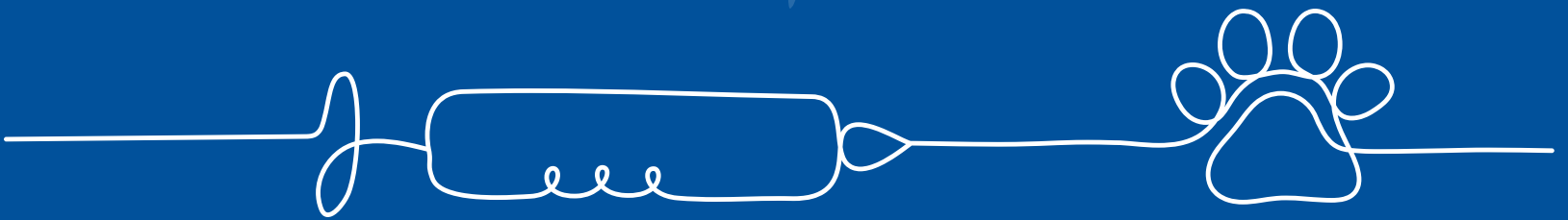





STATE ACTION PLAN FOR DOG MEDIATED RABIES ELIMINATION FROM MIZORAM BY 2030

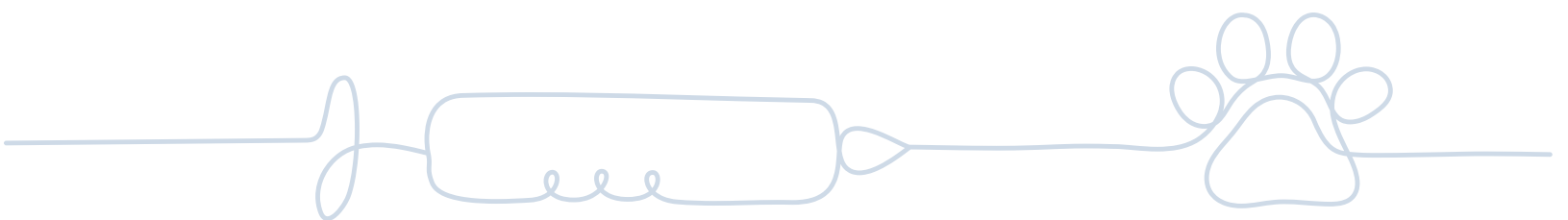


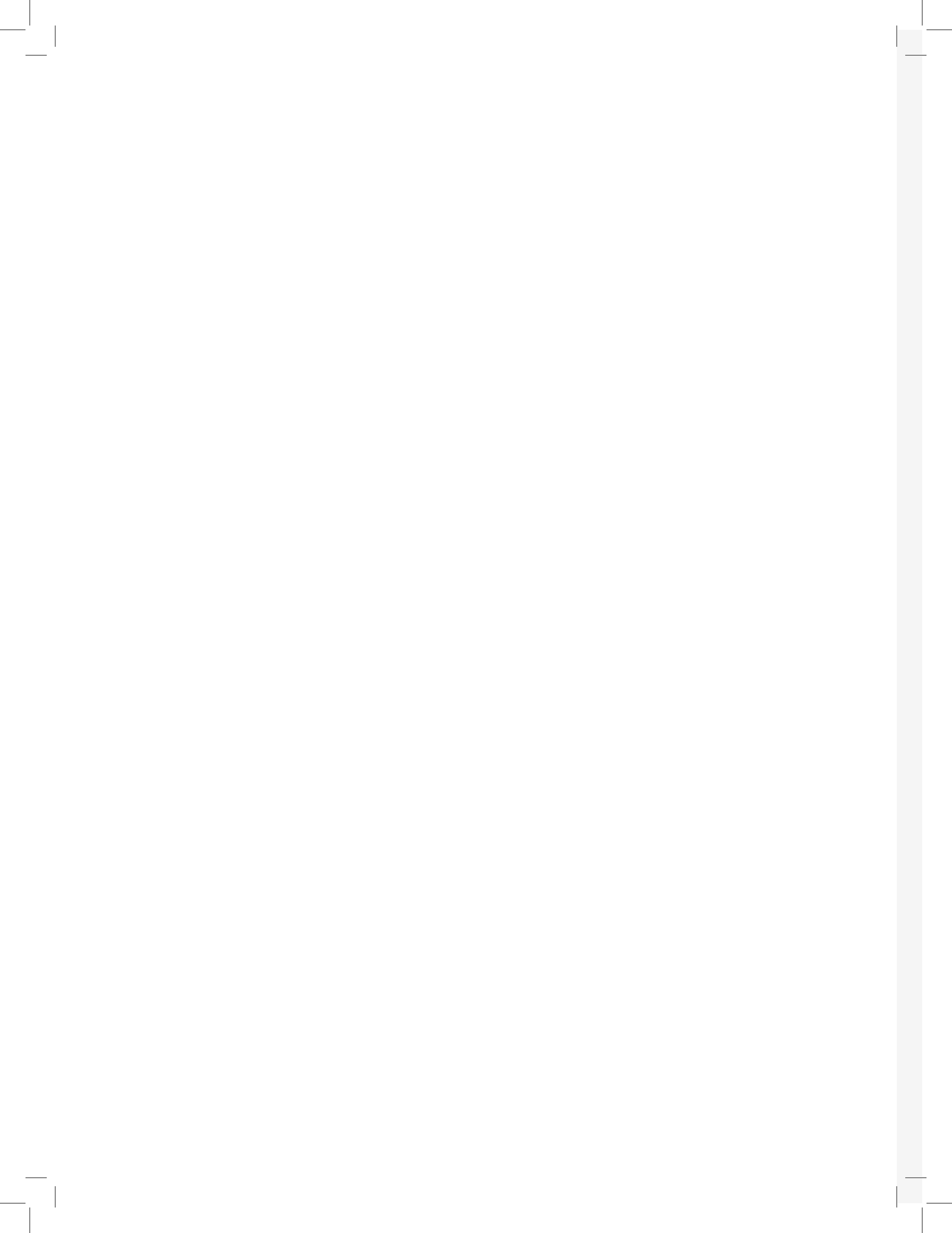
GOVERNMENT OF MIZORAM
HEALTH AND FAMILY WELFARE DEPARTMENT





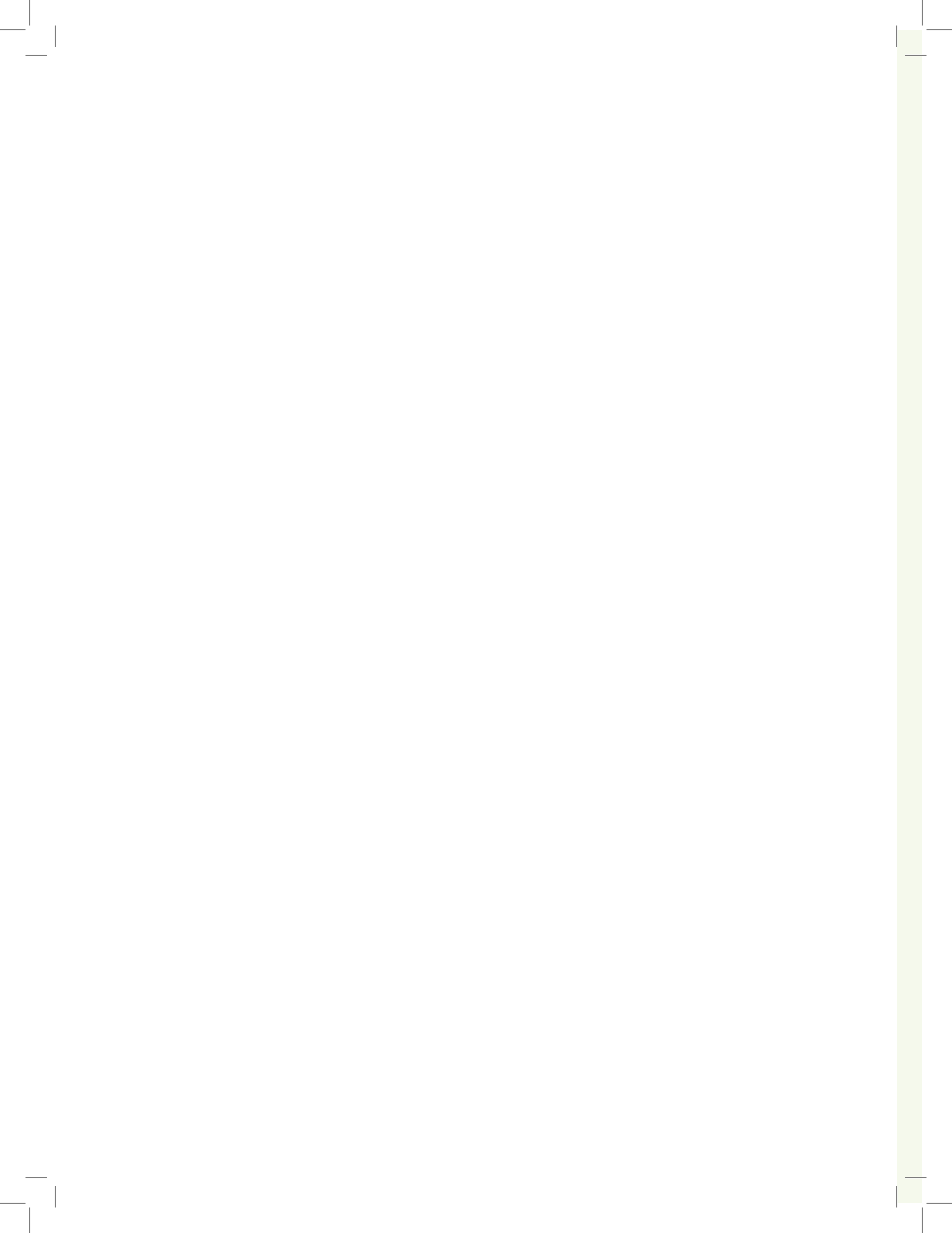
**STATE ACTION PLAN FOR
DOG MEDIATED
RABIES ELIMINATION
FROM MIZORAM
BY 2030**





ABBREVIATIONS

ABC	Animal Birth Control
ARC	Anti Rabies Clinic
ARS	Anti-Rabies Serum
ARV	Anti-Rabies Vaccine
ASCAD	Assistance to States for Control of Animal Diseases
AWBI	Animal Welfare Board of India
AWO	Animal Welfare Organization
CNS	Central Nervous System
DAHD	Department of Animal Husbandry and Dairying
DFA	Direct Fluorescent Antibody Assay
DPM	Dog Population Management
ELISA	Enzyme-Linked Immunosorbent Assay
FAT	Direct Fluorescent Antibody Test
ICAR	Indian Council of Agriculture Research
IEC	Information, Education and Communication
KVK	Krishi Vigyan Kendra
LFA	Lateral Flow Assay
MoHFW	Ministry of Health and Family Welfare
NHM	National Health Mission
NCDC	National Centre for Disease Control
NGO	Non-Government Organization
NRCP	National Rabies Control Programme
OIE	Office International des Epizootic (World Organization for Animal Health)
PEP	Post-exposure Prophylaxis
RRL	Regional Referral Laboratories
SOP	Standard Operating Procedure
TLP	Triple Layer Packaging
UNDP	United Nations Development Programme



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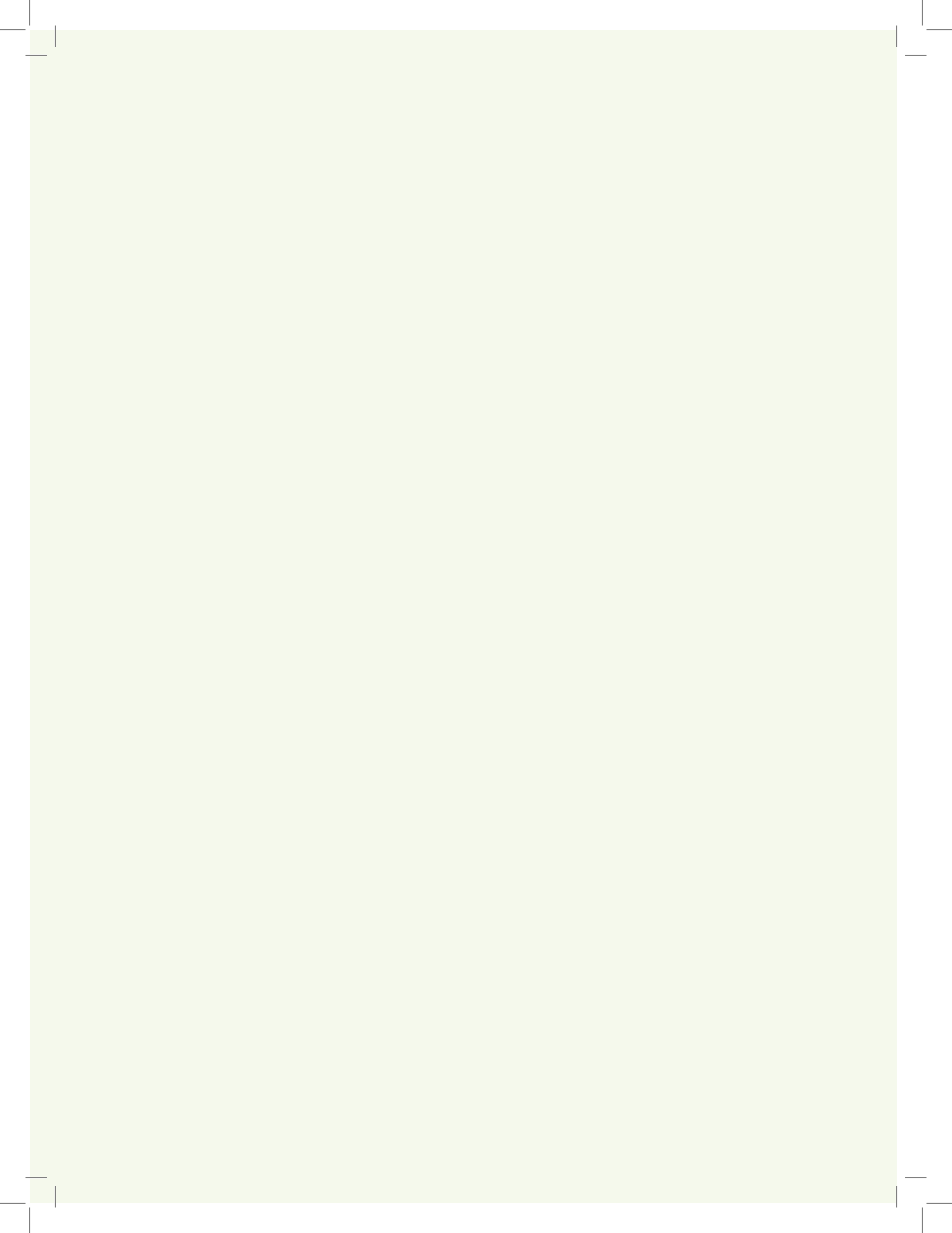
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1

Introduction

Rabies is a viral zoonotic disease affecting the Central Nervous System (CNS) causing acute encephalitis. The etiological agent belongs to the Mononegavirales order, the Rhabdoviridae family, and the Lyssavirus genus. Once clinical symptoms appear, rabies is virtually 100 per cent fatal. In up to 99 per cent of cases, domestic dogs are responsible for rabies virus transmission to humans. Rabies can affect both domestic and wild animals. Mode of transmission or spread is via saliva, usually through bites, scratches or direct contact with mucosa (eyes, mouth or open wounds). According to the World Health Organization (WHO), children between the age of five and 14 years are frequent victims. Rabies is present on all continents except Antarctica, with over 95 per cent of human deaths occurring in Asia and Africa. However, rabies cases are rarely reported, and registered numbers differ greatly from the estimated burden. In India the most common transmitting animal is the dog, accounting for more than 96 per cent cases. As per the national multicentric rabies survey done in 2003, about 17 million animal bites occur annually out of which 20,000 human rabies deaths occur in India. About 35 per cent of these are in children (<http://www.acvip.org>).

In 2015, there was a worldwide call for action by setting a goal of ‘Zero Human Dog-Mediated Rabies Deaths by 2030’. Subsequently, four organizations – the WHO, the World Organization for Animal Health (OIE), the Food and Agriculture Organization of the United Nations (FAO) and the Global Alliance for Rabies Control (GARC) – have joined forces, as the United Against Rabies collaboration, determined to reach the global target of “Zero human deaths due to dog-mediated Rabies by 2030”. Harmonized processes are required worldwide to acknowledge and measure country progress towards this goal [National Rabies Control Programme (NRCP)].

WHO IS IT FOR? *(Detailed roles and responsibilities of stakeholders are mentioned in chapter ix)*

The Key Stakeholders who will be acting as the nodal agency for the overall formulation, planning, coordination and implementation of the activities as envisaged under the National and State Action Plan of Rabies Elimination will be directly involved in providing technical and logistic support to the State/districts and levels below. The Key Stakeholders identified are: The objectives of the programme are:



- ◆ Human health sector - Ministry of Health and Family Welfare at the Centre, State Health Department at the State and the levels below.
- ◆ Ministry of Fisheries, Animal Husbandry and Dairying at the Centre and the State Animal Husbandry Department at the State and the levels below.
- ◆ Wildlife and environment sector - Ministry of Environment, Forest, and Climate Change at the Centre; Forest Department at the State level and similar forest authorities at National Parks and notified zones.
- ◆ Ministry of Agriculture and Farmers Welfare, Indian Council of Agriculture Research at the Centre.
- ◆ Ministry of Housing and Urban Affairs at the Centre and Urban Local Bodies at the district and block levels.
- ◆ Ministry of Panchayati Raj at the Centre and rural local bodies at village level.

Supporting Stakeholders who will be assisting the Key Stakeholders in the coordination and implementation of various aspects of the National Action Plan for Dog-Mediated Rabies Elimination (NAPRE) will provide technical assistance in activities planned for rabies elimination from India under various components. The Supporting Stakeholders identified are:

- ◆ Ministry of Finance at the Centre and the Department of Finance at the State and at levels below.
- ◆ Ministry of Human Resources Development at the Centre and the Department of Human Resources Development at the State and levels below.
- ◆ Ministry of Information and Broadcasting at the Centre and the Department of Information and Broadcasting at the State and those below the State level.
- ◆ Ministry of Science and Technology, Department of Biotechnology at the Centre.
- ◆ Ministry of Drinking Water and Sanitation at the Centre and the Department of Drinking Water and Sanitation at the State and levels below.
- ◆ National Human Rights Commission.

Other stakeholders who would primarily assist in the implementation of NAPRE with the logistics and expertise available to them at the field level include:

- ◆ Non-Government Organizations active in the field of rabies in health and veterinary sectors.
- ◆ Professional organizations and associations in the medical and veterinary sector.
- ◆ International development organizations and UN agencies.
- ◆ Private hospitals, institutions, clinics, and diagnostic labs both in the veterinary and health sectors.

HOW DOES IT WORK AND WHAT DOES IT INCLUDE?

The key principle is the elimination of dog-mediated rabies by achieving annual vaccination of 70 per cent of dog population in the State for three consecutive years and, to prevent human deaths due to the disease by ensuring timely access for Post-Exposure Prophylaxis (PEP) for all animal bite victims and creating responsive Public Health System (PHS) through concerned stakeholders and nodal agencies.

Rabies is a classic ‘One Health’ challenge: More than 96 per cent of human rabies deaths arise from exposure to a rabid dog. Standard animal vaccines for providing pre-exposure prophylaxis to dogs and human vaccines for providing optimum PEP to dog bite victims are available. However, imperfect awareness compounded by variable accessibility of PEP has resulted in the persistence of human rabies fatalities. Rabies is a typical example of a zoonotic infection that does not fit into the domain of any one single department having the responsibility of controlling rabies. Although there is an animal reservoir involved, mortality and morbidity mainly affect human beings. Therefore, for prevention, control and elimination of rabies, an effective and concerted effort from the animal husbandry sector, human health sector, local governing bodies, communities and other stakeholders, is the need of the hour. Until now, rabies elimination efforts have been fragmented and uncoordinated across various sectors. In 2015, The WHO/FAO/OIE declared a vision for the elimination of dog-mediated rabies in 2030 and called for action by setting a global goal of zero human dog-mediated rabies deaths by 2030 worldwide, thereby contributing to SDG 2.

