

CHAPTER – I

SOCIAL SECTOR

CHAPTER-I

SOCIAL SECTOR

1.1 Introduction

This Chapter of the Audit Report for the year ended 31 March 2023 deals with the findings on audit of State Government Departments under Social Sector.

During 2022-23, against total budget provisions of ₹ 5,158.57 crore, a total expenditure of ₹ 3,451.92 crore was incurred by 13 departments under the Social Sector. Department-wise details of budget provision and expenditure incurred there-against are shown in Table-1.1.

Table-1.1: Department-wise budget provision and expenditure

(₹ in crore)

Sl. No.	Name of the Department	Budget Allocation (BA)	Expenditure	Percentage of Expenditure to BA
1.	School Education	1,617.73	1,392.67	86.09
2.	Higher and Technical Education	332.91	269.82	81.05
3.	Sports and Youth Services	53.40	52.20	97.75
4.	Art and Culture	14.16	13.07	92.30
5.	Health and Family Welfare	915.02	724.96	79.23
6.	Public Health Engineering	791.04	508.49	64.28
7.	Information and Public Relation	16.10	15.01	93.23
8.	Labour, Employment, Skill Development and Entrepreneurship	36.00	20.35	56.53
9.	Social Welfare	294.95	210.21	71.27
10.	Disaster Management and Rehabilitation	84.55	65.58	77.56
11.	Local Administration	259.45	64.38	24.81
12.	Personnel and Administrative Reforms	6.44	6.08	94.41
13.	Urban Development and Poverty Alleviation	736.82 ¹	109.10	14.81
Total		5,158.57	3,451.92	66.92

Source: Appropriation Accounts: 2022-23

Barring Public Health Engineering Department, Labour, Employment, Skill Development & Entrepreneurship Department, Local Administration Department and Urban Development & Poverty Alleviation Department where fund utilisation was 64.28 per cent, 56.53 per cent, 24.81 per cent and 14.81 per cent respectively, all other departments managed to utilise more than 70 per cent of the funds allocated to them. The overall savings under Social Sector was 33.08 per cent against the budget allocation.

1.1.1 Planning and conduct of Audit

Audit process commences with the assessment of risks for various departments of the State Government. The risk criteria were the expenditure incurred, criticality/complexity of activities, level of delegated financial powers, assessment of overall internal controls, etc.

After completion of audit of each unit, Inspection Reports (IRs) containing audit findings are issued to the Heads of the offices with a request to furnish replies within

¹ ₹ 526.52 crore was not released by the Government of India

four weeks of receipt of the IRs with a copy to the next higher authority. On the basis of responses, audit findings are either settled or further action for compliance is advised. Significant audit observations arising out of these IRs are processed for inclusion in the Audit Report. The Audit Report is submitted to the Governor of the State under Article 151 of the Constitution of India for being tabled in the State Legislature.

During 2022-23, Audit test-checked an expenditure of ₹ 2,625.86 crore, including funds related to previous years, of the State Government pertaining to Social Sector. This Chapter includes three Performance Audits, one Subject Specific Compliance Audit and three Compliance Audit Paragraphs, as discussed in the following paragraphs.

PERFORMANCE AUDIT

Urban Development and Poverty Alleviation Department

1.2 Performance Audit on Solid Waste Management in Urban Areas of Mizoram

1.2.1 Introduction

In view of serious environmental degradation resulting from unscientific disposal of solid waste, the Ministry of Environment and Forests (MoEF), Government of India notified the Municipal Solid Waste (Management & Handling) Rules, 2000 stipulating all municipal authorities to scientifically manage solid waste. In line with these rules, Government of Mizoram subsequently notified “The Mizoram Urban Sanitation and Solid Waste Management Policy, 2011”.

Further, in exercise of the powers conferred by Sections 3, 6 and 25 of the Environment (Protection) Act, 1986 and in supersession of the Municipal Solid Waste (Management and Handling) Rules, 2000, the Central Government made the Solid Waste Management Rules, 2016 for management of Solid Waste. Based on these Rules, the Urban Development & Poverty Alleviation Department (UD&PA), Government of Mizoram prepared an action plan for collection and treatment of Municipal Solid Wastes in the State of Mizoram in 2016.

This Performance Audit examines the extent of implementation of Solid Waste Management (SWM) Rules, 2016 in the urban areas of Mizoram.

1.2.2 Audit Objectives

This Performance Audit was carried out to assess whether:

- “Strategy and planning” of solid waste management in Urban Areas is commensurate with the waste generated and is concurrent with the prevailing legal framework;
- Municipal tasks associated with solid waste management including collection, segregation, storage, transportation, disposal and social inclusion of informal waste workers were effective, efficient and economical;
- Planning, construction, commissioning, operation and maintenance of solid waste management projects in Urban Areas was effective, efficient and financially sustainable; and

- Monitoring and evaluation of Solid Waste Management system including awareness creation, citizen engagement for effecting behavioral change, complaint redressal mechanism for citizens, assessment of environmental impacts and implementation of the internal control and monitoring mechanism was adequate and effective.

1.2.3 Audit Criteria

Audit findings were benchmarked against the criteria sourced from the following:

- Manual of Municipal Solid Waste Management, 2016 issued by Government of India (GoI) in April 2016 and the Solid Waste Management Rules, 2016;
- The Mizoram Urban Sanitation and Solid Waste Management Policy, 2011;
- Performance parameters set out in Service Level Benchmarking (SLB) guidelines;
- The Mizoram Municipalities Act, 2007; and
- Instructions, guidelines, policies issued by Central Pollution Control Board, State Pollution Control Board, Government of India/ State Government on solid waste management from time to time.

1.2.4 Sample, Scope and Methodology of Audit

At the commencement of the Performance Audit (September 2022), there were 28 Urban Towns notified in the State of Mizoram. In Aizawl urban area, Solid Waste Management (SWM) is undertaken by Aizawl Municipal Corporation (AMC). Under AMC, Aizawl city is divided into 19 wards under which there are 83 Local Councils². In areas under the jurisdiction of Autonomous District Councils (ADCs), Solid Waste Management is taken up by respective ADCs and in the remaining urban areas of the State, it is carried out by the line Department *i.e.*, UD&PA.

Three Urban Areas *viz.*, Aizawl (ULB), Lunglei (UD&PA) and Lawngtlai (ADC) out of 28 urban areas were selected for Audit by applying simple random sampling method using Interactive Data Extraction and Analysis (IDEA) application software *i.e.*, one each from respective implementing agencies (ULB, ADCs, UD&PA). Out of the total 7,25,133 urban population projected³ for 2022 in the State of Mizoram, a population of 4,64,072 constituting 64 *per cent* was covered as part of the audit sample in these three urban areas. Joint physical verification of dumping sites was also conducted in these three Urban Areas.

The Performance Audit covered Solid Waste Management in urban areas for the period from 2017-18 to 2021-22. Entry Conference was conducted (20 September 2022) with the Secretary, UD&PA, where the audit objectives, scope and

² As per the Mizoram Municipalities (Ward Committee and Local Council) Rules, 2010, the Municipality may constitute Local Council for every locality in the ward. The general functions of Local Council shall be such as may be entrusted to it by the Municipality for common civic services and common benefit of the community and other matters in accordance with Mizo traditions, customs and practices as provided under sub-section (3) of section 23 of the Mizoram Municipalities Act, 2007. Further, each Local Council will be represented by two members in the Ward Committee formed by the Municipality

³ UD&PA records

methodology of audit were explained. Thereafter, field audit was conducted during the period from October 2022 to December 2022. The Audit methodologies included examination of records maintained by Aizawl Municipal Corporation (AMC), Lai Autonomous District Council (LADC) and UD&PA, issuance of questionnaires, queries, collection of data and information available on the website rendered by the UD&PA, Urban Local Bodies (ULBs) *i.e.*, AMC and Mizoram Pollution Control Board (MPCB), joint physical verification and issuance of audit observations. The draft report was issued (May 2023) to the Government and the audit findings were also discussed in the Exit Conference held (28 June 2023) with the Department and the report was finalised after taking into consideration the replies of the Department/ Government.

1.2.4.1 Acknowledgment

The office of the Principal Accountant General, Mizoram places on record our sincere acknowledgement of the cooperation rendered by the Department in the course of the audit.

1.2.5 Implementing Agencies

In Mizoram, Solid Waste Management Rules, 2016 were implemented by the Aizawl Municipal Corporation (AMC) in Aizawl urban area, Urban Development & Poverty Alleviation (UD&PA) Department, Government of Mizoram (GoM) in the other urban areas of the State and by the respective Autonomous District Councils (ADCs) in the Autonomous District Council areas.

1.2.5.1 Financial Position

The main source of funds for Solid Waste Management in urban areas are Central and State Finance Commissions grants. The budget allocation and expenditure on Solid Waste Management of the three Implementing agencies are as given in the following **Table-1.2**.

Table-1.2: Fund received and expenditure for Solid Waste Management of AMC

(₹ in crore)

Year	Opening Balance	Fund received	Total fund Available	Expenditure incurred	Closing Balance
2017-18	0.14	7.12	7.26	7.36	-0.10
2018-19	-0.10	6.50	6.40	7.15	-0.75
2019-20	-0.75	9.93	9.18	7.38	1.80
2020-21	1.80	13.55	15.35	7.79	7.56
2021-22	7.56	8.20	15.76	8.35	7.41
Total		45.30	53.95	38.03	

Source: AMC record

It can be seen from **Table-1.2** that during the period 2017-22, AMC incurred expenditure of ₹ 38.03 crore against the budget allocation of ₹ 45.30 crore towards Solid Waste Management.

It can also be seen that during the years 2017-18 and 2018-19, AMC incurred more expenditure than the budget allocation. However, expenditure during 2020-21 and 2021-22 was 50.75 *per cent* and 52.98 *per cent* respectively of the available funds.

AMC stated that grants were received in lump sum from State Government and internally allocated under different heads for specific purposes. Due to inevitable requirement, expenditures on SWM exceeded the allocation during 2017-18 and 2018-19.

During the period 2017-22, in the urban area of Lawngtlai where Solid Waste Management is undertaken by Lai Autonomous District Council (LADC), there was no separate budget available for Solid Waste Management. The activities relating to Solid Waste Management were taken up by the Sanitation Department. Audit noticed that the budget allocation of ₹ 7.67 crore⁴ for Sanitation Department in LADC was completely utilised. Out of ₹ 7.67 crore, ₹ 0.41 crore was spent on Maintenance of Trucks/ Trippers used in Solid Waste Management and the rest of the amount *i.e.*, ₹ 7.26 crore was spent on Salaries, Travelling expenses, Office Expenses, Purchase of Sweeping materials, Purchase of Uniforms, *etc.*, under Sanitation Department as detailed in **Table-1.3** below.

Table – 1.3: Fund allocation and expenditure of Lawngtlai

(₹ in crore)

Year	Fund Received			Expenditure incurred		
	SFC Grants	CFC Grants	Total	SFC Grants	CFC Grants	Total
2017-18	0.25	0.94	1.19	0.25	0.94	1.19
2018-19	0.28	1.17	1.45	0.28	1.17	1.45
2019-20	0.29	1.28	1.57	0.29	1.28	1.57
2020-21	0.00	1.60	1.60	0.00	1.60	1.60
2021-22	0.00	1.86	1.86	0.00	1.86	1.86
Total	0.82	6.85	7.67	0.82	6.85	7.67

Source: LADC record.

In the other urban area of Lunglei, where Solid Waste Management is taken up by UD&PA Department, a total budget allocation of ₹ 71.11 lakh during 2017-22 was completely spent.

The total fund received and expenditure for Solid Waste Management of the State by UD&PA Department from 2017-18 to 2021-22 is given in **Table-1.4**.

Table – 1.4: Year wise Fund allocation and expenditure

(₹ in lakh)

Year	Fund received	Expenditure
2017-18	60.00	60.00
2018-19	60.00	60.00
2019-20	60.00	60.00
2020-21	354.75	354.75
2021-22	938.14	938.14
Total	1,472.89	1,472.89

Source: UD&PA record.

⁴ The budget includes both salary and non-salary in respect of Sanitation Department of LADC as no separate budget is available for Solid Waste Management. However, part of the fund is used for maintenance of trucks/ trippers, purchase of uniforms, sweeping materials, *etc.*

1.2.6 Audit Findings

1.2.6.1 Non-achievement of targets as per action plan

Urban Development & Poverty Alleviation Department, Government of Mizoram prepared an action plan for collection and treatment of Municipal Solid Waste in the State of Mizoram in the year 2016. According to this action plan, various targets were set in respect of collection and transportation of solid waste, waste reduction and scientific treatment of solid waste. While some of the targets were achieved, others are yet to be achieved.

The targets set in respect of collection and transportation of solid waste along with the achievements/ shortcomings observed in audit can be seen in **Table-1.5** below.

Table – 1.5: Target and achievement

Sl. No.	Targets Set as per the action Plan	Status as claimed by the Department	Achievements/ Short Comings if any as observed in audit
1.	State Agencies/ ULBs will conduct house to house collection of Municipal Solid Waste (MSW) at pre-informed timings alerting the community (preferably early morning) by whistling/ bell ringing/ special music.	This has already been achieved. The process shall be strengthened so as to ensure coverage of 100 <i>per cent</i> households	Collection is done from designated pickup points from all localities.
2.	Vehicles used for transportation of solid waste will be covered to prevent scattering waste and polluting the environment. Such vehicles shall be so designed that multiple handling of waste prior to final disposal is avoided.	Presently, this is partly implemented. This will be implemented in a time-bound manner. Aizawl City alone will have 54 Dumpster Trucks (50 big & four Small). This would meet requirement of the city. Other Cities/ Towns will follow suit in this direction.	All trucks were procured. Majority of the vehicles used for transportation of municipal solid waste are uncovered and loaded beyond their designated capacity as mentioned in Paragraph 1.2.6.3 (B)
3.	Promoting behaviour change in the community through awareness campaigns involving all stakeholders and especially targeting school children, street vendors, NGOs, women groups and business communities to minimise solid waste generation.	This is an ongoing process. In Aizawl City, AMC and SIPMIU have carried out locality-wise campaigns. For other towns, the District Authorities have taken up the initiative under Swachh Bharat Mission (Urban)	Various awareness activities were undertaken by the implementing agencies through audio, visual modes of communication, campaign at schools <i>etc.</i>

The targets set in terms of timelines for scientific treatment of municipal wastes in selected urban areas of Mizoram along with the achievements/ shortcomings can be seen in **Table-1.6** below.

Table – 1.6: Target and achievement

Sl. No.	Name of City/ Town	Proposed Establishment of Scientific Solid Waste Management	Stipulated Timeline (Year)	Achievements made against
1.	Aizawl	Project for establishment of scientific management system is being implemented which is to be completed within 2019 with a source of fund from Asian Development Bank.	2019	Plant construction is completed at a cost of ₹ 43.37 crore. However, minimal solid waste is being treated despite the establishment of plant with a processing capacity of 190 MTD as detailed in Paragraph 1.2.6.5 (I)
2.	Lunglei	New scientific centre will be established by UD&PA Department with NLCPR funding at a project cost of ₹ 6 crore.	2022	Construction is under progress. During physical inspection, it was noticed that only earthwork and basement for Resource Management centre has been constructed till date of audit (December 2022).
3.	Lawngtlai	Scientific Management Centre will be established with a source of fund to be mobilised by Lai Autonomous District Council	2022	Project has not yet been sanctioned at the time of Audit (December 2022).

The Government while agreeing to the Audit observation stated that the Solid Waste Management Centre at Lunglei was planned to be completed by September, 2023.

However, as of April 2024 the construction of the Solid Waste Management Centre at Lunglei was not yet completed.

1.2.6.2 Assessment of generation of solid waste

To achieve the benchmark fixed by the Ministry of Urban Development for household level coverage/ efficiency in collection of solid waste, the quantity of solid waste generated daily in municipal areas and the quantum of each service level benchmark was required to be assessed properly.

As per Rule 24(2) of the Solid Waste Management Rules, 2016, a local body is required to submit its annual report on SWM in Form IV to the State Pollution Control Board and to the Director or Commissioner, Municipal Administration or Officer-in-charge of urban local bodies in the State on or before 30 June every year.

As per the Annual Reports submitted by AMC to Mizoram Pollution Control Board, the quantity of solid waste generated is same as quantity of solid waste collected. The quantity of solid waste generated/ collected per day in Aizawl Municipal area during the period 2017-22 can be seen in **Table-1.7** below:

Table – 1.7: Status of solid waste assessment and generation in AMC area

(Quantity in Tonne Per Day)

Year	Population under AMC	Quantity of solid waste assessed by Local body (TPD ⁵)*	Quantity of solid waste generated/ collected per day during the year (TPD)
(A)	(B)	(C)	(D)
2017-18	2,93,416	NA	137.91
2018-19	2,93,416	NA	137.91
2019-20	3,34,027	NA	167.91
2020-21	3,69,829	NA	167.91
2021-22	3,69,829	NA	70.21

*No assessment was done during the period 2017-22.

It was, however, observed in audit that no scientific assessment was done by AMC as they did not have weighbridges to assess the actual daily solid waste generated. In absence of weighbridge, the authenticity of the quantity incorporated in the annual report of the AMC is doubtful. Moreover, in **Table-1.7**, the data pertaining to solid waste generated (Column D of **Table-1.7**) in two consecutive years 2017-18 & 2018-19 and 2019-20 & 2020-21 being exactly same is highly unlikely.

In the absence of scientific assessment and accurate data on solid waste generated, planning for effective solid waste management strategies which are efficient, cost effective and sustainable would not be possible. Hence, there was a need for installation of weighbridge by the AMC at the site of disposal of solid waste at the earliest to assess the daily solid waste generated and to increase the efficiency of collection and disposal.

1.2.6.3 Collection and Transportation of solid waste

(A) Non-Segregation of Solid Waste at source

Rule 15 (zg) of the Solid Waste Management Rules, 2016 envisages that it shall be the duty and responsibility of the local authorities to create public awareness through Information, Education and Communication (IEC) campaign and educate the solid waste generators on practicing segregation of waste into bio-degradable, non-biodegradable (recyclable and combustible), sanitary waste and domestic hazardous wastes at source.

Schedule for fines of the Lunglei District Solid Waste Management Bye-laws, 2018 and Aizawl Municipal Corporation Plastic Waste Management Bye-laws, 2019 provides for penalty of ₹ 200 for individual user and ₹ 1,000 for bulk generator, in case of non-segregation of waste at source.

⁵ TPD- Tonne Per Day

In Aizawl, as per the Government report on Service Level Benchmark of Baseline indicators in respect of Solid Waste Management, the achievement in terms of waste segregation at source was one *per cent* for the year 2017-18 which improved to 60 *per cent* for the year 2021-22.

In the urban area of Lunglei segregation at source started from the year 2021-22. Even then, the segregation of solid waste at source has not been fully complied with and the practice of mixing different types of solid waste is still prevailing as there was no facility for segregation of Solid Waste in three selected urban areas. The mixed solid waste dumped at the site can be seen in the photographs shown below:



Mixed solid waste dumped in and around the dumping site at Riangvai Thlanmual, Lunglei (30 November 2022)

In the urban area of Lawngtlai where Solid Waste Management is taken up by LADC, it was noticed that solid waste segregation at source was not implemented as of 07 December 2022.

The matter was brought to the notice of the District Urban Development Officer, Lunglei and the Executive Secretary, LADC, Lawngtlai during December 2022 and April 2023 respectively; however, reply is awaited (April 2024).

Recommendation: The implementing agencies are required to create more awareness among citizens through IEC activities explaining the necessity of segregation of solid waste at source. In order to make the system effective, apart from segregation at source, there is also a need to create necessary facilities to avoid mixing of segregated wastes at subsequent stages.

(B) Transportation of solid waste

Rule 3(52) of Solid Waste Management Rules, 2016 envisages conveyance of solid waste, either treated, partly treated or untreated from a location to another location in an environmentally sound manner through specially designed and covered transport system so as to prevent foul odour, littering and unsightly conditions.

Further, Municipal Solid Waste Management Manual (MSWM), 2016 stipulates that communication technologies such as Global Positioning System (GPS), Geographic

Information System (GIS) are to be integrated as part of the monitoring of SWM system. This also helps in improving the collection and transportation efficiency of the vehicles.

During field inspection in the sampled urban areas, it was noticed that majority of vehicles (64 to 100 *per cent*) engaged in collection and transportation of solid waste were uncovered. Moreover, none of the sanitation vehicles were fitted with GPS devices which would have enabled effective tracking. The percentage of uncovered vehicles in sampled urban areas along with the number of vehicles having tracking system is given in **Table-1.8** below.

Table – 1.8: Status of covered vehicles and tracking device system

Sl. No.	Urban Area	Total Number of vehicles	Number of Covered Vehicles	Number of uncovered vehicles	Percentage of uncovered vehicles	Number of vehicles with GPS/ any tracking system
1.	Aizawl	149	54	95	64	0
2.	Lunglei	19	03	16	84	0
3.	Lawngtlai	04	00	04	100	0

Source: AMC, UD&PA and LADC respectively

It was also noticed during joint physical verification of dumping sites/ waste treatment plant that some of the vehicles were loaded beyond their designated capacity. This manner of transportation of garbage has the risk of littering of streets creating foul odour and unsightly condition affecting public health. Photographs of uncovered and overloaded garbage vehicles as observed during physical verification can be seen below:



Uncovered and Overloaded Garbage vehicle at Lunglei (30 November 2022)



Uncovered and Overloaded Garbage vehicle at Lawngtlai (7 December 2022)

The Department while agreeing to the Audit observation stated that instructions were issued to Local Councils (July 2023) to cover all garbage vehicles utilised for collection of solid waste.

Recommendation: It is recommended that the authorities concerned should initiate steps to cover all the Garbage vehicles.

1.2.6.4 Fixing of rate per trip in respect of Solid waste collection

As per the agreement between AMC and LCs, during 2017-18 to 2021-22, the cost of collection and transportation of solid waste was shared in the ratio of 80:20 by the AMC and LCs. Local Councils will provide garbage collectors, arrange vehicles for collection and transportation of garbage from localities to Solid Waste Management Centre at Tuirial. For providing these services, rate per trip *i.e.*, expenditure required per trip of the garbage vehicle was fixed. Out of this trip rate, 80 *per cent* will be paid by the AMC while the rest 20 *per cent* is to be borne by the Local Councils. This 20 *per cent* will be mobilised by the LCs from the user charges *i.e.*, sanitation fee collected by the LCs from the households. However, the rationale for cost sharing in the ratio of 80:20 was not on record. As such, for each Local Council area, the number of trips allocated per week and rate per trip for different types of vehicles were fixed by AMC. The detailed list of Local Councils along with the trip allotment per week and rate per trip for the year 2020 can be seen in **Appendix-1.1**.

During scrutiny of records, it was noticed that there was no scientific method of analysis and criteria for the calculation of rate per trip. Audit observed that the rate per km for each Local Council ranged from ₹ 51.42 per km (Tanhril) to ₹ 95.83 per km (Zemabawk North) for Light Motor Vehicle (LMV) and from ₹ 80.07 per km (Government Complex) to ₹ 125.95 per km (Zemabawk) for Medium Motor Vehicle (MMV) as detailed in **Appendix-1.1**. As such, based on the per km calculation, the rates fixed are highly arbitrary in nature, hence, resulting in a significant increase in the transportation costs from ₹ 4.02 crore in 2017-18 to ₹ 7.58 crore in 2021-22 as discussed at **Paragraph 1.2.6.8**.

The Department while agreeing to the Audit observation stated that garbage vehicles have to traverse many times in different roads within even one LCs/ jurisdiction and these roads sometimes have to be accessed from the adjoining road under the jurisdiction of other LCs. The Department further stated that the proposal for fixation of rate submitted by AMC Garbage Vehicle Owners Association is under active consideration of the Executive Council of the AMC in consultation with the rates fixed by the State Transport Authority of the Transport Department. It was also further stated that efforts are being made to determine the exact distance travelled by the garbage vehicles for collection and transportation to the Solid Waste Management Centre, Tuirial.

The reply is not tenable as rates per km ought to be fixed on the basis of distance travelled and not on the number of roads traversed. However, if the exercise to determine the exact distance travelled by the garbage vehicles for collection and transportation to the Solid Waste Management Centre, Tuirial is conducted successfully, the resulting data will be useful for arriving at a scientific method of analysis and criteria for the calculation of rate per trip.

Recommendation: It is recommended that AMC should fix the rate per trip by using scientific method of analysis using the distance travelled, so that payment made in this regard can be justified.

1.2.6.5 Dumping of solid waste

Rule 3 (20) of the Solid Waste Management Rules, 2016 defines “dump sites” as land utilised by local body for disposal of solid waste without following the principles of sanitary land filling.

(I) Aizawl Urban Area

During the period from 01 April 2017 to 11 December 2019, solid waste was dumped at the old dumping site at Tuirial without any treatment. The construction of Solid Waste Management Centre with a treatment capacity of 190 MT/ Day was completed on 11 December 2019 at a cost of ₹ 43.37 crore funded by the Asian Development Bank at a new site at Tuirial, Aizawl. After the construction of SWM Centre at the new site, the old dumping site was closed. Out of the total solid waste generated and transported from the municipal area to the SWM Centre for treatment, only a minimal portion was processed at this SWM Centre while the bulk of the solid waste was dumped at the SWM Centre without any treatment as shown in **Table-1.9**.

Table-1.9: Status of dumping of solid waste in Aizawl Urban Area⁶
(Quantity in Tonne Per Day i.e., TPD)

Year	Solid Waste Generated per day	Solid Waste collected per day	Solid Waste processed	Percentage of solid waste processed	Solid Waste deposited in dumping site	Percentage of solid waste dumped
(1)	(3)	(4)	(5)	(6)	(7)	(8) = (7)*100/(3)
2017-18	137.91	137.91	0	0	137.91	100
2018-19	137.91	137.91	0	0	137.91	100
2019-20	167.91	167.91	13.47	8.02	154.44	91.98
2020-21	167.91	167.91	13.47	8.02	154.44	91.98
2021-22	70.21	70.21	1.44	2.05	68.77	97.95
Total	681.85	681.85	28.38	4.16	653.47	95.84

Source: AMC records

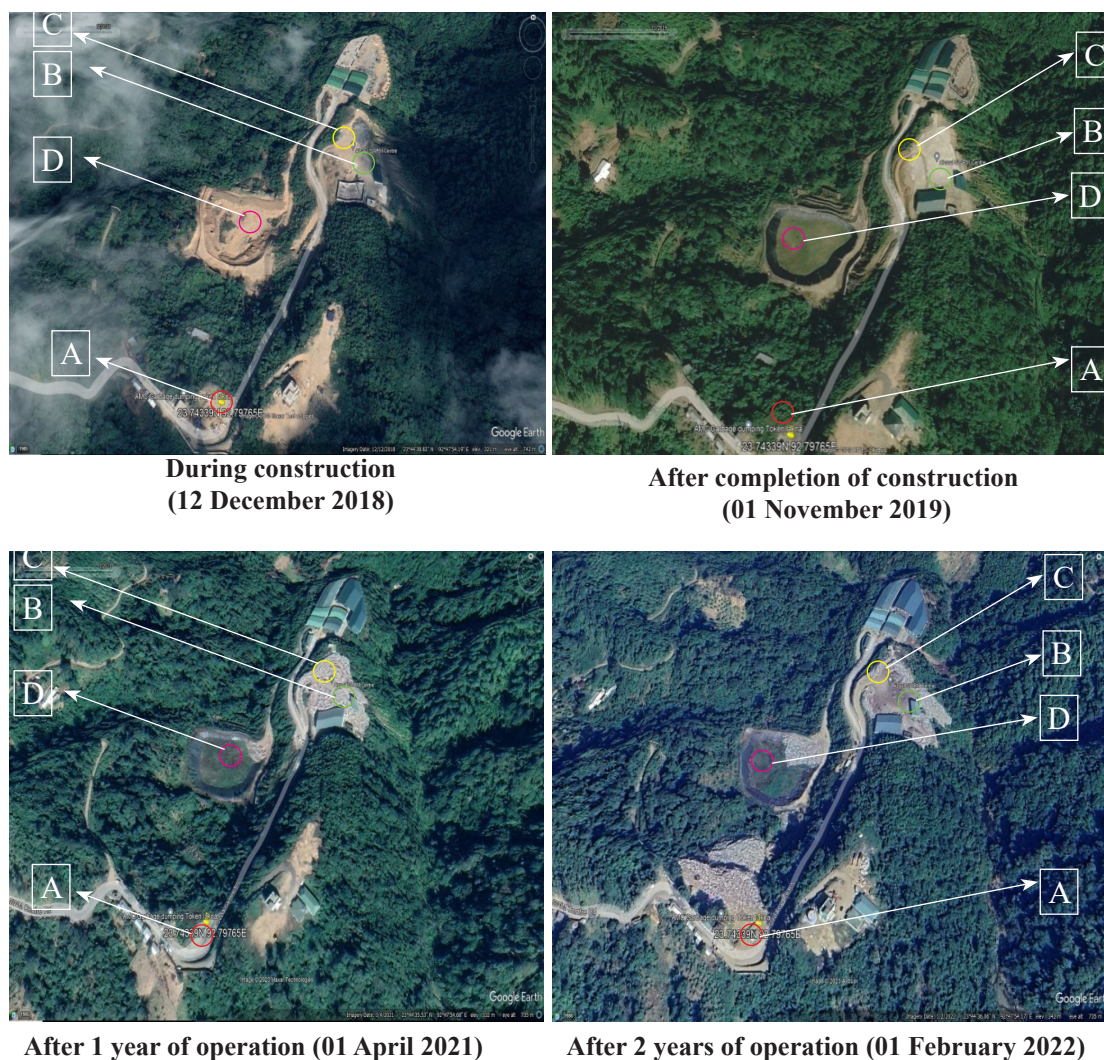
The percentage of solid waste processed at the SWM Centre was 2.05 to 8.02 during 2019-20 to 2021-22. Thus, despite the creation of SWM Centre at Tuirial with a treatment capacity of 190 MT/ Day⁷ at a cost of ₹ 43.37 crore, it could be seen that the treatment of solid waste was minimal due to the lack of efficiency of the treatment plant. Thus, the Solid Waste Management Centre acted as a dumping site without proper treatment.

Audit captured the time-lapse satellite images of the Solid Waste Management Centre site at Tuirial, Aizawl to observe the changes in the area due to dumping of solid waste inside the Solid Waste Management Centre from 01 April 2017 till

⁶ Data relating to solid waste as submitted by AMC to Mizoram Pollution Control Board (MPCB) in the annual reports

⁷ Treatment Facilities: (i) Mechanical Compost Plant: 50 TPD capacity, (ii) Vermi-compost plant: 22 TPD capacity, (iii) Waste Resource Centre: 74 TPD capacity, (iv) Engineered Sanitary Landfill: 44 TPD capacity

31 March 2022. The satellite images in time sequence can be seen below:



These images show that dry wastes *i.e.*, both recyclable and non-recyclable were being dumped at the area marked 'A' (Red) *i.e.*, at the entrance of the Solid Waste Management Centre instead of the Waste Resource Centre which is marked as 'B' (Green). Combustible waste with high calorific value was being dumped at the place marked as 'C' (Yellow). The area marked as 'D' (Pink) is the engineered landfill site which was not being utilised and thus vegetative growth can be seen to be gradually appearing on top of it. From the time-lapse satellite images, it can be seen that the area where waste has been dumped has been expanding over the years due to the non-processing of solid waste. If this situation persists, there is a high risk that the capacity to handle waste at the dumping site will be saturated within no time.

The matter was brought to the notice of the authorities concerned during the period between November 2022 and April 2023. The Government while agreeing to the Audit observation stated that all the direct dumping of Solid waste at the dumping site will be stopped as soon as the Solid Waste Management Centre is operational.

The reply of the Government is not acceptable as the SWM Centre has been operational since 11 December 2019.

(II) Lunglei Urban Area

The year-wise data in respect of solid waste generation, collection, treatment and dumping in respect of Lunglei Urban Area can be seen in **Table-1.10** below:

Table-1.10: Status of dumping of solid waste in Lunglei Urban Area

Year	Solid waste generated (TPD-Tonnes per day)	Solid waste segregation at source	Solid waste collected (TPD)	Quantity of solid waste treated (TPD)	Quantity of Solid waste dumped at dumping site (TPD)
2017-18	24	No	18	0	18
2018-19	25	No	22	0	22
2019-20	26	No	26	0	26
2020-21	28	No	28	0	28
2021-22	30	Yes	30	0	30
Total					124

Source: UD&PA Department.

From **Table-1.10** above, it can be clearly seen that 100 *per cent* of solid waste collected is being dumped at the dumping site at Riangvai Thlanmual, Lunglei without any treatment. Since, the urban area of Lunglei does not have any solid waste treatment/ processing plants, and there was no segregation at source, solid waste collected is directly dumped at the dumping site. However, since 2021-22 segregation of solid waste at source has commenced in Lunglei Urban Area.

(III) Lawngtlai Urban Area

The year-wise data in respect of solid waste generation, collection, treatment and dumping in respect of Lawngtlai Urban Area can be seen in **Table-1.11** below:

Table-1.11: Status of dumping of solid waste in Lawngtlai Urban Area

Year	Solid waste generated (TPD – Tonne per day)	Solid waste segregation at source	Solid waste collected (TPD)	Quantity of solid waste treated	Quantity of solid waste dumped at dumping site (TPD)
2017-18	9.70	No	2.70	0	2.70
2018-19	10.20	No	2.80	0	2.80
2019-20	10.30	No	3.00	0	3.00
2020-21	10.80	No	3.10	0	3.10
2021-22	11.10	No	3.20	0	3.20
Total					14.80

Source: LADC

From **Table-1.11**, it can be seen that 100 *per cent* of solid waste collected was dumped at the dumping site at Chawnhu ram, Phaikhang Chuanhnuai without any treatment. Since the urban area of Lawngtlai does not have any solid waste processing/ treatment facilities with them, solid waste collected is dumped at the dumping site in full without any treatment.

The untreated solid waste being dumped at the dumping sites in urban areas of Aizawl, Lunglei and Lawngtlai, directly exposed to the open environment has a high risk of causing severe environmental pollution, damaging land, air and water quality which will impact not only human health but also damage the ecosystem in the area.

Recommendation: It is recommended that effective measures to optimally utilise the existing processing facilities at Tuirial, Aizawl be undertaken and solid waste management centres be established in the other urban areas in order to avoid open dumping and environmental deterioration.

1.2.6.6 Utilisation of the facilities of Solid Waste Management Centre at Tuirial, Aizawl

The Aizawl Solid Waste Management Detailed Project Report, which was appraised by the Central Public Health Environmental Engineering Organisation (CPHEEO), Ministry of Urban Development, Government of India on 14 November 2014 included the construction of the SWM Centre to be executed under North Eastern Region Capital Cities Development Investment Program (NERCCDIP), funded by Asian Development Bank (ADB). Approved cost of the project was ₹ 43.37 crore and the construction of Solid Waste Management Centre at Tuirial, Aizawl was completed on 11 December 2019 at a cost of ₹ 43.37 crore. The facilities available at the centre and their solid waste processing capacity are as follows:

- | | | |
|--------------------------------|---|-------------------|
| • Mechanical Compost Plant | - | 50 Tonnes per day |
| • Vermi-Compost Plant | - | 22 Tonnes per day |
| • Waste Resource Centre | - | 74 Tonnes per day |
| • Engineered Sanitary Landfill | - | 44 Tonnes per day |

Audit observations based on Joint physical inspection of the Solid Waste Management Centre, are discussed in subsequent paragraphs:

(A) Idle expenditure amounting to ₹ 7.41 crore towards construction of vermi compost plant at Solid Waste Management Centre, Tuirial

Vermi Compost Plant, which is a component of the Solid Waste Management (SWM) centre at Tuirial, was constructed by State Investment Program Management and Implementation Unit (SIPMIU) with an expenditure of ₹ 7.41 crore. The SWM centre was managed by SIPMIU from the date of completion of construction (11 December 2019) to date of handing over the SWM Centre to AMC (20 January 2022) after which it was operated by AMC.

During Joint physical inspection it was observed that:

- The vermi-compost plant with 22 TPD capacity was not utilised since installation (11 December 2019) and was lying idle.
- The 10 TPD Vermi Shredder with conveyor belt attached to the vermi compost plant was not operational since installation and was lying idle in a dilapidated condition.



**Exterior view of Vermi Compost Plant
(8 November 2022)**

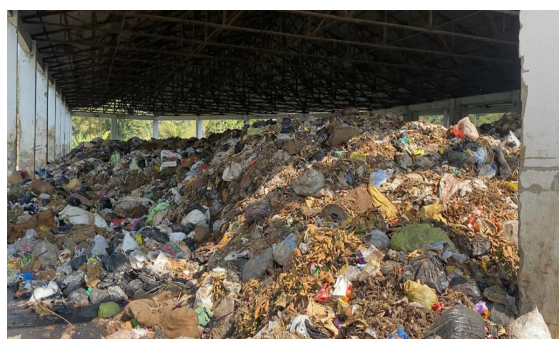


**Interior view of Vermi Compost Plant
(18 November 2022)**

Thus, expenditure of ₹ 7.41 crore incurred on construction of the vermi compost plant at SWM Centre, was rendered idle.

SIPMIU stated (23 February 2023) that the vermi compost plant was not utilised since installation as the mechanical compost plant was able to handle all the compostable wastes more efficiently and within a shorter period of time. The vermi compost plant was handed over to AMC on 20 January, 2022 only after inspection by officials of AMC and SIPMU and found functional without any issue.

The reply of SIPMIU that mechanical compost plant was able to handle all compostable waste more efficiently is not tenable as during joint physical inspection it was observed that heaps of compostable solid waste were found piled up since the mechanical compost plant could not process all the compostable solid wastes as seen in the photographs below:



**Compostable solid waste at the Solid Waste Management Centre, Tuirial
(18 November 2022)**

Such piling up of compostable wet waste was also the result of non-utilisation of the vermi compost plant. Moreover, the infrastructure of the vermi compost plant has deteriorated with broken doors and windows and water logging in the pits due to its non-utilisation. Piling up of compostable wet waste is a serious issue as the waste will rot and lead to increasing pollution.

The Government while agreeing to the audit observation stated that as segregation of garbage is not carried out at the source of collection to the desired level, segregation of garbage at the dumping site is a cumbersome and complex process involving huge labour and time. It was also stated that composting of waste using mechanical compost plant required less time and were more cost effective than vermi composting.

Thus, the vermicomposting plant set up at a cost of ₹ 7.41 crore remained non-operational thereby rendering the expenditure wasteful.

