

## FLOWERING OF MELOCANA BACCIFERA IN MIZORAM AND THE RESPONSE OF STATE GOVERNMENT TO COMBAT THIS CATASTROPHE

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### ABSTRACT

*A natural phenomenon called 'Mautam' or flowering of Melocana baccifera (bambusoides) has occurred every forty-eight years in Mizoram. Despite the fact that all bamboo flowerings are not harmful to the agricultural economy of the people in Mizoram, gregarious bamboo flowerings had, in the past, brought about catastrophe to their agricultural economy as a consequence of the wanton destruction of crops by the rapidly increasing rodent population and the absence of cultivable land for the ensuing year. People in the countryside have, once again, witnessed Mautam- the forerunner of famine. The present government in Mizoram, formed by the erstwhile separatist MNF- an offshoot of the last Mautam famine, has evolved and started implementation of gigantic measures to combat Mautam famine. However, the performances of some departments involved in the execution of the schemes are not adequate to strengthen the purchasing powers of the farmers to combat Mautam famine. However, the recent change of its strategy in the implementation of the schemes by the state government has just started directly strengthening the purchasing powers of the jhummia families in the countryside who have already confronted with this Mautam catastrophe.*

### Introduction

*Mautam* is a natural phenomenon which has visited some hilly areas of North-East India every forty-eight years. The past experiences of not only the Mizos but also other hill tribes living adjacent to Mizoram have proved that there are two independent cycles of bamboo-flowering in North-East India. The first cycle is associated with the flowering of one species of bamboo called *Rawthing* or *Bambusa tulda* & *Dendrocalamus longispachus* whose period of flowering cycle is known, in Mizo language, as *Thingtam* (Thing+Tam). The second cycle is, on the other hand, exclusively associated with the flowering of *Mautak* or *Melocana baccifera (bambusoides)* whose period of cycle is known, in Mizo language, as *Mautam* (Mau+Tam). So, *Mautam* is a local

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term specifically given by the Mizos to the flowering of one species of bamboo called *Mautak* or *Melocana baccifera* (*bambusoides*) whose species are naturally found in abundance in the Tropical Wet-Evergreen Forests. Further, each of the two cycles of bamboo-flowering can be divided into *sporadic* and *gregarious* types.

The *sporadic* type is not very much harmful to the agricultural economy of any state due to the fact that it always reverts to vegetative growth for future use. Conversely, the *gregarious* type always brings about devastation to the agricultural economy of the state because of the fact that bamboos eventually die a natural death or extinct after flowering to produce fruit-like seeds which are the good food for rodents. Since the ongoing *Mautam* or bamboo-flowering has been proved to be of a *gregarious* type, its after-shock has been anticipated to be of crucial in nature. The primary purpose of this work is, therefore, to appraise the ongoing implementation of the Bamboo-flowering and Famine Combat Schemes by the state government through its agencies. However, it will also make a modest attempt, at the outset, to recollect some of the past realities of bamboo-flowerings in Mizoram with a view to provoking the thoughts of decision-makers towards the necessity of improving the process of implementation of the aforesaid schemes.

### **Reminiscence of Bamboo Flowerings of the Past in Mizoram**

Mizoram, one of the districts of the erstwhile Assam state with rich flora and fauna, is situated in the extreme southern corner of North-East India. Today, only 62 per cent of the geographical area of Mizoram is covered with dense forests.<sup>1</sup> Strictly speaking, different kinds of bamboo species cover about 6,446 sq.kilometres (31%) of the total geographical area of 21,087 sq. kilometres.<sup>2</sup> However, forests in Mizoram can broadly be classified into three types:<sup>3</sup>

1. The Tropical Wet-Evergreen Forests.
2. The Tropical Semi-Evergreen Forests, and
3. The Mountain Sub-Tropical forest.

It is important to note that the western belt of Mizoram adjoining Bangladesh, Tripura and Cachar district of Assam is covered with dense Tropical Wet-Evergreen Forests. Naturally, bamboo species found in the Tropical Wet-Evergreen Forests are: *Mautak* (*Melocana baccifera bambusoides*), *Rawthing* (*Bambusa tulda*), *Rawnal* (*Dendrocalamus longispathus*), *Phulrua* (*Dendrocalamus hamiltonii*) and *Rawthla* (*Teinostachyum dullooa*). Up till now, there is an abundant supply of *Mautak* or *Melocana baccifera* (*bambusoides*) species in the Tropical Wet-Evergreen Forests that spread over

a vast area of Mizoram and those states of North-East India contiguous to it. Normally, lower slopes of the ridges, former jhummed areas and low valley sites are covered with bamboo patches of different growth.<sup>4</sup> It is, therefore, evident that there is a plentiful supply of *Mautak* or *Melocana baccifera* (*bambusoides*) in the western and northern belt of Mizoram.

According to the verbal informations handed down from one generation to the other, the Mizos, for the first time, experienced a dreadful gregarious *Mautam* (*flowering of bambusoides*) famine in 1862 when their population was spreading over the Chindwin belt of Burma (Myanmar) and the present Mizoram. Whenever the Mizo elders of today recollect the far-reaching effects of the first gregarious *Mautam* famine on human beings and domestic animals, they often say, "the surviving people were very lean and thin and the pigs were found leaning on the fence clenching their teeth due to extreme hunger."<sup>5</sup>

After a decade of British annexation of the present Mizoram in 1890, the Mizos again experienced two gregarious *Mautam* Famines.

