



ONE HEALTH



OPERATIONAL GUIDELINES FOR NATIONAL ONE HEALTH PROGRAMME FOR PREVENTION AND CONTROL OF ZOOZOSES

Division of Zoonotic Diseases Programmes
National Centre for Disease Control
Directorate General of Health Services
Ministry of Health and Family Welfare
Government of India



Contents

OPERATIONAL GUIDELINES FOR NATIONAL ONE HEALTH PROGRAMME FOR PREVENTION AND CONTROL OF ZOO NOSES

Acknowledgement	5
Abbreviations	11
About the Document	17
Chapter 1: Zoonoses: General Aspects and Epidemiology	18
1.1 Definition	18
1.2 Classification of Zoonoses	18
1.3 Factors Influencing the Prevalence of Zoonoses	19
1.4 Burden of Zoonotic Diseases	21
1.5. Rationale for One Health Approach	22
Chapter 2: National One Health Programme for Prevention and Control of Zoonoses (NOHP-PCZ)	23
2.1. Background	23
2.2. Vision, Mission, Goal and Objectives of National One Health Programme for Prevention and Control of Zoonoses (NOHP-PCZ)	23
2.3. Components of the programme	24
2.4. Deliverables under the programme	24
Chapter 3: Institutional Arrangements for The Programme	25
3.1. Institutional Mechanism under the Programme	25
3.2. Establishment of National Programme Management Unit (NPMU) for implementing the activities of NOHP-PCZ	26
3.3. Role of National Programme Management Unit (NPMU) in implementation of NOHP-PCZ	27
3.4. Constitution of National Level Steering Committee on One Health and Zoonoses (NSCOHZ)	28
3.5. Standing Committee on Zoonoses	28
3.6. Regional Committee on Zoonoses and One Health.....	28
3.7. State Level Zoonoses Committee (SLZC)	29
3.8. District Level Zoonoses Committee (DLZC)	29

3.9. Constitution of Technical Advisory Groups, Technical Task force and Roster of Disease Specific Expert working groups under the Programmes	29
CHAPTER 4: OPERATIONAL GUIDELINES FOR THE ACTIVITIES UNDER DIFFERENT COMPONENT OF THE NOHP-PCZ.....	30
4.1. Capacity building activities (Training/Workshops/Seminars).....	30
Steps	31
4.2. Laboratory Strengthening for Zoonotic Diseases under NOHP-PCZ	32
4.3. Role of Laboratories under NOHP-PCZ.....	32
4.4. Regional Coordinators for "One Health and Zoonoses" under NOHP-PCZ	35
4.5. Breakup of Grant in-Aid (GIA) to the Regional Coordinators/Centre for Excellence for One Health.....	37
4.6. Strengthening surveillance of zoonoses and establishment of National Zoonotic Diseases Surveillance and Information System.....	38
4.7. Integrated Community Outreach Programme on One Health.....	41
4.8. Advocacy and Risk Communication activities	43
4.9. Operational Research	45
Chapter 5: Multisectoral Collaboration and Stakeholder Engagements	47
5.1. Partnership with private professional bodies/private organizations/NGOs working in this field of zoonoses	49
CHAPTER 6: MONITORING AND EVALUATION.....	51
6.1. National Level	51
6.2. Regional, State and District Level.....	51
Chapter 7 Financial Guidelines and Management.....	54
7.1. Financial guideline for release of Grant in-aid under the programme	54
7.2. GFR 2017	55
7.3. Nature of Grant.....	55
7.4. Non-Recurring Grant	55
7.5. Procedure to be followed by Programme Management Unit- NPH-PCZ	55
7.6. Procedures to be followed by institute seeking GIA (Grantee)	56
7.7. Financial guideline for release of advance	58
7.8. Financial guideline for release of GIA for operational research.....	58
7.9. Guidelines for the activities to be undertaken under different Budget heads of allocated BE	60
Chapter 8: Activities Under PMASBY - Strengthening Of Activities Under National One Health Programme For Prevention And Control Of Zoonosis.....	62

ANNEXURE 1: Constitution and Terms of Reference of Standing Committee on Zoonoses	63
Standing Committee on Zoonoses (SCZ).....	63
ANNEXURE 2: Constitution and Terms of Reference of State Level Zoonoses Committees	65
State Level Zoonoses Committees	65
ANNEXURE 3: Constitution and Terms of Reference of District Level Zoonoses Committees ...	67
District Level Zoonoses Committee (DLZC).....	67
ANNEXURE 4: Memorandum of Understanding (MoU).....	69
ANNEXURE 5: List of Equipment's	74
ANNEXURE 6: Terms of Reference for Manpower for Regional Coordinators	75
ANNEXURE 7: Template for Proposal for Sentinel Surveillance Sites	79
ANNEXURE 8: Template for Proposal for Integrated Community Outreach Programme ..	83
ANNEXURE 9: Format for Submitting Operational Research/Thesis Proposal	87
ANNEXURE 10: Utilization Certificate	92
ANNEXURE 11: Regional Coordinators Identified Under the NOHP-PCZ From 2019-2021	95
List Of Contributors.....	96

Acknowledgement

The operational guidelines on National One Health Programme for Prevention and Control of Zoonoses (NOHP-PCZ) is a technical guidance document for the programme manager and other partner agencies to know about the programme objectives and activities envisaged under the programme modus operandi to operationalize the activities at various level. The ‘Operational Guidelines on National One Health Programme for Prevention and Control of Zoonoses’ is an output of collective efforts of implementing agencies and partners who work in coordination for prevention and control of emerging and re-emerging zoonotic diseases through One Health approach. This guideline has been developed after series of consultations with national and state level experts.

We express our sincere gratitude to Shri Rajesh Bhushan, Secretary, Ministry of Health and Family Welfare, Govt. of India; Shri S. Gopalkrishnan, Additional Secretary (Health); Shri Lav Aggarwal, Joint Secretary, Ministry of Health and Family Welfare, Dr. Sunil Kumar, Director General Health Services (DGHS) for their consistent support and encouragement to the core team during conceptualization of the guidelines.

We express our gratitude to Dr. Sujeet Kumar Singh, Former Director and Advisor, National Center for Disease Control, for providing a dynamic leadership, continued encouragement, and support to the core team as they developed these operational guidelines.

We are grateful for the valuable feedback from Dr. V. Balamurugan, Principal Scientist, ICAR-NIVEDI; Dr. Rupali Dey, Medical Superintendent, School of Tropical Medicine-Kolkata; Dr. Usha Kalawat, Professor, SVIMS-Tirupati; Dr. Dilip Sharma, Head Consultant NOHP-PCZ, Assam Agriculture University; Dr. Khuraijam Ranjana Devi, Professor and Head, Regional Institute of Medical Sciences-Imphal and Dr. Omesh Kumar Bharti, State Epidemiologist, Department of Health and Family Welfare, Government of Himachal Pradesh for their valuable contribution towards development of this guidance document.

We would like to acknowledge the valuable contributions of our regional coordinators under NOHP-PCZ programme, State Nodal Officers, and Medical Officers of Infectious Diseases hospitals for their active participation to bring out this guidance document.

We also extend our gratitude to the other consultants and support staff members of the DZDP, NCDC, New Delhi for their constant support in the preparation of the guidance document.



राजेश भूषण, आईएएस
सचिव
RAJESH BHUSHAN, IAS
SECRETARY



भारत सरकार
स्वास्थ्य एवं परिवार कल्याण विभाग
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
Government of India
Department of Health and Family Welfare
Ministry of Health and Family Welfare



MESSAGE

The concept of "One Health" is not new and has been constantly explored and re-discovered over the course of history. While there is no universally accepted definition of One Health, it is fundamentally rooted in the belief that the well-being of humans, animals, and the environment are all interdependent.

The One Health approach has gradually gained momentum over the past decade. As the world continuously strives for convergence and globalization, it also needs to focus on threats and issues that shape the landscape of human health, animal health, and the entire ecosystem of health.

COVID-19 crisis has highlighted the importance of 'One Health' Approach and Intersectoral Coordination for detection, prevention and response of Zoonotic and pandemic threats. Effective prevention and control of Zoonotic diseases could be achieved by concerted efforts by all stakeholders by adopting One Health Approach.

In line with Global call for acceleration of the One Health Initiatives to prevent future emergence of Zoonotic diseases of pandemic potential, Ministry of Health has already initiated Inter-Sectoral Co-ordination programme for prevention and Control of Zoonotic (ISC) in year 2013 now renamed as National One Health Programme for Prevention and Control of Zoonotic Diseases. The objective of programme is to institutionalize "One Health" mechanism at National, State and District level with relevant stakeholders i.e. Medical, Veterinary, Wildlife etc.

In order to provide guidance to all the professionals (i.e. Health, Veterinary, Wildlife), for undertaking activities under programme, "Operational Guideline" on National One Health Programme for Prevention and Control of Zoonotic Diseases, has been drafted.

I want to express my gratitude to all stakeholders who have assisted in preparation of these guidelines and I am convinced that this would add value to the implementation efforts on the ground.

(RAJESH BHUSHAN)

Place: New Delhi
Date: 10th August, 2022



एस. गोपालकृष्णन
अपर सचिव
S. Gopalakrishnan
Additional Secretary



भारत सरकार
स्वास्थ्य एवं परिवार कल्याण विभाग
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
Government of India
Department of Health and Family Welfare
Ministry of Health and Family Welfare



MESSAGE

Emerging and endemic zoonotic diseases pose a threat not only to the health of animals and humans but also to global health security. To address the burden of zoonotic diseases through One Health Approach, the Ministry of Health and Family Welfare, Govt. of India has implemented National One Health Programme for Prevention and Control of Zoonoses (NOHP-PCZ) since 12th Five-year plan (previously known as Inter-Sectoral Coordination programme for prevention and control of zoonotic diseases).

The programme is now being expanded through Regional Coordinators (i.e. Medical and Veterinary institutes) in all states/UTs and for strengthening surveillance, sentinel sites are being established across the country by supporting medical colleges/institutions. For engaging the community and target groups i.e. Farmers, Livestock owners etc. on zoonosis prevention, public and private sector organization are being roped in the programme

National Center for Disease Control had drafted this "Operational Guideline" on National One Health Programme for Prevention and Control of Zoonotic Diseases. I would like to extend my congratulations to all stakeholders who have contributed towards framing this important document.

This is a strategic document which will provide guidelines on the activities planned under the programme for all stakeholders. I am confident that this document will help in strengthening the collaboration and coordination between all concerned stakeholders and help to achieve the goal of Institutionalizing One Health mechanism at all levels.


(S. Gopalakrishnan)

Place: New Delhi
Date: 12th August, 2022



LAV AGARWAL, IAS
Joint Secretary
Tel. : 011-23061195
T/Fax : 011-23061842
E-mail : alav@ias.nic.in



सत्यमेव जयते



MESSAGE

India has the second largest human population in Asia and a livestock population of 536.76 million which attributes to 11.6% of worlds total livestock population. Most of the epidemics and pandemics that have and continue to threaten the world are of animal origin. Recent examples range from SARS in 2003, the H1N1 pandemic in 2009, the 2014 Ebola outbreak in West Africa, Zika in 2016, to now the COVID-19 pandemic, also have been linked to the same including current threat Monkey pox .

As we understand “One Health” has been proved to be an effective approach to address the complex public health threats on human health, animal health and environmental health interface. Further as the world enters the third year of the COVID-19 pandemic, there is increased awareness and broad recognition of the importance of One Health as a long-term, viable and sustainable approach.

Under National One health Programme for prevention of control of zoonotic diseases already initiatives are being taken to being all above stakeholders together and institutionalize the mechanisms for coordination at all level. Under the programme various other activities are being undertaken i.e Surveillance, Joint trainings of medical and veterinary professionals , Advocacy and communication with the target groups i.e Farmers ,Animal handlers and laboratory strengthening for zoonotic diseases etc.

In order to provide guidance document for above activities “Operational Guideline” on National One Health Programme for Prevention and Control of Zoonotic Diseases is developed. This document has strategically laid down the areas of collaboration and activities as envisaged under National One Health Programme Prevention and Control of Zoonoses.

I am hopeful that this will be a useful document for Programme managers at regional, state, district level for implementing the programme.

(Lav Agarwal)

Place: New Delhi

Dated the: 26th August, 2022



प्रो.(डॉ.) सुनील कुमार

एम.बी.बी.एस एवं एम.एस. (एम्स)

PROF. (Dr.) SUNIL KUMAR
MBBS & MS (AIIMS)

स्वास्थ्य सेवा महानिदेशक
DIRECTOR GENERAL OF HEALTH SERVICES



सत्यमेव जयते

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
स्वास्थ्य सेवा महानिदेशालय
Government of India
Ministry of Health & Family Welfare
Directorate General of Health Services



Foreword

Globally emerging Zoonoses are responsible for some of the highest profile and devastating epidemics. However, endemic Zoonoses may pose a more insidious and chronic threat to both human and animal health. In the year 2014 Ebola epidemic was responsible for 11,316 deaths and \$2.2 billion in economic losses; whereas each year Rabies accounts for ≈59,000 human deaths and roughly \$8.6 billion in economic losses worldwide. The on-going COVID-19 pandemic, which is also said to be Zoonotic in origin, has shown the devastating impact on world economy. The Zoonotic diseases of major public health importance in India are Leptospirosis, Plague, Rabies, Anthrax, Scrub Typhus, Brucellosis, Kyasanur Forest Disease, spotted fever caused by Rickettsiae and parasitic diseases like cysticercosis, hydatid disease, trypanosomiasis and toxoplasmosis.

To address the issue of Zoonotic diseases intersectoral coordination between various sectors especially Human health, Animal Health, Wild life health is required through One Health approach. The "One Health" concept was first put forward by OIE in 2005. According to OIE the "One Health" concept summarizes an idea that has been known for more than a century: animal health, human health, and environmental health are intrinsically intertwined and interdependent. The health of one affects the health of all.

National One Health Programs for Prevention and Control of Zoonoses (NOHPPCZ) approved by Ministry of Health and Family Welfare, Govt. of India, is being implemented in the country since 2013 with an objective to prevent the Zoonotic diseases with "One Health" approach. Program is undertaking the several initiatives to institutionalize the coordination between at regional, state and District level. Progress is also being made on various activities envisaged under the program through joint training of Medical & Vet. Professionals, lab. strengthening, IEC activities, etc. Thus, to guide the regional co-coordinators and state/district level stakeholders, operational guidelines have been developed.

I congratulate Dr. S.K Singh Director, NCDC, Dr. Simmi Tiwari, Officer In-Charge National One Health Programs for Prevention and Control of Zoonoses (NOHPPCZ) and her team for bringing out these updated Technical guidelines. I am confident that medical professionals as well as Veterinary professionals all over India will find these guidelines useful to deal the Zoonotic Infections in Humans and Animals with "One Health" approach. This will ensure uniform one health approach between Human Health, Animal Husbandry & Wild life sectors.

(Sunil Kumar)

Room No. 446-A, Nirman Bhawan, New Delhi-110108
Tel.: 011-23061063, 23061438 Fax: 011-23061924 Email: dghs@nic.in



Dr. Sujeet K Singh
MD,DCH
Director



सत्यमेव जयते

भारत सरकार

राष्ट्रीय रोग नियंत्रण केन्द्र

(स्वास्थ्य सेवा महाविद्यालय)

स्वास्थ्य एवं परिवार कल्याण मंत्रालय, भारत सरकार

22, शाम नाथ मार्ग, दिल्ली - 110054

Government of India

NATIONAL CENTRE FOR DISEASE CONTROL

[Formerly Known as National Institute of Communicable Diseases (NICD)]

Directorate General of Health Services

Ministry of Health & Family Welfare, Government of India

22, Sham Nath Marg, Delhi-110054



Direct: 06-91-11-23913148

23922132 Fax: 23922677

Email : dirnicd@nic.in, sujeet647@gmail.com

Website : www.ncdc.gov.in

www.idsp.nic.in



PREFACE

Zoonotic disease is one of the areas of concern which is affecting the human as well as the animal health; around 60% of all human infections and 75% of newly emerging infectious diseases that have affected people over last 3 decades are Zoonotic in nature.

It is now an established fact that One health is an approach is required for prevention and control of zoonosis which recognizes that Human health, animal health and environment are inextricably connected. The United Nations has set forth a set of sustainable developments goals which includes health and health security as critical elements. Strengthening our pandemic preparedness by using a One Health approach is essential to maintain progress of human development and achieve the goals.

To address the issue of these zoonotic diseases, National One Health Programs for Prevention and Control of Zoonoses (NOHPPCZ) previously known Intersectoral coordination programme (ISC) was launched by Ministry of Health and Family Welfare, Govt. of India during 12th five-year plan under the Umbrella scheme for implementation in all States and UTs. The objective of this programme is to operationalize "One Health" Mechanisms for prevention and control of Zoonoses through strengthening Inter-sectoral Coordination among all stakeholders at the National, State, and district and below district level and increasing awareness in general community.

Several initiatives have taken up under this programme over the years including creation of Master trainers on Zoonosis through joint training of medical & veterinary professionals, strengthening of regional coordinators, establishing state/district level zoonosis committees, strengthening of diagnostics for zoonosis and community awareness on importance of zoonosis prevention & control.

Under the programme various activities are envisaged over next few years for which need was recognized of guidance document which will helpful for regional state and district level stakeholders. Accordingly, the operational Guidelines for One Health Programs are finalized by National Center for Disease Control with inputs from relevant experts in the field and stakeholders from national and state level based on newly endorsed WHO, OIE and FAO Recommendations on One Health.

I sincerely hope that this publication will serve as a useful technical guidance documents for all health care, animal husbandry and wild life departments for undertaking appropriate Management with One Health approach and will bring out uniformity in activities as synchronized manner between Health, Animal Husbandry & Environment ministries.

(Dr Sujeet K Singh)



Antibiotic Resistance Containment Stewardship: Our Role, Our Responsibility
Judicious Use of Antibiotic: Key to Contain Antibiotic Resistance





सत्यमेव जयते

भारत सरकार

राष्ट्रीय रोग नियंत्रण केन्द्र

(स्वास्थ्य सेवा महाविद्यालय)

स्वास्थ्य एवं परिवार कल्याण मंत्रालय, भारत सरकार
22, शाम नाथ मार्ग, दिल्ली - 110054

Government of India

NATIONAL CENTRE FOR DISEASE CONTROL

[Formerly Known as National Institute of Communicable Disease (NICD)]

Directorate General of Health Services

Ministry of Health & Family Welfare, Government of India

22, Sham Nath Marg, Delhi-110054



Direct: 00-91-11-23913148

23922132 Fax: 23922677

E-mail: dirnld@nicl.in, sujeet647@nicl.in

Website: www.ncdc.gov.in

www.ldsp.nicl.in

FROM THE DESK OF THE PROGRAM OFFICER

More than 60% of the known Infectious Diseases and 75% of the Emerging and Endemic Infectious Diseases are Zoonotic in Origin. Globally, Zoonotic diseases account for 15.8% of all deaths and 43.7% of deaths in low-resource countries. This impacts the global Economy with over \$20 Billion loss directly and \$200 Billion Indirectly. Unfortunately, India is the leading contributor for the global burden of zoonosis.

