

# **Improving Preparedness and Response for Zoonotic diseases- Pakistan**

**(within Context of National Disease Surveillance Program)**

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# Overview

- ❑ An overview of National Disease Surveillance Program of Pakistan.
- ❑ Zoonotic Disease Context in NDSP.
- ❑ Surveillance During Recent Floods.
- ❑ Next Steps & Way Forward

# **Public Health Surveillance;**

## **Realization by MOH and DOH**

- ◆ **Surveillance is multi-faceted multi dimensional and needs inter- sectoral collaboration.**
- ◆ **There are critical gaps in the cycle from data generation to its eventual, appropriate use**
- ◆ **NDSP approach envisages integration of surveillance activities at all levels to maximize effectiveness, efficiency & equity.**
- ◆ **FETP enhances IDSP by supplying the critical bridge on translation of information into ACTION**

**National Disease Surveillance  
PC1 Program Objective  
Pilot Program**

- **To establish an integrated but decentralized system of disease surveillance for timely and effective public health action, while building on existing setups.**
- **To improve the efficiency of disease surveillance for use in health planning, management and evaluating control strategies**

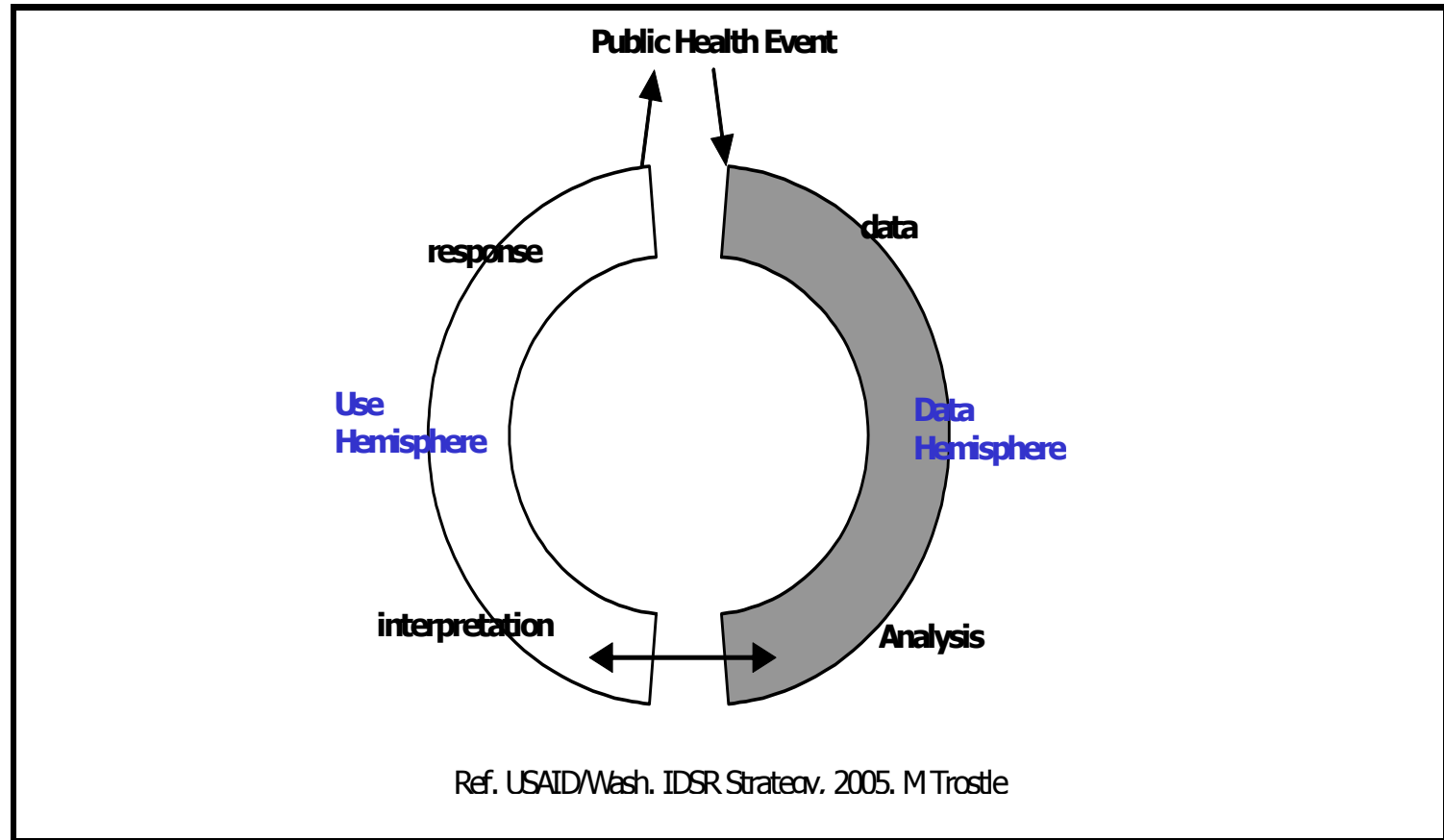
## **Critical Steps adopted for National Disease Surveillance Program**