In 1911, the first officially recorded *Mautam* Famine occurred in Mizoram. Though the British Government had already installed a formal but simple administrative structure in the area, the sufferings of the people due to scarcity of food stuff remained severe. Truly speaking, as the British Government did not have any commercial interest in Mizoram, it wanted to avoid high expenditure for the administration in the area and hence spent only about Rs. 80, 000/- for importing food grains from outside.<sup>6</sup>

After a decade of Indian Independence, in 1959, another dreadful *Mautam* (*flowering of Melocana baccifera (bambusoides)*), as predicted by some of the Mizo elders, had, for the second time, befallen on the Mizo Hills.

According to the past experiences of the Mizos, either of the two independent cycles of bamboo-flowering- *Thingtam* or *Mautam*, used to be preceded by a rapid increase in the size of population of two kinds of insects- one is a species of butterfly and another is an oil producing species of bug called *Thangnang*. Before this *Mautam* practically occurred, the District Councillors repeatedly informed their state government in Assam that many of their people living in the countryside had already witnessed the rapid increase in the number of one species of insect, called *Thangnang*, some time in the month of May 1958.<sup>7</sup> In those days, the Mizo District Council did not have any financial authority to ameliorate food situation in the territory. Hence, the only option available to the District authorities was to repeatedly request the state government to take pre-emptive measures in order to save the life of the people from the menace of *Mautam* famine. Unfortunately, the Assam government remained unconvinced by the Mizo District Councillors,

none of whom was an agricultural scientist to make such an accurate prediction on the imminence of *Mautam* famine.

While the state government was unprepared to take anti-famine measures as requested by the Mizo District Councillors, the gregarious *Mautam* or flowering of *Melocana baccifera (bambusoides)* had swept the entire Mizo district in 1959. As the Assam government had done nothing to combat such a dreadful *Mautam* famine, there was a terrible famine within the length and breadth of Mizoram as a result of the wanton destruction of crops by rats whose population had disproportionately increased in size during the flowering of bamboos. Being compelled by the emerging circumstances, the Assam government had taken belated relief measures which were inadequate to meet even the minimum needs of many starving people in the countryside. There was, therefore, widespread hardship and discontent among the famine-stricken people, stirred by acute shortage of food in the entire Mizo district. In this connection, Bhat has aptly said: "Relief was inadequate and there was considerable mismanagement in making it available to the affected people. There was widespread hardship and discontent."<sup>8</sup>

The Mizo Union leaders who were at the beginning staunch supporters of the Assam Congress government had openly blamed the state government for an inordinate delay in making the relief available to the famine-stricken people. Within a short spell of time, the deterioration and estrangement of relationship between the Chaliha government of Assam and the Mizo Union had reached a bitter stage. In this connection, S.K. Chaube has said: "The estrangement between the Chief Minister and the Mizo Union had meanwhile reached a bitter stage."<sup>9</sup> Under the given circumstances, the Mizo Union had gradually drifted away from the Assam government formed by the Congress Party under the Chief Ministership of B.P. Chaliha.

In view of the emerging volatile political situation, some of the politically motivated educated Mizos had formed voluntary organisations, like "the Mizo Cultural Society," and "the Famine Committee," on the pretext of alleviating the distress of the famine-stricken people. When Capt. Williamson Sangma, the then Assam Minister, in-charge of Tribal Areas Department, was visiting the Mizo district to take stock of the famine-related situation on the spot, the Mizo Cultural Society had organised, for the first time in Mizo history, a peaceful procession as an expression of their unhappiness over the Assam government's indifference to the Mizos' grievances. Some of the government servants were also found participating in the procession which was taken by the Assam government as an offence. Thus, the state government had barred all the government servants from membership of the Cultural Society. Laldenga, who served as a Clerk in the

Mizo District Council Office, had resigned from service and became the Secretary of the Mizo Cultural Society.

By way of removing their bad image before the state government for their future political gain, some of the disgruntled local politicians had dissolved the 'Cultural Society' and, with official blessing from the state, formed another welfare organisation called the "the Mizo National Famine Front (MNFF)." Within a short span of time, this Famine Front had become a very popular welfare organisation throughout the district and "earned a good name by the devoted work of its young volunteers who collected house-to-house donations and helped the people in distress."<sup>10</sup> Though famine situation got improved from the harvest of 1961, the Mizo National Famine Front (MNFF) continued to maintain its existence with political overtones. Following the rapid politicisation of the anti-famine and anti-government movement, the "Famine Front" was soon transformed by its leaders into a political party under the name and style of "Mizo National Front (MNF)" on 22 October 1961.<sup>11</sup> The declared objective of the newly formed MNF was no other than the attainment of "independence and sovereignty for the Mizo Hills."<sup>12</sup> The MNF soon gained unprecedented popularity under the charismatic leadership of its founding Father, Laldenga, and made rapid strides organisationally and politically to the point of challenging the authority of the Government of India.