The SAPRE is a blueprint adopted in line with the NAPRE and serves as a guide in enabling the State and other stakeholders on the specific needs of the State.

MEASURES AVAILABLE WITH THE STATE FOR CONTROLLING DOG RABIES

Under the human health component, the State ensures timely access for PEP for all animal bite victims at district hospitals, sub-district hospitals, community health care and primary health care facilities (Table 1 and 2).

Under the animal health component, the State will carry out Anti-Rabies Vaccination (ARV) coverage of at least 70 per cent of dogs in a defined geographical area annually for three consecutive years.

TABLE 1: HEALTH FACILITIES IN THE STATE:

Health facilities	Type and number of health facilities	Number of health facilities in the State	Number of health facilities with provision of ARV	Number of health facilities with provision of RIG
Total available public health facilities	District Hospital	12	1	-
	Sub-district Hospital	2	-	-
	Community Health Care	7	1	-
	Primary Health Care	58	8	-
	CMO	10	2	-

TABLE 2: RABIES CARE FACILITIES IN THE STATE:

Health facilities	Number of health facilities	Remarks
Number of District Hospitals/ Medical Hospitals providing in-patient facility for rabies cases	12	
Infectious Disease Hospitals in the State providing in-patient facility for rabies cases	0	

2

Epidemiology of Rabies In Mizoram

Epidemiology is the study of how often diseases occur in different groups of people and why. Epidemiological information is used to plan and evaluate strategies to prevent illness and as a guide to the management of patients in whom the disease has already developed.

EPIDEMIOLOGICAL IMPORTANCE IN THE STATE

Since rabies is commonly transmitted by animals, especially dogs, followed by cats and other wild animals such as foxes, wild dogs, wild cats, although Mizoram does not have free roaming stray dogs, a number of animal bite cases are reported each year (Table 3).

Year	Category I	Category II	Category unknown	Total number of animal bites (dog)	Bite by other animals	People receiving PEP	People receiving RIG additional to PEP
2018	NA	NA	2100	2100	NA	NA	NA
2019	NA	NA	2030	2030	NA	NA	NA
2020	NA	NA	1592	1592	NA	NA	NA
2021	NA	NA	1131	1131	NA	NA	NA
2022	NA	NA	1418	1418	NA	NA	NA

EPIDEMIOLOGICAL STATUS IN ANIMALS AND HUMANS

In Mizoram, although rabies in humans is rarely reported, a number of animal bite cases are reported each year which predisposes rabies infection (Fig 1). In 2018, a clinically suspected rabies case was reported from Mizoram (Table 4).

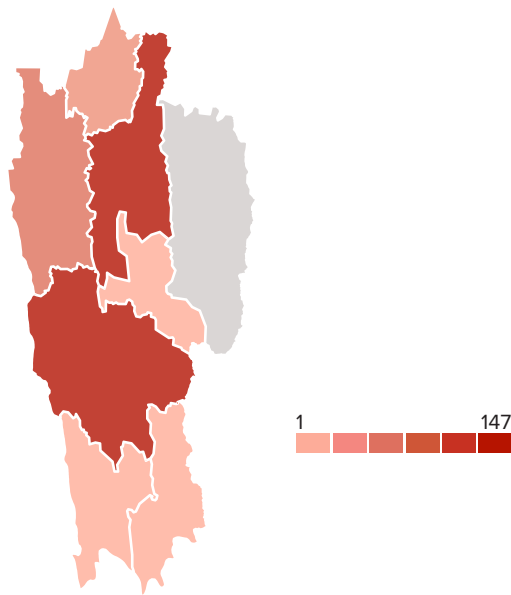


Fig:1 Dog bite prevalence map of the State up to May 15, 2023.

TABLE 4: YEAR-WISE HUMAN RABIES CASE:

Year	Number of clinically suspected rabies cases	Number of rabies cases discharged as LAMA	Number of laboratory-confirmed rabies cases
2018	1	0	0
2019	0	0	0
2020	0	0	0
2021	0	0	0
2022	1	0	0

EXISTING SURVEILLANCE OR EPIDEMIOLOGICAL DATA

Epidemiological data of animal cases of rabies in the State is lacking due to the unavailability of proper reporting system, and also of laboratory diagnostic facilities for suspected animals. At present, there is no data on the number of animal deaths due to rabies in the State.

3

Rabies – Biological Aspects

RABIES VACCINE FOR ANIMALS:

For rabies vaccination in animals, inactivated virus (for companion animals and livestock), live attenuated virus (for wildlife and free-roaming dogs), or recombinant vaccines (for wildlife, cats and dogs) are used. Vaccine manufacturers should make known the characteristics of the product and undertake necessary experiments satisfying minimum requirements established at national and international levels. Before vaccines can receive the relevant regulatory approval, the duration of immunity resulting from their use should be determined in vaccinated animals of the target species. Vaccines should confer protective immunity for at least one year (OIE Terrestrial Manual, 2018). Rabies is a zoonotic disease which causes inflammation of the brain and is usually fatal. The only solution to prevent rabies is timely vaccination with Anti-Rabies Vaccine (ARV). The vaccine is administered 1ml intramuscularly or subcutaneously through an area of clean, dry skin with all aseptic precautions. The vaccine is also intended for immunization against rabies by prophylactic use and also post-bite therapy. Annual vaccination is recommended particularly in endemic areas. However, utmost care must be taken during vaccination in the advanced stage of pregnancy to avoid stress. Rabies vaccine has to be stored and transported between 2- 8 °C. The antigenicity of the vaccine deteriorates if the cold chain is not maintained. Rabies vaccination schedule in canine is given below (Table 5):

TABLE 5: PRE-EXPOSURE RABIES VACCINATION SCHEDULE IN DOGS:

Dog vaccine	Initial puppy vaccination (at or under 16 weeks)	Initial adult dog vaccination (above 16 weeks)	Booster recommendation
Rabies	Can be administered in one dose, as early as three months of age	Single dose	Annual boosters are required

RABIES VACCINE FOR HUMANS

Pre-exposure Prophylaxis (PrEP) consists of a course of rabies vaccination given prior to an exposure and does not include rabies immunoglobulin (RIG). It is recommended for those at very high risk of being exposed (for example,

people working in a rabies vaccine manufacturing facility or in a rabies diagnostic laboratory) and veterinarians. It is also recommended for those living in or travelling to remote regions of the world where rabies is highly endemic or currently epidemic, where prompt access to healthcare is difficult.

Post-exposure Prophylaxis (PEP) is given after an exposure or suspected exposure to rabies has occurred. It includes local treatment of the wound, administration of a course of rabies vaccination and (dependent on the category of exposure and your individual health status) RIG may need to be administered. A person that has received either complete PrEP or complete PEP previously and is subsequently exposed to rabies does not need to receive RIG, but should receive a booster series of rabies vaccine. If the patient had received a full course of PEP within the last three months, only local wound treatment is required; neither vaccine nor RIG is needed. All incomplete vaccinations must be ignored and the exposure must be managed appropriately (full PEP) (rabiesblueprint.com).

Post-exposure rabies prophylaxis (PEP) is compulsory if you are bitten by a dog, cat or other animal that is rabid or is suspected to be infected with rabies. The standard schedule is five doses on days 0, 3, 7, 14 and 30, with day '0' being the day of commencement of vaccination. A regimen of five one-mL doses of rabies vaccines should be administered IM to previously unvaccinated persons. The first dose of the five-dose course should be administered as soon as possible after exposure. This date is then considered day 0 of the PEP series. Additional doses should then be administered on days 3, 7, 14, and 28 after the first vaccination (www.iapindia.org).



Infrastructure

PERSONNEL AVAILABLE FOR CARRYING OUT DOG VACCINATION CAMPAIGNS

A joint team of trained personnel from the health and veterinary workforce will be required.

A team of Medical Officers both from the health and veterinary sector along with nurses shall be responsible for carrying out dog vaccination campaigns. At the field and individual level, health and wellness officers, ANM and ASHAs can be responsible for conducting awareness and education. Involvement of stakeholders like NGOs and political influencers can be helpful in executing the required campaigns.

INFRASTRUCTURE NEEDED FOR STORAGE OF VACCINES: HUMAN VACCINES

It will be necessary to have enough refrigerators to store significant amounts of human and animal vaccines. Power backups shall be necessary to maintain the required temperature for the vaccines in events of power outage/power cuts. Ice packs can be frozen in refrigerators with freezer sections to maintain the cold chain in the field, but vaccines should never be kept in the freezer sections of a refrigerator.

Adequate cold chain and dry space are required for the storage and transportation of both vaccines and other consumables for administration of vaccines. Cold chain and transportation equipment need to be earmarked specifically for Anti-Rabies Vaccine (ARV) and Rabies Immunoglobulin.

Currently, walk-in cooler for storage of ARV and Rabies Immunoglobulin is available only at the State level. At district level, about four to six Ice Lined Refrigerators (ILR) are available which can be used to maintain the required cold chain and dry space, and need to be earmarked specifically for ARV and Rabies Immunoglobulin. Existing human resource to be trained on both vaccine logistic management and for inoculation of ARV and Rabies Immunoglobulin.

PERSONNEL AND INFRASTRUCTURE NEEDED FOR RABIES SURVEILLANCE -- PUBLIC HEALTH SECTOR

CAPACITY BUILDING OF ALL HEALTHCARE PROVIDERS IN RABIES SURVEILLANCE -- PUBLIC HEALTH SECTOR

The implementation of rabies surveillance activities requires trained professionals, including personnel in charge of collecting data and samples, obtaining and analyzing data, and laboratory personnel whose duty is to conduct rabies diagnostic tests. The personnel that will require training apart from the healthcare providers should include individuals from the community when it comes to reporting dog bite cases to the field workers: ASHAs, ANMs and to their respective health workers catering in their Catchment Areas i.e., ANMs, CHOs, Medical Officers at the nearest Public Health Care facilities (SC/PHC/CHC/District Hospitals).

ASHAs, ANMs, CHOs shall be trained in identification, providing first aid and referral of all dog bite cases for PEP. Medical Officers and staff nurses should be trained on rabies as per the National Guidelines for Rabies, which includes first aid, pre- and post-exposure prophylaxis, and reporting done via both the Integrated Health Information Platform (IHIP) site and the State Format of Reporting for Rabies. Reporting of all human rabies must adhere to the rabies case definition.

Model Anti-Rabies Clinic (mARC) needs to be established in the district headquarters catering to all the required infrastructure components for the mARC set-up. Assessment should be conducted at all the districts using the assessment checklist tool to rule out the necessary gaps in the establishment of mARC.

MEDICAL FACILITIES AVAILABLE FOR PROVIDING HUMAN POST- EXPOSURE PROPHYLAXIS -- HUMAN HEALTH

Strengthening existing public health institutions from the Primary Health Centre (PHC)-level to District Hospitals for providing PEP includes, conducting a gap assessment and bridging the gaps. Assessment will include all components of mARC. The checklist covers a wide range of topics related to clinical rabies prevention and control, including vaccine availability, animal bite management, Information, Education and Communication (IEC), training, surveillance and reporting. Post-assessment Anti-Rabies Clinic shall be established in facilities designated as ARC, essentially from PHC level, in all Community Health Centres (CHCs) and District Hospitals in the State.

Currently Anti-Rabies Serum/Immunoglobulin is yet to be dispersed to all districts. The State has a total of 12 District Hospitals (DH), two Sub-District Hospitals (SDH), seven CHCs, nine Urban Primary Health Centres, 58 PHCs and 376 Health Sub-Centres. Planning will be done in such a way that all health facilities get the required amount of Anti-Rabies Serum/Immunoglobulin. In case supplies are not sufficient, stock shall be maintained in the District Hospitals for required usage by each district. Supply chain shall be maintained using indenting systems like DVDMS software depending on the necessity and requirement of supply chain mechanism.

GUIDANCE OR CHECKLIST FOR THE STATE GOVERNMENT

A State specific contextualized Model Anti-Rabies Clinic (m-ARC) assessment checklist is developed in accordance to the minimum requirement for establishment of m-ARC (Table 6). The checklist can be used by a skilled professional for assessment of health facilities like PHCs, CHCs, SDHs and DHs.

In addition, the checklist will be applicable to Private Tertiary Hospitals if m-ARC is to be established in this kind of facility.

5

Status of the State

VACCINE PROCUREMENT

The procurement of Anti-Rabies Vaccine (ARV) is done through National Health Mission (NHM) under the National Rabies Control Programme (NRCP).

SUPPLY AND MASS VACCINATION

Provision of ARV and ARS (under free diagnostic services of NHM) is as follows:

1. No. of ARV vials to be procured = Total no. of animal bites per year + 10 per cent buffer stock + wastage

$$= 1700 + 170 + 100$$

No. of ARV required per animal bite = 3

$$\text{Therefore, Total No. of ARV required} = (1700 \times 3) + 170 + 100 = 5370$$

Rate of ARV per vial = Rs. 360

$$\text{Budget for ARV} = \text{Rs. } 360 \times 5370 = \text{Rs. } 19,33,200$$

2. No. of ARS vials to be procured = 50

Rate of ARS per vial = Rs. 5050

$$\text{Budget for ARS} = \text{Rs. } 5050 \times 50 = \text{Rs. } 2,52,500$$

$$\text{TOTAL PROPOSAL FOR ARV and ARS} = \text{Rs. } (19,33,200 + 2,52,500)$$

$$= \text{Rs. } 21,85,700$$

As per national guidelines, the preferred route of administration for human rabies vaccine is Intradermal. It is cost-effective and requires 0.2 ml/ visit/ patient for intradermal route vs. 1 ml/visit/patient for intra muscular route.

TRAINING AND AWARENESS CAMPAIGN

Under the United Nations Development Programme (UNDP), the State will conduct training for Medical Officers, Veterinary Officers and other stakeholders regarding the State Action Plan for Dog-Mediated Rabies Elimination (SAPRE).

EXISTING COORDINATION AND COLLABORATION



- ◆ The State department has highlighted advocacy for strong inter-sectoral coordination and collaboration for prevention and control of rabies in the State.
- ◆ Strengthening inter-sectoral coordination with veterinary, Municipal Corporation and Panchayat Raj Institutions.
- ◆ Training on appropriate animal bite management, prevention and control of rabies, surveillance and inter-sectoral coordination.
- ◆ Strengthening surveillance of animal bites and rabies deaths reporting.
- ◆ The State department is taking up initiatives for sharing information regarding rabies case incidence in the State in collaboration with notable NGOs.
- ◆ Joint response team in collaboration with the human health and other concerned departments should be formed for surveillance and control of suspected and/or confirmed rabies incidence.
- ◆ Existing rapid response team
- ◆ Rapid Response Teams (RRTs) of the department has to be constituted including State-level and District-level Monitoring Committee. The RRTs are important for preventive and control measures for rabies in respective areas of the State.

EXISTING PROVISION

Under ‘The Prevention and Control of Infectious and Contagious Diseases in Animals Act, 2009’, animal rabies is already a notifiable disease in India and every State Government has the legal power to take steps to prevent and control the disease.

6

State Legislation and Public Health Laws

EXISTING STATE PROVISION

The government of Mizoram on May 9, 2023, issued a notification declaring rabies as a notifiable disease in the State (Annexure I).

ROLE OF LEGISLATION IN THE FIGHT AGAINST RABIES

The State government has a big role to play in the fight against rabies by passing a 'Legislation' in the State Assembly pertaining to rabies control. A legislation will emphasize on the following heads:

- ◆ Declaring 'rabies' as zoonoses which are still prevalent in India.
- ◆ Declaring 'rabies' as a 'Notifiable Disease' as per the Prevention and Control of Infectious and Contagious Diseases in Animals Act – 2009.
- ◆ Bringing a bridge between animal husbandry and veterinary department, health and family welfare department and leading organizations dealing with rabies control by framing a common platform.
- ◆ Declaring that 'Registration, Vaccination and Animal Birth Control (ABC) of Dogs' a compulsory law (legal aspect) – failure of which will attract a penalty and/or even jail to pet owners.
- ◆ Making Intensified Awareness Programme on Rabies, Mass Rabies Vaccination Programme and Animal Birth Control (ABC) the three key components in rabies control (critical component) – mandatory for all districts to achieve the targets.
- ◆ All pet breeding shops dealing in supplying, breeding and importing of pets/exotic pets from outside the State should register with competent authorities and comply with rabies control rules.
- ◆ Municipal bodies in the State to strengthen their veterinary wings and be proactive in Registration, Animal Birth Control and Rabies Control as per Section 304, Chapter XVI and Section 325, Chapter XVIII of Indian MC Act -2000.
- ◆ Provision of funding on rabies control.

REPORTING AND NOTIFICATION

Once the law is passed by the State Legislature, reporting and notification of rabies outbreak, rabies positive cases, rabies affected species, affected villages/ places be made compulsory to the authority by the veterinarians and medicos

through proper channels. Then, the concerned authority will report and notify the same to the government (State and Central) after authentication for public interest. The municipal bodies will play a big role in reporting the same as per Section 280, Chapter XV and Section 285, Chapter XV of Indian MC Act -2000.

IMPORTANT FACTORS IN DECIDING WHETHER A DISEASE IS NOTIFIABLE

The following may be considered:

- ◆ Rabies is infectious, contagious, and a highly fatal disease (etiology)
- ◆ Rabies is highly contagious through dog bites from both domestic and wild carnivores whether in rural or urban areas (transmission)
- ◆ Rabies is a zoonotic disease (zoo-anthro-zoonoses) (public health concerns)
- ◆ Causes high fatality rate in both animals and humans (high mortality)
- ◆ Transboundary disease (difficult to control)
- ◆ Incurred loss in prophylaxis and treatment (economic loss)

RABIES IN ANIMALS A NOTIFIABLE DISEASE

Same as in humans, but in this case, it will be notified by veterinarians. The municipal bodies will play a big role in reporting of the same as per Section 280, Chapter XV and Section 285, Chapter XV of Indian MC Act -2000.

HOW TO NOTIFY A RABIES CASE BY AUTHORITIES

The authorities will notify rabies cases based on:

- a. Suspecting outbreaks of rabies from a particular area/areas.
- b. Confirmation of positive case (humans/animals) through laboratory diagnosis.
- c. Potential treats of rabies transmission to other areas/people (zoonoses).
- d. Mortality rate and high economic loss from rabies positive cases.
- e. Then rabies will be notified for public interest.

ANIMAL BITE INJURIES TO BE NOTIFIED

Veterinarians and medicos will notify animal bite cases to the authorities especially in cases:

- a. When bitten by stray dogs or wild animals.
- b. Improper vaccination record.
- c. When the bitten animal or human do not receive any PEP.

- d. Immuno-compromised or sick.
- e. When animals that bite others show signs of rabies (rabid dogs) or aggressive behaviour.
- f. History of such stray animals from the community about the same.

HOW THE LEGISLATURE SUPPORTS RABIES CONTROL

The law on rabies control passed by the State legislature will provide veterinarians, medicos, municipal bodies and administrative personnel a provision to implement rabies control with full legality as per The Prevention and Control of Infectious and Contagious Disease in Animals Act – 2009.

