



THE NEW LAND USE POLICY: A PANACEA FOR SHIFTING CULTIVATION IN MIZORAM

David Zothansanga ¹ & Bobby Beingachhi^{2,*}

¹Department of Public Administration, Pachhunga University College, Aizawl, Mizoram

²Department of Geography, Pachhunga University College, Aizawl, Mizoram

*Corresponding Author: beingachhibobby@gmail.com

 David Zothansanga: <https://orcid.org/0000-0002-4593-2480>

ABSTRACT

Shifting Cultivation also called jhumming is an integral part of the social cultural lives of Mizo people. Agriculture is the main occupation of the people of Mizoram where about 80% of the population is engaged in the practice. The increase in population has shortened the jhumming cycle and productivity considerably. The area under shifting cultivation varies from 18% to 28% of the geographical area according to numerous studies. Various scholars have opined that shifting cultivation has a negative impact on the forest and landscape. Considering this, the Government of Mizoram in 1984 launched a programme called NLUP (New Land Use Policy) and other schemes with an objective to put an end to the practice of shifting cultivation. However, the programme was not a success. A new initiative under the same name i.e. the New Land Use Policy was initiated in 2009 and which continues till today. A survey conducted by Consultative Committee for New Land Use Policy (CCN) in 2015 believes that New Land Use Policy greatly reduced the numbers of families engaged in jhum cultivation. This paper highlights as to how far New Land Use Policy has succeeded in containing the practice of shifting cultivation in Mizoram.

Keywords: *Shifting Cultivation, Jhum, jhumias, New Land Use Policy.*

Introduction

Shifting cultivation is an agricultural system which involves clearing of a piece of land followed by several years of wood harvesting or farming until the soil loses fertility. Once the land becomes inadequate

for crop production, it is left to be reclaimed by natural vegetation, or sometimes converted to a different long-term cyclical farming practice. This system of agriculture is often practiced at the level of an individual or family, but sometimes may involve an entire village. The term 'shifting

cultivation' refers to 'slash and burn' agriculture and nomenclature as '*Jhum*' or '*Jhuming*' cultivation in North-East India (NEI). It is variably termed as rotational bush fallow agriculture, or slash and burn cultivation, and is an ancient form of agriculture still common in many parts of the humid tropics.

There is no universally accepted definition of shifting cultivation. The most complex and multifaceted form of agriculture, shifting cultivation is a practice, consists of cyclic nature, under which selection of fields, clearing them, drying and burning debris for the cultivation of cereals is carried out. Selecting forest patches and clearing vegetation from it, takes place generally in the months of December and January. The herbs, shrubs, twigs and branches are burnt in February and March. In the month of April and May, seeds are sown. Generally, seeds include cereals, vegetables and oil seeds. The farmers continue the practices of shifting cultivation on the current sites for a few years and then agricultural fields are abandoned. They shift their agricultural fields to the other forest area. After a few years' gap, they again come back to the previous fields. This practice continues.

Mizoram is economically backward region and its economy is mainly dependent on the traditionally cultivating cereal crops. About 80% people are engaged in agricultural practices and rice is the main food-grain. The total consumption of rice in Mizoram is 1, 80,000 metric tons whereas; it produces only 44,950 metric tons of rice (25%). Under the traditional agriculture, shifting cultivation is dominant mainly in

the highlands. Wet rice is grown in the lowlands and the valleys. During the past decades, 58.1% area under shifting cultivation in Mizoram has been decreased (from 68,114 ha in 1997-98 to 28,562 ha in 2010-11). Meanwhile, the area under wet rice cultivation has been increased by 28.4% (from 9,446 ha to 12,130 ha) in 2010-2011. The share of shifting cultivation in net sown area was calculated about 38.64 % during the recent past. The fallow cycle under shifting cultivation has been decreased from 20-25 year to 2-3 years. It is now more intensive and frequent. Therefore, it has put excessive burden on the land thus, soil fertility has been reduced. As a result, the production and per hectare yields of cereal crops and vegetables have been decreased considerably.

In Mizoram, the economic life of the people has always been centered on shifting cultivation. The crops grown are mixed and the principal crop is paddy. Others are maize, cucumber, beans, arum, ginger mustard, sesame and cotton. Some pulses like cowpea, rice beans and French beans are cultivated under shifting cultivation.

