

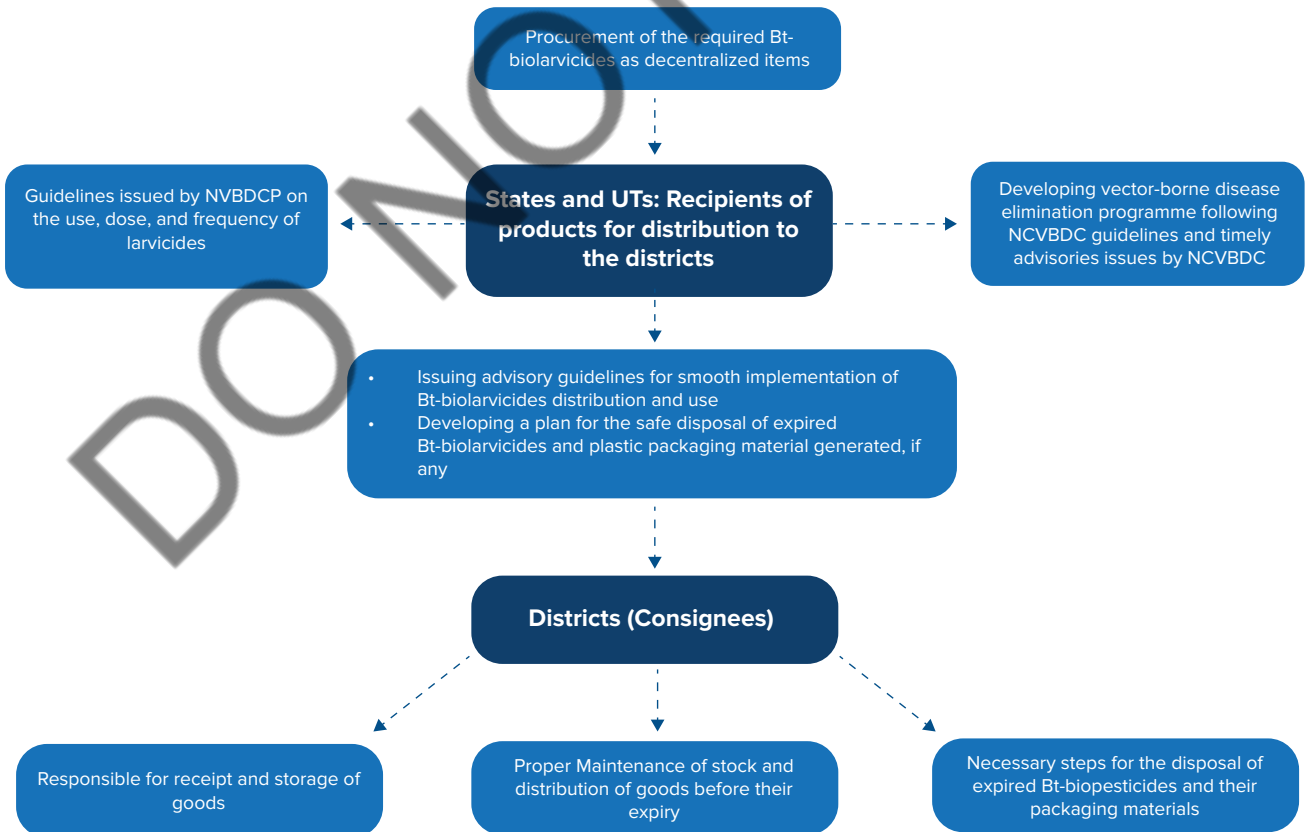
Guidance for users of Bt-based products

In the fight against malaria, the United Nations Industrial Development Organization (UNIDO) and United Nations Environment Programme (UNEP), supported by the Global Environment Facility (GEF), are working with India to develop and promote non-persistent organic pollutants (POPs) alternatives to dichlorodiphenyltrichloroethane (DDT). These include *Bacillus thuringiensis* (Bt)-based biopesticides, a globally recognized agent for biological vector control.

As part of the Government of India's Ministry of Health, Family and Welfare (MoHFW), the National Center for Vector Borne Diseases Control (NCVBDC) recommends the use of select larvicides, including Bt-bio-larvicides, as anti-larval measures against malaria in urban areas. NCVBDC has issued guidelines on the use, dose, and frequency of larvicides.¹

GUIDANCE

As health is a state subject in India, the implementation of programme activities, including the distribution and use of Bt-bio-larvicides in target areas is the responsibility of various States and Union Territories. A general procurement and distribution of Bt-bio-larvicides is shown below:



GENERAL PROCUREMENT AND DISTRIBUTION OF BT-BIOLARVICIDES

States are responsible for planning the safe disposal of expired Bt-product and related plastic packaging as per the **Solid Waste Management Rules, 2016, and Plastic Waste Management Rules, 2016**. District-level officials are responsible for taking the necessary steps to implement them.

The spray workers are the key people involved in Larval Source Management. Important guidelines for the concerned state agencies and local government officials for ensuring the safety of the spray workers and proper use of Bt-biolarvicides are:

- ✓ Assessing the quality of the sprayers to prevent potential harm with the sprayers, and ensuring the availability of safety devices like PPE to the spray workers
- ✓ A ready-to-use solution of Bt-biolarvicide is prepared from the stock assigned to the spray workers by diluting the formulation as recommended by NCVBDC and covering the recommended area by spraying to ensure the recommended dose is obtained.
- ✓ Supervision of the spraying activity by the local government officials to ensure compliance with the norms prescribed in the operating manual
- ✓ Utilization of Bt-biolarvicides before their expiry date and avoiding their application in potable water collection
- ✓ Repeated training of spray workers for proper use of Bt-biolarvicides, ensuring strict conformity with the precautions mentioned on the label and leaflet provided with the product

Bt-biolarvicides are allowed for sale in the retail market; various housing societies, non-governmental organizations (NGOs), and other private parties may also promote their use. These stakeholders also need to be aware of the specific guidelines for the users.

1 <https://ncvbdc.mohfw.gov.in/Doc/Guidelines/Manual-Integrated-Vector-Management-2022.pdf>