One Health is gaining recognition globally as an effective way to fight health issues at the human-animal-environment interface, including zoonotic diseases. One Health is a collaborative, multisectoral, and transdisciplinary approach working at the local, regional, national, and global levels with the goal of achieving optimal health outcomes recognizing the interconnection between people, animals, plants, and their shared environment.

Considering the importance of One Health in the prevention and Control of Diseases, Ministry of Health & Family Welfare, Govt. of India launched the National program "National One Health Program for Prevention and Control of Zoonoses (NOHP-PCZ)" which is being implemented through the National Centre for Disease Control (NCDC) under the Division of Zoonotic Diseases Programme in 12th FYP.

The programme has been initiated with an objective to strengthen intersectoral coordination among medical, veterinary and wildlife sector to address zoonoses through joint capacity building activities, lab strengthening of the States for Zoonoses, strengthening surveillance, data sharing and joint outbreak investigation and to undertake various IEC activities.

With the lessons learnt, the programme has progressively broadens its horizon to have a more pragmatic approach in institutionalization of One Health and response to Zoonoses. NOHP-PCZ is intended to further enhance and boost the country's capacity to reduce morbidity and mortality due to prevailing endemic viral, bacterial and parasitic Zoonoses and also aimed to strengthen IHR core capacities for Zoonotic threats of pandemic potential.

NOHP-PCZ programme has six major components through which the objective of this programme will be achieved. Thus, in order to guide the Stakeholders of all the departments in implementing the programme, the Programme division has developed the 'Operational Guidelines on National One Health Programme for Prevention and Control of Zoonoses'.

The 'Operational Guidelines on National One Health Programme for Prevention and Control of Zoonoses' is an output of collective efforts of implementing agencies and partners who work in coordination for prevention and control of emerging and endemic zoonotic diseases through One Health approach. The Operational Guidelines on National One Health Programme for Prevention and Control of Zoonoses is an evolving documents which may be modified as per the technical update and program need. We are hopeful that these guidelines will help the stakeholders to implement the programs components and hence achieving the goal of reducing morbidity and mortality due to Zoonotic Diseases by One Health Approach.

Dr. Simmi Tiwari

(Joint Director & Head)

Division of Zoonotic Disease Programme



Antibiotic Resistance Containment Stewardship: Our Role, Our Responsibility
Judicious Use of Antibiotic: Key to Contain Antibiotic Resistance



Abbreviations

AFI Acute Febrile Illness

AIDS Acquired Immuno Deficiency Syndrome

AIIMS All India Institute of Medical Sciences

ANM Auxiliary Nurse Midwife

APCRI Association for Prevention and Control of Rabies

ASHA Accredited Social Health Activist

AWO Animal Welfare Officer

AWW Anganwadi Worker

BOD Biological Oxygen Demand

CAG Comptroller and Auditor General of India

CAZD Centre for Arboviral & Zoonotic Diseases

CBOs Community Based Organizations

CCHF Crimean-Congo hemorrhagic fever

CDC Centre for Disease Control and Prevention

CEO Chief Executive Officer

CME Continuing Medical Education

CONCOR Container Corporation of India Limited

COVID-19 Coronavirus Disease 2019

CSIR Council of Scientific and Industrial Research

CSR Corporate social responsibility projects

DADF Department of Animal Husbandry, Dairying and Fisheries

DARE Department of Agricultural and Research Education

DBT Department of Biotechnology

DDO Drawing and Disbursing Officer

DEO Data Entry Operator

DGHS Directorate General of Health Services

DLZC District Level Zoonotic Committee

DPH Diploma in Public Health

DPHL District Public Health Laboratory

DRDO Defense Research and Development Organization

DSO District Surveillance Officer

DST Department of Science and Technology

DZDP Division of Zoonotic Disease Programme

ELISA Enzyme Linked Immuno Sorbent Assay

ERID Emerging & Re-emerging Infectious Diseases

ERP Enterprise Resource Planning

FETP Field Epidemiology Training Programme

FOA Food and Agricultural Organization

FY Five Year Plan

GeM Government e Marketplace

GIS Geographic Information System

GFR General Financial Rules

GIA Grant in Aid

GoI Government of India

IMA Indian Medical Association

IAP Indian Academy of Pediatrics

IAPH International Academy of Public Health

IAPSM Indian Association of Preventive and Social Medicine

IAVPHS Indian Association of Veterinary Public health Specialist

ICAR Indian Council of Agricultural Research

ICMR India Council of Medical Research

IDSP Integrated Disease Surveillance Programme

IEC Information, Education and Communication

IFD Integrated Finance division

IHIP Integrated Health Informatics Portal

IHR International Health Regulation

INCLEN International Clinical Epidemiology Network

IPC Indian Penal Code

IPHL Integrated Public Health Laboratories

ISRO Indian Space Research Organization

IT Information Technology

IVA Indian Veterinary Association

IVRI India Veterinary Research Institute

KAP Knowledge, Attitude, Practice

KFD Kyasanur Forest Disease

MCI Medical Council of India

MERS Middle East Respiratory Syndrome

MLT Medical Laboratory Technology

MoAFW Ministry of Agricultural and Farmers Welfare

MoEFCC Ministry of Environment, Forest and Climate Change

MoHFW Ministry of Health and Family Welfare

MoU Memorandum of Understanding

MPH Master of Public Health

MTS Multitasking Staff

NADRES National Animal Disease Referral System

NADRS National Animal Disease Reporting System

NCDC National Center for Disease Control

NDMA National Disaster Management Authority

NGO Non-Government Organizations

NHM National Health Mission

NHSRC National Health System Resource Centre

NIHFW National Institute of Health and Family Welfare

NIV National Institute of Virology

NOHP-PCZ National One Health Programme Prevention and Control of Zoonoses

NPMU National Programme Management Unit

NRL National Referral Laboratories

NTAG National Technical Advisory Group

OIE World Organization for Animal Health

PATH Programme for Appropriate Technology in Health

PB Professional Bodies

PCR Polymerase Chain Reaction

PD Programme Division

PFMS Public Finance Management System

PG Post Graduate

PHFI Public Health Foundation of India

PHs Public Health

PMASBY Pradhan Mantri Atma Nirbhar Swasth Bharat Yojana

PMU Programme Management Unit

PO Private Organizations

POL Statement of Expenditure on Fuel Charge

PPAM Pet Practitioners Association of Mumbai

PRI Panchayati Raj Institutes

RC Regional Coordinators

RDL Regional Diagnostic Laboratory

RKVY Rashtriya Krishi Vikas Yojana

RNTCP Revised National TB Control Programme

RRL Regional Referral Laboratories

RRT Rapid Response Team

SARS Sever Acute Respiratory Syndrome

SCZ Standing Committee on Zoonoses

SFC Standing Finance Committee

SLZC State Level Zoonotic Committee

SNO State Nodal Officer

SOP Standard Operating Procedure

SRF Senior Research Fellow

SRL State Referral Laboratories

TOR Term of Reference

UGC University Grants Commission

UNDP United Nations Development Programme

UNICEF United Nations International Children's Emergency Fund

USAID United States Agency for International Development

VCI Veterinary Council of India

VRDL Virus Research and Diagnostic Laboratory

WHO World Health Organization

WLI Wildlife Institute of India

About the Document

Emerging and endemic zoonotic diseases pose a threat not only to the health of humans and animals but alarmingly to global health security. It is estimated that 60% of the known and up to 75% of new or emerging infectious diseases are zoonotic in origin. Globally, infectious diseases account for about 15.8% of all deaths and 43.7% of them from low-resource countries. In India, zoonotic diseases of major public health importance are Rabies, Leptospirosis, Scrub Typhus, Plague, Anthrax, etc. Therefore, the global impacts of emerging and endemic zoonoses on both human and animal population requires systematic multi-sectoral collaboration between human, animal health, environments sectors through One Health approach to efficiently respond to emerging and re-emerging zoonoses.

The National One Health Program for Prevention and Control of Zoonoses is the revised appellation of the existing Central Sector Scheme ‘Strengthening Inter-Sectoral Coordination for Prevention and Control of Zoonotic Diseases’, approved in 12th Five-Year Plan by the “Ministry of Health and Family Welfare”, Govt. of India. This programme is aimed to bring intersectoral coordination between human, animal, and environmental sectors in the country.

At present, Ministries of Health, Agriculture, Animal Husbandry, Environment and Forest, Science and Biotechnology, Water and Sanitation Human Resource, etc. and organizations such as National Disaster Management Authority, Drug Controller General of India, Food Safety and Standards Authority of India etc. are amongst the major stakeholders of ‘One Health’ in India.

These ‘Operational guidelines’ on National One Health Programme for Prevention and control of Zoonoses (NOHP-PCZ) have been developed with consultation from stakeholders at national and state level. This guideline provides the blue print for collaboration amongst different stakeholders to strengthen intersectoral coordination and team work. In addition, this will help in appropriate implementation of the activities envisaged under NOHP-PCZ such as – capacity building through training, workshops and seminars; laboratory strengthening for surveillance of zoonotic diseases and strengthening diagnostics services and laboratory capacity building at state and district level.

Chapter 1: Zoonoses: General Aspects and Epidemiology

1.1 Definition

The word 'Zoonosis' (Pleural: Zoonoses) was introduced by Rudolf Virchow in 1880 to describe the diseases that are commonly shared in nature by human and animals. Later in 1959 World Health Organization (WHO) defined that Zoonoses are "those diseases and infections which are collectively transmitted between vertebrate animals and human". Zoonoses include only those infections where there is either a proof or strong circumstantial evidence for transmission between animal and human.

1.2 Classification of Zoonoses

With the advanced laboratory techniques and increased awareness among medical and veterinary scientists, ecologists and biologists, more than 300 zoonoses with diverse etiology are now recognized. Thus, a very large number of zoonoses calls for classification especially for easy understanding. A brief classification of zoonotic diseases as per causative or etiological agent or as per mode of transmission is as under-

1.2.1 According to etiological agents

- Bacterial zoonoses e.g., anthrax, brucellosis, plague, leptospirosis, salmonellosis and Lyme disease.
- Viral zoonoses e.g., rabies, arboviral infections, Kyasanur Forest Disease (KFD) yellow fever, influenza and Crimean-Congo hemorrhagic fever (CCHF).
- Rickettsial zoonoses e.g., murine typhus, tick typhus, scrub typhus and Q-fever.
- Protozoal zoonoses e.g., toxoplasmosis, trypanosomiasis and leishmaniasis.
- Helminthic zoonoses e.g., echinococcosis (hydatid disease), taeniasis, schistosomiasis and dracunculiasis.
- Fungal zoonoses e.g., deep mycosis-histoplasmosis, cryptococcosis and superficial dermatophytes.
- Ectoparasites e.g., scabies and myiasis.

1.2.2 According to mode of transmission

- a. Direct zoonoses

These are transmitted from an infected vertebrate host to a susceptible host (human) by direct contact (fomite or by a mechanical vector). The agent itself undergoes little or no propagative or developmental changes during the transmission, e.g., rabies, anthrax, brucellosis, leptospirosis and toxoplasmosis.

b. **Cyclozoonoses**

These require more than one vertebrate host species, but no invertebrate host for the completion of the life cycle of the agent, e.g., echinococcosis and taeniasis.

c. **Metazoonoses**

These are transmitted biologically by invertebrate vectors, in which the agent multiplies and/or develops and there is always an extrinsic incubation (prepatent) period before transmission to another vertebrate host e.g., plague, arbovirus infections, schistosomiasis and leishmaniasis.

d. **Saprozoonoses**

These require a vertebrate host and a non-animal developmental sites like soil, plant material, pigeon dropping etc. for the development of an infectious agent e.g., aspergillosis, coccidioidomycosis, cryptococcosis, histoplasmosis and zygomycosis.

1.2.3. According to the reservoir host

e. **Anthropozoonoses**

Infections transmitted to human from lower vertebrate animals e.g., rabies, leptospirosis, plague, arboviral infections, brucellosis and Q-fever.

f. **Zooanthroponoses**

Infections transmitted from human to lower vertebrate animals e.g., streptococci, staphylococci, diphtheria, Enterobacteriaceae, human tuberculosis in cattle and parrots.

g. **Amphixenoses**

Infections maintained in both human and lower vertebrate animals and transmitted in either direction e.g., salmonellosis, staphylococcosis

1.3 Factors Influencing the Prevalence of Zoonoses

Zoonotic diseases are constant threat to the human population due to changing interrelationship between human-animal and environment, the key factors leading to emergence and reemergence of zoonoses are described briefly as under-

a) **Ecological changes in human's environment**

With the expansion of human population, human is forced to exploit the virgin territories and natural resources like harnessing the power of rivers, constructing roads and pipelines through virgin or thinly populated areas, clearing, irrigating and cultivating new land, and deforestation. All this would lead to entering of humans in the unaccustomed ecosystem in which potential pathogens form part of the biotic community (natural focus). Large scale expansion of agricultural and engineering resources, construction of dams, artificial lakes, irrigation schemes, clearing of forests -all these lead to changing of the biting habits of the blood sucking vectors and alteration in the population of reservoir animals which has led to the spread of *Leptospira*, tularemia, helminthic infections etc.

b) **Handling animal by-products and wastes (occupational hazards)**

There are significantly higher attack rates in workers during the course of their occupation than the rest of the population, e.g., anthrax in carpet weavers, livestock raisers and workers exposed to animal hair in the textile industry, leptospirosis in rice field workers, listeriosis in agricultural workers, erysipeloid in butchers and fish merchants, tularemia and trypanosomiasis in hunters, creeping eruptions in plumbers, trench diggers etc. Other examples of zoonoses as occupational hazards are Q-fever in abattoir and rendering plant workers, jungle yellow fever and tick-borne diseases in wood cutters, salmonellosis in food processors, bovine tuberculosis in farmers etc.

c) **Increased movements of human**

Land development, engineering project work, pilgrimages, tourism, etc. expose the people to contaminated food and water leading to diseases like amoebiasis, colibacilliosis, giardiasis, salmonellosis, shigellosis, etc.

d) **Increased trade in animal products**

Countries which import hides, wool, bone meal, meat, etc. from an area where some of the zoonoses are endemic, are likely to introduce the disease into their territories, e.g., salmonellosis, foot and mouth disease, anthrax, Newcastle disease etc.

e) **Increased density of animal population**

Animals may carry potential risk of increased frequency of zoonotic agents in human e.g., dermatophytosis, tuberculosis, brucellosis etc.

f) Transportation of virus infected mosquitoes

Aircraft, ship, train, motor and other vehicles introduce the viruses to a new area, e.g., yellow fever chikungunya fever, dengue fever etc.

g) Cultural anthropological norms

In Kenya, people allow the dogs and hyenas to eat human dead bodies infected with hydatidosis. This helps to perpetuate the transmission cycle of the disease.

1.4 Burden of Zoonotic Diseases

1.4.1. Global Scenario

Emerging and endemic zoonotic diseases pose a threat not only to health of animals and humans but also to global health security. It is estimated that zoonoses are responsible for 2.5 billion cases of human illness and 2.7 million human deaths worldwide each year. An estimated 60% of known infectious diseases and up to 75% of new or emerging infectious diseases are Zoonotic in origin. Globally, infectious diseases account for 15.8% of all deaths and 43.7% of deaths in low- and middle-income countries.

Emerging zoonoses are responsible for some of the highest profile and devastating epidemics, however, endemic zoonoses may pose a more insidious and chronic threat to both human and animal health. In the year 2014, the Ebola epidemic was responsible for 11,316 deaths and economic loss of \$2.2 billion whereas, each year rabies accounts for about 59,000 human deaths and economic loss of \$8.6 billion worldwide. The COVID-19 pandemic which is also said to be Zoonotic in origin has shown the devastating impact on the world economy.

1.4.2. Indian Scenario

Classical infectious diseases like rabies and plague, well known for centuries, are zoonoses which have not been eradicated despite of major efforts. Some of the zoonotic diseases like plague have reemerged with three outbreaks in a span of ten years. The zoonotic diseases of major public health importance in India are Zoonotic Influenza, Leptospirosis, Plague, Rabies, Anthrax, Scrub Typhus, Brucellosis, Kyasanur Forest Disease, Spotted Fever caused by Rickettsial Parasitic diseases like Cysticercosis, Hydatid disease, Trypanosomiasis and Toxoplasmosis. Japanese Encephalitis and Leptospirosis outbreaks have been reported year after year. Recently, new zoonotic entities Crimean Congo Hemorrhagic fever, Nipah virus infection, Avian Influenza and H1N1 Influenza have stirred the public health machinery. In addition to existing zoonoses, the country faces potential threat of exotic zoonotic infection viz. Yellow Fever, Hantavirus infection, Rift Valley fever, Ebola and

Marburg disease. The vector susceptible host and conducive environment are prevalent in our country. The IDSP data reveals that zoonosis is prevalent across all the states and frequent outbreaks are reported from time to time in the country. From 2017 to 2021, IDSP has reported 415 outbreaks due to zoonotic pathogens with 14439 cases and 1612 deaths in the country.

1.5. Rationale for One Health Approach

"One Health concept" is not new perhaps dating back to the late nineteenth century when medical observations were made that human and animal health were closely linked. Today the One Health concept has often been cited an effective approach to complex public health problems that involve multiple disciplines. Often human health, animal health and environmental health are examined as closely linked. Examples of such complex problems include emerging and re-emerging infectious diseases particularly zoonoses, food safety, emergence of antimicrobial resistant pathogens, and diseases resulting due to climate change.

The zoonotic pathogens encompass a wide variety of viral, bacterial, protozoa and parasitic species and are often difficult to diagnose. The limited knowledge and skill to identify zoonotic diseases, coupled with limited diagnostic facilities at all levels have resulted in neglect of the infectious diseases due to zoonotic pathogens. The emerging and endemic zoonoses need to be urgently responded to, through systematic multi-sectoral collaboration between human, animal health, environment sectors by "One Health" approach and more resilient public health machinery at all levels.

'One Health' is defined as a "coordinated, collaborative, multidisciplinary and cross- sectoral approach to address potential or existing risks that originate at the animal-human- ecosystems interface."

India also echoes the global voice acknowledging its importance and paid a particular heed to make One Health Approach as an inbuilt principle in its national programs for e.g., National Program for AMR containment, National One Health Program for Prevention and Control of Zoonoses. The recent launch of National Action Plan for Dog Mediated Rabies Elimination by 2030 adds another milestone to the road map of realizing One Health in India.