Implications of Shifting Cultivation

In Mizoram, 1.5 % of total area is being affected by shifting cultivation, annually (Maithani 2005b) that costs about Rs. 1 billion forest resources loss (Lalkhana 1985). The adverse effects of shifting cultivation on the environment are well established scientific facts. Biologists, foresters and conservationists have noticed the effects of shifting cultivation on biodiversity in the tropical forests (Raman 2000). FAO (1957) reveals that shifting

cultivation was identified long time ago as a threat to tropical forests. Many scholars believe that shifting cultivation effects are very destructive (Rao & Hajra 1986; Lal & Prajapathi 1990; Tiwari 1991; Dwivedi 1993). These conclusions are based on the scientific data and experiments conducted world-wide (FAO 1984; Tawnenga et al, 1997). Air pollution due to slashing and burning, loss of fauna and flora and other ecological implications are very common in the areas where shifting cultivation is practiced. In contrast to the above-cited adverse impacts of shifting cultivation, some studies have shown that shifting cultivation is quite sustainable to restore ecology. A report from the Ministry of Environment and Forest (1997) shows that 1700 sq. km area was gained from shifting cultivation mainly comprises of scrubby vegetation. This growth also helped in checking soil erosion from the hilly slopes. Forest clearance alternating with long fallow period's mimics natural, small-scale high-intensity disturbances in forests and may be a sustainable form of land use (Andrade & Rubio-Torgler 1990). It may enhance biodiversity in the landscape by creating new habitats (Gadgil & Guha 1992; Kricher & David 1992). Mizoram state noticed 1.4% increase in forestland from 1991 to 2011. In 1991, the total forest area of Mizoram was 18853 km². In 2011, it increases up to 19,117 km². Meanwhile, many neighboring states such as Nagaland and Manipur recorded a decrease in forest land (7% and 3.4% respectively).

A Brief History of Land Use in Mizoram

The mainly agrarian Mizo population has an age-old practice of

farming by which each family would clear a patch of jungle by cutting down whatever is growing in that patch and later burning whatever has been cut down after they have dried on the ground. The ashes left behind thus become the fertilizer and this cleared and burnt patch of land is used for the cultivation of the main staple crop is rice and other subsidiary crops such as tobacco, cotton, chilly and vegetables are also grown.

The problem with this slash and burn method of farming, also called *jhum* cultivation or *jhumming*, is that once the produce are harvested, the land becomes barren and cannot be reused until a decade or so has passed. So a new patch of land has to be cleared and burnt year after year. This type of farming system is not only destructive for the environment, but also highly unprofitable - and labour consuming - as one can barely harvest a year's supply of crops for one's use. As a result of this and the growing population, Mizoram's lands have slowly lost their fertility and wooded areas over the decades to an alarming degree. This resulted in drying up of springs and rivers and depletion of underground water reserves and loss of precious fertile top soil.

It was not as if there had been no attempt to control land use in Mizoram. The Government of India first initiated such a move during the 1st Five Year Plan (1951-56). The Village Council Act of 1953, through which Village Councils were given wide ranging powers for the management of land, was the first empowerment of a local Government for land management in Mizoram. Then there came the Lushai Hills District (*Jhumming*) Regulation Act of 1954.

Post 1972, after Mizoram was accorded the status of Union Territory, the various Mizoram Governments had tried to control the prevailing traditional *jhum* cultivation until 1984 when the idea of a New Land Use Policy was conceived by the then Congress ministry and again in 2009.

Birth of the policy of New Land Use Policy

The New Land Used Policy has a history of nearly three decades during which it was implemented on and off, developed and streamlined through the process of experience gained as it was a new concept that has never been attempted before either by the Government of Mizoram or the Government of India. It is a courageous and ambitious political vision adhered to with tenacity by the Government of Mizoram when run by a Congress Ministry.

With a view to the grave economic deprivation of the common people, especially the farmers who constitute about 70% of the total population of Mizoram, the Government of Mizoram conceived a policy in 1984 which was implemented in a small scale during 1985 - 1992. While the birth of this New Land Use Policy was prompted, at first, by the destruction of forests and wooded areas of land through the uneconomical, labour-intensive slash and burn method and the economic hardships faced by the majority of the Mizo population, it was later developed into a more resourceful project during 1993-1998 when the Congress Ministry again came to power. This time round, it was implemented on a larger scale than the previous one and the project managed to encompass around

35,000 families during a two-year period. The policy was again implemented in 2011 after the Congress came to power once more in 2008 year-end. More modifications and a better framework were made to the policy following suggestions from the Government of India that envisaged a five-year period for the project to be completed with a project cost of a staggering Rs 2,800 crores.