(B) Waste Resource Centre

The 58 Tonne fully Auto Tie Horizontal Bailing Machine at the Waste Resource Centre (material recovery facility constructed to sort out recyclable materials from non-biodegradable waste coming from the source) was found to be non-functional due to which the waste remained untreated resulting in the piling of heaps of solid waste at the Waste Resource Centre.



**Non-functional Horizontal Bailing Machine
(18 November 2022)**



**Garbage around the Waste Resource Centre
(18 November 2022)**

AMC stated (3 February 2023) that the machine had mechanical problems which needed to be rectified and efforts were being made to get it repaired and put to use.

The Government while agreeing with the audit observation stated that steps are being taken by AMC to make the plant operational.

(C) Engineered Sanitary Landfill site

The Engineered Sanitary Landfill⁸ site at Tuirial was not functional. Vegetative growth on the surface of the Sanitary Landfill was observed and part of the protective plastic lining membrane could not be seen.



Engineered Sanitary Landfill site at SWM Centre, Tuirial (18 November 2022)

⁸ Engineered Landfill site is a waste disposal site for the deposit of residual solid waste in a facility designed with protective measures against pollution of ground water, surface water and air fugitive dust, windblown litter, bad odour, fire hazard, bird menace, pests or rodents, greenhouse gas emissions, slope instability and erosion.

AMC stated (3 February 2023) that despite steps taken for segregation of solid waste at source, unsegregated solid waste is being received at the SWM centre. As there is minimum processing happening, untreated solid waste cannot be filled into the landfill directly. Hence, facility is not utilised. AMC also stated that steps are being taken to process the waste and fill the engineered landfill with inert and residual waste.

The Department while agreeing to the audit observation stated that the engineered sanitary landfill was used to landfill the waste which cannot be processed any further and the untreated waste cannot be directly disposed into the landfill.

(D) Security and other equipment

- Eight Fire Hydrants which were installed on 29 January 2021 were not found at the site. Only hose pipes were found. Upon enquiry, it was stated that fire hydrants were stolen.
- Out of 16 CCTV cameras which were installed on 10 March 2021, only two were functional.
- Machineries such as JS 81 JCB Excavator, JCB VMT 860 Vibratory roller, TATA 86 Hydraulic Excavator, JCB 3DX Front End Loader required repair and were not functional and lying at the site in a deplorable condition.

AMC stated that during usage of these equipment, there were frequent breakdowns and thus required constant repairs. AMC also stated that repair will be undertaken at the earliest.

Thus, despite facilities being available for solid waste processing, most of them were either not utilised or were non-functional due to reasons such as need for repairs, non-availability of segregated waste, *etc.* as stated above by AMC. However, action was not taken to make the facilities functional and overall management of the plant was found unsatisfactory.

Recommendation: It is recommended that action may be taken immediately to rectify the shortcomings and make the Solid Waste Management Centre fully functional.

1.2.6.7 Instances of burning of Solid Waste

In terms of Solid Waste Management Rules, 2016, wastes (dry leaves, garbage) should not be burnt. Moreover, Rule 5(12) of the Lunglei District Solid Waste Management Bye-Laws, 2018 clearly states that disposal by burning of any type of solid waste at roadsides, or at any private or public property is prohibited. Audit, however, observed that heaps of garbage were burnt indiscriminately causing air pollution in and around the dumping site at Riangvai Thanmual, Lunglei as shown in the photographs below:



**Open Burning at dumping site located at Rianguvai Thlanmual, Lunglei
(30 November 2022)**

On enquiry, the Department could not state the reason for open burning as they were unaware of the reason due to absence of monitoring in the area.

The matter was brought to the notice of the District Urban Development Officer, Lunglei in December 2022. The Department while agreeing to the Audit observation stated that the burning was due to methane gas combustion and not due to lack of monitoring. It was also stated that dumping of waste will be stopped and bioremediation will be taken up.

Recommendation: The Government should initiate mitigating steps to prevent methane gas combustion at the dumping site.

1.2.6.8 Retention of user charges of ₹ 20.33 crore by Local Councils

Rule 3(54) of the Solid Waste Management Rules, 2016 defines user fee as a fee imposed by the local body and any entity mentioned in Rule 2 on the waste generator to cover full or part cost of providing solid waste collection, transportation, processing, and disposal services. Rule 15(f) of the Rules *ibid* clearly states that it is the duty of the local authorities (AMC in this case), to prescribe the rate of user fee and collect the fee from the waste generators on their own or through authorised agency.

Further, Rule 4(3) provides that all waste generators shall pay such user fee for solid waste management, as specified in the Bye-Laws of the local bodies.

As per Section 6.22 of the Aizawl Municipal Corporation Solid Waste Management Bye-Laws, 2019, the Rates/ User Charges/ Fees for collecting garbage from home and establishments within Aizawl Municipal areas were fixed as shown in **Table-1.12** below:

Table-1.12: Collection fees for various categories of customers

Sl. No.	Category of Customer		Fees to be collected per month (₹)
1.	Household		50-200
2.	Commercial establishments, shops, tea stall, restaurant, eating places	Small	300
		Medium	500
		Large	1,000
3.	Office/ Institutions/ Private firms	Small (10-30 workers)	300
		Medium (30-100 workers)	500
		Large (>100 workers)	1,000

During the course of audit, it was observed that the AMC collected user fees from the general public through the Local Councils (LCs). It was however, observed that no official order was issued regarding user fee/ tariff. The rate prescribed in the AMC Solid Waste Management Bye-Laws, 2019 was used by the LCs for collection of user charges. However, details/ records of the amount collected were not available with AMC.

The details of number of households, Government institutions and commercial establishments under AMC along with the user charges to be collected were worked out by Audit as seen in **Table-1.13**:

Table – 1.13: Calculation of user charges to be collected

(Amount in ₹)

Year	Households		Commercial Establishments		Government Institutions		Total user charge to be collected
	No.	User charges to be collected	No.	User charges to be collected	No.	User charges to be collected	
(1)	(2)	(3) = (2)*50*12	(4)	(5) = (4)*300*12	(6)	(7) = (6)*300*12	(8) = (3)+(5)+(7)
2017-18	67,594	4,05,56,400	990	35,64,000	1,381	49,71,600	4,90,92,000
2018-19	67,594	4,05,56,400	1,374	49,46,400	1,420	51,12,000	5,06,14,800
2019-20	67,594	4,05,56,400	1,552	55,87,200	1,420	51,12,000	5,12,55,600
2020-21	78,857	4,73,14,200	1,515	54,54,000	1,420	51,12,000	5,78,80,200
2021-22	78,857	4,73,14,200	1,980	71,28,000	1,420	51,12,000	5,95,54,200
Total							26,83,96,800

As per the service level benchmarks on Solid Waste Management notified by the UD&PA Department, the year-wise efficiency in collection of SWM charges ranged from 85 per cent to 100 per cent. Based on the efficiency of collection of SWM charges as claimed by the Department, Audit estimated the amount of user charges collected by LCs during 2017-22 by using details such as number of households, number of commercial establishments, number of Government institutions, user charges prescribed in AMC Solid Waste Management Bye-Laws, 2019. The details are shown in **Table-1.14**:

Table – 1.14: Efficiency in collection of user charges

(Amount in ₹)

Year	Efficiency in collection of SWM charges (in per cent)	User charges to be collected	User charges collected as per percentage of efficiency in collection of SWM charges
(1)	(2)	(3)	(4) = (2)*(3)/100
2017-18	85	4,90,92,000	4,17,28,200
2018-19	90	5,06,14,800	4,55,53,320
2019-20	90	5,12,55,600	4,61,30,040
2020-21	100	5,78,80,200	5,78,80,200
2021-22	100	5,95,54,200	5,95,54,200
Total user charges collected during 2017-22		26,83,96,800	25,08,45,960

Total user charges collected by LCs is computed to be ₹ 25.08 crore during 2017-22 as shown in column (4) of **Table-1.14** above.

During the period 2017-22, as per the agreement, the collection and transportation cost of solid waste is to be borne in the ratio of 80:20 between the AMC and LCs. From the records of cost incurred by AMC on the collection and transportation of solid waste, audit calculated the total amount borne by LCs to be ₹ 4.75 crore as shown in column four of **Table-1.15**.

Table-1.15: Calculation of transportation charges to be borne by AMC and LCs
(Amount in ₹)

Year	Yearly expenditure for transportation of garbage	Transportation cost to be borne by AMC =80 per cent of Total amount	Transportation cost to be borne by LC= 20 per cent of Total amount
(1)	(2)	(3) = (2)*80%	(4) =(2)*20%
2017-18	4,01,72,920	3,21,38,336	80,34,584
2018-19	1,30,05,230	1,04,04,184	26,01,046
2019-20	4,38,59,081	3,50,87,265	87,71,816
2020-21	6,48,41,780	5,18,73,424	1,29,68,356
2021-22	7,57,83,840	6,06,27,072	1,51,56,768
Total	23,76,62,851	19,01,30,281	4,75,32,570

Source: Transportation charges figures provided by AMC

Thus, as per Audit calculation based on efficiency in collection of SWM charges the minimum balance amount of ₹ 20.33 crore (₹ 25.08 crore - ₹ 4.75 crore) collected by the LCs was to be remitted to AMC. However, details of remittance of SWM charges collected by the LCs to AMC were not available in records relating to Accounts of AMC, which were made available to Audit.

On enquiring if there was remittance of user charges by LCs, AMC stated that Board of Councilors meeting did not mention anything pertaining to remittance of user charges collected by the LCs. As such, user charges were not remitted by the LCs. However, the reply by AMC was not tenable because there is no record produced to Audit which indicated that LCs had been authorised to retain the user charges collected by them.

From the replies of the AMC it is clear that user charges were not remitted by LCs to AMC. Thus, the minimum balance amount of ₹ 20.33 crore (₹ 25.08 crore - ₹ 4.75 crore) collected by the LCs was retained by them. Audit examined the records of 10 selected LCs out of 83 LCs through AMC which did not indicate that accounts were maintained by the LCs. Nine LCs out of 10 LCs, could not even produce the counterfoils of the user fee receipts issued to households. Also, Vouchers/ cash memos/ supporting documents related to expenditure made from the collection were also not maintained. The Department while agreeing to the Audit observation stated (July 2023) that AMC has informed all Local Councils to furnish details of the user charges collected by them and expenditures incurred therefrom. The Department further stated that software will be developed to record and monitor user charges collected from each household.

1.2.6.9 Domestic Hazardous Waste

Rule 15(j) of SWM Rules, 2016 provides that the local authority is to ensure safe storage and transportation of domestic hazardous waste to the hazardous waste disposal facility or as may be directed by the State Pollution Control Board or the Pollution Control Committee.

Rule 15(i) further provides that it shall be the duty of the local authority of the census towns or urban agglomerations to establish waste deposition centers for domestic hazardous waste and give direction for waste generators to deposit domestic hazardous wastes at these centres for its safe disposal. Such facility shall be established in a city or town in a manner that one centre is set up for the area of twenty square kilometers

or part thereof and notified the timings of receiving domestic hazardous waste at such centers.

Rule 22(4) also provides that necessary infrastructure be created by the local bodies and other authorities concerned, as the case may be, on their own, directly or by engaging agencies within two years from the date of notification of these Rules to enforce waste generators to practice segregation of biodegradable, recyclable, combustible, sanitary waste domestic hazardous and inert solid wastes at source.

The following observations emerged during audit regarding shortcomings in the management/ disposal of Domestic hazardous waste:

(I) Aizawl Urban Area

With regard to Rule 15(j) of SWM Rules, 2016, Audit noticed that infrastructure *i.e.*, wastes deposition centres were not created for Domestic Hazardous waste. One storage centre was established at Zemabawk area *i.e.*, at a distance of eight km from the ULB for collection and storage of Domestic electronic Hazardous wastes. However, during joint physical verification, it was observed that the establishment was locked, no staff were found available and the centre was not functional.



Electronics and Hazardous Waste storage centre at Zemabawk, Aizawl (18 November 2022)

The Department while agreeing to the Audit observation stated that no separate assessment of Domestic Hazardous waste was done and no data was available. However, generation of Hazardous waste was very minimal in quantity in AMC area. The AMC further stated that at the SWM Centre any hazardous waste noticed were kept separately. The contention of the Department that generation of Hazardous waste was very minimal in quantity, however, could not be accepted as there was no separate assessment of Domestic Hazardous waste along with the fact that segregation of waste was not efficiently practiced. Further, disposal of domestic hazardous waste in the open without dedicated storage or disposal facility is in contravention to SWM Rules and could result in serious environment pollution and health hazard considering the increasing usage of electronics items in day-to-day life.

(II) Lunglei and Lawngtlai Urban Areas

Similarly, in the urban areas of Lunglei and Lawngtlai, Domestic Hazardous Waste were not collected and transported separately by engaging dedicated vehicles. Moreover, no infrastructure *i.e.*, waste deposition centres for domestic hazardous waste were created in these urban areas.

Although domestic hazardous waste is a small portion of municipal solid waste, due to its toxicity, it can contaminate surface and ground water bodies and pollute the air, if not treated properly. The chemical composition in the hazardous waste, if disposed without treatment, could ignite, explode, poison, or corrode.

The matter was brought to the notice of the authorities concerned during the period between November 2022 and April 2023. The Department, while agreeing to the Audit observation stated that since the Waste Management Centre is not yet operational in Lunglei Urban Area, proper domestic hazardous waste treatment and safe disposal could not be carried out as of now even though the Waste Management Centre has been designed to process such kind of waste treatment and disposal. It was further stated that the Solid Waste Management Centre is planned to be completed by September, 2023 after which the issues will be improved.

Reply in respect of Lawngtlai Urban Area has not been received (April 2024).

Recommendation: It is recommended that the local bodies and the authorities concerned, as the case may be, should take immediate measures and create necessary infrastructure for proper management of domestic hazardous waste i.e., storage, transportation, disposal as laid down in Solid Waste Management Rules, 2016 considering the potential effects on environment as well as human beings.

1.2.6.10 Usage of Personal Protective Equipment

Rule 15(zd) of Solid Waste Management Rules, 2016 provides that it shall be the duty and responsibility of the local authorities of the census towns and urban agglomerations to ensure that the operator of a facility provides personal protection equipment including uniform, fluorescent jacket, hand gloves, raincoats, appropriate footwear and masks to all workers handling solid waste and the same are used by the workforce.

During scrutiny of records of Aizawl Municipal Corporation, it was seen that Personal Protective Equipment (PPE) such as uniform, fluorescent jacket, raincoats, etc., were not provided to the workers handling solid waste at Solid Waste Management centre, Tuirial. The number of personnel involved in solid waste handling and the number of personnel to whom protective equipment were distributed at Solid Waste Management Centre, Tuirial can be seen in **Table-1.16** below:

Table – 1.16: Distribution of PPE to workers at Solid Waste Management Centre, Tuirial

Year	No. of persons involved with solid waste handling	No of persons to whom protective equipment were distributed						
		Uniform	Fluorescent jacket	Hand gloves	Raincoat	Foot wear	Mask	Umbrella
2017-18	8	0	0	8	0	8	8	8
2018-19	8	0	0	8	0	8	8	8
2019-20	74	0	0	74	0	74	74	0
2020-21	74	0	0	74	0	74	74	0
2021-22	41	0	0	41	0	41	41	0

Source: records of AMC

Moreover, during physical inspection of the SWM Centre, it was noticed that some of the workers were handling solid waste without any protection as can be seen from the picture below:



Workers handling solid waste at SWM Centre, Tuirial (18 November 2022)

Exposure to solid waste without proper protective equipment can have adverse effects on the health of the workers. Therefore, the AMC should provide sufficient personal protective equipment *e.g.*, uniform, raincoat, *etc.*, to its workers and ensure that adequate awareness amongst the workforce is created for utilisation of protective equipment.

The Department while agreeing to the Audit observation stated that due to hot and humid climatic conditions at the worksite, the workers are unwilling to wear PPE kits provided to them. It was further stated that proper awareness will be imparted to the workforce to educate them about the necessity of wearing PPE kits and for which a standard operating procedure will be prepared and used as a guide.

1.2.6.11 Monitoring of environmental parameters of Solid Waste Management at the Solid Waste Management Centre, Tuirial

(A) Ground Water and ambient air quality

Schedule I (E)(i) of Solid Waste Management Rules, 2016 provides that the ground water quality within 50 meters of the periphery of landfill site shall be periodically monitored covering different seasons in a year *i.e.*, summer, monsoon and post-monsoon period to ensure that the ground water is not contaminated. Further, Schedule I (F)(iv) of Solid Waste Management Rules, 2016 provides that ambient air quality at the landfill site and at the vicinity shall be regularly monitored. Ambient air quality shall meet the standards prescribed by the Central Pollution Control Board for Industrial area.

Audit noticed that no samples were tested between the establishment of landfill site at Solid Waste Management Centre, Tuirial and the date of Audit (December 2022). In the absence of test samples, the quality of ground water and air quality at the periphery of landfill site could not be ascertained.

(B) Landfill Gas

Schedule I (F)(i) of Solid Waste Management Rules, 2016 provides that landfill gas control system including gas collection system shall be installed at landfill site to minimise odour, prevent off-site migration of gases, to protect vegetation planted on the rehabilitated landfill surface. For enhancing landfill gas recovery, use of geo-membranes in cover systems along with gas collection wells should be considered.

AMC stated that no landfill gas control system including gas collection system was installed at the landfill site to minimise odour and prevent off-site migration of gases.

The Department while agreeing to the Audit observation stated (July 2023) that an Environmental cell has been constituted recently and an Eco-Management Services consultant is engaged to monitor environmental issues and their compliance.

Recommendation: It is recommended that immediate steps should be taken to monitor air and ground water quality. The Department may conduct periodic testing to ensure that prescribed standards are met and the impact on the environment is assessed regularly.

1.2.6.12 Lack of litter bins at public places resulting in unsafe disposal of waste

Paragraph 2.2.1.2.3 of the Municipal Solid Waste Manual (MSWM), 2016 stipulates for provision of litter bins at important streets, markets, public places, tourist spots, bus and railway stations, large commercial complexes, etc., to ensure that streets and public places are not littered with waste.

In order to examine the extent of compliance of above provisions, Audit conducted some site visits to various public places in Aizawl. Audit found that the public places equipped with litter bins for disposal of waste were clean. The waste is properly disposed into the litter bins. The same can be seen in the photographs given below:



**Location: Open Gym, New Secretariat Complex, Khatla (23.72588N, 92.70718E)
(27 February 2023)**

However, in public places where litter bins are not placed, littering can be seen all over. The waste is seen to be thrown in open areas resulting in public places becoming unhygienic. Some of the public places where litter bins were not available can be seen in the pictures below:



Location: Chaltlang Viewpoint (23.74663 N, 92.72010 E) (13 December 2022)



Location: Durtlang (23.76257 N, 92.73358 E) (13 December 2022)

In public places, it is crucial to practice good hygiene since littered waste spoils the aesthetics, puts off tourists and visitors to those places, besides spreading contamination and diseases, stunting plant growth and causing soil and water pollution. Littered plastic if ingested by stray animals can affect their health. Plastic can also break into smaller pieces, known as microplastics which can create negative impacts on health for both humans and animals alike. Therefore, litter bins are essential to keep dirty and decaying waste separated from the rest of the clean surroundings.

The Department while agreeing to the audit observation stated (July 2023) that garbage fencing activities are taken up by AMC at litter prone areas and the idea of ban on small plastic bottles will be considered.

Recommendation: It is recommended that Municipal bodies should take immediate steps to place litter bins at all public places.

1.2.7 Conclusion

Solid Waste Management Rules, 2016 were framed for management of solid waste *i.e.*, collection, segregation, storage, transportation and disposal. The Performance Audit revealed several deficiencies in implementation of these Rules in selected Urban areas.

The implementing agencies did not determine the actual quantum of solid waste generated due to lack of weighbridges, affecting planning for effective solid waste management strategies. There was negligible segregation of solid waste before and after collection. Majority of the vehicles used for collection and transportation of solid waste were not covered and were overloaded. Moreover, none of the sanitation vehicles were fitted with GPS devices which would have enabled effective tracking. Dumping of

solid waste was the most common option for disposal of wastes due to under utilisation of processing facilities in Aizawl urban area and non-existence of waste processing facility and scientific landfill in Lunglei and Lawngtlai urban areas. The untreated solid waste being dumped at the dumping sites in urban areas of Aizawl, Lunglei and Lawngtlai, directly exposed to the open environment has a high risk of causing severe environmental pollution, damaging land, air and water quality which will impact not only human health but also damage the ecosystem in the area. Instances of burning of solid waste were noticed.

User charges collected by Local Councils were not remitted to Aizawl Municipal Corporation. Separation of domestic hazardous wastes from other wastes was not efficiently practiced. Personal protective equipment like uniform, jacket, raincoats were not provided to workers and there were instances which indicates that those provided to the sanitation workers of Aizawl Municipal Corporation were not worn by all workers. Exposure to solid waste without proper protective equipment can have adverse effects on the health of the workers.

No samples were tested at the landfill site in Tuirial, between the establishment of landfill site and the date of Audit (December 2022). Lack of litter bins in some of the public places resulted in open littering of garbage, making the places unhygienic besides spoiling the aesthetics of the sites.

1.2.8 Recommendations

The Government may consider the following recommendations:

- I. Weighbridges should be installed at appropriate urban areas for realistic assessment of solid waste;*
- II. The segregation of solid wastes as wet, dry-recyclable and non-recyclable and domestic electronic Hazardous wastes at source should be strictly enforced and implemented. Special drives may be taken up by authorities concerned to improve the extent of segregation of daily solid waste at source;*
- III. Transportation of solid waste should be done in an environmentally sound manner to prevent spreading of foul odour, littering, etc., by covering waste to prevent spillage;*
- IV. A proper location for Solid Waste Management Centre should be identified for future requirements due to accumulation of un-processed solid waste at the present site at Tuirial;*
- V. Provision of adequate infrastructure for processing of solid waste and the optimum utilisation of such facilities should be ensured;*
- VI. User charges collected by the Local Councils should be properly accounted for and remitted timely to AMC;*
- VII. Environmental impact assessment should be conducted periodically to monitor air and ground water quality; and*
- VIII. Municipal bodies should take immediate steps to place litter bins at all public places.*

PERFORMANCE AUDIT

Disaster Management and Rehabilitation Department

1.3 Performance Audit on Disaster Preparedness and Management in Mizoram

1.3.1 Introduction

The Disaster Management Act, 2005 was enacted by Government of India (GoI) to provide for the effective management of disasters. It defines disaster as a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or man-made causes or by accident or negligence which results in substantial loss of life or human suffering or damage to and destruction of property or degradation of environment and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area.

The Act provides for a disaster management framework that envisages a continuous and integrated process of planning, organising, co-ordinating and implementing measures for (i) prevention of disasters, (ii) mitigation or reduction of their risk and severity, (iii) capacity building, (iv) preparedness to deal with any disaster (v) prompt response to disaster, assessing the severity of a disaster (vii) evacuation, rescue, relief and (viii) rehabilitation and reconstruction. Vulnerability to and impact of disasters can be mitigated by risk assessment, pre-disaster warning, hazard mapping and adequate preparedness through adequate and effective policies, institutional mechanisms and adequate financial resources. These pre-disaster activities complement post-disaster activities of emergency response, recovery and relief as well as restoration, rehabilitation and reconstruction.

Owing to its geographic, geological and physical features, Mizoram is vulnerable to all-major natural hazards *viz.*, earthquake, landslide, cyclone, *etc.* The State is in Seismic Zone–V, which is the highest risk zone for earthquakes. The State is also under constant threat of cloud burst and landslide disasters which is well supported by the fact that more than 71 *per cent* of the total area is in Very High to Moderate Hazard Zone. The South-west Monsoon has a great influence on Mizoram (and other North-eastern states), thus, there is always abundant rainfall during the monsoon season. High wind/ cyclonic storms always strike the State at the beginning and after the monsoon season, which creates havoc in the State by damaging dwelling houses and crops. Due to excess rainfall, landslides are very serious hazard for the State. Landslides disrupt road, communications, damage houses and cause loss of life every year. Bamboo flowering which leads to explosion of rat population which in turn leads to famine or famine-like conditions occurred in the affected areas in past. Once the bamboo dies after flowering, the people whose livelihood depended on the bamboo resources are severely affected. Bamboo flowering occurs frequently in the State. However, bamboo flowering is a natural cycle and not included under notified disaster.

In the State of Mizoram, the Disaster Management & Rehabilitation Department is responsible for prevention, preparedness, mitigation, response, relief and rehabilitation work in case of any disaster.

The major disasters that occurred in the State from 2017 to 2022 are shown in **Table-1.17** below:

Table-1.17: Major Disasters in the State during 2017-18 to 2021-22

Sl. No.	Type of Calamity	No. of villages affected	No. of lives lost	No. of person injured	Agriculture damaged		Damage to infrastructure	
					Area (in ha)	Estimated crop loss (₹ in lakh)	Roads (in km)	Bldg.
1.	Landslide	661	41	15	518.73	160.54	219	5
2.	Fire	652	10	17	547.97	191.94	0	0
3.	Cyclone	465	5	1	283.90	44.28	0	9
4.	Flood	434	12	0	1,052.88	161.53	0	2
5.	Storm	197	0	0	726.20	90.90	0	5
6.	Earthquake	28	0	0	0.20	18.00	0	5
7.	Cloud Burst	28	0	1	24.60	17.91	0	0
8.	Lightning	7	1	4	0	0	0	0
9.	Pest attack	4	0	0	21.35	1.92	0	0
Total		2,476	69	38	3,175.83	687.02	219	26

Source: Departmental records

1.3.2 Organisational Structure

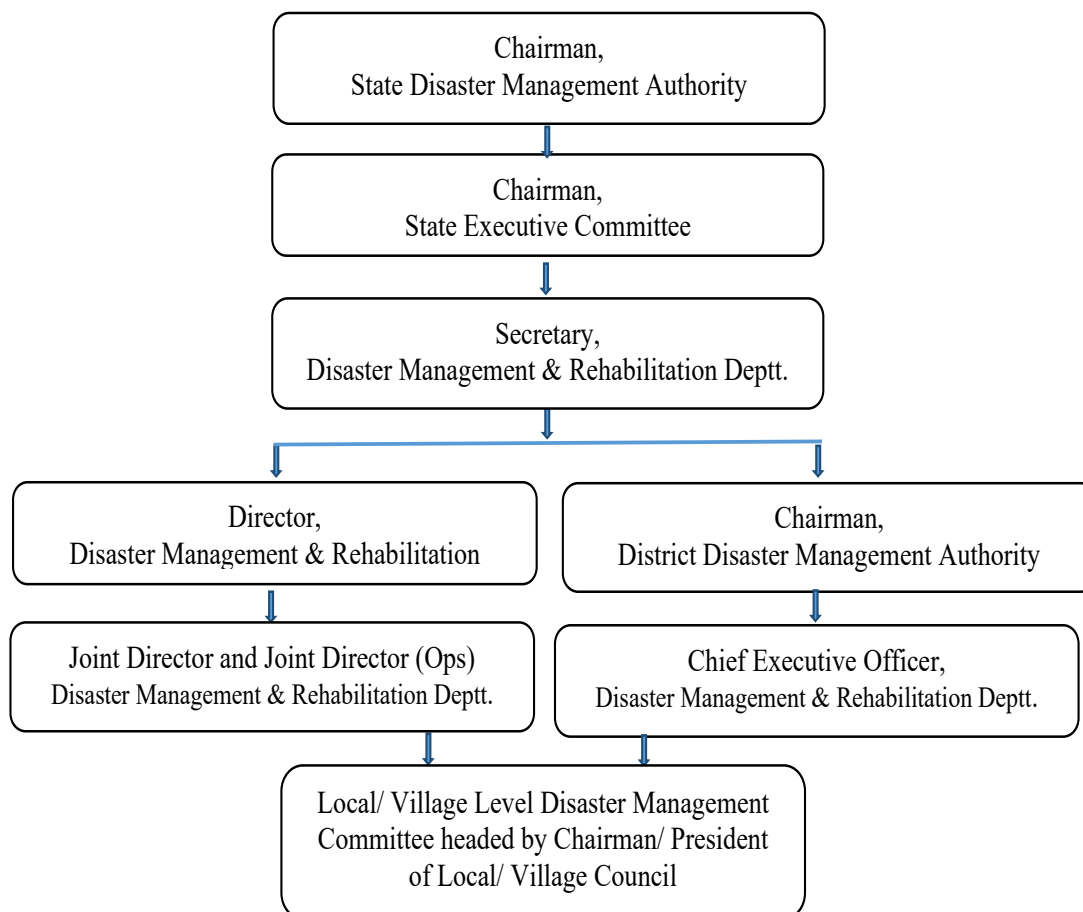
At State level, the State Disaster Management Authority (SDMA) under the Chairmanship of Chief Minister is responsible for laying down policies and plans for disaster management. The Chief Secretary is the Chairman of the State Executive Committee. The Secretary is the head of the Administrative Department of the Disaster Management and Rehabilitation (DM&R) Department.

The Director, DM&R Department assisted by two Joint Directors is responsible for disaster management activities in the State.

At the field level, the responsibility for disaster management activities, preparedness and relief work is vested in the Deputy Commissioners (DCs) of the eleven districts in the State. The DCs also function as Chairman of the respective District Level Disaster Management Authority (DDMA). The Deputy Commissioners are assisted by the Additional Deputy Commissioners (ADCs) and Local/ Village Level Disaster Management Committees headed by Chairman/ President of Local/ Village Council.

The organogram of the State Disaster Management Authority in the State is given in **Chart -1.1**

Chart -1.1: Organogram of the State Disaster Management Authority



1.3.3 Audit Objectives

The Performance Audit has been taken up to assess the preparedness, the effectiveness and efficiency of the State Government in management of disasters with the following Audit objectives.

- I. Whether proper planning was done for effective response and management of disaster;
- II. Whether effective steps for disaster preparedness and mitigation were taken to minimise the threat of disaster and its consequences;
- III. Whether financial management ensured timely availability of funds and the effective and efficient utilisation of the same; and
- IV. Whether disaster response mechanism and post-disaster activities were effective and efficient.

1.3.4 Audit Criteria

Audit findings were benchmarked against the following criteria:

- Disaster Management (DM) Act, 2005;

- The guidelines of the Fourteenth Finance Commission and Fifteenth Finance Commission regarding National Disaster Response Fund, State Disaster Response Fund, Capacity Building and State Disaster Risk Management Fund;
- State Disaster Management Plan 2019, 2020 & 2021;
- National Policy on Disaster Management, 2009;
- National Disaster Plan, guidelines and other instructions issued by the Ministry of Home Affairs and National Disaster Management Authority (NDMA);
- Policies, plans and guidelines on disaster management issued by the State Government; and
- General Financial Rules, 2017.

1.3.5 Audit Coverage and Methodology

The Performance Audit of Disaster Preparedness and Management in Mizoram covering the period from 2017-2022 was conducted between October 2022 and February 2023 through test check of records of State Disaster Management Authority (SDMA), State Executive Committee (SEC) and Director, Disaster Management & Rehabilitation (DM&R) Department and District Disaster Management Authority (DDMA). At field level out of eleven districts, three districts (Aizawl, Lawngtlai and Mamit) were selected based on Probability Proportional to size Sampling without Replacement method.

The Performance Audit commenced with an Entry Conference with the Additional Secretary, Government of Mizoram, DM&R Department and the Under Secretary, Finance Department on 19 October 2022 wherein the audit objectives, audit criteria and scope of audit were explained and suggestions as well as perceptions relating to the strengths and weakness of the Department in implementing the Disaster Management were discussed.

The Audit findings were discussed during the Exit Conference (06 December 2023) with the Department/ Government and the report was finalised after taking into consideration the replies of the Department/ Government.

1.3.6 Acknowledgment

The office of the Principal Accountant General, Mizoram places on record our sincere acknowledgement of the cooperation rendered by the Department in the course of the audit.

Audit Findings

1.3.7 Institutional set-up of Disaster Management

1.3.7.1 State Disaster Management Authority

As per Section 14(1 & 2) and 15(1) of Disaster Management (DM) Act, 2005, every State Government shall establish a State Disaster Management Authority (SDMA) by issuing a notification in the official gazette headed by the Chief Minister of the State and shall

meet as and when necessary and at such time and place as the Chairperson of the State Authority may think fit. The State Authority should review the development plans of the different departments of the State and ensure that prevention and mitigation measures are integrated therein; and that it shall lay down detailed guidelines for providing standards of relief to persons affected by disaster in the State as per Section 18(g) and 19 of the Act *ibid.*

The Government of Mizoram constituted and notified the State Disaster Management Authority (SDMA) under the Chairmanship of the Chief Minister on 23 May 2006. The SDMA headed by the Chief Minister is the highest body for policy formulation and taking appropriate decision in regard to disaster risk reduction activities in the State.

During the last five years (2017-22), the SDMA met six times to discuss various topics related to disaster preparedness and mitigation measures in the State. During scrutiny of records, it was observed that the SDMA did not review the development plans of the State to ensure that prevention and mitigation measures are integrated. The SDMA also issued notification of Guidelines for “Minimum Standards of Relief” to the persons affected by disaster in the State belatedly on 28 March 2022 *i.e.*, after a lapse of 15 years of the constitution/ formation of SDMA (May 2006).

A review of the Minutes of Meeting (15 March 2022) of SDMA revealed that, among other issues, SDMA took up the discussion on Building and Property Insurance, setting up of a full-fledged State Disaster Response (SDR) Force in the State, creation of District Organisers and State Organiser, *etc.*, as a result of which posts for three new District Organisers had been created and the State Emergency Operation Center (SEOC) had been allocated a new site for its functioning. Other significant decisions of SDMA meetings include approval of State Disaster Plans, formation of Quick Response Teams in all Districts, identification of land for setting up the State Emergency Operation Centre, *etc.*

1.3.7.2 State Advisory and Executive Committee

As per Section 17 of DM Act, 2005, SDMA shall constitute a State Advisory Committee (SAC), consisting of experts in the field of disaster management and having practical experience of disaster management to make recommendations on different aspects of disaster management. Further, as per Section 20 of the DM Act, 2005 every State Government shall constitute a State Executive Committee (SEC) headed by the Chief Secretary to assist the State Authority in the performance of its functions. As per Section 22(2)(a) of the Act, the SEC shall coordinate and monitor the implementation of the National Policy/ Plan and the State Plan. Section 22(2)(c) and (d) of the Act provides that the SEC shall lay down guidelines for preparation of disaster management plans by the departments of the State Government and District Authorities and monitor the implementation of the plan. The SEC shall examine the construction, in any local area in the State and, if it is of the opinion that the standards laid for such construction for the prevention of disaster are not being or have not been followed, may direct the District Authority or the local authority, as the case may be, to take such action as may be necessary to secure compliance of such standard as per Section 22(2)(m).

The State Advisory Committee (SAC) was constituted on 27 January 2015 with the Minister of State, Disaster Management & Rehabilitation as the Chairperson and members from various State and Central departments. As per the order notifying its constitution/ formation, the SAC is directed to meet at least once in three months.

Audit observed that the SAC did not conduct any meeting during the period 2017-18 to 2021-22 and no recommendation on different aspects of disaster management was made. Thus, the SAC did not perform its role in making recommendations on different aspects of disaster management in the State.

The SEC was constituted on 23 May 2006 with the Chief Secretary as the Chairman. Out of 48 departments in the State, only five departments⁹ and two controlling offices prepared their Departmental Disaster Plans in the year 2016. Some of the salient features of the Departmental Disaster Plans include capacity building, resource mobilisation strategy, formulation of coordination/ evacuation/ emergency medical plans, etc. The guidelines for preparation of Department Disaster Plan were issued on 13 March 2015 after a lapse of more than eight years and re-issued on 9 February 2022. Further, the SEC had not examined the construction/ projects in the State to ascertain whether the design, drawing and engineering of the structure were taken into consideration as per the National Building Code 2005, the appropriate Bureau of Indian Standards Codes, etc., as envisaged in the State Plan and DM Act.

The Government stated (December 2023) that the State Executive Committee (SEC) has played an active role covering different aspects of disaster management in the State. Due to the proactive role played by the SEC, the State Advisory Board was overlooked. Necessary action will be taken to ensure timely conduct of State Advisory Board Meeting.

The Government further stated (December 2023) that the General Administration Department in 2022 issued direction to all Administrative Heads of Department and all Heads of Department for preparation of Disaster Management Plan for all Offices (March 2022). However, a mechanism to closely examine every construction/ project to ensure adherence to laid down standards has not been put in place.

Recommendation: It is recommended that the State Advisory Committee should conduct meetings regularly and make recommendations on different aspects of disaster management. The SEC should ensure preparation of disaster plans by all the departments expeditiously and closely monitor their implementation. The SEC should also establish mechanism to closely examine every construction/ project to ensure that the laid down standards are adhered to.

1.3.7.3 District Disaster Management Authority (DDMA)

As per Section 25 (1) and (2) of DM Act, 2005, every State Government shall establish a District Disaster Management Authority (DDMA) for every District of the State headed by Deputy Commissioner as Chairperson with the elected representative of

⁹ i) Directorate of Hospital and Medical Education. ii) Prison Department. iii) Deputy Commissioner, Kolasib. iv) Deputy Commissioner, Champhai. v) Rural Development Department. vi) Administrative Training Institute. vii) Urban Development & Poverty Alleviation Department

local authority as the co-Chairperson and other members not exceeding seven. As per Section 27 of the Act, the District Authority shall meet as and when necessary and at such time and place as the Chairperson may think fit. Section 30(2) of the Act provides that the DDMA may prepare a disaster management plan including district response plan for the District and coordinate and monitor the implementation of the National Policy, State Policy, National Plan, State Plan and District Plan.

The details of constitution of DDMA and meetings held during the last five years in the three sampled districts are shown in **Table-1.18** below.

Table-1.18: Number of DDMA meeting

Sl. No.	Name of districts	Date of Constitution of DDMA in the District	DDMA headed by	No. of meetings held during the last five years
1.	Aizawl	23 May 2006	Deputy Commissioner	6
2.	Lawngtlai	03 April 2012	Deputy Commissioner	9
3.	Mamit	26 April 2012	Deputy Commissioner	3

Source: Department records.

Further, it was also observed that all the three sampled DDMA of Aizawl, Lawngtlai and Mamit had developed their district disaster management plans. The respective DDMA held discussions and took decisions on the mitigation of disasters like landslides, fires, *etc.*, and also issues like setting up of Quick Response Teams.

As per the district disaster management plans, the sampled districts had constituted Forest Fire Prevention Task Force, Quick Response Team and Zonal Officers to conduct spot verification in respect of any calamity and also established Incident Response System. The District Authority also conducts spot investigation of potential landslide areas and structural stability of building. The District Plan includes Standard Operating Procedures (SOP) for the line departments concerned like search & rescue, relief, medical response, communication, *etc.* Hence, the District Disaster Management Authority in the sampled Districts had been performing its functions in terms of formulation of disaster management Plans.