With this background, Division of Zoonotic Disease Programme (DZDP), National Center for Disease Control (NCDC), Directorate General of Health Services (DGHS), Ministry of Health and Family Welfare (MoHFW), Govt. of India, New Delhi had drafted these "Operational Guideline" on National One Health Programme for Prevention and Control of Zoonotic Diseases to strategically lay down the areas for coordination and collaboration with stakeholders to undertake the activities as envisaged under National One Health Programme Prevention and Control of Zoonoses(NOHP-PCZ).

Chapter 2: National One Health Programme for Prevention and Control of Zoonoses (NOHP-PCZ)

2.1. Background

The National One Health Programme for Prevention and Control of Zoonoses is the new name of already continuing Central Sector Scheme of "Ministry of Health and Family Welfare approved in 12th Five-year Plan as 'Strengthening Inter-Sectoral Coordination for Prevention and Control of Zoonotic Diseases' the SFC approval for the scheme was obtained on 26.6.2013. The nodal agency for implementation for the programme is NCDC, DGHS, MoHFW, Govt. of India.

2.2. Vision, Mission, Goal and Objectives of National One Health Programme for Prevention and Control of Zoonoses (NOHP-PCZ)

The programme was initiated with an objective to strengthen intersectoral coordination among medical, veterinary and wildlife sector to address zoonoses through joint capacity building activities, lab strengthening of the States for Zoonoses, strengthening surveillance, data sharing and joint outbreak investigation and to undertake various IEC activities. In the beginning, the programme was operationalized utilizing existing resources in the State and joint capacity building activities were undertaken in collaboration with veterinary sectors. Over the years, the programme has made significant achievements in sensitization of stakeholders and bringing together multidisciplinary experts on a common platform to build a consensus to have a structured, 'One Health' approach to respond to the Zoonotic threats in the country. Till date, 10 Regional coordinators (i.e., medical/veterinary institutes) have been strengthened to catalyze the coordination between medical and veterinary sectors. At State /district various activities such as training, laboratory strengthening, data sharing and IEC activities are being undertaken through above regional coordinators.

With the lessons learnt, the programme progressively broadens its horizon to have a more pragmatic approach in institutionalization of One Health and response to Zoonoses. Programme is intended to further enhance and boost the country's capacity to reduce morbidity and mortality due to prevailing endemic viral, bacterial and parasitic Zoonoses and also aimed to strengthen IHR core capacities for Zoonotic threats of pandemic potential. The expanded vision, mission, goal and objectives of the programme are as under:

1. **Vision** - To Institutionalize structural mechanism for 'One Health' approach in the country at each level i.e., National, State District, Block and village level
2. **Mission** - To bring all stakeholders from Policy makers till Front Line workers on One Health Platform with Shared Vision and Common Goals
3. **Goal** - To protect communities and minimize socio-economic losses due to emerging and re-emerging zoonotic threats.
4. **Objective** - To operationalize 'One Health' Mechanisms for prevention and control of Zoonoses through strengthening Inter-Sectoral Coordination among all stakeholders at the National, State, and District and up to grass root level.

2.3. Components of the programme

- Component A: Institutionalize One Health at National, State, District level and up to the grass root level
- Component B: Integrated capacity building programmes on zoonoses through multidisciplinary network of regional coordinators of One Health Institutes and Partner Organizations
- Component C: Integrated Surveillance Programme on Zoonoses
- Component D: Integrated Community Outreach Programme for Prevention and Control of Zoonoses with One Health approach at grass root level
- Component E: Advocacy and Risk Communication
- Component F: Operational Research

2.4. Deliverables under the programme

1. Institutionalization of One Health Structure at all level
2. Joint capacity building programme conducted on prevention, early detection, responses to zoonotic and foodborne outbreaks and organization of national and regional level workshops, symposiums, and CMEs
3. Laboratory Strengthening for diagnosis of priority zoonoses and ERID
4. Hands-on Training for State Reference labs and DPHL conducted
5. Sentinel site establishment for systematic assessments of spatial and temporal trends of Zoonotic diseases
6. Joint training of Medical Officers and Block Veterinary Officers on priority zoonoses and reverse zoonoses
7. Advocacy and Risk Communication (IEC Campaigns)

Chapter 3: Institutional Arrangements for The Programme

3.1. Institutional Mechanism under the Programme

The institutional mechanism envisaged under the programme has incorporated important stakeholders from all Ministries/Department i.e., Veterinary, Wildlife etc. at National, Regional, State to village level. It also envisaged to involve community and target population i.e., farmers, animal handlers, forest workers etc. through integrated community outreach programme and involvement of krishi vigyan kendra's, private organizations/NGOs. The Institutional mechanism envisaged for One Health in India is as under

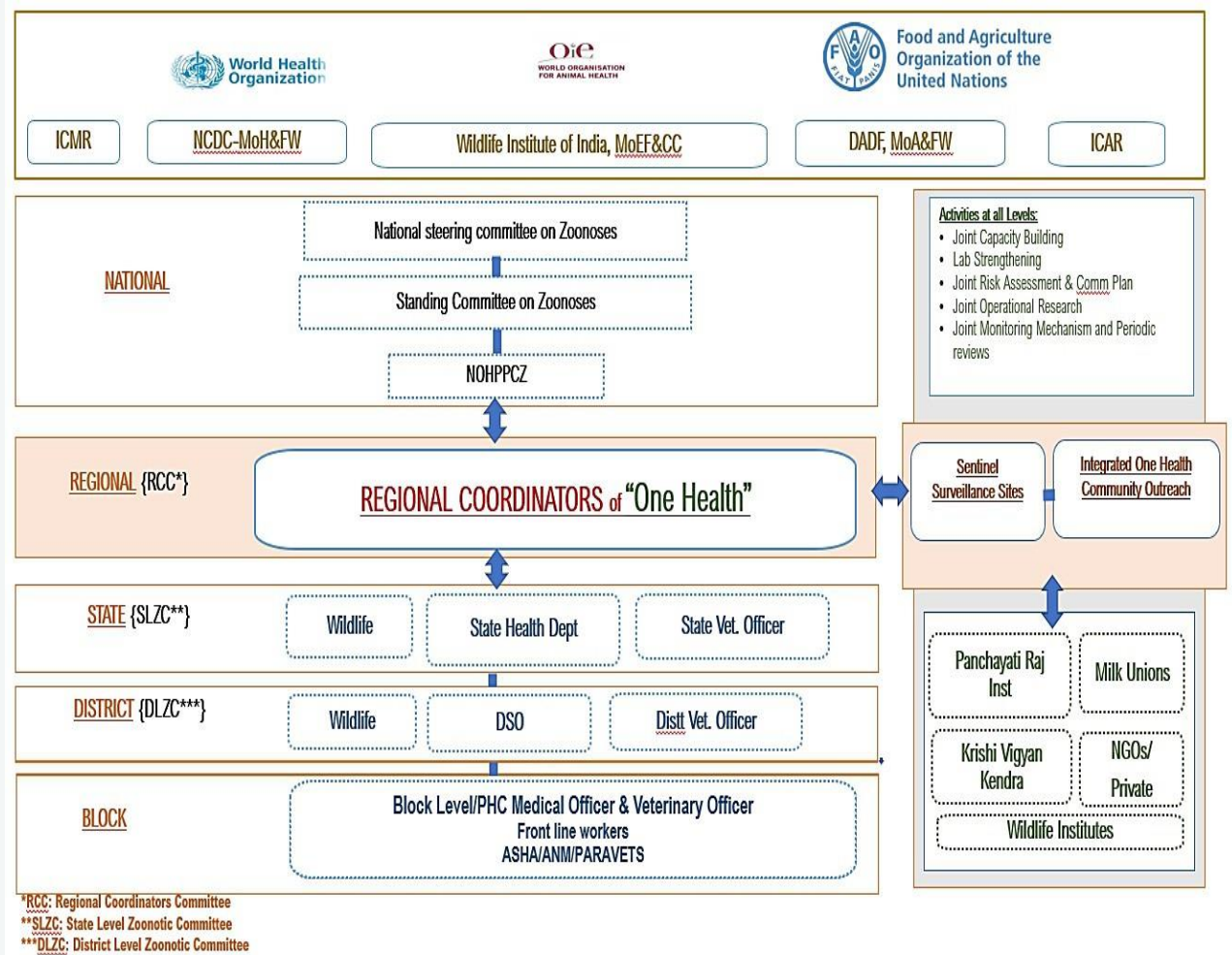


Figure 1: Institutional Mechanism for One Health in India

3.2. Establishment of National Programme Management Unit (NPMU) for implementing the activities of NOHP-PCZ

At National level, the programme will continue to be executed through DZDP, NCDC New Delhi. The National Programme Management Unit (NPMU) established under the division will operationalize all the headquarter activities through existing regular officers and contractual manpower support as approved under SFC for respective financial years.

The contractual manpower as approved under the programme by Standing Finance Committee (SFC) will be recruited through common recruitment procedure under NCDC or third-party placement agencies such as National Health System Resource Centre (NHSRC), New Delhi and others which may be hired to undertake the recruitment process. (If hired, the placement agency would be provided consultancy charges and operational cost for undertaking all recruitment processes).

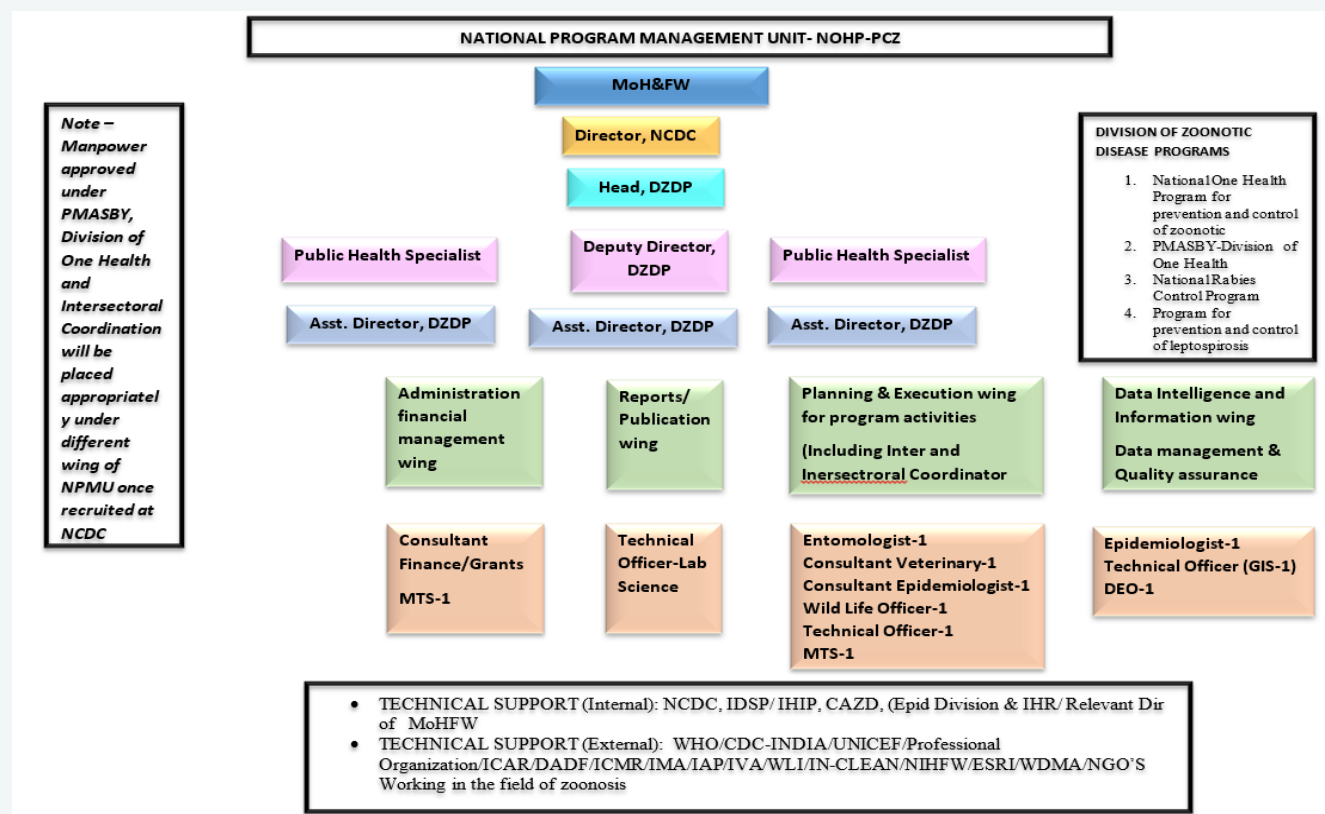


Figure 2: Organization structure of National Programme Management Unit

The logistical support such as desktops, laptops, computer accessories, internet access, software, furniture and consumables (stationary, etc.) will be procured from the funds allocated under appropriate budget head e.g., office expenses.

3.3. Role of National Programme Management Unit (NPMU) in implementation of NOHP-PCZ

The NPMU will be overall responsible for planning, execution, coordination and monitoring of all activities envisaged under the Programme.

The key role of the NOHP-PCZ NPMU will be as under:

1. Planning and execution of the activities as per approval granted by Standing Finance Committee and as per Operational Guidelines
2. To Organize time to time meetings of Technical Advisory Groups, subject expert group and meeting for Stakeholders engagement at National and subnational level as and when required.
3. To coordinate with other stakeholders, ministries, UN agencies (WHO, UNICEF, UNDP, USAID etc.), bilateral and multilateral international agencies and participate in One Health activities.
4. To identify research priorities for one health and zoonoses in consultation with relevant stakeholders and foster synergy among stakeholder for undertaking joint multidisciplinary research for evidence generation
5. To plan and execute activities from Zoonotic perspectives of IHR.
6. To coordinate with all stakeholders for systematic gap analysis and existing surveillance, lab capacity and response mechanism for endemic zoonoses and zoonoses diseases prone for causing outbreaks and epidemics.
7. To coordinate with IHR and Climate Health Division for One Health activities pertaining to Zoonotic Diseases
8. Formulation of Technical Guidelines, SOPs for the various programme components in consensus and consultation with technical experts.
9. Formulation of technical guidelines and training material on Diagnosis, case management, prevention of control of zoonotic disease and priority One Health Issues
10. Developing trained workforce to combat zoonotic Diseases: Training of Master Trainers for capacity building of medical and veterinary professionals on diagnosis, treatment, prevention and control of Zoonotic diseases.
11. Coordination with the identified Regional Coordinator for strengthening diagnostics in the region for important zoonotic diseases.
12. Development of standard IEC material and formulation of strategy for dissemination of the same.
13. Advocacy and Coordination with the respective State governments and for catalyzing the one health activities identify Nodal Officer/Regional Coordinator (RC) for the programme.
14. Overall monitoring and supervision of the programme activities

15. Coordination with the other stakeholders (ICMR, ICAR, IVRI, MoA, MOEF&CC, DADF and wildlife institutes etc.)
16. Coordinate release of GIA to the identified Stakeholders, Regional Coordinators and laboratories and professional organizations as per SFC approval for various activities.
17. Financial Management of the programme.

3.4. Constitution of National Level Steering Committee on One Health and Zoonoses (NSCOHZ)

Under the programme it is envisaged to constitute a national level steering committee with representation of all sectors viz IHR, animal husbandry, wildlife and environment and agriculture etc. The committee will also have representation of International Experts from WHO, OIE and FAO and other bilateral and multilateral agencies such as CDC etc. The mandate of this committee will be to endorse the technical recommendation given by the Standing Committee on Zoonoses and to provide administrative support and necessary direction to the relevant stakeholders for the actions to be taken as recommended by the SCZ committee. The meeting of NSCOHZ will be held at least once in a year or as and when required as decided by the Chair. The One Health declaration will be signed and formalized to achieve the highest level of political commitment to realize the goal of National One Health programme for Prevention and Control of Zoonoses.

3.5. Standing Committee on Zoonoses

This committee already exists under the chairmanship of Director General of Health Services, Govt. of India. This committee has representation of all stakeholders from health, veterinary, wildlife and environment sectors. These representatives include officials from state and central Govt. institutes, academia and scientists from eminent organizations. The committee holds its meeting twice in a year. The constitution of Standing Committee on Zoonoses and its TOR are placed at Annexure -1.

3.6. Regional Committee on Zoonoses and One Health

The Regional Committee on Zoonoses and One Health will be constituted of all Nodal Officers of Regional Coordinators identified under the programme. The regional committee on Zoonoses will review the region-specific issues and will formulate an action plan in coordination and consultation with each other for prevention and control of region-specific zoonotic illness. The agenda for discussion in the Regional Committee will be decided in consultation with experts and the committee will be chaired by selected Regional Coordinator on rotation basis. An external reviewer or observer will be deputed by NPMU to oversee the RC meetings and proceedings of the meeting will be submitted to the member secretary of SCZ and NSCOHZ and NPMU -Zoonoses and One Health. The meetings of Regional Committee will be held at-least biannually.

3.7. State Level Zoonoses Committee (SLZC)

Programme envisages State level coordination between medical, veterinary, wild life sector along with relevant stakeholder i.e., Panchayat Raj institution, Urban local bodies, agriculture department, education department etc. To ensure the regular coordination at state level, State Level Zoonotic Committees (SLZC) have been formed in 32 states out of 36 states and union territories. Rest of the states are being encouraged to form the committees through coordination with regional coordinators. The State Level Zoonoses Committee will submit the proceedings of the meeting to the concerned Regional Coordinator and Regional Coordinator in turn will compile all the proceedings of SLZC of their Jurisdiction for further discussion in the RC meetings. The Constitution and TORs of SLZC are placed at Annexure -2.

3.8. District Level Zoonoses Committee (DLZC)

Programme envisages district level coordination between Medical, Veterinary, Wildlife Sector along with relevant stakeholders i.e., Panchayat Raj institution, Urban local bodies, agriculture department, education department etc. To ensure the regular coordination at district level, all states have been communicated to constitute the district level zoonotic committees (DLZC). The DLZC will meet at least quarterly but preferably every month to review the situation of zoonoses at district and below district level. All the proceedings of DLZC will be submitted to the concerned State level Zoonoses committee member secretary for compilation and analysis and prepare priority agenda items to be discussed in SLZC. The Constitution and TORs of DLZC are placed at Annexure-III. Wherever possible the technical workforce will be tapped and engaged from state, district and village level functionaries from Animal husbandry, wildlife and agriculture centers and involvement of PRIs etc. The programme will also be supported by technical engagements with professional organizations and International Partners and UN agencies.

3.9. Constitution of Technical Advisory Groups, Technical Task force and Roster of Disease Specific Expert working groups under the Programmes

Technical Advisory Groups, Technical Task force and roster of disease specific expert groups will be constituted after consultation with stakeholder for Formulation of National One Health Policy document for Zoonoses, National Strategic Framework for Prevention and Control of Zoonoses through One Health approach and development of National Guidelines and SOPs to address priority Zoonoses in the country. Expert groups will meet on need basis and provide suggestions to programme division on operational aspects of the programme.