The actual groundwork for the implementation process was commenced in 2009 when the Government of Mizoram constituted the top authority for New Land Use Policy called New Land Use Policy Apex Board chaired by the Chief Minister. Directly under this was also constituted, at the same time, the New Land Use Policy Implementing Board (NIB) chaired by a Member of the Mizoram Legislative Assembly with the rank and status of a State Cabinet Minister. The Government of Mizoram also called in the expertise of an experienced retired Indian Administrative Service officer who has extensive experience and knowledge in implementing projects as a former Secretary of the North East Council (popularly called the mini Planning Commission for the eight States of the North East Region of India) to help reshape and implement the policy.

To do away with the unsustainable system of *jhum* cultivation, the State Government has initiated the New Land Use Policy (New Land Use Policy) in Mizoram. The main objective of New Land Use Policy is to abolish the system of *jhum* cultivation by giving sustainable livelihood to the cultivators of Mizoram. Aims and Objectives as envisaged in the New Land Use Policy Manual 2009 include following:

- To put an end to wasteful shifting cultivation
- To ensure that all farmers have land of their own so that they can each pursue a permanent means of livelihood under agriculture and its allied sectors, industry or animal husbandry sector
- To develop all suitable land for wet rice cultivation to attain self-sufficiency in rice and vegetables.
- To re-afforest the land save those allocated to the New Land Use Policy beneficiaries so as to regenerate the ecosystem. This will help stabilize the climatic changes brought by global warming, rejuvenate the flora and fauna and make Mizoram a better place to live in.
- To set up a marketing infrastructure so that the successful farmers and beneficiaries under the New Land Use Policy can have a viable commercial outlet for their products.

Target Groups under New Land Use Policy

Jhumias who depend upon *jhumming* for their livelihood; families other than jhumias having no permanent means of livelihood but consisting of able bodied members capable of rendering physical labour.

Each New Land Use Policy beneficiary has to undertake any land-based activity, which shall be cultivated on a permanent basis, in place of *jhum* cultivation presently undertaken for livelihood. With all families, who are currently engaged in *jhum*

cultivation, having been assisted under the New Land Use Policy scheme, the practice of *jhum* cultivation is expected to be abandoned in Mizoram in five years. In addition, families, who want to undertake activities other than land based, in place of *jhumming*, are also offered industrial trades under the New Land Use Policy scheme. Activities which can be taken up under the scheme are classified under 8 major sectors (or Departments), and the various trades under these sectors shall be looked after by the respective Line Departments as follows:

- i. Agriculture
- ii. Horticulture
- iii. Animal Husbandry & Veterinary
- iv. Fishery
- v. Sericulture
- vi. Soil & Water Conservation
- vii. Environment & Forest
- viii. Industry

To successfully implement land-based activities under the New Land Use Policy scheme, plots of land were allotted to all beneficiaries as well as prospective beneficiaries by the village authorities. Though the case of land distribution among the families in each of the village is under the purview of the respective village councils. In addition to the distribution of land to the beneficiaries of the scheme, the project aims at keeping a large area covered by dense forest so as to create a good environment for the future generations.

To ensure the compliance of land distribution with the pattern as desired by the Government, a number of training courses and workshops have been organized across the State. Unfortunately, it was

realized, of late, by the authority that most villages did not comply with the guidelines issued by the Government while distributing plots of land to the cultivators to undertake land-based activities under New Land Use Policy. This necessitated a preparation of land use plan, for each village, by a third party as the public officials at different stages are busy with their normal work. Consequently, the work of rural land use planning exercise for the implementation of New Land Use Policy was outsourced to a team of research scholars, led by James L.T. Thanga from the Department of Economics, Mizoram University with effect from April 2011.

Results of New Land Use Policy since 2009 in the field of Agriculture

i. Expansion of Rice Cultivation Areas

As per the report of the Mizoram Remote Sensing Application Centre (MIRSAC), Science & Technology, Planning Department, Government of Mizoram, Aizawl, 2008, the total available potential area for the Wet Rice Cultivation (WRC) was 74,644 hectare. During the year, 2010-2011 (initial stage of New Land Use Policy implementation) the total area under Rice cultivation (WRC) was 12,130 hectare which covers only 16.25% of the total Rice cultivation potential areas.