1.3.7.4 Emergency Operation Centre

As per Clause 5.2.7 of the National Policy on Disaster Management (NPDM) 2009, Emergency Operation Centres should be established at the National, State, Metro and District Level and equipped with contemporary technologies and communication facilities and their periodic up gradation will be accorded priority.

Further, as per clause 6.1.1.1 and 18 of the Mizoram State Disaster Management Plan, 2020, the Emergency Operation Centre (EOC) is a nodal point for the overall coordination and control of relief work. In case of an L1¹⁰ Disaster, the District

¹⁰ L1 specifies disaster that can be managed at the District level, however, the State and Centre will remain in readiness to provide assistance, if needed

Emergency Operation Centre (DEOC) will be activated and in case of L2¹¹ and L3¹² disasters, State Emergency Operation Centre (SEOC) will be activated along with the DEOC. Function of EOC depends on the site of the event and if it is close to the District, a DEOC will be used for data management and decision-making. If the event is very close to the State Headquarters, the SEOC will be used as an additional EOC for data management and decision-making process.

District Emergency Operations Centres (DEOCs) were established in every district and the State Emergency Operations Centre (SEOC) was attached to the Directorate, DM&R. Details of personnel in place and types of equipment available in the SEOC and DEOCs of the sampled Districts are given in **Table-1.19** below.

Table-1.19: List of manpower and equipment available at SEOC/ DEOC

Sl. No.	District	No. of staffs attached	Equipment type
1.	SEOC, Aizawl	One District Organiser Seven District Volunteer	Rotary Rescue saw, chain saw, Honda generator, stretcher, full body harness, sit harness, Satellite phone, <i>etc.</i>
2.	DEOC, Aizawl	One District Organiser One DM Volunteer	Foot tape, Push rope, Jumper, body harness, rope ladder, aluminum ladder, life jacket, <i>etc.</i>
3.	DEOC, Lawngtlai	One District Organiser One Group – D	Fire extinguisher, generator, repelling mitten, heavy duty glove, sit hardness, stretcher, Satellite phone, <i>etc.</i>
4.	DEOC, Mamit	One District Organiser One DM volunteer	Gas stove, chain saw, rope harness, helmet, life jacket, jack hammer, portable light, Satellite phone, <i>etc.</i>

It was observed that as per Minutes of the Meeting of SDMA on 15 March 2022, it was decided that a post of State Organiser will be created to strengthen the State Emergency Operation Centre (SEOC). However, the post for the State Organiser was not created as of September 2023.

The Department stated (April 2023) that the District Organiser for Aizawl, DEOC, attached at the Directorate of DM&R, functions as the State Organiser also in addition to his own duty until the post is created and filled up. The Department also stated that the proposal for the creation of the post of State Organiser as per the SDMA meeting held on 15 March 2022 was not yet approved by the State Authority.

During physical verification, it was observed that one Satellite phone each had been provided to the SEOC, Aizawl and DEOC at Lawngtlai and Mamit in 2019 with SIM card. Out of these, one Satellite phone issued to the SEOC, Aizawl was not in working condition. The Director, DM&R had requested the General Manager (Inmarsat, 21 May 2021) for replacement of the phone but no reply has been received (November 2023).

¹¹ L2 specifies disaster situation which required assistance and active participation of the State, mobilisation of its resources for management of disasters

¹² L3 specifies large scale disaster where the State and District authorities have been overwhelmed and require assistance from the Central Government

Thus, lack of active communication technology could cause a serious setback on warning dissemination and rescue operations if major communication lines are disrupted due to disasters.

1.3.8 Pre-Disaster Preparedness and Mitigation Measures

1.3.8.1 Disaster Preparedness and Mitigation

As per Section 23 (1) and (2) and 18 (2)(b) of the DM Act, 2005, there shall be a plan for disaster management for every State to be called State Disaster Management Plan and the State Plan should be prepared by the State Executive Committee which should be approved by the State Authority. Further, sub-Section (1) and (2) of Section 31 of the Act provides that there shall be a plan for disaster management for every district of the State and the District Plan shall be prepared by the District Authority and approved by the State Authority.

As per clause 5.1.2 of the National Policy for Disaster Management (NPDM), 2009, Disaster Management authorities at the State and District levels need to carry out risk and vulnerability assessment of all disaster-prone areas and conduct hazard zonation mapping and vulnerability analysis based on the Geographic Information System (GIS) and remote sensing data which needs to mandatorily include a ground check component. Clause 5.1.4 and 8.2.1 of the Policy provide for the requirement of action plans to check unplanned urbanisation and ensure safe human habitat against all forms of disasters and to identify Agencies to supply the necessary stores in the pre disaster phase.

Further, as per clause 3.2.2, 3.2.2.1 to 3.2.2.4 of the State Disaster Management Plan, 2020, prevention and mitigation measures for earthquake, landslide, flood, cyclone, cloud burst, hailstorm, *etc.*, are envisaged. Clause 5.2.4 of the State Plan, 2020 envisages enactment of Emergency Medical Service Act with underlying features like creation of an emergency medical services authority, establishment of paramedic cadre through training programmes, imparting of training to manpower for emergency services, *etc.* Clause 5.6 envisages identification of Medical Incident Command System like Incident Commander for the State level, District level and Disaster site, *etc.*

During audit, it was observed that in the State Disaster Management Plan (SDMP) and records furnished by the Directorate of Science & Technology regarding hazard risk and vulnerability analysis, mapping was done to include vulnerability of different parts of the State to various forms of disaster as a whole. Hazard Risk and Vulnerability Analysis for eight District Headquarters of Mizoram and Atlas of Micro-level Landslide Hazard Zonation of Aizawl City and Selected Towns of Mizoram prepared by Mizoram Remote Sensing Application Centre (MIRSAC) were published under the sponsorship of North Eastern Council, Shillong.

In relation to landslide, which is the most common natural hazard within the State, only Atlas of Micro-level Landslide Hazard Zonation of Aizawl City and Selected Towns of Mizoram had been prepared by Mizoram Remote Sensing Application Centre (MIRSAC). However, regular inspection of landslide prone areas and research studies

have not been conducted as per State Disaster Management Plan and National Disaster Management Plan.

Further, there was no Action Plan for checking unplanned urbanisation. No soil and material testing had been conducted in landslide hazard areas. As envisaged in the State Plan, the State Authority did not prepare separate Standard Operating Procedures (SOP) for earthquake, landslide, flood, cyclone, cloud burst, hailstorm, *etc.* Medical Incident Command System was not identified. Further, the State Disaster Management Authority did not identify agencies to supply necessary stores in the event of disasters.

The Government stated (December 2023) that Soil testing was done for landslide at Hunthar Veng (in Aizawl) sinking area and the test report was submitted in 2017. Furthermore, two inclinometers and five Piezometres were installed therein which are continuously monitored since June, 2022. Also, Seismic sensors were placed at Champhai (National Centre for Seismology, IMD, MoES), Lunglei and Khawbung with two stations at the Directorate of Geology & Mining and Deputy Commissioner, Siaha.

However, the reply is silent on the action taken for regular inspection of landslide prone areas, Action Plan for checking unplanned urbanisation, preparation of SOP for earthquake, landslide, flood, cyclone, cloud burst, hailstorm, *etc.*, identification of Medical Incident Command System and identification of agencies to supply necessary stores in the event of disasters.

Recommendation: It is recommended that the State Authority initiate steps to identify Agencies to supply stores in the event of disasters, prepare SOPs for earthquake, landslide, etc., along with regular inspection and conduct of research and soil & material testing in landslide hazard areas.

1.3.8.2 Automated Landslide Monitoring System

Clause 3.2.2.3 of the State Disaster Management Plan, 2020 envisages the establishment of automated landslide monitoring system as a landslide mitigation measure for monitoring landslide prone areas.

It was observed during Audit that the State Authority had not yet established automated landslide monitoring system even though this was envisaged in the State Plan since 2015. The automated landslide monitoring system, if established, will be extremely helpful in adoption of mitigation measures, in saving precious lives and minimising loss of property in the eventuality of landslides.

The Department stated (November 2023) that Zonal Officers appointed under the District Disaster Management Authorities are responsible for monitoring of landslides in their respective districts. Further, it was stated (April 2023) that necessary steps will be taken in future for establishment of Automated Landslide Monitoring System.

1.3.8.3 Incorporation of Earthquake Resistant Designs in Building Code

According to Clause 4.1 of the State Disaster Management Plan, 2020 the responsible departments are to ascertain whether the design and engineering of the structure is in line with the National Buildings Code 2005 and other codes prescribed by the Bureau

of Indian Standards (BIS) for seismic zone V and carrying out structural safety audit of all critical lifeline structures.

In Aizawl District, Earthquake Resistant Designs in Building Code were incorporated in the current building regulation *i.e.*, Aizawl Municipal Council (AMC) Building Regulations, 2012 (Regulation 30). All building constructions within AMC area have to adhere strictly to AMC Building Regulation.

However, it was observed that National Building Code for Seismic Zone V is yet to be adopted in the sampled Lawngtlai and Mamit districts.

Since Mizoram lies in Zone V of the Seismic Zoning Map of India which is referred as Very High Damage Risk Zone and is prone to landslides, non-adoption of National Building Code or non-formulation of a similar Building Code could result in disastrous consequences.

The Government stated (December 2023) that the matter will be submitted for deliberation of the State Executive Committee.

Recommendation: It is recommended that the State Authority may consider making it mandatory for all building constructions in the State to adhere to the National Buildings Code and include the same in all the District Plans.

1.3.8.4 Status of Unsafe Buildings

Clause 3.2.2.1 of the State Disaster Management Plan, 2020 envisages to create database of existing public and private structures in the State. Within the State Capital, Aizawl, the responsibility for identification and removal of unsafe buildings/ structure was assigned to Aizawl Municipal Council (AMC) and in other area to the State Public Works Department.

During audit, it was observed that during 2017-22, the Executive Engineer, Public Work Department, Quality Control Research & Development Division, Aizawl conducted safety audit of 32 critical government buildings and eight critical lifeline infrastructures all over Mizoram and submitted the report to the line departments concerned for further action. It was observed that an unsafe building was dismantled in one case but there was no information on action taken in other cases. The AMC also surveyed the unsafe buildings in and around the Aizawl area and issued demolition notices to 21 non-government buildings, out of which only six buildings were demolished and one building was retrofitted leaving 14 buildings yet to be demolished.

The Government, while furnishing a list of 14 buildings yet to be demolished, stated (December 2023) that demolition of six buildings was completed and one was retrofitted.

1.3.8.5 Preparation of checklists on Recurring and Frequent Hazards

Clause 14.4 of the State Disaster Management Plan, 2021 envisages that all Central and State departments having offices in the State should prepare checklists with vertical indicators to regularly monitor the progress of the implementation of respective DM plans on recurring and frequent hazards, such as cyclone, flood and landslide, affecting the State and to assess preparedness before the onset of the Monsoon season. They must

regularly review preparedness for disasters that tend to occur without warning, like landslides or are extremely rare, such as earthquakes.

It was observed that no checklists for managing and dealing with recurring and frequent hazards that affect the State were prepared by any Department.

The Director, DM&R stated (April 2023) that necessary steps will be taken in future.

1.3.8.6 Capacity Building and Information, Education and Communication

Section 22(i) & 18(2)(h) of the DM Act, 2005 envisages promoting general education, awareness and community training in regard to the forms of disasters to which different parts of the State are vulnerable and the measures that may be taken by such community to prevent the disaster, mitigate and respond to such disaster and the State Authority may review the measures being taken for mitigation, capacity building and preparedness by the departments of the Government of the State.

As per Paragraph 10.2.2 of National Policy on Disaster Management, 2009, disaster management training and orientation of professionals like doctors, engineers and architects will be given due importance.

Test check of records revealed that the State Authority incurred expenditure of ₹ 1.88 crore during 2017-18 to 2021-22 for various Capacity Building and Information Education & Communication (IEC) activities like hoarding, training, workshop, seminar, competition, mock drills, *etc.*

However, records revealed that no capacity building measures/ training had been imparted to Medical/ police personnel and only one training was conducted for engineers, architects, masons, *etc.*, incurring expenditure of ₹ 2.00 lakh during the period 2017-18 to 2021-22.

The DM&R Department conducted 12 mock drill exercises between 2017-18 to 2019-20 as shown in **Table-1.20**. No mock drills had been conducted between 2020-21 to 2021-22.

Table-1.20 Mock drills conducted during 2017-18 to 2021-22

Sl. No.	Year	Vr. No.	Particulars	District	Expenditure incurred (in ₹)
1.	2017-18	97	Conducting mock drills	03	1,50,000
2.	2018-19	153	Conducting multi state mock exercise	08	8,50,000
3.	2018-19	154(a)	Conducting multi state mock exercise	01	56,210
Total					10,56,210

Thus, it can be observed that capacity building measures on disaster response and awareness training were inadequate as no training was imparted to important stakeholders like Medical/ emergency/ police personnel, *etc.*, in the past five years, *i.e.*, 2017-22.

The Director, DM&R replied (April 2023) that more capacity building measures for Doctors, NCC Cadets, NSS, NYC, Traffic, Fire Service and Government officials will be included in the Annual Work Plan.

1.3.8.7 Bamboo Flowering

In Mizoram, two bamboo species viz., *Melocanna baccifera* and *Bambusa tulda* are prevalent. These two species do not flower at the same time with *Bambusa tulda* flowering 18 years after *Melocanna baccifera*. The flowering of *Melocanna baccifera* results in famine known as '**Mautam**'¹³ which occurs every 48-50 years due to explosion of the rat population. The phenomenon occurred in 1815, 1862, 1911, 1959 and 2007 in the State of Mizoram. The flowering of *Bambusa tulda* causes '**Thingtam**' famine and these occurred in 1785, 1833, 1881, 1929 and 1977. The fruits of the two bamboo species are eaten by rats. It is believed that *Mautam* famines are more severe because the fruits are much larger and support a larger population of rats. Historically in Mizoram, Bamboo flowering resulted in suffering due to famine caused by widespread destruction/ loss of paddy and crops caused by the increase in rat population. After paddy, rats raid granaries of the villagers resulting in food shortage. Hence, mitigation of the effects of Bamboo flowering assumes greater importance in the State. In addition, once the bamboo dies after flowering, the people whose livelihoods depends on the bamboo resources are severely affected. *Thingtam* is predicted to occur in 2025-26.

Audit is of the view that considering the five major famines (1785, 1833, 1881, 1929 and 1977) experienced by the State due to bamboo flowering leading to unprecedented human suffering, it is of utmost importance for the State to develop a plan to mitigate the impact of bamboo flowering which is yet to be listed as a State specific disaster. Non-preparedness to combat the impending *Thingtam* predicted to occur in 2025-26 could affect the people whose livelihoods depends on bamboo resources if pre-emptive measures are not taken. Since the State recently faced the incidence of sudden explosion of rodent population in September 2022, steps may be initiated to accelerate the preparation of SOPs by the departments concerned to ensure that minimum damage is caused.

The Government stated (December 2023) that there has been a paradigm shift regarding the dependency of annual food grain production for livelihood of the people of the State as many of the household are dependent on other imported food grains. Furthermore, with the improvement in road connectivity, the Government will be able to provide necessary assistance to the areas affected at a much faster pace, as such the probability of *Thingtam* bringing devastation to the general public is not that pronounced. However, this observation will be submitted for deliberation of the State Executive Committee.

1.3.8.8 State Disaster Response Force

As envisaged in Clause 3.4.5 of the National Policy on Disaster Management 2009, States will be encouraged to create response capabilities from within their existing resources. To start with, each State may aim at equipping and training one battalion equivalent force. They will also include women members for looking after the needs of women and children. National Disaster Response Force (NDRF) battalions and

¹³ in Mizo term, Mau means bamboo and Tam means death

their training institutions will assist the States/ Union Territories in this effort. The States/ UTs will also be encouraged to include disaster management training in their respective Police Training Colleges and basic and in-service courses, for gazetted and non-gazetted officers.

As per Minutes of Meeting of the Mizoram State Disaster Management Authority held on 18 April 2017, it was suggested that the feasibility of conversion of the 5th Indian Reserve (IR) Battalion with its headquarters at Lungverh into a full-fledged SDR Force Battalion in consultation with the Home Minister, Government of Mizoram be assessed. However, there have not been further developments in this regard.

The Department stated (March 2023) that no dedicated SDR Force battalion has been established. However, as part of Capacity Building measures, disaster response training has been imparted to a certain number of personnel in the State armed forces to be deployed in search and rescue operations during disasters and no female personnel were yet selected for training by the Home Department till date. Details are given in Table-1.21.

Table-1.21: SDR Force Training during the period from 2017-2022

No. of batches	Venue	Name of the Battalions	No. of Personnel trained	Duration	Expenditure incurred (₹ in lakh)
16 th Batch	Central Training Institute Sesawng	3 rd BN. MAP Hqrs., Mualpui, Aizawl.	10	15.05.2017 to 23.06.2017	12.96
		1 st I.R. BN. Hqrs., Mualvum	18		
		2 nd I.R. B.N. Hqrs., Khawzawl	19		
		4 th I.R. B.N. Hqrs., Mamit	10		
17 th Batch	Central Training Institute Sesawng	1 st I.R. BN. Hqrs., Mualvum	10	16.10.2017 to 17.11.2017	10.97
		2 nd I.R. B.N. Hqrs., Khawzawl	09		
		4 th I.R. B.N. Hqrs., Mamit	20		
		5 th I.R. B.N, Hqrs. Lungverh	10		
Total			106		23.93

The Director, DM&R also stated that training had been imparted from 2010 onwards and so far, 853 personnel, which is an ideal strength for the State of Mizoram, have been trained.

Even though the number of personnel has reached its ideal strength for the State of Mizoram, non-creation of a dedicated SDR Force by the State Government could be detrimental to disaster response efforts.

1.3.9 Post-Disaster Activities and Management

1.3.9.1 Financial Outlay

The State Disaster Response Fund (SDRF) was constituted under Section 48 (1) (a) of the Disaster Management Act, 2005. State Government may use up to 10 *per cent* of the funds available under SDRF for providing immediate relief to the victims of natural disasters that they consider to be ‘disasters’ within local context in the State. The aggregate size of the State Disaster Response Fund of each State for each of the financial year from 2017-18 to 2021-22, should be as recommended by the 14th Finance Commission. The Government of India will contribute 90 *per cent* and 10 *per cent*

will be contributed by the State Government. The share of the Central Government in the SDRF shall be remitted to the State Government in two instalments in June and December in each financial year. Likewise, the State Government shall also transfer its contribution to the SDRF in two instalments in June and December in the same year.

As per Paragraph 7 of the guidelines on Constitution and Administration of State Disaster Response Fund, the State Government is to immediately transfer Government of India's share to the Public Account Major Head "8121- General and Other reserve Funds" within 15 days of its receipt. The details of funds released/ transferred are shown in **Table-1.22** below.

Table – 1.22: Fund released by GoI and State Government

(₹ in crore)

Year	Installment	Date of release by GoI	Date of release by GoM	No. of days of delay beyond 15 days allowed for transfer of the fund	Amount released by GoI	Amount transferred by State Government	State Share
2017-18	1 st	18.07.2017	09.08.2017	7	8.55	8.55	1.90
	2 nd	03.08.2017	02.10.2017	45	8.55	8.55	
2018-19	1 st	05.07.2018	17.01.2019	181	9.00	9.00	1.00
	2 nd	13.03.2019	25.06.2019	89	9.00	9.00	
2019-20	1 st	03.02.2020	18.03.2020	29	9.00	9.00	2.00
	2 nd	20.03.2020	27.03.2020	00	9.00	9.00	
2020-21	1 st	03.04.2020	17.04.2020	00	23.50	23.50	3.50
	2 nd	25.03.2021	31.03.2021	00	23.50	23.50	
2021-22	1 st	29.04.2021	26.08.2021	104	18.80	18.80	3.50
	2 nd	12.10.2021	26.05.2022	211	18.80	18.80	
Total					137.70	137.70	11.90

Source: State Finance Accounts

From **Table-1.22** above, it was observed that during the period 2017-18 to 2021-22, on seven occasions there were delays in transfer of funds by the State Government ranging from seven days to 211 days in violation of the guidelines.

Further, scrutiny of records revealed that the Department invested ₹ 4.00 crore in a fixed deposit account with the Mizoram Co-operative Apex Bank during 2016-17 which continues up to date (November 2023).

The Finance Department, Government of Mizoram stated (April 2024) that the instances of delay in transfer of SDRF were due to financial constraints of the State Department and no immediate demand was received from the Directorate, DMR Department.

1.3.9.2 Inadmissible Expenditure under SDRF

As per Paragraph 3.1 of the guidelines on Constitution and Administration of State Disaster Response Fund, SDRF shall be used only for meeting the expenditure for providing immediate relief to the victims of cyclone, drought, earthquake, fire, flood, landslide, cloud burst, pest attack, etc. Further, as per Ministry of Home Affairs' letter dated 8 April 2015 every repair/ restoration (of immediate nature) of damaged

infrastructure should be based on the assessment of need, as per State's costs/ rates/ schedules of repair, prepared by State Executive Committee.

Analysis of records revealed that the Directorate of DM&R Department and Lawngtlai District incurred an expenditure of ₹ 1.75 crore on inadmissible components viz., construction of RCC slab, flood mark, retaining wall, etc., without assessment of requirement by the State Executive Committee (SEC) in violation of the guidelines of SDRF during 2017-22 as shown in **Appendix-1.2** and **Appendix-1.3**. A summary of the expenditure is shown in **Table-1.23**.

Table-1.23: Inadmissible expenditure under SDRF

(₹ in crore)

Name of Office/ agency	Inadmissible amount
Directorate, DM&R	1.31
Lawngtlai District	0.44
Total	1.75

Source: Departmental records

The Director, DM&R while agreeing to the observation stated that the guidelines on constitution and administration of the SDRF stipulate that the SDRF shall be used for meeting the expenditure for providing immediate relief to the 12 notified disasters and the provision for disaster preparedness, restoration, reconstruction and mitigation should not be part of SDRF. The Director further stated that the items and norms of assistance under SDRF included the provision of repair, restoration of damaged infrastructure including roads & bridges, drinking water supply, irrigation, power, schools, primary health centres and community assets and the assessment of requirement is to be based on the assessment of needs.

The DDMA, Lawngtlai stated that no instructions had been received from the higher authority on how the funds were to be utilised. SDRF was utilised for disaster related matters only such as disbursement of relief materials and assistance, clearance of debris and on restoration works. Further, the Government stated (22 December 2022) that ex-post facto approval of the expenditure will be initiated.

The replies of the Director, DM&R and DDMA, Lawngtlai are not acceptable as the nature of expenditure did not fall under the category of immediate relief and expenditure was not made based on assessment of needs. Thus, expenditure of ₹ 1.75 crore from SDRF was not incurred as per norms.

1.3.9.3 Expenditure of National Disaster Response Fund (NDRF)

Department of Expenditure, Ministry of Finance, Government of India vide letter dated 08 March 2018 released an amount of ₹ 35.97 crore for financial assistance to the State from National Disaster Response Fund (NDRF) during 2017-18.

The Ministry of Home Affairs vide letter dated 8 April 2015 and 18 July 2018 issued instructions to all the State/ UT Governments on the items/ Particulars of disasters and the norms of assistance permissible under NDRF while seeking Assistance from the Ministry. Some of the relevant approved items and norms of Assistance are given in **Table-1.24** below:

Table – 1.24: Norms of assistance under NDRF

Sl. No.	Items/ Particulars	Norms of Assistance
1.	Repair/ restoration (of immediate nature of damaged infrastructure: (i) Roads & bridges (ii) Drinking Water Supply Works (iii) Irrigation (iv) Power (only limited to immediate restoration of electricity supply in the affected areas) (v) Schools (vi) Primary Health Centres (vii) Community assets owned by Panchayat.	Based on assessment of need, as per State's costs/ rates/ schedules for repair, by SEC and recommendation by the Central Team (in case of NDRF).
2.	Damaged primary school building, Panchayat Ghar/ Anganwadi/ Mahila Mondal/ Yuva Kendra/ Community Hall, Higher secondary/ middle/ college and other educational institutions buildings	Up to ₹ 2.00 lakh/ unit Not covered
3.	State Highway/ Major District road	Up to ₹ 1.00 lakh/ km
4.	Rural road/ bridge	Up to ₹ 0.60 lakh/ km
5.	Minor irrigation schemes/ Canal Major irrigation scheme	Up to ₹ 1.50 lakh/ scheme Not covered
6.	State Government Buildings viz., Department/ office building, quarters, religious structures, playground, etc.	Not covered
7.	National Highways	Not covered

*** Illustrative list of activities identified as of an immediate nature:**

- 1. Drinking Water Supply:** Repair of damaged platforms of hand pumps/ ring/ well, pumping machines, leaking overhead reservoirs, restoration of damaged stand post. etc.
- 2. Roads:** Filling up breaches and potholes, breached culverts, repair and stone pitching of embankments, diversions to the damaged/ washed out portions of bridges to restore immediate connectivity, temporary repair of approaches of bridges/ embankments of bridges, over damaged stretch of roads to restore traffic, etc.
- 3. Irrigation:** Immediate repair of damaged canal structure, tank and small reservoir using cement, sandbags and stones, repair of weak areas such as piping or rat holes in dam walls/ embankments, removal of vegetable materials/ debris, repair of embankments of minor, medium and major irrigation projects.
- 4. Health:** Repair of damaged approach roads, buildings and electric lines of PHCs/ CHCs.
- 5. Community assets of Panchayat:** Repair of village internal roads/ water supply lines, streetlights, temporary repairs of primary school, anganwadi, removal of debris from drainage/ sewages lines, etc.

The following irregularities were observed regarding expenditure incurred from NDRF corpus:

(a) Inadmissible Expenditure amounting to ₹ 36 lakh by DDMA, Lawngtlai

National Disaster Response Fund is defined in Section 46 of the Disaster Management Act 2005 as a fund managed by the Central Government for meeting the expenses for emergency response, relief and rehabilitation due to any threatening disaster situation or disaster. NDRF is constituted to supplement the funds of the State Disaster Response Fund of the States to facilitate immediate relief in case of calamities of a severe nature. The financial assistance from SDRF/ NDRF is for providing immediate relief and is not compensation for loss/ damage to properties/ crops. In other words, NDRF amount can be spent only towards meeting the expenses for emergency response, relief and rehabilitation.

Further, as per Rule 10 of the Operational Guidelines for Constitution and Administration of the National Disaster Response Fund (NDRF), expenditure from NDRF is meant to assist a State to provide immediate relief in those cases of severe calamity, where the expenditure required is in excess of the balance in the State's SDRF.

The Director, DM&R Department, Mizoram released an amount of ₹ 7.84 crore on 17 July 2018 to the Deputy Commissioner, Lawngtlai under NDRF. Test check of records of the Chairman, District Disaster Management Authority (DDMA), Lawngtlai revealed that expenditure of ₹ 7.84 crore was incurred on 111 works executed departmentally by the different line departments by engaging the Junior/ Assistant Engineers of the Deputy Commissioner, UD&PA Department and District Rural Development Agency as detailed in **Appendix-1.4**. The line departments were instructed to submit photographs of the works before execution, during execution and after completion for release of final payment along with supporting bills/ vouchers, MR bills, Completion Certificate and Utilisation Certificate.

Audit observed that work completion certificates were submitted only in 37 out of 111 works.

(b) Execution of works amounting to ₹ 5.15 crore without supporting vouchers, etc., by DDMA, Lawngtlai

Out of 111 works executed by the DDMA, Lawngtlai, in 39 works involving expenditure of ₹ 5.15 crore, there were no supporting documents viz., photograph of the work, vouchers, etc., except the sanction/ release order of the fund as detailed in **Appendix-1.5**. In respect of works executed as in Sl. no. 12, 22-24 amounting to ₹ 1.10 crore (**Appendix 1.5**), it was observed that purpose of the works executed was for carrying of food stuffs and for smooth movements of election officials which was not related to disaster preparedness and its mitigation and inadmissible.

The District Authority did not take any measures regarding submission of relevant records of the works executed by the line departments, which reflect deficient internal control and financial accountability in the management of disaster fund. In the absence of vouchers, photographs, completion certificates, utilisation certificates, etc., it is doubtful as to whether the works were executed as per norms.

The DDMA, Lawngtlai replied (April 2023) that the line departments were informed to submit supporting documents of works through letter and telephonic conversation and that replies from the line departments will be forwarded to Audit as and when the line departments furnish the requisite documents/ records. However, no further information has been received (April 2024). Thus, there were major irregularities noticed in incurring expenditure of ₹ 5.15 crore from NDRF.

1.3.9.4 Case study of Basic Service for Urban Poor (BSUP) Building collapse at Durtlang, Aizawl

As per Clause 7.9.1 of NPDM, 2009, medical response has to be quick and effective. And as per Clause 6.2.4 & 6.6 of SDMP, 2020, the State Authority is required

to set up Trauma Counselling for those affected by disaster within 12 hours of the occurrence of disaster and the local authorities would work in close coordination with relevant Government departments like PWD, PHE, P&E, H&FW, Police, *etc.*, to restore infrastructure like public building, road, *etc.*, to normal operating condition.

During scrutiny of records of DDMA, Aizawl, Vanglai News & Newslink dated 04 July 2019 and the website of the Department of Information & Public Relations, Mizoram, it was observed that at around 06:00 PM on 02 July 2019, due to massive landslide triggered by heavy rainfall, out of 20 blocks of Basic Service of Urban Poor (BSUP) Building Complex at Durtlang, Aizawl, three blocks collapsed leading to the death of three persons and injury to 11 others. As per data provided by the DDMA, Aizawl, 140 families resided in the building complex at the time of disaster. And out of 140 families, 30 families were re-allocated to BSUP, Rangvamual and 110 families were re-allocated to BSUP, Edenthlar.

Based on the interview conducted by audit party during beneficiaries' survey at BSUP, Edenthlar and Rangvamual, it was observed that the State Authority did not conduct trauma counselling to the victims of disaster nor set up medical camp.

Further, as per Ministry of Home Affairs' letter dated 8 April 2015, the items and norms of assistance were as given in **Table-1.25**.

Table-1.25: Norms of assistance

Sl. No.	Items	Norms
1.	Gratuitous relief for families whose livelihood is seriously affected.	₹ 60/- per adult and ₹ 45/- per child, not housed in relief camps. State Government will certify that identified beneficiaries are not housed in relief camps. Further, State Government will provide the basis and process for arriving at such beneficiaries' district-wise. Period for providing gratuitous relief will be as per assessment of the State Executive Committee (SEC) and the Central Team (in case of NDRF). The default period of assistance will be upto 30 days, which may be extended upto 60 days in the first instance, if required, and subsequently upto 90 days in case of drought/ pest attack.

However, irrespective of the size of the family, the affected families were provided with a cash assistance of ₹ 0.01 lakh each as one-time assistance which is less than the amount of assistance to be provided during the default period of assistance which can be extended upto 60 days.

As per geo-technical study on the cause of the landslide at Durtlang, Aizawl conducted by IIT, Guwahati in 2020 it was stated that although the hill slope did not pose a landslide hazard, to protect the slope it was suggested that a feasible support system would be drilling of long metal bolts deep into the rock and then connecting them to a wire net confinement of high tensile strength on the slope surface, construction of buttressed retaining walls to protect the hill toe, *etc.* During site visit at BSUP, Durtlang it was observed that none of the suggestions were carried out and no reconstruction or mitigation works had been undertaken by the State Government.

Thus, there were shortcomings in the distribution of gratuitous relief, provision of medical and trauma care and in restoration of/ re-construction of damage to infrastructure.

The Government stated (December 2023) that Cash assistance of ₹ 0.01 lakh was given to all the affected families as one time assistance by DDMA, Aizawl. Instruction will be given to DDMA, Aizawl to provide assistance/ relief as per norms.

1.3.10 Conclusion

Audit noticed deficiencies in the functioning of the State Disaster Management Authority (SDMA), the State Advisory Committee (SAC) and the State Executive Committee (SEC) in comparison with the provisions laid down in the Disaster Management Act. The State Authority did not review the development plans of the State to ensure that prevention and mitigation measures are integrated therein. The guidelines for preparation of Department Disaster Plan were issued on 13 March 2015 only after a lapse of more than eight years from the date of constitution of the SEC. The SAC did not conduct any meetings during the period 2017-18 to 2021-22 and did not perform its role effectively in making recommendations on different aspects of disaster management in the State. Further, the SEC did not examine construction/ projects in the State to ascertain whether the design, drawing and engineering of the structures were as per the National Building Code 2005, the appropriate Bureau of Indian Standards Codes, etc.

Regular inspection of landslide prone areas and research studies had not been conducted as per State Disaster Management Plan and National Disaster Management Plan. Soil testing for landslide was done once at Hunthar Veng (in Aizawl) sinking area only and material testing had not been conducted in landslide hazard areas in the State during the period covered by Audit. The State Authority did not prepare separate Standard Operating Procedures for earthquake, landslide, flood, drought, cyclone, cloud burst, etc. The State Authority had not yet established automated landslide monitoring system even though this was envisaged in the State Plan since 2015. No checklists for managing and dealing with recurring and frequent hazards that affect the State were prepared by any Department.

Audit noticed that no capacity building measures/ training had been imparted to medical/ police personnel and no mock drills had been conducted between 2020-21 to 2021-22. The State did not establish a dedicated State Disaster Response Force battalion, though disaster response training had been imparted to certain number of personnel in the State armed forces to be deployed in search and rescue operations during disasters, with female personnel yet to be selected for training by the Home Department till date. Instances of expenditure on inadmissible components as well as irregularities in incurring of expenditure out of National Disaster Response Fund (NDRF) were noticed.

1.3.11 Recommendations

The Government may consider the following recommendations:

- I. *Institutional mechanism such as State Disaster Management Authority, State Advisory Committee, and District Disaster Management Authority should meet regularly to give overall guidance and monitoring of disaster management at all levels;*

- II. State Authority should examine the construction/ projects in the State to ascertain whether the design, drawing and engineering of the structure are as per the National Building Code 2005 and Bureau of Indian Standards Codes, etc.;*
- III. State Authority should ensure that regular inspection of landslide prone areas be conducted so that effective measures can be taken for preparedness and mitigation measures;*
- IV. The Government should train medical staff, para medics, Police, Government officials, etc., on disaster measures and take initiative to enhance public awareness about preparedness for disaster;*
- V. The Government should create a full-fledged State Disaster Response Force to combat disasters by ensuring disaster preparedness, preventive & mitigation measures; and*
- VI. The Government should avoid incurring inadmissible expenditure/ expenditure without supporting vouchers, etc.*

PERFORMANCE AUDIT

Labour, Employment, Skill Development and Entrepreneurship Department

1.4 Performance Audit on Welfare of Building and Other Construction Workers in Mizoram

1.4.1 Introduction

Building and other construction workers are one of the most vulnerable segments of unorganised labour in India, characterised by the inherent risk to life and limbs of workers. For the welfare of these workers and to provide basic amenities and welfare facilities, the Government of India enacted the Building and Other Construction Workers (BOCW) Regulation of Employment and Conditions of Service (RECS) Act and BOCW Welfare Cess Act in 1996. Subsequently, the BOCW (RECS) Rules and BOCW Welfare Cess Rules were framed in 1998 to enforce the Acts. Further, pursuant to the Supreme Court's directions (4 July 2018), Model Scheme for BOCW and Action Plan (Model Welfare Scheme) guidelines were prepared by the Ministry for strengthening the implementation machinery.

In Mizoram, BOCW (RECS) Rules, 2015 (State Rules, 2015) was notified on 18 May 2016 and six Amendments have been made till 2023. The Mizoram Building & Other Construction Welfare Board (hereinafter called the Board) was constituted on 20 March 2009 before the notification of the State Rules, 2015. Further, the Governor of Mizoram constituted (10 March 2012) the Mizoram BOCW Welfare Fund. The Fund is operated and managed by the Mizoram Building and Other Construction Workers' Welfare Board and the basic objective of the Fund is to provide a measure of social security for its members who are vulnerable to risks and uncertainties and do not have any other institutional protection based on their employment status. The major categories of benefits provided by the Fund are death benefit, maternity benefit, pension benefit, medical benefit, marriage benefit, cash award, *etc.*

1.4.2 Organisational Set-up

The Chairperson of the Mizoram BOCW Welfare Board was nominated by the State Government as per the gazette notification dated 29 September 2020. The Secretary/ Chief Executive Officer of the Welfare Board is assisted by the Deputy Labour Commissioner (DLC) who acts as the Registering Officer and Cess Collector at the State level and five District level officers of the Labour, Employment, Skill Development and Entrepreneurship (LESDE) Department.

The organogram of the Mizoram BOCW Welfare Board is shown in **Chart-1.2**.

Chart-1.2: Organisation chart of Mizoram BOCW Welfare Board



Source: Departmental & Welfare Board.

The State Government appointed (09 November 2021) the District Labour & Employment Officers (DLEOs)/ Labour Officer (LO) as Inspectors/ Registering Officers/ Assessing Officers and Cess Collectors at the District levels.

1.4.3 Functions and Responsibilities of the Board

Functions of the Boards

As given in Section 22 of BOCW (RECS) Act, 1996, the Board may:

- provide immediate assistance to a beneficiary in case of accident;
- make payment of pension to the beneficiaries who have completed the age of 60 years;
- pay such amount in connection with premia for Group Insurance Scheme of the beneficiaries as it may deem fit;
- give such financial assistance for the education of children of the beneficiaries as may be prescribed;
- meet such medical expenses for treatment of major ailments of a beneficiary or, such dependent, as may be prescribed; and
- make payment of maternity benefit to the female beneficiaries, *etc.*

Responsibilities of the Board

As per Rule 264 of Mizoram BOCW (RECS) Rules, 2015, the responsibilities of the Board are:

The responsibilities of the Mizoram Building and Other Construction Workers' Welfare Board, as per Rule 264 of Mizoram BOCW (RECS) Rules, 2015, are as given below:

- (1) Administration of the Fund, laying down policies for the deposits of the amount of the Fund, submission of annual budget for sanction and annual report on the activities of the Board to the State Government, proper maintenance of accounts, annual audit of accounts of the Board, collection of contribution to the fund and other charges, *etc.*
- (2) Furnishing information to the State Government on such matters as the State Government may refer to it, from time to time.

1.4.4 Audit Framework

1.4.4.1 Audit Objectives

Audit objectives were to assess whether:

- I. The Rules notified by the State Government under the Act are consistent with the objectives of both the Central Acts;
- II. There was effective system for registration of establishments and beneficiaries;
- III. Cess assessment, collection, and transfer of collected cess to the Fund was efficient;
- IV. Government prescribed appropriate health and safety norms and could ensure an environment of compliance to those norms by Employers;
- V. Government implemented transparent and effective system of inspections to check evasion of Labour cess and compliance to health and safety norms by employer; and
- VI. Administration and utilisation of fund on implementation of welfare scheme by the Board was efficient and effective and as per Act and Rules framed by the State Government.