LAWS AND BY – LAWS USEFUL IN ENSURING A SUCCESSFUL DOG RABIES CONTROL PROGRAMME

A provision under the law on rabies control passed by the State legislative will pass different laws and by-laws to ensure a successful rabies control programme such as:

- ◆ Compulsory registration, rabies vaccination and Animal Birth Control (ABC) of pet dogs/owned dogs with the concerned authorities as per Animal Welfare Board of India Rules and Indian Municipal Corporations (MC) Act -2000.
- ◆ Garbage control, sewage disposal and registration and control/seizing-cum-rabies vaccination of stray dogs by municipal bodies (proactive) as per Indian MC Act - 2000. (Section 196 of Chapter XII, Section 301 of Chapter XV, Section 304 of Chapter XVI and Section 325 of Chapter XVIII)
- ◆ Compulsory pre-exposure vaccination against rabies for health workers, public health workers, wildlife workers, pet handlers, animal health workers, municipal personnel dealing with restraining stray dogs/animals.
- ◆ Compulsory awareness programme on rabies to schoolchildren, public (health education), syllabus on awareness in rabies in school colleges.
- ◆ Regular Mass Dog Vaccination (MDV) Programme in urban areas (municipal), market areas to target the stray dog population, and in areas with high density of dog population in order to achieve more rabies vaccination coverage.

AVAILABLE LAWS AND RECOMMENDATIONS

- ◆ Pet Breeding Rule: Director, Animal Husbandry and Veterinary Department, Government of Mizoram, on February 5, 2021, issued the following order regarding selling and breeding of dogs within Mizoram: “Whereas, the Prevention of Cruelty to Animals (Dog Breeding and Marketing) Rules, 2017 and the Prevention of Cruelty to Animals (Pet Shop) Rules, 2018 have been framed under the Prevention of Cruelty to Animals Act, 1960 and came into force on 23rd May, 2017 and 6th September, 2018 respectively. Therefore, no

dog breeder in the State shall carry on or continue any breeding activity or own or house dogs for breeding and sale of dogs and pups, unless the breeder has obtained certificate of registration.”

- ◆ Transportation of Animals: The transporters to strictly abide by the Transport of Animals Rules, 2001 and 2016 (Amend) of Transport of Animals Rules -1978 to control zoonoses including rabies.
- ◆ Compulsory registration, vaccination and ABC of dogs/pets – (Recommendation).
- ◆ Compulsory pre-exposure vaccination to high risk populations/individuals.
- ◆ Garbage control and sewage disposal to be strictly followed by municipal/ civic bodies to avoid increasing dog population and decreasing dog bite case incidence (Recommendation).
- ◆ Intensified awareness programme on rabies to pet handlers and communities (Recommendation).

Compulsory dog vaccination: Once the law is passed by State legislation, dog vaccination to be made compulsory to eliminate rabies in the long run. Both pre-exposure and post-exposure rabies vaccination of dogs to be made compulsory to reduce incidence of rabies cases in other population.

Emergency orders in case of unexpected outbreaks: The District Magistrate will pass any orders in the case of unexpected outbreaks in a particular district/ areas to deal with the outbreak such as: Healthcare for the positive cases, ban on the transportation of dogs, directives and advisory to public, collection of samples from suspected cases (animals and humans), proper disposal of dead animals and humans.

Creation of check post surveillance for transboundary movement of dogs: Check posts will streamline the transportation of dogs into the State. Dogs without proper health certificates, vaccination cards and unfit dogs and other exotic pets/animals will be rejected entry to the State to reduce the incidence of rabies including other zoonoses and infections as per Transport of Animals Rules -2016 (Amend).

INDIAN MUNICIPAL CORPORATION ACT – 2000

Some rules related to rabies and other diseases:

- ◆ Section 186, Chapter XII - Deals with sewage disposal and garbage control.
- ◆ Section 280, Chapter XV - Obligation to give information of dangerous diseases.
- ◆ Section 285, Chapter XV – Special measures in case of outbreak of dangerous or epidemic disease.
- ◆ Section 301, Chapter XV – Disposal of dead animals.
- ◆ Section 304, Chapter XVI – Registration and control of dogs.
- ◆ Section 325 of Chapter XVIII – Seizing of certain animals.

ANNEXURE: 1



GOVERNMENT OF MIZORAM
HEALTH & FAMILY WELFARE DEPARTMENT
MIZORAM SECRETARIAT, MINECO, AIZAWL-796001

6
11/5

Aizawl, the 9th May, 2023

NOTIFICATION

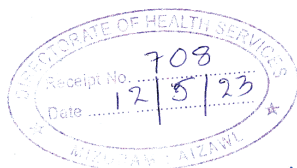
No.D.33011/19/2020-HFW (ZCP)/177 : Whereas Rabies is an acute viral encephalomyelitis caused by RNA Lyssavirus belonging to Family Rhabdoviridae that causes disease in virtually all the warm-blooded animals including man. Rabies is one of the oldest recognized Zoonotic diseases with extremely high fatality rate that causes extremely painful deaths where the patient suffers painful spasm and dies of extreme thirst and hunger because of hydrophobia. However, by timely and appropriate Post Exposure Prophylaxis (PEP), this fatal disease can be easily prevented.

Whereas the Ministry of Health and Family Welfare Department, Government of India in its letter DO. No. 2283429/NRCP/DZDP-NCDC/DGHS dated 20th September, 2021 requested all States/UTs to make Human Rabies a notifiable disease thereby making mandatory for all government and private health facilities (including medical colleges) to report all suspected, probable and confirmed Human Rabies cases as per enclosed guidelines 'Guidance Document for Rabies as a notifiable Diseases' formulated by National Rabies Control Program, Ministry of Health & Family Welfare, Government of India.

Now therefore, in order to ensure early diagnosis, case management, treatment, reduction of transmission and for preventive, control and elimination measures of Human Rabies and to achieve the WHO goal of zero deaths due to Human Rabies in 2023 and in pursuance of the Ministry of Health & Family Welfare Department, Government of India's letter DO. No. 2283429/NRCP/DZDP-NCDC/DGHS dated 20th September, 2021, the competent authority hereby declares '**Human Rabies**' as a '**Notifiable Disease**' under section 12 (1) (iii) and 42 of the Clinical Establishments (Registration and Regulation) Act 2010 in the state of Mizoram in the interest of the safety of the general public of Mizoram with immediate effect and until further order.

In this connection, all Government and private health facilities (including the Medical College) shall immediately report all suspected, probable and confirmed cases of 'Human Rabies' by following the 'Guidance Document for Rabies as a notifiable Diseases' issued by National Rabies Control Program, Ministry of Health & Family Welfare, Government of India to the Chief Medical Officer of the concerned district with a copy to the State Nodal Officer, National Rabies Control Program / IDSP to the official Email idspmizoram@gmail.com in the format prescribed which is hereby appended and marked as **Annexure-1** and **Annexure -2**.

Sd/- ESTHER LAL RUATKIMI
Principal Secretary to the Govt. of Mizoram
Health & Family Welfare Department



Supdt
11/5
12/5

Kimi Redirected to IDSP Secy
Contd
15/5/23

STATE ACTION PLAN FOR DOG MEDIATED
RABIES ELIMINATION FROM MIZORAM BY 2030

30

Memo No. D.33011/19/2020-HFW (ZCP)/177 : Aizawl the 9th May, 2023

Copy to:

1. P.S to Governor of Mizoram.
2. P.S to Chief Minister, Govt. of Mizoram.
3. P.S to Minister, Health & Family Welfare Department.
4. Sr. P.P.S. to Chief Secretary, Govt. of Mizoram.
5. All Administrative Departments.
6. All Deputy Commissioners, Mizoram
7. All Heads of Department.
8. All Superintendents of Police, Mizoram
9. Principal Director of Health & Family Welfare Department.
10. Director of Health Services.
11. Director of Hospital & Medical Education.
12. Mission Director, National Health Mission.
13. Director, Zoram Medical College.
14. State Nodal Officer, National Rabies Control Program, Mizoram.
15. All Chief Medical Officers, Mizoram
16. All Medical Superintendents, Mizoram
17. All Senior Medical Officers.
18. President, Indian Medical Association (Mizoram Chapter).
19. President, Non-Government Hospital Association of Mizoram.
20. Controller, Printing & Stationery with six (6) spare copies for kind publication in the Official Gazette.
21. All concerned members.
22. Website Manager, Directorate of Health Services
23. Guard File



(JOSEPHINE ZONUNSANGI)

Under Secretary to the Govt. of Mizoram
Health & Family Welfare Department

Annexure-1

‘Human Rabies’ case is defined as follows:

1. **Suspected Case:** *(To be reported by Hospital/Clinics)*

Definition:

Death of a human with history of dog bite few weeks/months preceding death. Wherever available, the details of such cases should be shared in a line list- Name, Age, Gender, Address.

2. **Probable Case:** *(To be reported by Hospital/Clinics)*

Definition:

A suspected human case plus history of exposure to a (suspect / probable) rabid animal.

2.1 Exposure is usually defined as a bite or scratch from a rabies-susceptible animal (usually dogs). It could also be lick exposure to open wound, abrasion, mucous membranes of the patient.

2.2 A suspect rabid animal is a rabies-susceptible animal (usually dogs) which presents with any of the following signs at time of exposure or within 10 days following exposure: unprovoked aggression (biting people or animals or inanimate objects), hypersalivation, paralysis, lethargy, abnormal vocalization, or diurnal activity of nocturnal species. Whenever the history of mentioned signs cannot be elicited, the history of exposure to rabies-susceptible animal would be considered adequate.

2.3 A probable rabid animal is a suspect rabid animal (as defined above) with additional history of a bite by another suspect / probable rabid animal and/or is a suspect rabid animal that is killed, died, or disappeared within 4- 5 days of observing illness signs.

Wherever available, the details of such cases should be shared in a line list as per line

Annexure 2

3. **Laboratory Confirmed Case:** *(To be reported by laboratories)*

Definition: A suspect or a probable human case that is laboratory-confirmed.

Laboratory confirmation by one or more of the following:

3.1 Detection of rabies viral antigens by direct fluorescent antibody test (FAT) or by ELISA in clinical specimens, preferably brain tissue (collected post mortem).

3.2 Detection by FAT on skin biopsy (ante mortem).

3.3 FAT positive after inoculation of brain tissue, saliva or CSF in cell culture, or after intracerebral inoculation in mice or in suckling mice.

3.4 Detectable rabies-neutralizing antibody titre in the serum or the CSF of an unvaccinated person.

3.5 Detection of viral nucleic acids by PCR on tissue collected post mortem or intra vitam a clinical specimen (brain tissue or skin, cornea, urine or saliva).

Annexure-2

NATIONAL RABIES CONTROL PROGRAM

Line List of Suspected/ Probable/ Confirmed Rabies Cases/ Deaths*

S.No.	Name	Age	Sex	Contact Number	Village	Sub District/ Taluk/Block/ mandal	District	State	Biting Animal	Suspected/ probable/ Confirmed	Address of place where bite incidence took place	Category of Bite	Status of PEP (Complete/ Partial/ Nil/NA)	Name of the health facility reported Rabies case	Date when reported at the facility	Outcome of patient (Death in Hospital/ LAMA/ Alive)

Date of Reporting: -

Name of reporting person: -

Designation: -

Signature: -

Note: - To be reported by Health facilities to concerned Chief Medical Officer and SNO NRCP/IDSP (idspmizoram@gmail.com)



STATE ACTION PLAN FOR DOG MEDIATED
RABIES ELIMINATION FROM MIZORAM BY 2030



‘One Health Approach’ for Rabies Elimination

The ‘One Health Approach’ is a comprehensive and interdisciplinary strategy that recognizes the interconnection between human health, animal health, and the environment. When applied to human rabies elimination, the ‘One Health Approach’ emphasizes the collaboration and coordination of various sectors including public health, veterinary medicine, and wildlife management. The approach recognizes that rabies is a zoonotic disease, primarily transmitted through the bites of infected animals, particularly dogs, and poses a significant threat to human health. By addressing the disease at its source and considering the complex interactions between humans, animals, and the environment, the ‘One Health Approach’ aims to prevent and control human rabies through interventions such as awareness generation, mass dog vaccination campaigns, responsible pet ownership education, surveillance and monitoring of rabies cases, and improved healthcare infrastructure for prompt and effective treatment. The integrated approach is essential for achieving sustainable and long-term success in eliminating human rabies, protecting communities, and preserving the health and well-being of both humans and animals.

IMPORTANCE OF AN EFFECTIVE COMMUNICATION PLAN

An effective communication plan is crucial in implementing the ‘One Health Approach’ to eliminate dog-mediated rabies and fostering collaboration among the health, veterinary, and municipal sectors. Reasons why an effective communication plan is important:

Raising awareness: A communication plan helps raise awareness about dog-mediated rabies, its risks, prevention methods, and the importance of collaboration among different sectors. By disseminating information through various channels, such as public service announcements, social media, workshops, and community engagement, people become informed about the disease and the actions needed to eliminate it.

Behaviour change: Rabies prevention relies on changing human behaviour, such as responsible dog ownership, vaccination, and reporting of dog bites. An effective communication plan can educate individuals and communities about these behavioural changes, emphasizing the benefits of responsible dog ownership and timely vaccination. It can also address common misconceptions and myths surrounding rabies, leading to behaviour change and improved compliance with preventive measures.

Stakeholder engagement: The ‘One Health Approach’ requires collaboration and coordination among various stakeholders, including the health, veterinary, and municipal sectors. A communication plan helps engage stakeholders by providing clear and consistent messaging, facilitating dialogue, and establishing platforms for sharing information and resources. It ensures that all sectors are aligned and working towards a common goal, leveraging their unique expertise and resources.

Trust-building: Effective communication builds trust among the public, stakeholders, and sectors involved. By providing accurate and timely information, addressing concerns, and promoting transparency, the communication plan fosters trust in the efforts being made to eliminate dog-mediated rabies. The trust is essential for the success of vaccination campaigns, reporting of dog bites, and community participation.

Sustained engagement: Rabies elimination requires sustained efforts over time. A communication plan helps maintain engagement and momentum by keeping the public informed about progress, challenges, and future plans. It provides regular updates, celebrates achievements, and seeks community feedback. Continuous communication ensures that people remain invested in the cause, leading to long-term commitment and support.

Effective resource utilization: An efficient communication plan optimizes the use of available resources. By targeting specific audiences, tailoring messages, and selecting appropriate channels, it maximizes the impact of communication activities. It helps in reaching a wide range of individuals and communities, even in resource-constrained settings, and ensures that resources are utilized effectively for the greatest benefit.

EFFECTIVE COMMUNICATION PLAN

An effective communication plan plays a crucial role in implementing a ‘One Health Approach’ to eliminate dog-mediated rabies. It raises awareness, promotes behaviour change, engages stakeholders, builds trust, sustains engagement, and optimizes resource utilization. By facilitating collaboration and communication among the health, veterinary, and municipal sectors, the plan enhances the collective efforts to eradicate rabies and protect both human and animal health.

DEVELOPING A COMMUNICATION PLAN

Developing a communication plan on rabies elimination that involves the health, veterinary, and municipal sectors is vital for fostering collaboration, aligning efforts, and maximizing the impact of collective action taken by the sectors. The key steps involved in developing a communication plan are:

Stakeholder identification: Identify key stakeholders within the health, veterinary, and municipal sectors, and the local bodies who will play a role in rabies elimination efforts. It includes representatives from public health departments, veterinary associations, animal control agencies, healthcare providers, local government authorities, and community organizations.

Goal setting: Establish clear and measurable goals for the communication plan. The goals should align with the overall objectives of rabies elimination such as increasing vaccination coverage, promoting responsible pet ownership, enhancing reporting mechanisms for dog bites, and raising awareness about the importance of timely treatment.

Audience analysis: Conduct an audience analysis to understand the characteristics, needs, and communication preferences of different target groups. It includes identifying at-risk communities, healthcare professionals, pet owners, local authorities, and the general public. Tailor the communication strategies and messages to effectively reach and engage specific audience.

Message development: Craft key messages that are accurate, clear, and resonate with the target audience. Emphasize the importance of collaboration among the health, veterinary, and municipal sectors in eliminating rabies. Highlight the benefits of responsible dog ownership, significance of vaccination, protocol for reporting and treating dog bites, and the role of each sector in rabies prevention and control.

Communication channels and tools: Determine the most appropriate communication channels and tools to reach the target audience. It may include a combination of traditional media (TV, radio, print), digital platforms (websites, social media), community events, educational materials, and training workshops. Consider the accessibility and reach of each channel to ensure maximum engagement.

Collaboration and coordination: Establish mechanisms for collaboration and coordination among the health, veterinary, and municipal sectors in implementing the communication plan. It may involve regular meetings, joint training sessions, shared resources, and a centralized platform for information sharing and updates. Encourage open communication and feedback loops among the sectors to address challenges and adapt strategies as needed.

Monitoring and evaluation: Implement a system for monitoring and evaluating the effectiveness of the communication plan. Track key performance indicators such as changes in vaccination rates, increased reporting of dog bites, and public awareness levels. Gather feedback from stakeholders and the public to assess the impact of communication activities and identify areas for improvement.

Continuous improvement: Continuously assess and improve the communication plan based on monitoring and evaluation results, feedback from stakeholders, and emerging needs and challenges. Adapt strategies, messages, and channels

as necessary to ensure the plan remains effective and aligned with the evolving context of rabies elimination efforts.

By developing a comprehensive communication plan that involves the health, veterinary, and municipal sectors, collaborative efforts to eliminate rabies can be enhanced. Effective communication will raise awareness, encourage behaviour change, promote responsible pet ownership, and strengthen reporting and treatment mechanisms, leading to the successful prevention and control of rabies while safeguarding the health and well-being of both humans and animals.

8

State Action Plan for Dog - Mediated Rabies Elimination

THEMATIC AREA 1- DATA COLLECTION AND ANALYSIS:

ANIMAL HEALTH

At present, the Department of Animal Husbandry and Veterinary does not have any reporting mechanism for suspected or laboratory confirmed cases of animal rabies, rabies vaccinations and dog population management. A separate mechanism through digital platform will be established and Mobile Veterinary Unit (MVU) utilized for active surveillance. A toll-free number 1962 is being used in parallel with other diseases. The veterinarians and para-veterinarians will be trained for animal rabies sample collection and rabies surveillance, and monitoring and funds for the same will be explored through the existing Assistance to States for Control of Animal Diseases (ASCAD) schemes. The State will conduct a study on identification of hotspots and risk areas. The prevalence in the neighbouring States will be studied for forecasting and preparation of strategy. The State is also implementing The Prevention and Control of Infectious and Contagious Diseases in Animals Act, 2009, and quarantine facilities will be established for suspected animals at various hotspots in the State. The College of Veterinary Sciences and Animal Husbandry will be utilized for animal healthcare facilities with coordination with North Eastern Regional Disease Diagnostic Laboratory (NERDDL). Standard Operating Procedures (SOPs) will be prepared in consulting with the National Centre for Disease Control (NCDC).

HUMAN HEALTH

The Integrated Health Information Platform (IHIP) is an existing platform within the Health Department that plays a crucial role in reporting dog bite cases and facilitating timely interventions. The IHIP serves as a centralized system for reporting and monitoring dog bite cases, ensuring prompt action and effective coordination among various healthcare facilities and personnel. Three kinds of forms are used for reporting: The S form, the P form and the L form. The S form is reported by field staff, specifically Auxiliary Nurse Midwives (ANMs), who are responsible for collecting information on dog bite cases at the community level. The ANMs, who are often the first point of contact in primary healthcare settings, complete the S form for every dog bite case they encounter. The form captures essential details such as the patient's demographic information, date and time of the bite, location, and severity of the wound. ANMs enter the information into

the IHIP system to initiate the reporting process. On the other hand, the P form is reported by Medical Officers and L form for laboratory confirmed cases by lab technicians (by laboratories having confirmatory test facilities for rabies) at public health facilities, ranging from Primary Health Centres (PHCs) and Community Health Centres (CHCs) to the district level. Medical Officers fill out the P form for each dog bite case attended to at these facilities. The P form captures additional clinical information, such as the patient's medical history, treatment provided, and Post-Exposure Prophylaxis (PEP) administered. Medical Officers input the information into IHIP, ensuring comprehensive reporting and enabling effective follow-up care. In addition to reporting by healthcare professionals within the public health system, IHIP also incorporates a mechanism called Event Alert which allows individuals in the community to report dog bite cases directly to their respective Accredited Social Health Activists (ASHAs), ANMs, Medical Officers, or staff nurses. The healthcare staff members, using their login credentials, can enter the information from the community-reported cases into the IHIP application or portal. This facilitates real-time reporting, prompt response, and appropriate allocation of resources to address dog bite incidents. The utilization of IHIP and the mandated reporting of S, P and L forms in both public and private health facilities across the State create a comprehensive and integrated system for tracking and managing dog bite cases. The system is supplemented by the robust reporting format developed by the State Integrated Disease Surveillance Programme (IDSP) cell to ensure that dog bites are reported within 24 hours, enabling timely interventions, such as follow up for administering PEP, monitoring patients, and implementing preventive measures to control the spread of rabies. By leveraging technology and involving multiple stakeholders, the IHIP streamlines the reporting process, enhances data accuracy, and supports evidence-based decision-making to effectively address the public health challenge of dog-mediated rabies. A joint outbreak investigation team will be carried out for any rabies control activities in areas identified as high-risk.