The MNF, at first, professed non-violence as the means for achieving their objectives. Laldenga wrote thus: "Though known as martial race, Mizo nation commits itself to a policy of non-violence, not to resort to violence for their liberation."<sup>13</sup> But, the MNF's *ulterior motive* had become public when it took up arms "in an attempt to achieve its goal" and declared Mizoram a "Sovereign Independent State" with effect from the mid-night of 28 February–1 March 1966. The immediate effect of the MNF's declaration of "Mizoram independence" from the Indian Union was nothing but the occurrence of disturbances at all important centres of the Mizo district which had virtually paralysed the civil administration of the entire district. Newspapers also flashed the immediate impact of Mizo insurgency on the administration of the district: "Administration in Mizoram paralysed following widespread sub-version by the armed volunteers of the MNF."<sup>14</sup>

It becomes crystal clear that the Mizos' feeling of neglect and hatred built up against both the Union government and the Assam government, during and after the flowering of bamboo in 1959, had finally led to the conversion of a welfare organisation into a separatist political party, called the Mizo National Front (MNF), to fight for Mizoram independence. Since that time onwards, both the central and the state governments, whether they liked it or not, had to pay a heavy price for insurgency. In fact, the expenditure of the

government for solving the insurgency problems in the Mizo Hills was much heavier than the funds required for alleviating the plight of the people during *Mautam* famine.

### **Ongoing Bamboo-flowering in Mizoram and the State Government's Reactions**

Mizoram has been, once again, visited by *Mautam* or flowering of *Melocana baccifera (bambusoides)* in accordance with the prediction made earlier by some local elders that about 26,614 sq. kilometre bamboo areas spreading over the states of Mizoram, Tripura, Manipur and some parts of Assam and Meghalaya, where there is an abundant supply of *Melocana baccifera (bambusoides)* or *Mautak*, would be seriously affected by the phenomenon of gregarious *Mautam* or flowering of *Melocana baccifera (bambusoides)* in 2006-2007.<sup>15</sup> Experts from the Indian Council of Agricultural Research (ICAR) had also made an independent prediction that Mizoram would be the epicentre of this *Mautam* or *Melocana baccifera (bambusoides)*.<sup>16</sup> The state government, run by the MNF, had quickly decided to take pre-emptive measures against this *Mautam* and thus formed the *State Level High Power Committee*, under the chairmanship of the Chief Minister, "to address all issues relating to the imminent *Mautam* in Mizoram."<sup>17</sup> Accordingly, the state government had instructed 14 (fourteen) relevant departments to prepare, what is popularly called, "Bamboo Flowering and Famine Combat Schemes (*BAFFACOS*)" *firstly*, to save the life of the people from the famine to be heralded by *Mautam* and, *secondly*, to turn *Mautam* into a blessing in disguise by making an optimum utilisation of bamboos, before they perish, for the economic prosperity of the state. On the basis of the various action plans formulated by the listed departments, the state government had chalked out a comprehensive programme for the entire state. An analysis of this comprehensive programme for combating *Mautam* famine has, however, crystallized that the state government, through the concerted efforts of the different departments, tries to achieve three major objectives:<sup>18</sup>

1. Utilise bamboos for economic benefit of the state before they perish.
2. Control of the multiplication of rodent population by giving cash incentives to the farmers depending upon the number of rat tails they can produce before the officers of the Agriculture Department.
3. Making of alternative arrangements to substitute paddy for other cash crops to save the villagers from hunger.

During the Annual Plan of 2006-2007, the state government has allocated Rs. 30 (thirty) crore for combating the ongoing gregarious flowering of bamboos and its subsequent disastrous effects.<sup>19</sup> In the Annual Plan for

2007-2008, another Rs.35 crore has been allocated for the implementation of the schemes under *BAFFACOS*.<sup>20</sup> The High Power Committee has been empowered to rigorously monitor the processes of implementation of *Mautam* and famine combat schemes by the 14 (fourteen) notified departments. The general public also have a high hope from their state government for the simple reason that it is formed and run by the MNF—basically an offshoot of the last *Mautam* famine.

By way of having a true understanding of the strategies adopted by the state government to combat this *Mautam* disaster, let us briefly analyse, one by one, the action plans formulated by the concerned departments for implementation.

**1. Department of Food, Civil Supplies and Consumers' Affairs:** Mizoram remains a deficit state in terms of foodstuff production and yet needs to procure annually three-fourths of its foodstuff requirement from outside. According to the opinion of the Department, food security situation in the state could be considerably improved by doing timely delivery of food stuff to the famine affected people in the rural areas through Public Distribution System (PDS).<sup>21</sup> Thus, the Department of Food, Civil Supplies and Consumers' Affairs had, a couple of years ago, proposed to the state government that it should make an appeal, well in advance, to the Central Government to increase allotment quota of rice per head during and after *Mautam* famine. In order to facilitate timely delivery and equal distribution of foodstuff to the famine-affected poor farmers, the Department has as many as 188 (one hundred eighty) godowns for storing food grains in the rural areas.