1.4.4.2 Audit Criteria

The audit findings were benchmarked against criteria derived from the following sources:

- Building and Other Construction Workers' (Regulation of Employment and Conditions of Services (RECS) Act, 1996;
- Building and Other Construction Workers' Welfare Cess Act, 1996;
- Building and Other Construction Workers' (RECS) Rules, 1998;
- Building and Other Construction Workers' Welfare Cess Rules, 1998;
- Mizoram Building and Other Construction Workers' (RECS) Rules, 2015;
- Resolutions passed by the Board or Minutes of meetings;
- Inspection Policy notified by State Government;
- Model Welfare Scheme for BOCW and Action Plan; and
- Notification on MBOCW Welfare Fund by the Government of Mizoram.

1.4.4.3 Audit Scope and Methodology

The Performance Audit covered a period of five years *i.e.* 2017-18 to 2021-22 and was conducted during November 2022 to May 2023. Audit scope involved test-check of all relevant records/ documents of LESDE Department and the Board as well as their subordinate offices, selected work units (PWD, PHED and Aizawl Municipal Corporation) in the sampled Districts. Audit methodology involved issue of audit requisitions and questionnaires, beneficiary survey and field visit of establishments in the selected work units in the sampled districts.

The Performance Audit commenced on 29 November 2022 after an Entry Meeting on 07 October 2022 with the Secretary, LESDE Department; Member Secretary/

Secretary Welfare Board, MB&OCWWB; Under Secretary, Finance Department; wherein the audit objectives, scope and audit criteria were discussed, and the inputs of the Department were obtained. The Audit was concluded with an Exit Conference held on 03 May 2024 with the Board and LESDE Department and their responses have been incorporated suitably in the Report.

1.4.4.4 Sampling Methodology

Four Districts *viz.*, Aizawl, Serchhip, Kolasib and Lunglei districts out of eight¹⁴ districts were selected, based on district having maximum amount of cess collection and maximum amount of benefits disbursed.

One Local Body/ Urban Development Authority *i.e.*, Aizawl Municipal Corporation (AMC) which is the only functional Local Body/ Urban Development Authority from sampled districts was selected.

In addition, eight work divisions (two each from four sampled districts) were selected based on the highest expenditure incurring Drawing and Disbursing Officers (DDOs) on Minor and Major Works under Public Works Department (PWD) and Public Health Engineering Department (PHED), to assess the collection and remission of labour cess to the Welfare Board fund.

Further, Joint Field Visits were conducted on selected work units having on-going works to assess the registration of works as establishments and registration of the engaged construction workers (migrant and local) as beneficiaries.

Nine Welfare Schemes and one Welfare Measure implemented by the Board were selected to assess the extent of benefits delivered to the beneficiaries. Joint survey of selected 321 beneficiaries in the four sampled districts was conducted to assess the quantum of benefits received and level of awareness about the various welfare schemes operated by the Board.

1.4.4.5 Acknowledgement

Audit acknowledges the co-operation extended by the LESDE Department, Welfare Board, DLEOs/ LO, PWD, PHED and AMC in the conduct of the performance audit.

1.4.5 Audit findings

The audit findings are discussed in the succeeding paragraphs.

Audit Objective-1: Whether the Rules notified by the State Government under the Act are consistent with the spirit of both the Central Acts

1.4.5.1 Consistency of Rules

The Government of Mizoram adopted the BOCW RECS Act, 1996 and BOCW Welfare Cess Act, 1996 and notified (18 May 2016) the Mizoram BOCW (RECS) Rules, 2015. There was no inconsistency between Rules 01 to 252 of the BOCW (RECS) Rules, 1998 and Rules 01 to 252 of the Mizoram BOCW (RECS) Rules, 2015. However, the Mizoram BOCW (RECS) Rules, 2015 contained additional provision from Rules

¹⁴ There are 11 Districts in Mizoram since bifurcation of three District in 2019

253 to 300 pertaining to, among others, opening of District and Sub-divisional offices, procedure of payment of welfare pension, disability pension, funeral assistance, death benefit, cash award, financial assistance for marriage, recovery of advances and loans, investment and utilisation of the Welfare Fund, *etc.*

Audit Objective-2: Whether there was effective system for registration of establishments and beneficiaries

1.4.5.2 Appointment of District Labour & Employment Officers/ Labour Officer as Inspectors, Registering Officers, Assessing Officers and Cess Collectors

Section 6 of the Welfare Cess Act, 1996 provides that the State Government may, by order notified in the Official Gazette, (a) Appoint such persons, being Gazetted Officers of Government, as it thinks fit, to be the registering officers for the purposes of this Act; and (b) Define the limits within which a registering officer shall exercise the powers conferred on him by or under this Act.

The State Government in its notification dated 09 November 2021 appointed the District Labour & Employment Officers (DLEOs)/ Labour Officer (LO) as Inspectors, Registering Officers, Assessing Officers and Cess Collectors as given in **Table-1.26** below.

Table-1.26: DLEOs/ LO and their jurisdictions

Sl. No.	DLEO	Jurisdiction (Districts)	Appointed as
1.	DLEO Aizawl	Aizawl, Serchhip and Saitual	Inspectors, Registering Officers, Assessing Officers and Cess Collectors
2.	DLEO Champhai	Champhai and Khawzawl	
3.	DLEO Lunglei	Lunglei, Hnahthial and Lawngtlai	
4.	DLEO Siaha	Siaha	
5.	LO	Kolasib and Mamit	

Audit observed that the DLEOs were, in fact, given additional charges of Inspectors, Registering Officers, Assessing Officers and Cess collectors in addition to their normal responsibilities.

The Department stated during Exit Conference (03 May 2024) that the roles, duties and responsibilities would be clearly specified in the future.

1.4.5.3 Registration of establishments

(i) Non-Registration of establishment within 60 days of commencement of work

Section 7 (a) of the BOCW (RECS) Act, 1996 stipulates that every employer undertaking construction work, would make an application to the registering officer for registration of the establishment within 60 days from the commencement of the work. Section 10 also stipulates that no employer of an unregistered establishment shall employ building workers. The manner, condition and fee of registration of the establishments are specified in Rules 23 to 27 of the Mizoram BOCW (RECS) Rules, 2015.

Audit noticed that employers/ contractors did not register 3,239 works within 60 days from the commencement of the works as per the provisions of the Act.

The Department stated that there was no mechanism in place to ensure registration of every construction work. Inspection of establishments was not carried out by LESDE Department and establishments which evaded registration, remained un-detected. (Paragraph 1.4.5.11).

(ii) Non-fulfillment of provisions of Model Welfare Schemes

The Model Welfare Scheme guidelines suggested that the State may take up the following measures to strengthen the machinery for registration of establishments, which, *inter alia*, includes:

- The registration of establishments should be made on-line to make the process of registration quicker and to minimise public interface [Clause B],
- The State Governments should issue directions to all Departments/ State undertakings/ local bodies in their jurisdiction to timely forward a copy of the allotment of work order in regard to construction activity to be carried out, to the relevant registration, cess collection and cess assessment authorities appointed under the BOCW Act by the State [Clause C],
- The State Governments should develop a mechanism for regular monitoring of construction activities going on in the State and make use of Geographic Information System (GIS) technology/ mapping *etc.*, for the purpose [Clause D].

Audit noticed that the measures suggested in the Model Welfare Scheme guidelines for strengthening the machinery for registration of establishments were not complied with in the State. Registration of establishments was made offline, the State Government had not issued directions to all Departments/ State undertakings, *etc.*, to forward a copy of work orders to the DLEOs/ LOs with regard to construction activities to be carried out in their jurisdiction and mechanism was yet to be developed by the State for regular monitoring of construction activities ongoing in the State using GIS technology/ mapping, *etc.* Thus, the State did not comply with measures for strengthening the machinery for registration of establishments as per the Model Welfare Scheme guidelines.

During the Exit Conference (03 May 2024), the Department stated that the above measures were not undertaken for registration of establishments due to shortage of staff. The Secretary, Welfare Board stated that steps have been undertaken for development of an online portal through an IT firm¹⁵. This portal can then be used for registration purposes. For online payment system, it was also stated that it would be possible to have the online mode operational within this financial year in line with the instructions of the Model Welfare Scheme guidelines.

(iii) Collection of Registration fee in sampled Districts

As per Rule 27 of the Mizoram BOCW (RECS) Rules, 2015, the registration fee slab is based on the number of workers employed (revised rate of 2013 & 2021), as shown in **Table-1.27** below.

¹⁵ M/s Lailen Consulting Private Limited, Tuikhuahtlang, Aizawl

Table-1.27: Registration fee of establishments

Sl. No.	No. of workers engaged by employer	Registration Fee (in ₹)
1.	Up to 100	1,000
2.	101 to 500	2,500
3.	500 & above	5,000

During 2017-18 to 2021-22, a total amount of ₹ 47.45 lakh was collected as registration fee from 4,745 registered establishments at the rate of ₹ 1,000 per unit, in the sampled districts as shown in **Table-1.28**. No registration fee was collected in Aizawl and Serchhip Districts during 2017-18 due to non-registration of works.

Table-1.28: Collection of registration fees in the sampled districts

(₹ in lakh)

Year	Districts	No. of works	Amount
2017-18	Kolasib and Lunglei	86	0.86
2018-19	Aizawl, Kolasib, Serchhip and Lunglei	1,674	16.74
2019-20	Aizawl, Kolasib, Serchhip and Lunglei	1,077	10.77
2020-21	Aizawl, Kolasib, Serchhip and Lunglei	1,083	10.83
2021-22	Aizawl, Kolasib, Serchhip and Lunglei	825	8.25
Total		4,745	47.45

Source: Department's reply.

(iv) Loss to the Government due to non-registration of works

It was noticed that Public Works Department, Mizoram commenced 149 works during 2017-18 but the works were not registered. Non-registration of 149 works resulted in loss of the Government to the tune of ₹ 1.49 lakh during 2017-18.

During 2017-22, in the sampled districts, contractors/ employers for 3,239 works under the Works Departments and Aizawl Municipal Council (AMC) did not register themselves with the Registering Officers. As data on the number of workers employed was not available, Audit calculated the amount of registration fee not collected at the minimal rate of ₹ 1,000 per work, as shown in **Table-1.29** below.

Table-1.29: Works executed but registration fee not collected

(₹ in lakh)

Sl. No.	Head of Office and Districts	Number of works	Amount
1.	EE, PHED, PD-II, Aizawl	20	0.20
2.	EE, PWD Kolasib Building Division	23	0.23
3.	EE, PHED, Serchhip	13	0.13
4.	EE, PWD Serchhip Division	7	0.07
5.	EE, PWD Building Division, Lunglei	389	3.89
6.	EE, PWD, Road Division-I, Lunglei	59	0.59
7.	Municipal Commissioner, AMC	2,728	27.28
Total		3,239	32.39

Source: Work Units' replies.

As shown in **Table-1.29** above, 3,239 works were not registered by the contractors/ employers and as such registration fees were not paid, resulting in loss of revenue to the tune of ₹ 32.39 lakh to the State Government. The Head of Offices as well as the

work units in the sampled districts stated that they were not aware that they had to get the works registered with the LESDE Department.

Thus, there was no mechanism at the LESDE department for tracking the number of works executed by various departments and for detecting establishments which evaded the process of registration. As a result, quantum of loss of revenue to the State due to non-registration of works remained un-assessed. Ultimately, the resultant cess evasion due to non-registration by establishments also remained un-assessed.

The Department stated during Exit Conference (03 May 2024) that a formal mechanism will be set up to resolve the issue pertaining to registration of establishment. Meeting with the works Departments and Contractors is being scheduled in near future.

1.4.5.4 Registration of workers

Rule 268 (1) of Mizoram BOCW (RECS) Rules, 2015 states that every building worker who is a citizen of India who has completed 18 years of age but has not completed 60 years of age and who is not a member in any other welfare fund established under any law for the time being in force shall be eligible for membership in the Mizoram BOCW Welfare Fund.

Further, to strengthen the machinery for registration of workers in the State, the Model Welfare Scheme suggested that every State should allot a Unique Identification Number to the registered BOC workers and upload complete details on the State web portal and the National BOCW Portal.

In Mizoram, registration of workers was done offline and State web portal was not yet developed. Workers submitted applications for registration to the respective DLEOs/ LO along with age proof certificates¹⁶ and certificate to show that the applicant is a construction worker from the employer or contractor or registered workers' union or Local Councils/ Village Councils. The workers were then allotted unique registration number and issued identity cards. The year-wise number of registered workers in the sampled districts during 2017-18 to 2021-22 is shown in **Table-1.30** below:

Table-1.30: Number of workers registered

Year	No. of registered workers
2017-18	820
2018-19	18,593
2019-20	23,322
2020-21	9,411
2021-22	1,849

Source: Board's reply.

As per information furnished by the Board, it was noticed that all the registered workers were residents of Mizoram alone and no workers were registered in Serchhip District throughout the period covered in audit and in Aizawl District during 2017-18 and 2021-22. The number of registrations increased in the year 2019-20 (Covid Pandemic) during which Mission Mode Project for registration of left out workers was implemented. During exit conference (03 May 2024), the Department stated that the

¹⁶ (i) school records, (ii) a certificate from the registrar of births and deaths, (iii) EPIC

high increase was due to lumpsum payment of ₹ 3,000/- per worker during Covid-19 pandemic announced by Government.

(i) Non-registration of migrant workers

In order to facilitate the registration of migrant workers under the Board, the Model Welfare Scheme for BOCW suggests that:

- States should ensure that the domicile status of a worker should not prevent the worker from getting registered outside his/ her State of origin (Clause H);
- The destination State may be directed to conduct special drive with focus on migrant BOC workers and ensure that the migrant workers from outside the State are not discriminated at the time of registration and delivery of benefits (Clause I).
- The State Labour Department/ Welfare Board may issue directions to workers' registration authorities, to hold regular camps/ create facilitation centres at prominent labour chowks/ addas for the purpose of conducting awareness campaigns and facilitating registration of workers (Clause E).

In order to ascertain whether migrant workers were registered with the Board, Audit obtained data of Inner Line Permit (ILP) issued by the Deputy Commissioners for migrant workers in the sampled districts. The data of migrant workers in the sampled districts during 2017-22 is given in **Table-1.31** below.

Table-1.31: Migrant workers in sampled districts during 2017-22

Sl. No	DC's Offices	2017-18	2018-19	2019-20	2020-21	2021-22	Total
1.	Aizawl ¹⁷	NA	NA	NA	NA	5,576	5,576
2.	Lunglei	1,235	1,011	1,289	778	551	4,864
3.	Serchhip	420	482	495	201	298	1,896
4.	Kolasib	222	205	270	137	149	983
Total		1,877	1,698	2,054	1,116	6,574	13,319

Source: Data of ILPs¹⁸ issued by DC's Office in the sampled districts

It was found that no migrant workers were registered with the Board and no special drive nor awareness campaign was conducted by the Board. As such, all the 13,319 migrant workers were not registered as beneficiaries of the Welfare Fund. This was corroborated during the Joint Field Visit of worksites where 24 migrant workers present at the sites stated that they were not registered with the Board and thus, were not beneficiaries of the Welfare Fund.

Audit noticed that camps were not held and facilitation centres were not created at prominent labour chowks/ addas for the purpose of conducting awareness campaigns and facilitating registration of workers as per the Model Welfare Scheme guidelines.

¹⁷ Data of ILP issued by the Deputy Commissioner, Aizawl during 2017-18 to 2020-21 was not available as a fire destroyed the entire office building in December 2021

¹⁸ Migrant workers had been registered under Inner Line Regulation Act of 1897 and issued Inner Line Pass by the Deputy Commissioners' Office for specified periods not exceeding 15 days (Temporary ILP) and six months (Regular ILP)

Thus, due to non-adherence to the Model Welfare Scheme guidelines, no migrant worker registered and availed benefits under the BOCW Welfare Scheme in the State.

The Department stated (24 September 2024) that instruction to the Registering Officers was issued (23 July 2024) to register migrant workers having valid documents under their jurisdiction.

Audit Objective 3: Whether the cess assessment, collection, and transfer of collected cess to the Fund was effective

1.4.5.5 Deficiency in assessment and collection of Cess

Section 3 (1) of the Welfare Cess Act, 1996 stipulates that there shall be levied and collected a cess for the purposes of the BOCW (RECS) Act, 1996, at such rate not exceeding two *per cent* but not less than one *per cent* of the cost of construction incurred by an employer, as the Central Government, may, by notification in the Official Gazette, from time to time specify. Rule 4 of the Welfare Cess Rules, 1998 further states that the cess levied shall be paid by an employer, within thirty days of completion of the construction project or within thirty days of the date on which assessment of cess payable is finalised, whichever is earlier, to the cess collector.

LESDE Department requested on 27 April 2011 and 01 September 2020 all Government Departments, Semi-Government Departments, Public and Private undertakings within the State of Mizoram and all building and other construction contractors recognised by the State PWD, PHE, and Power and Electricity (P&E) Departments covered by the Welfare Cess Act, 1996 to submit lists of works related to building and other construction works within the State for assessing the applicable cess. Further, the Department *vide* OM dated 30 March 2017 directed all Works departments or any other department/ Establishment to deduct one *per cent* of the cost of construction as cess at source for the Mizoram BOCW Welfare Board.

It was observed that the Department did not pursue compliance to its request. The DLEOs/ LOs of the sampled districts had not taken up efforts to identify the quantum of construction works being undertaken under their jurisdiction by Works and non-Works Departments and Local Bodies, to make fair estimate of the applicable cess. As a result, 3,239 works were executed during 2017-22 but details were not available with the LESDE Department.

Audit observed that the departments/ contractors concerned neither submitted the lists of works executed by them nor was any effort taken up by the Assessing Officers to detect works which evaded cess. The Assessing Officer also did not maintain Form-I as per Rule 7(1) of BOCW(Cess) Rules, 1998 to ascertain registration of establishment/ works. Further, cess was not deducted at source for departmental works in the sampled districts. Assessment of cess was made only when the employers, on their own, deposited cess levied to the Cess Collector.

The Department stated during Exit Conference (03 May 2024) that there is no enough manpower under the Department to implement all the said provisions under the Act.

Recommendation: LESDE Department should consider introducing a penal provision for non-compliance to its notification for submission of lists of works, contractors, companies, etc. The Assessing Officers should compulsorily carry out assessment of all establishments who do not furnish Form-I in time and impose penalties as per Rule 12 of Welfare Cess Rules, 1998.

1.4.5.6 Non-deduction of Cess in Departmental works executed by Aizawl Municipal Corporation-₹ 2.19 lakh

LESDE Department *vide* OM dated 30 March 2017 provided that all Works department or any other department/ Establishment as the case may be, while entering into any agreement with any Contractors/ Establishment for execution of any building and other construction works including works being executed departmentally shall ensure deduction at source one *per cent* of the cost of construction as Cess for the Mizoram BOCW Welfare Board.

Scrutiny of records of the Aizawl Municipal Corporation (AMC) revealed that the Corporation had executed 89 works departmentally during 2017-20. Out of these, cess was not deposited for 65 works. The value of the 65 works was ₹ 2.19 crore and the applicable cess is ₹ 2.19 lakh, as detailed in **Table-1.32** below.

Table-1.32: Departmental works executed by AMC in which cess was not deducted during 2017-20

(₹ in lakh)

Year	No. of works	Value of work	Cess applicable
2017-18	13	32.01	0.32
2018-19	2	12.06	0.12
2019-20	50	175.15	1.75
Total	65	219.23	2.19

Source: AMC Works record.

While accepting the fact, the Municipal Commissioner, AMC stated that AMC has not received any specific instruction regarding deduction of labour cess from Departmental works. The reply of AMC was not tenable as notification was issued by LESDE Department in 2017 for deduction of cess at source, one *per cent* of the cost of construction works, including works being executed departmentally. Thus, AMC did not implement the order.

1.4.5.7 Non-deduction of labour cess from Departmental works

During scrutiny of records in the sampled work units in the four sampled districts, it was found that labour cess to the tune of ₹ 30.25 lakh was not deposited in respect of works executed departmentally, in violation of the office memorandum dated 30 March 2017, as shown in **Table-1.33**.

Table-1.33: Non-deduction of cess by works units during 2017-22

(₹ in lakh)

Sl. No.	Sample District	Designation of the selected work units Head of Office	Total Bill Amount	01 per cent Labour Cess		
				Applicable	Deducted	Not deducted
1.	Aizawl	E.E, PWD, PD-I, Aizawl	14.34	0.14	0	0.14
2.	Kolasib	E.E, PWD, NHD-V, Kolasib	646.59	6.47	0	6.47
3.	Lunglei	E.E, PWD (Building), Lunglei	1,316.66	13.17	0	13.17
4.	Serchhip	E.E, PHED, Serchhip Division	2,105.96	21.06	10.59	10.47
Total			4,083.55	40.84	10.59	30.25

Source: Departmental records

The Executive Engineer PWD (Building), Lunglei stated that cess was to be deducted from the cost of construction exclusive of supply of material cost and labour cost. The reply of the Executive Engineer is not tenable as cess was not deducted from the cost of construction.

1.4.5.8 Improper accounting of cess transferred by Districts to the Fund

The Government of Mizoram appointed¹⁹ district officers of the LESDE Department-DLEO/ LO as Cess collectors and the proceeds of the Cess collected shall be transferred by these officials to the Board.

Audit noticed that there was an overall shortfall of ₹ 10.15 crore in the amount of cess deposited by the respective DLEO/ LO of the sampled districts *vis-à-vis* the amount of Cess received by the Board (as per their records), as shown in **Table-1.34** below.

Table-1.34: Cess deposited by DLEOs *vis-à-vis* Cess accounted by the Board

(₹ in crore)

Sl. No.	Name of DLEO and their jurisdiction	Cess deposited by DLEOs (A)	Cess accounted by the Board (B)	Difference (A-B)
1.	DLEO Aizawl (Aizawl, Serchhip & Saitual)	43.04	35.20	7.84
2.	DLEO Lunglei (Lunglei, Hnathial & Lawngtlai)	7.13	5.36	1.77
3.	LO Kolasib (Kolasib & Mamit)	8.05	7.51	0.54
Total		58.22	48.07	10.15

Source: Department figure

The reasons for the discrepancies were not furnished by the concerned DLEO/ LO or the Board.

The Department stated during the Exit Conference (03 May 2024) that the Board is currently reconciling the accounts and report shall be submitted at the earliest.

Recommendation: The Board and the concerned DLEO/ LO may reconcile their accounts on priority.

¹⁹ No.A.47012/1/2014-LE&IT dated 13-06-2016 and No. B.16012/2/2014-LESDE/259 dated 03-02-2020 (Chief Inspectors, Inspector, Registering Officer, Assessing Officer, Cess Collector with their respective jurisdiction)

Audit Objective 4: Whether Government prescribed appropriate health and safety norms and system of inspection to check and to ensure an environment of compliance to those norms by employers

1.4.5.9 Non-conformity with Health and safety norms

Section 40 (1) of the BOCW Act stipulates that the appropriate Government may, by notification, make Rules regarding the measures to be taken for the safety and health of building workers in the course of their employment and the equipment and appliances necessary to be provided to them for ensuring their safety, health and protection during such employment. And as per provision of Mizoram BOCW (RECS) Rules, 2015, employers are to ensure an environment compliant with health and safety norms as given below:

- Employers are to ensure provision of drinking water, latrines and urinals for workers (Rule 243).
- The employer shall ensure that first aid boxes are provided at the construction sites (Rule 231(a)).
- The employer shall ensure that fire extinguishing equipment are provided at the construction sites (Rule 35(a)).
- Every building worker required to pass through or work within the areas at building or other construction works where there is hazard of being struck by falling objects or materials shall be provided by the employer with safety helmets of type and tested in accordance with national standards (Rule 46).

Audit conducted Joint Physical Verification in six construction sites and checked whether health and safety norms had been complied with at the worksites. The status of compliance is shown in **Table-1.35** below.

Table-1.35: Status of compliance with Health and Safety norms at worksites

District	Sl. No.	Name of works	Health and safety facilities			
			Drinking water	Latrines and Urinals	First Aid Box	Safety equipment/appliances
Aizawl	1.	Construction of community water tank at Muallungthu	√	√	√	X
	2.	Construction of community water tank at Maubuang	√	√	√	X
Kolasib	3.	Construction of roads	√	√	√	X
	4.	Maintenance of roads	√	√	√	X
Lunglei	5.	Maintenance of road at Hrangchawkawn	√	√	√	X
	6.	Maintenance of Lunglei-Aizawl road at Haulawng	√	√	√	X

It was found that drinking water, latrines & urinals and first aid boxes were available at the work sites. However, other safety equipment or appliances like fire extinguishing equipment, safety helmets, *etc.*, were not available. The Department stated

(03 May 2024) that necessary action shall be taken to ensure that all establishments comply with safety measures.

Audit Objective 5: Implementation of transparent and effective system of inspection to check evasion of Labour cess

1.4.5.10 Expert Committees and State Advisory Committee

A Expert Committees

Section 5 (1) of the BOCW (RECS) Act, 1996, provides that the appropriate Government shall constitute one or more Expert Committees consisting of persons specially qualified in building and other construction works for advising the Government for making Rules under this Act.

Audit noticed that Expert Committee was constituted in 2009 and re-constituted in 2016 under the Chairmanship of the Commissioner and Secretary of the then LE&IT Department for making Rules.

B State Advisory Committee

Section 4(1) of the BOCW (RECS) Act, 1996 stipulates that the State Government shall constitute a committee to be called the State Building and Other Construction Workers' Advisory Committee (State Advisory Committee) to advise the State Government on such matters arising out of the administration of this Act as may be referred to it. Further, Rule 20 of the Mizoram BOCW (RECS) Rule 2015 provides that the State Advisory Committee should meet at least once in six months.

The State Advisory Committee was constituted in 2009 and re-constituted in 2014 and 2019. Against the provision of Rule 20 of the Mizoram BOCW (RECS) Rule 2015, the State Advisory Committee did not convene any meetings during 2017-18 to 2021-22.

The Department stated during Exit Conference (03 May 2024) that the meeting of SAC will be convened regularly henceforth.

1.4.5.11 Inspection not conducted by the LESDE Department

Section 42 (2) (3) of the BOCW (RECS) Act, 1996 provides that State Government may, by notification, appoint a Gazetted Officer as the Chief Inspector and Officers to be Inspectors who shall be responsible for effectively carrying out the provisions of this Act in the State. Section 43 of the Act empowers the Inspectors to enter worksites and carry out examination of records as well as workers.

Further, Rule 15 of the BOCW Welfare Cess Rules, 1998 states that any inspector under the Act, or a Trade Union, having come to know of violation of an obligation to furnish return, furnishing of false information, intentionally or wilfully evading or attempting to evade the payment of cess may make a complaint to the Board. The Board on receiving such complaint shall examine the complaint and if it so decides may refer such complaint to the Government for taking legal action against the offender.

The State Government had appointed²⁰ the Labour Commissioner, as Chief Inspector and DLEOs/ LO as Inspectors. The appointed Inspectors, however, did not exercise the powers²¹ granted by the provisions of the Act and there was no record of inspections carried out under the above provisions during 2017-22.

Due to non-inspection, examination of any register or record or notices required to be kept or exhibited under the BOCW (RECS) Act, 1996 was not done and cases of willful evasion of cess were not detected.

The Department stated during Exit Conference (03 May 2024) that the Inspectors shall conduct regular inspection of worksites to prevent evasion of cess by contractors/ employers.

Recommendation: The Chief Inspector and Inspector/ Inspecting Officers appointed by State Government may conduct regular inspection of worksites to check and deter evasion of cess by Contractors/ Employers.

Audit Objective 6: Administration and utilisation of fund for implementation of welfare schemes by the Board was efficient and effective and as per Act and Rules framed by the State Government

1.4.5.12 Position of Welfare Board Fund

In Mizoram ten welfare schemes were implemented by the Board viz., (1) Children Education Assistance, (2) Cash Award, (3) Medical Assistance, (4) Disability Benefit, (5) Disability Pension, (6) Death Benefit, (7) Funeral Assistance, (8) Marriage Assistance, (9) Maternity Benefit, and (10) Welfare Pension.

As per Notification dated 10 March 2012, the Governor of Mizoram constituted the Mizoram BOCW Welfare Fund. The objective of the Fund was to provide a measure of social security for its members who were vulnerable to risks and uncertainties and did not have any other institutional protection based on their employment status. The major categories of benefits provided by the fund were Death benefit, Maternity benefit, Medical benefit, Marriage benefit, Cash Award, etc., to the beneficiaries/ workers registered with the MB&OCWWB. Budget is prepared by the Board and approved in its Committee Meeting. Fund position of the Welfare Board is shown in **Table-1.36** below.

Table-1.36: Position of Welfare Board Fund during 2017-22

(₹ in crore)

Year	Opening Balance	Total Receipt	Total fund	Expenditure	Closing balance
2017-18	14.85	17.89	32.74	8.14	24.60
2018-19	24.60	39.98	64.58	13.56	51.02
2019-20	51.02	23.19	74.21	30.36	43.85
2020-21	43.85	16.36	60.21	37.03	23.18
2021-22	23.18	28.68	51.86	29.29	22.57
Total	---	126.10	283.60	118.38	---

Source: Annual Accounts of the Board.

²⁰ No. B-13017/5/2009-L&E dated 20-03-2009 (Chief Inspectors and inspector with their respective jurisdiction (Chief Inspectors and inspector/ RO, AO Cess collector with their jurisdiction)

²¹ An Inspector may examine/ enquire construction sites/ places/premises; issue show cause notice/ warning to employers regarding safety, health or welfare; file a complaint or other proceeding in a court relating to an offence under the Act; direct any contractor/ employer to get building workers medically examine, etc.

The details of expenditure incurred by the Board during 2017-18 to 2021-22 are given in **Table-1.37** below.

Table-1.37: Head-wise expenditure of Welfare Fund

(₹ in crore)

Head	2017-18	2018-19	2019-20	2020-21	2021-22	Total
Administrative Cost	6.88	0.72	13.65	5.59	6.79	33.63
Welfare Schemes	0.98	12.76	13.37	10.63	18.50	56.24
Welfare Measures ²²	0.28	0.08	3.34	20.81	4.00	28.51
Total	8.14	13.56	30.36	37.03	29.29	118.38

Source: Annual Accounts of the Board.

1.4.5.13 Investment of Welfare Board Fund

As per Rule 293 of Mizoram BOCW (RECS) Rules, 2015, all money belonging to the Fund may be invested in the Nationalised Banks or Scheduled Banks or in the Securities.

The status of investment during 2017-18 and 2021-22, as reflected in the Balance Sheet of the Board's Annual Accounts, is shown in the following **Table-1.38** below.

Table-1.38: Status of Fixed Deposit/ Investment during 2017-18 and 2021-22

(₹ in crore)

Sl. No.	Particulars	As on:				
		31-03-18	31-03-19	31-03-20	31-03-21	31-03-22
1.	Fixed Deposit in UCO	2.50	0	0	2.00	0
2.	Fixed Deposit in Central Bank	5.00	0	0	2.00	0
3.	Fixed Deposit in MCAB	2.50	0	0	0	0
4.	Fixed Deposit	0	0	2.00	0	4.00
5.	Fixed Deposit in PNB	0	0	0	2.00	0
6.	Fixed Deposit in BoI	0	0	0	2.00	0
7.	Investment in Bajaj Allianz	1.00	1.00	1.00	1.00	1.00
Total		11.00	1.00	3.00	9.00	5.00

Source: Welfare Board's Annual Accounts.

Out of the balance fund of ₹ 22.57 crore as on 31 March 2022, an amount of ₹ 5.00 crore was invested in Fixed Deposit, while the balance fund of ₹ 17.57 crore was lying un-invested.

Interest totalling ₹ 1.79 crore was earned during 2017-18 to 2021-22 from investment including investments made prior to 2017-18.

It was observed that, ₹ 2.50 crore was invested in Mizoram Cooperative Apex Bank (MCAB) during 2017-18 which is neither Nationalised nor Scheduled Bank. Further, ₹ 1.00 crore has been invested in Bajaj Alliance since 2013 which is a private company in contravention of Rule 293 of Mizoram BOCW (RECS) Rules, 2015. Details of investment of ₹ 4.00 crore made during 2021-22 were not shown in the Annual Accounts and Certificates of Fixed Deposit were not available.

²² Awareness, Covid Package and Free Ration during Covid 19 and construction of Multipurpose Centre

The following deficiencies in relation to the maintenance of accounts and operation of the Fund were observed in Audit:

1.4.5.14 Payment of scheme benefits from BOCW Welfare Fund to ineligible beneficiaries

As per Section 12 (1) of the BOCW (RECS) Act, 1996, every building worker who has completed 18 years of age, but has not completed 60 years of age, and who has been engaged in any building or other construction works shall be eligible for registration as a beneficiary under this Act.

During Audit, it was noticed that payment of scheme benefits amounting to ₹ 24.48 lakhs was irregularly made to 390 beneficiaries during 2018-19 to 2021-22 (in the sampled districts) who were State Government employees, Muster Roll Employees, Anganwadi workers, *etc.*, but were registered as Building/ Construction workers under MBOCWFB, as shown in **Table-1.39** below.

Table-1.39: Payment of benefit to ineligible beneficiaries

(₹ in lakh)

Sl. No.	District	Benefits claimed under	No. of ineligible beneficiaries	Amount
1.	Aizawl	CEA, Medical, Cash award & Marriage	133	7.77
2.	Serchhip	CEA, Covid package	71	2.47
3.	Kolasib	CEA, Medical, Maternity	93	6.53
4.	Lunglei	CEA, Medical, Maternity, Covid package	93	7.71
Total			390	24.48

Source: Departmental records.

The payment of benefits to ineligible beneficiaries highlights shortcomings in the registration process. The Board stated during the Exit Conference (03 May 2024) that the registration of the beneficiaries was valid as they were eligible during the time of registration and valid recipient during the disbursement of benefits. Their eligibility may vary with time due to change in their nature of work. (*i.e.*, beneficiaries who are unemployed during registration, were in the course of time, employed in Government Department and not reported to the Welfare Board). The Department stated that beneficiaries who no longer were engaged in construction works were removed during inspection of beneficiaries.

The reply of the Department is not tenable as no supporting document was furnished to show that the beneficiaries were eligible at the time of registration but later became ineligible as found out during inspection carried out by the Department.

1.4.5.15 Implementation of New Group Superannuation Cash Accumulation-defined benefit (NGCAB) scheme

In line with Section 22 (d) of the BOCW (RECS) Act, 1996, the Welfare Board has implemented Welfare Pension Schemes under Life Insurance Corporation of India (LICI) which commenced on 01 March 2019. As per the valuation report, the pension

premium estimate for eligible construction workers was ₹ 61.63 crores which needs to be funded in a span not exceeding five years. The Board informed (May 2024) that an insurance premium of ₹ 22.00 crore has been paid to LIC as on March 2022.

Irregularities observed in the implementation of NGCAB are given in detail in the following paragraphs:

(i) Non-payment of Pension benefit to eligible beneficiaries

Rule 274²³ of the Mizoram BOCW (RECS) Rules, 2015 states that a member of the Fund who has been working as a building worker for not less than one year after the commencement of these Rules shall on completion of 60 years of age, be eligible for welfare pension. The welfare pension will become payable from the first day of the succeeding month in which he completed 60 years of age. Rule 275 (6) *ibid* also states that the welfare pension sanctioning authority shall maintain a register in Form No. XXXV. The Welfare Board approved a pension of ₹ 1,000/- per month and is being paid to the pensioners under Welfare Pension and Disability Pension schemes.

During audit, it was found that 38 out of 383 beneficiaries of Welfare Pension and two out of 13 beneficiaries of Disability Pension did not receive pension amounting to ₹ 4.60 lakh and ₹ 0.42 lakh respectively as shown in **Table-1.40** below:

Table-1.40: Number of pensioners and pension payable as of 31 March 2022

(₹ in lakh)

Sl. No.	District	Welfare Pension		Disability Pension		Total	
		No. of beneficiaries	Amount	No. of beneficiaries	Amount	No. of beneficiaries	Amount
1.	Aizawl	20	3.09	02	0.42	22	3.51
2.	Kolasib	13	0.80	0	0	13	0.80
3.	Lunglei	4	0.67	0	0	4	0.67
4.	Serchhip	1	0.04	0	0	1	0.04
Total		38	4.60	02	0.42	40	5.02

The beneficiaries were not given pension as they were not assigned annuity number by LIC. The Secretary, Welfare Board stated that the matter has been raised with LIC (12 May 2023) and their reply is awaited.

The Department stated during the Exit Conference (03 May 2024) that all the above mentioned beneficiaries had received their annuity numbers and furnished a list of pensioners with their annuity numbers.

When the list furnished by the Department was checked, it was noticed that the same annuity number (410200000526) was assigned to two different pensioners viz., Tlangthankhumi and K Tlangthanmawia. Further, no record was furnished showing payment of pension even after allotment of annuity numbers by LIC. Thus, the reply of the Department is not acceptable.

Recommendation: The Board should ensure that annuity numbers are allotted on time to beneficiaries eligible for the pension.

²³ Rule 274 of No. B.16012/2/2014-LE&IT/pt, dated 18 May 2016

1.4.5.16 Construction of Multipurpose Centre out of cess collected during 2019-20 and 2021-22 and use of the building as offices by LESDE Department and Welfare Board

As per the Model Welfare Scheme (MWS), provisions for transit accommodation/ labour shed/ night shelter, *etc.*, should be created exclusively for BOC Worker by utilising not more than 10 *per cent* of the cess amount collected in the previous year.

Under this provision, the Board decided (27th Meeting on 19 March 2020) to construct a 'Multipurpose Centre' at an estimated cost of ₹ 15.00 crore. The Multipurpose Centre was to be constructed for transit accommodation/ hostel/ labour shed/ night shelter, *etc.*, in order to mitigate the various hardships of workers.

Audit noticed that an amount of ₹ 15.96 crore was released out of cess collection during 2019-20 to 2022-23 and the construction of the Multipurpose Centre was completed in July 2023.

The following shortcomings/ deficiencies were observed:

i) Inclusion of other facilities in the Multipurpose Centre

As envisaged in the MWS, the Housing facilities are to be provided for the BOC workers as they are predominantly migratory and move from one place to other in search of work. However, the scope/ objective of the Multipurpose Centre as envisaged by the Board also included building a hub of skill development programme with training facilities, in-built hostel, facilitation centre and offices for relevant departments and others. This was against the provisions of the Scheme which specifically mentions that the housing facilities are to be used exclusively for BOC workers.