THEMATIC AREA 2- PREVENTION AND CONTROL:

ANIMAL HEALTH

The State has a mechanism of procurement which will be revised appropriately after the dog population census, and advisories/guidelines for pet owners regarding vaccination, animal bite, management of wound, and disposal of garbage will be prepared in local language and circulated. Yearly Mass Dog Vaccination (MDV) will be carried out with support from ASCAD and other stakeholders throughout the State. Coordination mechanism will be made with the Department of Environment, Forest and Climate Change (EF&CC) for control in wild animals.

HUMAN HEALTH

Availability and accessibility of human rabies vaccines in the State. Measures

need to be taken to improve the PEP Anti-Rabies Vaccination (ARV) coverage for humans –

- ◆ Availability and accessibility of ARV and Anti-Rabies Serum (ARS) to all animal bite victims at the State/ District Hospitals, CHCs, PHCs, central government hospitals.
- ◆ Implementation of Intradermal (ID) route ARV in the dog bites case attending in all PHCs and CHCs, and sensitization of all health professionals both in the government and private sectors to routinely practice ID route instead of Intramuscular (IM) route for rabies prophylaxis.
- ◆ Strengthening infrastructure for treating victims of animal bites by establishing Model Anti-Rabies Clinics (mARCs).

Ensuring availability of trained human resource concerning appropriate animal bite management/ID inoculation/ ARS infiltration.

- ◆ ARV and ARS are procured and supplied by government, pharmacy to all institutions.
- ◆ Availability of World Health Organization (WHO) pre-qualified vaccines and RIG to high-risk and exposed individuals.
- ◆ RIG (ERIG and HRIG) available only in district hospitals. Recommendations to be placed to supply ARS in all health facilities.
- ◆ Develop SOPs for sharing of information between sectors agreed upon at the State level.
- ◆ Draft SOP for outbreak response which will be uniformly followed. Information to be shared with Animal Husbandry Department and Municipality.
- ◆ Prepare SOPs for an active response to outbreaks.
- ◆ Uniform SOP to be followed. To engage rapid response teams for an outbreak.

Capacity building of professionals in appropriate animal bite management:

- ◆ Training of health professionals and paramedical staff on rabies pre and post-exposure prophylaxis as per national guidelines.
- ◆ Training of State, district and below district level healthcare professionals on programme management aspects.
- ◆ Joint training of health and veterinary professionals on the operational aspect of the rabies elimination plan.
- ◆ Training and capacity building of laboratory professionals on rabies diagnostics.
- ◆ Training on surveillance of animal bites and rabies case investigations and notification.

THEMATIC AREA 3- LABORATORY DIAGNOSIS:

Currently there is no laboratory for testing of human or animal rabies cases,

and no established SOP for collection, transportation and testing of sample in the State. The College of Veterinary Science and Animal Husbandry, Selesih, at present will serve as the Regional Referral Laboratory (RRL) for the department. A rabies diagnostic laboratory for animals will be proposed to be set up in the State by strengthening the existing Disease Diagnostic Laboratory, Aizawl, along with logistics and human resource requirements such as a veterinarian, laboratory technician and lab attendant. The personnel from each district will be sent for training on brain sample collection, packing, transportation and processing of samples. The department will also develop a platform for sharing data on positive cases with other stakeholders.

THEMATIC AREA 4- DOG POPULATION MANAGEMENT: (NOT AVAILABLE DUE TO ABSENCE OF STRAY DOGS IN THE STATE)

THEMATIC AREA 5- INFORMATION, EDUCATION AND COMMUNICATION:

Information, Education and Communication (IEC) on rabies and vaccination in both English and local language have been disseminated to the public in the form of leaflets and brochures created by the department. There is a need for comprehensive public awareness campaign about rabies prevention and vaccination both in human and animals, as well as for responsible pet ownership and it is proposed to be done in joint collaboration with the health department. All the departments will coordinate and collaborate to develop IEC materials that shall include both human health and animal component. It will be used to sensitize the para-veterinarians and animal health workers, and will also be distributed to the public and displayed at strategic public places. Proposal for use of digital platforms for advocating the prevention (PEP, wound care) and control of rabies in human and animals will be made to DIPR, AIR, DD and other media.

THEMATIC AREA 6- CROSS-CUTTING ISSUES:

A Joint Steering Committee with the Chief Secretary as Chairman, and a District Steering Committee with the Deputy Commissioner as Chairman and relevant stakeholders has been formed in the State and districts respectively. The Joint Steering Committee will develop monitoring framework for tracking the progress of implementation and prepare the TOR for the intersectoral Rabies Task Force. The department will develop mechanism for mobilizing emergency funds for rabies control from Central scheme like ASCAD, State government funds, private corporates, international bodies, donors and philanthropists.

THEMATIC AREA 7- RABIES FREE CITIES:

The Aizawl Municipal Corporation has conducted several interventions in the control of pet population in Aizawl through local councils and is involved in collecting dog population census along with their vaccination history. Solid waste management is implemented through PPP mode (AMC 60 per cent and local council 40 per cent which help tremendously in reducing scavenging by free roaming dogs. The AMC will provide active support aligning with the guidelines in controlling dog population and to encourage pet dog vaccination within our constituencies.



Stakeholders Involved In SAPRE

IDENTIFICATION OF STAKEHOLDERS INVOLVED AND THEIR ROLES AND RESPONSIBILITIES:

ROLE OF HUMAN HEALTH SECTOR:

At the Centre, the Ministry of Health and Family Welfare, National Centre for Disease Control will be the key stakeholder and nodal agency for the overall planning, coordination and implementation of the human health component in the country. The State, district and below district- level activities will be implemented through the existing health systems. The key role of the health sector under NAPRE will be:

- ◆ Advocacy with different stakeholders for prioritizing rabies to achieve commitment at all levels so that resources could be mobilized for prevention and control of the disease.
- ◆ Ensure accessibility and rapid availability of treatment to all animal bite victims and rabies patients.
- ◆ Capacity building and training of health professionals in appropriate animal bite management and rabies prophylaxis at all levels.
- ◆ Production of standard IEC materials for wider circulation.
- ◆ Strengthening maintenance of a database on rabies control programme (vaccination coverage), analysis and sharing of information with other stakeholders.
- ◆ Strengthening Public-Private Partnership (PPP) through engagement with professional organizations such as IMA, IAP, and communities/ organizations involved in the field of rabies for undertaking research and other activities.
- ◆ Strengthening of rabies diagnostic laboratories, including the standardization of protocol for diagnosis, to ensure uniformity across identified diagnostic laboratories in the country.
- ◆ Intersectoral coordination and sharing of information between the animal health and wildlife health sector to facilitate better implementation.
- ◆ Regularly updating technical guidelines on rabies.
- ◆ Regulation of rabies sera and sera producing pharmaceuticals as per the Drugs and Cosmetics Act, 1940, and rules in vogue.
- ◆ Monitor and evaluate the rabies control programmes implemented by the field units.

- ◆ Coordinate and conduct operational research on rabies in collaboration with national, international, diagnostic and research institutions.

ROLE OF VETERINARY SECTOR:

At the Centre, Ministry of Fisheries, Animal Husbandry and Dairying will be the key stakeholder and nodal agency for technical guidance to the States for the activities planned under the animal health component. The programme in the States will be implemented through the State Veterinary Department, veterinary colleges, municipalities, and Panchayati Raj Institutions. In this NAPRE, the role envisaged for the animal sector is:

- ◆ Advocacy with different stakeholders for prioritizing animal rabies to achieve commitment at all levels so that resources could be mobilized for the elimination of the disease.
- ◆ Mapping of high risk, medium risk and low risk areas of rabies in association with the health department and other stakeholders to prioritize areas for MDV and DPM.
- ◆ Ensure uninterrupted supply of logistics (money, human resource and material) for undertaking strategic mass vaccination and ring vaccinations activities for the areas targeted for rabies elimination.
- ◆ Capacity building for veterinary professionals, para-vets, dog catchers, post-vaccination survey staff, and other allied personnel.
- ◆ Strengthening of rabies diagnostic laboratories from the veterinary sector.
- ◆ To develop standard (IEC) materials for wider circulation.
- ◆ Intersectoral coordination and sharing of information on rabies in the animal health and wildlife health sector to facilitate better implementation.
- ◆ To be part of joint investigations whenever there are human rabies cases or increasing dog bite cases.
- ◆ Liaise with different stakeholders/agencies/international organizations (FAO, OIE, WHO, SAARC) for technical support on rabies prevention and control.
- ◆ The possibility of linking the National Animal Disease Reporting System (NADRS), National Animal Disease Referral Expert System (NADRES) to the IHIP portal for selected parameters is to be explored.
- ◆ Regularly publishing and updating technical guidelines on animal rabies.
- ◆ Regulation of rabies sera and sera producing pharmaceuticals as per the Drugs and Cosmetics Act, 1940, and rules in vogue.
- ◆ Monitor and evaluate the control programmes implemented by the field units.
- ◆ Coordinate and conduct operational research on rabies in collaboration with national, international, diagnostic and research institutions.
- ◆ Establishment/strengthening of check post/quarantine centres since unvaccinated as well as diseased animals can easily enter and introduce rabies in areas where the cases have reduced.

- ◆ To coordinate with the stakeholders involved in strategic Dog Population Management (DPM).
- ◆ Since the Veterinary Council of India is responsible for making provisions for the regulation of veterinary practice and standards of veterinary education, animal rabies should be included as a priority disease in the curriculum of veterinary students in colleges.
- ◆ Veterinary colleges and veterinary universities can incorporate training of veterinary students on MDV and mass DPM as per Animal Welfare Board of India (AWBI) norms.
- ◆ Increase the involvement of veterinary students in activities of MDV and MDPM during their routine internships.

ROLE OF WILDLIFE SECTORS:

Most of the forests are surrounded by villages and rural dwellings, increasing the risks of transmission at the domestic-wildlife interface, hence collaboration between livestock and wildlife sectors (forestry) is equally important. In NAPRE, the role envisaged are: -

- ◆ Frame technical guidelines and monitoring framework for wildlife rabies.
- ◆ Identify animal rabies endemic areas near national parks/conservation areas and forests.
- ◆ Undertake surveys in wildlife reservoirs among captured and free-roaming wild animals.
- ◆ Capacity building of zoo personnel to handle wildlife rabies cases.
- ◆ Ensure pre-exposure prophylaxis for rabies among zoo personnel, wildlife workers and animal handlers.
- ◆ Ensure pre-exposure prophylaxis rabies vaccinations for zoo animals.
- ◆ Disseminate IEC for zoo and animal handlers/ zoo workers/ visitors.
- ◆ Sharing of rabies disease outbreak information among wild animals to DAHD and health sector.
- ◆ To undertake research on wildlife sentinels, transmission patterns, and spillovers of rabies virus from wild animals to domestic animals.
- ◆ To undertake active surveillance to identify the wildlife reservoirs for the Lyssa virus.
- ◆ To undertake risk assessment in areas adjoining the forests, sanctuaries, and national parks.
- ◆ Predator-proof sheds for livestock should be made compulsory for those families who live near the Wildlife Protected Area (WPA)/forest/sanctuary to ensure no spillovers.
- ◆ Pre-exposure rabies vaccination protocols should be done routinely for dogs and livestock living around WPA/forest/sanctuary.
- ◆ To undertake proper disposal of animal carcasses near WPA/forest/sanctuary.



- ◆ Collection of surveillance samples from wild animals in cases of suspected rabies deaths.
- ◆ Implementation of three-four layered agro-forestry plantations for the prevention of wildlife-domesticated animal conflict in the fringe areas of villages and the fallow area near the WPA/forest/sanctuary.
- ◆ The wildlife sanctuaries/national parks marked for the conservation of wild cats by National Tiger Conservation Authority to consider the control of stray dog population and ARV clubbed with other mass vaccination campaigns for distemper and parvovirus.

ROLE OF MINISTRY OF AGRICULTURE AND FARMERS WELFARE:

At the Centre, Indian Council of Agricultural Research (ICAR) in the Ministry of Agriculture and Farmers Welfare will be the nodal agency for coordinating, guiding and managing research and education in animal sciences with the States for the research activities planned under the animal health component. In the NAPRE, the role envisaged for ICAR is:

- ◆ Framing technical guidelines, SOPs and monitoring framework on rabies elimination.
- ◆ Coordinate and conduct operational research on rabies in collaboration with national, international, diagnostic and research institutions.
- ◆ Undertake community awareness programme in ICAR network of institutes and Krishi Vigyan Kendras.

ROLE OF ANIMAL WELFARE BOARD OF INDIA:

- ◆ To ensure implementation of The Prevention of Cruelty to Animal Act, 1960, in coordination with the State government and local bodies.
- ◆ To work with the State veterinary department, and coordinate with the local governing bodies for developing a strategic Dog Population Management (DPM) plan as per the ABC Rule.
- ◆ Services and assistance of animal welfare organizations (AWOs) can be utilized with respect to certain aspects of DPM and MDV drives; and isolation and observation of aggressive dogs suspected with rabies.
- ◆ The services of AWOs will be utilized constructively for prevention and control of rabies in their jurisdiction area; wherever possible local governments can take assistance from AWOs in social mobilization, community awareness and rescue operations for undertaking the MDV and DPM.

ROLE OF URBAN AND RURAL LOCAL GOVERNING BODIES (LGB):

(Municipal Corporation, Zilla Parishad, gram panchayat)

As per the Panchayat Raj Act and Municipality Act, the local self-government, councils, and corporations are in charge of implementing the ABC programmes. The acts are to be implemented as per the guidelines (for stray dog vaccinations, and dog population management). The activities envisaged for LGB are:

- ◆ Advocacy, training, and capacity building of Panchayati Raj Institutions (PRI) members on prevention and control of rabies in their village/ward.
- ◆ Gram Sabha to be convened immediately to inform the public regarding the incidence of rabies and the need for various mitigation measures and legislation.
- ◆ Members can immediately report to the animal husbandry and health departments when an unusual incidence of dog bite or a potential rabies case in their respective ward/village is noted.
- ◆ Members can ensure that human bite victim (exposed) gets proper (full dose) medical treatment.
- ◆ Provide a list of patients exposed to animal bites and the same be maintained in the respective ward/village and follow up measures to be done strictly.
- ◆ Monitor and strictly implement mass vaccination campaign of dogs in their respective ward/villages.
- ◆ Encourage pet dog registration in their wards/constituencies/villages.
- ◆ Resolution can be passed in Gram Sabha regarding restriction of movement of dogs in their respective ward and complete ban on importation/introduction of new dogs.
- ◆ Monitor pet owners and encourage them to register and vaccinate their pets.
- ◆ Monitor MDV and DPM plans undertaken by the concerned agency.
- ◆ Coordination with health and veterinary sectors for strategic mass vaccination of stray dogs.
- ◆ Monitor solid waste management and garbage disposal areas in their wards, and identify problem areas of waste collection points and ensure proper waste management to prevent conglomeration of stray dogs in such areas.
- ◆ Information sharing on animal bites and rabies cases to the local animal husbandry department, health department, and local authority.
- ◆ To provide required logistics for undertaking DPM and mass stray dog vaccinations such as dog pounds (ABC centre with operation theatre/mobile clinic and dog kennels), dog vans and logistic support to run the programme as per the ABC (Dogs) Rules, 2001.
- ◆ Monitoring of slaughterhouses and meat stalls with existing laws (Food Safety and Standards Authority of India, Licensing, and Registration, 2011), and regular monitoring of waste generated from the units.
- ◆ To collect waste from vegetable, fruit, flower, meat, poultry, and fish markets on a day-to-day basis and promote setting up of decentralized compost plant or bio-methanation plant at suitable locations in the markets or in the vicinity of markets to ensure hygienic conditions to accumulation of waste which would attract dogs (Free-Roaming Dogs (FRDs) and community-owned dogs).

- ◆ Special focus on preventing the disposal of animal carcasses in and around peripheral areas of villages, towns, cities, and around forest areas so as to avoid easy availability of food for FRDs and scavenging wild animals and further prevent the interactions between wildlife and domestic animals.

ROLE OF MINISTRY OF HUMAN RESOURCE DEVELOPMENT:

Children are most vulnerable to dog bites. It is therefore important to include rabies in the formal education system at all levels.

- ◆ Prevention of rabies and animal bite management incorporated in the school health programme.
- ◆ Inclusion of the basic prevention and control measures for rabies in the school curriculum in order to sensitize children and youth about the disease and measures to be undertaken in case of animal bites.
- ◆ Capacity building of teachers on first-aid measures in the event of animal bites. To ensure that dogs in and around school premises are vaccinated.
- ◆ Conduct frequent educational camps for creating awareness against rabies.
- ◆ Include the observation of World Rabies Day every September 28th in the school and college premises.
- ◆ Ensure proper waste management in school compounds to prevent access to garbage to free- roaming or owned dogs.

ROLE OF MINISTRY OF DRINKING WATER AND SANITATION, AND MINISTRY OF HOUSING AND URBAN AFFAIRS SWACHH BHARAT MISSION:

- ◆ At the central level, the Ministry of Housing and Urban Affairs is the nodal ministry for the formulation of policies, strategies, and guidelines and assists the States by providing financial assistance for the development of water supply and sanitation infrastructure in the cities and towns. Swachh Bharat Mission (SBM), an initiative of the Government of India, has the objective of improving sanitation by eliminating open defecation, eradicating manual scavenging, managing municipal solid waste through modern and scientific techniques, and generating awareness about sanitation. A viable linkage may be created by including various strategies used in the NAPRE within the ambit of the Smart Cities Mission of the Ministry of Housing and Urban Affairs. DPM can be undertaken under the aegis of the Urban Development Department vide support of various local bodies.
- ◆ LGB need to explore the role of SBM regarding solid waste management as it would help in maintaining clean garbage areas and thus the stray dog population. SBM in rural areas is implemented by the Ministry of Drinking Water and Sanitation, and in urban areas by the Ministry of Housing and Urban Affairs. The role of the ministries through the SBM is:
- ◆ Steps should be taken to exclude dogs from sources of food (rubbish dumps and abattoirs, and installing animal-proof rubbish containers.)

- ◆ Swachh City Plans under SBM could consider including steps to install animal proof rubbish containers.
- ◆ Monitor solid waste management in the wards, identify problem areas of waste collection points, and ensure proper waste management to prevent conglomeration of stray dogs in such areas.
- ◆ Community awareness and IECs on maintaining clean neighbourhoods and how it corresponds to the dog population.
- ◆ Strict monitoring of waste generated from slaughterhouses and meat stalls with existing laws i.e. Food Safety and Standards Authority of India (FSSAI Regulations) (Licensing and Registration) 2011.
- ◆ To undertake training and capacity building of local bodies and other stakeholders.

ROLE OF DEPARTMENT OF BIOTECHNOLOGY, MINISTRY OF SCIENCE AND TECHNOLOGY:

Provide technical and any other support in operational research activities planned by the animal health, human health, and all the other stakeholders identified under the NAPRE on rabies and Lyssa virus in the Indian context.

ROLE OF MINISTRY OF FINANCE:

The Ministry of Finance (MoF) should provide adequate fund for the implementation of NAPRE in the country. Adequate budget provision for rabies prevention and dog population control should be made available at different levels to all stakeholders. The MoF should provide contingency funds for rabies outbreak containment in addition to routine prevention and control activities.