CHAPTER 4: OPERATIONAL GUIDELINES FOR THE ACTIVITIES UNDER DIFFERENT COMPONENT OF THE NOHP-PCZ

Programme envisages various activities to be undertaken i.e., training, laboratory strengthening, IECs etc. to be undertaken by all stakeholders as envisaged under Institutional mechanism. A brief about operational status of above activities is as under –

4.1. Capacity building activities (Training/Workshops/Seminars)

The key objective is to build the capacity of the States on all technical aspects of Zoonotic Diseases (Laboratory, Surveillance and Joint Outbreak Investigations, biosafety and biosecurity, Emergency Response to Zoonotic and food borne zoonoses threats etc.). For undertaking various training on Zoonotic disease, the activities will be conducted through existing NPMU, Regional Coordinators, and through a technical collaboration with professional bodies IMA, IAP, IAM, IAPSM etc. Expert faculty will be roped in from premier institutes and Standard diseases specific training material will be developed. The cost will include TA/DA for the participants and faculty, per-diems for the participants and expert fee and other operational charges as per norms.

Table 1: Technical domains and Targets groups for capacity building/training

S. No.	Activity	Technical Domain	Target Group	Duration/Number of trainings	Tentative Numbers/Batch size	Partners/ Implementers
1)	National level Joint orientation training programme	Clinico - epidemiological aspects of Zoonotic diseases including, Diagnosis, prevention and management	State-level Health, Veterinary and wildlife professionals	5-6 Days per year	30-40 PER BATCH	NCDC-IVRI-NIV, WLI etc.
2)	National /Regional level/Sentinel Sites level Hands on Training on the diagnosis of zoonoses	Lab-Based Training	Microbiologist , Pathologist and laboratory professional of RCs/Sentinel Sites/DPHL/as per State requirement	5-6 Days	20-25 per batch	NCDC/ Regional Coordinators / AIIMS and another Institute
3)	Community Outreach Activity	Skill building of frontline health and Veterinary workers on identification, reporting and initial primary management of zoonotic diseases	Front line workers (all sectors) i.e., ASHA, ANM, AWW etc.	2 days	40-50 batch size	In collaboration with professional bodies /NGOs/RKVY /PRI /State livelihood missions etc.

Steps

1. Training needs assessments of different category target audience.
2. Preparation/ Standardization of Training Material/Curriculum.
3. Identification of partners (Regional Coordinators/Sentinel sites under NOHPPCZ) / Professional bodies working in the field of Zoonoses e.g., IMA/IAP/ICAR network institutes etc.

4. Financial approval and transfer of funds to the partner organizations/institutes/professional bodies etc. as advance (budget head: Other Administrative Expenses) to undertake the activity.
5. Intervention- organization of capacity building workshop and Training activities.
6. Reporting and Outcome assessment (pre-test and post-test) reports and settlement of expenses.
7. Funds for the capacity building activities under different components will be sourced from the appropriate budget head under the programmes.

4.2. Laboratory Strengthening for Zoonotic Diseases under NOHP-PCZ

The programme has envisaged to build the capacity of laboratory professionals for diagnosis of zoonotic pathogens and establish a three-tiered structure of laboratory and referrals diagnostic services for Zoonotic diseases at all level i.e., National, Regional, State and District level. The funds will be provided to the selected institutes as per Govt. norms.

At the national level, NCDC and selected institutes will function as National Reference Laboratory for Zoonoses. These NRLs will build the capacity of other Regional Coordinators and which will work further to strengthen diagnostic on zoonotic disease prevalent in the state utilizing the GIA received under the programme. The Regional Coordinator will support the State Reference laboratories by providing hands- on training on zoonoses and diagnostic. At district level existing, DPHL under IDSP will be targeted for enhanced capacity building for diagnosis of endemic and outbreak prone zoonotic Diseases. The target is to strengthen at least 2 DPHL per state preferably the districts which are reporting outbreaks during last consecutive years.

4.3. Role of Laboratories under NOHP-PCZ

4.3.1. National Referral Laboratories (NRL) for Zoonoses

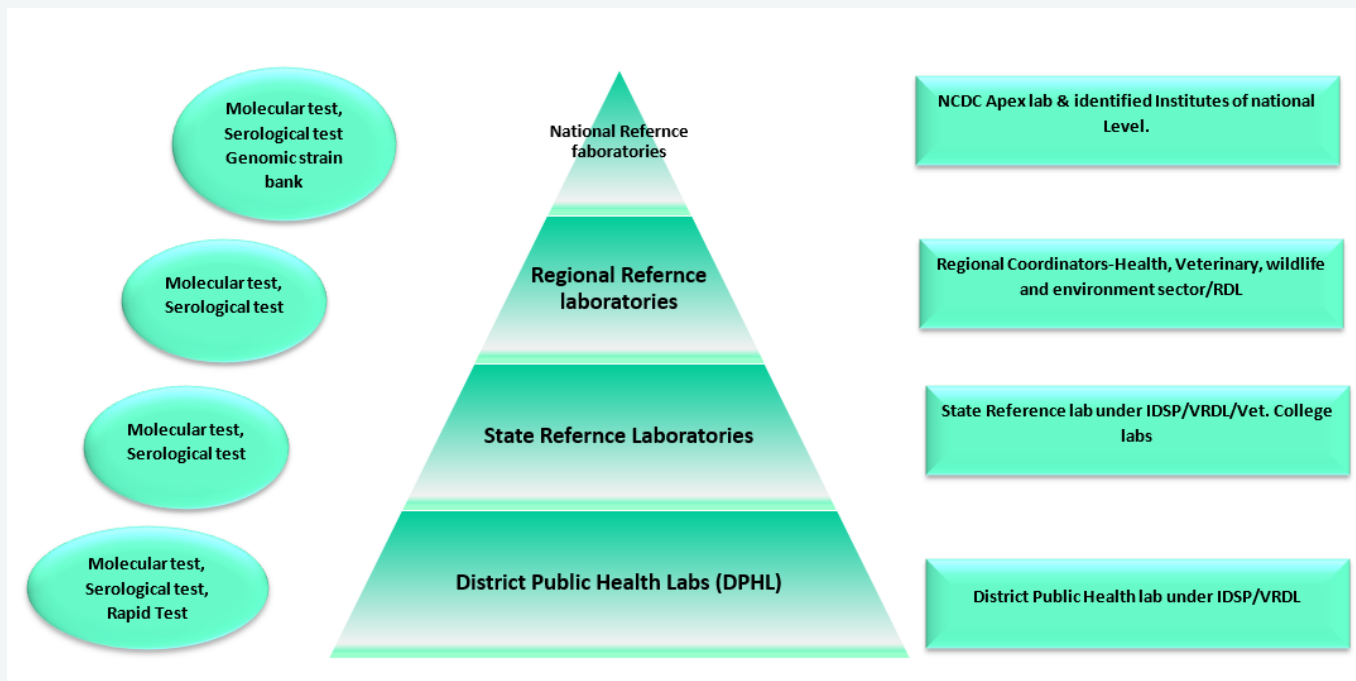


Figure 1: Laboratory Structure for diagnosis of Zoonoses

National Referral Laboratories (NRL) will be identified which will serve as a National Referral Lab (NRL) for human and animal samples. The capacities of these NRL will be strengthened in a phased manner. The manpower will be trained on various epidemiological and microbiological aspects of virus isolation, PCR, serological, rapid test for diagnosis of priority zoonotic diseases.

Role of NRLs is as under:

1. NRL will play a key role in providing technical support, capacity building and supervision of all sub-National laboratory activities.
2. Capacity building of State level laboratories on the following aspects: --
 - a. Molecular Surveillance for zoonotic viruses, bacteria etc.
 - b. Serological surveillance
 - c. Standard Laboratory diagnostics and protocols
 - d. Quality assurance systems
 - e. Bio risk management and areas of biosafety, biosecurity, and biocontainment
3. A subset of samples will be sequenced to determine the genotype and maintain a national database on the genotypes circulating in the population.
4. NRL will frame Standard guidelines and technical documents on lab aspects.
5. Participation in WHO/OIE proficiency testing and overall quality control

6. Participate in research and survey activity.
7. Maintain a repository of zoonotic pathogens.
8. Coordination and reporting -NRL will facilitate and coordinate sharing of data and line list of Zoonotic diseases to all the stakeholders and subnational laboratories.

4.3.2. Regional Referral Laboratories (RRL) for Zoonoses

The identified Regional Coordinators will function as Regional Referral Laboratories (RRL) to provide state of Art diagnostics facilities for selected zoonotic pathogens for 3 to 4 states in its jurisdiction to support the diagnosis of human as well as animal samples. 10 Regional Coordinators already exist as mentioned in the previous section and the network will be further enhanced based on approval received under the programme. The services provided by RRLs will be same as the NRLs except the quantum of the services.

4.3.3. State Referral Laboratories (SRL) for Zoonoses

At least 2 to 3 State Referral Laboratories (SRL) will be identified and designated for diagnosis under the programme. It is envisaged that selected medical/veterinary colleges, medical/veterinary institutes, infectious disease hospitals and tertiary care institutes in each state may be designated as SRLs. The SRL will undertake capacity building on various epidemiological and microbiological aspects, including molecular diagnosis, serology, rapid test, antibody titre estimation. These SRL may be the same as funded under IDSP programme or under VRDL Scheme of ICMR or any other State Medical/veterinary college labs.

Role of State Level Laboratories

1. Provide training on sample collection, packing, transportation, processing of samples by Rapid test to District level laboratories (at least 2 /District).
2. Testing of the samples received from the district level institutions/collages
3. Transport of samples to the Regional Laboratory along with the details.
4. Undertake capacity building on epidemiological and diagnostic aspect.
5. Sharing of test reports with the district laboratories.
6. Upload the outcome of testing in the National portal.

Role of District Level Laboratories

1. Provide training on collection of samples, packing, transportation to Block/Taluk level veterinarians/wildlife personnel, medical officers, laboratory technician and related staff.
2. Submit samples to the State Level laboratories.
3. Conduct Rapid diagnosis and support outbreak investigations.

4.4. Regional Coordinators for "One Health and Zoonoses" under NOHP-PCZ

This component is the continuation and further expansion of a regional coordinator (Medical/ Veterinary/ Wildlife institutes) network already established under the NOHP-PCZ of Zoonoses. Till date there are 10 Regional coordinators, five each from health and veterinary sector under the programme. It may be expanded to a total of 18 to 20 Regional coordinators (2-3 RC per year). The network could further be expanded as per subject to availability of funds. The key objective is to build the capacity of the States on all technical aspects of Zoonotic Diseases (Laboratory, Surveillance and Joint Outbreak Investigation, Biosafety and biosecurity, Emergency Response to Zoonotic and food borne threats etc.). These Regional Coordinators will be provided recurring and non-recurring Grants-in-Aid (GIA) for various activities envisaged under the programme. The detailed operational guidelines for regional coordinators are available at NCDC website.

(Link for Operational guidelines:- <https://ncdc.mohfw.gov.in/showfile.php?lid=421>)

4.4.1. Key Roles of the Regional Coordinators

Regional coordinators will be assigned to two to three States to coordinate the programme activities. Following programme activities are envisaged to be undertaken through regional headquarters.

A. Capacity Building Activities

- a) Organization of Joint Orientation workshops for Medical and Veterinary professionals on Zoonotic diseases
- b) Hands on Training for laboratory professionals on laboratory diagnosis for zoonotic diseases.

B. Strengthening of Surveillance and Outbreak Investigations

- a) The RC will facilitate data sharing between the health, veterinary sector, and other stakeholders on zoonotic diseases. The data on the agreed parameters will be entered on IDSP /IHIP portal and proposed digital platform of 'National Zoonotic Diseases surveillance and Information System'
- b) The RC will function in collaboration with State Surveillance Officer and State Veterinary officer to monitor the trend of the zoonotic diseases of public health importance in their jurisdiction and will provide support to the States for outbreak investigation of the zoonotic diseases. The contact details of State surveillance officer are available at IDSP website: - <https://idsp.nic.in/indexl.php?lang= I &level=I &sublinkid=66 l 4&lid=455>.
 - a) Each regional coordinator will also function as Sentinel Surveillance site for the zoonotic diseases and will supervise and coordinate all activities of Sentinel Surveillance sites and community outreach programme on One Health.

C. Diagnostics Services and Lab Capacity Building of States and Districts Level Laboratories

The Regional Coordinator lab will support the State reference laboratories by providing hands-on training on zoonoses and diagnostic support. The regional coordinator (RC) will work to strengthen diagnostics on zoonotic disease in the institute for respective zoonotic disease prevalent in the state by utilizing the GIA received under the programme. It is envisaged that the RC will provide technical support and strengthen networking with the other laboratories such as State Reference Lab and District Public Health Laboratories of IDSP and State NCDC branch wherever required.

D. Intersectoral Coordination Activities

Each regional coordinator will play a significant role in strengthening of intersectoral coordination among stakeholders for efficiently responding to the zoonotic threats by following activities:

- Coordination with the respective state health and veterinary Department to nominate/ identify a state focal point for the programme activities.
- To facilitate the constitution of State and district level zoonoses committees in the respective States.



Figure 4: Activities undertaken by Regional Coordination

- a) To establish coordination with veterinary, medical and forest department or wildlife institutes through Identified State focal point for sharing of information and data on zoonotic disease of public health importance in animals, human and wildlife species.
- b) Regional coordinators will work with the State government for preparation of an action plan for prevention of control of zoonotic outbreaks including training and IEC activities.
- c) Regional coordinator will facilitate and advocate for regular meetings of state and district level zoonoses committees.
- d) Funds are provided under Advertisement and Publicity which may be utilized for creation and dissemination of IEC for generating community awareness on Zoonoses. It is envisaged that regional coordinators will conduct and participate in operational research on various technical and programmatic interventions. Breakup of GIA to be provided to the Regional Coordinators.

4.5. Breakup of Grant in-Aid (GIA) to the Regional Coordinators/Centre for Excellence for One Health

The regional coordinators/Centre for excellence for One Health will be selected in consultation with concerned stakeholders such as Animal husbandry, Wild Life, Ecology and Environmental sectors. The programme envisages the distribution of regional coordinators in such a way that the country has at least 4 to 6 Regional coordinators in each zone (East, west, north, north-east, central and south zone) representing health, veterinary, wildlife and environment sectors depending on the need. The proposal will be called from the identified institutes in consultation with the stakeholders and will be examined at the NPMU. After initial gap analysis, all the shortlisted proposals will be presented to the Technical Advisory Committee of Zoonotic Diseases experts constituted under the Programme. The vetted proposal will be submitted to the ministry for concurrence and release of GIA. The transfer of GIA to the regional coordinator will be undertaken as per rules after signing a MoU between the Head of the Institute and Director NCDC (Template MoU at Annexure 4).

Each Regional Coordinator may be provided a maximum of Rs 1.2 Crores as GIA per year (Recurring grant maximum up to Rs 0.60 Crores per year and Non-Recurring Grant maximum of Rs 0.60 Crores in a year).

Recurring grants include Manpower, Kits & Reagents consumables, meetings & trainings, Surveillance & Monitoring, Travel, and Research. The non-recurring grant will include Infrastructure/Civil Works and Equipment's required for zoonoses. (Tentative List of equipment at Annexure V).

The non-recurring grant shall be provided only during the initial period of (1-2 years) of the entire project period except in case of special circumstances/exigencies (public health interest) subject to approval by ministry and NTAG of lab experts. The Existing Regional Coordinators will be provided NR grant after conducting gap analysis and need assessment and Plan of action of the RC.

Note: The breakup is tentative and it varies as per need and action plan of the regional coordinator which will be approved after internal scrutiny, approval by TAG and by the ministry.

Manpower support for the Regional Coordinator: (It may vary as per the approved SFC for respective FY).

Table 2: Manpower approved for Regional Coordinators

S. No.	Post Name	No. of Post
1)	Project consultant/Medical Microbiologist/ Veterinary Microbiologist/ Public Health Expert	1
2)	Assistant Research Officer SRF Research Associate as per requirement	1
3)	Lab. Technician Laboratory Assistant	1
4)	Data Entry Operator	1

Above manpower to be hired by the respective institute/organization as per standard policy of the respective institute and requirements of project within the framework designed under existing guidelines of Regional Coordinators. Maximum monthly remuneration for each of the posts will be as prescribed under approved SFC for respective FY. The detailed TOR is placed at Annexure 6.

4.6. Strengthening surveillance of zoonoses and establishment of National Zoonotic Diseases Surveillance and Information System

This is a key component of the programme to ensure the standardized and sensitive surveillance system for capturing the data related to zoonosis in the country. Activities envisaged under this component are as under:

4.6.1. Establishing an integrated web/digital portal for zoonotic pathogens

It is understood that the source of infection of zoonotic pathogens is a wide spectrum of vertebrates and invertebrates including livestock and wildlife species. The timely prevention of zoonotic threats can only be realized with the generation of Early Warning Signals of impending outbreaks which requires systematic data sharing mechanisms between health and veterinary sectors. However, without having a defined policy on data sharing, systematic data sharing is still lacking. The efforts so far were under 'Intersectoral Coordination Programme' for prevention and control of zoonotic Diseases' for proposed integration of NADRS and IDSP system but due to inherent difference in basic modalities of data generations points, periodicity and difference in primary mandates and priorities of the two sectors (health and veterinary) this could not be formalized as yet. As recommended on various forums by technical experts to effectively institutionalize One Health Mechanism and systematic real-time data sharing it is proposed to have dedicated integrated web/digital portal for zoonotic pathogens which would be a joint IT platform of DAHD, MoEF&CC, DARE, DST and

MoHFW (NCDC). This will enable the development of a real-time alert mechanism for zoonotic diseases and timely detection, effective prevention, and public health response for impending outbreaks.

Accordingly, efforts will be undertaken for development of a website named Integrated One Health Platform/National Zoonotic Diseases Surveillance and Information system. The meetings will be held with the stakeholders to identify data parameters as per need of the programme. The task will be undertaken in collaboration with the National Informatics Centre under the Ministry of Information and Technology. The development of a dedicated digital platform or website for National Zoonotic Diseases Surveillance and Information system will enable to meet the following objectives:

1. Integration of National, state, and district level surveillance activity for various Zoonotic Disease.
2. Integration of National level programmes implemented under one health paradigm by various ministries and international bodies.
3. Integration of National, state, and district level report from IDSP (<https://idsp.nic.in/>), Animal Husbandry, India Meteorological Department (<https://mausam.imd.gov.in/>) and data received from other Stakeholders.
4. Integration of National, state, and district level lab confirmed cases of Zoonotic Disease - integrate with the National referral labs, regional referrals labs and regional coordinators.
5. Geographically precise location information for Zoonotic Disease and effecting area.
6. Real-time access to surveillance data by participants & stakeholders.
7. The ability to display surveillance data geographically in relation to environmental features.
8. Adaptable to integrate with NADRES and NADRS
9. Adaptable to future surveillance needs

4.6.2. Sentinel Surveillance Sites for Zoonoses

Establishing a network of Sentinel Surveillance Sites is required for systematic assessments of spatial and temporal trends of Zoonotic diseases. The priority zoonoses targeted will include the Scrub Typhus and Rickettsial infections, Leptospirosis, Kyasanur Forest Disease, Crimean Congo Hemorrhagic Fever, Brucellosis and other priority Zoonoses in 80 sentinel sites across the country (20 sites/year) these sentinel sites will be monitored by Nodal centers i.e NCDC and Regional Coordinators. The target is to bring at least 80-100 sites (over a period of 5 Years) under the Sentinel Surveillance Network of Zoonoses under the programme.