**2. Department of Agriculture:** In pursuance of the state government's comprehensive programme of assistance for the rural farmers to combat bamboo flowering and famine, the Department of Agriculture has adopted ambitious short-term and long-term programme of intensified and diversified cropping system through mechanisation, post-harvest technology, connectivity of market linkage, water harvesting ponds.<sup>22</sup> By way of materialising its comprehensive programme, the Department has carried out the implementation of the following eight sub-programmes:<sup>23</sup>

“Promotion of—

- (i) Rodent Control Measures.
- (ii) Crop diversification for bamboo shoot production.
- (iii) Early maturing rice and maize.
- (iv) Alternative crops like ginger, cotton, potato, jatropha, sugarcane, sweet potato, and oilseeds/pulses.

- (v) Agriculture Mechanisation with post harvesting linkage.
- (vi) Rain-water harvesting ponds.
- (vii) Connectivity for market linkage.
- (viii) Bamboo vinegar and bamboo charcoal.”

The Agriculture Department had foreseen that the above mentioned sub-programmes could not be effectively implemented without collaborating with other cognate and allied Departments and Corporations. This inter-departmental approach to the problem, as advocated by the Department of Agriculture, is necessary due to the fact that, while processing of bamboo shoot into consumable item is the responsibility of the Mizoram Food Processing Industries (MIFCO), promotion of bamboo vinegar and bamboo charcoal in the rural areas falls under the purview of the Horticulture Department. Over and above, in order to effectively combat the menace of *Mautam* and its subsequent famine, the Agriculture Department has given top priority to people’s involvement in the processes of implementation of its comprehensive programme. Under the guidance of the Department of Agriculture, poor farmers in the countryside have been concentrating on the cultivation of two cash crops, namely, jatropha and turmeric.<sup>24</sup> It is an expectation of the Department that, through the cultivation of these two cash crops, the poor farmers would be able to strengthen their purchasing powers to withstand famine- the unfavourable effect of *Mautam*.

**3. Industries Department:** The Department of Industries has given top priority to the setting up of agro-based and rich raw material-based industries to fully utilise huge bamboo potential, before its extinction, for the economic growth of the state. As an instrument for guiding the implementation of the scheme towards the desired direction, the Department has set the following objectives:<sup>25</sup>

- (i) Mitigation of negative effect of flowering of huge bamboo resources.
- (ii) Maximisation of bamboo resources utilisation before and during flowering.
- (iii) Increase in purchasing powers of the people.
- (iv) Sustained income generation of the people using bamboo.

Keeping in mind the aforesaid objectives, the Department has encouraged the public to establish the following Small Scale and Medium Scale bamboo based industries:<sup>26</sup>

- (i) Agarbatti (incense) sticks industries.
- (ii) Slat making industries.

- (iii) Sliver making industries.
- (iv) Pebble mat industries.
- (v) Bamboo daily use items.
- (vi) Bamboo handicrafts.
- (vii) Bamboo shoots preservation.
- (viii) Curtain mat manufacturing industries (locally improvised).

The Department will not directly participate in the investment process but will only play a facilitating role by exploring funds from different funding agencies. The funds so raised shall be distributed to private entrepreneurs for their investment according to the prescribed procedures for funding- 10% of the total cost will be borne by the entrepreneurs, 65% on term loan from financial institutions and 25% as incentives by way of grant or assistance. The Department has estimated that setting up of these industries would generate direct employment for at least 1,550 persons.<sup>27</sup> The primary motive behind the encouragement of private investment by the Department of Industries is to improve the purchasing powers of the individual entrepreneurs in the face of the impending *Mautam* famine. Accordingly, the Department has been carrying out the implementation of its scheme both in the urban and the rural areas with a good intention of giving equal opportunity to all types of people to process bamboo resources for strengthening their purchasing powers.

In addition, the Department has taken up the construction of bamboo link roads in the countryside with a view to facilitating capital investment of the rural entrepreneurs through the utilisation of bamboo resources. Today, private bamboo-related industries have flourished in the areas identified by the department. Some of these private entrepreneurs have had success stories in generating income not only for them but also for the State Government.

**4. Rural Development:** The Department of Rural Development has tried to mitigate the menace of *Mautam* and its subsequent famine through the implementation of its concise scheme. The main objectives of the scheme are:<sup>28</sup>

**First**, to minimise the flowering of bamboo by harvesting most of the bamboo before it flowers.

**Secondly**, combating expected famine by improving existing roads and constructing new roads for supply of essential commodities to the most interior places of the state.

Under Rural Connectivity Project, the Department has also carried out the construction of roads in the rural areas to serve twin purposes- one to facilitate the distribution of food stuff to the people and the other to facilitate marketing of cash crops by the farmers of the countryside.

**5. Directorate of Horticulture:** By using rural population as its target groups, the Directorate of Horticulture has brought out an ambitious project to combat *Mautam* famine. Accordingly, the project of the Directorate of Horticulture has intended to achieve the following objectives:<sup>29</sup>

- (i) To offer avenues in creating employment opportunities to the rural population who depend on Jhum cultivation for their sustenance.
- (ii) To extend financial Assistance to the farmers through the available source of fund in the country.
- (iii) To increase income per unit area by augmentation of the productivity level of the plant with introduction of selective varieties and improved technique of cultivation.
- (iv) To provide proper utilisation of land to minimise unnecessary destruction of forest and adopt cultivation of viable crop to increase value production per unit area.
- (v) To transform the practices of destructive shifting cultivation into constructive farming.