ROLE OF PRIVATE PARTNERS, NON-GOVERNMENT SECTORS, PROFESSIONAL MEDICAL AND VETERINARY ORGANIZATIONS:

The elimination of dog-mediated rabies envisages active participation of the private and NGO sectors. The key roles identified are:

- ◆ Develop a strong volunteer network for community engagement and mobilization.
- ◆ Promotion of Anti-Rabies Vaccination campaigns.
- ◆ Promote responsible pet ownership.
- ◆ Intensify rabies awareness education and interpersonal communication campaign.
- ◆ Surveillance/reporting of suspected animal and human rabies cases.
- ◆ Ensure animal bite management in humans and animals.

ROLE OF INTERNATIONAL ORGANIZATIONS:

International organizations such as the World Organization for Animal Health (OIE), World Health Organization (WHO), Food and Agriculture Organization (FAO), and other organizations can provide technical support for implementing the strategic components of the NAPRE.

TABLE 7: LIST OF DISTRICT SURVEILLANCE OFFICERS (DSO) IN MIZORAM:

SI No.	Name of District	Name of DSO	Contact No.
1	Aizawl East	Dr Lalhlunpuii	9436361253
2	Aizawl West	Dr R Lalnienga	8118942725
3	Champhai	Dr Vanzarliani	9436141070
4	Hnahtial	Dr R Lalsanglura	9862327400
5	Khawzawl	Dr Albert Lalhminghlua	9862829724
6	Kolasib	Dr Zonunsiamama	9436151903
7	Lawngtlai	Dr S Thaizi	8974285859
8	Lunglei	Dr Lalrinthangi	9436361845
9	Mamit	Dr Lalnuntluangi Khiangte	8974945353
10	Saitual	Dr Zothanpari Chhakchhuak	9436379301
11	Serchhip	Dr Lallawmkimi Chhakchhuak	9856853895
12	Siaha	Dr S Vabeilysa	9436148247

TABLE 8: LIST OF NODAL OFFICERS FOR ANTI-RABIES CLINIC (ARC) IN MIZORAM:

SI No.	Name of District/ Hospital	Name of Nodal Officers	Contact No.
1	Zoram Medical College	Dr Betty Laldintluangi	8974606623
2	Champhai	Dr Lalnuntluanga	8413970507
3	Civil Hospital Aizawl	Dr Lalramsanga	9862164030
4	Hnahtial	Dr R Lalsanglura	9862327400

SI No.	Name of District/ Hospital	Name of Nodal Officers	Contact No.
5	Khawzawl	Dr Melody Lalmuanpuii	8974212717
6	Kolasib	Dr Lalrawngbawla Colney	9862439238
7	Lawngtlai	Dr Richard Lalrinmawia Ralte	8119880987
8	Lunglei	Dr Sailopari Sailo	8974741397
9	Mamit	Dr Lalfakzuala Hrahse	9863232141
10	Saitual	Dr Lawmsangzuala Renthlei	8731966014
11	Serchhip	Dr Lallawmkimi Chhakchhuak	9856853895
12	Siaha	Dr Laltanpuia Chhangte	7085699210

TABLE 9: LIST OF VETERINARY OFFICERS (VO) IN MIZORAM:

SI No.	Name of District	Name of Veterinary Officers	Contact No.
1	Aizawl	Dr Robert Rualthankhuma	9436140179
2	Aizawl	Dr Zohlimpuia	7005148162
3	Aizawl	Dr Ruby Ngurnunmawii Sailo	9862207041
4	Champhai	Dr PL Ruatfela	8730029849
5	Hnahthial	Dr C Sanghluna	9383076502
6	Khawzawl	Dr Lalbiakzuala Sailo	9233945933
7	Kolasib	Dr K Lalbiaknungi	8729986893
8	Lawngtlai	Dr Charlie C. Chawngthu	9436378527
9	Lunglei	Dr K Zothanpuii	8837272669

SI No.	Name of District	Name of Veterinary Officers	Contact No.
10	Mamit	Dr Lalramnghaka	9862357217
11	Saitual	Dr V Vanneihluanga	9863145727
12	Serchhip	Dr H Vanlalrawna	8730970402
13	Siaha	Dr John Beizalaisa Khithie	8794547701

TABLE 10: LIST OF WILDLIFE OFFICIALS FOR IN MIZORAM:

SI No.	Name of Division	DCF/DFO/FD	Contact No.	Email id
1	Khawzawl Wildlife Division	Lawmnapari	8014798083	kzlwildlife@gmail.com
2	Aizawl Wildlife Division	PC Laltanpuia	9436961354	dcfwazl@yahoo.com.in
3	Chhimituipui Wildlife Division	Lalruatfela	7005072179/ 8794579685	Efcclawngtlai07@gmail.com
4	Director, Dampa Tiger Reserve	PC Laltanpuia	9436961345	fddampa@gmail.com
5	MADC	Pu Thally T Azyu	9436149073	mafcl12@gmail.com
6	Aizawl Forest Division	Lalnunsanga Khawlhing	8794718449	Dfoaizawl115@gmail.com
7	Kolasib Forest Division	Margaret Lalramchhani	8974436843	dfo.kolasib@gmail.com
8	Lunglei Forest Division	PC Lalchhandama	9612609107	dfolunglei@gmail.com
9	Champhai Forest Division	Lalduhthlana	8974058661	dfocpi@gmail.com
10	Mamit Forest Division	Lalrinmuana	8729917156	mamitforestdivision@gmail.com
11	Kawrthah Forest Division	Samson Thanruma	9863577351	Dfokawrthah.div@gmail.com
12	N Vanlaiphai Forest Division	C Lalkhawthanga	7085220214	Clkthanga11@gmail.com

SI No.	Name of Division	DCF/DFO/FD	Contact No.	Email id
13	Darlawn Forest Division	Lalnunzira	7005634196	dfodarlawn@gmail.com
14	Thenzawl Forest Division	Lalbiakchama Chawngthu	8974419028	thenzawlforest@gmail.com
15	Tlabung Forest Division	Solai T Azyu	9862705396	tlabungdfo@gmail.com
16	WPO North	Mahesh Zoramthara	9436354743	mzsingson@gmail.com
17	WPO South	PC Lalchhandama	9612609107	solai.envi@gmail.com
18	DFO (Extension)	Lalnunpuii	8132835041	samsonthan@gmail.com
19	DFO (Protection)	B Lalsiamliana	9612082634	dfoprotectionazl@gmail.com
20	CF (CC)	Lalrammawii Sailo	9436150119	cfcaizawl@gmail.com
21	CF (NC)	Lalnunzira	7005634196	cfnc.kolasib@gmail.com
22	CF (SC)	Laltlanhlua Zathang	9436195286	cfnc.kolasib@gmail.com
23	DCCF, LADC, Lawngtlai	Lalromawia		

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Rabies Surveillance Under SAPRE

TRAINING

The Department needs to conduct training for rabies surveillance as under:

- ◆ Master trainers of staff for sample collection.
- ◆ Hands-on training to the field staff.

SURVEILLANCE -HUMAN COMPONENT

- ◆ Strengthening the current activities of rabies notification and line listing in human health sectors through IHIP portal for notification of animal bite victims/ rabies cases.
- ◆ Strengthening periodic reporting system about animal bites and rabies incidence through IDSP and IHIP.
- ◆ Resource mapping – mapping the facilities (State/ district wise) for management of animal bite victims.
- ◆ Treatment facilities for suspected rabies cases or infectious diseases hospitals, and mapping of laboratories for rabies diagnostics.

CASE DEFINITION:

Case definition	Type of reporting/ format
<p>Suspect case: Death of a human with history of dog bite few weeks/months preceding death. Wherever available, the details of such cases will be shared in a line list– Name, Age, Gender, Address.</p>	<p>To be reported in S form by ANM/health workers</p>

Case definition	Type of reporting/ format
<p>Probable case: A suspected human case plus history of exposure to a (suspect/probable) rabid animal.</p> <p>Exposure is usually defined as a bite or scratch from a rabies susceptible animal (usually dogs). It could also be lick exposure to open wound, abrasion, mucous membranes of the patient.</p> <p>A suspect rabid animal is a rabies-susceptible animal (usually dogs) which presents with any of the following signs at time of exposure or within 10 days following exposure: Unprovoked aggression (biting people or animals or inanimate objects), hyper salivation, paralysis, lethargy, abnormal vocalization, or diurnal activity of nocturnal species. Whenever the history of mentioned signs cannot be elicited, the history of exposure to rabies-susceptible animal would be considered adequate.</p> <p>A probable rabid animal is a suspect rabid animal (as defined above) with additional history of a bite by another suspect / probable rabid animal and/or is a suspect rabid animal that is killed, died, or disappeared within four-five days of observing signs of illness.</p> <p>Wherever available, the details of such cases should be shared in a line list as per line list design of IDSP.</p>	<p>To be reported in P form (by Medical Officers/doctors)</p>
<p>Laboratory confirmed case: A suspect or a probable human case that is laboratory-confirmed.</p> <p>Laboratory confirmation by one or more of the following:</p> <ol style="list-style-type: none"> 1. Detection of rabies viral antigens by direct fluorescent antibody test (FAT) or by ELISA in clinical specimen, preferably brain tissue (collected post mortem). 2. Detection by FAT on skin biopsy (ante mortem). 3. FAT positive after inoculation of brain tissue, saliva or CSF in cell culture, or after intra-cerebral inoculation in mice or in suckling mice. 4. Detectable rabies-neutralizing antibody titre in the serum or the CSF of an unvaccinated person. 5. Detection of viral nucleic acids by PCR on tissue collected post mortem or intra vitam in a clinical specimen (brain tissue or skin, cornea, urine or saliva). 	<p>To be reported by lab technician in L-Form (by laboratories having confirmatory test facilities for rabies)</p>



JOINT OUTBREAK INVESTIGATION

A joint outbreak investigation involving the veterinary, health and municipal departments is a crucial step in addressing a case of human rabies. Such collaboration ensures a comprehensive and coordinated response to identify the source of the outbreak, prevent further transmission, and implement effective control measures. An overview of the key aspects involved in a joint outbreak investigation:

Case identification and confirmation: The health department identifies and confirms the case of human rabies through clinical evaluation, laboratory testing, and medical history analysis. Once a case is confirmed, it triggers the need for a thorough investigation to understand the extent and potential sources of the outbreak.

Epidemiological assessment: The health department, in collaboration with the veterinary department, conducts an epidemiological assessment to gather information about the affected individual, including their exposure history, contact with animals, and travel patterns. The assessment helps in identifying potential sources of infection and determining the scope of the outbreak.

Animal contact investigation: The veterinary department plays a crucial role in investigating animal contacts associated with the confirmed case. It includes tracing and examining animals, particularly dogs that may have transmitted the rabies virus. The veterinary department may perform animal testing, such as post-mortem examinations or laboratory analysis of animal samples, to confirm rabies infection.

Environmental assessment: The municipal department is responsible for conducting an environmental assessment to identify areas or factors that may contribute to the spread of rabies. It includes assessing the presence of stray animals, animal shelters, waste management practices, and other environmental factors that could increase the risk of exposure to rabid animals.

Collaborative data analysis: The veterinary, health, and municipal departments jointly analyse the data collected during the investigation. The analysis includes mapping and identifying patterns of human and animal rabies cases, determining the source and routes of transmission, and identifying potential risk factors contributing to the outbreak.

Control measures implementation: Based on the findings of the investigation, the three departments collaborate to implement appropriate control measures which may include targeted vaccination campaigns for domestic animals, particularly dogs, in the affected areas to interrupt the transmission cycle. Other measures may involve public awareness campaigns, enforcement of responsible pet ownership practices, enhanced surveillance, and collaboration with relevant stakeholders to address specific risk factors identified during the investigation.

Communication and coordination: Effective communication and coordination among the three departments are essential throughout the outbreak investigation to ensure that information is shared in a timely manner on a common data sharing platform, decisions are coordinated, and control measures are implemented consistently. Regular meetings, joint action plans, and information-sharing mechanisms help maintain alignment and streamline efforts.

Monitoring and evaluation: The three departments continue to monitor the progress and effectiveness of the control measures, including assessing the impact of vaccination campaigns, tracking human and animal rabies cases, evaluating the implementation of responsible pet ownership practices, and adjusting strategies as required. Monitoring and evaluation provide valuable insights for future outbreak preparedness and response.

By conducting a joint outbreak investigation, the veterinary, health, and municipal departments combine their expertise and resources to address human rabies outbreaks comprehensively. The collaborative approach strengthens the control measures implemented, enhances communication and coordination, and ultimately contributes to the containment and prevention of rabies transmission, protecting both human and animal health within the affected area.

SURVEILLANCE – ANIMAL COMPONENT

Surveillance programme for animals shall include laboratory and serological surveillance as per the standard guidelines by DAHD. Recording and reporting of all animal bites events and animal rabies cases occurring in the community is an essential step for maintaining surveillance and will be undertaken through a common portal. Various recording and reporting formats would be framed for the animal health facility in the government and the private sector as per the standard guidelines by DAHD which would be implemented to strengthen the surveillance activities. The formats would be available at all animal health facilities at the block and district levels.

SURVEILLANCE IN WILD ANIMALS

As rabies virus is maintained in a wide range of wild animals, there may be disease transmission at the domestic-wildlife interface in areas adjoining the forests. Therefore, a collaboration between livestock and forestry sectors (wildlife) is important for disease surveillance, sharing of disease outbreak information, and prevention and control programme. Activities under this will be undertaken by the State forest department in coordination with the veterinary department, local governing bodies and NGOs.

Free-ranging wild animals - In case any clinical signs/pathological lesions of suspected rabies is detected in any susceptible free-ranging wild animal, the respective wildlife/forest authorities should inform the veterinary department.

The samples will be referred to the Regional/State/National Referral Laboratory by respective wildlife/forest authorities.

Captive wild animal - In case any clinical signs/pathological lesions of suspected rabies is detected in any susceptible captive wild animal, the respective zoo authorities should inform the veterinary department. The samples will be referred to regional/state/national referral laboratories by respective wildlife forest authorities.

In both cases, active surveillance must be conducted to establish:

- ◆ Identify whether there is a presence of any other wild animal in the area which may have clinical signs or pathological lesions of suspected rabies.
- ◆ Identify whether there is any suspected rabies case in domestic animals in the vicinity.
- ◆ Determine whether any domestic animal has been bitten by wild animals in the vicinity.
- ◆ Determine whether there were any Suspected, Probable, or Confirmed animal rabies case in the vicinity among free-roaming dogs, pet dogs, community-owned dogs in local communities inhabiting around the perimeters of wildlife areas and forest reserves.

In such cases, the community leader should notify the local wildlife/forest authorities and the veterinary department.

EVENTS- BASED SURVEILLANCE SYSTEM AND PUBLIC HEALTH ACTION TO BE TAKEN FOR ANIMAL HEALTH SECTOR OBSERVED ABNORMAL BEHAVIOUR IN A STRAY ANIMAL (DOGS RUNNING AMOK OR CAUSING UNPROVED BITES)

ACTION TO BE TAKEN IN THE VETERINARY SECTOR

- ◆ Complete epidemiological investigation of the event and active case search in and around areas.
- ◆ Follow up of the animal that had bitten livestock/pet animal - status alive or dead.
- ◆ Notify to the authorities in standard format -- block/district with Unique Case ID / State level.
- ◆ Conduct risk assessment and ensure PEP of those in contact with the suspected animal.
- ◆ In case of death, send the biological sample to the lab with TPL.
- ◆ Issue advisory/IEC about dead body disposal and use of milk or meat in case of livestock animal

DEATH OF A PET FOLLOWING ANIMAL BITE/UNEXPLAINED DEATH WITHOUT HISTORY OF EXPOSURE OR DEATH OF A LIVESTOCK FOLLOWING ANIMAL BITE/UNEXPLAINED DEATH

WITHOUT HISTORY OF EXPOSURE

ACTION TO BE TAKEN

- ◆ Complete an epidemiological investigation of the event and enquire about the status of vaccination.
- ◆ Follow up of the animal that had bitten the livestock/pet animal - status alive or dead).
- ◆ Send sample to the lab in the Triple Layer Packaging (TLP) (saliva/brain tissue, if dead).
- ◆ Issue advisory/IEC about dead body disposal and use of milk or meat in case of livestock animal.
- ◆ Notify the respective authorities.
- ◆ Do risk assessment and ensure PEP of those in contact with the dead animals.

UNEXPLAINED DEATH OF WILD ANIMAL (CAPTIVE AND FREE-ROAMING BOTH)

The event can be observed by a common man/forest dweller/workers/ woodcutters/wildlife officers/forest officers/veterinary/healthcare worker

ACTION TO BE TAKEN

- ◆ Immediately inform the concerned wildlife officer/ LGB.
- ◆ Complete epidemiological investigation of the event through RRT.
- ◆ Send sample to the lab in the TLP (saliva/brain tissue, if dead).
- ◆ Issue advisory/ IEC about dead body disposal and use of milk or meat in case of livestock animal.
- ◆ Notify the respective authorities.
- ◆ Conduct risk assessment and ensure PEP of those in contact with the dead animals.

DEATH OF ANY STRAY ANIMAL - DOGS.

The event can be observed by a common man/veterinary/municipal/ / healthcare workers

ACTION TO BE TAKEN

- ◆ Immediately inform the municipal/ LGB, and animals should be immediately removed from the community to prevent further risk of exposure. It should be confined and appropriate action to be taken as per local laws.
- ◆ The appropriate biological sample shall be taken after the death of the animal (samples from the central nervous system for laboratory diagnosis, if available).
- ◆ Active search of cases and exposed animals in and around the area.

- ◆ Conduct risk assessment and ensure full rabies PEP for those who exposed.

STANDARD CASE DEFINITION TO BE USED FOR SURVEILLANCE SYSTEM

STANDARD CASE DEFINITIONS FOR RABID ANIMALS

As per the WHO guidelines, proposed case definitions and surveillance activities to be undertaken by the veterinary officer in case of Suspected, Probable and Lab Confirmed animal rabies.

STANDARD CASE DEFINITION FOR ANIMAL RABIES

Case definition	Type of reporting/format
Suspected animal rabies	A case that is compatible with a clinical case definition of animal rabies. An animal that presents with any of the following signs - hyper salivation, paralysis, lethargy, unprovoked abnormal aggression (biting two or more people or animals and/or inanimate objects), abnormal vocalization and diurnal activity of nocturnal species, or any animal showing signs of dumb form of rabies.
Probable animal rabies	A suspected case + reliable history of contact with a suspected, probable or confirmed rabid animal and/or an animal with suspected rabies that is killed, died or disappears within four-five days of observation of illness.
Confirmed animal rabies	A suspected or probable animal case confirmed in a laboratory.
Not a case	A suspected or probable case that is ruled out by laboratory tests or epidemiological investigation (appropriate quarantine period in eligible animals).

LABORATORY SURVEILLANCE

Lab-based surveillance would be done when the suspected/confirmed animal is dead and post mortem is done, and laboratory confirmation is needed to confirm whether the case was rabies. It is especially important when the dog is known to cause dog bites in an area.

VIROLOGICAL SURVEILLANCE

The brain tissue samples from carcasses (especially dogs and cats) shall be collected and subjected to a rapid antigen detection test and FAT to find a rabies case. Samples tested positive to FAT could be archived for molecular analysis and research purpose to identify the circulating virus in the region.

TECHNIQUE AVAILABLE TO ESTIMATE THE POPULATION OF DOGS

By conducting local house-to-house questionnaire-based surveys to estimate the number of owned dogs, the mean number of owned dogs per household, and dog : human ratios. Since the total human population or number of households is generally known through national population censuses, an estimate of the owned dog population can be extrapolated.