The potential sentinel sites will be:

1. Regional Coordinators- Health and Veterinary Sectors
2. State Reference lab of IDSP- District Hospitals/Medical Colleges
3. Regional disease diagnostic laboratories of animal husbandry/Veterinary Colleges or Universities/ICAR and ICMR network labs
4. District Public Health Labs/Labs of CSIR/DBT funded projects Labs under Pvt Sector undertaking state of the art diagnostic facilities for zoonoses

5. NCDC State Branches/Upcoming metropolitan Surveillance Units/Regional NCDC
6. Tertiary care institutes and laboratories in private sectors willing to participate

The steps for establishing a network of Sentinel surveillance on zoonoses are as under:

A. Selection of Sentinel Site

In the initial stages, districts will be selected based on the burden of zoonoses in the human and animal health sector (as per case data available on IDSP, NDARS/NADRES and outbreaks reported) and after consultation with the State. Thereafter in the selected districts Health facilities, Medical College/potential institutes as listed above will be identified and approached based on the laboratory infrastructure, epidemiologic capacity and the willingness of the participant organization and as analysis of IDSP. The regional coordinators identified and supported under the programme of NOHP-PCZ will be given responsibilities to monitor and supervise at least 3-5 sentinel sites in their jurisdiction area.

Target - The target is to establish a network of 80 to 100 Sentinel sites over a period of five years subject to availability of funds under the programme.

B. Steps for Selection

Selection of State based on data analysis and risk mapping → Selection of district and health facility with available infrastructure and willingness to participate → linkage of Sentinel sites with community outreach site catchment area.

Manpower and logistic support to the sentinel sites - It may be provided in the form of non-recurring grants for Equipment's/other item requested by institute and recurring support in the form of manpower support (one lab technician and one data assistant), consumables like kits and reagents, miscellaneous and contingency expenses etc.

C. Method of funds disbursement to the sentinel site

Funds will be provided as GIA to the selected sentinel site either routed through regional coordinators or directly from NPMU after signing a MoU between NCDC and the head of selected site. Periodic audits and a quality check will be ascertained as per standard TOR and guidelines formulated for sentinel sites. The template for proposal for Sentinel sites is attached at Annexure- 7

Sentinel surveillance will function as per standard guidelines formulated by NPMU

4.7. Integrated Community Outreach Programme on One Health

This activity is envisaged under component D of the programme. As more than 60 % of the rural population is still dependent on farming and livestock, this is a most vulnerable section who needs to be educated and informed about the significance of prevention, early diagnoses and control of zoonoses for not only to promote and restore health but also for better care of their livestock and economic security. Research Studies have shown that farmers, animal handlers such as milkers, paravets, artificial inseminators, Pashu Sakhis, Pashu Mitra, and Forest workers and wildlife professionals are classified as High-Risk Groups for being exposed to zoonotic diseases. In 2019, KAP study done in Punjab about awareness of zoonotic diseases, it was observed that 85% of livestock farmers had heard the term 'zoonoses' but only 40%, 31% and 25% farmers were aware of the zoonotic diseases such as Tuberculosis, Japanese Encephalitis and Taeniasis, respectively and yet 23% farmers reported consumption of raw milk and only 10% and 8% livestock farmers ever got their animals tested for brucellosis and tuberculosis, respectively (Singh et al, 2019)

The objective of Integrated Community Outreach programme on One Health is to foster the One Health concept at block and village level through collaboration with Panchayati Raj Institutions, RKVY, PMSKY, Krishi Vigyan Kendra's and other existing outreach programmes in the government and private sectors.

The Community Outreach programme will be implemented either by the identified Medical/ Veterinary College or through professional organizations developmental/PHs/NGOs/CBOs and Research Organizations. This component is envisaged to be rolled out on a pilot basis. The Regional Coordinator will be roped in to supervise and coordinate the activities of Sentinel Sites and Community Outreach Project sites.

Each Community outreach implementation site would be linked to sentinel surveillance sites for zoonoses. Each Community Outreach site is envisaged to serve as Model Public Health Unit using "One Health" Approach at Grass root level to address Zoonoses at selected sites. Standard training, IEC material and facilitators guides will be developed by the nodal center to undertake the activity. The template for proposal for Integrated Community Outreach programme is attached at Annexure-VIII.

The key activities of Community Outreach Programme on One Health will include:

1. Joint training of Medical Officers and Block Veterinary Officers on priority zoonoses and reverse zoonoses
2. Joint training to educate ASHAs, AWW, and paravets and field level wildlife and forest workers through joint training session and awareness programme.
3. Creating awareness among target groups i.e., farmer, livestock handlers and general community on zoonoses and reverse zoonoses.

4. Creating awareness on appropriate behavior/practices to be followed for prevention of Zoonotic diseases through involvement of Gram Sabha, Gram Sewak and Village health sanitation committee and IPC.
5. Assessing the routine practices responsible for spread of zoonotic diseases and impact on IEC activities in behavior change of population w.r.t. zoonotic diseases.
6. Event notification on suspected cases and deaths due to Zoonotic diseases in the community
7. Encouraging vaccination and other preventive modalities for animal and human's population on high-risk zoonotic diseases prevalent in the region (as per government guidelines) through relevant stakeholders

The estimated budget under this component for all activities for one year is Rs. 3.10 Cr. and for 5 years is Rs. 15.50 Cr. Activities will be undertaken by dedicated GIA provided either to the regional coordinators identified under this programme or an identified medical/veterinary roped in as sentinel sites for zoonotic diseases Surveillance. Alternatively, possibility will be explored to execute this activity through professional organizations developmental /PHs/NGOs/CBOs and research organizations working in the field of zoonosis subject to approval by the ministry.

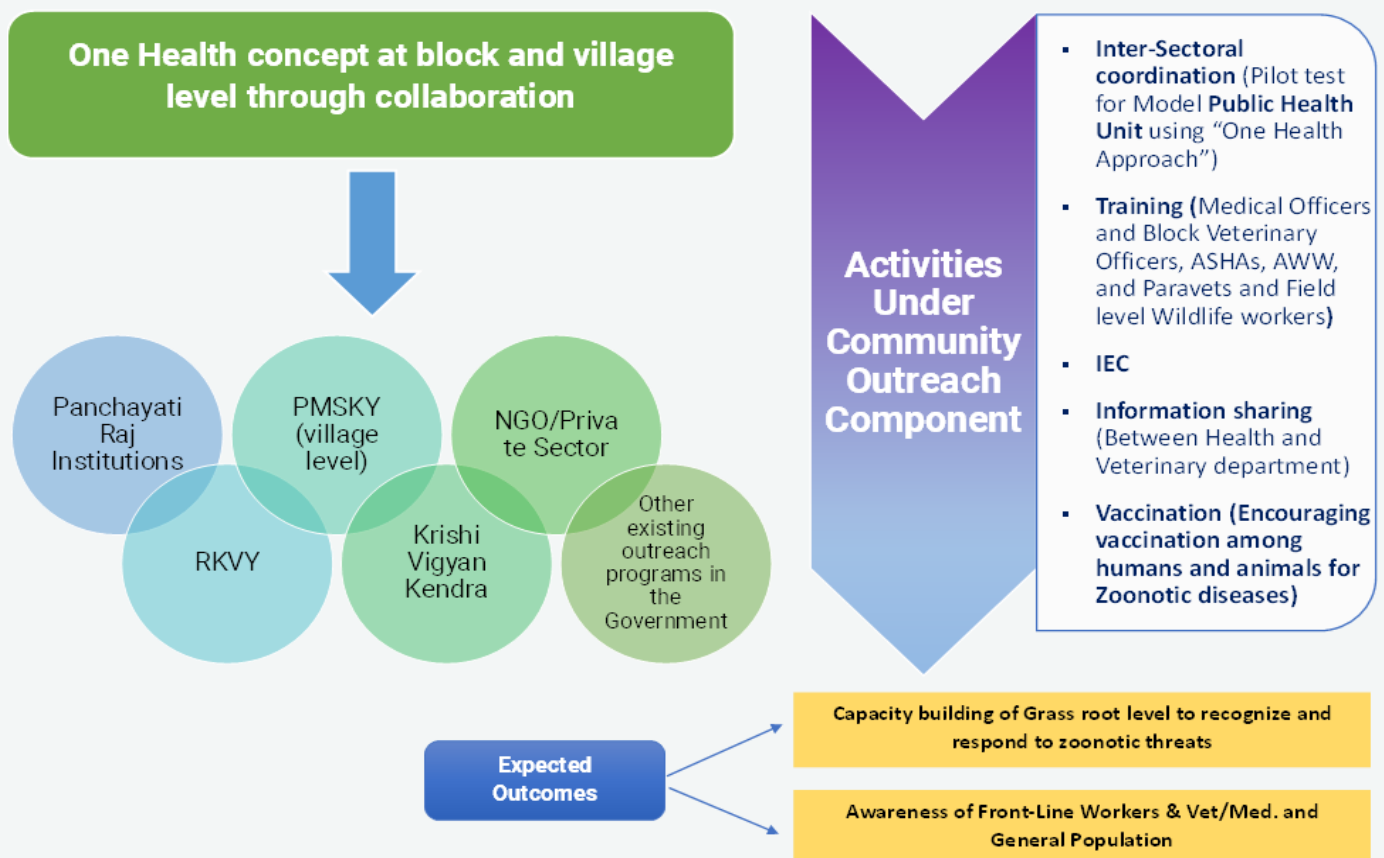


Figure 5: Integrated Community Outreach Programme on One Health for Zoonoses

Expected Outcome of Integrated Community Outreach programme on One Health for Zoonoses includes-

1. Capacity building at Grass root level to recognise and respond to zoonotic threats
2. Skill building of Front-Line Workers under Human Health /Animal Health/forest dept. on management of Zoonotic disease outbreaks.
3. Increased Awareness and behavior change in general population and target groups. e.g., farmers on Zoonotic disease prevention.
4. Improvement in health of human as well as in animals (Livestock Health)
5. Improvement in Surveillance of Zoonotic Diseases in High-Risk Groups.
6. Improve and strengthen the timely diagnosis of Zoonotic diseases and intersectoral coordination between different sectors.
7. Strengthening the economic security through impact of human disease burden and livestock morbidity and mortality

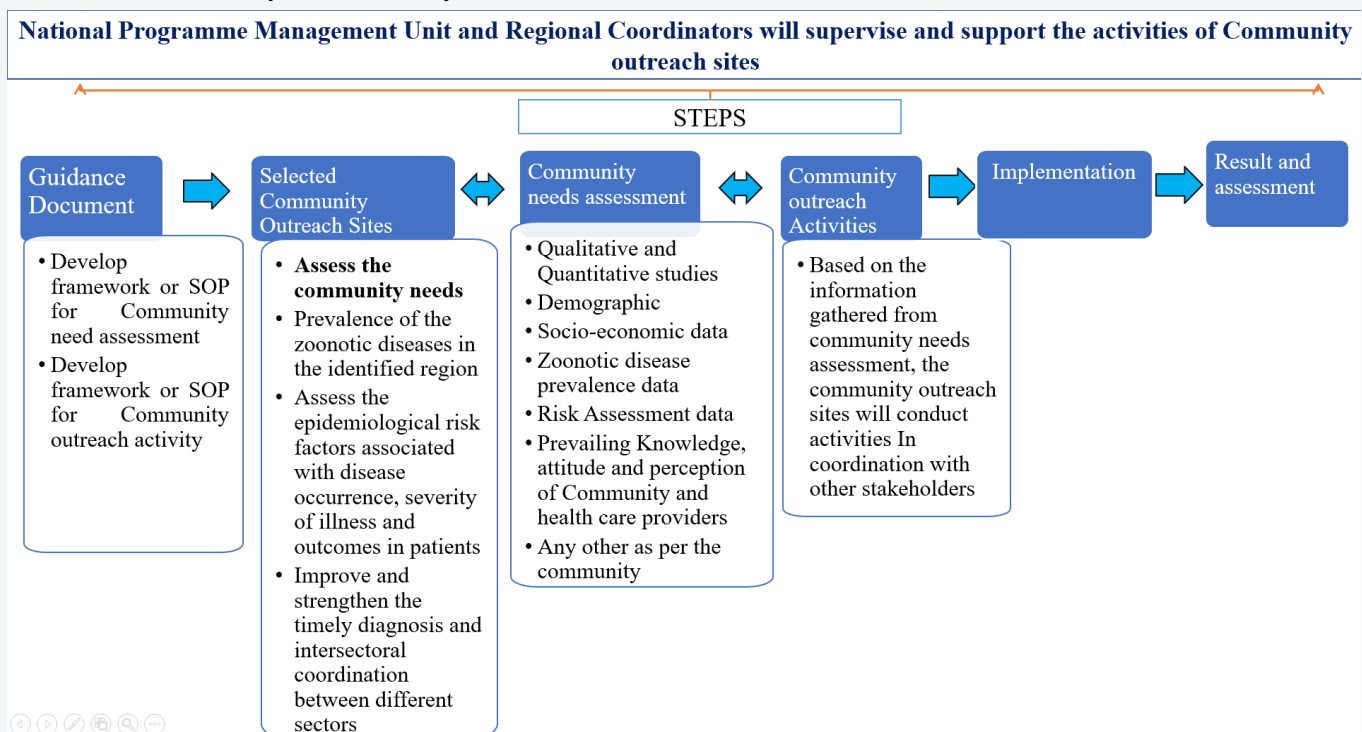


Figure 6 Flow of mechanism of activity for Sentinel and Community outreach sites

4.8. Advocacy and Risk Communication activities

This will include Sensitization of government policymakers at various levels and partners on One Health approach for buy-in and support. The programme envisages Strategic IEC activities for

improving knowledge, attitude, behavior and practice of community on health threats or risks at human, animal, and environment interface.

LINK- <https://www.ncdc.gov.in/index1.php?lang=1&level=2&sublinkid=502&lid=428>).

4.9. Operational Research

The Zoonotic pathogens have unique natural history due to involvement of multiple vectors and intermediary hosts. The complex nature of zoonotic pathogens and diseases need a multidisciplinary approach to completely understand its epidemiology, diagnostics requirement, clinical and prevention and control aspects. Significant gaps in knowledge, attitude and practices about zoonoses do exist in general physicians, veterinarians, wildlife handlers and communities.

Funds will be provided to promote Research on zoonoses to bridge knowledge gaps in measuring burden and spatial distribution of zoonoses and to understand the transmission dynamics of zoonotic pathogens. National level multicenter studies in collaboration with ICAR/IVRI/DBT/Wildlife institutes and ICMR will be undertaken to collaborate on prioritized zoonotic diseases High threat pathogens and other health threats at the animal- human-environment interface.

Grants and fellowship will be provided to the PG Scholars of medical and veterinary colleges to undertake operational research on zoonoses. A thesis grant for research on priority areas will be approved after review by the appropriate committee. GIA will be given to Post Graduate degree and diploma students to undertake thesis as a part of their post graduate curriculum. PG students enrolled in MCI, VCI, UGC recognized courses will be eligible for this thesis grant. The thesis grant may be released to the Dean/Principal of concerned colleges in the name of the student.

Professional bodies working in the field of zoonosis may also submit the Operational research proposal for support under the programme. The GIA shall be released to the governing body in the name of principal investigator.

Funds for operational research projects will be released in minimum two (70/30) or maximum three installments 50%/30%/20% at the beginning of research, 30% at midpoint of study and remaining 20% after the final report is made available.

All projects require documentation of ethical approval from an institutional ethics committee. Before submission, all studies should have agreement from the host institution where they take place and endorsement should accompany the proposal.

The proposal to be submitted in prescribed format which includes Title of the Research Project, A brief write up on usefulness of the project, Present knowledge/literature on the subject (including latest referrals), Objectives, detailed methodology (Study design (cross- sectional, longitudinal etc.), Sampling (simple random, cluster etc.), Sample size, Selection of Samples, Definitions, procedure, Questionnaire if any, Maps etc. if required, how analysis will be carried out), Bibliography, Budget requirements (with detailed break-up and full justification with recurring, non-recurring, contingency, personal etc. component wise details). Format for submitting operational research/thesis proposal is placed at Annexure IX.

While submitting thesis proposal bio data of PG student, guide and co-guide needs to be included. In case of operational research biodata principal investigator and other key investigators needs to be submitted.

The final report of the Research Project would also be submitted in the same format and include sections on Results, Discussion, Summary and Conclusions, Recommendation and Bibliography.

Chapter 5: Multisectoral Collaboration and Stakeholder Engagements

Multisectoral collaboration and partnership with shared vision and objectives is key for success of One Health Approach. It refers to deliberate collaboration among various stakeholder groups (e.g., government, civil society, and private sector) and sectors (e.g., health, environment, and economy) to jointly achieve a policy outcome. By engaging multiple sectors, all partners can leverage knowledge, expertise, reach, and resources, benefiting from their combined and varied strengths as they work toward the shared goal of producing better health outcomes. The prevention and control of Zoonotic Diseases of public health importance as per emerging and re-emerging zoonotic threats is extremely challenging because of multiple factors including complex transmission dynamics contributing to the emergence and disease progression.

The competing priorities of different sectors is another limiting factor to achieve the control on Zoonoses. An active partnership with concerned stakeholders will surely help in addressing identified zoonotic health issues at all levels in a focused way as it helps in pooling the resources and formulating the common objectives. One of the major advantages will be optimization of usage of resources by avoiding duplication of inputs and activities which will tremendously improve programme effectiveness and efficiency.

Key requirements for a successful collaboration will require willingness at the leadership and mandate at the policy level to bring all the major stakeholders on a common platform with a shared vision and focused perspective to jointly address the problem of Zoonoses in the country. Under the Ministry of Health and Family Welfare, multisectoral collaboration exists under many National Health Programmes such as Malaria Elimination Programme, RNTCP, National AIDS Control Programmes, National Blindness Control Programme, Tobacco Control etc. which have successfully demonstrated the Multisectoral collaboration. Promotion of multisectoral collaboration within the health system and with other ministries is seen as an important measure for effective implementation and improving efficiency

Under NOHP-PCZ, the execution of activities under various components requires technical collaboration with professional organizations developmental partners, bilateral and Multilateral agencies (UN organization) and Private organizations working in the field of Zoonoses.