Directorate of Horticulture has scientifically proved that the climate of Mizoram is suitable for the cultivation of some cash crops like Passion fruit, Grape, Potato, and Turmeric etc. and anthurium. As all the aforesaid cash crops have short gestation period, they have good prospect for further marketing and export to other parts of the world for quick economic returns for the State.<sup>30</sup> Today, many of the families have generated a huge income from the sale of anthurium- an internationally recognised highly demanded cash crop. It has now been proved by the local experts that permanent cultivation of the aforesaid cash crops can provide alternative means of livelihood to the rural population even under normal situation.

Over and above, the Directorate of Horticulture has made serious attempts to optimise the utilisation of bamboos, before they perish, for the production of bamboo charcoal and vinegar for the following useful purposes:<sup>31</sup>

- (i) for soil improvement as it contains antibacterial ingredients like benzoquinne, acetic etc.
- (ii) For promoting crop growth, accelerating its sprout, improving its quality and production as insect repellent.

- (iii) As a substitute for chemical pesticide, chemical insecticide and chemical fertilizers.

It is important to note that, while implementing its scheme, the Directorate of Horticulture plays a facilitating role by providing all technical helps and guidance to the private beneficiaries of the scheme. Apart from this, the Directorate has proposed to work hand in gloves with the Directorate of Agriculture in implementing some of their allied and cognate Schemes/Projects.

**6. Department of Animal Husbandry and Veterinary:** The primary aims of the action plan of the Department of Animal Husbandry and Veterinary are, *first*, to improve the economic condition of the jhummia families in the countryside to counter *Mautam* famine and *secondly* to introduce substitutes for shifting cultivation along with the improvement of the purchasing powers of the rural farmers to overcome the menace of *Mautam* famine. The target groups of the Department are:<sup>32</sup>

- (i) Farmers who engage themselves in annual shifting cultivation.
- (ii) Non-jhummia families having good workforce without any permanent occupation.
- (iii) Families interested in cattle rearing.
- (iv) Families having good pasture.
- (v) It is meant for bonafide citizens of India.

The Department has given top priority to the improvement of the purchasing powers of the rural people to combat *Mautam* famine through extensive rearing of cattle of the following species:<sup>33</sup>

- (i) Pig Rearing:** Pig rearing is basically one of the indigenous economic activities of the Mizos since time immemorial. The Department is of strong opinion that, through the sale of pigs, the beneficiaries would be able to earn a handsome amount of money for the purchase of food grains in the post *Mautam* famine.
- (ii) Broiler Poultry Farming:** Though broiler poultry farming can give the quickest returns to the beneficiaries, broilers need proper feeding with balanced computed ration plus scientific management. The Department has, therefore, recommended broiler farming only in the urban and semi-urban areas where transport facilities are easily available either for the procurement of concentrated feeds or for marketing the poultry birds.
- (iii) Dairy Cow Farming:** Dairy Cow Farming can be taken up in the urban, semi-urban and in the rural areas. Mizo typical cows have been

recommended to be reared anywhere inside the state as long as there are sufficient numbers of people to consume perishable milk in the surrounding areas. Preferably, the firms should be located along the Highway routes.

But, the Department is worried about the marketing problems that may stand on the way of generation of profit by the rural farmers out of their toils. Hence, the Department has been making serious efforts to explore markets in the urban centres where the village farmers would easily sell their products.

**7. Department of Environment and Forests:** Mizoram has an abundant supply of bamboo raw materials that can support a variety of cottage as well as other agro-based industries within and outside the state. Hence, the action plan of the Department has given top priority to bamboo sector development for the improvement of purchasing powers of the rural farmers to withstand the reverberations of *Mautam*. The Department expects its comprehensive project to give economic benefits to the rural farmers in two ways:

*First, commercialisation of bamboos before their extinction by involving the rural farmers as labourers, and*

*Secondly, promotion of commercial cultivation of high-yielding thick walled bamboos in the vacant lands in the countryside for the benefit of the rural poor<sup>34</sup>.*

The Department is of the view that, though Mizoram does not have any industry for processing bamboos, the rural farmers can easily sell their bamboos to the Paper Mills located in the neighbouring states. In addition, the Department has initiated the cultivation of medicinal plants to motivate and lead the rural people to such lucrative activities for their economic gains.

In short, by getting the rural farmers directly involved in the implementation of the project as paid labourers, the Department has improved their purchasing powers to combat *Mautam* famine.

**8. Fisheries:** The Directorate of Fisheries has brought out an extensive Scheme for combating the impending *Mautam* and its ensuing famine. The main objectives of the Comprehensive Action Plan of the Fisheries are:<sup>35</sup>

- (i) To produce fish flesh for food and earning income by augmenting table size fish production so as to substitute and combat the damage of standing crops etc. during the bamboo flowering and famine.
- (ii) To generate additional employment for the villagers by way of constructing fish farms in the private sector and offering permanent employment to about 8,000 families on individual family basis and 400 villages (2,000 families/community basis).