The Department stated during Exit Conference (03 May 2024) that the equipment for training, dormitory, *etc.*, are still not procured and the decision of the Welfare Board is awaited. The reply, however, was silent on the inclusion of offices for the Board and the Department.

ii) Non-utilisation of the Multipurpose Centre as transit accommodation/ labour shed/ night shelter, *etc.*, exclusively for BOC Workers

The Multipurpose Centre was inaugurated on 07 July 2023. During a joint field visit with the Department officials to the building on 02 May 2024, it was found that the building comprises eight floors which were utilised for offices of the Board and the Department.

It was also found that migrant workers were not given accommodation/ shelter in the building. The Board stated (13 May 2024) that training rooms, in built hostel (dormitory), *etc.*, was included for the welfare of the beneficiaries. However, during the joint field visit it was found that the dormitory on the third floor was occupied by Registering Officer & Staff of Mamit and Kolasib and a private Training Partner. Thus, it was observed that the Multipurpose Centre was not utilised by BOC workers.

The Department stated during Exit Conference (03 May 2024) that the building is yet to facilitate transit accommodation/ night shelter, *etc.*, as essential equipment were not yet procured.

iii) Use of Limited Tender Enquiry against General Financial Rules, 2017

As per Rule 161 of the GFR, 2017 (adopted by the Government of Mizoram), invitation to tender by advertisement should be used for procurement of goods above ₹ 25.00 lakh. And as per Rule 162, Limited Tender Enquiry may be adopted when the estimated value of the goods to be procured is upto ₹ 25.00 lakh.

The construction of 'Multipurpose Centre' was estimated at a cost of ₹ 15.00 crore. However, contrary to the provisions of GFR, Restricted Tender was called (27 October 2020) by issuing Request for Proposal to five Consultancy Firms with the approval of the Finance Department. A firm²⁴ was selected and agreement was signed on 20 January 2021. Letter of award for 'Design and Construction of Multipurpose Centre' was issued on 14 December 2020. The Board, in its 28th Meeting (25 January 2021), granted ex-post facto approval of all the initiatives taken up for the construction of the Multipurpose Centre including the award of the contract to the contractor.

The Department stated during Exit Conference (03 May 2024) that the proposal for floating restricted tender was examined and approved by the Finance Department. The reply, however, was not tenable since use of restricted tender for construction of 'Multipurpose Centre' was undertaken for work above ₹ 25.00 lakh, which was not as per provisions of GFR 2017.

1.4.5.17 Beneficiary survey

A joint beneficiary survey of the sampled beneficiaries was conducted along with officials of the Department during February to April 2023.

Table-1.41: Report of Beneficiary Survey conducted during Audit

Sl. No	District	No. of sampled beneficiaries	Surveyed	Not surveyed
1.	Aizawl	93	18	75
2.	Serchhip	82	31	51
3.	Kolasib	74	17	57
4.	Lunglei	72	10	62
Total		321	76	245

Out of 321 sampled beneficiaries 245 of the beneficiaries could not be contacted as they had already migrated/ shifted to other villages/ districts or their phone numbers were found to be out of service.

During the survey, the beneficiaries were given a questionnaire asking whether medical facilities, drinking water and toilet facilities were provided by the employer and wages were given on time. All the 76 surveyed beneficiaries stated that medical facilities, drinking water and toilet facilities were provided by the employer and wages were

²⁴ M/s C. B. Engineering, Aizawl

given on time. The beneficiaries, however, stated that no training had been imparted nor have they been notified for training to be imparted.

1.4.5.18 Delay in payment of pension/ release of assistances to beneficiaries

During the joint beneficiary survey, it was observed that a number of beneficiaries had not been given assistance in time, as detailed below:

1. XXXX Renthlei of Durtlang, Aizawl, a registered beneficiary of 'Disability Pension', retired on 18 July 2019. He was sanctioned the pension on 09 February 2022. He is yet to receive the pension benefit of ₹ 41,000 (pension for 41 months) as of December 2022.
2. XXXX Sailo of Zotlang, Lunglei District, a registered beneficiary of 'Welfare Pension' retired on 07 May 2020 and was sanctioned pension on 08 February 2022. However, he is yet to receive pension of ₹ 34,000 (pension for 34 months) as of March 2023.
3. XXXX LalXXXX of Zotlang, Lunglei District, a registered beneficiary of 'Welfare Pension' retired on 07 October 2020 and was sanctioned pension on 08 February 2022. However, he is yet to receive pension of ₹ 29,000 (pension for 29 months) as of March 2023.
4. XXXX LalXXXX of Hmar Veng, Kolasib, a registered beneficiary under the Welfare Board applied for assistance of ₹ 5,000 during 2020 under 'Maternity Benefit' but she has not been given the assistance as of March 2023.
5. XXXX DarXXXXi of Venglai, Kolasib, widow of Pu Chhunkhuma, a registered worker who expired on 20 June 2020, is yet to receive funeral assistance of ₹ 5,000 as of March 2023.
6. XXXX LalXXXX and Pu XXXXXkzuala, both resident of Electric Veng Lunglei, were beneficiaries of 'Covid-19 Package'. Neither of them had received the assistance of ₹ 20,000 each as on date of survey (April 2023).

1.4.6 Conclusion

The Mizoram BOCW (RECS) Rules, 2015 contained additional provisions pertaining to, among others, opening of District and Sub-divisional offices, procedure of payment of welfare pension, disability pension, funeral assistance, death benefit, cash award, financial assistance for marriage, recovery of advances and loans, investment and utilisation of the Welfare Fund, *etc.*

Audit observed that District Labour & Employment Officers (DLEOs) were given additional charges of Inspectors, Registering Officers, Assessing Officers and Cess collectors, in addition to their normal responsibilities. The employers/ contractors did not register 3,239 works within 60 days from the commencement of the works and there was no mechanism in place to ensure registration of every construction work affecting Government revenue. Inspection of establishments was not carried out by LESDE Department and establishments which evaded registration, remained undetected/un-assessed. Resultantly, registration fee could not be collected from such establishments.

Registration of establishments was made offline, the State Government had not issued directions to all Departments/ State undertakings, *etc.*, to forward a copy of work orders to the DLEOs/ LOs with regard to construction activities to be carried out in their jurisdiction and mechanism was yet to be developed by the State for regular monitoring of construction activities ongoing in the State using GIS technology/ mapping, *etc.*

The registration of workers was done offline as State web portal was not yet developed. Audit noticed that migrant workers were not registered with the Board and no special drive and no awareness campaign was conducted by the Board for such workers. Cess was not deducted at source for works executed departmentally in the sampled districts. Assessment of cess was made only when the employers/ contractors, on their own, deposited cess to the Cess Collectors. Audit noticed that there was an overall shortfall of ₹ 10.15 crore in the amount of cess deposited by the respective DLEO/ LO of the sampled districts *vis-à-vis* the amount of Cess received by the Board. Audit conducted Joint Physical Verification in six construction sites and found that safety equipment or appliances like fire extinguishing equipment, safety helmets, *etc.*, were not available.

No State Advisory Committee meeting was held during the audit coverage period. During Audit, it was noticed that payment of scheme benefits amounting to ₹ 24.48 lakhs was irregularly made to 390 beneficiaries during 2018-19 to 2021-22 (in the sampled districts) who were State Government employees, Muster Roll Employees, Anganwadi workers, *etc.*, but were also registered as Building/ Construction workers under MBOCWWB.

A joint beneficiary survey of the sampled beneficiaries was conducted along with officials of the Department during February to April 2023, which revealed that, out of 321 sampled beneficiaries, 245 of the beneficiaries could not be contacted as they had already migrated/ shifted to other villages/ districts or their phone numbers were found to be out of service. 76 surveyed beneficiaries stated that no training had been imparted nor have they been notified for training to be imparted.

1.4.7 Recommendations

The Government may consider the following recommendations:

- I. The State Government should ensure online registration of establishments and beneficiaries;*
- II. The Department may conduct a special drive to ensure that migrant workers are made aware of the scheme benefits and their registration facilitated as per the Model Welfare Scheme;*
- III. The Department/ Board should set up a mechanism to ensure proper coordination with all Government departments to ensure deduction of cess at source on works executed departmentally and through contractors by all the Government departments/ Enterprises;*
- IV. The Board should carry out a comprehensive exercise to identify and de-register all ineligible persons;*

- V. The Board should ensure that the Contractors comply with the requirement to ensure the safety, health and protection of construction workers as per the extant Acts/ Rules; and*
- VI. The Board should reconcile their accounts with the District Labour and Employment Officers/ Labour Officers.*

COMPLIANCE AUDIT PARAGRAPH

Health & Family Welfare Department

1.5 Subject Specific Compliance Audit on “Public Health Infrastructure and Management of Health Services”

1.5.1 Introduction

The Health and Family Welfare (H&FW) Department is responsible for maintaining and developing the healthcare system in the State, guiding and supervising the Health and Family Welfare Programmes in Mizoram. The services offered by the Department are Preventive Healthcare Services, Promotive Healthcare Services, Routine Curative Services, Rehabilitation Services, *etc.* The vast network of Health Sub-Centres (HSCs²⁵), Primary Health Centres (PHCs²⁶) and Urban Primary Health Centres (UPHCs), and Community Health Centres (CHCs²⁷) form the primary tier of public health delivery system for rural and urban population respectively. District Hospitals (DHs) serve as the secondary tier for rural and urban population while Tertiary healthcare involves providing advanced and super speciality services by medical institutions in urban areas.

A Performance Audit (PA) was conducted to cover the areas of basic health infrastructure facilities in the State focussed on selected District Hospitals which mainly cater to secondary healthcare services. The findings were incorporated in the Comptroller and Auditor General’s Performance Audit Report on “Select District Hospitals in Mizoram” for the year ended 31 March 2019.

The present Subject Specific Compliance Audit (SSCA) covers primary health care services which provide health facilities at the village and block levels. It also covers a holistic view of improvement of necessary infrastructure created for meeting emergencies and service delivery by sampled health institutions for the period 2017-18 to 2021-22.

1.5.2 Overview of Public Healthcare facilities in Mizoram

Mizoram is one of the smallest States in India with a population of 10.97 lakh as per 2011 census. To cater to the Healthcare services of its people at different levels, the State has two²⁸ tertiary healthcare facilities in the State Capital, 11 District Hospitals (DHs), nine Community Health Centres (CHCs), 61 Primary Health Centres (PHCs)-including four notified but non-functional PHCs of Kanhmun, Tuipuibari, Zobawk and Longpuighat and 379 Health Sub-Centres as shown in **Appendix-1.6**. In addition, there is also one Integrated AYUSH Hospital in the State. The structure of public health facilities is shown in **Chart-1.3**.

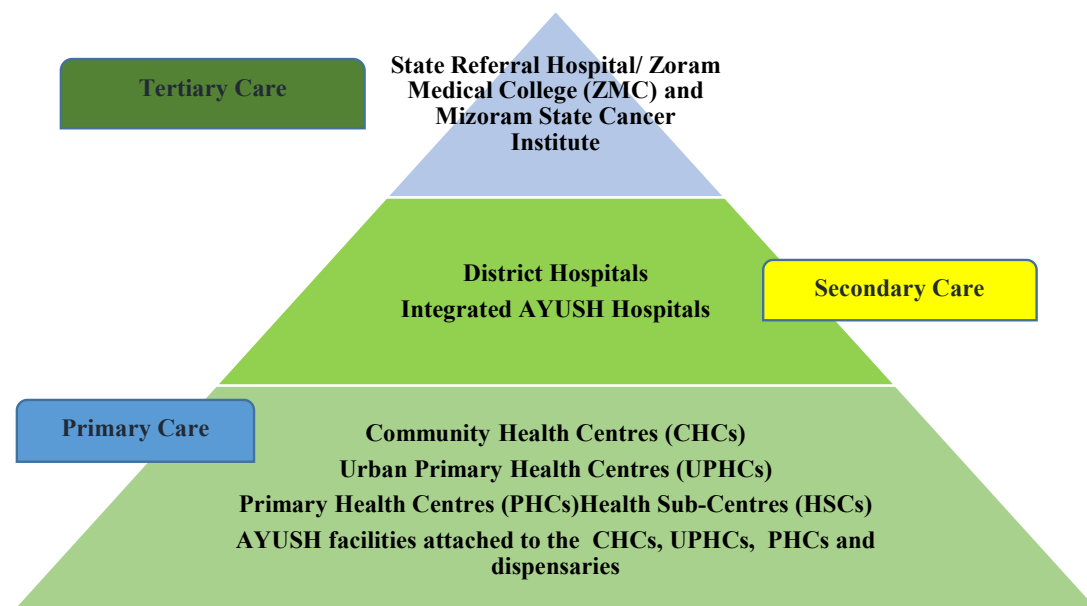
²⁵ HSCs are peripheral healthcare centres which serve a population of 3,000 in the hilly areas

²⁶ PHCs are peripheral healthcare centres which serve a population of 20,000 in the hilly areas

²⁷ CHCs are peripheral healthcare centres which serve a population of 80,000 in the hilly areas

²⁸ State Referral Hospital/ Zoram Medical College (ZMC) and Mizoram State Cancer Institute

Chart-1.3: Details of Health Facilities in the State



Source: Health and Family Welfare Department, Government of Mizoram

The Health and Family Welfare (H&FW) Department, Government of Mizoram (GoM), is responsible for the management of primary, secondary and tertiary Healthcare Centres in the State.

The Secretary, H&FW Department at the Government level and the Principal Director, H&FW Department at the Directorate level are responsible for the overall functioning of the health centres/ Hospitals under the primary, secondary and tertiary level health services in the State. Broadly, there are two directorates viz., Directorate of Hospital and Medical Education (DHME) and Directorate of Health Services (DHS). The DHME is entrusted with the responsibility of administration of DHs at the District Headquarters and other Government Hospitals while the DHS is responsible for the administration of the Sub-district Hospitals, CHCs, PHCs, and HSCs. Besides, Mission Directorate of National Health Mission (NHM), Zoram Medical College and Directorate of AYUSH are looking after the implementation/ functioning of National Health Mission, Zoram Medical College and National AYUSH Mission respectively.

At the District level, District Medical Superintendent (DMS) and Chief Medical Officer (CMO) are responsible for the functioning of DHs and primary level health services (HSCs, PHCs and CHCs) respectively.

1.5.2.1 Public Healthcare facilities at the District and Primary Level

During 2021-22, all the 11 districts²⁹ had District Hospitals and there were two Sub-District Hospitals³⁰ in the State with no shortage of District Hospitals in the State. Three District Hospitals of Hnahthial, Khawzawl and Saitual were established during the audit coverage period.

²⁹ Three new districts of Saitual, Khawzawl and Hnahthial were created in 2018

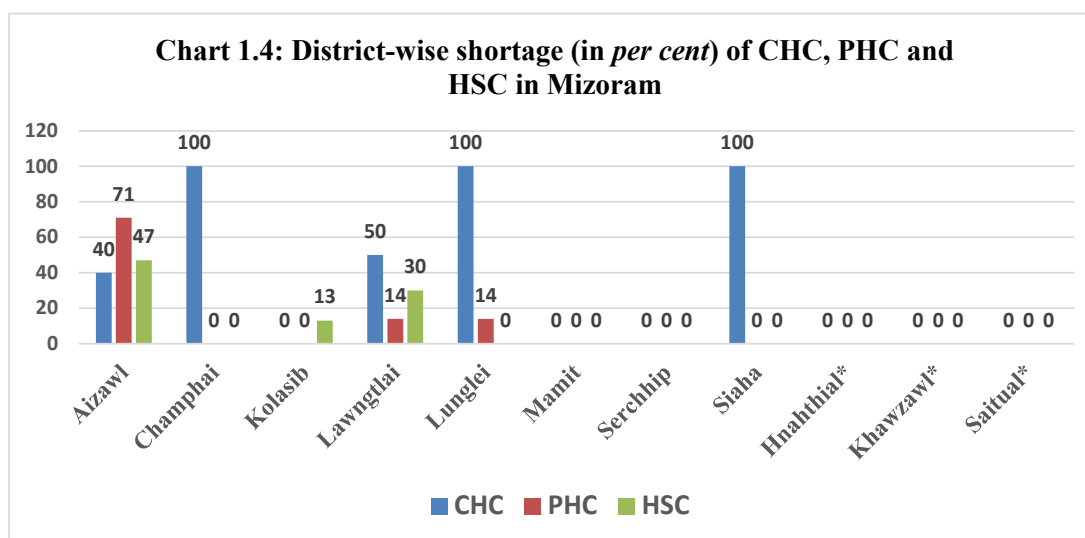
³⁰ Sub-District Hospital at Kulikawn and Tlabung

As per the Indian Public Health Standards (IPHS) norms, one CHC is required per 80,000 persons. During 2021-22, three districts viz., Champhai, Lunglei, and Siaha did not have any CHCs. The shortage of CHCs in Champhai, Lunglei and Saiha districts was significant (100 *per cent*). In Lawngtlai District the shortage was 50 *per cent*. Aizawl has three out of five prescribed number of CHCs representing a shortage of 40 *per cent*. Three districts of Kolasib, Mamit and Serchhip required and have one CHC each without any shortages. Also, in three districts of Hnahthial, Khawzawl and Saitual, there was no requirement of CHCs as per IPHS population norms, however, two of the districts of Khawzawl and Saitual have one CHC each. Thus, there was an overall shortage of five CHCs (36 *per cent*) out of total requirement of 14 as shown in **Appendix-1.7**.

For PHCs the requirement as per IPHS population norm is one PHC for every 20,000 persons. In Mizoram, during 2021-22 the actual numbers of PHCs were 61 against the requirement of 61. It was, however, observed that the 61 PHCs included four notified but non-functional PHCs of Longpuighat, Zobawk, Kanhmun and Tuipuibari. Significant shortage in PHC was found in Aizawl District (71 *per cent*), while excesses were noticed in Mamit, Hnahthial and Khawzawl Districts as shown in **Appendix-1.8**.

Similarly, one HSC is required for every 3,000 persons. However, in Mizoram, during 2021-22 the actual number of HSCs (379) was less than the requirement (413) with overall shortage of 34 HSCs as shown in **Appendix-1.9**. Significant shortage of HSC was observed in Aizawl District (47 *per cent*).

Hence, during 2021-22 there was overall shortage of five CHCs and 34 HSCs in Mizoram, with varying degrees of availability and shortage among the Districts. The district-wise shortage (in *per cent*) of CHCs, PHCs and HSCs as per IPHS norms is given in **Appendix-1.6** and shown in **Chart-1.4**³¹ below:



While accepting the facts, the Department stated (February 2024) that with regards to the number of CHCs, for districts like Siaha and Serchhip that have less than 80,000

³¹ Excess not reflected in the Chart

population, and where there is a functioning District Hospital, there may not be an absolute requirement for a CHC.

1.5.2.2 Services available in the DHs, CHCs and PHCs in the State

Service availability in the DHs, CHCs and PHCs were grouped into essential services and desirable services as per the IPHS norms. Among the DHs, only Aizawl DH has all the essential services while DH Saitual, DH Hnahthial and DH Khawzawl did not provide the essential services like Medicine, Orthopedic, Obstetric & Gynaecology, General Surgery, Ophthalmology, Anaesthesiology, *etc.*, due to non-availability of specialists.

Speciality services in General Medicine, Surgery, Obstetrics and Gynaecology, Paediatrics, Ophthalmology and Emergency Services were essential services for Community Health Centres (CHC) as per IPHS norms. However, all the CHCs in the State did not have the above speciality services as per the norms.

All the PHCs in the State provided basic essential health services as per IPHS norms.

While accepting the facts, the Department stated (February 2024) that due to shortage of specialist doctors they were unable to post the required number of specialists even in the District Hospitals. Despite this, the Department has started posting critical specialists to CHCs and Sub-District Hospitals (SDHs).

1.5.2.3 Availability of Doctors, Nurses and Paramedics in the DHs, CHCs and PHCs in the State

(A) District Hospitals (DHs)

The IPHS norms provide manpower requirement for the District Hospitals (DHs) as per the prescribed service delivery norms for each healthcare facility.

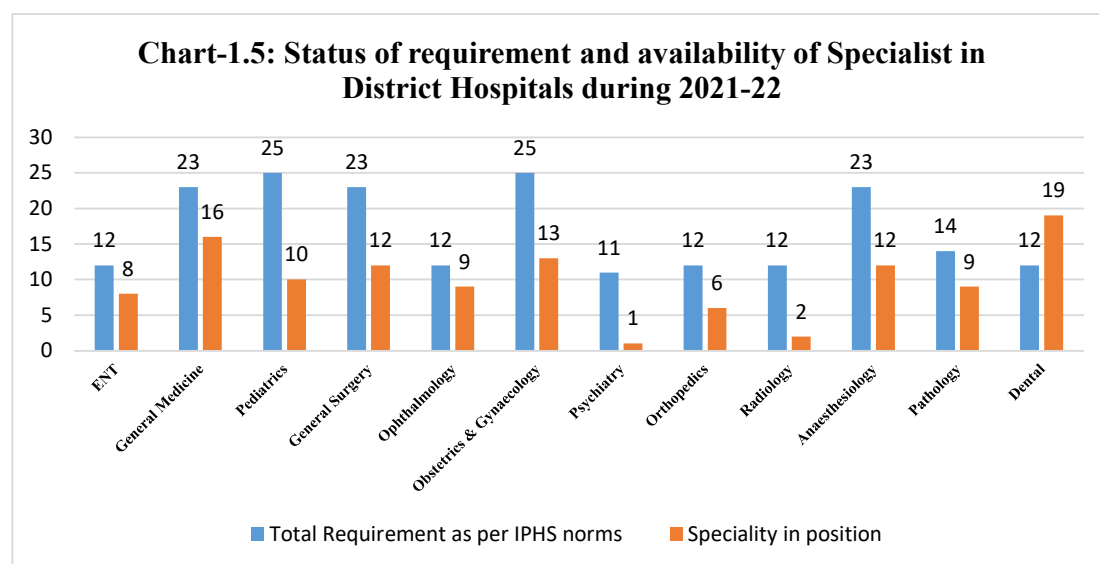
In case of DHs, significant shortages existed in the cadres of Specialist Doctors³² which ranged between 39 and 45 *per cent*, General Duty Medical Officers³³ (shortage ranged between 72 and 75 *per cent*), Nurses³⁴ (shortage ranged between 43 and 46 *per cent*) and Paramedics³⁵ (shortage ranged between 45 and 50 *per cent*) during 2017-18 to 2021-22. The status of requirement and availability of specialist doctors in all the District Hospitals are given in **Chart-1.5** and the detailed manpower position is given in **Appendices-1.10 to 1.14**.

³² Appendix-1.10

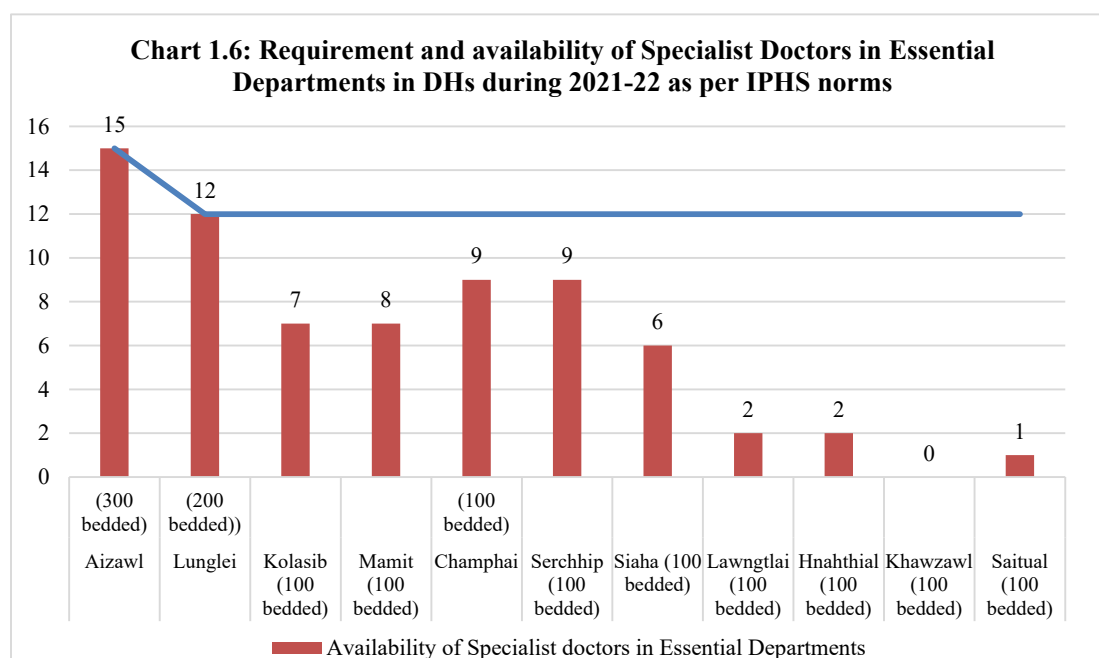
³³ Appendix-1.11

³⁴ Appendix-1.12

³⁵ Appendix-1.13

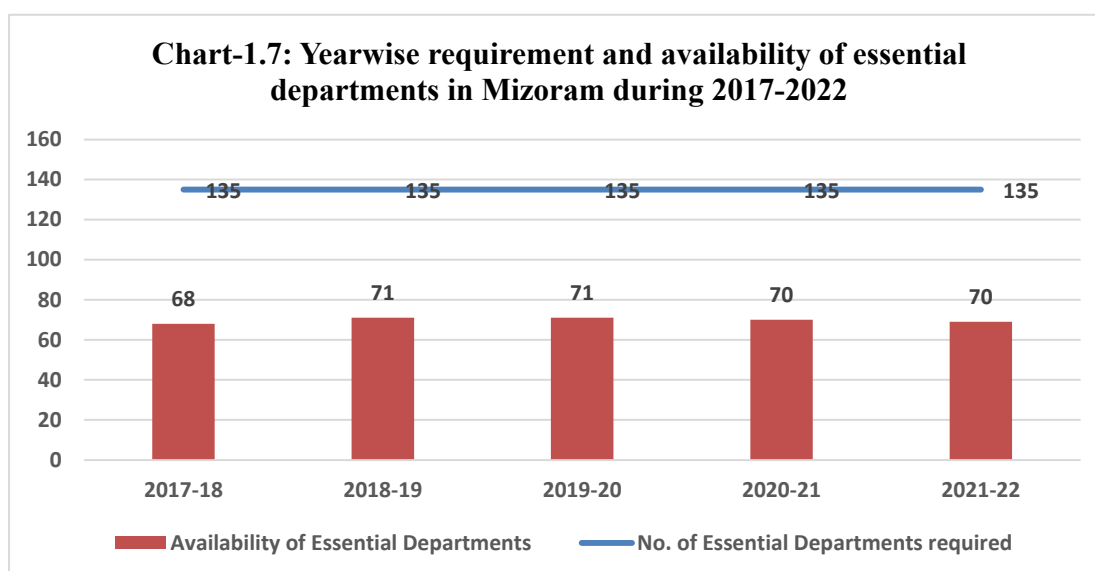


As regards availability of Specialist Doctors, except in the case of Aizawl DH and Lunglei DH, in the remaining DHs only few departments had Specialist Doctors available as per norms during 2017-18 to 2021-22. The overall status of requirement and availability of Specialist Doctors in Essential Departments³⁶ in each District Hospital is given in **Appendix-1.14** and **Chart-1.6**.

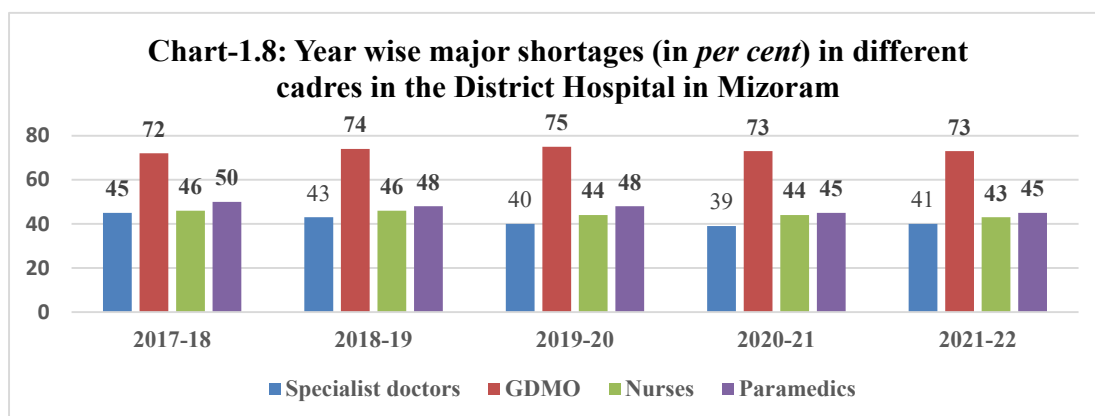


The year-wise overall requirement and availability of specialist doctors in all essential departments in all the District Hospitals of the State during 2017-18 to 2021-22 is given in **Appendix-1.14**. The year-wise overall of requirement and availability of essential departments in all DHs in the State is shown in **Chart-1.7**.

³⁶ 1. ENT, 2. General Medicine, 3. Pediatrics, 4. General Surgery, 5. Ophthalmology, 6. Obstetrics & Gynaecology, 7. Psychiatry, 8. Orthopedics, 9. Radiology, 10. Anaesthesiology, 11. Pathology, 12. Dental



Audit noticed that in the Aizawl DH, except for Psychiatry department all mandatory Specialist Doctors were available during 2021-22 as per norms. Further in Khawzawl DH no Specialist Doctors were available in any Department while in Saitual DH only one specialist was available. The detailed status is given in **Appendix-1.14**. The year wise requirement and availability of essential departments requiring Specialist Doctors in all DHs is given in **Chart-1.7**. The overall year wise status of the shortages in different cadres in District Hospitals is depicted in **Chart-1.8** and **Appendices-1.10, 1.11, 1.12** and **1.13**.

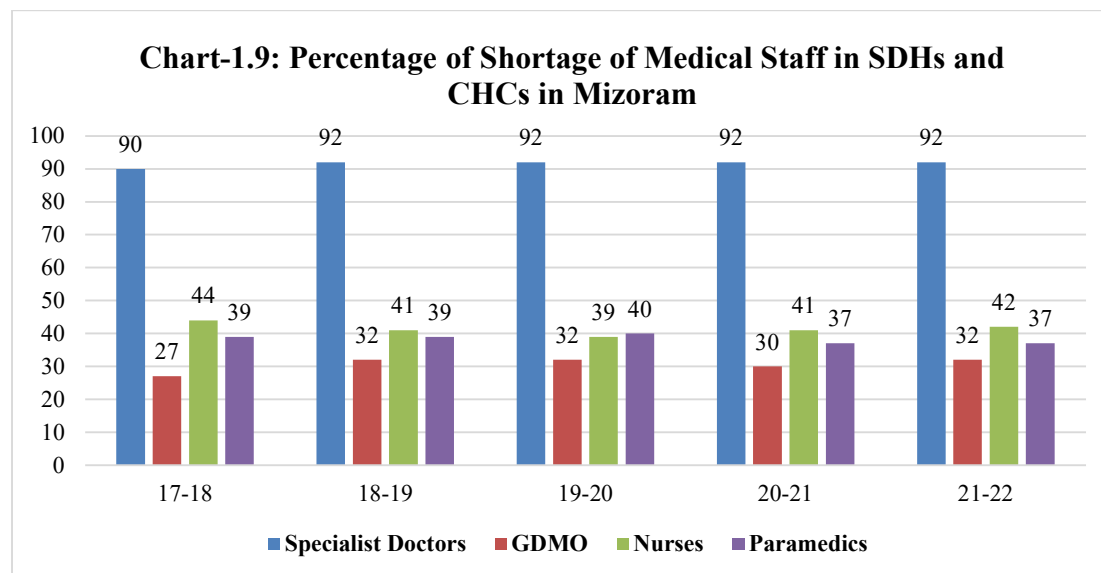


(B) Sub-District Hospitals (SDHs) and Community Health Centres (CHCs)

Though the service of Specialist Doctors falls under the category of 'Essential Service' in respect of SDHs and CHCs as per IPHS, the shortage during 2017-18 to 2021-22 ranged between 90 and 92 per cent as shown in **Appendix-1.15**. No specialist doctors were posted in any of the CHCs and Tlabung SDH. In case of Kulikawn SDH, specialists were provided only for Paediatric, Obstetrics & Gynaecology, Orthopedic and Dental departments.

Similar shortages existed in the cadres of General Duty Medical Officers (GDMOs), Nurses and Paramedics which ranged between 27 and 32 per cent, 39 to 44 per cent and 37 and 40 per cent respectively as seen in **Appendices-1.16, 1.17** and **1.18**. The overall

shortages of Specialist Doctors, MO, Nurses and Paramedics in SDHs and CHCs are depicted in **Chart-1.9**.



(C) Primary Health Centres (PHCs)

The requirement of doctors in PHCs as per IPHS norms is at least one MBBS doctor for each PHC.

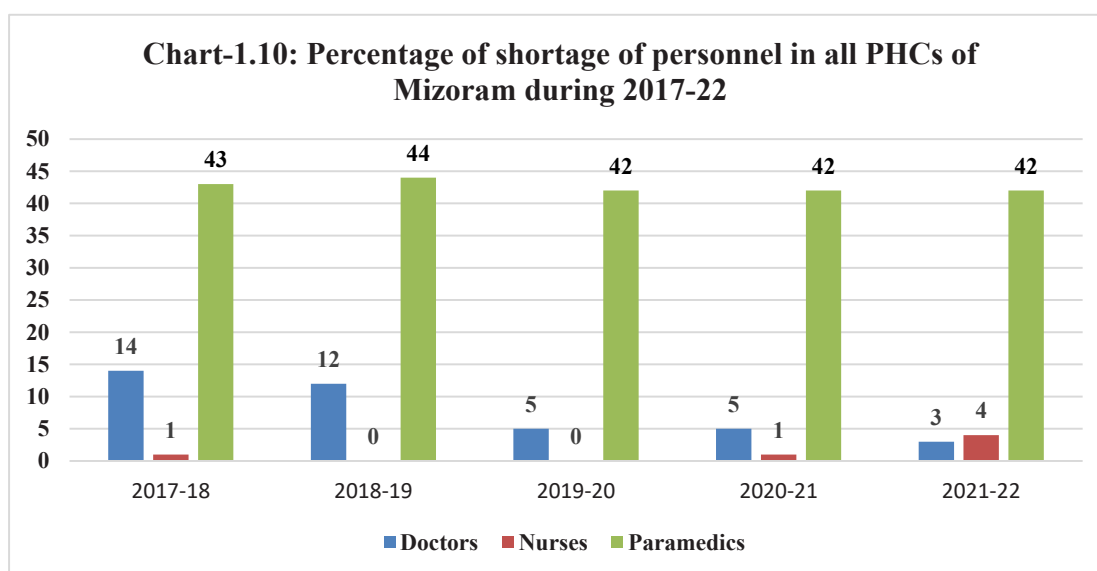
The detailed requirement and actual position of doctors, nurses and paramedics are as given in **Appendix-1.19**.

The overall requirement of doctors in all PHCs of the State was 57³⁷. During 2017-22 the shortage of doctors ranged between three and 14 *per cent*. It was observed that two functional PHCs (Tuipang and Bunghmun S) did not have any doctor during 2021-22.

Similarly, the requirement of nurses as per IPHS norms in PHCs was three nurses for every PHC. The required number of nurses in all the 57 functional PHCs in the State was 171. The overall shortage of nurses during 2017-22 in all the PHCs ranged between zero and four *per cent*.

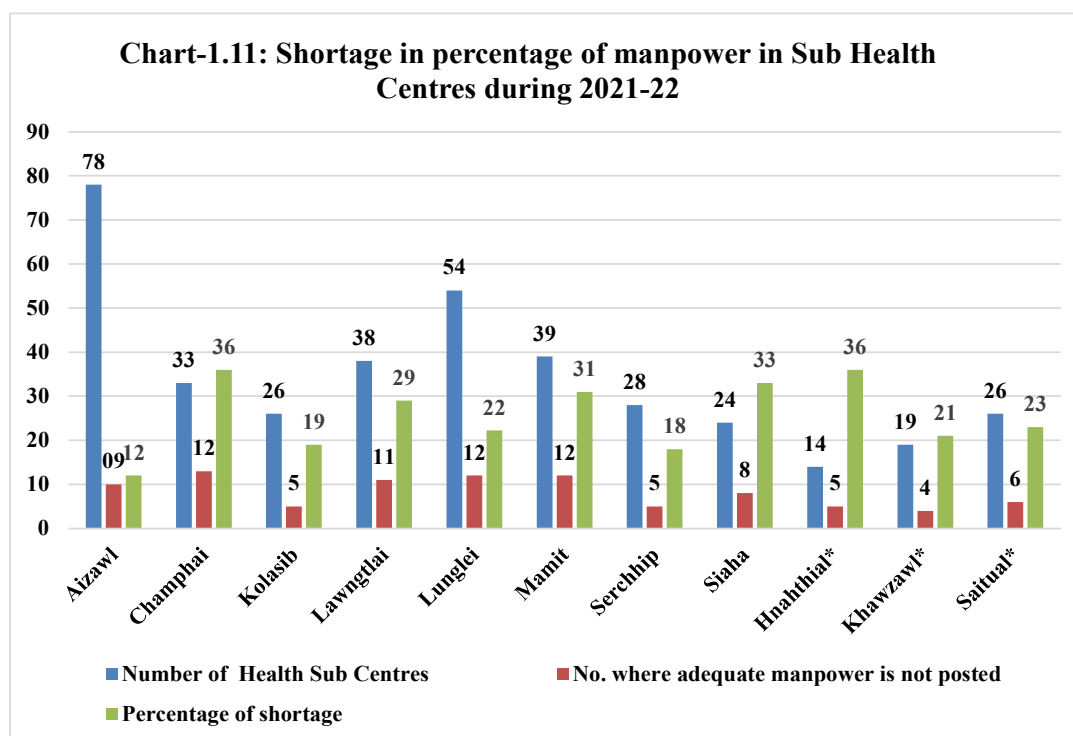
The requirement of Paramedics as per IPHS norms is four paramedics for every PHC. The overall requirement of paramedics in all the 57 functional PHCs in Mizoram was 228. It was observed in audit that shortage of paramedics in all the PHCs during 2017-22 ranged between 42 and 44 *per cent*. The shortage of personnel is shown in **Chart-1.10** below and the detailed position is given in **Appendix-1.19**.