During the year 2015-16, the total Rice cultivation area (WRC) was recorded at 17,302 hectare which accounts for about 2.59% increase from the utilization of WRC potential area also increased to 23.18% as compared to 16.25% during 2010-11.

The contribution of New Land Use Policy in the field of expansion of Rice cultivation area is a notable achievement. Under 1st and 2nd phase of New Land Use Policy, there are 11,282 numbers of WRC families and are calculated to contribute an additional area of 5,825 hectare contributing 33.67% in total WRC area. The total Rice cultivation area including *Jhum* during 2015-16 was 37,153 hectares out of which 15.68% was calculated to be contributed by New Land Use Policy.

ii. Increase in Rice Production

At the initial stage of the implementation of New Land Use Policy (2010-2011), the total rice production in Mizoram was 47,201 metric tons which increase to 62,089 metric tons in 2015-2016. The increase in rice production is therefore 14,888 metric tons which accounts for about 31.54% increase.

After six years of implementation of New Land Use Policy (2015-16), under the 1st and 2nd Phase of New Land Use Policy, there are 11,282 numbers of Beneficiaries (both WRC-I & WRC-II) whose production of rice was calculated at 6,812 metric tons. During the year 2015-16, the total rice production from WRC areas has increased to 37,746 metric tons out of which 6,812 metric tons are contributed by New Land Use Policy which accounts for 18.05% of overall rice production from WRC.

iii. Decrease in Jhum Areas

One of the primary objectives of New Land Use Policy is to provide sustainable income to farming families by winning away the destructive and

unprofitable shifting cultivation practices. The total *Jhum* area and the total number of Jhumia families in Mizoram during 2010-11 are 28,562 hectare and 68,433 numbers respectively.

As a result of the implementation of New Land Use Policy, the total *Jhum* area as recorded during 2015-16 was 19,851 hectare which shows that the decrease in *Jhum* area for the last 6(six) years was about 30.50%.

Similarly, the total number of Jhumia families also decrease from 68,433 to 48,417 numbers during 2015-16 which accounts for about 29.25% decrease during the last 6 (six) years.

iv. Expansion in Oil Palm Cultivation Areas

Out of the total geographical area of Mizoram i.e ,21,08,700 hectare, the total potential area for Oil Palm cultivation was recorded at 1,01,000 hectare (as recommended by Chadha Committee 2006 and Rathinam Committee 2012). During the year of 2010 -11, the total Oil Palm cultivation area in Mizoram was only 1878 hectare which constitutes only about 1.8% of the total potential areas.

During the year 2015-16, the total area covered under Oil Palm in Mizoram was 25,027 hectares. Under first, second, third and fourth phase of New Land Use Policy, the total number of Oil Palm beneficiaries till date is 3,315 families and the total area covered under Oil Palm is recorded at 3,315 hectares. It may be concluded that out the total area covered under Oil Palm in Mizoram i.e. 25,027 hectares, the contribution of Oil Palm

beneficiaries is about 3,315 hectare which accounts for about 13.25% since the inception of New Land Use Policy.

v. Farm Power Availability

Due to convergence of Rashtriya Krishi Vikas Yojana (RKVY) and Sub-Mission on Agriculture Mechanization (SMAM) with New Land Use Policy, a large number of Farm Machineries like Power Tillers, Mini Farm Tillers were distributed at subsidized rates which increased the availability of a man power thus boosting up rice cultivation and productivity. The farm power availability has also increased from 0.75 kW/ha at the beginning of 12th Finance Year Plan (2012-13) to 0.90kW/ha during 2014-15.

vi. Potential Area Connectivity (PAC)

Due to convergence of New Land Use Policy with RKVY scheme, at present the total length of Potential Area Connectivity (PAC) has already constructed about 777 kilometers. This will result in the increase in the production of rice and other crops.

Conclusion

Jhumming should not be viewed as an evil practice. It is a practice that has evolved over centuries. The output is not commensurate with the input in the form of physical labour that is put in. If alternate means of sustenance are available nobody will undertake this job which is tedious and of arduous nature. Any effort aimed at ending the practice should include assistance to the families practicing *jhumming* which should be able to generate sufficient income to support the family on sustained basis.

As per record of the Department of Agriculture, Mizoram, since the inception of New Land Use Policy, there has been a steady decrease in the practice of *jhumming* and increase in rice production which shows that New Land Use Policy has been a success to a certain extent. However, to maintain long term sustainability the following should be kept in mind:

The involvement of the beneficiaries is necessary and a wide scope in employment opportunity will attract more people to the programme. The benefits should conform to the direct needs of the people. It is necessary that the marketing facilities are made available to the beneficiaries to market their products. Monitoring and evaluation should be maintained so that significant qualitative difference in the nature of planning and decision-making functions are brought.

References

- Andrade G.I. and Rubio-Torgler H. 1994. *Sustainable use of the tropical rain forest: evidence from the Avifauna in a shifting cultivation in habitat mosaic in the Colombian Amazon. Conservation Biology*, 8: 545-554.
- Dwivedi A.P. 1993. *Forests: The Ecological Ramification*, Natraj Publishers, Dehradun, India.
- Economic Survey Mizoram 2016-17, Planning and Implementation Department, Government of Mizoram.*
- Holden S. 2001. *'A century of Technological Change and Deforestation in the Miombo woodland of Northern Zambia' in Angelsen, A and Kaimowitz, D (ed.). Agricultural Technologies and Tropical Deforestation. CABI and CIFOR publications, pp. 251-269.*
- ICAR. 1985. *Shifting Cultivation in Northeast India. ICAR Research Complex for NEH Region, Shillong.*
- Kumar G. 2012. *Dynamics of Development and planning: Mizoram a comprehensive regional analysis*, Kalpaz Publications, Delhi.
- Lal J.B. and Prajapatu R.C. 1990. *Space-borne monitoring of shifting cultivation in northern region of India*, Van Vighan, 28: 125-126.
- Lalkhana. 1985. *This land This Zoram. Mizoram New Magazine. Autumn Issue, p. 22.*
- Maithani B.P. 2005 a & b. *Shifting Cultivation in North-East India Policy Issues and Options. Published and printed by Krishna for Mittal Publications, Mohan Garden, New Delhi, India.*
- Mishra B.K. 1981. *Studies on Jhum (Slash and Burn Cultivation): at Higher Elevations of Meghalaya. Unpublished Ph.D. Thesis, North-Eastern Hill University, Shillong.*
- Monela G.C. and Abdallah J.M. 2007. *External Policy Impacts on Miombo Forest Development in Tanzania.*
- Dube, Y.C. and Schmithusen, F. (eds). n.d. *Cross-sectoral Policy Development in*

- Forestry. FAO and CABI publications, pp.117-125.
- New Land Use Policy: An Inclusive and Transformal Development Project of the Government of Mizoram – A Concise Summary, New Land Use Policy implementing Board.
- Pachau R. 2009. *Mizoram: A Study in Comprehensive Geography*, Northern Book Centre, New Delhi.
- Ramakrishna P.S. 1992. *Shifting Agriculture and Sustainable Development, An Interdisciplinary Study from Northeast India*. The United Nations Educational, Scientific and Cultural Organization, 75700 Paris, France.
- Raman T.R.S. 2001 a & b. *Effect of slash-and-burn shifting cultivation on rainforest birds in Mizoram, Northeast India*. *Conservation Biology*, 15(3): 685-698.
- Sachchidananda (ed). 1989. *Shifting Cultivation in India*. Concept Publishing Company, New Delhi.
- Tawnenga. 1990. *Studies on Ecological Implications of Traditional and Innovative Approaches to Shifting Cultivation in Mizoram*. Ph. D. Thesis, North Eastern Hill University, Shillong.
- Tawnenga, Shankar U. and Tripathi R.S. 1996. *Evaluating second year cropping on jhum fallows in Mizoram, Northeastern India-Phytomass dynamics and primary productivity*. *Journal of Biosciences*, 21: 563-575.
- Tawnenga, Shankar U. and Tripathi R.S. 1997. *Evaluating second year cropping on jhum fallows in Mizoram, North-East India: Soil fertility*. *Journal of Bioscience*, 22: 615-625.
- Tiwari D.N. 1991. *Shifting cultivation in India*. *Indian Forester*, 117: 91-104.