- (iii) Finally to reduce financial burden of the Government by way of generating sources of income to meet the cost of food grains and cereals by the individual fish farmers.

The Directorate of Fisheries has launched an awareness campaign to motivate the fish farmers to think in terms of exports of fish flesh at least to other neighbouring North-East States. Keeping in view the aforesaid objectives, the Directorate of Fisheries has set the following ambitious targets to be materialised phase-wise for the fish farmers:<sup>36</sup>

- (a) To renovate and supply inputs viz, fish seeds, fish feed etc. covering 1,200 hectare of pond in a private sector for the first year.
- (b) To develop 400 hectare of new community ponds in 400 villages including supply of inputs for the first year.
- (c) To develop 400 hectare of individual new ponds in the private sector including supply of inputs for the first year.
- (d) To train up a cadre of 10,000 fish farmers from both existing and new fish ponds comprising of community and individual fish farmers.
- (e) To create Market assets like installation of Ice Plants or Cold Storage, introduction of refrigerated/insulated van, providing insulated boxes/deep freezer to retailers in the private sector by providing 25% subsidy under the scheme to the private entrepreneurs, dovetailing 25% marginal amount (borrower's share) and 50% Bank loan.

**9. Health and Family Welfare:** As bamboo-flowering in Mizoram was usually accompanied by considerable increase of the rodent population, the Department of Health and Family Welfare has prepared its medical experts to address the most critical aspect of the whole issue during and after *Mautam*, that is, to prevent, manage or control the corresponding rodent-borne diseases, malnutrition and its related diseases. Since there is likelihood of spreading rodent related epidemic during and after *Mautam*, the Department of Health and Family Welfare, in its plan of action, sets the following general objectives:<sup>37</sup>

- (i) To prevent, manage and control rodent associated diseases in Mizoram.
- (ii) To prevent and manage malnutrition due to food scarcity during bamboo-flowering.
- (iii) To develop the capacity of health services and community.
- (iv) To prevent economic loss of India and disruption of local and international trade by preventing or controlling plague epidemic.

With a view to making an additional contribution outside the scope of their project, the Department has also proposed to work in collaboration with other Departments in the following identified areas:<sup>38</sup>

- (i) Rodent control with Agriculture Department.
- (ii) Passive surveillance of dogs with the Department of Animal Husbandry and Veterinary.
- (iii) Surveillance of contaminated water with Public Health Engineering.
- (iv) Enforcement of Food Safety measures with the Department of Food, Civil Supplies & Consumers' Affairs.
- (v) Imparting of public education with the Department of Information and Public Relations.
- (vi) Reporting of rat falls and cases of rodent borne diseases with community participation.

The focus of attention of the Department of Health and Family Welfare is basically on the prevention of human beings against health problems that may happen during and after *Mautam* famine.

**10. Land Revenue and Settlement:** Department of Land Revenue and Settlement has been called upon to conduct survey of agricultural land for allotment and settlement to the bamboo affected villagers for plantation of better quality of bamboo to substitute natural bamboo before they perish. Accordingly, the Department has prepared the project to serve three important purposes:<sup>39</sup>

- (1) Introduction of settled cultivation to wean the farmers off shifting cultivation.
- (2) Giving employment to the affected people by engaging them as labourers to clear the jungle for plantation of better quality of bamboo for which they will be paid money by the Government.
- (3) Improvement of the purchasing power of the rural people by allowing them to sell the natural bamboo without paying royalty before bamboo flowering.

The Department of Land Revenue and Settlement has carried out survey of the entire area earmarked for bamboo plantation. Besides, agricultural lands in the countryside have been allotted to many of the families, on permanent basis, for the cultivation of cash crops identified by experts from agriculture-related departments of the state.

**11. Sericulture:** The Sericulture Department has given top priority to enhancing employment opportunities of the rural people by developing

entrepreneurs for various sericulture and silk processing activities like reeling, spinning, dyeing, weaving and garment production.<sup>40</sup> The beneficiaries of this scheme would be trained on latest technologies related to Mulberry silk production activities and also for the acquisition of managerial and technical skill for taking up production activities.

**12. Soil and Water Conservation:** The scheme of the Directorate of Soil and Water Conservation has proposed the following works to be executed for generating employment opportunities for the villagers to improve their rural economy:<sup>41</sup>

- A. Gully Control Measures that require the involvement of the rural people.
- B. Stream Bank Erosion Control Measures.
- C. Land Development.

The Department has tried its best to extensively involve the rural people in the process of implementation of the above-mentioned works that naturally require the involvement of the rural people as daily labourers. The Department is of strong opinion that the engagement of the rural people as wage earners will certainly improve their purchasing power to bravely face *Mautam* famine.