³⁷ Excluding four notified but non-functional PHCs of Longpuighat, Zobawk, Kanhmun and Tuipuibari



(D) Health Sub-Centres (HSCs)

Health Sub-Centres (HSCs) under the PHCs witnessed shortage of personnel *vis-à-vis* the norms. The number and percentage of HSCs that witnessed shortage of personnel ranging from 12 and 36 *per cent* during 2021-22 (latest position) is shown in **Appendix-1.20**. The overall status of HSCs is provided in **Chart-1.11**.



*- New Districts

While accepting the facts, the Department stated (February 2024) that there are both absolute shortages in terms of number of posts created and relative shortage in terms of slow filling up of posts. Also, due to austerity measures in place due to COVID-19 pandemic, recruitment of manpower was curtailed to the extent that even vacant positions due to retirement were not filled.

1.5.2.4 OPD Services in the District Hospitals

According to IPHS norms, DHs are supposed to provide Out Patient Department (OPD) services in General Medicine, General Surgery, Obstetrics & Gynaecology, Paediatrics, Ophthalmology, ENT, Orthopaedics, Psychiatry, Dental Care, *etc.*

All DHs in the State were providing the OPD services according to the availability of Specialist Doctors with the Hospital. The speciality-wise number of patients availing OPD services in all DHs of Mizoram during 2021-22 (latest position) is given in **Table-1.42** below.

Table-1.42: OPD Services in District Hospitals (DHs)

Sl. No.	Name of the Department	Number of patients that visited the Departments during 2021-22 for OPD services										
		DH Aizawl	DH Lunglei	DH Champhai	DH Siaha	DH Lawngtlai	DH Serchhip	DH Kolasib	DH Mamit	DH Khawzawl	DH Saitual	DH Hnahthial
1.	Dental	10,309	973	1,384	723	269	2,328	668	818	00	565	1,604
2.	Emergency	21,994	5,148	4,051	3,185	3,582	4,676	5,396	2,103	2,208	2,342	00
3.	ENT	15,337	1,781	1,901	00	163	2,605	00	00	244	00	3,532
4.	Eye	13,441	1,902	2,548	1,128	778	1,383	1,799	585	304	621	367
5.	Medicine	46,692	8,353	3,980	4,438	4,384	4,467	3,940	5,286	1,183	11,436	00
6.	Obs. & Gynae	25,771	2,470	2,377	3,325	3,543	1,677	1,816	1,266	612	00	00
7.	Ortho	21,538	1,935	00	00	154	1,776	660	00	304	00	00
8.	Paediatric	10,895	2,406	3,633	2,905	2,570	3,254	1,460	1,359	977	00	3,589
9.	Psychiatric	5,406	1,110	00	00	00	00	00	161	09	00	00
10.	Surgery	25,303	1,982	1,464	464	765	1,581	1,024	715	321	00	00
11.	Dermatology & Venerology	11,876	1,171	00	00	36	00	00	00	277	00	00
12.	PMR	3,989	0	142	00	00	00	00	110	00	00	00

Source: Information furnished by Health and Family Welfare Department, Government of Mizoram.

1.5.2.5 Availability of beds in the District Hospitals

According to IPHS norms, DHs are classified into five³⁸ grades from Grade-I to Grade-V District Hospital according to the bed strength of the respective hospitals. In Mizoram there were eleven DHs, with nine DHs having bed capacity of 100 beds each, one DH at Lunglei having bed capacity of 200 beds and Aizawl DH having bed capacity of 300 beds. Also, as per IPHS norms, Hospital beds are to be distributed among different wards *viz.*, Medicine ward, Surgical Ward, Orthopaedic Ward, Pediatric Ward, Obstetrics and Gynaecology/ Maternity Ward, Ophthalmology ward, Isolation Ward, *etc.*

The detailed position of availability of beds in all DHs of Mizoram is given in **Appendix-1.21**. It was observed that separate beds for Maternal care and Childcare were available only in five³⁹ DHs. Beds for Orthopaedic Wards were allocated only in three DHs of Aizawl, Lunglei and Serchhip. Hnahthial DH has only separate beds for Maternal care and Childcare Ward and Paediatric Ward, while Saitual has separate beds for only General Medicine Ward. Thus, the allocation of beds were not done as per the prescribed norms.

³⁸ Grade -I DH with 100 beds, Grade-II with 200 beds, Grade-III with 300 beds, Grade-IV with 400 beds and Grade-V with 500 beds District Hospital

³⁹ Lunglei, Siaha, Lawngtlai, Khawzawl and Hnahthial

Though separate beds for Special New-born Care Units (SNCU) were available only in five⁴⁰ DHs for new-born care, paediatric beds was available in all the DHs except Saitual DH.

While accepting the facts, the Department stated (February 2024) that the State Government is taking active measures to improve service availability in all the health facilities. As the number of specialists continue to increase, different wards for different specialisation will be created. Further, in the case of Aizawl DH, although there are no separate maternity care and child care beds, however, the DH has 52 beds under Obstetric & Gynaecology Department which is utilised for all maternal and child care.

1.5.2.6 In-Patient Department (IPD) services in the District Hospitals

According to IPHS norms, DHs are supposed to provide IPD services in General Medicine, General Surgery, Maternity, Paediatric, New Born, Isolation Cases, Critical Care, Post-Operative, Ante-natal, Post-Natal. The speciality-wise IPD patients in all the DHs of the State is given in **Table-1.43**.

Table-1.43: IPD Services in DHs in the State during 2021-22

Sl. No.	Name of the Department	Number of patients' visit during 2021-22										
		DH Aizawl	DH Lunglei	DH Champhai	DH Siaha	DH Lawngtlai	DH Serchhip	DH Kolasib	DH Mamit	DH Khawzawl	DH Saitual	DH Hnahthial
1.	Emergency	562	1,308	0	720	0	1,800	898	296	272	3,242	2,083
2.	ENT	442	30	15	0	0	484	0	0	01	0	78
3.	Eye	429	108	50	65	0	0	167	0	01	0	0
4.	Medicine	1,057	714	614	948	966	1,997	1,350	502	273	1,155	0
5.	Obs & Gynae	4,661	897	1,310	1,056	452	600	744	377	111	0	0
6.	Ortho	1,060	276	00	00	0	203	275	00	5	0	0
7.	Paediatric	661	368	783	145	321	370	549	234	185	0	515
8.	Surgery	1,812	370	256	107	00	182	418	112	28	0	0
9.	Dental	0	0	16	0	0	0	0	0	0	0	43
10.	Psychiatric	0	40	0	0	0	0	0	0	0	0	0
11.	SNCU	476	145	429	128	278	0	0	0	0	0	0
12.	ICU	407	0	13	0	0	0	0	0	0	0	0

Source: Information furnished by Health and Family Welfare Department, Government of Mizoram.

It can be seen from **Table-1.43** above and **Appendix-1.21** that during 2021-22 IPD Paediatric services were availed in all DHs in the State except Saitual DH and ICU services were availed only in Aizawl DH and Champhai DH. However, even though Kolasib DH did not have an Orthopaedic ward it had Orthopaedic patients, while Khawzawl DH did not have an Obstetrics and Gynaecology ward but had inpatients for Obstetrics and Gynaecology services.

Thus, the number of patients availing IPD services in different specialties is not exactly related to the availability of beds/ wards and availability of specialist doctors as can be seen from **Table-1.43**, **Appendix-1.14** and **Appendix-1.21**.

While accepting the facts, the Department stated (February 2024) that the full complement of specialists as per IPHS norms is not available in all the District Hospitals.

⁴⁰ Aizawl, Lunglei, Champhai, Siaha and Lawngtlai

1.5.2.7 Availability of Diagnostic Services in the District Hospitals

According to IPHS norms, District Hospitals' Laboratories and Other Diagnostic Services shall serve the purpose of public health and be able to perform all tests required to diagnose epidemics or important diseases from the public health point of view. The recommended services which are supposed to be available in a District Hospital are (i) Clinical Pathology, (ii) Pathology, (iii) Microbiology, (iv) Serology, (v) Biochemistry, (vi) Cardiac investigation, (vii) Ophthalmology, (viii) ENT, (ix) Radiology, (x) Endoscopy and (xi) Respiratory function tests.

All the District Hospitals (DHs) except Khawzawl DH have Biochemistry test service. All the DHs except Lunglei, Siaha and Lawngtlai have Clinical Pathology services. Diagnostic Services like Cardiac investigation, Ophthalmology, ENT, Endoscopy and Respiratory function tests were not available in the three new District Hospitals of Khawzawl, Saitual and Hnahthial (**Appendix-1.22**).

In respect of Radiology investigation, test like X-Ray for chest, skull, spine, *etc.*, Dental X-Ray, MMR, HSG and Ultrasonography were available in all the DHs except Lunglei DH.

Thus, all DHs except Aizawl DH, did not have all the recommended diagnostic services.

While accepting the facts, the Department stated (February 2024) that by utilising available schemes under Government of India and Government of Mizoram, diagnostic services will continue to improve across Mizoram.

1.5.2.8 Availability of Blood Bank in the District Hospitals

According to IPHS norms, every DH should have a Blood Bank which shall be in close proximity to Pathology Department and at an accessible distance to Operation Theatre Department, Intensive Care Units and Emergency and Accident Department. Blood Banks should follow all existing guidelines and fulfill all requirements as per various Acts pertaining to setting up of the Blood Bank.

In Mizoram, Blood Banks are being run to cater to the requirement of patients in all District Hospitals during 2021-22 as per IPHS norms except in the three new District Hospitals of Khawzawl, Saitual and Hnahthial as shown in **Appendix-1.22**.

While accepting the facts, the Department stated (February 2024) that Blood Banks will be established in three new DHs and all the three new DHs are to be re-constructed as the proposals are already approved under the Ministry of Development of North Eastern Region (DoNER) project.

1.5.2.9 Dietary Services in the District Hospitals

IPHS norms envisage dietary service of a Hospital as an important therapeutic tool. Apart from normal diet, diabetic diet, semi-solid diets and liquid diets shall be available based on patient's requirement.

In Mizoram, patients availed Dietician service only in Aizawl District Hospital even though dietary services (hospital kitchen) were provided in all the District Hospitals by outsourcing to private parties.

Thus, in contravention of IPHS norms, except for Aizawl DH, there was no provision to provide special diets like diabetic diets, semi-solid diets and liquid diets as per patient's requirement in all other DHs.

While accepting the facts, the Department stated (February 2024) that actions will be taken to make special diets available to patients as per their requirement and Food Safety Standard Authority of India (FSSAI) norms will be enforced.

1.5.2.10 Laundry and Linen Service in District Hospitals

As per IPHS norms, hospital laundry should be provided with necessary facilities for drying, pressing and storage of soiled and clean linen. Outsourcing of support services like Laundry, Housekeeping, Waste Disposal, Power Backup, *etc.*, shall be done on the basis of service level agreements which include clearly defined service deliverables and penalty clauses, if service is not delivered.

In Mizoram Laundry and Linen Services were outsourced to private parties in all the DHs without ensuring adherence to the IPHS norms like facilities for drying, pressing and storage of soiled and clean linen as prescribed by IPHS.

While accepting the facts, the Department stated (February 2024) that IPHS norms were not imposed on laundry service providers. However, they stated that quality standards will be enforced for laundry services.

1.5.2.11 Bio-medical Waste Management by District Hospitals

Bio-medical waste (BMW)/ Hospital waste is any kind of waste containing infectious or potentially infectious materials. The BMW management is an integral part of infection control activities of the Hospital. The Government of India (GoI) framed Bio-Medical Waste (Management and Handling) Rules, 1998 under Environment (Protection) Act, 1986, which was superseded by Bio-Medical Waste Management Rules, 2016. The Rules, *inter alia*, stipulate the procedures for collection, handling, transportation, disposal and monitoring of bio-medical waste with clear roles for waste generators and Common Bio-Medical Waste Treatment Facility (CBMWTF).

In the District Hospitals of Mizoram, segregation of BMWs was done through separate coloured bins at the point of generation of waste particularly in the ward areas. BMW management was done by means of disinfection using one *per cent* Sodium hypo chloride solution. Incinerators and burial pits were used for yellow category (animal waste) BMW, while plastics broken glasses, vials, *etc.*, were dumped in the dumping ground after disinfection and sharp wastes were dumped in the sharp pit set up near all the Hospitals while dedicated vehicles were engaged for transporting Bio-Medical Wastes.

Thus, in all the sampled District Hospitals, Bio-Medical Waste (Management and Handling) Rules, 1998 under Environment (Protection) Act, 1986, which was superseded by Bio-Medical Waste Management Rules, 2016 were complied with.

While accepting the facts, the Department stated (February 2024) that the State is in the process of preparing revised action plan. Also, Common Bio-medical Waste Treatment

Facility (CBMWTF) is in the final stage of construction at Tuirial, Aizawl through Aizawl Smart City Project which will greatly facilitate disposal.

1.5.2.12 Mortuary Services in the District Hospitals

IPHS envisages that every DH shall have facilities for keeping of dead bodies and for conducting autopsy.

In Mizoram, 24/7 mortuary services were functional only in Aizawl DH. In other DHs though designated rooms were allocated for mortuary services they lacked Cold Storage facility.

The Department accepted the facts (February 2024).

1.5.2.13 Ambulance Services

IPHS stipulates that DHs should have well equipped Basic Life support (BLS) and desirably one Advanced Life Support (ALS) ambulance. These ambulances should be provided with Communication Systems and there shall be separate space for parking near the emergency service.

In Mizoram, the National Ambulance Service (NAS) under the National Health Mission was set up in 2013 with 62 Ambulances across 59 different health institutions within the State.

At present, though the number of ambulances has increased to 148, only one ambulance is equipped with Advance Life Support (ALS) while 12 ambulances are equipped with Basic Life Support (BLS). The remaining 135 ambulances were used for providing transportation facility to pregnant women in order to provide safe, healthy and hygienic delivery at health institutions. The NAS functions 24/7 and is monitored by a centralised Call Centre (102 toll free).

Further, apart from providing pick and drop facility to pregnant women and infants, NAS also transports patients that are in need of emergency medical service.

While accepting the facts, the Department stated (February 2024) that the State will propose to the Ministry of Health and Family Welfare through National Health Mission to acquire more ambulances and also improve referral services through various available funds.

1.5.2.14 Ayushman Bharat- Coverage and Achievement

Ayushman Bharat is flagship scheme of Government of India. Ayushman Bharat is an attempt to move from sectoral and segmented approach of health service delivery to a comprehensive need-based healthcare service. It was launched in September 2018 to achieve Universal Health Coverage (UHC) as recommended in National Health Policy, 2017. This scheme aims to undertake path breaking interventions to holistically address the healthcare system (covering prevention, promotion and ambulatory care) at the primary, secondary and tertiary level. Ayushman Bharat adopts a continuum of care approach, comprising two inter-related components, which are:

1. Pradhan Mantri Jan Arogya Yojana (PM-JAY), and
2. Health and Wellness Centres (HWCs).

(i) Pradhan Mantri Jan Arogya Yojana (PM-JAY)

Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) is one of the two Healthcare Insurance Schemes of Mizoram State Healthcare Society. Under the Scheme, every household can claim medical bills up to ₹ 5.00 lakh per annum through Golden Card issued by the Mizoram Healthcare Society. The claim may be preferred any number of times during a year by the beneficiary families subject to a limitation of ₹ 5.00 lakh per annum.

Under AB-PMJAY, the State Government had empanelled 96 Hospitals (90 public hospitals and Six private hospitals) as of March 2022 for availing benefits under AB-PMJAY.

The State had identified approximately 2.17 lakh households with an estimated 9.75 lakh members to be eligible under the scheme. It was, however, observed that only 4.40 lakh cards have been issued as on date indicating that not even 50 *per cent* of the eligible beneficiaries have been covered.

The following categories of family are covered under AB-PMJAY:

- (a) Family categorised as 'Deprived Class' under Socio Economic and Caste Census (SECC), 2011 under the Ministry of Rural Development.
- (b) Families having 'Smart Card' under Rashtriya Swasthya Bima Yojana (RSBY) in 2018.

Under the scheme, 4,39,501 cards have been issued till 2022-23. The Golden Card is applicable in all Government Hospitals and recognised/ empanelled Private Hospitals in India.

The number of patients benefitting from the scheme during 2018-19 to 2021-22 is given in **Table-1.44**.

Table-1.44: Number of beneficiaries admitted in public and private hospitals under PMJAY during 2018-19 to 2021-22

Portability/ Non-Portability	Private/ Public Hospital	Number of beneficiaries admitted in public and private hospitals during the financial year(s):				Grand Total
		2018-19	2019-20	2020-21	2021-22	
Portability ⁴¹	Public	102	333	72	904	1,411
	Private	5	101	64	154	324
Non-Portability	Public	6,779	25,190	15,080	11,884	58,933
	Private	140	1,867	1,714	866	4,587
Total:		7,026	27,491	16,930	13,808	65,255

Source: Information furnished by Directorate of Health Services, Government of Mizoram.

⁴¹ Portability means patients getting treatment outside the State of Mizoram while non-portability means those patients getting treatment within the State of Mizoram

Table-1.45: Amounts of claim paid to public and private hospitals under PMJAY during 2018-19 to 2021-22

Nature of Hospital	Claims paid during the years (₹ in crore):				
	2018-19	2019-20	2020-21	2021-22	Total
Public	5.13	20.68	16.34	13.33	55.48
Private	0.17	2.80	2.54	1.16	6.67
Total	5.30	23.48	18.88	14.49	62.15

Source: Information furnished by Directorate of Health Services, Government of Mizoram

Thus, under the Scheme 65,255 patients were admitted in both public and private hospitals with a total expenditure of ₹ 62.15 crore during 2018-22. Audit noticed that less number of claimants under the scheme was due to the fact that only 4.40 lakh (less than 50 *per cent*) cards had been issued despite 9.75 lakh members identified to be eligible under the scheme.

While accepting the facts, the Department stated (February 2024) that the State is in the process of implementing the Mizoram Health Systems Strengthening Project (MHSSP) with World Bank loan under which one component is for strengthening of health insurance system. The project has been implemented since July 2021. The State also has a project with Asian Development Bank for strengthening of health insurance ecosystem to support Universal Health Coverage in the State and is working towards convergence of existing schemes like PMJAY, Mizoram State Health Insurance Scheme and Medical Re-imbursment for regular employees scheme.

(ii) Operationalisation of Health & Wellness Centres (HWCs)

Ayushman Bharat - Health & Wellness Centres (AB-HWCs) have been implemented in Mizoram through the National Health Mission (NHM) since 2018-19. As per Ministry of Health & Family Welfare (MoHFW) guidelines, 15 *per cent* of target Health Sub Centers (HSC) in the State are to be implemented through the Ministry of AYUSH as AYUSH SC-HWCs.

It is envisaged to upgrade all existing Health Sub Centres (HSCs) & Primary Health Centres (PHCs) into Health & Wellness Centres (HWCs) in an incremental manner by 2022. One of the critical inputs of this upgradation is infrastructural up-gradation. MoHFW had released draft infrastructure design of HWCs to assist states in the process.

The Ministry of Health & Family Welfare (MoHFW) aims to convert all HSCs and PHCs in Mizoram into HWCs by December 2022. For sub-centres, one of the most critical inputs is the additional human resource (HR) of a Mid-Level Health Provider (MLHP). In Mizoram, BSc (Nursing) graduates are required to be posted for upgrading the existing HSCs or PHCs into HWCs. **Table-1.46** below highlighted the yearly target for conversion of HSCs and PHCs into HWCs by December 2022.

Table-1.46: Yearly targets for conversion of HSCs/ PHCs to HWCs

Year	Rural PHCs	Urban PHCs	HSCs	Total
2018-19	4	8	20	32
2019-20	52	0	29	81
2020-21	1	0	79	80
2021-22	0	0	120	120
Dec 2022	0	0	65	65
Total	57	8	313	378

Source: Information furnished by Health and Family Welfare Department, Government of Mizoram.

In line with the endeavor of the Government of India, the Government of Mizoram, Health & Family Welfare Department has achieved this target as of May 2023 and 57 rural PHCs, eight UPHCs and 313 HSCs have been converted into Health and Wellness Centres.

Patients served by the HWCs in the State from 2018-19 up to 2021-22 are as given in **Table-1.47** below.

Table-1.47: Patients served at different HWCs

Name of District	Number of patients in the:			Total Number of patients
	HSC	PHC	UPHC	
1	2	3	4	5 = (2+3+4)
Aizawl	2,47,446	1,12,200	1,08,330	4,67,976
Champhai	33,303	85,270	0	118,573
Kolasib	49,332	43,412	0	92,744
Lawngtlai	22,655	27,702	0	50,357
Lunglei	1,08,595	61,734	0	1,70,329
Mamit	1,22,368	52,348	0	1,74,716
Serchhip	48,341	38,678	0	87,019
Siaha	16,033	19,396	0	35,429
Total	6,48,073	4,40,740	1,08,330	11,97,143

Source: Information furnished by Health and Family Welfare Department, Government of Mizoram.

1.5.2.15 Medical College in the State

The first Committee for establishment of Medical College and Referral Hospital was constituted on 08 May 2009 under the chairmanship of the Chief Minister. The first meeting of the Medical College Committee under the Chairmanship of the Health Minister, Government of Mizoram held on 09 June 2013 approved the name of the Medical College as 'Mizoram Institute of Medical Education & Research'-MIMER.

A new Centrally Sponsored Scheme (CSS) was envisaged under the Twelfth Plan for setting up of new Medical Colleges attached to existing District Hospitals/ Referral Hospitals. Under this new CSS the Government of India gave approval during February 2014 for opening of a New Medical College at the State Referral Hospital, Falkawn with a total project cost of ₹ 189 crore. The Government of India and the State Government signed the Memorandum of Understanding for setting up of Medical College during May 2014.

The Medical College finally became functional on 25 May 2018 when the Ministry of Health & Family Welfare, Government of India conveyed the Letter of Permission for establishment of the Medical College.

The name of the institution was later changed to Zoram Medical College (ZMC) on 26 April 2019.

1.5.2.16 Budget Allocation and expenditure

The budget allotment and expenditure of the State Government and the Health and Family Welfare Department during 2017-22 are shown in **Table-1.48** below:

Table-1.48: Budget allotment and expenditure of the State and the Department

(₹ in crore)

Year	State		Health Sector		GSDP	Health Expenditure (percentage of GSDP)
	Budget	Expenditure	Budget (percentage of State Budget)	Expenditure (percentage of State Budget)		
2017-18	11,089.46	9,284.96	733.44 (6.61)	547.86 (4.94)	19,385	2.83
2018-19	12,644.30	9,790.41	754.34 (5.97)	576.85 (4.56)	21,912	2.63
2019-20	14,346.73	11,367.37	751.00 (5.23)	584.41 (4.07)	24,990	2.34
2020-21	13,931.89	11,375.10	775.56 (5.57)	569.52 (4.09)	23,923	2.38
2021-22	17,356.33	13,476.19	836.98 (4.82)	686.05 (3.95)	27,824	2.47
Total	69,368.71	55,294.03	3,851.32 (5.55)	2,964.69 (4.27)	-	2.51

Source: Appropriation Accounts, Mizoram and State Finances Audit Report, Mizoram

National Health Policy, 2017 envisages increase in the sectoral health spending to more than eight *per cent* of the budget by 2020. However, it is seen from **Table-1.48** above that during 2017-22, budgetary outlay on Health Sector in the State was less than eight *per cent* and ranged between 4.82 *per cent* (2021-22) and 6.61 *per cent* (2017-18) while the expenditure on health sector to the total expenditure ranged between 3.95 *per cent* (2021-22) and 4.94 *per cent* (2017-18).

Further, as against the NHP target to increase State Health Sector expenditure to 2.5 *per cent* of the Gross State Domestic Product (GSDP) by 2025, the State's expenditure on Health Sector ranged between 2.34 (2019-20) and 2.83 *per cent* (2017-18) of GSDP.

While accepting the facts, the Department reiterated (February 2024) that Mizoram is one of the better performing states in terms of public health financing by the Government.

1.5.3 Audit Objective

The Compliance Audit was conducted to assess whether:

1. The primary healthcare infrastructure and services are available and properly managed;
2. Support services in healthcare facilities are available and adequate;
3. State spending on Health has improved the health and wellbeing of the people as per Sustainable Development Goal-3 (SDG-3);
4. Infrastructure developed during COVID-19 has been utilised; and
5. Functioning of AYUSH in the sampled units (Districts/ CHCs/ PHCs) was adequate and satisfactory.

1.5.4 Audit Criteria

Audit findings were benchmarked against the criteria sourced from the following:

- National Health Policy, 2017;
- Sustainable Development Goal-3 (SDG-3), National Indicators and State specific targets and programmes;
- Indian Public Health Standards (IPHS) 2012 for District Hospitals, Community Health Centres (CHCs), Primary Health Centres (PHCs) and Sub Health Centres;
- Medical Council of India (MCI) Act, 1956 replaced by National Medical Commission Act, 2019;
- Drugs & Cosmetics Act, 1940;
- General Financial Rules (GFR)-2017, Central Government Accounts (Receipt & Payment) Rules, 1983; and
- Government of India/ Government of Mizoram policies, norms, orders, circulars, annual/ administration reports, *etc.*, related to healthcare.

1.5.5 Scope of Audit and Methodology

The Audit covered the period 2017-2018 to 2021-2022 by examining relevant records of Health and Family Welfare (H&FW) Department and Finance Department at the State level, offices of Director of Health Services, Director of Hospital and Medical Education, Director of AYUSH at the Directorate level and offices of the CMOs, Medical Superintendent, and District Health Societies at the District level. Inspection of the District Hospitals of sampled Districts, sampled CHCs, PHCs, *etc.*, were also carried out.

Audit methodology includes scrutiny of records/ files, gathering of evidence by issue of Audit enquiries and conducting joint physical verification in sample units with departmental officials.

An Entry meeting with the Secretary of the H&FW Department and other stakeholders was conducted (27 January 2022) at the commencement of the Compliance Audit to discuss the Audit objectives, Audit criteria and Audit methodology. An Exit Conference was conducted on 18 December 2023 after completion of the Compliance Audit to discuss the Audit findings. Replies furnished by the Department and relevant comments expressed during the Exit Conference have been suitably incorporated in the Report.

1.5.6 Audit Sample

Aizawl, Champhai and Lawngtlai districts, which were covered in Standalone 'Performance Audit on Select District Hospitals' for the period 2014-15 to 2018-19 have also been covered in this Compliance Audit.

Two blocks each of Champhai and Lawngtlai districts and four blocks of Aizawl District were selected randomly⁴² using SRSWOR (Simple Random Sampling Without

⁴² Random sampling was carried out after arranging the units in alphabetical order

Replacement). One CHC (when CHCs are available within the selected blocks) and one PHC within each selected block were selected for Audit using SRSWOR with number of patients as the sampling criteria. AYUSH facilities were included to assess the performance of the State Government under National AYUSH Mission. The audit coverage is as shown in **Table-1.49** below:

Table-1.49: Sample Units covered

Sl. No.	Name of the District	Name of the Block	Name of the CHC	Name of the Rural PHC	Name of the Urban PHC
1.	Aizawl	Aibawk	-	Aibawk	-
		Thingsulthliah	Thingsulthliah	Khawruhlian	-
		Tlangnuam	Lengpui	-	Chawlhmun
		Darlawn	Sakawrdai	-	-
2.	Champhai	Champhai	-	Hnahlan	Champhai
		Khawbung	Biate	Bungzung	-
3.	Lawngtlai	Chawngte	Chawngte	Borapansury	-
		Sangau	-	Bualpui NG	-
4.	AYUSH Mission				

1.5.7 Acknowledgement

The Office of the Principal Accountant General, Mizoram acknowledges the cooperation extended by the officers and staff of the Health and Family Welfare Department as well as the sampled DHs, CHCs and PHCs during conduct of this Compliance Audit.

Audit Findings

Audit Objective 1: Whether the primary healthcare in infrastructure and services are available and properly managed

1.5.8 Availability of Infrastructure

1.5.8.1 Shortages of CHCs, PHCs and HSCs

The required number of health facilities as per Indian Public Health Standards (IPHS), their availability and shortfall thereof, against the three categories of healthcare infrastructure as of March 2022 is given in **Table-1.50**.

Table-1.50: Shortage of health facilities in the State⁴³

Health facility	Norms taken into consideration (IPHS 2012)	Required as per norms	Available	Shortfall Excess (+)/ Shortfall (-) (Per cent)
Health Sub Centre (HSC) ⁴⁴	One HSC for 3,000 population	413	379	(-) 34 (8)
Primary Health Centre (PHC) ⁴⁵	One PHC for every 20,000 population	61	61 ⁴⁶	0 (o)
Community Health Centre (CHC) ⁴⁷	One CHC for every 80,000 population	14	09	(-) 5 (36)

Source: Health and Family Welfare Department, Government of Mizoram

The availability of PHCs in the State was as per the norm, whereas the shortage of CHCs and HSCs stood at 36 *per cent* and eight *per cent* respectively.

While accepting the audit observation, the Department emphasised (February 2024) that the State Government is also cognizant of the ‘time to reach’ approach recommended by the National Health Policy, 2017 and, therefore, recently notified PHCs are based in areas where there is a strong need.

1.5.8.2 Shortage of manpower in the sampled CHCs and PHCs

The staffing of manpower under the sampled CHCs and PHCs during 2017-22 is given in **Appendix-1.15 to 1.18** and **Appendix-1.19** respectively.

During 2021-22, the overall requirement of doctors in all sampled CHCs and PHCs was 58 while availability was 24 with shortfall of 59 *per cent*. The requirement of nurses in all sampled CHCs and PHCs was 79 while availability was 51 resulting in shortfall of 35 *per cent* while the requirement of paramedics in all sampled CHCs and PHCs was 87 against availability of only 46 paramedics resulting in shortfall of 47 *per cent*. The percentage of shortage/ surplus of Doctors, Nurses and paramedics is given in **Appendix-1.23** and **Chart-1.12** below.

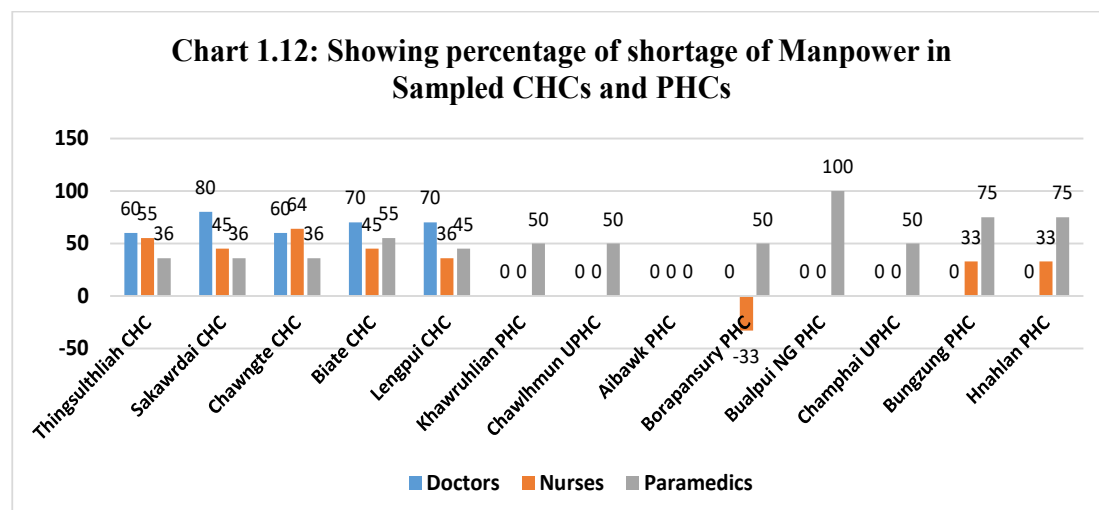
⁴³ Appendix-1.6

⁴⁴ Appendix-1.9

⁴⁵ Appendix-1.8

⁴⁶ Including four PHCs of Longpuighat, Zobawk, Kanhmun and Tuipuibari which were notified but yet to be made functional

⁴⁷ Appendix-1.7



The Department accepted the facts (February 2024).

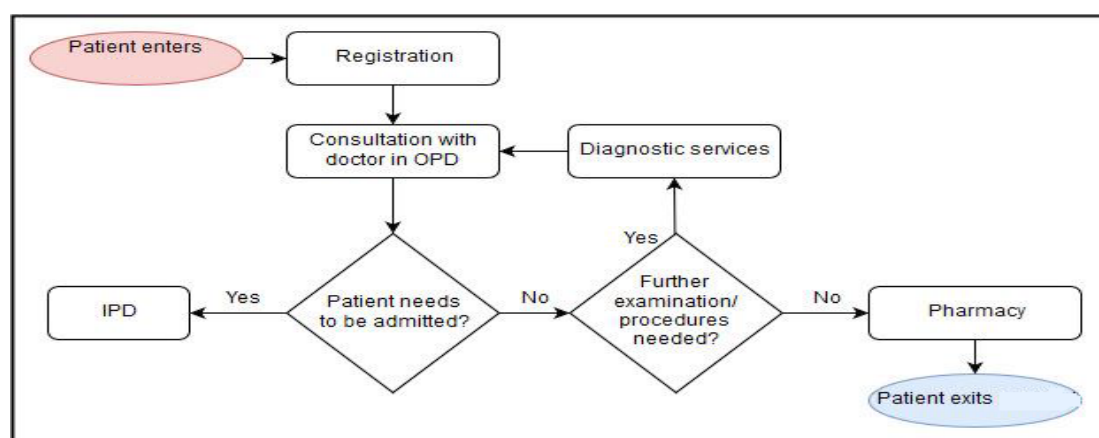
1.5.9 Availability of services in sampled health facilities

The various types of services provided in the test checked health facilities are as detailed in **Paragraphs 1.5.9.1 to 1.5.9.9**:

1.5.9.1 Out-Patient Department Services in CHCs and PHCs

Out-Patient Department (OPD) normally remains integrated with the in-patient services and is staffed by physicians and surgeons who also attend inpatients in the wards. Many patients are examined and given treatment as out-patients before being admitted to the hospital at a later date as in-patients. The treatment procedure followed in the Public Health Institutions in the State is outlined in **Chart-1.13**.

Chart-1.13: Flow of OPD services in PHCs and CHCs



Audit findings pertaining to OPD services like registration, consultation, waiting time and other basic OPD facilities/ services are discussed below.

(a) Registration facility for OPD

Registration Counter is the first point of contact with the hospital for patients and is considered an important component of the hospital for patients and attendants.

The average daily load at the Registration Counter in the sampled health centres during 2021-22 is given in **Table-1.51**.

Table-1.51: Details of OPD patient registration in CHC/ PHC during 2021-22

Sl. No.	Name of Health Facilities	No. of counters	Total number of OPD patients during 2021-22	Average patient per month per counter	Average number of patients per counter per hour ⁴⁸
	Thingsulthliah CHC	1	2,449	204	2
	Sakawrdai CHC	1	4,543	379	4
	Chawngte CHC	1	2,256	188	2
	Biate CHC	1	3,711	309	4
	Lengpui CHC	1	1,320	110	1
	Khawruhlian PHC	1	630	53	1
	Chawlhmun UPHC	1	2,246	187	2
	Aibawk PHC	1	3,052	254	3
	Borapansury PHC	1	396	33	0
	Bualpui NG PHC	1	1,594	133	2
	Champhai UPHC ⁴⁹	1	00	00	0
	Bungzung PHC	1	956	80	1
	Hnahlan PHC	1	3,578	298	3

Source: Departmental records

All the health centres follow manual system of registration of patients at the point of entry.

(b) OPD load and OPD Cases in sampled CHCs and PHCs

As per IPHS guidelines, CHCs should provide Medicine, Surgery, Obstetrics & Gynaecology, Paediatrics, Dental, AYUSH and emergency services while Eye Specialist services should be available at one in every five CHCs. IPHS norms for PHCs only specify for the availability of OPD services managed by Medical Officers without specialisation.

Contrary to this, Audit observed that the five sampled CHCs did not have any specialist doctors as envisaged in IPHS guidelines (**Appendix-1.15**). The OPD services in both the CHCs were managed by Medical Officers who did not have any specialisation.

Total OPD load, average patient load per doctor per year and per day is given in **Appendix-1.24**.

It was observed that there was no consistency in the trend of patients during 2017-18 to 2021-22 in the total annual OPD. It was highest during 2019-20 (51,724) and gradually reduced to the lowest during 2021-22 (26,731).

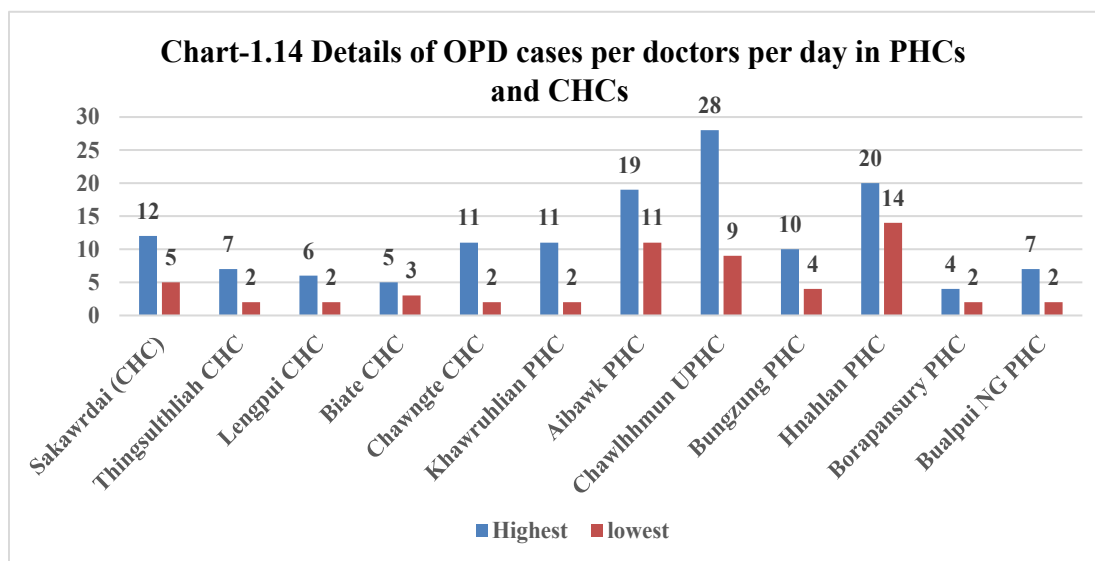
As per IPHS Norms 2012 for PHC, the minimum standards are being projected based on case load of 40 patients per doctor per day, the expected number of beneficiaries for

⁴⁸ OPD hour in Mizoram is 9.00 AM to 1:00 PM and approximately 22 OPD days are available in one month

⁴⁹ Champhai UPHC did not have any data as it was newly established

maternal and child health care and family planning and about 60 per cent utilisation of the available indoor/ observation beds (six beds).