Table 3: The Technical domains and activities under various components and potential collaborators are described as under:

S. No.	Technical Domain	Activities to be undertaken	Potential Collaboration (Public/Private)
1)	Capacity Building	Training of Health, Veterinary and forest professionals/workers, Skill upgradation on Zoonotic diseases management	DADF, ICMR, ICAR, WHO, OIE, FAO UNICEF, CDC, PHFI, IAVPHS, VCI, IVA, PPAM, IMA, IAP, APCRI any other NGOs working in field of public health
2)	Surveillance	Active surveillance in community Passive surveillance through public /private facilities surveys, field reports	ICMR, ICAR, PPAM, IVA, IMA, IAP. Public/Private Medical/Veterinary colleges, Environment health Institutes,
3)	Information, Education, Communication (IEC) / Community Outreach	Generating community awareness among high-risk groups (Agricultural workers, Animal handlers, People) residing near forest areas, tribal people) on zoonotic disease prevention Awareness among the general population Do & Don'ts for prevention of Zoonotic diseases through campaigns, melas, community meetings etc.	Krishi Vigyan Kendra, Local and Rural governing bodies, ICAR, WHO, OIE, FAO, UNICEF, CDC, PHFI, IAVPHS, VCI, IVA, PPAM, IMA, IAP, APCRI any other NGOs working in field of public health, Corporate social responsibility projects (CSR) on public health

4)	Laboratory Strengthening	Building diagnostic capacity of public/private organization for zoonotic diseases of importance	ICAR, ICMR, CSIR, DRDO, Public/Private, Medical/Veterinary colleges, Environment health Institutes, Institutes of National Importance
5)	Model 'One Health Unit'	Establishing Model "One Health Unit for effective implementation if Inter-sectoral coordination at field level Establishing innovative pilot projects/ best practices for zoonosis control at field level	Development Sector organization (e.g., USAID, PATH etc.), NGOs working in the field of public health, Animal health, Environmental health Public/Private Medical/Veterinary
6)	Operational Research	Research on zoonoses to bridge knowledge gaps in measuring burden and spatial distribution of zoonoses and to understand the transmission dynamics of zoonotic pathogens	ICMR, ICAR, Public/Private Medical/Veterinary colleges, Environment health Institutes, Institutes of National Importance, CSIR etc.

5.1. Partnership with private professional bodies/private organizations/NGOs working in this field of zoonoses

NOHP-PCZ aims to collaborate with stakeholders in the field which are currently engaged in activities for prevention and control of zoonosis. One health concept as assigned under the programme would require the participation of all professional bodies/private organizations/ NGOs from the medical veterinary and wildlife sector. As approved under SFC (2021-2025) for NOHP-PCZ, it is proposed that a repository will be generated through consultation with all stakeholders of professional bodies/private organizations/NGO's working in the field of zoonosis. Based on

repository, major professional bodies/private organization/ NGO's will be identified based on following criteria-

- a) Project undertaken on zoonoses.
- b) Expertise in community outreach/field survey.
- c) Innovative work under One Health/ Zoonoses.
- d) Excellent track record of working with the public sector.
- e) Established coordinator with stakeholders in field of zoonoses.
- f) Adequate manpower, infrastructure & logistics desired for implementing public health projects.

As per approved SFC, major professional bodies/private organizations/ NGOs will be requested to submit the proposals based on RFPs floated under the programme.

RFPs Will Be Based on Following Activities as Assigned Under NOHP-PCZ:

Proposals submitted by PB/PO/NGOs for above activities will be scrutinized by experts in the field of One Health under NOHPPCZ & after necessary approvals, collaborators will be selected (i.e., PB/PO/NGOS). Due attention will be provided while selection of collaborators on areas such as (priority areas for zoonosis prevention & control in India & projects with properly clear outputs as per objectives assigned under programme). Once identified, collaborators (PB/PO/NGO's) will be provided with GIA as per the approval of SFC and GoI norms. All norms for activities such as salary, equipments, logistics, overhead expenses would be as per guidelines developed by NHM or other concerned Govt. agencies (PA/PO/NGO's), followed by signing of MOU with NCDC prior to fund release with undertaking project completion and determined timelines and outputs.

CHAPTER 6: MONITORING AND EVALUATION

Programme envisaged a systematic and periodic review of all physical and financial targets of the programmes. The monitoring and supervision will be undertaken by reporting formats, periodic review by technical expert committee (internal and external) and conducting visits to the grantee organizations etc.

6.1. National Level

At National level, the programme will be reviewed by the highest National Steering Committee on One health (under process) and by Standing Committee on Zoonoses as and when appropriate. Overall, the programme will be monitored by NPMU on all technical and financial aspects. Monitoring for technical activities related to the laboratory aspects will be undertaken through National Level Expert Committee on Laboratory Strengthening on Zoonosis Programmes (NLEG-Z).

6.2. Regional, State and District Level

At regional level, monitoring will be undertaken for technical and financial activities by a regional committee formed through regional coordinators. This committee would include representation from state/district nodal officers of surveillance programmes, experts on zoonosis in the region (medical/veterinary institute), representatives of sentinel sites/community outreach units, state/district zoonosis committees. Nodal officer of regional coordinators will serve as member secretary of the regional level committee and would be responsible for facilitation of committee meetings. Technical activities would also be reviewed by respective state/district zoonosis committees of the region. At all field levels respective Nodal Coordinators would also be responsible for regular monitoring of programme activities.

External Evaluation - Third party evaluation would be undertaken by any agency with demonstrated experience in evaluation of public health programmers. Evaluation will be undertaken in the middle at the end of project to monitor progress and any course correction needed under the project.

The programme will ensure the inbuilt monitoring mechanism for all the technical projects undertaken in partnership with any bilateral/multilateral or professional bodies and also external evaluation if required as per the need of the activity/proposal.

Table 4: Monitoring indicators for NOHP-PCZ

Components	Outcome Target	Outcome Indicator
Component A Institutionalization of One Health Structure at National, State and District Level	Institutionalization of One Health Structure at all level	National - • Constitution of National Steering committee on One Health for Zoonoses • Organization of National Multi stakeholder Workshops for Sensitization of Stakeholders • Formulation of National One Health Policy document for Zoonoses • Formulation of the National Strategic Framework for Prevention and Control of Zoonoses through One Health approach • Formulation of National Guidelines and SOPs to address priority zoonoses in the country State - • No. of States constituted state-level zoonosis committees • No. of districts constituted district-level zoonosis committees • No. of National Sensitization Workshop Organized • No. of Regional Sensitization Workshop Organized • No. of Joint capacity building programmes conducted on prevention, early detection, responses to zoonotic and foldome outbreaks and organization of national and regional level workshops, symposiums, CMEs

Component B Integrated Capacity building through the establishment of Multidisciplinary Regional Network of One Health Institutes and Partner organizations	Capacity Building	- No. of Laboratory Strengthened for diagnosis of priority zoonoses and ERID - No. of Hands-on Training for State Reference labs and DPHL conducted
Component C Integrated Surveillance programme on Zoonoses and ERID	Strengthening Surveillance of Zoonotic Diseases	No. of Sentinel site established for systematic assessments of spatial and temporal trends of Zoonotic diseases
Component D Integrated Community Outreach programme on One Health		- No. of states conducted Joint training of Medical Officers and Block Veterinary Officers on priority zoonoses and reverse zoonoses, - No. of Medical officers trained on priority zoonoses and reverse zoonoses, - No. of Block Veterinary officers trained on priority zoonoses and reverse zoonoses
Component E Advocacy and Risk Communication activities	Advocacy and Risk Communication activities	No. of IEC campaign conducted (we may ask a No. of states also)
Component F Operational Research	Operational Research	No. of Research projects on Zoonotic diseases conducted

Chapter 7 Financial Guidelines and Management

The main objective of financial guidelines is to operationalize an effective and accountable financial management system for various expenditures to be incurred under the programmes and release of funds as GIA or as an advance payment as per approved SFC.

It is pertinent to be stated here that all activities of the programme will be undertaken after due administrative and financial approval of the competent authority as per appropriate operational and technical guidelines. The financial management of the grants given under the programme and other activities to be undertaken will be as per standard GFR norms of Govt. of India. The funds under PMASBY component i.e., Division of One Health and Intersectoral Coordination will be governed as per guidelines issued by competent authority.

A dedicated administrative and financial wing under the PMU will be keeping all records and books of accounts on physical and digital formats. Independent audits of the programme will be as per CAG and Govt. Norms.

Following rules will be admissible with respect to the programme components:

7.1. Financial guideline for release of Grant in-aid under the programme

As per SFC approval, there is a provision for GIA to the institutes for the activities under different components of the programmes. All institutes receiving any kind of financial support under NOHP-PCZ MoHFW Government of India should follow the guideline as per General financial Rules -2017. As per SFC, GIA will be provided mainly to the:

1. Regional Coordinators/Centre for Excellence for One Health identified under the programme (Components B of the programme). This could be an autonomous organization under ICMR/ICAR, State Govt. University or Institute/ medical college or Union ministry, Govt. of India organization.
2. Sentinel sites of Zoonoses - State Govt. run Medical/ Veterinary/ Wild Life or Govt. of India Institute. The activity envisaged under Component B of the Programme
3. Organization undertaking Community outreach Activities - the activity envisaged under Component D of the Programme- Professional Body /NGO/CBO/ AWO
4. Research grants to the Professional organizations will be provided for undertaking research on priority agendas on zoonoses. GIA will be given to Post Graduate degree and diploma students (medical/ veterinary/ entomology/wild life sector/ life sciences) to undertake a thesis

as a part of their post graduate curriculum. PG students enrolled in MCI, VCI, UGC recognized courses will be eligible for this thesis grant. Research thesis grants for research on priority areas will be approved after review by the appropriate committee.

7.2. GFR 2017

As a general principal GIA can be given to a person or a public body or institution having a distinct legal entity. Thus, GIA including scholarship may be sanctioned by an authority competent to do so under the Delegation Powers Rules, 1978:

- a) Institutions or organizations set up as an Autonomous Organization under a specific status or as a society registered under the Societies Registration Act, 1860 or Indian Trusts Act, or other statutes.
- b) Voluntary organization or Non-Government Organization carrying out activities which promote the welfare schemes and programmes of the Government should be selected on the basis of well-defined criteria regarding financial and other resources, credibility and type of activities undertaken
- c) Educational and other institutions by way of scholarships or stipends to the students
- d) Urban and Rural local self-Government institutions
- e) Co-operative societies
- f) Societies or clubs set up by Government servants to promote amongst themselves social, cultural and sports activities as recreation avenue

7.3. Nature of Grant

Recurring Grant - defined as grant which is released periodically to the same organization for the same purpose.

7.4. Non-Recurring Grant

One time grant released to an organization for a special purpose (which could be released in installments). Every order sanctioning a grant shall indicate clearly the object for which it is being given and the time limit within which the grant is to be spent.

7.5. Procedure to be followed by Programme Management Unit- NOPH-PCZ

1. Inviting proposals from the institutes after consultation with concerned stakeholders.
2. Preparation of guidelines and checklist formats for inviting proposals from the institute.

3. Compilation and Examination (Gap analysis of the all proposals). The PMU will scrutinize the proposals for budget demand and will ensure that the proposal submitted by the grantee is appropriate for consideration as per objectives of the programmes and as per SFC approvals.
4. To avoid Duplication of Grant, the PD/PMU should maintain a list of Institution or organization along with details of amount and purpose of Grant given to them. These details should also be made available on the website of the programmes Ministry/Department.
5. Organization of Meeting of Technical Expert Group to examine and vet the proposals- All selected proposals will be produced by PMU/PD before an expert group committee constituted under the programmes and approved by competent authority. The Technical Expert Group will also be examining the proposals from technical point of view justification and for funds requested
6. Submission of proposal to the ministry and Sanctioning Authority-The proposals cleared by Technical Expert Group will be forwarded by PMU to the sanctioning authority (concerned Joint Secretary) for approval and concurrence by Integrated Finance Division of MoHFW, GOI.
7. Overall coordination of release of Grants after obtaining sanctions and IFD concurrence- After IFD concurrence - PMU/PD will communicate with the Grantee organization for signing of MoU and obtaining all bank details for release of GIA. Sanction order should be issued by the DDO, NCDC for the amount sanctioned to the grantee institution and GIA will be released through PFMS
8. Physical and Financial monitoring along with periodic review of the activities (Internal and External review by third party) will be undertaken by the PD/PMU
9. PD/PMU will ensure auditing of the accounts as per Institutes policies and procedure of the institute or as per CAG norms.

7.6. Procedures to be followed by institute seeking GIA (Grantee)

1. The Institute/organization applying for GIA should submit their detailed proposal to the PMU/ Programme Division within the time limit as given by the PMU.
2. The Institute/organization applying for such GIA, indicates the purpose for which GIA is required and the result to be achieved by the Institute/organization.
3. Every Grantee org. will designate a Technical nodal officer for regular communication with PD/PMU and will also appoint an officer at appropriate level to render financial advice whose concurrence should be obtained for sanction and incurring of expenditure. The Head of the Institution/ Chief Executive Officer (CEO) of the Grantee will be responsible for overall Physical and financial management.
4. The grantee organization will be eligible to receive the Grant in-Aid only after signing MoU (as approved by the Ministry) with Director NCDC. The Amount of grant received by grantee

will be taken into income of a particular year to the extent of expenditure incurred against such grant. Grant aid shall be considered on actual receipts basis.

5. The Grant in Aid remaining or unspent at the end of Financial Year is to be shown as liability in the balance sheet.
6. Unspent Balance: when recurring Grants in Aid are sanctioned to the same institution/org. for the same purpose, the unspent balance of the previous grant should be taken into account in sanctioning the subsequent grant. Ministry/Dept. shall take help of PFMS portal to know the bank balance of the recipients' agency before each release.
7. Disposal of Assets: the assets acquired out of Govt. grants (except those declared as absolute or condemned as per GFR) shall not be disposed of without obtaining the prior approval of the authority which sanctioned the grant in aid
8. Interest: All interest against grant in aid or advance release to any grantee institute should be mandatory remitted (return) to the consolidated fund of India, immediately after finalization of accounts. Such advances should not be allowed to be adjusted against future releases.
9. Appropriate arrangements will be made by the Grantee organization for internal or external audits
10. The grantee organization will maintain the following Books of Accounts as per double entry system:
11. Trial Balance
 - a. Income and Expenditure Account
 - b. Receipts and Payments Account
 - c. Balance Sheet
 - d. PFMS Register
 - e. Bank Reconciliation Statement
 - f. Advance Register
 - g. Fund Receive Register
 - h. Fixed Assets Register, etc.

Subsequent release of GIA is subjected to submission of Utilization certificate and performance report of the previous year. (Format of Utilization certificate is attached at Annexure X).

Key Considerations

All funds received and payments should be made through PFMS Portal.

Bank account may preferably be kept in Government Bank.

Bank account should be operated under Joint signatures.

Unspent balance should be taken into account with the help of PFMS portal, to know the bank balance

7.7. Financial guideline for release of advance

Release of advance may be required for Professional organization for undertaking Capacity Building /Workshops/Seminars/Hand-on Trainings and CMEs etc. Release of advance may also be required for undertaking short consultancy services for programme components. Release of advance may be sourced from appropriate budget head as per activities after due approval of ministry and Concurrence by Integrated Finance Division. The settlement of advance given to any institute or professional body will be done as per Standard GFR rules of Govt. of India.

7.8. Financial guideline for release of GIA for operational research

Funds will be provided to promote research on zoonoses to bridge knowledge gaps in measuring burden and spatial distribution of zoonoses and to understand the transmission dynamics of zoonotic pathogens. National level multicenter studies in collaboration with ICAR/ IVRI / DBT / Wildlife institutes and ICMR will be undertaken to collaborate on prioritized zoonotic diseases high threat pathogens and other health threats at the animal- human-environment interface.

Grants and fellowship will be provided to the PG Scholars of medical and veterinary colleges to undertake operational research on zoonoses. A thesis grant for research on priority areas will be approved after review by appropriate committee.

GIA will be given to Post Graduate degree and diploma students to undertake thesis as a part of their post graduate curriculum. PG students enrolled in MCI, VCI, UGC recognized courses will be eligible for this thesis grant.

The thesis grant will be released to the Dean / Principal of concerned colleges in the name of the student. Funds for thesis study will be released in two installments. 80% at the beginning of study and remaining 20% after final report is made available.

Professional bodies like APCRI, CONCOR, IAPSM, IAPH, INCLEN etc. can also submit the Operational research proposal in the field of zoonotic diseases. The GIA shall be released to the governing body in the name of principal investigator.

Funds for operational research projects will be released in three installments. 50% at the beginning of research, 30 % at midpoint of study and remaining 20% after the final report is made available.

All projects require documentation of ethical approval from an institutional ethical committee. Before submission, all studies should have agreement from the host institution where they take place and endorsement should accompany the proposal.

The proposal to be submitted in prescribed format which will include- Title of the Research Project, A brief write up on usefulness of the project, Present knowledge/literature on the subject (including latest referrals), Objectives, detailed methodology (Study design (cross-sectional, longitudinal etc.), Sampling (simple random, cluster etc.), Sample size, selection of samples, definitions, procedure, Questionnaire if any, Maps etc. if required, how analysis will be carried out), Bibliography, Budget requirements (with detailed break-up and full justification with recurring, non-recurring, contingency, personal etc. component wise details).

While submitting thesis proposal bio data of PG student, guide and co-guide needs to be included. In case of operational research biodata principal investigator and other key investigators needs to be submitted.

The final report of the Research Project would also be submitted in the same format and include sections on Results, Discussion, Summary and Conclusions, Recommendation and Bibliography.

7.9. Guidelines for the activities to be undertaken under different Budget heads of allocated BE

(As per extracts from general system of financial management as per GFR 2017).

A. Domestic Travel Expenses:

Domestic travel expenses will cover all expenses for regular officers and /or contractual manpower on account of travel on duty/ field visits in India including conveyance and fixed traveling allowances but excluding leave travel concessions which would be part of salaries.

B. Office Expenses:

- All contingent expenses for running an office such as furniture, postage, purchase and maintenance of office machines and equipment.
- Hot and cold weather charges
- Telephone, electricity and water charges.
- Maintenance of office vehicles like Ambulance, this will also include POL expenses on vehicles for office use. Vehicle hiring for programme operational through GeM portal /Govt. Norms.

C. Other Administrative Expenses:

Expenditure on conducting tours, expenditure on conferences/seminars/workshops/Meetings etc. (Expenditure on other training programmes such as Joint Capacity Building programme, Hand on training for lab professionals, FETP programmes etc.)