**13. Social Welfare:** The main objective of the Famine Combat Scheme of Social Welfare Department is to set up Village Grain Banks on the basis of the demand made by families living below poverty line (BPL).<sup>42</sup> To meet their immediate needs, the BPL families would be allowed to borrow food grains from the Village Grains Banks but would be required to repay their debts only during the next harvest or when 'food for work' is started in their localities by the state government. Child Development Project Officers (CDPOs) and their Circle Officers (COs) posted in the countryside have been given responsibility to effectively carry out the scheme within their respective jurisdictions. The Co-ordination Committees of the Anganwadi Centres of all the villages are called upon to act as the Village Committees.

**14. Department of Information and Public Relations:** The Department of Information and Public Relations has, in its Scheme, proposed to achieve two main objectives as following:

*First*, to create public awareness about the upcoming *Mautam* as this phenomenon always leads to forest depletion and famine in Mizoram.

*Secondly*, to teach the people through Multimedia Publicity Campaigns how to tackle the two problems arising out of this flowering of bamboo.

In collaboration with other concerned departments, the Department has, throughout the state, launched a Multimedia Publicity Campaigns on *Mautam* and its possible bad consequences. On top of this, the Department has made sincere efforts to create national and international awareness about the danger of *Mautam* famine by organising a Seminar, in New Delhi, on the subject- "Bamboo Flowering and Combating the Impending Famine."<sup>43</sup> In fact, the Department acts as the eye-opener of the different activities of the concerned departments in their fight against *Mautam* and its offspring-famine.

### **An Appraisal of the Processes of Implementation of various Combat Schemes by the Departments of the State Government**

*Mautam* has already caused a heavy loss of agricultural products worth Rs. 73,71,850/- to the people of Mizoram.<sup>44</sup> But, most of the Bamboo Flowering and Famine Combat Schemes implemented by the state government are only on the verge of their completion. The performances of the concerned departments in the implementation of the schemes are far from satisfactory for the following reasons.

**First**, the state government neglects the constitution of proper machinery which will effectively monitor the processes of implementation of the different schemes for the benefit of the poor farmers in the countryside. Though the State Level High Power Committee has been constituted to monitor the processes of implementation of the various schemes, its impact has not been felt by many of the officers in the concerned departments. Meanwhile, the Mizoram Intodelh Project (M.I.P), considered by many as a substitute for the New Land Use Policy (NLUP), has a vibrant organisational agency to make the state self-sufficient in food. The Board members of this agency are, on many occasions, found interfering in the business of those departments enlisted by the state government to carry out the implementation of the famine combat schemes. In the absence of proper differentiation of functions between the State Level High Power Committee and the Mizoram Intodelh Project (M.I.P), some of the concerned departments get confusion as to which agency they have to give their first loyalty. This confusion in the minds of government servants tremendously delays the processes of implementation of the various schemes.

**Secondly**, many of the schemes prepared by the notified departments are full of overlapping of functions. For instance, the State Public Works Department (PWD) is considered to be the relevant department to carry out the construction of roads for easy transportation of foodstuff, cash crops and essential commodities from the interior villages to the urban centres and *vice versa*. Simultaneously, similar nature of works has figured the schemes of

other Departments like Rural Development and Industries. Thus, it has been found that duplication of functions as proposed by some of the departments is bound to escalate Government's expenditure for the implementation of the schemes and projects.

**Thirdly**, there are some charges of glaring irregularities in the processes of selection of the beneficiaries for the schemes. Some of the local newspapers have, from time to time, reported that there is rampant politicisation of selection of the beneficiaries for the schemes at the village level. This presence of irregularities has also been proved by the fact that, while the poor farmers in the countryside are likely to be the worst sufferers, the largest numbers of beneficiaries of these Schemes are undoubtedly the urban dwellers who never cultivate a hard land for their sustenance. There is also a common allegation that, at the time of selecting the beneficiaries of the various schemes, the State Government has excluded many of the poor farmers in the countryside for the simple reason that they are not the members of the ruling party.<sup>45</sup>

**Fourthly**, there are also some charges of prejudices at the time of selecting the areas for introduction of the aforesaid *Mautam* famine combat schemes. It has been pointed out earlier that the north-western belt of Mizoram bordering Bangladesh, Tripura and Cachar District of Assam are considered to be hit hard by this imminent *Mautam* because of the fact that there is a huge supply of *Mautak* or *Melocana baccifera (bambusoides)* in these areas. It is, however, unfortunate for the poor farmers in these areas that the State Government has done little for them. Strictly speaking, only a handful of the poor farmers living in the prone areas have been selected to be rewarded by the Government through these schemes.

**Fifthly**, the State Government has committed a great mistake in overlooking the immediate needs of the people. This argument has been proved by the fact that, while the people in the countryside have already been affected by the menace of this *Mautam*, most of the notified departments set only long term targets and not short term targets to meet their immediate needs in their Famine Combat Schemes.

**Sixthly**, some of the beneficiaries of the schemes felt contented only with receiving funds from the state government to satisfy their financial greed. The selection of one private firm, called "Mizoram Venus Bamboo Product (P) Ltd," by the state government as its investment-partner has justified this point. Since the funds under the BAFFACOS are released by the central government exclusively for the implementation of various anti-*Mautam* famine schemes by the state government, this private firm alone has received Rs.907.50 lakhs of that funds as loan from the state government.<sup>46</sup> While few

far-sighted private entrepreneurs have done well in the implementation of their trades, this private firm has not yet made any success story. Right-thinking people of the state do not find any justification for this conversion of funds into loan component by the state government.