PLAN VACCINATION CAMPAIGN ON THE GROUND

A meeting with stakeholders (AHD, health, LGB, NGOs, rabies Committee) will be set to discuss:

- ◆ Strategies on how to cover most of the population.
- ◆ Logistics includes the source of vaccines, human resources and their identification, how to inform the community about the activity, where to get the dog population list, and the activities on the vaccination day.

ENSURE COMMUNITY AND DOG OWNERS ARE AWARE OF THE VACCINATION CAMPAIGN

A successful campaign will involve an intensive communication strategy about the date and time of vaccinations. A detailed vaccination schedule of the place to be visited by the teams will be prepared in advance and distributed to all the concerned in-charges, who, in turn, will inform the public so that they can bring their pets and community dogs to the designated areas. Mass community engagement campaigns will be done before the beginning of MDV.

ASSESSMENT OF POST VACCINATION COVERAGE

- ◆ To assess the success of MDV, it is essential to conduct sero-monitoring of the vaccinated dog population.
- ◆ A survey will be undertaken within a week of the MDV campaign in the vaccinated areas to assess the numbers of marked /unmarked dogs, and conduct proportional counts (the number of dogs with colour mark), and also by using a questionnaire survey of the household.
- ◆ A revaccination campaign will be organized if the coverage is found to be below 70 per cent of the estimated dog population.



- ◆ The details of animals vaccinated in the field will be reported using the Monthly Animal Health Report Form to the local authority.
- ◆ The local authority will then issue a completed mass vaccination certificate to the village/block/district.

HOW TO ENSURE SUSTAINABILITY OF THE RABIES CONTROL PROGRAMME

To ensure sustainability of the rabies control programme, there is a need for the creation of a separate division for rabies in the department for planning and implementing the activities. There should also be sufficient fund for capacity building of human resources, vaccines, logistics and diagnostics.

P Form



National Centre for Disease Control
Ministry of Health and Family Welfare
Government of India



Line List of Suspected/ Probable/ Confirmed Rabies Cases/ Deaths*

Date:

Name of Nodal Person:
Designation of Nodal Person:

Contact Number:
Email ID:

S.No	Name			Age	Sex	Contact Number	District	Sub District/ Taluk/Block/ Mandal	Village	Biting Animal (Dog & Other)	Suspected /probable/ Confirmed	Place of bite incidence			Category of Bite	Status of PEP (Complete/ Partial/ Nil/NA)	Details of reporting health facility		Outcome of patient (Death in Hospital/ LAMA/ Alive)	Bite from Stray Dog/ Pet Dog	Mobile Number	Date of bite		
	First Name	Middle Name	Last Name									Name of Institute	District											

To be reported by Health facilities to District Nodal Officer, State Nodal Officer & National Program Division (Delhi) at napreindia-ncdc@ncdc.gov.in every month before 5th day



STATE ACTION PLAN FOR DOG MEDIATED
RABIES ELIMINATION FROM MIZORAM BY 2030

ANNEXURE-2



Laboratory Diagnosis of Rabies

STATE-LEVEL LABORATORIES

The State has identified the Virus Research and Diagnostic Laboratory (VRDL) in Zoram Medical College (ZMC) at Falkawn for human rabies diagnosis. The State Referral Laboratories (SRL) will undertake capacity building on various epidemiological and microbiological aspects of rabies.

ROLE OF STATE LABORATORIES

ANIMAL DIAGNOSTIC LABS

- ◆ Provide training on brain sample collection, packing, transportation, processing of samples by Lateral Flow Assay (LFA) to district-level laboratories (at least two/district).
- ◆ Test the samples by employing Direct Fluorescent Antibody Assay (DFA) / Direct Rapid Immunohistochemistry Test (dRIT).
- ◆ Transport of samples (brain/serum) in the cold chain to the regional laboratory.

HUMAN DIAGNOSTIC LABS

- ◆ Undertake capacity building on the epidemiological and microbiological aspects of rabies diagnosis by using qualified ELISA, PCR, and FAT.
- ◆ Share the reports of testing with the district labs.
- ◆ Upload the outcome of testing on the national portal.

DISTRICT-LEVEL LABORATORY

The capacities of the district lab will be strengthened in a phased manner. These laboratories will perform testing and would also be linked to SRLs, RRLs and NRLs and other ARCs in the district, sub-district levels in the region. Human resource will be trained on using LFA, anti-rabies titre estimation by ELISA and PCR. Below the district, at the block level, no standalone rabies diagnostic facilities are envisaged, however, the Rapid Diagnostic Tests (RDTs) like LFA by the block-level veterinary department will be prompted for confirmation of a clinical diagnosis of the animal.

ROLE OF DISTRICT-LEVEL LABORATORIES

- ◆ Provide training on collection of samples, packing, transportation to block/taluk level/wildlife veterinarians, medical officers and staff.
- ◆ Submit post mortem animal samples (brain/serum) to the State-level laboratories for DFA/dRIT along with the result of LFA.
- ◆ Conduct LFA.
- ◆ In case of human ante mortem and post mortem diagnosis, samples will be referred to the proposed State Diagnostic Laboratory/Regional Referral Laboratory.



12

Implementation Plan of SAP for Rabies Elimination

The funds for human health components will continue to be sourced from National Health Mission (NHM), the funding for the animal health components will be explored through existing ASCAD schemes or revenue available with municipal corporations or State veterinary departments. The delivery of services for animal health shall be done through the already existing veterinary infrastructure and established channels such as animal husbandry department, urban/rural governing bodies, NGOs and municipal corporations.

As the human health component under the National Rabies Control Programme is already being implemented in the country, identified State Nodal Officers and District Nodal Officers will continue implementing the activities of the human health component.

For animal health components, the respective States will identify and nominate State and District Nodal Officers and will coordinate with identified State Nodal Officers and District Nodal Officers of the human health component for implementing activities.

A brief about the plan of implementation for both components:

Case Definition	Human Health Component	Animal Health Component
Nodal agency for planning and execution at State level	State Health Department, State NHM <ul style="list-style-type: none"> Identified State Nodal Officer (SNO) for NRCP will coordinate the activities. 	State Animal Husbandry Departments, Director State animal husbandry department nominates a State Nodal Officer for Animal Health Component. <ul style="list-style-type: none"> The State veterinary department will implement the activities of animal health component in cooperation with municipal bodies in urban areas and Panchayati Raj systems in rural areas. It is the responsibility of State animal husbandry department to devise methodology and assign duties to participating officer for monitoring surveillance activities.
Plan will be implemented as per availability of resources and prevalence of the disease.		

Case Definition	Human Health Component	Animal Health Component
District Level	District Health Officer <ul style="list-style-type: none"> Identified District Nodal Officer (DNO) for NRCP will coordinate the activities 	District Nodal Officers (Dist. Vet Officer) <ul style="list-style-type: none"> Coordinate with local governing bodies, local authorities, and NGOs.
Plan will be implemented as per availability of resources and prevalence of the disease.		
Block level	Block Medical Officers <ul style="list-style-type: none"> Implementation of the programme at the ground level. Coordination with block veterinary officer. Reporting to District Nodal Officer (DNO). Feedback to DNO for refinement/betterment of the programme as per field scenario. 	Block Veterinary Officer or equivalent <ul style="list-style-type: none"> Implementation of the programme at ground level. Coordination with block medical officer. Reporting to district nodal officer, animal husbandry. Feedback to district nodal officer, animal husbandry for refinement/betterment of the programme as per field scenario.

TABLE 11: LIST OF LABORATORIES ASSOCIATED WITH HUMAN AND ANIMAL SAMPLE:

Case Definition	Human Health Component	Animal Health Component
1.	Zoram Medical College, Falkawn	Human
2.	College of Veterinary Sciences and Animal Husbandry, Selesih	Animal

13

Monitoring and Evaluation

In both the health and veterinary sectors, the National/State entities will jointly and regularly monitor the implementation of the programme. The key objective of monitoring and evaluation will be to assess the progress made at each level to achieve the target of rabies elimination, to identify challenges, and to provide solutions to the extent possible by advocacy and facilitation.

INPUT INDICATORS

Input indicators will assess the progress of the States with respect to their preparedness for formulation and operationalization of State Action Plans. They are also a measure of successful implementation of the National Action Plan for Rabies Elimination through continues advocacy among stakeholders at the national and the State level.

Input indicators for monitoring and responsible stakeholders are:

MONITORING INDICATORS TO ASSESS AT THE STATE LEVEL:

S.NO	Indicators	Responsible stakeholders
1	Number of States where advocacy for rabies control programme has been done at all levels	State Animal Husbandry Department and State Health Department
2	Number of States which have formulated SAPRE and submitted it to national nodal agencies in the human and veterinary sector	Animal Husbandry Department and Health Department
3	Number of States which have a structured mechanism for rabies notification both in the human and veterinary sector	State Animal Husbandry Department and State Health Department
4	Number of States which have developed relevant technical guidelines, Standard Operating Procedure for human and animal health components of SAPRE	State Animal Husbandry Department, State Health Department and wildlife sector

S.NO	Indicators	Responsible stakeholders
5	Number of States which have designated State Programme Management Unit for operationalization of SAPRE for both human and animal health component	State Animal Husbandry Department, State Health Department, and wildlife sector
6	Number of States which have earmarked funding for animal and human components	State Animal Husbandry Department and State Health Department
7	Number of States which have organized training programmes for medical, veterinary and allied human resource for different components of SAPRE	State Animal Husbandry Department and State Health Department
8	Number of States which have initiated school health awareness programme for rabies prevention	Department of Human Resources
9	Number of States which have planned, executed and completed dog enumeration exercises or mapping of risk zones for undertaking animal health component activities	State Animal Husbandry Department, State Health Department, Wildlife sector and State task force identified by State government for SAPRE
10	Number of States which have planned, executed and completed mass dog vaccination	State Animal Husbandry Department and State Animal Welfare Board
11	Number of States which have planned, executed and completed strategic DPM/ABC activities	State Animal Husbandry Department and State Animal Welfare Board
12	Number of State labs strengthened to carry out diagnosis for rabies as envisaged under NAPRE both in the health and veterinary sector	State Animal Husbandry Department and State Health Department

PROCESS INDICATORS

Process indicators are defined to measure the progress of the core component of NAPRE -- human health and animal health components. Process indicators to assess the progress of target achievements and their means of verification are:.

PROCESS INDICATORS FOR HUMAN HEALTH COMPONENT

Activities	Technical Indicator	Objectively Verifiable Indicator(s)	Means of Verification	Source of Information
1. Timely completion of PEP for animal bite victims	Number of States which have adequate supply ARV and ARS at animal bite management facilities.	ARV/ARS procurements and utilization percentage of facilities with no rabies vaccines and serum stock out	Stock register, records and reports available at animal bite management facilities/ hospital records/media reports about shortage/ public grievances	State health departments and State Nodal Officers of NRCP DVDAMS portal/ media Supervision reports
	Number of States which have implemented ID Route in major facilities	Percentage of facilities implementing ID route of ARV	NRCP format	State health department, SNO NRCP
	To assess the RIG utilization and coverage	Percentage of designated health facilities with no RIG stock-outs Percentage of Category 3 bites received RIG	Review of annual report on RIG use; NRCP monthly format	
	PEP completion rate among eligible Rabies exposed cases	Percentage of eligible cases with PEP completed	NRCP reports	NRCP reports; operational research
	Pre-exposure Prophylaxis among high risk categories and children	Percentage of at-risk groups that receive complete dose of pre-exposure prophylaxis as per guidelines	NRCP reports	NRCP reports; Immunization reports

Activities	Technical Indicator	Objectively Verifiable Indicator(s)	Means of Verification	Source of Information
2. Capacity building	Trained staff of animal bite management	Number of staff trained in facilities on appropriate animal bite management and rabies PEP	Number of training certificates issued	RCP training reports
			Trained participants list	
		Percentage of facilities with trained staff with the bite wound management guidelines	Regular supervision reports	
3. Diagnostic Support	Strengthening laboratory diagnostic capacity for human rabies diagnosis	Percentage of laboratories equipped with diagnostic facilities; Number of samples for rabies submitted and tested	Laboratory assessment reports	NRCP reports SRL and RRL reports; Report of Disease Surveillance Unit
4. Surveillance	Strengthening surveillance of rabies cases and animal bites	Percentage of facilities reporting rabies cases and animal/dog bites	NRCP Reports and IDSP/ IHIP Reports	NRCP IDSP Disease Alert Report Surveillance unit (web portal)
5. Dog enumeration of vaccination	Enumeration exercise/ risk zone mapping	Percentage of blocks/ districts that have completed enumeration of dogs; Percentage of mapped high-risk areas in district	State animal department format	State Animal Husbandry Department

Activities	Technical Indicator	Objectively Verifiable Indicator(s)	Means of Verification	Source of Information
	Mass Dog Vaccination with a target to vaccinate more than 70 per cent of dog population annually	Proportion of dogs vaccinated for rabies	Post vaccination surveys in each of the States	State animal husbandry department annual vaccination reports
		Percentage of States with 70per cent vaccination coverage	Number of doses of rabies vaccine administered	State animal husbandry department annual vaccination reports
	Dog Population Management	Percentage change in dog population in respective areas	Change in the number of FRD, pet and community-owned dogs	Survey reports of State animal husbandry department
6. Diagnostic support for animal rabies diagnosis	Strengthening lab capacity	Number of labs strengthened in veterinary sector for rabies diagnosis	Reports	Reports
7. Containment	Containment of rabies cases in identified areas	Proportion of animal rabies cases confined and number of containment zones declared	Number of rabies cases confined and containment zones established	State animal husbandry department outbreak reports
8. IEC	Raise awareness on responsible dog ownership among citizens	Percentage population/ household awareness of responsible dog ownership	KAP survey	Survey report
9. Surveillance	Strengthening surveillance of animal rabies	Percentage of animal rabies cases captured by surveillance system; Proportion of	Model Rabies Clinic has to be established separately.	Identification of the existing healthcare facility for the Model Rabies Clinic.

Activities	Technical Indicator	Objectively Verifiable Indicator(s)	Means of Verification	Source of Information
10. Advocacy, Communication and Social Mobilization	Measuring public awareness about the risk of rabies and prevention of dog-bite	Percentage of population awareness of rabies, prevention and control	KAP survey	KAP survey results
11. Inter-Sectoral Coordination	Assess levels of partnerships and multi-sectoral collaboration among ministries, other government agencies, NGOs and private sectors for implementation of the NAPRE	Proportion of identified stakeholders onboard in Joint Monitoring Committees and Joint Taskforces constituted by States	Number of stakeholders attending periodic review meetings	Monitoring reports
12. Resource Mobilization	Assessment of resources to support rabies elimination activities	Budget for rabies prevention and control provided in human component	Approved budget and record of budget allocation	State Health Department Financial Report
		Budget for animal ARV, training, IECs provided in animal component	Approved budget and record of budget allocation	State and National Animal Husbandry Department reports/SAPRE operational plan document
		Numbers of partners involved in the project	Budget report	NRCP Annual Report

Activities	Technical Indicator	Objectively Verifiable Indicator(s)	Means of Verification	Source of Information
13. Operational Research	To invite development partners/ agencies to participate and manage aspects of the project	Percentage of applicable studies done	Study reports	Dissemination of results manuscript
	Conduct studies to examine operational feasibility and effectiveness for modified regimen for rabies post exposure prophylaxis	Number of studies done	Study reports	Dissemination of results manuscript
	Conduct studies for estimating the coverage of ARV and ARS and compliance of the vaccination	Number of studies done	Study reports	Dissemination of results manuscript
	Conduct molecular epidemiological studies of Lyssa viruses circulating in animals in India	Number of studies done	Study reports	Dissemination of results manuscript

OUTPUT/OUTCOME INDICATORS

These indicators are to assess the overall impact of the activities undertaken under NAPRE and to see the progress towards the ultimate goal of achieving zero human deaths due to dog-mediated rabies by 2030 (reduction to below 1 per cent of the incidence of rabies in humans as well as in animals). The outcome target and indicators thereof are:

OUTCOME TARGET INDICATORS

Technical Indicator	Objectively Verifiable Indicator(s)	Means of Verification	Source of Information
To progressively reduce and ultimately eliminate human rabies in India through sustained, mass dog vaccination and appropriate post-exposure treatment	Number of States that have rabies as a notifiable disease in humans and animals	Publication/ Amendment through the State Public Health / State Disaster Act/ Epidemic Act Gazette	State Gazette
	Percentage decrease in rabies in humans	Monthly /quarterly/ yearly surveillance records	Annual Reports, Surveillance Reports
	Percentage decrease in rabies in animals	Surveillance records	Annual reports, Surveillance Reports

14

District Action Plan

A two-day workshop on finalization of the State Action Plan for Dog-Mediated Rabies Elimination (SAPRE) and formulation of District Action Plan for Dog-Mediated Rabies Elimination (DAPRE) for the State of Mizoram was organized on January 17-18, 2024, at Royale Lalawi Hotel, Aizawl, Mizoram, with support from the United Nations Development Programme (UNDP), India. The event aimed to develop a comprehensive State Action Plan to eliminate dog-mediated rabies in Mizoram by 2030 as part of the National Rabies Control Programme. The workshop was supported by UNDP India and the Access and Delivery Partnership (ADP), a global initiative funded by the Government of Japan. The objective was to finalize SAPRE and DAPRE for rabies elimination from Mizoram by 2030.

The workshop was chaired by the State Nodal Officer, IDSP, Mizoram, in the presence of the Chief Guest, Hon'ble Minister of Animal Husbandry and Veterinary Department Pu C. Lalsawivunga, Guest and other special invitees such as Pi Zarzokimi, Joint Secretary, UD&PA and DM&R, Dr Debalina Mitra, Assistant Commissioner, DAHD, MoFAHD, and Dr Chiranjeev Bhattacharjya, National Programme Manager-HSS, UNDP. The NCDC team also graced the workshop virtually.

Officials who participated in the workshop include all the District Surveillance Officers (DSOs), District Veterinary Officers (DVOs), IDSP Data Managers from each district, two participants from Zoram Medical College (ZMC) and all Mizoram State Surveillance Unit Staff (SSU).





DISTRICT ACTION PLAN FOR DOG-MEDIATED RABIES ELIMINATION BY 2030 FOR THE STATE OF MIZORAM FOR ONE YEAR

ANIMAL COMPONENT:

A. COMPONENT-WISE TENTATIVE BUDGET BREAK-UP PLAN FOR ANIMAL COMPONENT (From ASCAD):

Improvement of existing infrastructure, capacity building of existing human resource and mass dog vaccination will be carried out in the first year of dog-mediated rabies elimination by 2030.

Table 12: Tentative Budget Break-Up Plan For Animal Component.