- Step –I      Sensitization for National Disease Surveillance Program.**
- Step –II     Assessment of National Surveillance Systems.**
- Step –III    Plan of Action (PoA) Development.**
- Step –IV    Implementation of Plan of Action / Project Development & Launching.**
- Step –V     Review, evaluation and re-planning.**
- Step -VI    Consolidation of IDS Strategy & its nationwide Implementation.**

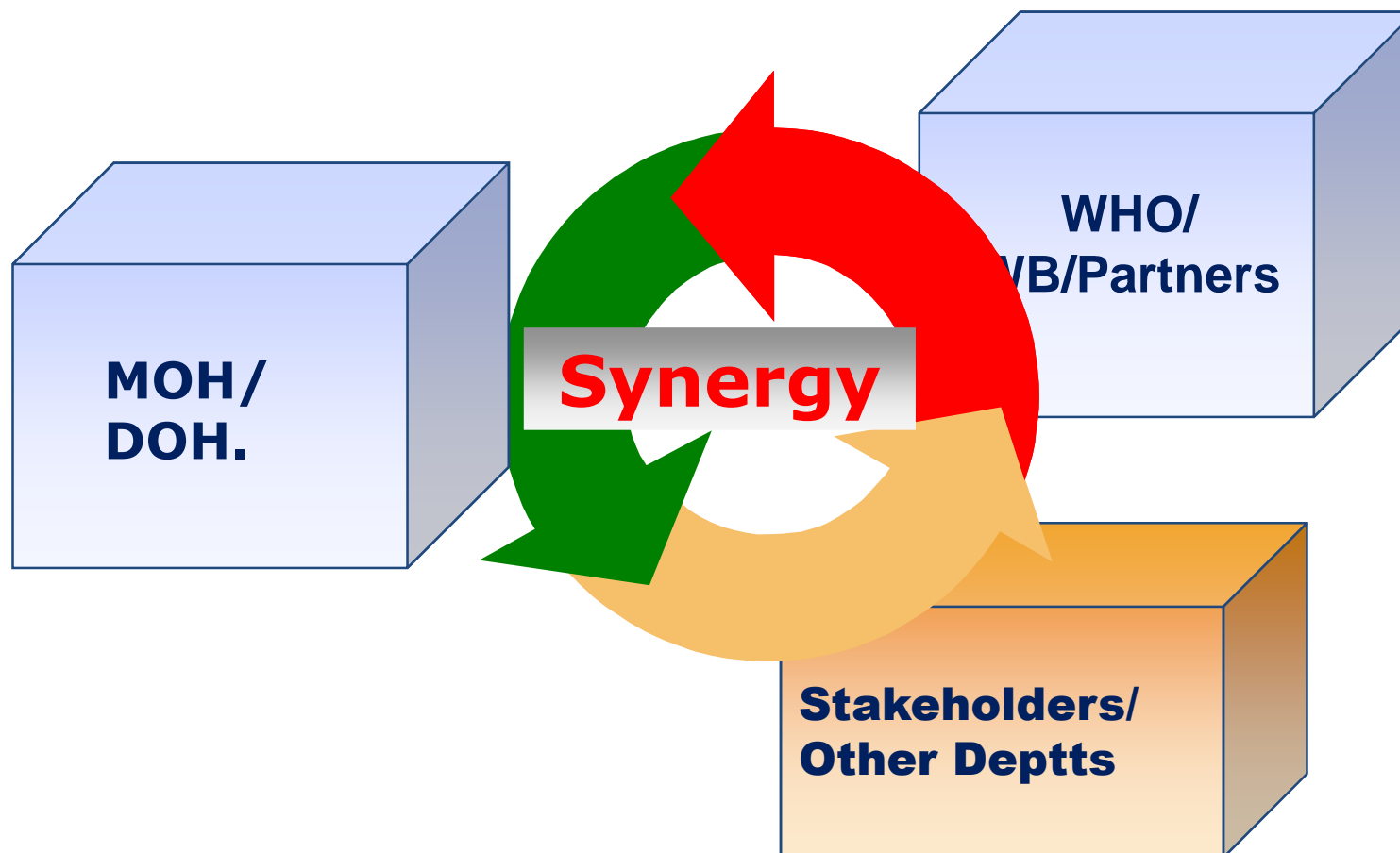
# **National Action Plan**

- 1. Structures and Organization Roles and Responsibilities in Disease Surveillance (Federal, Provincial & District & Partner Agencies.)**
- 2. Plan for Development and strengthening of national human resources including private sector in surveillance and disease control**
- 3. Resources requirements (Logistics & Lab) and activities needed for surveillance**
- 4. Disease Prioritization and specific action**

