

Government of India
Ministry of Health and Family Welfare
Directorate General of Health Services
Central International Health Division

Date: 12.09.2023

HEALTH ADVISORY FOR CONSTRUCTION ACTIVITIES AT POINTS OF ENTRY
FOR PREVENTION AND CONTROL OF VECTORS AND VECTOR BORNE DISEASES

Background

Surveillance and control of vectors at construction sites are indispensable to safeguard the well-being of both workers and neighboring communities, thereby fostering a work environment conducive to heightened productivity and efficiency.

Furthermore, India's commitment as a signatory to the International Health Regulations 2005 (IHR 2005) underscores the imperative need to establish and implement robust action plans for vector surveillance at all Points of Entry (POEs). This mandate charges competent authorities with the responsibility of maintaining sanitary conditions at POE facilities, ensuring they remain devoid of infection and contamination sources, including vectors and reservoirs. These stringent measures are fundamentally essential for the protection of public health.

Scope

These guidelines apply to all Points of Entry (POEs) in India to support the implementation of an effective vector management program aimed at preventing vector-borne disease outbreaks. Depending on the changing situation, these guidelines may require periodic updates to establish relevant public health measures.

A. GUIDELINES FOR VECTOR SURVEILLANCE AND CONTROL AT CONSTRUCTION SITES

i. POE Operator:

- a. Notification of planned or in-progress construction operations at the Point of Entry (POE) should be conveyed to the APHO/PHO/LPHO, ideally prior to the initiation of said activities.
- b. Information pertaining to the contractor or designated point of contact for the construction site, including their name, mobile number, organization, and job title, should be provided to the APHO/PHO/LPHO.

ii. Construction Contractor/Agency:

- a. Information regarding the nature of the work, project timeline, and the estimated number of personnel involved in the undertaking should be informed to the APHO/PHO/LPHO.
- b. Comprehensive data on all workers, to be shared with APHO/PHO/LPHO as required for the execution of public health responses during vector-borne disease outbreaks or in response to case reports.

iii. Site Assessment:

- a. Conduct a thorough assessment of the construction site to identify potential breeding grounds and entry points for vectors.
- b. Identify nearby sources of standing water, such as puddles, ditches, and stagnant ponds, curing tanks which can serve as breeding sites for mosquitoes.

iv. Develop a Vector Control Plan:

- a. Create a comprehensive vector control plan that outlines specific measures to be taken based on the site assessment findings.
- b. Assign responsibilities to individuals or teams for implementing and monitoring vector control measures.

v. Eliminate Breeding Sites:

- a. Remove or drain any standing water sources on the construction site, such as containers, tires or equipment that can collect rainwater.
- b. All the water storage containers, curing tanks, drums, sintex tanks to be covered.
- c. Provide a drain hole for easy clearing of stagnant water for eg. Temporary storage tanks were created for construction work.
- d. Regularly inspect and clean drainage systems, gutters and catch basins to prevent clogging.
- e. Scrub clean all the tanks & water storage containers once weekly and dry it before refilling to prevent mosquito eggs collection & breeding.
- f. Store all the water collection scraps, drums, cement bags, construction wastes materials etc. under the roof or properly covered to prevent rainwater collection.
- g. All the construction equipment's like cement concrete mixtures, which uses water to be kept, dry every day at the end of work/ shift.
- h. All tyres, tarpaulin sheets to be stored under the roof & they must be kept free of any water collection.

vi. Use Larvicides:

- a. If standing water cannot be eliminated, consider using larvicides to treat water bodies where mosquitoes breed.
- b. Use larvicides approved for vector control by NCVBDC and concurrence from the APHO/PHO/LPHO.

vii. Mosquito Netting, Screens and Personal protection

- a. Install mosquito netting or screens on windows and doors of temporary structures, especially worker accommodations, to prevent mosquitoes from entering.
- b. Provide workers with personal protective equipment (PPE) such as mosquito repellent, long-sleeved clothing and mosquito nets for sleeping.
- c. Worker's accommodation to be provided outside the Point of Entry premises

viii. Waste Management:

