

# COMMUNICABLE DISEASE OF NORTH EAST INDIA WITH EMPHASIS ON MALARIA: STUDY FOR RURAL INFRASTRUCTURE DEVELOPMENT

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## ABSTRACT

Malaria is known as the disease of “high fever”. It is caused by the infection known as malaria Par parasite, which is transmitted from a person suffering from malaria to another healthy person by Anopheles mosquito. The infection occurs following a bite of an infected female anopheles mosquito, which contains malaria parasites in its salivary glands and the infected person may suffer from Malaria Within 14-21 days. However, One malaria patient cases through anopheles mosquitoes.

Due to its wide distribution, especially in rural areas of the NE Region, malaria is one of the important factors responsible for slow rate of agricultural, industrial and economic growth in this reason. Before our Independence, a pre-DDT era, malaria was rampant in every part of India. The economic losses due to man-days lost to malaria were estimated to be about Rs.10 billion per year in 1935. According to an estimation made by the Govt. of India in 1953, there was an annual incidence of 75 million cases of malaria, resulting in 8 lakh deaths per year, in the early fifties. Soon after the Second World War, the well known insecticide DDT was introduced in public health service for the control of malaria.

Pilot project in different parts of rural Indian showed highly successful results of the application of DDT. This opened a new chapter in the field of malaria. This paper would be discussed, use of Biocides in Malaria control and however, they should not be used for level control in portable water.

**KEY WORDS:** Eradication, High Fever, Malaria, Mosquito.

## INTRODUCTION

The National Malaria Eradication Programmed (NMEP) was launched in 1958, on the recommendation of WHO, on the basis of total coverage both geographically and in terms of population. The term “eradication” literally means pulling out by the root. Thus by definition,

NMEP implies on intensive short term effect for the elimination of malaria parasitic from human population so that there is no-further occurrence of malaria even in the presence carrier mosquito's.

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The NMEP strategy for this purpose was based on the following:

- House-to-House search of malaria cases and their medical treatment to abolish the human reservoir of infection.
- Spraying human dwellings and other rooted structure, where mosquito rest, with residual insecticide (e.g. DDT, BHC or Malathon) so that mosquito can kill and there by interrupting the transmission of malaria.

This programme was highly successful since there were only 0.1 million cases and no recorded death due to malaria in 1965-66, against 75 million cases and 0.8 million deaths during 1951-52.

This paper would be discussed, use of Biocides in Malaria control and however, they should not be used for level control in portable water.

## LITERACY REVIEW

It has been noticed that every “development” project in third world countries gives rise to a range of decease. In North East India,

constructions of large/medium dams and consequent deforestation have been shown to be related to a rise malaria, schistosomiasis and hemorrhagic fever.

The major problem is creating to Malaria in N.E. Region of India that the spread of malaria in the wake of irrigation projects has long been know. The emergence of malaria in the largely area of Assam over the last five years has been shown to be related to the change in the ecology of the region. Assam, however, is not the only state of India affected by malaria. In fact, malaria is an ancient disease of mankind and over 80% of our population is exposed to the risk of this scourge.

## METHODOLOGY

### RESURGENCE OF MALARIA

In the beginning, the malaria eradication programme was highly successful in NE Region the annual incidence of the case of malaria increased from 0.1 million in 1976. A number of factors were responsible for the set back of the malaria eradication programme in NE India.



These can be classified as follow-

- **TECHNICAL FACTORS:** In a few years, mosquito vectors became resistant to commonly used insecticides. Even the malaria parasites developed resistance to drugs such as chloroquine.
- **ADMINISTRATIVE FACTORS:** There was a rise in the cost of insecticides and consequently, a shortage of insecticides and ant malaria chemicals, inadequate funds prevented the conversion of unipurpose health workers to multipurpose workers.
- **OPERATIONAL FACTORS:** There was inadequate surveillance and coverage by residual insecticides during the attack phase.

#### USE OF BIOCIDES IN MALARIA CONTROL:

The biocide, viz Bacillus sphaericus and Bacillus Thuringiensis have been field tested and are now Recommended for use under malaria control in some situation, various relevant aspects of these bridgeable, Pesticides are discussed below:

First, a thin paste of the biocide is prepared by adding a small quantity of water to the biocide power. This paste is than dilute with the remaining part of the water and constantly stirred to obtain a homogeneous suspension. (b)

This gives a 2.5% suspension of P. Thuringiensis or 5% suspension of B sphaericus.