# Information to Action Cycle



# Strengthening Surveillance and Response / Multiple Partners



# INFORMATION COLLECTION & RESPONSE UNDER NDSP AT OPERATIONAL & STRATEGIC LEVELS

## DATA SOURCES

LHWs, EPI – Field Staff,  
Health Facilities Staff,  
Volunteers

Medical Officer at  
FLCF/ OPDs Hospital,  
Municipal Corporation  
Staff, Peripheral Labs

District HMIS& Response Unit,  
Dist. Lab, Medical  
Colleges, Private Sentinel  
Units

Provincial HMIS& Response Unit,  
P. H. Labs, Medical Colleges,  
Provincial Public Health  
Programs

National IDSP Coordinating /  
Ministry of Health  
National Laboratories

## INPUTS

Surveillance Data in  
Simplified Pre-Formatted  
Document

Surveillance Data Entry in  
structure forms

Consolidated Surveillance  
Data

Filtered, Consolidated &  
Analyzed Surveillance Data

Filtered, Consolidated &  
Analyzed Surveillance Data

**Tehsil / District  
IDSP Database**

**Provincial  
IDSP Database**

**National  
IDSP Database**

## OUTPUTS

1. Structured, Validated  
Surveillance Data  
2. Presentable Information  
3. Information display

1. Consolidated Reports  
2. Subject Specific Reports  
3. Feedback from Districts  
4. Consolid. Data Transfer to Dist.  
5. Feedback From District

1. Reports for National Program  
2. Trend Analysis  
3. Statistical Analysis  
4. Feedback to Health Facility  
5. Feedback from Prov./  
Federal

1. Reports for National Program  
2. Trend Analysis  
3. Statistical Analysis  
4. Feedback to Health Facility  
5. Feedback from Federal

1. Trend Analysis  
2. Statistical Analysis  
3. Feedback to Provincial /  
District Offices  
4. Feedback from MOH

## DATA USERS/ RESPONSE

- Community Field Staff
- Facility In-Charge
- Facility Management Committee

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- Facility Management Committee

- D H M T
- District Surveillance Officer
- Provincial Prog. Coordinator
- District Lab
- Private Sentinel Unit

- DOH Management
- Provincial Steering Committee
- Provincial Surveillance Officers
- National Prog. Coordinator
- P. H Labs

- MOH Management
- National Steering Committee
- National Surveillance Officers
- National Laboratories

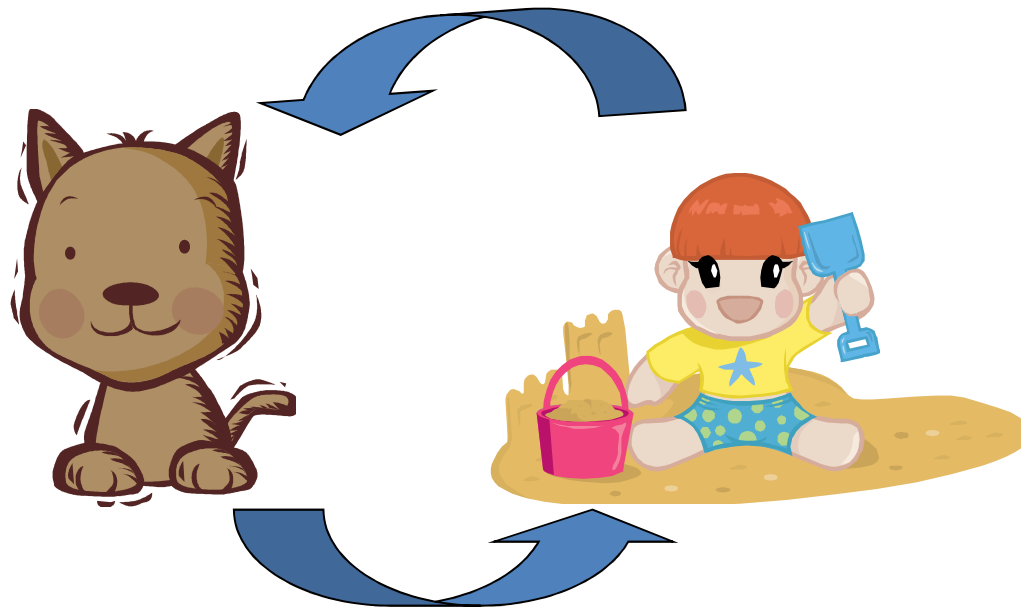


# Disease Prioritization Exercise Results

- **Tuberculosis**
- **Hepatitis B and C**
- **Malaria**
- **Measles**
- **Cholera**
- **Polio**
- **Diarrhea**
- **Tetanus**
- **Leishmaniasis**
- **CCRF**
- **HIV/AIDS**
- **Enteric fever**
- **Rabies**
- **Bacterial Meningitis**
- **Pertussis**
- **Helminthic infections**

# What are Zoonotic diseases

- According to the CDC\* a zoonotic disease is any disease which may be passed from animals to people or from people to animals.



# Zoonotic Diseases

- Approximately 60% of all human pathogens are zoonotic
- 75% of emerging infectious diseases have an animal origin
- Growing need for veterinarians and physicians to work together

# Recent Floods & Zoonotics.

## Floods in July, 2010,

- Left 2000 deaths, 1-Million Home Destroy.
- 2 Million Population Displaced
- Nearly 60000 Kms Area Affacted/
- Out of 160000. KM of Total Area.

## **Flood Related Health Issues.**

WHO – “during floods, reports and rumours are common about problems created by animals such as dogs, rats, mice and snakes”

- Leptospirosis, Snake Bites, Rabies, Salmonellosis etc.

# **Risk Factors for Diseases During Floods**

- Overcrowding
- Nutritional changes
- Contaminated water supplies
- Wounds and injuries
- Inappropriate weather
- Vectors
- Other stressors.

# NDSP Application - Zoonotic Plan for Floods

## Objectives

- To understand the importance and epidemiology of major zoonotic diseases during Floods.
- Goal: To strengthen capacities to manage the risks of prevailing zoonotic diseases emergencies, having epidemic potential.
- Originally envisaged project to have following primary components:
  - development of a area assessment instrument and its application.
  - Capacity building workshops on zoonotic diseases.
  - Enhance Inter-sectoral Collaboration.

# Plan Focus: All Broad Categories of Transmission

- Vectorborne (insects)
- Waterborne
- Fecal Oral Transmission
- Contaminated Meat



## **Issues Faced For Surveillance.**

- Multiple surveillance systems run by different agencies with little cross-coordination
- Duplication of efforts, inefficient use of resources
- No linking of veterinary, animal control data to human data
- Data relating Zoonotic Diseases.
- Core capacities for Zoonotic Diseases.
- Lack of action plan for who will trigger a response.
- Mechanism for inter sectoral coordination.

## **Decision at Federal Level.**

To improve the basic infrastructure of human and veterinary health systems in order to control endemic zoonotic diseases increase in affected districts political awareness.

# Urgent Actions.

- **Step 1:** Strengthen collaboration between the Ministries Health , Veterinary, Agriculture, Environment.

- **Develop Mechanism / advocacy for collaboration**

**Indicators:** 1- At least one meeting or collaborative activity/Week to be held jointly between the Ministry of health, LB and the Agriculture in each distt. Be health

- **Identify priority diseases and relevant partners.**

**Indicators:** One written documentation of the priority diseases be developed and relevant partners identified.

## **Step-2**

- **Share information between departments of human and animal public health and related ministries.**
- **Convene a National workshop on information sharing.**

*Indicators: 1- written report from workshop.*

- **Develop mechanism for sharing information at all levels: National , province, district.**
- *Indicators: 1- written report/ document*
- **Convene a Workshops on animal- human interface.**
- *Indicators: Written reports from workshop. Including recommendation.*

- Step 3:

Build Core capacities in Zoonotic Diseases, as an integral part of surveillance.

# **Next Steps for Improvement of Surveillance Systems**

- **Conducting studies to provide evidence for priority setting and guiding action;**
- **Building on existing data;**
- **Strengthening the capacity of diagnostic and research laboratories;**
- **Sharing information;**
- **Strengthening interagency collaboration through coordination mechanisms.**
- **Setting priorities based on both health impact and the agricultural market.**

- **Preparing educational materials based on research findings.**
- **Strengthening preparedness through identification of an appropriate structure for the prevention and control of zoonotic diseases, laboratory capacity, improving case management and developing tools for risk assessment.**
- **Linking zoonotic disease prevention and control programs (eg Public Health Programs, NDSP) rather going for vertical programs.**
- **Working with regional forums (OHASA) for knowledge sharing to mutually benefit from each other.**

Thankyou