- a. Properly manage and dispose of construction waste, as it can attract rodents and other pests.
- b. Use covered containers to store and transport waste materials.
- c. Dispose of all solid waste, cement bags immediately.

ix. Pest Control:

- a. Implement integrated pest management (IPM) practices to control rodents and other pests that may carry diseases.
- b. Professional pest control services (if necessary) to be hired by the contractor/agency.

x. Education and Training:

- a. Train construction site workers and contractors on the importance of vector control and the proper use of preventive measures.
- b. APHO/PHO/LPHO to conduct an awareness session periodically.

xi. Monitoring and Surveillance:

- a. Conduct regular inspections of the construction site to assess the effectiveness of vector control measures.
- b. Set up traps and monitoring devices to track vector populations and identify potential problem areas.

xii. Disease surveillance and reporting

- a. Urgent medical attention to be provided for any fever cases for workers or their family members.
- b. All suspected/confirmed cases of vector borne diseases (malaria, dengue, chikungunya, zika, scrub typhus, JE etc.), has to be communicated to APHO/PHO/LPHO at the earliest by the concerned agency/contractor/treating physician etc.

xiii. Record Keeping:

- a. The operator/contractor/agency may be advised to maintain detailed records of vector control activities, inspections, and any pest-related incidents.
- b. Details of workers including their visit (during the last 15 days) to be documented before engaging them at the initial stage or after short leaves.

xiv. Reporting and Response:

- a. Establish a reporting system for vector-related issues and encourage workers to report any problems promptly.
- b. Respond quickly to vector-related concerns and take corrective actions as needed.
- c. Weekly report must be submitted to APHO/PHO/LPHO by the agency/contractor on the health status of all the workers engaged in the construction sites at POEs.

xv. Regular Review:

- a. Periodically review and update the vector control plan to adapt to changing conditions and emerging vector-related risks.
- b. Joint visit by APHO/PHO/LPHO, POE Operator, Construction site in-charge to be conducted weekly or as needed earlier also if warranted, but at a minimum of fortnightly basis and a detailed report to be submitted to Central International Health Division, Directorate General of Health Services, Ministry of Health and Family Welfare.

By implementing these guidelines, construction sites can effectively reduce the risks associated with vectors and protect both workers and the surrounding community from vector-borne diseases.

B. WEEKLY MEASURES TO BE UNDERTAKEN IN & AROUND THE CONSTRUCTION SITES.

i. Check for mosquito breeding in the following places:

- a. Unused containers and building wastes in the worksite and site offices.
- b. Building materials, canvas sheets, equipment, and machinery.
- c. Puddles on the ground.
- d. Puddles on the concrete floors of all upper levels and basements
- e. Water storage drums, tanks and containers
- f. Bulk waste containers
- g. Trenches
- h. Lift wells
- i. Safety barriers
- j. Rooftops and water tanks
- k. Treatment plants- (Water, AC, Sewage).
- l. Sanitary exhaust pipes, Overhead tanks overflow pipes/air vents to be covered with mesh.
- m. Fire safety ponds, wells, tanks.
- n. Any other containers

ii. Application of insecticide or anti-mosquito oil

- a. Apply insecticides or anti-mosquito oil every week to all stagnant water and water-bearing containers at ground level and on upper floors.
- b. Repeat application after rain as the insecticide or oil would have been washed away.
- c. Gambusia fish introduction to any permanent water collection bodies.

iii. Destruction of mosquito breeding

- a. Destroy all mosquito breeding found during the inspection and remove or treat all potential breeding habitats with insecticide.
- b. Report all breeding detected, and potential breeding habitats observed, to the construction site supervisor so that appropriate interim or permanent measures can be taken.

iv. Fogging

- a. It is not mandatory to conduct fogging at construction sites.
- b. Fogging treatment should only be done when there is a mosquito nuisance problem or disease outbreak under direction of APHO/PHO/LPHO.

v. Any incidence/suspected case of VBDs to be reported to APHO/PHO/LPHO.

vi. Any other activity as decided by APHO/PHO/LPHO.