Broad Component	Activity	Total Cost
Surveillance	Operational cost	5,50,000
	Infrastructure	55,00,000
	Training	22,00,000
Prevention and Control	Cost of ARV	61,08,600
	Infrastructure for cold chain maintenance	13,50,000
	Human resource	2036150
Laboratory Diagnosis	Cost related to collection of samples	5,50,000
	Cost related to sample packaging and transportation	5,50,000
	Human resource	-
	Cold chain maintenance	-
IEC	Organizing awareness campaign	5,50,000
Total		1,93,94,750

B. DISTRICT WISE TENTATIVE BUDGET BREAK-UP PLAN FOR ANIMAL COMPONENT (From ASCAD):

Table 13: Aizawl District Tentative Budget Break-Up Plan:

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
Surveillance	Operational cost	50,000	50,000	For conducting dog population census: TA/DA, POL
	Infrastructure	5,00,000	5,00,000	Establishment of check-gate and holding facilities
	Training	2,00,000	2,00,000	DA, training materials, food and lodging
Prevention and Control	Cost of ARV	10,543 dogs x Rs150	15,81,450	Through ASCAD, NRCP funds
	Infrastructure for cold chain maintenance	50,000 x 5 RD Blocks	2,50,000	For establishment of solar infrastructure
	Human resource	10,543dogs x Rs50	5,27,150	Rs 50/dog/ first year mass vaccination. Department VFAs
Laboratory Diagnosis	Cost related to collection of samples	50,000	50,000	POL, DA, Consumables like vials and VTM
	Cost related to sample packaging and transportation	50,000	50,000	Logistic costs
	Human resource			Existing human resource
	Cold chain maintenance			Existing infrastructure

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
IEC	Organizing awareness campaign	50,000	50,000	Material cost, advertisement cost, Leaflet, print-on
Total Cost		32,58,600		

Table 14: Saitual District Tentative Budget Break-Up Plan

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
Surveillance	Operational cost	50,000	50,000	For conducting dog population census: TA/DA, POL
	Infrastructure	5,00,000	5,00,000	Establishment of check-gate and holding facilities
	Training	2,00,000	2,00,000	DA, training materials, food and lodging
Prevention and Control	Cost of ARV	1,066 dogs x Rs150	1,59,900	Through ASCAD, NRCP funds
	Infrastructure for cold chain maintenance	50,000 x 2 RD Blocks	1,00,000	For establishment of solar infrastructure
	Human resource	1,066 dogs x Rs50	53,300	Rs 50/dog/ first year mass vaccination. Department VFAs

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
Laboratory Diagnosis	Cost related to collection of samples	50,000	50,000	POL, DA, Consumables like vials, VTM
	Cost related to sample packaging and transportation	50,000	50,000	Logistics cost
	Human resource			Existing human resource
	Cold chain maintenance			Existing infrastructure
IEC	Organizing awareness campaign	50,000	50,000	Material cost, advertisement cost, leaflet, print-on etc.
Total Cost		12,13,200		

Table 15: Champhai District Tentative Budget Break-Up Plan:

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
Surveillance	Operational cost	50,000	50,000	For conducting dog population census: TA/DA, POL
	Infrastructure	5,00,000	5,00,000	Establishment of check-gate and holding facilities
	Training	2,00,000	2,00,000	DA, training materials, food and lodging

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
Prevention and Control	Cost of ARV	3,091 dogs x Rs150	4,63,650	Through ASCAD, NRCP funds
	Infrastructure for cold chain maintenance	50,000x 2 RD Blocks	1,00,000	For establishment of solar infrastructure
	Human resource	3,091 x Rs50	1,54,550	Rs 50/dog/ first year mass vaccination. Department VFAs
Laboratory Diagnosis	Cost related to collection of samples	50,000	50,000	POL, DA, Consumables like vials, VTM
	Cost related to sample packaging and transportation	50,000	50,000	Logistics cost
	Human resource			Will utilize existing human resource
	Cold chain maintenance			Will utilize existing infrastructure
IEC	Organizing awareness campaign	50,000	50,000	Material cost, advertisement cost, leaflet, print-on etc.
Total Cost			16,18,200	

Table 16: Khawzawl District Tentative Budget Break-Up Plan:

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
Surveillance	Operational cost	50,000	50,000	For conducting dog population census: TA/DA, POL
	Infrastructure	5,00,000	5,00,000	Establishment of check-gate and holding facilities
	Training	2,00,000	2,00,000	DA, Training materials, food and lodging
Prevention and Control	Cost of ARV	1,328 dogs x Rs150	1,99,200	Through ASCAD, NRCP funds
	Infrastructure for cold chain maintenance	50,000x 1RD Blocks	50,000	For establishment of solar infrastructure
	Human resource	1,328 x Rs50	66,400	Rs 50/dog/ first year mass vaccination. Department VFAs
Laboratory Diagnosis	Cost related to collection of samples	50,000	50,000	POL, DA, Consumables like vials, VTM
	Cost related to sample packaging and transportation	50,000	50,000	Logistics cost
	Human resource			Will utilize existing human resource
	Cold chain maintenance			Will utilize existing infrastructure

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
IEC	Organizing awareness campaign	50,000	50,000	Material cost, advertisement cost, leaflet, print-on etc.
Total Cost		12,15,600		

Table 17: Serchhip District Tentative Budget Break-Up Plan:

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
Surveillance	Operational cost	50,000	50,000	For conducting dog population census: TA/DA, POL
	Infrastructure	5,00,000	5,00,000	Establishment of check-gate and holding facilities
	Training	2,00,000	2,00,000	DA, Training materials, food and lodging
Prevention and Control	Cost of ARV	5,051 dogs x Rs150	7,57,650	Through ASCAD, NRCP funds
	Infrastructure for cold chain maintenance	50,000x 2 RD Blocks	1,00,000	For establishment of solar infrastructure
	Human resource	5,051 x Rs50	2,52,500	Rs 50/dog/ first year mass vaccination. Department VFAs

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
Laboratory Diagnosis	Cost related to collection of samples	50,000	50,000	POL, DA, Consumables like vials, VTM
	Cost related to sample packaging and transportation	50,000	50,000	Logistics cost
	Human resource			Will utilize existing human resource
	Cold chain maintenance			Will utilize existing infrastructure
IEC	Organizing awareness campaign	50,000	50,000	Material cost, advertisement cost, leaflet, print-on etc.
Total Cost		20,10,150		

Table 18: Mamit District Tentative Budget Break-Up Plan

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
Surveillance	Operational cost	50,000	50,000	For conducting dog population census: TA/DA, POL
	Infrastructure	5,00,000	5,00,000	Establishment of check-gate and holding facilities
	Training	2,00,000	2,00,000	DA, Training materials, food and lodging

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
Prevention and Control	Cost of ARV	5,670 dogs x Rs150	8,50,500	Through ASCAD, NRCP funds
	Infrastructure for cold chain maintenance	50,000x 3RD Blocks	1,50,000	For establishment of solar infrastructure
	Human resource	5,670 x Rs50	2,83,500	Rs 50/dog/ first year mass vaccination. Department VFAs
Laboratory Diagnosis	Cost related to collection of samples	50,000	50,000	POL, DA, Consumables like vials, VTM
	Cost related to sample packaging and transportation	50,000	50,000	Logistics cost
	Human resource			Will utilize existing human resource
	Cold chain maintenance			Will utilize existing infrastructure
IEC	Organizing awareness campaign	50,000	50,000	Material cost, advertisement cost, leaflet, print-on etc.
Total Cost			21,84,000	



Table 19: Kolasib District Tentative Budget Break-Up Plan

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
Surveillance	Operational cost	50,000	50,000	For conducting dog population census: TA/DA, POL
	Infrastructure	5,00,000	5,00,000	Establishment of check-gate and holding facilities
	Training	2,00,000	2,00,000	DA, Training materials, food and lodging
Prevention and Control	Cost of ARV	3,033 dogs x Rs150	4,54,950	Through ASCAD, NRCP funds
	Infrastructure for cold chain maintenance	50,000x 2 RD Blocks	1,00,000	For establishment of solar infrastructure
	Human resource	3,033x Rs50	1,51,650	Rs 50/dog/ first year mass vaccination. Department VFAs
Laboratory Diagnosis	Cost related to collection of samples	50,000	50,000	POL, DA, Consumables like vials, VTM
	Cost related to sample packaging and transportation	50,000	50,000	Logistics cost
	Human resource			Will utilize existing human resource
	Cold chain maintenance			Will utilize existing infrastructure

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
IEC	Organizing awareness campaign	50,000	50,000	Material cost, advertisement cost, leaflet, print-on etc.
Total Cost		16,06,600		

Table 20: Lunglei District Tentative Budget Break-Up Plan

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
Surveillance	Operational cost	50,000	50,000	For conducting dog population census: TA/DA, POL
	Infrastructure	5,00,000	5,00,000	Establishment of check-gate and holding facilities
	Training	2,00,000	2,00,000	DA, Training materials, food and lodging
Prevention and Control	Cost of ARV	4,056 dogs x Rs150	6,08,400	Through ASCAD, NRCP funds
	Infrastructure for cold chain maintenance	50,000x 3RD Blocks	1,50,000	For establishment of solar infrastructure
	Human resource	4,056 x Rs50	2,02,800	Rs 50/dog/ first year mass vaccination. Department VFAs

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
Laboratory Diagnosis	Cost related to collection of samples	50,000	50,000	POL, DA, Consumables like vials, VTM
	Cost related to sample packaging and transportation	50,000	50,000	Logistics cost
	Human resource			Will utilize existing human resource
	Cold chain maintenance			Will utilize existing infrastructure
IEC	Organizing awareness campaign	50,000	50,000	Material cost, advertisement cost, leaflet, print-on etc.
Total Cost		18,61,200		

Table 21: Hnahthial District Tentative Budget Break-Up Plan

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
Surveillance	Operational cost	50,000	50,000	For conducting dog population census: TA/DA, POL
	Infrastructure	5,00,000	5,00,000	Establishment of check-gate and holding facilities
	Training	2,00,000	2,00,000	DA, Training materials, food and lodging

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
Prevention and Control	Cost of ARV	2,227 dogs x Rs150	3,34,050	Through ASCAD, NRCP funds
	Infrastructure for cold chain maintenance	50,000x 1RD Blocks	50,000	For establishment of solar infrastructure
	Human resource	2,227 x Rs50	1,11,350	Rs 50/dog/ first year mass vaccination. Department VFAs
Laboratory Diagnosis	Cost related to collection of samples	50,000	50,000	POL, DA, Consumables like vials, VTM
	Cost related to sample packaging and transportation	50,000	50,000	Logistics cost
	Human resource			Will utilize existing human resource
	Cold chain maintenance			Will utilize existing infrastructure
IEC	Organizing awareness campaign	50,000	50,000	Material cost, advertisement cost, leaflet, print-on etc.
Total Cost			13,95,400	

Table 22: Lawngtlai District Tentative Budget Break-Up Plan

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
Surveillance	Operational cost	50,000	50,000	For conducting dog population census: TA/DA, POL
	Infrastructure	5,00,000	5,00,000	Establishment of check-gate and holding facilities
	Training	2,00,000	2,00,000	DA, Training materials, food and lodging
Prevention and Control	Cost of ARV	3,156 dogs x Rs150	4,73,400	Through ASCAD, NRCP funds
	Infrastructure for cold chain maintenance	50,000x 4RD Blocks	2,00,000	For establishment of solar infrastructure
	Human resource	3,156 x Rs50	1,57,800	Rs 50/dog/ first year mass vaccination. Department VFAs
Laboratory Diagnosis	Cost related to collection of samples	50,000	50,000	POL, DA, Consumables like vials, VTM
	Cost related to sample packaging and transportation	50,000	50,000	Logistics cost
	Human resource			Will utilize existing human resource
	Cold chain maintenance			Will utilize existing infrastructure

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
IEC	Organizing awareness campaign	50,000	50,000	Material cost, advertisement cost, leaflet, print-on etc.
Total Cost		17,31,200		

Table 23: Siaha District Tentative Budget Break-Up Plan

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
Surveillance	Operational cost	50,000	50,000	For conducting dog population census: TA/DA, POL
	Infrastructure	5,00,000	5,00,000	Establishment of check-gate and holding facilities
	Training	2,00,000	2,00,000	DA, training materials, food and lodging
Prevention and Control	Cost of ARV	1,503 dogs x Rs150	2,25,450	Through ASCAD, NRCP funds
	Infrastructure for cold chain maintenance	50,000x 2 RD Blocks	1,00,000	For establishment of solar infrastructure
	Human resource	1,503x Rs50	75,150	Rs 50/dog/ first year mass vaccination. Department VFAs

Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
Laboratory Diagnosis	Cost related to collection of samples	50,000	50,000	POL, DA, Consumables like vials, VTM
	Cost related to sample packaging and transportation	50,000	50,000	Logistics cost
	Human resource			Will utilize existing human resource
	Cold chain maintenance			Will utilize existing infrastructure
IEC	Organizing awareness campaign	50,000	50,000	Material cost, advertisement cost, leaflet, print-on etc.
Total Cost			13,00,600	

HUMAN COMPONENT:

C. COMPONENT WISE TENTATIVE BUDGET BREAK-UP PLAN FOR HUMAN COMPONENT (From NHM):

Capacity building of existing human resource through training of staffs and improvement of the availability of Post exposure anti-rabies vaccines (ARV) and anti-rabies serum (ARS) is planned for the first year of Dog-mediated rabies elimination by 2030.

Table 24: Tentative budget break-up plan for human component:

Broad Component	Activity	Total Cost
Surveillance	Operational Cost	50,000
	Infrastructure	5,00,000
	Training	2,00,000

Broad Component	Activity	Total Cost
Prevention and Control	Cost Of Arv	72,96,300
	Cost Of Ars	1,57,500
	Infrastructure	-
	Human Resource	-
Laboratory Diagnosis	Cost Related To Collection Of Samples	61,500
	Cost Related To Sample Packaging And Transportation	18,000
	Human Resource	-
	Cold Chain Maintenance	-
IEC	Organizing Awareness Campaign	-
Total Cost		82,34,300

D. DISTRICT-WISE TENTATIVE BUDGET BREAK UP PLAN FOR HUMAN COMPONENT (From NHM):

Table 25: Aizawl East District Tentative Budget Break-Up Plan:

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
NDPCP.6 SI no.84	Surveillance	Human resource	-	-	Will utilize existing human resource
		Infrastructure	-	-	Will utilize existing Infrastructure
		Training	1. TA/DA for 3 UPHCs & 1 DIST. HOSPITAL : Rs. 2,000/-x 4 = 8,000/-	87,000	Training for animal bite management

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
			2. TA/DA for 5 PHCs : a) Thingsulthliah PHC – Rs. 4,000/- b) Khawruhlian PHC – Rs. 5,000/- c) Phuaibuang PHC – 7,000/- d) Phullen PHC – Rs. 5,000/- e) Suangpuilawn PHC – Rs. 5,500/- 3. TA/DA for 3 CHCs : a) Darlawn CHC – 6,000/- b) Saitual CHC – 4,500/- c) Sakawrdai CHC – 7,000/- 4. Resource person form district = Rs. 2,000/- 5. Training materials = Rs. 10,000/- 6. Refreshment = 20 person @500/-=10,000/- 7. Hall rent = Rs. 3,000/- 8. Miscellaneous = Rs. 10,000/- TOTAL = 87,000/-		Training of human resource for sample collection for district hospital and UPHCs, PHCs, CHCs.

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
	Prevention and Control	Cost of ARV	1811 X Rs 360 x 3doses +10%	21,51,468	Total no. of animal bite+10per cent buffer stock.
		Cost of ARS	350x50 doses	17,500	Rs 50/ dog/first year mass vaccination. Department VFAs
		Infrastructure	-	-	Will utilize existing Infrastructure
		Human resource	-	-	Will utilize existing human resource
	Laboratory Diagnosis	Cost related to collection of samples	150 VTM per vial x 5 vials x 12 centres (upto PHC)	9,000	For purchasing sample collection kit to be distributed to UPHCs, PHCs, CHCs and District Hospital
		Cost related to sample packaging and transportation	2,000 per district	2,000	Capacity building for necropsy and lab diagnosis (As per available SOP)

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
		Human resource	-	-	Will utilize existing human resource
		Cold chain maintenance	-	-	Will utilize existing Infrastructure
	IEC	Organizing awareness campaign	-	-	Flyers will be circulated through social media
Total Cost			22,66,968		

Table 26: Aizawl West District Tentative Budget Break-Up Plan:

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
NDCP.6 SI no.84	Surveillance	Human resource	-	-	Will utilize existing human resource
		Infrastructure	-	-	Will utilize existing Infrastructure
		Training	1. TA/DA for 3 UPHCs & 1 DIST. HOSPITAL & 1 SUB DISTRICT HOSPITAL Rs. 2,000x5 = 1,0000/- 2. TA/DA for 3 PHCs : Sairang PHC DA – Rs. 700x2=1400 TA= Rs. 300x2= 600 Aibawk PHC DA– RS.700x2=1400	48,700	Training for animal bite management Training of human resource for sample collection for district hospital and UPHCs, PHCs, CHCs.

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
			TA= Rs.300 x 2=600 Sialsuk PHC DA -- Rs.700x2=1400 TA=Rs.400x2= Rs.800 4. 2 Resource person form district = Rs. 2,000x3 days = 6000 5. Training materials = Rs. 10,000/- 6. Refreshment=18 person @250/- =4,500/- 7. Hall rent = Rs. 2,000/- 8. Miscellaneous = Rs. 10,000/- TOTAL = 48,700		
	Prevention and Control	Cost of ARV	1400 X Rs360 x 3doses	16,63,200	Total no. of animal bite + 10 per cent buffer stock.
		Cost of ARS	350x50 doses	17,500	
		Infrastructure	-	-	Will utilize existing Infrastructure
		Human resource	-	-	Will utilize existing human resource

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
	Laboratory Diagnosis	Cost related to collection of samples	150 VTM per vial x 5 vials x 9 centers (upto PHC)	6,750	For purchasing sample collection kit to be distributed to UPHCs, PHCs, CHCs and District Hospital
		Cost related to sample packaging and transportation	2000 per district	2,000	Capacity building for necropsy and lab diagnosis (As per available SOP)
		Human resource	-	-	Will utilize existing human resource
		Cold chain maintenance	-	-	Will utilize existing Infrastructure
	IEC	Organizing awareness campaign	-	-	Flyers will be circulated through social media
	Total Cost			17,38,150	

Table 27: Champhai District Tentative Budget Break-Up Plan

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
NDCP.6 SI no.84	Surveillance	Human resource	-	-	Will utilize existing human resource
		Infrastructure	-	-	Will utilize existing Infrastructure
		Training	1. TA/DA for 1 UPHCs & 1 DIST. HOSPITAL : Rs. 1,500/-x 2 = 3,000/- 2. TA/DA for 11 PHCs : a) Khawzawl PHC – Rs. 3,200/- b) Khawhai PHC – Rs. 3,400/- c) Kawlkuh PHC –Rs. 3,500/- d) NE Khawdungsei PHC – Rs. 3,300/- e) Mimbung PHC – Rs. 3,600/- f) Hnahlan PHC – Rs. 3,300/- g) Bungzung PHC – Rs. 3,800/- h) Khawbung PHC - Rs. 3,400/- i) Farkawn PHC – Rs. 3,700/- j) Rabung PHC – Rs. 3,400/- k) Sialhawk PHC - Rs. 3,200/-	85,600	Training for animal bite management Training of human resource for sample collection for district hospital and UPHCs, PHCs, CHCs.

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
			3. TA/DA for 2 CHCs : a) Biate CHC – Rs. 3,200/- b) Ngopa CHC – Rs. 3,100/- 4. Resource person form district = Rs. 2,000/- 5. Training materials = Rs. 10,000/- 6.Refreshment=25 person @500/- =12,500/- 7. Hall rent = Rs. 3,000/- 8. Miscellaneous = Rs. 10,000/- TOTAL = Rs. 85,600/-		
	Prevention and Control	Cost of ARV	324 X Rs360 x 3doses	3,84,912	Total no. of animal bite+10 per cent buffer stock.
		Cost of ARS	350x50 doses	17,500	
		Infrastructure	-	-	Will utilize existing Infrastructure
		Human resource			

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
	Laboratory Diagnosis	Cost related to collection of samples	150 VTM per vial x 5 vials x 13 centers (upto PHC)	9,750	For purchasing sample collection kit to be distributed to UPHCs, PHCs, CHCs and District Hospital
		Cost related to sample packaging and transportation	2000 per district	2,000	Capacity building for necropsy and lab diagnosis (As per available SOP)
		Human resource	-	-	Will utilize existing human resource
		Cold chain maintenance	-	-	Will utilize existing Infrastructure
	IEC	Organizing awareness campaign	-	-	Material cost, Advertisement cost
	Total Cost			4,99,762	

Table 28: Mamit District Tentative Budget Break-Up Plan

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
NDCP.6 SI no.84	Surveillance	Human resource	-	-	Will utilize existing human resource
		Infrastructure	-	-	Will utilize existing Infrastructure
		Training	1. TA/DA for DIST. HOSPITAL : Rs. 2,000/-x 1 = 2,000/- 2. TA/DA for 8 PHCs : a)Marpara PHC – Rs. 4,500/- b) Phuldungsei PHC – Rs. 4,000/- c) W.Phaileng PHC – 3,500/- d) Rawpuichhip PHC – Rs. 3,000/- e) Reiek PHC – Rs. 4000/- f)Kanghmun PHC – Rs. 4500/- g) Kawrtethawveng PHC – Rs. 3000/- h) Zawlnuam PHC – Rs. 3500/- 3. TA/DA for 1 CHCs : a) Kawrthah CHC – Rs. 3000/-	70,000	Training for animal bite management Training of human resource for sample collection for district hospital and UPHCs, PHCs, CHCs.