- Professional Services: It will include the following-
- Charges for legal services, consultancy fees, fees to staff artistes
- Remuneration to the examiners, invigilators, etc. It will also include payments for services rendered by contractual engagements and professionals, supplies made by other departments such as Railways, Police etc. these expenses will be incurred for running of an office in which case the expenditure will be recorded under office expenses.

D. Material and Supply:

Expenditure on kits and consumables for labs, drugs and reagents and vaccines etc.

- V.** Advertisement and Publicity - The funds may be used for creation translation, printing & Dissemination of IEC material in local language
- VI.** Publication- For incurring expenditure on printing of guidelines, IEC, Formats, reports and undertaking research publication if any
- VII.** Surveillance and monitoring - The funds under this head could be utilized for expenses on Surveillance and Monitoring activities (Travel/ meetings/ IT and digital requirements for e.g., creation of apps, programme website, ERP software, GIS application etc./ professional Consultancies charges for digital solutions etc. Operational research- Expenses for conducting Operational Research activities by nodal agency i.e., NPMU or by in collaboration with technical partner/stakeholders/professional agencies GIA - To provide GIA to the institutes as per approval.

Chapter 8: Activities Under PMASBY - Strengthening Of Activities Under National One Health Programme For Prevention And Control Of Zoonosis

The activities of One Health and Zoonotic Diseases approved under PMASBY will be implemented through Division of Zoonotic Diseases Programme through the ongoing programme of National One Health Programme for Prevention and Control of Zoonoses (continuation and expansion of Programme for Strengthening Intersectoral Coordination for Prevention and Control of Zoonosis. The zoonotic disease targeted will be as under:

Plague, Brucellosis, Rabies, CCHF and other VHF, KFD, Leptospirosis, Food Borne and Parasitic Zoonosis (Salmonellosis, Neurocysticercosis), Rickettsial Infections (Scrub Typhus, ITT), West Nile Fever, Nipah Virus Infection, Zoonotic Tuberculosis, ZIKA Virus infections, Anthrax, Zoonotic diseases of Pandemic potentials Zoonotic influenzas (Avian influenzas and H1N1, H3N5, SARS CoV 1 & 2 and MERS CoV, Ebola Virus Diseases) - IHR perspectives.

Under PMASBY, funds are allocated for a period of five years (FY 2021-22 to FY 2025-26). Funds are approved for manpower support for One Health and Intersectoral Coordination activities. Funds are also allocated under non-Recurring budget head for capital/ civil work and Recurring expenditure under Other administrative head, Office Expenses and Miscellaneous etc. Accordingly, the funds allocated under PMASBY will be utilized to undertake the following activities:

1. Capacity Building Programmes on Zoonotic Diseases (Trainings / Workshops/ Seminars)
2. Strengthening Surveillance of Zoonotic Diseases through support to the selected Sentinel Sites
3. Strengthening Lab Capacity on Zoonoses
4. Awareness Generation and Creation of IEC Materials
5. Applied Research activities: National Multicenter Study to estimate the Burden of Zoonotic Diseases

All the activities of PMASBY will be undertaken as per Operational Guidelines of NOHP- PCZ

ANNEXURE 1: Constitution and Terms of Reference of Standing Committee on Zoonoses

Standing Committee on Zoonoses (SCZ)

This committee already exists under the chairmanship of Director General of Health Services, Govt. of India. This committee has representation of all stakeholders from health, veterinary, wildlife and environment sectors. The representative includes officials from state and central Govt. institutes, academia and scientists from eminent organizations. The Committee holds its meeting twice in a year. The constitution of Standing Committee on Zoonoses is as under:

S. No.	Standing Committee on Zoonoses	Designation
1.	Director General of Health Services, MoHFW, Government of India	Chairman
2.	Director, National Centre for Disease Control, MoHFW, Government of India	Co-Chairman
3.	Animal Husbandry Commissioner, Department of Animal Husbandry, Ministry of Fisheries, Animal Husbandry & Dairying, Government of India	Co-Chairman
4.	Division of Epidemiology and Communicable Diseases, ICMR, MoHFW, Government of India	Member
5.	Director, Indian Veterinary Research Institute, Bareilly, Uttar Pradesh	Member
6.	Director Central Research Institute, Kasauli, Himachal Pradesh	Member
7.	Director, Wildlife Institute of India, Dehradun, Uttarakhand	Member
8.	Directorate of Health Services, (any 5 states on rotation basis)	Member
9.	Director, Animal Husbandry & Veterinary services, (any 2 states on rotation basis)	Member
10.	Dean, Colleges of Veterinary Sciences, G.B. Pant University of Agriculture & Technology, Uttarakhand	Member
11.	Director, Forest Research Institute, Dehradun,	Member
12.	Director, Central Marine fisheries Research Institute, Kochi, Kerala	Member
13.	Director, Himalayan Forest Research Institute, Shimla, Himanchal Pradesh	Member

14.	Representative from Ngo working in the field of zoonosis	Member
15.	Representative from Pharmaceutical & Vaccine manufacturing institute	Member
16.	representative from India space Research Organization, ISRO. Government of India	Member
17.	Representative from Ministry of Forest, Environment & Climate Change, Government of India	Member
18.	Representative from Defense Research and Development Organization (DRDO)	Member
19.	Representative from National Disaster Management Authority (NDMA)	Member
20.	Representative from International Health Regulation (HR) Government of India	Member
21.	Head & OIC, Division of Zoonotic Disease Programme, NCDC	Member
22.	Any other expert as per Chairman's direction	Member

Terms of reference of the Standing Committee on Zoonoses are as under:

1. To review the current situation and advise on various facets of the work on the zoonoses to enable scientists in the field to tackle the problem on a priority basis.
2. To advise on the modus operandi for developing the networking between various sectors viz. medical, veterinary and allied institutions.
3. To review and advise on the progress of zoonotic diseases programmes and activities being undertaken by concerned stakeholders.
4. To advise on laboratory strengthening and networking at the National, Regional and State level for capacity building for diagnosis of selected zoonotic disease.
5. To advise on the various research priorities on emerging and reemerging Zoonoses in the country and region.
6. To advise on the IHR perspective of emerging and reemerging zoonotic pathogens as per situation.
7. To set up the priority operational research agenda in the area of Zoonoses and "One Health".
8. The committee will normally hold its meeting at a suitable venue as per the convenience of the Chair & co-chair, at least once in a year or as and when required.
9. The expenditure on TA/DA of the members of the committee shall be met from the source from which their pay and allowance are drawn.
10. This issue is approved by the Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India.

ANNEXURE 2: Constitution and Terms of Reference of State Level Zoonoses Committees

State Level Zoonoses Committees

Programme envisages State level coordination between medical, veterinary, wildlife sector along with relevant stakeholder i.e., Panchayat Raj institution, Urban local bodies, agriculture department, education department etc. To ensure the regular coordination at state level, State Level Zoonotic Committees (SLZC) have been formed in 32 states/36 states. Rest of the states are being encouraged to form the committees through coordination with regional coordinators. The State Level Zoonoses Committee will submit the proceedings of the meeting to the concerned Regional Coordinator and Regional Coordinator in turn will compile all the proceedings of SLZC of their Jurisdiction for further discussion in the RC meetings. The Constitution and TORs of SLZC are as under:

S. No.	State Lave Zoonoses Committee	Designation
1.	Secretary, Health Department	Chairperson
2.	Director General, Health services	Member
3.	Director, Department of Animal Husbandry & Veterinary Services	Member
4.	In-charge, Regional Disease Diagnostic Laboratory (If any)	Member
5.	Director, State Veterinary Laboratory (If any)	Member
6.	State Drug Controller	Member
7.	Additional Principal Chief Conservator of Forest (C), Ministry of Environment, forest and Climate Change Regional Office (If any)	Member
8.	Dean Govt. Medical college/ Director Medical Lab. Institute (If any)	Member
9.	Dean Veterinary College (If any)	Member
10.	HOD, Public Health/ Community medicine Govt. Medical College	Member
11.	HOD, Veterinary Public Health and other department, Veterinary college	Member
12.	Director, Veterinary Institute under ICAR (if any)	Member
13.	Director, Institute under ICMR (If any)	Member
14.	Director, Pharmaceutical/ Biological Products (If any)	Member
15.	Director, Veterinary Biological Products/ Leading Pharmaceutical (If any)	Member

16.	State Surveillance Officer (SSO), Integrated Disease Surveillance Programme (IDSP), Health department	Member
17.	Additional Director (Livestock Health), National Animal Disease Reporting System (NADRS), Animal Husbandry department	Member
18.	Nodal Officer, National Animal Disease Reporting System (NADRS), Animal husbandry department	Member
19.	State Nodal Officer (SNO), IDSP, Health Department	Member Secretary

Terms of Reference of the State Level Zoonotic Committee are as under:

1. To advise various facets of the work on Zoonoses prevalent in the State and list zoonoses infections/diseases according to priority and importance under various heads like bacterial, viral, fungal, parasites and protozoon to enable the scientists in the field to tackle the problem on a priority basis.
2. To formulate the terms of reference and modus-operandi for developing the networking between various sectors viz. medical, veterinary and allied departments/institutions.
3. To review the burden of priority zoonotic disease prevalent in the state and advice the respective state authorities on specific measures to be taken for prevention and control of zoonotic diseases.
4. To monitor the progress of efforts undertaken by respective state authorities for prevention and control of emerging and reemerging zoonotic diseases.
5. To pursue the formation of Zoonoses Committee at the District level and provide guidance to district committees on specific issues arising out of zoonoses.
6. To advise the authorities for capacity building and joint training of medical & veterinary professionals.
7. To advise regarding the location and requirement of special laboratories at the State or regional level for diagnosis of selected zoonotic diseases.
8. To identify those involved in zoonotic disease research for potential collaboration.
9. The Committee normally holds its meeting at the Capital at least twice a year. In the meeting, the committee will evaluate progress, and review the plans for collaborative activities.
10. The expenditure on TA/DA of the members of the Committee shall be met from the source from which their pay and allowances are drawn.

ANNEXURE 3: Constitution and Terms of Reference of District Level Zoonoses Committees

District Level Zoonoses Committee (DLZC)

Programme envisages district level coordination between Medical, Veterinary, and Wildlife Sector along with relevant stakeholders i.e., Panchayat Raj institution, Urban local bodies, agriculture department, education department etc. To ensure the regular coordination at district level, all states have been communicated to constitute the district level zoonotic committees (DLZC). The DLZC will meet at least quarterly but preferably every month to review the situation of zoonoses at district and below district level. All the proceedings of DLZC will be submitted to the concerned State level Zoonoses committee member secretary for compilation and analysis and prepare priority agenda items to be discussed in State Zoonoses Committees

Wherever possible the technical workforce will be tapped and engaged from state, district and village level functionaries from Animal husbandry, wildlife and agriculture centers and involvement of PRIs etc. The programme will also be supported by technical engagements with professional organizations and International Partners and UN agencies.

S. No.	District Level Zoonoses Committee	Designation
1.	District Magistrate	Chairperson
2.	Chief Medical Health officer (CMHO) / Civil Surgeon /District Health Officer	Member
3.	District Veterinary Officer	Member
4.	Representative from Forest Dept.	Member
5.	Representative of Drug Department	Member
6.	Dean Govt. Medical College/ Director Medical Lab Institute (If any)	Member
7.	Dean Veterinary College (if any)	Member
8.	HOD, Public Health/Community Medicine, Govt. Medical College	Member
9.	HOD, Veterinary Public Health Veterinary College	Member
10.	Representative from District Veterinary Laboratory (if any)	Member
11.	District Surveillance Officer (SSO)	Member

12.	District Nodal Officer (Animal Disease Surveillance), Animal Husbandry Department (if any)	Member
13.	District Nodal Officer (DSO), Integrated Disease Surveillance Programme (IDSP), Health Department	Member
14.	District Nodal Officer (DSO), Integrated Disease Surveillance Programme (IDSP), Health Department	Member Secretary

Terms of Reference of the District Level Zoonotic Committee are as under:

1. To advise on various facets of the work on Zoonoses in the District and list zoonoses infections/diseases according to priority and importance under the various heads like bacterial, viral, fungal, parasite and protozoon to enable the scientists in the field to tackle the problem on a priority basis.
2. To work in liaison with the state level committee to formulate the terms of reference and modus-operandi for developing the networking between various sectors viz. medical, veterinary and allied departments /institutions.
3. To review the burden of priority zoonotic disease prevalent in the district and advice the respective district authorities on specific measures to be taken for prevention and control of zoonotic diseases.
4. To monitor the progress of efforts undertaken by respective authorities for prevention and control of emerging and reemerging zoonotic diseases.
5. Coordination with the District Level Rapid Response Team (RRT) for control of zoonotic diseases in the district.
6. To advise regarding the location and requirement of special laboratories at the district or regional level for diagnosis of selected zoonotic diseases.
7. To advise the respective authorities for capacity building and joint training of medical & veterinary professionals.
8. The Committee will normally hold its meeting at least twice a year.
9. The expenditure on TA/DA of the members of the Committee shall be met from the source from which their pay and allowances are drawn.

ANNEXURE 4: Memorandum of Understanding (MoU)

Memorandum of Understanding (MOU)

Between

The National Centre for Disease Control And

..... Grantee Party

By Which

1. Preamble

I. WHEREAS the Intersectoral coordination programme for prevention and control of zoonotic diseases has been launched by the Government of India under the Umbrella scheme of NCDC (2018-20) by the cooperation and collaboration of National Centre for Disease Control (NCDC).

II. AND WHEREAS the main components of the programme are

- a) Strengthening of intersectoral coordination utilizing the existing surveillance system of IDSP and NCDC branches
- b) Capacity building of medical and veterinary professionals on prevention and control of zoonotic diseases.
- c) IEC to create awareness in the community.
- d) Strengthening of laboratories for intersectoral coordination for zoonotic diseases.

With reference to above objectives, programme plans to establish an inter-sectoral coordination mechanism at national, state and district level by

- Creating state and district level zoonoses committees for guiding appropriate authorities in the state/districts for prevention and control of zoonotic diseases.
- Utilizing existing surveillance system (IDSP) and National Animal Disease reporting system (NADRS) to detect early warning signals of impending outbreaks for timely and effective public health actions.
- Facilitating sharing of relevant information on priority zoonotic diseases prevalent in the area with the stakeholders for taking actions
- Laboratory capacity development for diagnosis of Zoonotic diseases prevalent in the particular state/district.

III. AND WHEREAS the NCDC and the Grantee party shall be parties to this Memorandum of Understanding.

IV. NOW THEREFORE, below are the terms and conditions under which signatories to this MoU, NCDC andGrantee party, have agreed to set out as herein below:

1 Duration of MOU

This MOU will be operative with effect from the date of signature of both the parties concerned and will remain in force till the programme continues. This MOU may be terminated before the expiry of its term by the mutual consent of the parties concerned.

2 The commitments of NCDC is to Coordinate overall activities under the programme Funds will be provided for Recurring (consumables) and Non-recurring expenditure (equipment's) along with contingency.

3 The Grantee party/ Commitments

i) Designate a dedicated focal point, who would be responsible for activities and will liaison with NCDC focal person.

Name, contact number and email of focal point

- Strengthened inter-sectoral coordination in the states between health and animal husbandry depts. for carrying out activities for prevention and control of zoonotic diseases.

- Trained manpower in the states/districts for surveillance, diagnosis, prevention and control.
- Strengthened laboratory facilities in health and Veterinary sector for diagnosis of zoonotic diseases
- Data Exchange/Integrated surveillance in human/animal reservoir.
- Co-ordinated response for investigation of outbreaks of zoonotic diseases and implementation of containment measures.

4. Set out below are the **terms and conditions** under

which.....**Grantee party** agrees to carry out the above- mentioned assignment.

- i. For administrative purposes, the Head of Zoonoses Division, NCDC has been assigned to administer the assignment and to provide..... with relevant information needed to carry out the assignment.
- ii. The NCDC may, if find necessary, postpone or cancel the assignment and/or shorten or extend its duration. However, every effort will be made to give.....
..... **Grantee party** early as possible, notice of any changes. In the event of termination, the..... **Grantee party** shall be paid for the services rendered for carrying out the assignment to the date of termination, and the **Grantee party** will provide the NCDC with any reports thereof or any other information and documentation gathered under the contract prior to the date of termination.
- iii. Whereas, this contract, its meaning and interpretation and relation between the parties shall be governed by the Laws in force of the Union of India.
- iv. Whereas all reports and records generated by**Grantee party** in the performance of the services shall become and remain the property of the NCDC.
- v. Whereas the..... **Grantee party** may retain a copy of such documents but shall not use them for purposes other than this contract without the prior written approval of NCDC.
- vi. Whereas the**Grantee party** undertakes to carry out the assignment in accordance with the highest standards of professional and ethical competence and integrity.
- vii.
Grantee party shall pay the taxes, duty fee and other impositions levied under the applicable law and the NCDC shall perform such duties in regards to the deduction of such tax, as may be lawfully imposed.
- viii.
Grantee party also agrees that all knowledge and information not within the public domain which may be acquired during carrying out of this Contract, shall be for all times and for all purpose, regarded as strictly confidential and held in confidence and shall not be directly or indirectly disclosed to any person whatsoever, except with NCDC's written permission.

.....

Grantee party shall open a separate savings bank account, maintain books of accounts separately and furnish Statement of Expenditure duly audited by the Chartered Accountant and Utilization Certificate in form GFR 19A under Rule 212 (1) of General Financial Rules, 2005 within 3 months of the closer of the financial year

5. Redressal Mechanism

- i. In case of any irregularity or dispute arising out of this MOU or interpretation of the terms and conditions of this MOU both the parties agree to settle the matter amicably through mutual discussion by Director, National Centre for Disease Control and Director, V..... **Grantee party** and on the failure of such discussions, the matter shall be referred to a sole arbitrator to be appointed by both the parties by mutual agreement. The decision of the arbitrator shall be binding on both the parties. The arbitration shall be subject to the provisions of the Arbitrations and Conciliation Act, 1996.
- ii. Non-compliance of the commitment and obligations set out in the MOU, upon failure of Grantee party..... to make satisfactory progress may require NCDC and.....**Grant party** to review the SITUATION COMMITTED THROUGH THIS MOU leading to suspension, reduction or cancellation thereof. In case of unsatisfactory progress of the project, every effort would be made by NCDC and.....**Grantee party** to bring the project back to rail through mutual consultations. In the event of an irretrievable situation, the funding may be suspended and MOU also be terminated as per procedure.

IN WITNESS WHEREOF, THE PARTIES HAVE EXECUTED THIS AGREEMENT ON THIS

_____ DAY OF _____

(MONTH) _____ &(YEAR)

For and on behalf of the Government of India, Ministry of Health & Family Welfare (through Director, NCDC) Director, NCDC	_____ _____ Grantee party Head of the Grantee party
--	---

I. Witness

1. Witness

ANNEXURE 5: List of Equipment's

LIST OF EQUIPMENT'S USED FOR DIAGNOSIS OF ZOONOTIC DISEASES

1. ELISA Reader with Washer
2. Automated DNA & RNA quantification machine
3. PCR machine (Gradient) 96 well format- Gradient Thermal Cycler
4. FAST Real time PCR 96 well format machine
5. PCR work station- UV sterilizing
6. Electrophoresis system for PCR
7. Fully automated gel doc with high pixel camera
8. Fluorescent Microscope with photographic Attachment
9. Deep Fridge (-80 C) Vertical/ Horizontal
10. Deep Fridge (-20 C) Vertical/ Horizontal
11. CO2 incubator
12. water bath
13. BOD incubator
14. Centrifuge machine
15. Biosafety cabinet- Class II Type B2
16. Biosafety cabinet- Class II Type A2
17. Inverted microscope
18. Autoclave- vertical
19. Dark ground/field microscope

ANNEXURE 6: Terms of Reference for Manpower for Regional Coordinators

TERMS OF REFERENCE FOR MANPOWER FOR REGIONAL COORDINATOR

1. Name of the Position- Project Consultant/Medical Microbiologist/ Veterinary Microbiologist/ Public Health Expert

Number of Position- One

Qualifications-

Medical Graduate with Post Graduate Degree/Diploma (preferably in Epidemiology or Public Health such as MD, MPH, DPH, MAE, PhD etc. or Microbiology)

OR

Medical Graduate with 2 years' experience in related field OR

M.D. in Microbiology with experience in Molecular Diagnostic techniques with 1 year experience after MD degree

OR

Master's degree (MSc/MSc./MD) in Biotechnology/Molecular biology/Microbial genetics/Organic Chemistry/ Microbiology OR Zoology with cell biology or human genetics as special subject OR Life Sciences with specialization in molecular biology/ microbial genetics/ cell biology or genetics from a recognized University.

Experience -At least 3-year experience after Master Degree

Duties and Responsibilities

- Implement the programme and ensure operational continuity of the programme.
- Provide assistance for data collection, reporting, analysis and other local action pertaining to the programme.
- Assist in co-ordination of various activities of the programme by interacting with all the sectors involved in the programme.

- Assist in development of trained health manpower by organizing training for core trainers and medical and paramedical professionals, monitoring training impact on the field and assessing emerging training needs.
- Liaison with other departments that have relevance to the programme (Animal Husbandry, Veterinary etc.)
- Guide microbiologist/technicians for laboratory investigations of diseases of public health importance.
- Any other work/activity assigned from time to time.
- Remuneration: Consolidated Rs. 75,000/ (Seventy-Five thousand only).

2. Name of the position- Assistant Research Officer/ Senior Research Fellow/ Research Associate

Number of Position- One

Qualifications-

Graduate in Science/relevant subjects from a recognized University with five years of experience from recognized Institutions.

OR

Master's Degree/PhD in the relevant Subjects.

Duties and Responsibilities-

- Planning, setting up and undertaking controlled experiments, recording and analysing data.
- Collecting, preparing and/or testing samples, maintaining, calibrating, cleaning and testing sterility of the equipment.
- Providing technical support, presenting results to senior staff, writing reports, reviews and summaries.
- Keeping up to date with relevant scientific and technical developments, supervising staff and carrying out risk assessments ordering and maintaining stock and resources.
- Remuneration: Consolidated Rs. 45,000/- (Forty-Five thousand only).

3. Name of the Position- Laboratory Technician/ Laboratory Assistant

Number of Position - One

Essential Qualification/Requirements

Graduate in Medical Laboratory Technology from a recognized University/Institute/Hospital

OR

Diploma in Medical Laboratory Technology (MLT) with the course of at least 2 years duration from a recognized University.

OR

Diploma/Certificate in Medical Laboratory Technology (MLT) with the course of at least one year Duration from a recognized University.

Desirable:

- 1 year experience for those of working in medical laboratory with diploma in MLT (2year course) from recognized Central Government/ State Government hospital/Institute/Autonomous/Private Institute.
- 2 years' experience in working in medical laboratory for those with diploma in MLT (1year course) from a recognized Central Government/ Delhi Government hospital/Institute/Autonomous/Private Institute.

- 1 year experience in a medical laboratory for Graduate in Science from a recognized Central Government/ Delhi Government hospital/ Institute/Autonomous/Private Institute.
- Candidates with work experience in "Quality assured Laboratory" shall be preferred.

- Duties and Responsibilities -
- Conducting and supporting scientific investigations and experiments at Lab.
- Planning, setting up and undertaking controlled experiments, recording and analysing data.
- Collecting, preparing and/or testing samples, maintaining, calibrating, cleaning and testing sterility of the equipment.
- Providing technical support, presenting results to senior staff, writing reports, reviews and summaries.
- Keeping up to date with relevant scientific and technical developments, supervising staff and carrying out risk assessments ordering and maintaining stock and resources.
- Remuneration: Consolidated Rs. 30,000/- (Thirty Thousand Only)

4. Name of position- Data Entry Operator

Number of Positions - 1

Essential Qualification / Requirements

Graduate with 1 year Diploma course in computer application with one year experience in the related field.

Duties and Responsibilities -

- Provide assistance for data collection, compilation, reporting and analysis and other local action pertaining to the project.
- Assist in organizing training programme.
- Assist in the organization of technical meetings.
- Assist in compilation of monthly reviews and periodic reports and plans under the project.
- Remuneration: Consolidated Rs. 20,000/ (Twenty thousand only).

ANNEXURE 7: Template for Proposal for Sentinel Surveillance Sites

Template for Proposal for Institutes for undertaking "Sentinel Surveillance for zoonotic diseases" under NOHPPCZ

- A. Name of the Organization/Institute and Background:
 B. Organizational structure of the Institute (Govt./Non-Govt./Autonomous/Semi- Govt./Charitable/Private etc.):
 C. Facilities available at the Institute/organization with respect to diagnosis, management and prevention and control of zoonotic diseases:

Sl. No.	List of the functional equipment	No. of Sample handled (Monthly)	Type of zoonotic diseases handled								Availability of Consumables (Reagents/kits/glass wares/lab utility)	Relevant staffs available (Manpower)	No. of Beds dedicated for infectious diseases
			Rab	Lepto	Anthrax	Brucella	KFD	Scrub Typhus	J E	Any Other			

- D. Manpower/Professionals working in the field of Zoonotic Disease/One Health/AFI Surveillance in your Institute?

Name of the Official	Designation	Area of Work	Ongoing Project	Future Projects

- E. Details on current ongoing project related to Zoonoses:
 F. Any projects are going on in the following identified areas of work for prevention and control of zoonotic diseases? If yes, please provide brief explanation-
 a) Diagnostic facilities for zoonotic diseases (Medical/Veterinary):
 b) Capacity building activity for Medical/Veterinary professionals:
 c) Surveillance activity of zoonotic diseases in the following areas: -
 • Risk mapping
 • Epidemiology
 • Data management
 d) Information Education Communication (IEC) activity:

- G. Identified areas to strengthen the Organisation for conducting activities for Sentinel surveillance for zoonotic Diseases under NOHP-PCZ for prevention control of Zoonotic Diseases with roper Justification:
- H. Strategic intervention to be undertaken by institute for Sentinel surveillance for zoonotic Diseases activity:
- I. Proposed outlay (year wise)
- J. Total proposed outlay (component wise):
- K. Propose Physical/Financial wise progress:

Activities	Year 1	Year 2 & so on	Total	
	Physical Financial	Physical Financial	Physical	Financial
1,2,3 & so on				

- L. Funding agency details: Funds flow mechanism to the institute under centrals sector scheme:
- M. Indicate final Outcomes for the Project in the form of measurable indicators which can be used for impact assessment/evaluation after the project is complete. Baseline data or survey against which such outcomes would be benchmarked should also be mentioned.
- N. Approval & Clearances:
 - Requirement of mandatory approvals/ clearances of various local, state and national bodies and their availability may be indicated in a tabular form.

SI. No.	Approvals/ Clearances	Agency Concerned	Availability (Y/N)

- Is ethical clearance required: Yes/No
- Is institution is having institutional ethics committee: Yes/No

O. Activity wise proposed Budget:

roposed Activities	Budget Head	Amount (In Rs.)	Justification
Manpower	Professional Services		
Office Expenses	Office Expenses		
Meetings, Training, Research, Travel	Surveillance, Monitoring and Other Administrative expenses		
Information Education and Communication (IEC)	Advertisements & Publicity		
Any other activity	Contingency Expenditure (Not exceeding 10% of the total cost)		
Total			

- P. Proposed plan of action with timelines: (GANTT CHART)
- Q. Proposed Output and Outcome indicators:
- R. Whether Institute/Organization is receiving funds from other central sector schemes under

Ministry of Health and Family Welfare? If yes, please provide details:

- S. Name of the Investigator/Nodal person with contact Details (Phone No., Email ID, Address) as per the attached format below.
- T. Name and contact of Nodal Person in the department of Community Medicine, Medicine, Paediatrics, Microbiology and Pathology:
- U. Postal Address of the Institute:

Form for Investigator

1) Name (Dr./Kum. /Smt./Shri): _____

First Name(s)

Surname

2) Designation:

3) Complete Postal Address, Pin, Email & Telephone Number:

4) Date of Birth:

5) Educational Qualification-

Degrees obtained (Begin with MBBS):

Degree	Institution	Field(s)	Year

6) Research/Training Experience (apart from Thesis):

Duration	Institution	Particulars of the work done	Year

7) Research specialization (Major scientific fields of interest):

Recent publications (last 5 years, with titles and references), also papers in press (i)

(ii)

(iii)

(iv)

(v)

8) Give details of financial support received (if any) from other sources

ANNEXURE 8: Template for Proposal for Integrated Community Outreach Programme

Proposal for Institutes for undertaking "Integrated Community Outreach Activity" under NOHP-PCZ

- A. Name of the Organization/Institute and Background:
- B. Organizational structure:
- Name & Address of the institute:
 - Public/Private/Autonomous/Semi-Autonomous/Charity etc.:
 - Department/Division:
 - Head of the Institute & Divisions:
 - Faculty/Staff:
- C. Facilities available at the Institute/organization with respect to diagnosis, management and prevention and control of zoonotic diseases:

S. No	List of the functional equipment	No. of Sample handled (Monthly)	Type of zoonotic diseases handled							Availability of Consumables (Reagents/kit test/glass wares/lab utility)		Relevant staffs available (Manpower)	No. of Beds dedicated for infectious diseases	
			Rab	Lepto	Anthrax	Brucella	KFD	Scrub Typhus	JE	Any Other				

- D. Details on current ongoing project related to Zoonoses:
- E. Identified areas to strengthen the Organisation for conducting activities (as detailed in email) for Integrated Community outreach Programme under NOHP-PCZ for prevention control of Zoonotic Diseases with proper Justification:
- F. Strategic intervention to be undertaken by institute for community outreach activity
- G. Participating stakeholders
- H. Proposed plan of action with timelines
- I. Proposed outlay (year wise)
- J. Total proposed outlay (component wise)
- K. Propose Physical/Financial Progress:

Activities	Year 1	Year 2 & soon	Total	Activities	Year 1	Year 2 & soon
	Physical	Technical	Physical	Technical	Physical	Technical
1,2,3 & soon						

- L. Proposed funding pattern (Public/Private Institute):
- Funding agency details. Funds flow mechanism to the institute under central sector
 - Indicate final Outcomes for the Project in the form of measurable indicators which can be used for impact assessment/evaluation after the project is complete. Baseline data or survey against which such outcomes would be benchmarked should also be mentioned.
 - Please indicate funding tie-ups for the components.
 - If government support is intended, it may be indicated whether such funds have been tied up?
- M. Approval & Clearances:
- Requirement of mandatory approvals/ clearances of various local, state and national bodies and their availability may be indicated in a tabular form.

S. No	Approvals/Clearness	Agency Concerned	Availability (Y/N)

- Is ethical clearance required: Yes/No
- Is institution is having institutional ethics committee: Yes/No

N. Human Resources:

- Indicate the administrative structure for implementing the Project. Usually creation of new structures, entities, etc., should be avoided.

O. Monitoring and Evaluation:

- Indicate the Project Management/Implementing Agency(s). What agency charges are payable, if any?
- Please indicate the monitoring framework, including MIS, and the arrangements for internal/statutory audit.
- Please indicate what arrangements have been made for impact assessment after the project is complete?

1. Activity wise proposed activities:

Proposed Activities	Amount (in Rs.)	Justification
Manpower		
Office Expenses		
Meetings		
Training		
Research		
Travel		
Information Education and Communication (IEC)		
Any other Activity		
Total		

- P. Whether Institute/Organization is receiving funds from other central sector schemes under Ministry of Health and Family Welfare? If yes, please provide details
- Q. Name of the Nodal person with contact Details (Phone No., Email ID, Address):
- R. Postal Address of the Institute:

ANNEXURE 9: Format for Submitting Operational Research/Thesis Proposal

Section A

General

- 1) Title of the Research Project
- 2) Name and designation of:
 - (i) Principal Investigators
 - (ii) Co-investigator(s)
- 3) Address of the Institution Name:

Postal address :

Email address :

Telephone FAX Telex No.
- 4) Duration of Research Project (Maximum 5 Years /2 Years for Thesis)
 - (i) Period which may be needed for collecting the data
 - (ii) Period which may be needed for analyzing the data
- 5) Amount of grant-in-aid asked for (details are to be furnished in section B)

5) Amount of grant-in-aid asked for (details are to be furnished in section B)

	1st Year	2nd Year	3rd Year	Total
Staff				
Contingencies				
Any other				
Total				

DECLARATION AND ATTESTATION

6) (i) I/We agree to submit within one month from the date of termination of the project the final report and a list of articles, both expendable and non- expendable, left on the closure of the project.

(ii) I/we agree to submit audited statements duly audited by the Auditors of the Institute.

7) Signature of the:

(a) Principal Investigator -----

(b) Co-Investigator(s) -----

(c) Head of the Department -----

(d) Head of the Institute -----

Dated

Seal of the Head of the Institution

Section B

Details of Research Protocols

Adequate information must be furnished in a brief but self-contained manner to enable the Scientific Committee to assess the project.

1) Title of the Research Project

2) A brief write-up on usefulness of the project and its application to the NOHPPCZ

- 3) Present knowledge/literature on the subject (including latest referrals from Abroad/ India)
- 4) Objectives
- 5) Detailed Methodology including:
 - (a) Study design (cross-sectional, longitudinal etc.)
 - (b) Sampling (simple random, cluster etc.)
 - (c) Sample size
 - (d) Selection of Samples
 - (e) Definitions, procedure
 - (f) Questionnaire if any
 - (g) Maps etc. if required
 - (h) How analysis will be carried out
- 6) Bibliography
- 7) Budget requirements (with detailed breakup and full justification)
 - (i) Personal Contingencies (ii)Recurring
 - (ii) Non-recurring

NOTE: The final report of the Research Project would also be submitted in the same format and include sections on Results, Discussion, Summary and Conclusions, Recommendation and Bibliography.

Section C

Biodata of the Investigator(s)

1) Name (Dr./Kum./Smt./Shri)

First Name(s) Surname

2) Designation

3) Complete Postal Address, Pin, Email & Telephone Number

4) Date of Birth

5) Educational Qualification

Degrees obtained (Begin with MBBS)

Degree Institution Field(s) Year

6) Research specialization (Major scientific fields of interest)

Degree Institution Field(s) Year

7) Recent publications (last 5 years, with titles and references), also papers in press

8) Recent publications (last 5 years, with titles and references), also papers in press

(i)

(ii)

(iii)

(iv)

9) Give details of financial support received (if any) from other sources

ANNEXURE 10: Utilization Certificate

GFR 19-A

(See Rule 212 (1))

Form of Utilization Certificate

S. No.	Letter No. and Date	Amount (Rs.)
	Total	

Certified that out of Rs..... of Grants-in-aid sanctioned

during the years in favor of

..... **under this Ministry/Department letter**

no. given in the margin and Rs. on account of unspent

balance of the previous year, a Sum of Rs..... has been utilized

for the purpose of for which it

was sanctioned and that the balance of Rs

.....rem
aining

unutilized at the end of the year has been surrendered to Government (vide no.

..... dated) will be adjusted towards the grants-in-aid

payable during the next year

.....

Certified that I have satisfied myself that the conditions on which the grants-in-aid was sanctioned have been duly fulfilled/are being fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of checks exercised.

1. **Signature**

2. Designation

3. Date

ANNEXURE 11: Regional Coordinators Identified Under the NOHP-PCZ From 2019-2021



List Of Contributors

1. Dr. Ajit Shewale, Deputy Director, Division of Zoonotic Disease Control Programme, National Center for Disease Control, GoI.
2. Dr. Balaji Sivaraman, Consultant-Microbiologist, National Rabies Control Program, Division of Zoonotic Disease Control Programme, National Center for Disease Control, GoI.
3. Dr. Balamurugan. V, Principal Scientist, ICAR-NIVEDI, Bangalore, Karnataka
4. Dr. Dilip Sarma, Head Consultant-NOHP-PCZ, Assam Agriculture University, Jorhat, Assam
5. Dr. Dipti Mishra, Consultant, Programme for Prevention and Control of Leptospirosis, Division of Zoonotic Disease Control Programme, National Center for Disease Control, GoI.
6. Dr. Khuraijam Ranjana Devi, Professor and Head, Regional Institute of Medical Sciences, Imphal, Manipur
7. Dr. Monil Singhai, Joint Director, Centre for Arboviral and Zoonotic Diseases, National Center for Disease Control, GoI
8. Dr. Omesh Kumar Bharti, State Epidemiologist, Department of Health and Family Welfare, Government of Himachal Pradesh
9. Dr. Prabhakar Jha, Consultant-Veterinary, National Rabies Control Program, Division of Zoonotic Disease Control Programme, National Center for Disease Control, GoI.
10. Dr. Rupali Dey, Medical Superintendent, School of Tropical Medicine, Kolkata, West Bengal
11. Dr. Simmi Tiwari, Joint Director and Head, National Center for Disease Control, Delhi, GoI
12. Dr. Sujeet Kumar Singh, Former Director and Advisor, National Center for Disease Control, Delhi, GoI
13. Dr. Tushar N Nale, Deputy Director, Division of Zoonotic Disease Programme, National Center for Disease Control, Delhi, GoI
14. Dr. Usha Kalawat, Professor, Sri Venkateswara Institute of Medical Science, Tirupati, Andhra Pradesh
15. Mr. Mukesh Kumar Saxena, Consultant-Finance, National Rabies Control Program, Division of Zoonotic Disease Control Programme, National Center for Disease Control, GoI.

National One Health Programme for Prevention and Control of Zoonoses
National Centre for Disease Control
Directorate General of Health Services
Ministry of Health and Family Welfare
Government of India