The overall range of OPD cases per doctor per day in the sampled Health establishments is depicted in **Chart-1.14**⁵⁰.



From **Chart-1.14** above, it is evident that all the CHCs and PHCs handle lower average patient load per doctor per day than the projected IPHS norm.

While accepting the facts, the Department stated (February 2024) that the availability of Specialist services that should be available at CHCs is contingent upon manpower availability over which the Department is reliant upon the State Government. Austerity measures of the State Government also resulted in very little recruitment of staff of all cadres. However, the Department is exercising the essence of Universal Health Coverage (UHC) with the support of the World Bank and Asian Development Bank.

1.5.9.2 IPD cases in the test checked CHCs and PHCs

As per IPHS guidelines for CHCs and PHCs the requisite number of beds is 30 and six respectively.

Audit observed that in the sample health establishments only three CHCs viz., Sakawrdai CHC, Thingsulthiah CHC and Chawngte CHC had shortage of beds.

The detailed information on IPD cases and number of beds in test checked CHCs is given in **Appendix-1.25**.

Further as per IPHS guidelines for CHCs, specialist in-patient service pertaining to General Medicine, General Surgery, Obstetrics & Gynaecology and Paediatrics should be available in addition to Medical Officers. In the case of PHCs, as per IPHS norms, IPDs are managed by Medical Officers.

Analysis of data revealed that the IPD load was on a downward trend in the sampled health establishments from 5,292 during 2017-18 to 3,558 during 2021-22, with a more

⁵⁰ Champhai UPHC did not have any data as it was newly established

noticeable decrease in IPD load in CHCs. This could partially be attributed to absence of the requisite category of specialist doctors in Medicine, General Surgery, Obstetrics & Gynaecology and Paediatrics in the sampled CHCs (**Appendix-1.15**).

While accepting the facts, the Department stated (February 2024) that the availability of Specialist services that should be available at CHCs is contingent upon manpower availability over which the Department is reliant upon the State Government. Austerity measures of the State Government also resulted in very little recruitment of staff of all cadres. However, the Department is exercising the essence of Universal Health Coverage (UHC) with the support of the World Bank and Asian Development Bank.

1.5.9.3 Operation Theatre services, Surgical Procedures and average surgery per doctor in CHCs and PHCs

(a) *Surgical procedures and average surgery per doctor in CHCs and PHCs*

As per IPHS norms for CHCs, routine and emergency surgery services like dressings, incision and drainage and surgery for hernia, hydrocele, appendicitis, haemorrhoids, fistula, and stitching of injuries besides handling of emergencies like intestinal obstruction, haemorrhage, *etc.*, should be provided. Other management including nasal packing, tracheostomy, foreign body removal, fracture reduction and putting splints/ plaster cast should also be provided. Accordingly, prescribed surgical equipment and physical infrastructures are required to be provided.

Also, as per IPHS norms for PHCs, to facilitate conducting selected surgical procedures like vasectomy, tubectomy, hydrocelectomy, *etc.*, PHCs should have a changing room, sterilization area, an operating area and washing area. Separate facilities for storing of sterile and unsterile equipment/ instruments should be available in the OT besides prescribed equipment and medicines.

The health centre-wise number of surgeries per year in test checked CHCs and PHCs are given in **Appendix-1.26**.

It can be observed from **Appendix-1.26** that while there was no significant increase or decrease in the number of surgical procedures conducted during 2017-18 to 2020-21, the number increased substantially by 39 *per cent* in 2021-22 (1,570 from 1,133 in 2020-21). Centre-wise number of surgeries per year in sampled health centres is given in **Appendix-1.26**.

Further, it was observed that the test checked health facilities were lacking infrastructure like Specialist Doctors in the sampled CHCs (**Appendix-1.15**) for conducting surgical procedures except for minor procedures. Given that the highest number of surgical procedures done by a Doctor in a year is 185 (Hnahlan PHC), the sampled entities are comfortably placed in terms of capacity for minor surgical services.

While accepting the facts, the Department stated (February 2024) that the State is pursuing infrastructure upgradation projects and envisages that by 2025-26 most of the health facilities will have infrastructure commensurate with the level of care they are to provide.

1.5.9.4 Non-availability of Blood Storage facilities

As per IPHS norms for CHC, the area required for setting up the blood storage facility is only 10 square meters, should be well-lighted, clean and preferably air-conditioned. One of the existing doctors and technicians should be designated for this purpose. They should be trained in the operation of blood storage. There is no requirement for blood storage facilities in PHCs and other basic procedures.

24 hours power supply is essential, and provision of back-up generator is also required along with related equipment like blood bank refrigerators having a storage capacity of 50 units of blood, deep freezers, insulated carrier boxes, centrifuge, prescribed consumables and reagents.

All the five sampled CHCs did not have the required blood storage facilities as per IPHS norms for CHC. The lack of the blood storage facilities poses a big risk to the survival of patients requiring emergency blood transfusion in the areas serviced by the sampled CHCs.

While accepting the facts, the Department stated (February 2024) that the State will take immediate measures to ensure availability of blood storage facilities/ Blood bank in these CHCs.

1.5.9.5 Availability of diagnostic services

Diagnostic tests play a crucial role at every step of disease management. The diagnostic tests which are required to be done in the sampled health facilities and their availability are shown in **Table-1.52** and **Appendix-1.27**.

Table-1.52: Availability of diagnostic tests in the sampled health facilities

Name of the health establishments	No. of Clinical Pathology Services		Cardiac investigation test		Ophthalmology Services		Radiology	
	No. of tests as per IPHS	Tests available (<i>per cent</i>)	No. of tests required as per IPHS	Available	No. of tests as per IPHS	Available	No. of tests required as per IPHS	Available
Sakawrdai CHC	29	13 (44.83)	3	0	3	2	7	2
Thingsulthiah CHC	29	11 (37.93)	3	0	3	1	7	1
Chawngte CHC	29	5 (17.24)	3	0	3	2	7	0
Lengpui CHC	29	3 (10.34)	3	0	3	3	7	2
Biate CHC	29	12 (41.38)	3	0	3	2	7	0

Source: Departmental records

Analysis of the data revealed that the availability of Clinical Pathology services and other tests, ranged between 10.34 *per cent* and 44.83 *per cent* in the sampled CHCs. Cardiac Investigation Test service was not available in any of sampled CHCs. Ophthalmology service was available in all of the sampled CHCs though all the essential tests as envisaged in the IPHS could not be done. Radiological investigation was available in three of the sampled CHCs though these were the part of essential service delivery as per the IPHS guidelines.

The non-availability of such mandatory tests in the CHCs could result in absence of the desired level of services like delayed diagnosis of many health conditions. This, in turn, would lead to worsening health outcomes (because early detection of many diseases can lead to better outcomes).

The above tests were not part of mandatory tests for PHCs as per IPHS norms.

The Department accepted the facts (February 2024).

1.5.9.6 Quality assurance of Laboratory/ Pathology services

Quality testing of in-house pathological services through the Internal Quality Assessment Scheme as well as through External Quality Assessment Scheme was part of the quality assurance mechanism for laboratory services under IPHS for CHCs. The periodic validation of laboratory reports should be done by external agencies like District PHC/ Medical College for quality assurance of laboratory services. Further, periodic calibration of laboratory equipment is also required.

Audit noticed that Internal Quality Assessment and External Quality Assessment of in house pathological services was not done for CHCs in the State. No records regarding validation of laboratory reports by the District Health Authority for quality control of laboratory services, periodic calibration of laboratory equipment were made available to audit. Thus, quality assurance of the Pathological and other laboratory services could not be evaluated or ensured.

While accepting the audit observation, the Department stated (February 2024) that the State will take measures to ensure quality certification of laboratories through National Accreditation Board for Testing and Calibration Laboratories (NABL).

1.5.9.7 Referrals of patients to higher facilities for better treatment

Audit noticed that during 2017-22, out of 2,21,920 patients admitted in sampled health facilities, 2,603 patients were referred to the District and State Hospitals from the sampled health facilities. The detailed position is shown in **Table-1.53**.

Table-1.53: Admission of patients and referrals by the health institutions viz., CHCs & PHCs (2017-22)

Health Facility	Number of OPD patients	Number of patients admitted (IPD)	Number of patients referred out	Percentage of referral <i>vis-à-vis</i> admitted
CHC				
Sakawrdai CHC	23,415	3,779	258	6.83
Thingsulthiah CHC	29,035	4,415	403	9.13
Biate CHC	13,822	1,304	91	6.98
Chawngte CHC	39,001	5,837	353	6.05
Lengpui CHC	17,984	636	89	13.99
PHC				
Khawruhlian PHC	10,783	1,743	425	24.38
Aibawk PHC	18,476	1,199	224	18.68
Chawlhmun UPHC	26,009	189	373	197.35
Champhai UPHC	1,470	0	66	--
Bungzung PHC	10,297	771	11	1.43
Hnahlan PHC	23,283	2,521	233	9.24
Borapansury PHC	2,592	237	0	0
Bualpui NG PHC	5,753	129	77	59.69
Grand Total	2,21,920	22,760	2,603	11.44

Source: Departmental records

Analysis of data during 2017-22 revealed that among the CHCs, the lowest *percentage* of referrals was from Chawngte CHC (6.05 *per cent vis-à-vis* the total admissions), while the highest *percentage* of referral cases were from Lengpui CHC (13.99 *per cent vis-à-vis* the total admissions).

Among the PHCs, the maximum number of referrals were from Khawruhlian PHC which was 425 while the highest referral rate was from Chawlhmun UPHC which was 197.35 *per cent vis-à-vis* the total admissions. The referral percentage ranged between zero and 197.35 *per cent* in the sampled PHCs. However, only Borapansury PHC had no referral case.

While accepting the audit observation, the Department stated (February 2024) that timely referrals are encouraged to reduce morbidity and mortality.

1.5.9.8 Emergency and Trauma Care service

As per IPHS norms, a CHC should have the facility to attend emergency cases of surgery, medicine, emergency obstetric care including surgical interventions like caesarean section, emergency care of sick children including facility based Integrated Management of Neonatal and Childhood Illness (IMNCI) strategy, emergency oral health, *etc.* A separate earmarked emergency area is to be located near the entrance of hospital preferably having four rooms (one for doctor, one for minor OT, one for plaster/ dressing and one for patient observation (at least four beds). The PHC should be capable of providing appropriate management of injuries and accidents, first aid, stitching of wounds, incision and drainage of abscess, stabilisation of the condition of the patient before referral, Dog bite/ snake bite/ Scorpion bite cases and other emergency conditions. The PHC should have separate Minor OT/ Dressing Room/ Injection Room, *etc.*

Availability of emergency services in the sampled health institutions are enumerated in **Appendix-1.28** and **Table-1.54** below:

Table-1.54: Status of availability of Emergency Services in the sampled Health Centres

Sl. No.	Nature of the facility required to be available	Status of availability
1.	Whether signage display for emergency on entrance available?	Available in 10 out of 13 sampled Health centres
2.	Whether emergency ward has dedicated triage?	Available in 6 out of 13 sampled Health centres
3.	Whether emergency ward has resuscitation and observation area?	Available in 6 out of 13 sampled Health centres
4.	Whether emergency ward has separate provision for examination of rape/ sexual assault victim?	Available in 4 out of 13 sampled Health centres
5.	Whether emergency ward has separate beds. Duty rooms for Doctors/ Nurses/ Paramedical staff and medico legal cases?	Available in 5 out of 13 sampled Health centres
6.	Whether emergency ward has emergency block to have ECG, Pulse Oximeter, cardiac Monitor with defibrillator, Multiparameter Monitor, ventilator also?	NIL
7.	Whether emergency ward has procedure for receiving and triage of patients?	Available in 6 out of 13 sampled Health centres
8.	Whether emergency ward has emergency protocols are defined and implemented?	Available in 9 out of 13 sampled Health centres

Source: Joint Physical verification data and departmental records

It may be seen from **Table-1.54** above that none of the sampled health Centres have separate emergency block and provisions to have ECG, Pulse Oximeter, cardiac Monitor with defibrillator, Multi-parameter Monitor, ventilator, *etc.* The availability of other required facilities ranged from four to 10 in the 13 sampled Health Centres.

While accepting the audit observations, the Department stated (February 2024) that infrastructure upgradation to meet the quality standards are ongoing.

1.5.9.9 Maternal and Child Care

(a) MMR and IMR

Maternal Mortality Rate (MMR) refers to the number of maternal deaths per 100,000 live births due to causes related to pregnancy or within 42 days of termination of pregnancy, regardless of the site or duration of pregnancy. Infant Mortality Rate (IMR) indicates the number of deaths of infants (under one year) per 1,000 live births.

MMR and IMR are indicative of the health care services of states.

The All India MMR during 2015-17 stood at 122 per 1,00,000 live births which declined to 97 in 2018-20. The All India IMR which stood at 33 per 1,000 live births in 2017 came down to 27 in 2022.

Trend in number of maternal deaths and IMR in Mizoram during 2017-22 are shown in **Table-1.55** below:

Table-1.55: Trend in maternal deaths and IMR in Mizoram during 2017-22

Year	Number of Live births in Mizoram	No. of infant deaths in Mizoram	No. of Maternal deaths in Mizoram	IMR in India	IMR in Mizoram
2017-18	19,393	390	17	32	20
2018-19	19,289	340	26	31	18
2019-20	20,577	369	13	30	18
2020-21	20,051	441	22	29	22
2021-22	19,122	465	25	28	24

Source: Heath and Family Welfare Department, Government of Mizoram

The MMR for Mizoram was not calculated as the live births figures were below one lakh per year during 2017-18 to 2021-22.

The sampled health facilities performed much better in terms of IMR. Only two CHCs (Sakawrdai and Chawngte) and one PHC out of the 13 (five CHCs and eight PHCs) sampled health facilities have IMR ranging between one and 37.

The Department stated (February 2024) that regular Maternal Death Reviews (MDR) are conducted at districts and State to review causes of deaths and reparative actions can be taken to avoid future deaths.

(b) Antenatal Care

According to IPHS, HSCs are mainly responsible for providing Ante Natal Care (ANC) service to the pregnant woman which includes early registration of pregnant woman, providing of minimum four ANC, name-based tracking of all pregnant

women for assured service delivery, identification of high-risk pregnancy cases, etc.

The total number of Pregnant Women (PW) in the State registered for ANC, registered within the first trimester (within 12 weeks), number of PW who received up to three-four ANC check-up, number of PW given TT2/ Booster, etc., during 2016-22 is shown in **Table-1.56**:

Table-1.56: Number of PW registered for ANC

Year	Total number registered	Within first trimester	per cent	No. of PWs received up to four ANC check-ups	per cent	TT2 or Booster given to PWs	per cent	IFA Tablets given to PWs	per cent
2017-18	21,582	16,265	75.36	9,547	44.24	19,937	92.38	5,193	24.06
2018-19	22,682	16,779	73.97	16,013	70.60	19,126	84.32	9,059	39.94
2019-20	23,614	17,764	75.23	13,490	57.13	20,886	88.45	11,977	50.72
2020-21	21,484	17,300	80.53	13,436	62.54	19,470	90.63	16,020	74.57
2021-22	21,485	17,315	80.59	13,443	62.57	19,474	90.64	16,028	74.60
Total	1,10,847	85,423	77.06	65,929	59.48	98,893	89.22	58,277	52.57

Source: Heath and Family Welfare Department, Government of Mizoram

It can be seen from **Table-1.56** above that registration of Pregnant Women (PW) within the first trimester ranged between 73.97 per cent and 80.59 per cent during the period 2017-18 to 2021-22. Overall registration rate within the first trimester was 77.06 per cent during this period. The number of PW who received up to four ANC services was only 44.24 per cent during 2017-18 which increased to 62.57 per cent during 2021-22. The overall number of PW who received up to four ANC checkup, TT2 or Booster and IFA doses were 59.48, 89.22 and 52.57 per cent respectively during the same period.

Audit noticed that in sampled PHCs & CHCs having co-located HSCs, i.e., there are Sub-Centres (SCs) in the same villages. All routine ANC are conducted at SCs and not at PHCs or CHCs. Only patients requiring medical interventions are referred to PHCs/ CHCs from SCs. Therefore, HMIS data and recorded data at PHCs/ CHCs are not available for routine ANC.

(c) Still births

As per the National Family Health Survey -5 (NFHS-5) conducted in 2018-19, the rate of stillbirth in India were 0.90 per cent of live births. The trend of stillbirths in Mizoram is given in **Table-1.57**.

Table-1.57: Number and rate of stillbirths in the State

Year	2017-18	2018-19	2019-20	2020-21	2021-22	Total
Total number of deliveries	19,403	19,527	19,440 ⁵¹	20,728	19,256	98,354
Number of stillbirths	175	184	189	156	195	899
Percentage of stillbirth with reference to deliveries	0.90	0.94	0.97	0.75	1.01	0.91

Source: Heath and Family Welfare Department, Government of Mizoram

⁵¹ The discrepancy between the Total number of deliveries and the Number of live births (Table 1.55) for the year 2019-20 is as per the information provided by the Department

It can be seen from **Table-1.57** that the rate of stillbirths during 2017-22 in the State ranged between 0.75 and 1.01 *per cent*, with the average rate of 0.91 *per cent* for the same period, which was almost at par with the national average of 0.90 *per cent*.

Audit also observed that stillbirth rate varied between 0.0 and 2.65 *per cent* in the sampled PHCs and the CHCs during 2017-22 as shown in **Table-1.58**. It was noticed that the Sakawrdai CHC registered highest stillbirth rate of 2.65 *per cent*.

Table-1.58: Stillbirth rate of the sampled CHCs and PHC

Hospital	Number of deliveries during 2017-18 to 2021-22	Number of stillbirths	Percentage of stillbirths to deliveries
CHCs			
Sakawrdai	528	14	2.65
Thingsulthliah	806	9	1.12
Lengpui	160	1	0.63
Biate	93	0	0.00
Chawngte	1,259	21	1.67
PHC			
Khawruhlian	304	2	0.66
Aibawk	274	1	0.36
Chawlhmun UPHC	71	1	1.41
Bungzung	109	0	0.00
Hnahlan	356	5	1.40
Champhai UPHC	0	0	0.00
Borapansury	59	1	1.69
Bualpui NG	172	1	0.58
Total	4,191	56	1.34

Source: Heath and Family Welfare Department, Government of Mizoram

It can be seen from **Table-1.58** above that the percentage of stillbirths in the 13 sampled health institutions was 1.34 *per cent* which is way above the overall State as well as national rate.

1.5.9.10 Conclusion

There were shortages of doctors, nurses and paramedics in the sampled health facilities. Though services of specialist doctors were to be made available in the CHCs as per the IPHS, specialist service was not available in any of the sampled CHCs. Diagnostic services for Cardiac investigation test, required to be available in the CHCs as per the IPHS norms were not available in all the sampled health institutions. Quality assurance in the Laboratory Services as mandated under the IPHS was not done. The CHCs could not provide any emergency major surgery due to non-availability of specialist doctors and lack of equipment. Despite the better performance of sampled health facilities in terms of IMR, their performance in terms of ANC checkups and still-birth rate is worse off than the State average.

1.5.9.11 Recommendations

- i. *The State Government may initiate action for posting of the required number of manpower in all the CHCs and PHCs;*

- ii. *Necessary diagnostic services may be provided in all the CHCs as per IPHS norms; and*
- iii. *The State Government should strengthen the grass root level health care services so as to increase the number of Pregnant Women adopting Ante Natal Care and to reduce the number of still births.*

Audit Objective 2: Whether support services in healthcare facilities are available and adequate

1.5.10 Other Support Services

The operational activities of a health facility comprise a wide variety of support services viz., management of linens, dietary management, ambulance service, sweeping and cleaning service, hospital security service, etc.

Management of support services in the sampled health institutions are discussed in succeeding **Paragraphs 1.5.10.1 to 1.5.10.10.**

1.5.10.1 Dietary services

As per IPHS norms for CHCs, diet may either be outsourced or adequate space for cooking should be provided in a separate space. The diet within the budget/ funds and affordability should be healthy food, nutritious and full of minerals and vitamins. Also, as per IPHS norms for PHCs, nutritious and well-balanced diet shall be provided to all IPD patients keeping in mind their cultural preferences. A suitable arrangement with a local agency like a local women's group/ NGO/ Self-Help Group for provision of nutritious and hygienic food at reasonable rates may be made wherever feasible and possible.

Audit noticed that Dietary services in the sampled health facilities were outsourced without any provision during 2017-18 to 2021-22 to ensure the quality of food served, nutritious value and without any prescription of diet by dieticians. Further, Food Safety Standard Authority of India (FSSAI) license was not obtained by any of the sampled health facilities and examination of food served in the health facilities was not done by food inspectors.

Audit observed that in absence of any concrete service level agreement, there was no provision to ensure that nutritious and healthy food suiting the requirements of patients were served in the health centres. 11 of the sampled health establishments provided dietary services at the rate of ₹ 60-80 per meal either through in-house kitchen or through outsourced services.

While accepting the audit observation, the Department stated (February 2024) that all measures will be undertaken to ensure that diets provided in the CHCs/ PHCs comply with FSSAI standards.

1.5.10.2 Hospital linen/ laundry services

As per IPHS norms for CHCs and PHCs, clean linen was to be provided to patients with provisions for laundry services and proper storage of the linens.

It was observed in audit that during 2017-19 to 2021-22 in all the sampled health facilities except Champhai UPHC and Borapansury PHC, separate laundry registers were maintained wherein the dates and numbers of linen washed was recorded. All the reserved stocks of clean linen were kept in closed cupboards in the wards in all the sampled health facilities. However, the Department did not provide any guidelines regarding schedule of changing soiled bed sheets and linens for providing clean and hygienic linen services and linen services were outsourced.

Thus, the linen/ laundry services were satisfactory in the sampled health facilities (except Champhai UPHC and Borapansury PHC) and may be emulated in all the CHCs and PHCs of the State.

While accepting the audit observation, the Department stated (February 2024) that efforts will be undertaken to maintain and improve the quality of linen/ laundry services.

1.5.10.3 Bio-Medical Waste management

Bio-Medical Waste Management (BMW) Rules, 2016 stipulates that bio-medical waste shall be segregated into containers or bags at the point of generation in accordance with Schedule-I prior to its storage, transportation, treatment and disposal.

During the period covered in audit, except for Borapansury PHC, all the sampled health centres practiced segregation of waste into different categories in separate-coloured bins, available at the point of generation of waste, particularly in the ward areas, OTs, etc., as per the Bio-Medical Waste Management (BMW) Rules, 2016. However, all the Bio-Medical Waste was subsequently mixed at the time of dumping except in six Health Centres⁵² as there are no provisions for disposal of segregated wastes, thereby rendering the initially followed segregation process entirely futile. Only six⁵³ out of the 13 sampled CHCs/ PHCs maintained and updated the BMW registers on a day-to-day basis.

Only six⁵⁴ of the sampled CHCs and PHCs have effluent treatment plants, deep burial for placenta and other biological wastes. Training on BMW management was also imparted to the Staff as per norms, except for Borapansury PHC and Champhai UPHC.

Only eight⁵⁵ out of the 13 test checked health facilities obtained consent/ authorisation to handle bio-medical waste as per norms. Thus, the Bio- Medical Waste Management (BMW) Rules, 2016 were not fully complied with by CHCs and PHCs. Details are shown in **Appendix-1.29**.

While accepting the audit observation, the Department stated (February 2024) that the State is in the process of strengthening the entire Bio- Medical Waste ecosystem in the State through Mizoram Health System Strengthening Project.

⁵² Thingsulthliah CHC, Sakawrdai CHC, Lengpui CHC, Khawruhlian PHC, Chawlhmun UPHC and Bungzung PHC

⁵³ Sakawrdai CHC, Thingsulthliah CHC, Lengpui CHC, Aibawk PHC, Chawlhmun UPHC and Hnahlan PHC

⁵⁴ Thingsulthliah CHC, Sakawrdai CHC, Lengpui CHC, Khawruhlian PHC, Chawlhmun UPHC and Bungzung PHC

⁵⁵ Sakawrdai CHC, Thingsulthliah PHC, Biate CHC, Lengpui CHC, Khawruhlian PHC, Aibawk PHC, Bualpui NG PHC and Chawlhmun UPHC

1.5.10.4 Staff immunisation and medical check-up of health care workers

Periodic medical check-up and immunisation of staff is a part of the hospital infection control programme to be followed by the CHCs and the PHCs as per norms.

All the sampled health centres provided Hepatitis B and Tetanus injections and regular health check-up to all their health care workers involved in handling of bio-medical waste, except in Borapansury PHC (**Appendix-1.29**).

1.5.10.5 Disinfection and sterilisation

According to the Assessor's Guidebook for Quality Assurance for PHCs, 2014, the facility should have standard procedures for disinfection of lab and sterilisation of equipment and instruments. Also, as per the Hospital Infection Control Guidelines, specific guidance has been issued regarding disinfection and sterilisation to prevent transmission of infections.

Audit noticed that out of the sampled health facilities five PHCs viz., Khawruhlian PHC, Chawlhmun UPHC, Aibawk PHC, Borapansury PHC and Champhai UPHC did not adopt boiling, autoclaving and chemical sterilisation process for disinfection and sterilisation of hospital equipment and instruments. Thus, these five health facilities were not in line with Hospital Infection Control guidelines (**Appendix-1.29**).

1.5.10.6 Infection control

As per Assessor's Guidebook for Quality Assurance in the health facilities, health facilities should have functional Infection Control Committee as part of the Infection Control Programme for prevention, control and measurement of Hospital associated infection.

Hospital Infection Control Committee (HICC) was found to have been formed in 11 out of the 13 sampled health centres as required by norms as shown in **Appendix-1.30**. It was noticed in audit that checklist for infection control programme was not available in 02 out of 13 sampled health centres. Verification of the minutes of the quarterly HICC meetings of Thingsuthliah CHC revealed that the HICC meeting discussed issues based on the current challenges faced especially during Covid-19 pandemic. Thus, it was observed that the HICC addressed the core issues of infection control during such meetings. Such regular meetings with specific agenda should also be done in other health facilities of the State.

While accepting the fact, the Department stated (February 2024) that notifications will be issued to form Infection Control Committees in all the health facilities.

1.5.10.7 Disaster management capability of hospitals

NHM Assessor's Guidebook envisages that a Disaster Management Plan (DMP) be prepared for each health facility. Besides, disaster management training for hospital staff and conduct of periodic mock drills in the hospitals is necessary. Standard Operating Procedures (SOPs) should be available, and a disaster management committee should be constituted.

Audit noticed that out of the 13 sampled health centres, only four health facilities viz., Biate CHC, Khawruhlian PHC, Aibawk PHC and Hnahlan PHC had disaster management plans as shown in **Appendix-1.31**. Only four health facilities viz., Lengpui PHC, Khawruhlian PHC, Chawlhmun UPHC and Bualpui NG PHC conducted training program for fire isolation and none of the health facilities had fire detection alarm system. Except Champhai UPHC, all the sampled CHCs and PHCs had fire extinguishers but other than Chawlhmun UPHC none of them obtained No Objection Certificate (NOC) from the fire Department.

While accepting the audit observation, the Department stated (February 2024) that action will be taken based on the audit observation.

1.5.10.8 Power back-up and water supply

As per IPHS norms, in case of power failure, generator back-up should be available in all facilities.

It was noticed that 24x7 power supply including the back-up arrangement was not available in all the health centres. All the sampled CHCs and PHCs, were running on electrical power without backup arrangements since they did not have back-up generator. However, no records of power failure were maintained by any of the sampled health facilities. Without 24X7 power backup, there is an inherent risk of interruption in provision of healthcare services which can lead to fatalities in case of power disruptions.

While accepting the audit observation, the Department stated (February 2024) that in partnership with Solar Electric Light Company (SELCO) Foundation, all the PHCs, CHCs and HSCs will be provided with solar energy power back up by 2025.

1.5.10.9 Ambulance Service

As per IPHS norms 2012 for CHCs, , having round the clock ambulance services is envisaged. However, in the case of PHCs as per IPHS norms, 2012, it is only *desirable* that the PHC has ambulance facilities for transport of patients for timely and assured referral to functional First Referral Units (FRUs) in case of complications during pregnancy and child birth. This may be outsourced either through Government/ Public Private Partnership model or linkages with Emergency Transport system should be in place.

In Mizoram, the National Ambulance Service (NAS) is functioning 24/7 with toll free call number - 102. Apart from providing pick and drop facility to pregnant women and infants, NAS also transports patients on emergency cases that are in need of emergency medical service.

It was, however, observed that out of the 13 sampled CHCs and PHCs, only seven health facilities (Sakawrdai CHC, Thingsulthliah CHC, Biate CHC, Lengpui CHC, Aibawk PHC, Khawruhlian PHC and Hnahlan PHC) have ambulance services as shown in **Appendix-1.32**. Although these ambulances were equipped with Oxygen, they were all running without technicians, thus potentially reducing their utility at the time of need.

While accepting the audit observation, the Department stated (February 2024) that a separate proposal will be prepared to estimate the requirements.

1.5.10.10 Evaluation of In-patient Services through Outcome Indicators

This paragraph presents an assessment of overall Health Indicators of the State and the IPD services provided during 2017-22 in the sampled health facilities. The Outcome Indicators (OIs) prescribed in IPHS guidelines are Bed Occupancy Rate (BOR), Leave Against Medical Advice (LAMA) Rate, Absconding Rate and Referred Out Rate (ROR). **Table-1.59** gives the categorisation and methodology of evaluating these standards.

Table-1.59: Calculation of quality indicators

Type	Quality Indicator	Numerator	Denominator
Productivity of hospital	BOR (in <i>per cent</i>)	Total patient bed days X 100	Total No. of functional beds X No. of days
Service quality of hospital	LAMA (Rate/1000)	Total No. of LAMA X 1000	Total No. of admissions
	Absconding (Rate/1000)	Total No. of Absconding cases X 1000	Total No. of admissions
Efficiency	ROR Per 1000	Total No. of cases referred to higher facility X 1000	Total No. of admissions

Source: IPHS

Relative performance of the sampled health facilities during 2017-18 to 2021-22 on various OIs as worked out by audit is shown in **Table-1.60**.

Table-1.60: Outcomes *vis-à-vis* availability of resources in the sampled health facilities

Sl. No.	Name of Health Facilities (no. of beds)	Outcome indicators			
		BOR (<i>per cent</i>)	ROR per 1000	LAMA per 1000	Absconding Rate per 1000
CHCs					
1.	Sakawrdai (26)	23	68	0	0
2.	Thingsulthliah (20)	57	91	0	0
3.	Lengpui (30)	4	140	3.14	0
4.	Biate (30)	16	70	0.77	1.53
5.	Chawngte (24)	48	60	8.91	2.23
PHCs					
6.	Khawruhlian (10)	57	244	0	0
7.	Aibawk (10)	6	187	0	0
8.	Chawlhmun UPHC (10)	3	1,973.57 ⁵⁶	0	0
9.	Bungzung (10)	11	14	0	0
10.	Hnahlan (10)	42	92.42	0	0.40
11.	Borapansury (10)	-	0	0	0
12.	Champhai UPHC (10)		0	0	0
13.	Bualpui NG (6)	4	597	0	0

Source: Departmental records

- Audit noticed that amongst the sampled CHCs and PHCs, Lengpui CHC, Bualpui NG, Aibawk PHC and Chawlhmun UPHC have the lowest BOR of four, six and three each, which may be due to the relatively low number of patients availing IPD

⁵⁶ Chawlhmun UPHC located within Aizawl City has higher number of referral cases than the number of patients admitted due to its proximity with Aizawl Civils Hospital and other hospitals in the capital city of Aizawl.

services as shown in **Appendix-1.25**. Proximity to better healthcare services in Aizawl City could also be a factor for low BOR.

- Audit noticed that LAMA and Absconding cases were absent in all the PHCs. However, among the sampled CHCs, three CHCs have LAMA cases among which Chawngte CHC has the highest with 8.91 LAMA per thousand. Further, three out of five CHCs did not have any absconding cases which could be an indicator for satisfactory service quality in the health facility.
- The Lengpui CHC, Aibawk PHC and Bualpui NG PHCs have comparatively low BOR and high referral rate.
- Chawlhmun UPHC has more referred cases (373) than IPD patients (189) possibly due to the fact that Aizawl Civil Hospital, the main referral hospital in the State is just 30 minutes away. Hence most of the patients requiring specialists and those requiring diagnostic services are referred out without being admitted.

While accepting the audit observation, the Department stated (February 2024) that ROR for Bualpui NG may be higher due to its close proximity to Siaha DH.

1.5.10.11 Patient rights and grievance redressal

The grievance redressal mechanism is a part of the Citizen Charter as per IPHS norms. Charter of Patients' Rights for appropriate information to the beneficiaries, grievance redressal and constitution of Rogi Kalyan Samiti/ Primary Health Centre Management Committee for better management and improvement of PHC services with involvement of Panchayati Raj Institutions (PRI) has also been made as a part of the Indian Public Health Standards.

Audit analysis of records revealed that five health facilities of Sakawrdai CHC, Lengpui CHC, Aibawk PHC, Khawruhlian PHC and Hnahlan PHC constituted Grievance Redressal Committee during 2017-18 to 2021-22 as shown in **Appendix-1.33**. During this period, Sakawrdai CHC received 88 complaints, Aibawk PHC - 21 complaints and Hnahlan PHC - six complaints. However, there was no data for Lengpui CHC and Khawruhlian PHC. All the complaints during 2017-18 to 2021-22 were addressed by the committees. None of the other sampled CHCs and PHCs constituted any such committee and no records relating to complaints were maintained.

While accepting the audit observation, the Department stated (February 2024) that Grievance Redressal Mechanism (GRM) is being upgraded through Mizoram Health System Strengthening Project (MHSSP).

1.5.10.12 Conclusion

Hospital support services, viz., dietary services were operational in the sampled health facilities without any standard operating guidelines from the Government. Further, there was no mechanism to ensure nutritious and healthy foods were provided in the health facilities. 12 out of 13 health care facilities (except Chawlhmun UPHC) were running without any safety clearance from the Fire Department and thus posed a fire threat to patients. Hospital Infection Control Committee (HICC) was found to have been formed in 11 out of the 13 sampled health centres. The Sampled Health Facilities were also not

adhering fully to the provisions of the Bio Medical Waste Management Rules. Most of the sampled health centres did not constitute Grievance Redressal Committee to address grievances of the public with regard to services provided by the health facilities.

1.5.10.13 Recommendations

- i. Standard operational guidelines should be prepared for hospital support services like, linen, laundry, dietary service etc., including disaster management plan; and*
- ii. Constitution of Grievance Redressal Committee may be ensured in every health facility.*

Audit Objective 3: Whether the State spending on Health has improved the health and wellbeing of the people as per Sustainable Development Goals-3 (SDG 3).

1.5.11 Improvement of the Health and Well-being conditions of people as per SDG-3

1.5.11.1 Overview

The ‘Sustainable Development Goals’ represent the most comprehensive and holistic development paradigm encompassing the social, economic and environmental dimension of development adopted by India along with the world community in the year 2015. The 17 Sustainable Development Goals are given in **Table-1.61** below:

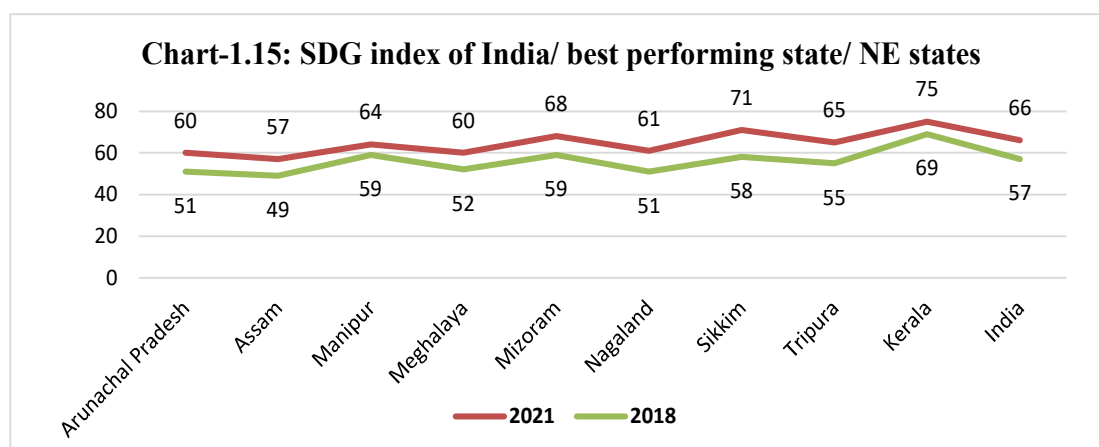
Table-1.61: The 17 goals under the Sustainable Development Goals

1. No poverty	2. Zero Hunger	3. Good health and well-being
4. Quality Education	5. Gender Equality	6. Clean Water and Sanitation
7. Affordable and Clean Energy	8. Decent Work and Economic Growth	9. Industry, Innovation and Infrastructure
10. Reduce Inequalities	11. Sustainable Cities and Communities	12. Sustainable Consumption and Production
13. Climate Action	14. Life Below Water	15. Life on Land
16. Peace, Justice and Strong Institutions	17. Partnership for the goals	

India being a signatory to the resolution of the 2030 Agenda for Sustainable Development, which has adopted 17 Sustainable Development Goals (SDGs), it is the obligation on the part of the State Government to adopt these 17 SDGs for its Vision Plan.

(a) Status of SDGs in India and the North Eastern States

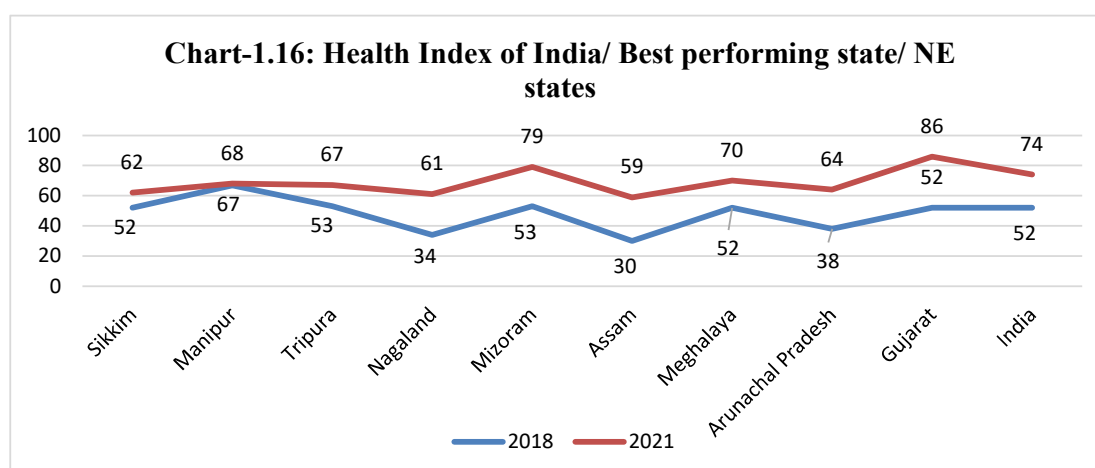
As per the NITI Aayog report on ‘SDG Index India and Dashboard of 2021’, the progress made by the States and the country as a whole of the SDGs is depicted in **Chart-1.15**.