**Seventhly**, some of the schemes are apparently prepared by the departments not necessarily for alleviating the plight of the poor farmers in the countryside but for claiming some percentages of shares from the money sanctioned by the Union Government.<sup>47</sup>

**Eighthly**, the state government does not constitute a neutral agency to cross-examine and evaluate the processes of implementation of the projects/schemes. This instantaneously carries a message to the people that the state government is not committed to the proper implementation of the various schemes to combat *Mautam* famine as long as it fails to constitute a competent agency to suggest corrective measures, at any stage, for the proper implementation of the *Mautam* famine combat schemes.

### **Suggestions for improvement of the implementation of Bamboo-Flowering and Famine Combat Schemes (BAFFACOS)**

In the light of the above appraisal of the Bamboo-Flowering and Famine Schemes and their implementation, it is possible to identify some areas where the State Government should keep constant watch for its proper implementation to benefit the state government in general and the poor farmers in the countryside in particular. It is, therefore, suggested that the state government should take the following positive measures in order to effectively implement the Schemes (*BAFFACOS*).

- 1. Neutral Experts' Body to evaluate the execution of the Schemes:** The state government must constitute an Experts' body to rigorously evaluate and monitor the processes of implementation of the different schemes by the concerned departments. If necessary, before it is too late, this body should suggest corrective measures, at any stage, for the proper implementation of the schemes. Otherwise, many of the combat schemes would fail to bring the expected results to benefit not only the poor farmers in the rural areas but also the entire population in the state.
- 2. Corruption-free Implementation of the Schemes/Projects:** The state government must check corruption among the officers of the concerned departments involved in the implementation of the various *Mautam* and famine combat schemes. Imposing punishment on one or two officers is not enough to rectify malpractices among the implementing officers.

3. **Minimisation of Duplication of Functions:** Some of the notified departments have proposed more or less the same functions in their combat schemes. Duplication of functions is sure to open a floodgate for wastage of public funds without any positive outcome. The state government should, therefore, take immediate steps to minimise, as far as possible, duplication of functions in the schemes and projects of some departments. Only then, the concerned departments would be expected to avoid inflated expenditure for the implementation of their bamboo-flowering and famine combat schemes and projects.
4. **Rural Farmer-Centred Schemes:** The state government must ensure that the bamboo-flowering and famine combat schemes are implemented to practically help the rural farmers by the concerned departments. If necessary, the government should not hesitate to alter the *modus operandi* of implementation of the schemes as long as such innovative modifications are going to benefit the poor farmers in the countryside. Moreover, the state government should insist on review of the implementation of their schemes by the concerned department at regular intervals.
5. **Revision of Famine Combat Schemes to meet the immediate Needs of the poor Farmers:** Most of the schemes prepared by the concerned departments have failed to take short-term measures to strengthen the purchasing powers of the rural agriculturists. Though most of the bamboo-flowering and famine combat schemes have not yet been fully implemented, the people living in the rural areas have already been visited by *Mautam* (Bamboo-flowering). According to the calculation made by the local experts from the Agriculture Department, 22.75 per cent of the jhums within the state have already been affected by this catastrophe.<sup>48</sup> Thus, the ground reality has proved that the need of the hour is revision of the bamboo-flowering and famine combat schemes by the state government to meet the present needs of the poor farmers. If the state government fails to do so, the sufferings of the rural farmers before the completion of the long-term *Mautam* and famine combat schemes will be immeasurable.
6. **Absence of Politicisation of the Schemes:** Since *Mautam* famine does not have any political consideration; the state government should dispense justice impartially to all deserving beneficiaries of the schemes. There should be fair identification of the sites for the introduction of the short-term schemes/projects without political consideration.
7. **Proper Utilisation of the Funds by the Beneficiaries:** The state government must ensure that the funds released to the beneficiaries are

properly utilised exclusively for an effective implementation of the schemes and projects. The government should also be vigilant enough to check the possible misuse of the funds by the beneficiaries. If necessary, the government should stop releasing the funds to those beneficiaries who are using their trades only for making money.

### Conclusion

On the whole, the objective common to all the schemes and projects of the different departments of the state government is the improvement of the purchasing powers of the poor farmers in the countryside to combat the ongoing bamboo-flowering and its ensuing famine. According to the predictions made by different experts-local and non-local, *Mautam* is likely to practically occur from the harvest of 2007. But, many of the farmers in the countryside have already been practically affected by the menace of *Mautam* while most of the schemes to combat *Mautam* and its subsequent famine are yet to be implemented. In addition, most of the schemes do not contain any provision for meeting the immediate needs of the affected farmers. If the state government is really committed to the improvement of the purchasing powers of the poor farmers against *Mautam* famine through the implementation of the different schemes, it has to put into effect the above-mentioned suggestions to set things right. If not, the price to be paid in future will be too high for the state government. Now, a big question is whether these schemes and projects of the state government would really help the poor farmers in the countryside to withstand famine, that is, the end result of *Mautam*.

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