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
			4. Resource person form district = Rs. 2,000/- 10,000/- 7. Hall rent = Rs. 3,000/- 8. Miscellaneous = Rs. 10,000/- TOTAL = 70,000/-		
	Prevention and Control	Cost of ARV	330 X Rs360 x 3doses	3,92,040	Total no. of animal bite+10 per cent buffer stock.
		Cost of ARS	350x50 doses	17,500	
		Infrastructure	-	-	Will utilize existing Infrastructure
		Human resource	-	-	Will utilize existing human resource
	Laboratory Diagnosis	Cost related to collection of samples	150 VTM per vial x 5 vials x 9 centers (upto PHC)	6,750	For purchasing sample collection kit to be distributed to UPHCs, PHCs, CHCs and District Hospital
		Cost related to sample packaging and transportation	2000 per district	2,000	Capacity building for necropsy and lab diagnosis (As per available SOP)

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
		Human resource	-	-	Will utilize existing human resource
		Cold chain maintenance	-	-	Will utilize existing Infrastructure
	IEC	Organizing awareness campaign	-	-	Flyers will be circulated through social media
Total Cost			4,88,290		

Table 29: Kolasib District Tentative Budget Break-Up Plan

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
NDCP.6 SI no.84	Surveillance	Human resource	-	-	Will utilize existing human resource
		Infrastructure	-	-	Will utilize existing infrastructure
		Training	1. TA/DA for UPHCs & 1 DIST. HOSPITAL: Rs. 2,000/-x = 2,000/- 2. TA/DA for 4 PHCs: a) Bilkhawthlir PHC – Rs. 4,000/- b) Bairabi PHC – Rs. 5,000/- c) bukpuir PHC – 7,000/- d) Lungdai PHC – Rs. 4,000/-	68,000	Training for animal bite management Training of human resource for sample collection for district hospital and UPHCs, PHCs, CHCs.

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
			3. TA/DA for 2 CHCs: a) Vairengte CHC – 6,000/- b) Kawnpui CHC – 5,000/- 4. Resource person form district = Rs. 2,000/- 5. Training materials = Rs. 10,000/- 6. Refreshment=20 person @500/- =10,000/- 7. Hall rent = Rs. 3,000/- 8. Miscellaneous = Rs. 10,000/- TOTAL = 68,000/-		
	Prevention and Control	Cost of ARV	605 X Rs360 x3doses	2,39,580	Total no. of animal bite+10 per cent buffer stock.
		Cost of ARS	350x50 doses	17,500	Will utilize existing human resource
		Infrastructure	-	-	Will utilize existing Infrastructure

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
		Human resource	-	-	Will utilize existing human resource
	Laboratory Diagnosis	Cost related to collection of samples	150 VTM per vial x 5 vials x 6 centers (upto PHC)	4,500	For purchasing sample collection kit to be distributed to UPHCs, PHCs, CHCs and District Hospital
		Cost related to sample packaging and transportation	2,000 per district	2,000	
		Human resource	-	-	Will utilize existing human resource
		Cold chain maintenance	-	-	Will utilize existing Infrastructure
	IEC	Organizing awareness campaign	-	-	Flyers will be circulated through social media
	Total Cost			3,31,580	

Table 30: Serchhip District Tentative Budget Break-Up Plan

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
NDCP.6 SI no.84	Surveillance	Human resource	-	-	Will utilize existing human resource
		Infrastructure	-	-	Will utilize existing infrastructure
		Training	1. TA/DA for 1 DIST. HOSPITAL: Rs. 2,000/ 2. TA/DA for 5 PHCs : a) Ngentiang PHC – Rs. 7,000/- b) N Vanlaiphai PHC – Rs. 5,000/- c) E Lungdar PHC – 5,000/- d) Khawlailung PHC – Rs. 5,000/- e) Chhingchhip PHC – Rs. 4000/- 3. TA/DA for 1 CHC : a) Thenzawl CHC – 4,000/- 4. Resource person form district = Rs. 2,000/- 5. Training materials = Rs. 10,000/- 6. Refreshment=15 person @500/- =7,500/- 7. Hall rent = Rs. 1,000/-	54,500	Training for animal bite management Training of human resource for sample collection for district hospital and UPHCs, PHCs, CHCs.

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
	Prevention and Control	Cost of ARV	450 X Rs360 x 3doses	5,34,600	Total no. of animal bite+10 per cent buffer stock.
		Cost of ARS	350x50 doses	17,500	
		Infrastructure	-	-	Will utilize existing Infrastructure
		Human resource	-	-	
	Laboratory Diagnosis	Cost related to collection of samples	150 VTM per vial x 5 vials x 6 centers (upto PHC)	4,500	For purchasing sample collection kit to be distributed to UPHCs, PHCs, CHCs and District Hospital
		Cost related to sample packaging and transportation	2,000 per district	2,000	
		Human resource	-	-	Will utilize existing human resource
		Cold chain maintenance	-	-	Will utilize existing Infrastructure
	IEC	Organizing awareness campaign	-	-	Flyers will be circulated through social media
	Total Cost			6,13,100	

Table 31: Lunglei District Tentative Budget Break-Up Plan

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
NDCP.6 SI no.84	Surveillance	Human resource	-	-	Will utilize existing human resource
		Infrastructure	-	-	Will utilize existing infrastructure
		Training	1. TA/DA for 2 UPHCs & 1 DIST. HOSPITAL : Rs. 2,000/- 3 nos. = 6,000/- 2. TA/DA for SDH,PHCs : a) Hnahthial Dist Hosp – Rs. 4,000/- b) S. Vanlaiphai PHC – Rs. 7,000/- c) Cherhlun PHC – 7,000/- d) Pangzawl PHC – Rs. 6,000/- e) Chhipphir PHC – Rs. 5,000/- f) Haulawng PHC – Rs. 5000/- g) Tawipui PHC – Rs. 5000/- h) Tlabung SDH – Rs. 7000 i) Lungsen PHC – Rs. 6000 j) Bungmun PHC – Rs. 7000 k) Buarpui PHC – Rs. 6000 l) Sub total = 71000	1,11,200	Training for animal bite management Training of human resource for sample collection for district hospital and UPHCs, PHCs, CHCs.

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
			5. Training materials = Rs. 18,000/- 6. Refreshment=38 person @400/- =15,200/- 7. Hall rent = Rs. 4,000/- 8. Miscellaneous = Rs. 20,000/- TOTAL = 1,28,000/-		
	Prevention and Control	Cost of ARV	551 X Rs360 x 3doses	6,54,588	Total no. of animal bite+10 per cent buffer stock.
		Cost of ARS	350x50 doses	17,500	Will utilize existing human resource
		Infrastructure	-	-	Will utilize existing Infrastructure
		Human resource	-	-	Will utilize existing human resource

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
	Laboratory Diagnosis	Cost related to collection of samples	150 VTM per vial x 5 vials x 13 centers (upto PHC)	9,750	For purchasing sample collection kit to be distributed to UPHCs, PHCs, CHCs and District Hospital
		Cost related to sample packaging and transportation	2,000 per district	2,000	Capacity building for necropsy and lab diagnosis (As per available SOP)
		Human resource	-	-	Will utilize existing human resource
		Cold chain maintenance	-	-	Will utilize existing Infrastructure
		IEC	Organizing awareness campaign	-	-
	Total Cost			7,95,038	

Table 32: Lawngtlai District Tentative Budget Break-Up Plan:

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
NDCP.6 SI no.84	Surveillance	Human resource	-	-	Will utilize existing human resource
		Infrastructure	-	-	Will utilize existing infrastructure
		Training	1. TA/DA for 1 UHWC & 1 DIST. HOSPITAL : Rs. 2,000/-x 2 = 4000/- 2.TA/DA for 3 PHCs : 3. Bualpui 'NG' PHC – Rs. 6,000/- a) Lungpher 'S' PHC – Rs. 6,000/- b) Borapansury PHC – 6,000/- 3. TA/DA for 3 CHCs : a) Chawngte CHC – 7,000/- b) Sangau CHC – 7000/- c) Bungtlang 'S' CHC – 5500/- 4. Resource person form district = Rs. 2,000/- x 2 = Rs. 4000/- 5. Training materials = Rs. 10,000/- 6. Refreshment=30 persons @350/ day = 10,500/- 7. Hall rent = Rs. 3,000/- 8. Miscellaneous = Rs. 10,000/-	77,000	Training for animal bite management Training of human resource for sample collection for district hospital and UPHCs, PHCs, CHCs.

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
	Prevention and Control	Cost of ARV	974 X Rs360x 3doses	11,57,112	Total no. of animal bite+10 per cent buffer stock.
		Cost of ARS	350x50 doses	17,500	Will utilize existing human resource
		Infrastructure	-	-	Will utilize existing Infrastructure
		Human resource	-	-	Will utilize existing human resource
	Laboratory Diagnosis	Cost related to collection of samples	150 VTM per vial x 5 vials x 5 centers (upto PHC)	3,750	For purchasing sample collection kit to be distributed to UPHCs, PHCs, CHCs and District Hospital
		Cost related to sample packaging and transportation	2,000 per district	2,000	Capacity building for necropsy and lab diagnosis (As per available SOP)
		Human resource	-	-	Will utilize existing human resource
		Cold chain maintenance	-	-	Will utilize existing Infrastructure

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
	IEC	Organizing awareness campaign	-	-	Flyers will be circulated through social media
Total Cost			12,57,362		

Table 33: Sialha District Tentative Budget Break-Up Plan

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
NDCP.6 SI no.84	Surveillance	Human resource	-	-	Will utilize existing human resource
		Infrastructure	-	-	Will utilize existing infrastructure
		Training	1. TA/DA for 4 PHCs & 1 DIST. HOSPITAL : Rs. 2,000/-x 4 = 8,000/- 2. TA/DA for 4 PHCs : a) Tipa PHC – Rs. 8,000/- b) phuraPHC – Rs.8,000/- c) Chakhei PHC – 8,000/- d) Chhaolo PHC – Rs. 5,000/- 3. TA/DA for 1 MCs : a) Sialha MC – 10,000/- 4. Resource person form district = Rs. 2,000/-	99,000	Training for animal bite management Training of human resource for sample collection for district hospital and UPHCs, PHCs, CHCs.

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
			5. Training materials = Rs. 10,000/- 6. Refreshment=70 person @500/- =35,000/- 7. Hall rent = Rs. 3,000/- 8. Miscellaneous = Rs. 10,000/-		
	Prevention and Control	Cost of ARV	100 X Rs360 x 3doses	1,18,800	Total no. of animal bite+10 per cent buffer stock.
		Cost of ARS	350x50 doses	17,500	Will utilize existing human resource
		Infrastructure	-	-	Will utilize existing Infrastructure
		Human resource	-	-	Will utilize existing human resource
	Laboratory Diagnosis	Cost related to collection of samples	150 VTM per vial x 5 vials x 9 centers (upto PHC)	6,750	For purchasing sample collection kit to be distributed to UPHCs, PHCs, CHCs and District Hospital
		Cost related to sample packaging and transportation	2,000 per district	2,000	Capacity building for necropsy and lab diagnosis (As per available SOP)

FMR Code	Broad Component	Activity	Tentative Budget (In Rs)	Total Cost (In Rs)	Comments (If Any)
		Human resource	-	-	Will utilize existing human resource
		Cold chain maintenance	-	-	Will utilize existing Infrastructure
	IEC	Organizing awareness campaign	-	-	Flyers will be circulated through social media
Total Cost			2,44,050		

TOTAL OPERATIONAL COST REQUIRED FOR ANIMAL COMPONENT (A/B): Rs 1,93,94,750/-

TOTAL OPERATIONAL COST REQUIRED FOR HUMAN COMPONENT (C/D): Rs 82,34,300/-

GROSS TOTAL (A/B + C/D): Rs 2,76,29,050/- (Two crore seventy-six lakh twenty-nine thousand fifty)



Prevent Rabies, Vaccinate To Save Lives



After Dog Bite or Scratches or Licks

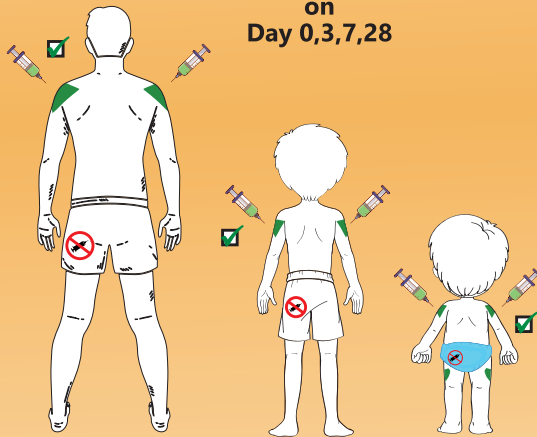
STEP 1 Wound Management for Category I, II & III

- Wash all wounds under running water with soap for upto 15 minutes.
- Apply Antiseptic

STEP 2 Vaccinate for Category II & III

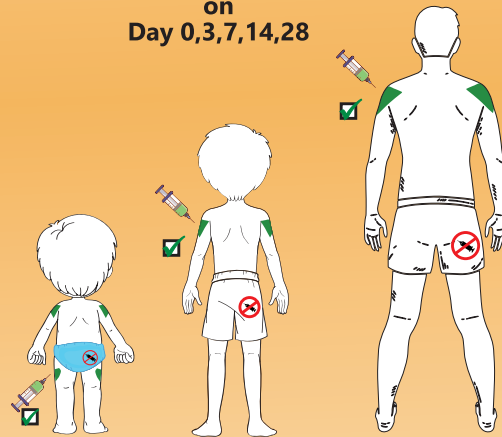
Intradermal Route

0.1 ml at 2 Sites
on
Day 0,3,7,28

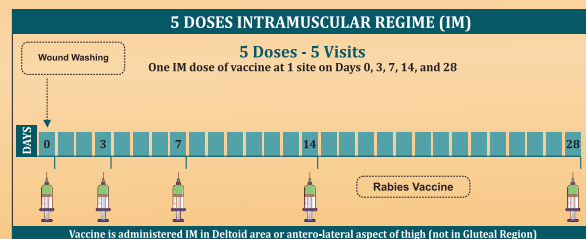
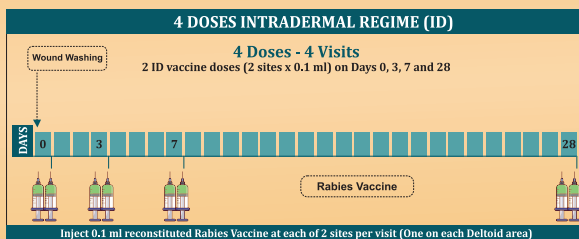


Intramuscular Route

1 vial at 1 Site
on
Day 0,3,7,14,28



Do not inject Rabies Vaccine in Gluteal Region



Step 3: Infiltrate (RIG) in Category III

Infiltrate Rabies Immunoglobulin in **all** wounds.



MINISTRY OF HEALTH AND FAMILY WELFARE
GOVERNMENT OF INDIA



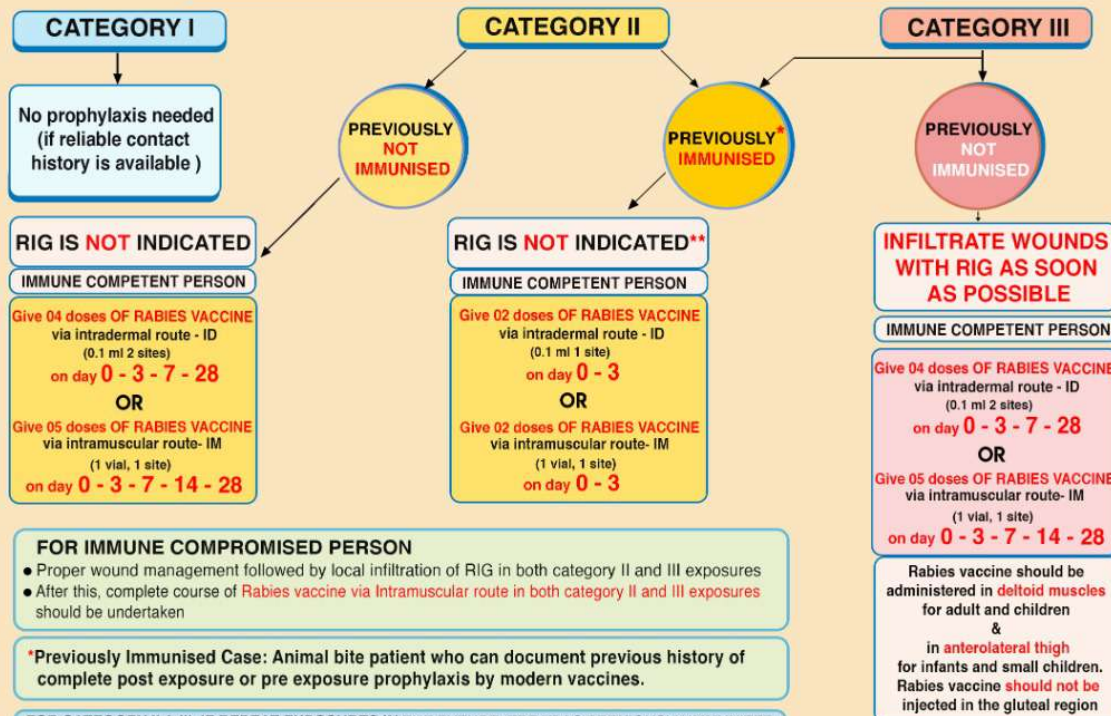
PROTOCOL FOR RABIES POST EXPOSURE PROPHYLAXIS AFTER ANIMAL BITE

DECISION TO TREAT

	CATEGORY I • Touching or feeding of animals • Licks on intact skin		Gently wash all scratches or wounds with mild soap and running water for atleast "15 minutes" irrespective of exposure category to decrease viral load	No prophylaxis needed (if reliable contact history is available)
	CATEGORY II • Nibbling of uncovered skin • Minor scratches or abrasions without bleeding			ONLY RABIES VACCINATION
	CATEGORY III • Single or multiple transdermal bites or scratches. • Licks on broken skin. • Contamination of mucous membrane with saliva.			RABIES VACCINATION + RIG INFILTRATION

*All categories of bite should be reported in NRCP monthly report.

POST EXPOSURE PROPHYLAXIS PROTOCOL



FOR IMMUNE COMPROMISED PERSON

- Proper wound management followed by local infiltration of RIG in both category II and III exposures
- After this, complete course of Rabies vaccine via Intramuscular route in both category II and III exposures should be undertaken

*Previously Immunised Case: Animal bite patient who can document previous history of complete post exposure or pre exposure prophylaxis by modern vaccines.

FOR CATEGORY II & III, IF REPEAT EXPOSURES IN THE FUTURE, TREAT AS PREVIOUSLY IMMUNIZED AND FOLLOW THE ALGORITHM AS ABOVE

RABIES IMMUNOGLOBULIN - RIG DOSAGE

- The maximum dosage for HRIG is 20 IU/Kg of the body weight and that of ERIG is 40 IU/Kg of bodyweight.
- The entire immunoglobulin dose or as much as anatomically feasible but possibly avoiding compartment syndrome, should be carefully infiltrated into or as close as possible to the wound(s) or exposure site.
- Do not give RIG beyond the 7th day after the 1st vaccine dose on day 0.
- **In previously vaccinated individual/s where direct nerve exposure is suspected treating physician may consider RIG infiltration



*NRCP ADVOCATES INTRADERMAL ROUTE FOR RABIES VACCINE ADMINISTRATION

NATIONAL RABIES CONTROL PROGRAMME

ADOPT ONE HEALTH, STOP RABIES