Source: SDG India Index 2018 & 2021

It can be seen from **Chart-1.15** that all the States of the North-East and India as a whole are gradually moving towards achieving the SDG Goals since the States have improved their Index positions over the years from 2018 to 2021. Mizoram is in the second position with the score of 68 among the NE States after Sikkim and achieved the twelfth rank at the all India level.

The position with respect to SDG Goal-3 on the Health and Well Being conditions of people is depicted in **Chart-1.16**.



Source: SDG India Index 2018 & 2020

All the North-eastern States and the Country are showing improvements towards achieving the Goal of ensuring Healthy lives and Well Being for all. Gujarat recorded best performance at pan India level with a score of 86 in 2021. Mizoram is in the first position among the North-eastern states and fourth position overall with a score of 79. Mizoram has moved from twenty-second during 2018 to fourth in 2021, indicating a substantial improvement.

1.5.11.2 Performance of Mizoram against specific targets and indicators

Out of the 13 targets under SDG-3, analysis was done on three (out of nine⁵⁷) targets and the corresponding six indicators on which data was available. **Table-1.62** shows the achievement in respect of the four targets and seven indicators for Mizoram.

⁵⁷ Data not available for nine out of 13 SDG-3 targets

Table-1.62: Status of SDG-3 Parameters in Mizoram

SDG target	Indicator	Target	Year-wise achievement				
			2017-18	2018-19	2019-20	2020-21	2021-22
Target 3.1: By 2030, reduce the global maternal mortality ratio to less than 70 per 1,00,000 live births	3.1.1: Maternal mortality ratio (MMR)*	70	Live birth in Mizoram were less than one lakh per year during audit coverage period and hence MMR was not calculated.				
Target 3.2: By 2030, end preventable deaths of newborn and children under-five years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births.	3.2.1: Under-five mortality rate	25	24	21	21	25	27
	3.2.2: Neonatal mortality rate	12	10	9	10	12	17
Target 3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.	3.3.1: HIV/AIDS incidence (in per cent) of total population*	0	0.166	0.162	0.145	0.129	0.116
	3.3.2: Tuberculosis incidence per 1,00,000 population	0	160	181	240	168	137
	3.3.3: Malaria incidence per 1,000 population	0	4.79	3.58	6.98	6.90	4.56
Target 3.4: By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.	3.4.1: Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease. (No. of Death due to Cancer per 10,000 Population)	6	5.86	7.30	8.14	8.30	8.38

Source: Data provided by DHS, Govt. of Mizoram

*The calculation for incidence of HIV/ AIDS is per thousand uninfected population as per SDG, but the Department has given the data in percentage of the total population.

In this regard, Audit observed the following:

Indicator 3.1.1 MMR: It is the annual number of female deaths per one lakh live births from any cause related to or aggravated by pregnancy or its management. Live births in Mizoram were less than one lakh per year during audit coverage period and hence were not commented upon.

Indicator 3.2.1 -Under-five mortality rate: It is the probability (expressed as rate per one thousand live births) of a child born in a specific year or period dying before reaching the age of five years.

During the years 2017-18 to 2020-21, the target of 25 neo-natal under-five mortality rate in Mizoram was achieved 21-25/ 1,000 live birth. The under-five year mortality

rate decreased from 24 in 2017-18 to 21 in 2018-19 and 2019-20. However, it again increased to 25 in 2020-21 and 27 in 2021-22. The increasing trends over the last two years indicate that the State is not moving in the right direction.

Status of under-five mortality rate in the three sampled districts during 2017-18 to 2021-22 is given in the **Table-1.63**.

Table-1.63: Status of under-five mortality rate in the three sampled districts

Sl. No.	Name of the District	Target	Year-wise ratio				
			2017-18	2018-19	2019-20	2020-21	2021-22
1.	Mizoram (State)	25	24	21	21	25	27
2.	Aizawl	25	23	17	18	25	35
3.	Champhai	25	33	45	25	32	41
4.	Lawngtlai	25	30	15	26	31	19

Source: DMS, Health and Family Welfare Department, Government of Mizoram

It can be seen from the above table that the status of under-five mortality in the sampled districts was higher than the State rate in most of the years though there were better performances in some years viz., 2017-18, 2018-19 and 2019-20 in Aizawl and during 2018-19 and 2021-22 in Lawngtlai District. The trend in Aizawl and Champhai districts were worsening.

While accepting the audit observation, the Department stated (February 2024) that the findings will be examined against the available information as per Child Death Reviews (CDR). Further, the Department attributed (August 2024) the increasing trend of under-five mortality cases during 2020-21 and 2021-22 was due to Covid-19.

Indicator 3.2.2 - Neonatal mortality rate: It is the number of children who died during the first 28 days of their life. It is calculated as $\text{neonatal deaths} = (\text{number of children}) / (\text{total live births}) \times 1000$.

During the years 2017-18 to 2020-21, target of 12 for neonatal mortality rate in Mizoram was achieved (9-12/1000 live births). However, this increased to 17 in 2021-22. The increase in the neonatal mortality rate during 2021-22, if unchecked, will result in non-achievement of the target by 2030.

Status of neo-natal mortality rate in the three sampled districts during 2017-18 to 2021-22 is given in the **Table-1.64** below:

Table-1.64: Status of neonatal mortality rate in the three sampled districts

Sl. No.	Name of the District	Target	Year-wise ratio				
			2017-18	2018-19	2019-20	2020-21	2021-22
1.	Mizoram (State)	12	10	9	10	12	17
2.	Aizawl	12	12	8	9	17	29
3.	Champhai	12	11	13	7	15	21
4.	Lawngtlai	12	4	4	9	8	9

Source: DMS, Health and Family Welfare Department, Government of Mizoram

The neo-natal mortality rate in Aizawl District was better than State rate during 2018-19 and 2019-20. Champhai District had higher rate than the State in almost all the years except during 2019-20. Lawngtlai District had consistently maintained

a lower rate below the State and within the target through all the five years from 2017-22. The worsening trend in Aizawl and Champhai districts were in line with the trend for the State. Thus, Aizawl and Champhai districts should give more efforts to reverse the worsening trend in order to achieve the target by 2030. The Department attributed the increasing trend of neonatal mortality cases during 2020-21 and 2021-22 to Covid-19.

While accepting the audit observation, the Department stated (February 2024) that the cases reported are for the facilities and not the address or district of the deceased. Therefore, it is likely that not all children dying at Civil Hospital, Aizawl are from Aizawl District itself.

Indicator 3.3.1 AIDS: The Department of Health and Family Welfare has furnished the data on incidence of HIV/ AIDS in the State in percentage of the total population. As per the data furnished by the Department, the percentage incidence of AIDS in the State has gradually reduced from 0.166 *per cent* during 2017-18 to 0.116 *per cent* by 2021-22 as detailed in **Table-1.62**.

The Department did not maintain any data on HIV incidence at the District level. The Department stated (August 2024) that the declining trend in HIV/AIDS incident was due to strengthening and scale up of all HIV responses in the State.

Indicator 3.3.2 - Tuberculosis incidence per 1,00,000 population: The incidence of Tuberculosis increased from 160 in 2017-18 to 240 in 2019-20 and decreased from 240 (highest in 2019-20) to 137 (lowest in 2021-22) per 1,00,000 population. Thus, the trend is positive from 2019-20 to 2021-22.

Consistent efforts may be made to maintain the positive trend to achieve the target by 2030.

Tuberculosis incidence per 1,00,000 population in the three sampled districts during 2017-18 to 2021-22 is given in the **Table-1.65** below:

Table-1.65: Status of Tuberculosis incidence per 1,00,000 population in the sampled districts

Sl. No.	Name of the District	Target	Year-wise ratio				
			2017-18	2018-19	2019-20	2020-21	2021-22
1.	Mizoram (State)	0	160	181	240	168	137
2.	Aizawl	0	234	288	443	297	253
3.	Champhai	0	99	105	103	70	75
4.	Lawngtlai	0	87	82	114	54	40

Source: DMS, Health and Family Welfare Department, Government of Mizoram

As can be seen from **Table-1.65** above, the prevalence of tuberculosis in the sampled districts fluctuated during the period from 2017-18 to 2021-22. On average, the incidence was higher in Aizawl District as compared to the State figure. Champhai and Lawngtlai districts maintained a lower ratio in all the years as compared to State ratio. Also, there was a reducing trend in the three districts from 2019-20 to 2021-22, which should either be improved or maintained to achieve the target by 2030.

While accepting the audit observation, the Department stated (February 2024) that the State is committed to eliminate Tuberculosis by 2025. Further, the Department attributed (August 2024) the increasing trend of tuberculosis during 2017-18 to 2019-20 due to enhanced methods of diagnostics like Truenat, Intensified Active Case Finding Campaigns, *etc.*

Indicator 3.3.3 - Malaria incidence per 1,000 population: The incidence of malaria in the State during 2017-18 was 4.79, which increased to 6.98 during 2019-20 and again reduced to 4.56 during 2021-22.

The State did not have consistent trend in the incidence of malaria during 2017-18 to 2021-22. The positive trend from 2019-20 to 2021-22 needs to be maintained to achieve the target of eliminating the incidence of Malaria by 2030.

Status of Malaria incidence per 1,000 population in the three sampled districts during 2017-18 to 2021-22 is given in **Table-1.66** below:

Table-1.66: Status of Malaria incidence in the three sampled districts

Sl. No.	Name of the District	Target	Year-wise ratio				
			2017-18	2018-19	2019-20	2020-21	2021-22
1.	Mizoram (State)	0	4.79	3.58	6.98	6.90	4.56
2.	Aizawl	0	0.35	0.15	0.21	0.10	0.17
3.	Champhai	0	0.04	0.04	0.13	0.14	0.18
4.	Lawngtlai	0	20.41	16.18	25.82	30.40	15.97

Source: DHS, Health and Family Welfare Department, Government of Mizoram

As can be seen from **Table-1.66** above, the incidence of malaria was alarmingly high in Lawngtlai District, a predominantly rural district, as compared to the State figure. Aizawl and Champhai districts maintained incidence ratio lower than the State ratio in all the years.

While accepting the audit observation, the Department stated (February 2024) that the non-consistent trend in the incidence of malaria is due to the sensitivity of malaria incidence/ prevalence to interventions like Long Lasting Insecticidal Nets (LLIN) and Indoor Residual Spraying (IRS) of DDT. Further, the Department stated (August 2024) that the increasing trend of malaria cases during 2019-20 and 2020-21 was due to the expiry of Long-Lasting Insecticidal Nets (LLIN) which were supplied during 2016-17 with no replacement from the Government and also due to infrequent rainfall, warm and humid climatic condition across the State.

Indicator 3.4.1 - Number of Death due to Cancer per 10,000 Population: Mizoram has rising mortality rate due to death from Cancer, from 5.86 during 2017-18 to 8.38 during 2021-22. The projected population and number of death due to cancer is as given in **Table-1.67 (A) and (B)** below.

Table-1.67 (A): Cancer Mortality rate in Mizoram

Year	Projected population	No. of deaths due to cancer	Mortality due to cancer per 10,000 population	Mortality due to cancer per 1,000 population
2017-18	12,38,251	726	5.86	0.59
2018-19	12,61,728	922	7.30	0.73
2019-20	12,85,170	1,047	8.14	0.81
2020-21	13,08,571	1,087	8.30	0.83
2021-22	13,31,921	1,117	8.38	0.84

Thus, it can be seen from **Table-1.67 (A)** that the State is facing an increasing trend in the mortality rate due to Cancer.

The number of deaths due to cancer in three sampled districts during 2017-18 to 2021-22 is given in **Table-1.67 (B)** below:

Table-1.67 (B): Status of number of Deaths due to Cancer in sampled districts*

Sl. No.	Name of the District	Year-wise Ratio				
		2017-18	2018-19	2019-20	2020-21	2021-22
1.	Mizoram (State)	726	922	1,047	1,087	1,117
2.	Aizawl	302	417	500	515	509
3.	Champhai	89	84	89	90	112
4.	Lawngtlai	27	42	47	49	55

Source: Health and Family Welfare Department, Government of Mizoram

* Department could not provide district-wise death rate per 10,000 population due to Cancer.

As can be seen from **Table-1.67 (B)** above, the number of cancer cases increased every year in the sampled districts except for a slight decrease shown in Champhai District during 2018-19.

Aizawl District accounted for 42 *per cent* of the total death cases during 2017-18 to 2021-22, possibly due to the absence of cancer treatment facilities in other districts resulting in cancer patients seeking treatment in Aizawl and also due to the fact that Aizawl District accounts for about 40 *per cent* of the State's population.

While accepting the audit observation, the Department stated that, in order to arrest the increasing trend of cancer cases, through National Health Mission, Mizoram Health System Strengthening Project, community interventions to raise public awareness and foster behavior changes are being implemented. Besides the State has a ₹ 700 crore project with Japan International Cooperation Agency to establish a Super-Speciality Cancer Care Centre at Zemabawk, Aizawl which will also include training of health workers, community interventions, *etc.* Further, the Department attributed (August 2024) the increasing trend of cancer cases to various factors like poor detection and early diagnosis, limited access to healthcare, high tobacco consumption rate, *etc.*

Recommendation: The State Government may enhance funding for the Health Sector as per the National Health Policy, 2017 prescription so that enhanced efforts can be made towards achievement of SDG 2030 goals.

Audit Objective 4: Whether infrastructure developed during Covid-19 has been utilised?

1.5.12 Utilisation of Covid-19 Infrastructure

1.5.12.1 Finance for Management of Covid-19

Details of the fund received and expenditure incurred by the Health and Family Welfare Department on account of management of Covid-19 pandemic is shown in **Appendix-1.34**. The total amount of fund allocated for combating the Covid-19 pandemic both from the Government of India and the State budget was ₹ 208.13 crore while the total expenditure was ₹ 207.57 crore.

1.5.12.2 Non-utilisation of Covid-19 Infrastructure

(a) Delay in installation of RT-PCR Machine

At the outbreak of Covid-19 pandemic, the State Government was equipped with only one RT-PCR testing centre at Zoram Medical College, Falkawn on the outskirts of Aizawl City with only one testing machine. Considering the need of the people in combating the pandemic, one RT-PCR Machine was donated by Shri Zodintluanga, MLA on 26 June 2020 from MLA LAD Fund which was meant to be installed at Lunglei, the second major town of the State.

However, the State Government did not install the machine or set up laboratory for testing Covid-19. Due to non-utilisation of the donated machine, the Aizawl Bench of the Guwahati High Court, in response to a PIL, directed the respondents, viz., the State Government to expedite the setting up of the RT-PCR Laboratory in Lunglei.

Thereafter, the RT-PCR Laboratory was set up and made functional on 19 January 2022 after a lapse of more than one and half years from the date on which the machine was donated.



Figure 1: Different components of RT-PCR machine at Lunglei

The Department stated (February 2024) that the delay in installation of RT-PCR Machine for a period of more than one and half years was due to the limited capacity of the State Government in dealing with such pandemic in terms of infrastructure; coupled with fund constraints and lack of Human Resources having expertise in the field.

The reply of the Department is not tenable due to the fact that only after the direction issued by the Aizawl Bench of the Guwahati High Court (August 2021) the Department set up the Make-shift testing centre within a period of five months (10 August 2021) and it was made functional on 19 January 2022.

(b) Installation of Oxygen Generating Plants

Under North East Special Infrastructure Development Scheme (NESIDS) project- 'Purchase of Hospital Equipment/ Materials for strengthening of Health Infrastructure for Comprehensive response to possible Outbreak of Covid-19', the Government of Mizoram procured oxygen generating plants. The status of installation is given in **Appendix-1.35**.

During the course of Audit, the following issues were observed:

- (i) Delayed installation/ non-installation of Oxygen Generating Plants**
- Agreements for supply and installation of seven Pressure Swing Adsorption Oxygen Generating Machines under North East Special Infrastructure Development Scheme (NESIDS) funding were signed between Health and Family Welfare Department, Government of Mizoram and three suppliers⁵⁸ during December 2020 and January 2021. As per the condition of the agreement, all the seven machines were to be installed within a period of three months from the date of issue of supply/ work order. Supply/ work orders were issued during December 2020 and January 2021. Hence, all the plants should have been installed by the end of April 2021.

It was observed during audit that none of the plants were installed within the prescribed timeline. In fact, as of April 2023, only two of the seven plants i.e., the Oxygen plants in Civil Hospital, Aizawl and the oxygen generating plant (filling station) for Southern Mizoram were installed on 28 March 2022 and 12 April 2023 respectively, after a lapse of more than 11 months and 25 months respectively from the due date. The details of delay in installation of oxygen generating plants is given in **Table-1.68** below:

⁵⁸ M/s Genesis Enterprise, M/s Sristhy Medical pvt. Ltd. and M/s Vidur's

Table-1.68: Table showing delay in installation of oxygen generating plants*(₹ in lakh)*

Sl. No.	Place of installation	Capacity (LPM)	Name of supplier	Date of issue of work order	Due date of installation	Actual date of installation	Cost of installation	Amount paid
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	Civil Hospital, Aizawl	500	Genesis Enterprise, Aizawl	13.01.21	13.04.21	28.03.22	92.91	92.91 ⁵⁹
2.	District Hospital, Kolasib	200	Sristhy Medical Pvt. Ltd., New Delhi	13.01.21	13.04.21	Not yet installed	55.44	226.80 ⁶⁰
3.	District Hospital, Mamit	200	Sristhy Medical Pvt. Ltd., New Delhi	13.01.21	13.04.21	Not yet installed	55.44	
4.	District Hospital, Champhai	80	Sristhy Medical Pvt. Ltd., New Delhi	13.01.21	13.04.21	Not yet installed	47.04	
5.	District Hospital, Serchhip	80	Sristhy Medical Pvt. Ltd., New Delhi	13.01.21	13.04.21	Not yet installed	47.04	
6.	District Hospital, Siaha	80	Sristhy Medical Pvt. Ltd., New Delhi	13.01.21	13.04.21	Not yet installed	47.04	
7.	Oxygen generating Plant (filling station) for south Mizoram	500	M/s Vidur's, Guwahati	21.12.20	21.03.21	12.04.23	240.27	144.17 ⁶¹
Total								585.18

Source: Heath and Family Welfare Department, Government of Mizoram

From **Table-1.68** above, it can be seen that there was a delay in installation of Oxygen Generating Plant by around one year in respect of Aizawl Civil Hospital and more than two years in respect of the filling station for South Mizoram. Further, though an amount of ₹ 226.80 lakh was paid during August 2022 and December 2022 to the firm M/s Sristhy Medical Pvt. Ltd., the Oxygen Generating Plants in respect of Kolasib, Mamit, Champhai, Serchhip and Siaha District Hospitals were not yet installed as of May 2023.

The Department stated (May 2023) that the Oxygen plants for the District Hospitals at Champhai, Kolasib, Mamit and Siaha were delivered in August/ September 2022. However, the plants could not be installed immediately as the project did not cover the civil works portion and fund had to be met from the State Fund. The reply did not cite any reason for non-installation at Serchhip District Hospital.

⁵⁹ ₹ 92.91 lakh paid on 03 August 2022

⁶⁰ ₹ 63.00 lakh being 25 per cent mobilisation advance was paid on 10 June 2021 + ₹ 63.00 lakh paid on 18 August 2022 + ₹ 100.80 lakh paid on 28 December 2022

⁶¹ ₹ 24.03 lakh being 10 per cent mobilisation advance was paid on 10 June 2021 + ₹ 120.14 lakh paid on 03 August 2022

The Department in its reply further stated (February 2024) that the reasons for delay in installation of the Oxygen Generating Plants were mainly due to lack of preparation on the part of the State Government in such sudden outbreak of the pandemic and due to the complexity of interdependence of various departments. Also, the Department could not timely allocate the required sites, power supply and other related items/ pre-requisites for timely installations.

(c) Non-functioning Oxygen Generating Plant

The State Government received 14 Oxygen Generating Plants through PM-CARES fund which were to be installed during October 2021 in various hospitals across the State. Out of 14, one plant in Champhai District Hospital with installed capacity of 500 litres per Minute (LPM) which was installed on 07 October 2021 was not functioning and was not in use since 24 June 2022.

The District Medical Superintendent, Champhai has taken up the matter with the Director, Hospital and Medical Education. The plant was, however, not repaired or made functional as of December 2022.

Due to non-functioning of the only Oxygen Generating Plant, the urgent requirement of oxygen in the Hospital had to be supplemented by means of the oxygen cylinders available from other sources.



Non-functioning Oxygen Plant at Champhai District Hospital

The Department in its reply stated (February 2024) that due to reluctance on the part of the supplier to take up repair and maintenance work, adding that the non-functioning of the Oxygen Generating Plant was due to faulty electric supply, hence the repair work could not be done immediately. However, due to sincere efforts of the Department Officials, the defect has been rectified.

The Department, however, did not state when the defect had been rectified and whether the Oxygen Generating Plant is in operation or not.

1.5.12.3 Conclusion

The State Government did not effectively manage the infrastructure for Covid-19. Various equipment like Pressure Swing Adsorption Oxygen plants and RT-PCR machine were not put to use timely and effectively due to delay in installation and non-utilisation

in combating the Covid-19 pandemic. This is an indication of the poor/ sub-optimal handling of Covid-19 pandemic by the administration.

Recommendation: *The State Government may ensure timely procurement, installation and utilisation of equipment for the purpose for which they were meant. The Oxygen Generating Plants that are yet to be installed may be installed at the earliest.*

Audit Objective 5: Whether the functioning of AYUSH is adequate and satisfactory

1.5.13 Availability of Services

As per the AYUSH system of healthcare under Ministry of AYUSH, seven kinds of systems of medicines are available under AYUSH viz., Ayurveda, Unani, Siddha, Yoga, Naturopathy, Homeopathy and Sowa-Rigpa.

During examination of the effectiveness of the AYUSH system of healthcare in the State, the following observations emerged:

1.5.13.1 Availability of Doctors

The following **Table-1.69** provides the required number of Doctors as per IPHS norms and actual availability in the sampled CHCs⁶².

Table-1.69: Availability of AYUSH Doctor in sampled CHCs

Sl. No.	Name of the selected CHC	No. of Doctors required as per IPHS norms	Availability	Shortage
1.	Biate	1	1 (Homeopathy)	0
2.	Chawngte	1	1 (Homeopathy)	0
3.	Lengpui	1	1 (Homeopathy)	0
4.	Sakawrdai	1	1 (Homeopathy)	0
5.	Thingsulthliah	1	1 (Homeopathy)	0
Total		5	5	0

Source: Departmental records

All the CHCs had at least one AYUSH doctor.

1.5.13.2 Shortage of drugs in the sampled CHCs

Indian Public Health Standards (IPHS) Guidelines for Primary Health Centres, 2012 and Community Health Centres, 2012 provides a list of AYUSH drugs for a functional CHC. Four categories of essential system of Drugs are mentioned in the Guidelines as shown in **Table-1.70** below.

Table-1.70: Requirement of types of AYUSH Drugs in CHCs as per IPHS norms

Particulars	Requirement as per IPHS norms (CHC)
Ayurveda	125
Unani	116
Siddha	94
Homeopathy	483

Source: IPHS

⁶² As per IPHS norms, 2012, availability of AYUSH doctors in PHCs is only a “Desirable” norm.

It was observed that none of the selected CHCs had the kinds of drugs recommended under IPHS norms. The status or availability of the different types of drugs in the sampled CHC having the requisite Doctor(s) is shown in **Table-1.71** below:

Table-1.71: Availability of Drugs/ Medicines in the sampled CHCs against IPHS norms (where doctors are available)

Sl. No.	Name of the CHC	Ayurveda		Unani		Siddha		Homeopathy	
		Available	Per cent	Available	Per cent	Available	Per cent	Available	Per cent
CHCs									
1.	Biate	00	00	00	00	00	00	67	13.87
2.	Chawngte	00	00	00	00	00	00	149	30.85
3.	Sakawrdai	00	00	00	00	00	00	99	20.50
4.	Lengpui	00	00	00	00	00	00	82	16.98
5.	Thingsulthiah	00	00	00	00	00	00	135	27.95

Source: Joint Physical Verification conducted at selected CHCs/ PHCs

From **Table-1.71** above it can be seen that in all the sampled CHCs having Doctors, out of four categories of drugs, three categories of medicines were not available in any of them. Only one category of drug viz., Homeopathy was available in the five CHCs where AYUSH doctors are available. However, the availability percentage ranged between 13.87 per cent and 30.85 per cent in the five CHCs.

While accepting (December 2022) the facts, the Department stated that essential drugs under National AYUSH Mission were made available as per the requirements submitted by the Medical Officers (AYUSH) and according to the availability of funds allotted under the National AYUSH Mission. The shortage of drugs was also due to non-allocation of funds from the Ministry.

1.5.13.3 50 Bedded Integrated AYUSH Hospital, Thenzawl

The 50 bedded AYUSH dedicated Hospital was inaugurated at Thenzawl, Serchhip District on 27 October 2016 to provide the AYUSH system of healthcare in the State. The patient load of the Integrated AYUSH Hospital is given in **Table-1.72** below:

Table-1.72: Year-wise OPD load from 2017-18 to 2021-22

Sl. No.	OPD Load		
	Mizoram	OPD load year-wise	Daily Average
1.	2017-18	7,637	27.70
2.	2018-19	3,694	13.43
3.	2019-20	3,516	12.78
4.	2020-21	601	2.18
5.	2021-22	3,148	11.44

Source: Departmental records

As can be seen from **Table-1.72** above, the patient load of the Hospital was highest during 2017-18 and lowest during 2020-21 when the hospital was declared and utilised as Covid-19 Care Centre.

The manpower available in the integrated AYUSH Hospital, Thenzawl is shown in **Appendix-1.36**.

(a) Shortage of manpower

Against the prescription of National AYUSH Mission (NAM) the Hospital had an overall shortage of 29 *per cent* of manpower. Against the prescribed requirement of 69 staff, the Hospital had 49 as of March 2023. There was shortage of five doctors/ specialists against the prescribed 11. There was also shortfall of four nurses against the prescribed 12.

The Department stated (May 2023) that as per IPHS norms, there is no specific mention of 50 bedded Integrated AYUSH Hospital and its requirement of doctors, nurses and medicines. However, Medical Superintendent is to be posted as per National AYUSH Mission (NAM). The Department, however, accepted that there was shortage of nurses and stated that nurses posted are sufficient considering the present patients load.

The reply is, however, not tenable as the specific requirements of doctors, nurses and para-medics are clearly envisaged in the NAM guidelines.

(b) Shortage of equipment

The Operational Guidelines of the National AYUSH Mission (NAM) provide the list of equipment required for 50 bedded Integrated AYUSH Hospital as given in **Table-1.73**.

Table-1.73: Requirement and Availability of equipment in the 50 bedded Integrated AYUSH Hospital

Category No.	Particulars	Requirement as per NAM norms	Availability as per NAM norms	Per cent of availability
A	Panchakarma	29	22	75.86
B	Ksharasutra	7	4	57.14
C	Uttarbasti	20	13	65.00
D	Raktamokshana (Leech Therapy)	9	5	55.56

Source: Departmental records

It can be seen from **Table-1.73** above that the dedicated AYUSH Hospital did not have the full complement of equipment as per NAM norms. The availability of equipment ranged between 55.56 *per cent* and 75.86 *per cent*. Due to non-availability of full equipment, the hospital's ability to provide all the services to the public was impaired.

The Department stated (February 2024) that there has been no allocation of fund for procurement of equipment since the introduction of the new Operational Guidelines.

(c) Improper storage of AYUSH Medicines

As per IPHS, 2012 norms, the area for storage of drugs should be well-lit and ventilated and rodent/ pest free. Sufficient number of racks shall be provided. Drugs shall be stored properly and systematically in cool (away from direct sunlight), safe and dry

environment. Near expiry drugs shall be segregated and stored separately. Sufficient space with the storage cabins separately for AYUSH drugs be provided.

Directorate of AYUSH, Government of Mizoram, procured medicines for the lone Integrated AYUSH Hospital, District Hospitals, CHCs and PHCs on various occasions during the Audit period (2017-22). The procured medicines were transported to Central Medical Store (CMS), Zemabawk for onward distribution to different District Hospitals, CHCs, PHCs, and Integrated AYUSH Hospital, Thenzawl. Verification of records of CMS, Zemabawk and Integrated AYUSH Hospital, Thenzawl revealed that the prevailing system of storage of drugs/ medicines was not conducive for orderly and hygienic storage as per norms/ parameters. The drugs were dumped in two rooms in CMS, Zemabawk without any provision of racks for storage. Some of the medicines were dumped in the corridor/ open space in the Integrated AYUSH Hospital, Thenzawl making the drugs/ medicines susceptible to damage/ contamination and theft. The two store rooms at CMS, Zemabawk were in dilapidated conditions, with no arrangement for proper storage of medicines/ drugs.

Stock registers were also not updated regularly and therefore Audit could not ascertain the actual stock of medicines available at any point of time. It was also found that some medicines were stored in the Office of the Directorate of AYUSH. The drug storeroom was also used as the office of the State Medicinal Plant Board.

The system of storage of drugs needs to be improved so as to ensure their safe keeping from rodents, moisture, theft, *etc.*, orderly storage and systematic distribution.



**Drug storage at CMS,
Zemabawk**



**Drug storage at AYUSH
Hospital, Thenzawl**



**Drug storage at Directorate
of AYUSH, Aizawl**

While accepting the fact, the Department stated (May 2023) that there is no provision for bulk medicine storage in the Integrated AYUSH Hospital initially and medicines transported had to be kept in available spaces. Also due to Covid-19, the Hospital was utilised as Covid Care Centre (CCC) and medicines could not be transported freely within the Hospital premises. With the Hospital resuming its day to day activities, storage of medicines was checked and arrangements were made accordingly. The Directorate of AYUSH is committed to take necessary steps for better and appropriate storage of medicines and satisfy the norms of IPHS.

However, provision for orderly, safe and hygienic storage of medicines has not been made as of May 2023.

The AYUSH system appears to have been suitably utilised as evident from the average number of patients availing OPD services. The shortages in terms of equipment, manpower and medicines in the AYUSH Hospital, Thenzawl, however, needs to be addressed so that larger number of people can avail and benefit from the affordable treatments under Indian System of Medicine.

Recommendation: Efforts should be made to ensure the availability of man-power as per IPHS norms so that timely healthcare services are provided to the general public.

1.5.14 Conclusion

The budgetary allocation of the State in healthcare sector was less than what was aimed in the National Health Policy 2017 *i.e.*, to increase the health spending to more than eight *per cent* of the budget by 2020. It was also evident that the State is not moving in the right direction to achieve its targeted goals as per the indicators of Sustainable Development Goals. The number of doctors and nurses available in the CHCs/ PHCs/ UPHCs was much lesser than the IPHS norms. The different types of services provided in the health facilities were not as per norms. COVID-19 related infrastructure was not utilised optimally as reflected in the delay in installation of RT-PCR machine and delay in installation of oxygen generating plants. Audit noticed shortage of drugs, equipment, and shortage of staff under AYUSH System of Healthcare in the selected health facilities.

HIGHER & TECHNICAL EDUCATION DEPARTMENT

1.6 Idle Expenditure

Mizoram Engineering College constructed at a cost of ₹ 26.00 crore remained idle due to non-provision of staff and funds

The Project Approval Board of Rashtriya Uchchatar Shiksha Abhiyan (RUSA), Ministry of Human Resource Development (MHRD), Higher Education Department, Government of India (GoI) in its meeting approved (10 December 2014) the establishment of a new Engineering College that would offer programmes in Engineering, Management and Commerce in Lunglei District of Mizoram at a total outlay of ₹ 26.00 crore.

As per detailed project report, the new Engineering College, viz., Mizoram Engineering College would open better opportunities for the local youth to pursue degree and master's degree level courses in Engineering. It would pave the way for Polytechnic pass-outs to pursue further studies through lateral entry system. Diploma holders already in Government service would have a chance to improve their qualifications by enrolling in degree courses. Further, the institute would serve as Research & Development (R&D) centre to develop locally needed technologies as well as serve as centre of excellence for local industries in R&D field. The institute was proposed to be opened from the 2018-19 session. To operate the Mizoram Engineering College, a total of 36 teaching staff and 119 non-teaching staff would be required and the financial estimate of ₹ 26.00 crore for the construction works of seven buildings⁶³ was provided in the detailed project report.

As per Note one below Component Six - New College (Professional) of RUSA 1.0 guidelines, the grant for execution of New Colleges (Professional) is subject to a maximum of ₹ 26.00 crores for each institution. Further, as per Note 4 below Component Six "New Colleges (Professional)" of the said guidelines, the State Governments will fill/ appoint additional non-teaching staff in order to achieve the ideal teaching to non-teaching ratio of 1:1.1 and fill vacant teaching posts and create additional posts with a Student Teacher ratio of 20:1.

Test check (March 2022) of the records of the State Project Director, RUSA, Higher and Technical Education (H&TE), Department, Government of Mizoram (GoM) revealed that the State Project Director entered into a Memorandum of Understanding (MoU) with a firm⁶⁴ on 12 February 2015 as executing agency covering the whole project of RUSA including the construction of Mizoram Engineering College, Pukpui, Lunglei. The work order was issued on 5 April 2016. In the meantime, GoI released ₹ 23.40 crore as grant in the ratio of central-state share of 90:10 for the construction of Mizoram Engineering College, Pukpui, Lunglei during the period between December

⁶³ (1) Academic block-₹ 9.71 crore, (2) Administrative building and common facilities-₹ 9.38 crore, (3) Hostel-Boys' Hostel and Girls' Hostel-₹ 2.78 crore, (4) Civil Laboratories and Workshop-₹ 1.90 crore, (5) Library-₹ 1.34 crore, (6) Common room-₹ 0.67 crore and (7) Cafeteria-₹ 0.22 crore

⁶⁴ Selected from among the State empanelled firms on limited tender basis. M/s Mizoram Technocrats Company (P) Ltd

2015 and September 2018. The GoM also released its share of ₹ 2.60 crore during the period between March 2016 and December 2018 as shown in **Table-1.74** below:

Table-1.74: Details of fund released by the GoI and GoM

(₹ in crore)

Installment	Fund Released				
	GoI		GoM		Total Amount
	Sanction order No. & date	Amount	Sanction order No. & date	Amount	
1 st	F. No. 24-39/2014-U.Policy (MZNPCEQ21GC-SC) dt. 23.12.2015	11.70	No. B.13017/20/2016-HTE dt.21.03.2016	1.30	13.00
2 nd	F. No. 24-39/2014-U.Policy (MZNPCE12-Gen) dt. 30.03.2017	5.85	No. B.13017/20/2000-HTE/81 dt.04.05.2017	0.65	6.50
3 rd	F. No. 24-39/2014-U.Policy (MZNPC3-Gen) dt. 22.12.2017	4.81	No. B.13017/20/2016-HTE dated 22.02.2018	0.53	5.34
4 th & final	F. No.24-39/2014-U.Policy (MZNPC-Gen) dt. 27.09.2018	1.04	No. B.13017/20/2016-HTE dated 07.12.2018	0.12	1.16
Total		23.40		2.60	26.00

The construction of the College began on 22 April 2016 and was completed on 16 November 2018 at a cost of ₹ 26.00 crore. After completion, the newly constructed Mizoram Engineering College was taken over by the State Project Director, RUSA on 28 February 2019.

Audit observed that expenditure of ₹ 0.85 crore was incurred in January 2017 out of the project fund of ₹ 26.00 crore on improvement and maintenance of existing approach kutch road without any running bill/ voucher / measurement of the work done, even though this work was not included in the detailed project report resulting in diversion of fund.

Scrutiny of records revealed that the Finance Department lifted (20 March 2014) a ban for creation and filling up of posts purely for implementation of RUSA scheme in the State. It may be mentioned here that apart from proposal for opening of Civil Engineering Department as a temporary campus for first 2-4 years, the Additional State Project Director, RUSA, made a budget proposal (18 January 2019) of ₹ 3.43 crore⁶⁵ to the State Government for the salary of 28 staff (13 teaching and 15 non-teaching), and for purchase of furniture and equipment, Laboratory Equipment, Library Books & journals, *etc.*, to operate the Mizoram Engineering College from the Academic session 2019-20. However, the State Project Director, RUSA did not submit any proposal for creation of posts to the State Government. Another proposal for allocation of additional fund of ₹ 6.23 crore⁶⁶ for filling up of the infrastructure gaps was sent (4 February 2019) to the State Government by the Director, H&TE

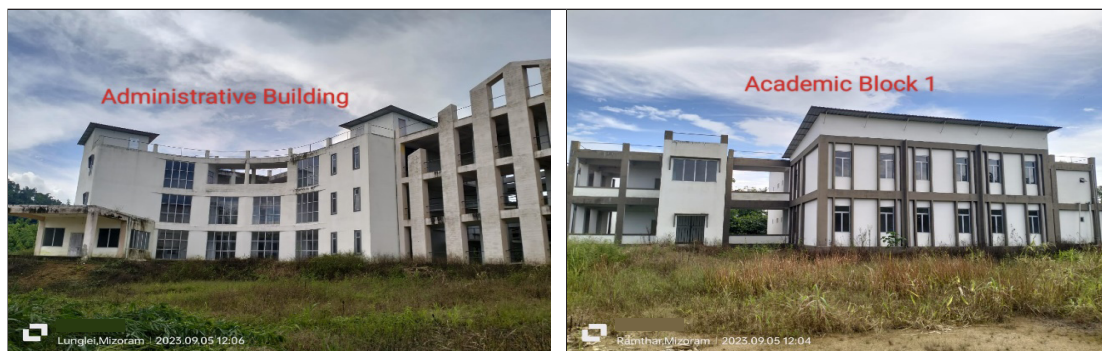
⁶⁵ Salary for 28 teaching and non-teaching staff - ₹ 1.32 crore, furniture and equipment - ₹ 0.19 crore, Laboratory Equipment for Civil Engineer - ₹ 1.20 crore, Library Books & journals - ₹ 0.22 crore, Two Buses - ₹ 0.44 crore and Contingency/ Reserved Fund - ₹ 0.06 crore

⁶⁶ Water connection and Storage reservoir - ₹ 2.07 crore, Electric connection (11 KV line) and transformer - ