनुसन्धान गर्न सकिन्छ?</b></p>  | <input type="checkbox"/> हो<br><input type="checkbox"/> होइन/<br><input type="checkbox"/> थाहा छैन | <p>यदि "हो" भने प्रश्न ६ मा जानुहोस्।</p> <p>यदि " होइन अथवा थाहा छैन " भने प्रश्न ८ मा जानुहोस्।</p> |

|  |  |  |
|--|--|--|
| <ul style="list-style-type: none"> <li>के स्थानीय द्रुत प्रतिक्रिया टोलीहरूले महामारी सर्वेक्षण, अन्तर्वार्ता, वा वातावरणीय मूल्याङ्कनहरू गर्न क्षमता राख्छन् ? जस्तै, स्थानीय RRTs र FETPs र</li> <li>कारण पहिचानको लागि नमूनाहरू सङ्कलन, ढुवानी, परीक्षण र नतिजा पत्ता लगाउन स्थानीय प्रयोगशालाहरू सक्षम छन्?</li> </ul>   |  |  |
| <p><b>४. के यो अपेक्षित भन्दा बढी हो ?</b></p> <ul style="list-style-type: none"> <li>बिगतको आधार रेखा स्तरको (baseline level) तुलनामा घटनाहरूको संख्यामा उल्लेखनीय वृद्धि (जस्तै, मौसमी औसत, अधिल्लो वर्षको संख्या, थ्रेसहोल्ड स्तर)।</li> <li>अनपेक्षित लक्षण, उमेर समूह, वा गम्भीरता वा अचानक मृत्युको प्रस्तुतिकरण।</li> <li>असामान्य भौगोलिकता वा घटनाहरूको असामान्य क्रमबद्धता</li> </ul>  | <input type="checkbox"/> हो<br><input type="checkbox"/> होइन/<br><input type="checkbox"/> थाहा छैन | यदि "हो" भने प्रश्न ६ मा जानुहोस्।<br>यदि " होइन अथवा थाहा छैन " भने प्रश्न ५ मा जानुहोस्।       |
| <p><b>५. के थप संक्रमण (exposure) हुने सम्भावना छ?</b></p> <ul style="list-style-type: none"> <li>घटनाको सम्भावित कारण ( Etiology) के हो?</li> <li>के रोग/घटना फैलउने स्रोतहरू अझै सक्रिय छन्? (जस्तै, दूषित पानी, निरन्तर रोग फैलिरहेको, वा प्रकोप जारी नै रहनु, विस्तार हुनु)</li> <li>के समुदाय वा नजिकका क्षेत्रहरूमा निरन्तर फैलावटको प्रमाण छ, जस्तै अन्य वडा र स्थानीय तहहरूमा फैलावट?</li> <li>के जनसंख्या उच्च जोखिममा पर्न सक्ने गरी कमजोर छ?</li> </ul> | <input type="checkbox"/> हो<br><input type="checkbox"/> होइन/<br><input type="checkbox"/> थाहा छैन | यदि "हो" भने प्रश्न ६ मा जानुहोस्।<br>यदि " होइन अथवा थाहा छैन " भने प्रश्न ८(क) मा जानुहोस्।    |
| <p><b>६. के यो समय वा अवधिमा अस्पताल भर्ना/र मृत्युदर बढेको छ?</b></p> <ul style="list-style-type: none"> <li>घटनाबाट प्रभावित भई अस्पताल भर्ना भएकाहरूको संख्या।</li> <li>जोखिमका कारण भएका मृत्युको संख्या।</li> <li>रासायनिक, विषाक्त र रेडियोलोजिकल मूल्याङ्कनको लागि dose-response र मृत्युदरको मूल्याङ्कन गर्नुहोस्।</li> </ul>  | <input type="checkbox"/> हो<br><input type="checkbox"/> होइन/<br><input type="checkbox"/> थाहा छैन | यदि "हो" भने प्रश्न ७ मा जानुहोस्।<br>यदि " होइन अथवा थाहा छैन " भने प्रश्न ८(क) मा जानुहोस्।    |
| <p><b>७. के भविष्यमा उच्च संख्यामा बिरामीहरू बढ्ने वा भौगोलिक फैलावट हुने अपेक्षा गरिएको छ?</b></p> <ul style="list-style-type: none"> <li>के पहिले प्रभावित नभएका क्षेत्रहरूमा नयाँ घटनाहरूको तीव्र रूपमा वृद्धि भएको प्रमाण छ?</li> <li>के फैलावटमा योगदान गर्ने सुपर स्प्रेडर घटनाहरू (जस्तै, चाडपर्वहरू, ठूला जमघटहरू) हुने सम्भावना छन् ?</li> <li>के प्रभावित व्यक्तिहरू अप्रभावित क्षेत्रहरूमा यात्रा गरिरहेका छन् ?</li> </ul>                             | <input type="checkbox"/> हो<br><input type="checkbox"/> होइन<br><input type="checkbox"/> थाहा छैन  | यदि "हो" भने प्रश्न ८(ख) मा जानुहोस्।<br>यदि " होइन अथवा थाहा छैन " भने प्रश्न ८(क) मा जानुहोस्। |
| <p><b>८. रोकथाम र प्रतिक्रियाको लागि क्षमता, नियन्त्रण उपायहरू कार्यान्वयनमा छन् ?</b></p>   | <input type="checkbox"/> हो<br><input type="checkbox"/> होइन/                                      | जोखिम स्तर र प्रतिक्रियाको लागि Algorithm पछ्याउनुहोस्।  |

|  |                                   |  |
|--|-----------------------------------|--|
| <ul style="list-style-type: none"> <li>• के प्रशिक्षित स्वास्थ्यकर्मी र द्रुत प्रतिक्रिया टोलीहरू उपलब्ध छन्?</li> <li>• के स्वास्थ्य सेवा प्रणाली घटनाहरू/प्रकोपको भार व्यवस्थापन गर्न सक्षम छ (जस्तै, बेड, आइसोलेसन वार्डहरू)?</li> <li>• के प्रकोपहरूको लागि स्थानीय प्रतिकार्य योजनाहरू र प्रोटोकलहरू छन्?</li> <li>• के घटनाहरूको निदान र उपचारको लागि निर्देशिकाहरू कार्यान्वयनमा छन्?</li> <li>• के क्लिनिकल केस व्यवस्थापनको लागि पर्याप्त टोली छ?</li> <li>• के केस व्यवस्थापनको लागि रेफरल सेवाहरू कार्यान्वयनमा छन् (जस्तै एम्बुलेन्स आदिको उपलब्धता)?</li> <li>• के वातावरणीय जोखिमहरूको (जस्तै, दूषित पानी, भेक्टरहरू) व्यवस्थापन भइरहेको छ?</li> <li>• के समुदाय प्रकोप रोकथाम र प्रतिकार्यका प्रयासहरूमा सक्रिय रूपमा संलग्न हुन सक्छन् ?</li> <li>• के प्रकोप अनुसारको संक्रमण रोकथाम र नियन्त्रणका लागि निर्देशिकाहरू उपलब्ध छन् ?</li> </ul> | <input type="checkbox"/> थाहा छैन |  |
|--|-----------------------------------|--|

## References

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- [2] World Health Organization, Early detection, assessment and response to acute public health events: Implementation of Early Warning and Response with a focus on Event-Based Surveillance, 2014, Geneva, WHO/HSE/GCR/LYO/2014.4
- [3] World Health Organization. International health regulations (2005). 3rd ed. Geneva: WHO Press; 2016. Available from: <https://www.who.int/publications/i/item/9789241580496>
- [4] World Health Organization. Strengthening rapid response teams (RRT) as frontline responders in detection and response to disease outbreaks [Internet]. WHO Indonesia; 2022 Dec 14 . Available from: [https://www.who.int/indonesia/news/detail/14-12-2022-strengthening-rapid-response-teams-\(rrt\)-as-frontline-responders-in-detection-and-response-to-disease-outbreaks](https://www.who.int/indonesia/news/detail/14-12-2022-strengthening-rapid-response-teams-(rrt)-as-frontline-responders-in-detection-and-response-to-disease-outbreaks)
- [5] World Health Organization. (2024). EMERGENCY RESPONSE FRAMEWORK Internal WHO procedures. Available from: <https://iris.who.int/bitstream/handle/10665/375964/9789240058064-eng.pdf>

**Annex 1. Proposed result recording form for initial risk assessment**

**Initial Risk Assessment - Result Recording Form**

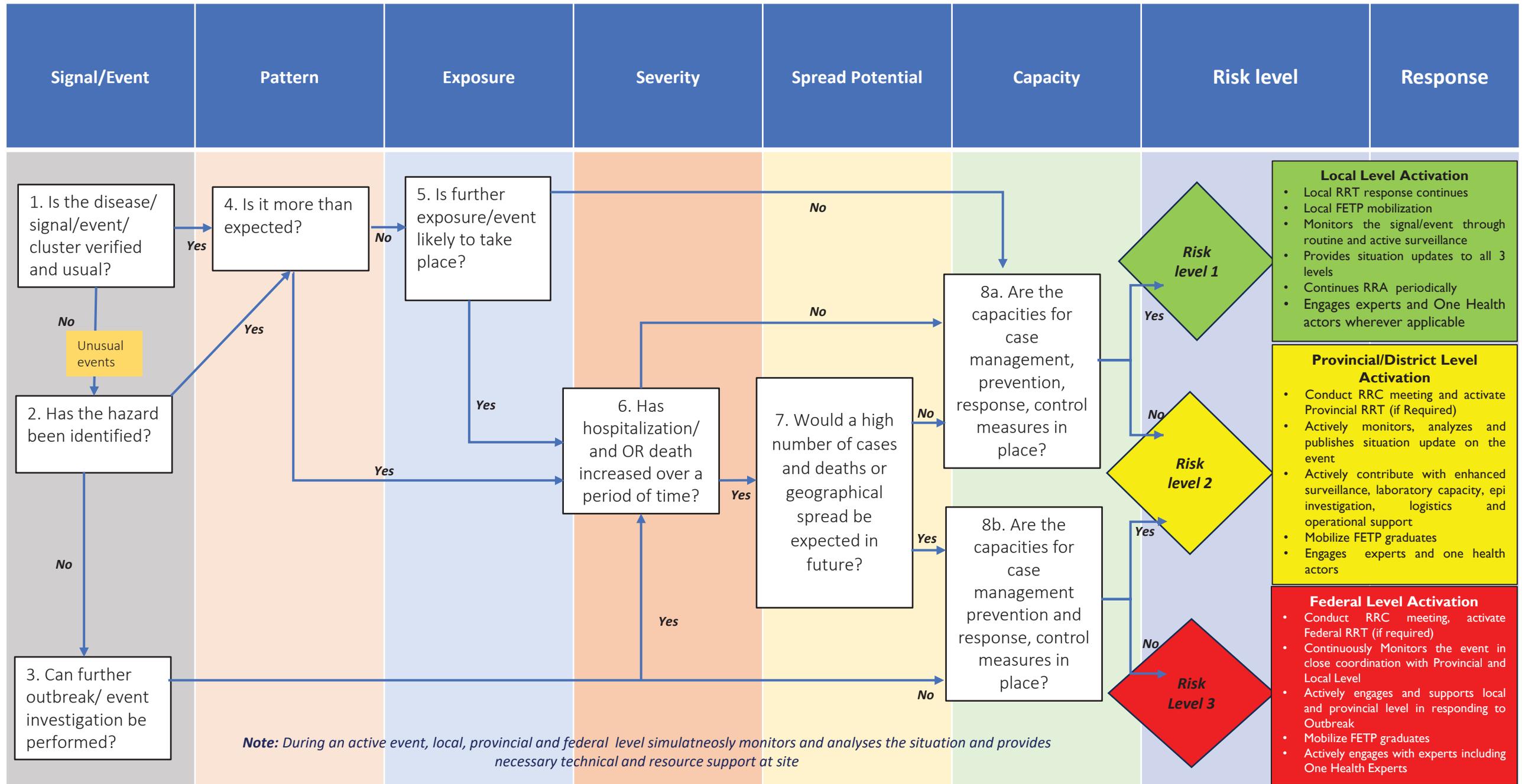
|  |                 |
|--|-----------------|
| Disease/Signal/Event/Cluster:  | Name of Palika: |
| Date and Time of initial Risk Assessment:  | Version:        |
| Brief event summary of incident (should include information related to cases, time, and geographical location and how information where detected):                         |                 |
| 1. Is the disease/ signal/events/ cluster known and verified or usual?<br><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown        |                 |
| 2. Any identified hazard or source of origin?<br><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown                                 |                 |
| 3. Can further investigation be performed to identify the source or hazard?<br><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown   |                 |
| 4. Is it more than expected?<br><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown  |                 |
| 5. Is further exposure likely to take place?<br><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown                                  |                 |
| 6. Has hospitalization/ and OR death increased over a period of time?<br><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown         |                 |
| 7. Would a high number of cases or geographical spread be expected in future?<br><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown |                 |
| 8. Are the capacity for prevention and response, control measures in place?<br><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown   |                 |
| Risk classification:   |                 |
| Justification (Narrative):   |                 |
| Proposed Actions:  |                 |
| Other considerations:  |                 |
| Risk assessment teams:   |                 |

**अनुसूची १। प्रारम्भिक जोखिम मूल्याङ्कनको लागि प्रस्तावित परिणाम अभिलेख फारम**

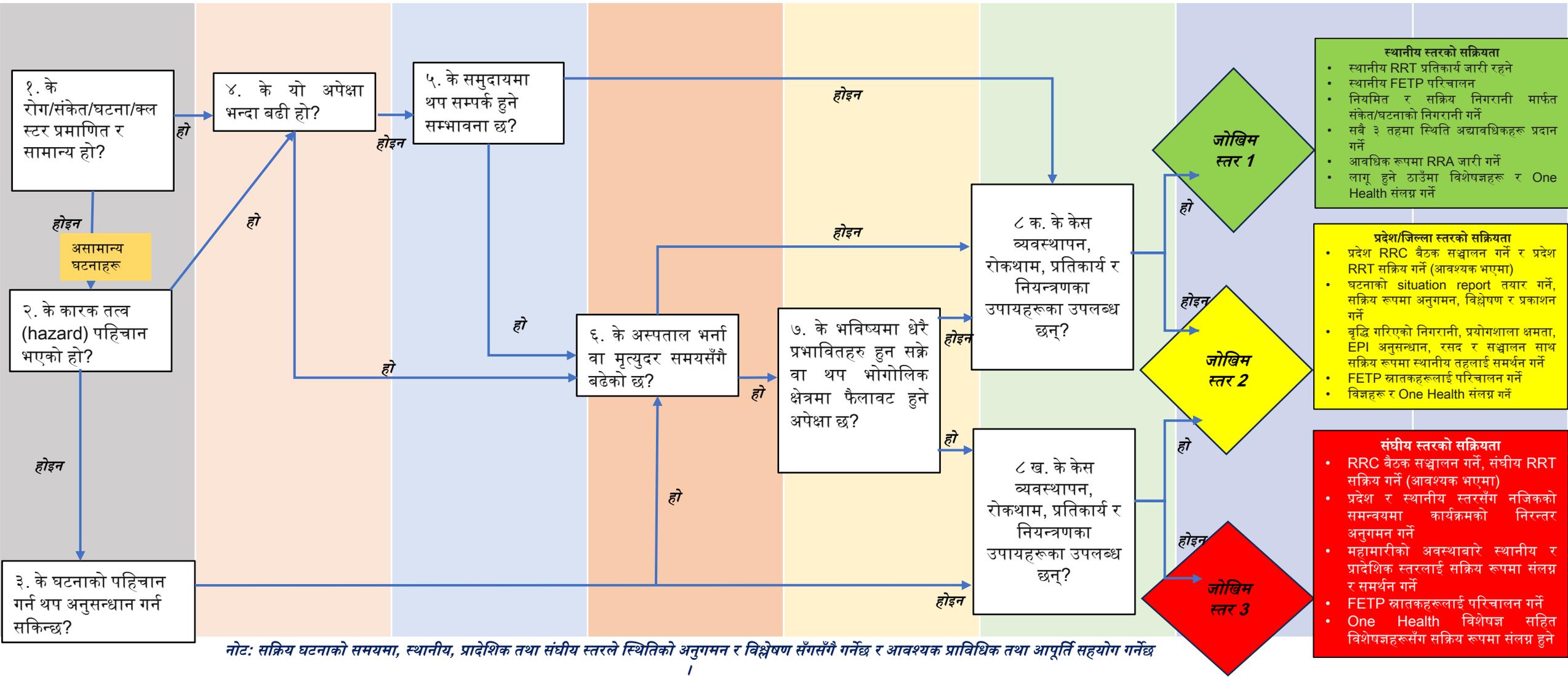
**प्रारम्भिक जोखिम मूल्याङ्कन - परिणाम अभिलेख फारम**

|   |               |
|---|---------------|
| रोग/संकेत/घटना:   | पालिकाको नाम: |
| प्रारम्भिक जोखिम मूल्याङ्कनको मिति र समय:   | संस्करण:      |
| घटनाको संक्षिप्त सारांश (घटनाहरू, समय, भौगोलिक स्थान र जानकारी कसरी पत्ता लाग्यो भन्ने सम्बन्धित जानकारी समावेश हुनुपर्छ):  |               |
| <p>१. रोग / संकेत / घटना / क्लस्टर परिचित र प्रमाणित र सामान्य हो?</p> <p><input type="checkbox"/> हो <input type="checkbox"/> होइन <input type="checkbox"/> थाहा छैन</p> <p>२. कुनै जोखिम वा उत्पत्तिको स्रोत पहिचान गरिएको छ?</p> <p><input type="checkbox"/> हो <input type="checkbox"/> होइन <input type="checkbox"/> थाहा छैन</p> <p>३. स्रोत वा जोखिम पहिचान गर्न थप अनुसन्धान गर्न सकिन्छ?</p> <p><input type="checkbox"/> हो <input type="checkbox"/> होइन <input type="checkbox"/> थाहा छैन</p> <p>४. के यो अपेक्षाभन्दा बढी हो?</p> <p><input type="checkbox"/> हो <input type="checkbox"/> होइन <input type="checkbox"/> थाहा छैन</p> <p>५. के समुदायमा थप सम्पर्क हुने सम्भावना छ?</p> <p><input type="checkbox"/> हो <input type="checkbox"/> होइन <input type="checkbox"/> थाहा छैन</p> <p>६. के अस्पताल भर्ना वा मृत्युदर समयसँगै बढेको छ?</p> <p><input type="checkbox"/> हो <input type="checkbox"/> होइन <input type="checkbox"/> थाहा छैन</p> <p>७. के भविष्यमा धेरै प्रभावितहरू हुन सक्ने वा थप भौगोलिक क्षेत्रमा फैलावट हुने अपेक्षा छ?</p> <p><input type="checkbox"/> हो <input type="checkbox"/> होइन <input type="checkbox"/> थाहा छैन</p> <p>८. के रोकथाम, प्रतिकार्य र नियन्त्रणका उपायहरूका उपलब्ध छन् ?</p> <p><input type="checkbox"/> हो <input type="checkbox"/> होइन <input type="checkbox"/> थाहा छैन</p> |               |
| जोखिम वर्गीकरण:   |               |
| औचित्य (कथन):   |               |
| प्रस्तावित कार्यहरू:  |               |
| अन्य विचारहरू:  |               |
| जोखिम मूल्याङ्कन टोलीहरू:   |               |

# Algorithm for Rapid Risk Assessment decision making at Local Level



| Signal/Event | Pattern | Exposure | Severity | Spread Potential | Capacity | Risk level | Response |
|--------------|---------|----------|----------|------------------|----------|------------|----------|
|--------------|---------|----------|----------|------------------|----------|------------|----------|



- स्थानीय स्तरको सक्रियता**
- स्थानीय RRT प्रतिकार्य जारी रहने
  - स्थानीय FETP परिचालन
  - नियमित र सक्रिय निगरानी मार्फत संकेत/घटनाको निगरानी गर्ने
  - सबै ३ तहमा स्थिति अद्यावधिकहरू प्रदान गर्ने
  - आवधिक रूपमा RRA जारी गर्ने
  - लागू हुने ठाउँमा विशेषज्ञहरू र One Health संलग्न गर्ने

- प्रदेश/जिल्ला स्तरको सक्रियता**
- प्रदेश RRC बैठक सञ्चालन गर्ने र प्रदेश RRT सक्रिय गर्ने (आवश्यक भएमा)
  - घटनाको situation report तयार गर्ने, सक्रिय रूपमा अनुगमन, विश्लेषण र प्रकाशन गर्ने
  - वृद्धि गरिएको निगरानी, प्रयोगशाला क्षमता, EPI अनुसन्धान, रसद र सञ्चालन साथ सक्रिय रूपमा स्थानीय तहलाई समर्थन गर्ने
  - FETP स्नातकहरूलाई परिचालन गर्ने
  - विज्ञहरू र One Health संलग्न गर्ने

- संघीय स्तरको सक्रियता**
- RRC बैठक सञ्चालन गर्ने, संघीय RRT सक्रिय गर्ने (आवश्यक भएमा)
  - प्रदेश र स्थानीय स्तरसँग नजिकको समन्वयमा कार्यक्रमको निरन्तर अनुगमन गर्ने
  - महामारीको अवस्थाबारे स्थानीय र प्रादेशिक स्तरलाई सक्रिय रूपमा संलग्न र समर्थन गर्ने
  - FETP स्नातकहरूलाई परिचालन गर्ने
  - One Health विशेषज्ञ सहित विशेषज्ञहरूसँग सक्रिय रूपमा संलग्न हुने

नोट: सक्रिय घटनाको समयमा, स्थानीय, प्रादेशिक तथा संघीय स्तरले स्थितिको अनुगमन र विश्लेषण सँगसँगै गर्नेछ र आवश्यक प्राविधिक तथा आपूर्ति सहयोग गर्नेछ



Government of Nepal  
Ministry of Health and Population  
Department of Health Services  
**Epidemiology and Disease Control Division**  
Teku, Kathmandu

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