Second, the suspension is sprayed at the rate of one litre over 50 square meters (or 20 cc per square meter) of water surfaces.

#### RESULT & DISCUSSION

Malaria can also be controlled in NE India, indirectly by protecting the human beings from mosquito bites using mosquito nets. (or can be improved by impregnating them with biocide, which is effectiveness) . Some relevant points in this connection are as follows-

Quality of bed nets, the standard size of holes in the bed nets should not a bigger than 1.2 to 1.5 mm diameter, i.e.6-8 holds per 10 mm liner length. Nylon nets are preferred over cotton ones since the former are more durable, quicker dry after impregnation and the insectide stays longer on the surface of nylon free. The recommended dosage is 25-50 mg of biocide per square of net.

The surface area of the bad nets can be determined by adding the areas of the four sides to that of the top. The water absorbing capacity of the net is calculating by trial and error since it differs for different material used for making the nets. The optimum quantity of water required for

impregnation is determined from the absorption capacity hanging it in shade. When not washed, the impregnated bad nets will have efficiency for

about 6 months. If washed, the impregnation with biocide has to be done afresh.

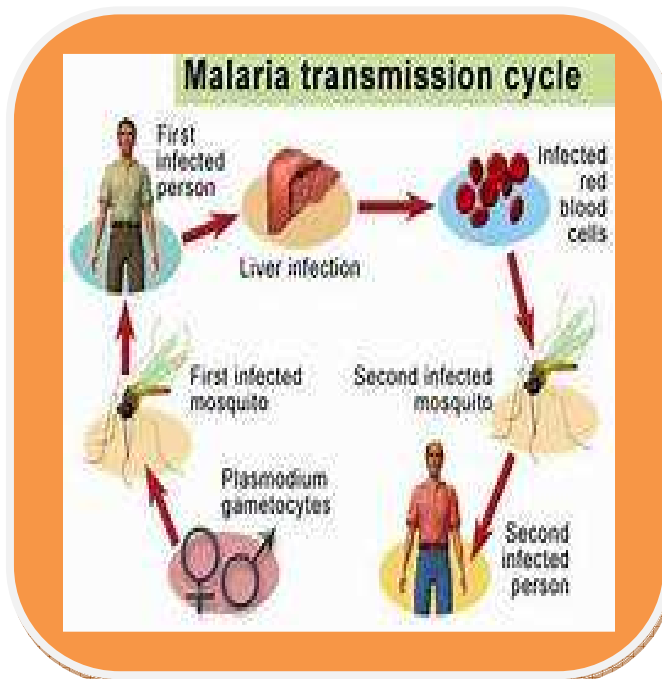


For the preparation of Biocide suspension in above three stages and before that weighting 500 gm of B. Sphaericus or 250gm of B. Thuringiensis or 10 kg of B. Sphaericus per hector of the water surface.

The recommended frequency of spraying is once 2 weeks for B. Thuringiensis and once in 3 weeks for B. Sphaericus. These frequency, however, can be suitable adjusted.

### CONCLUSION

The link between the environment and health is not new. In the early, cholera was recognized as a water disease. In the last few decades, economic growth and technological development have promoted both social and ecological disruption, and this has resulted in an adverse impact on both industrialized and developing countries.



Due to the Deforestation and cutting down hills, have been shown to be related to a rise in malaria. Environmental pollution is a complicated as it is serious. It is complicated because much pollution is caused by things that benefit us. Factories and industrial processes create billions of tons of toxic gases waste contaminates the land, as result to a rise in malaria. But factories provide jobs to people and produce goods that people want.

Thus, to end or greatly reduce malaria at once, Govt. of India must pass and enforce law that require business and individual to stop or cut down on certain polluting activities to a rise in malaria.

Therefore, National Malaria Eradication Programmed to revise its strategy which was called the modified plan of operation (MPO). The MPO called for the decentralization of the entire anti-malaria campaign and stressed on research and development and electing public co-operation through voluntary organization.

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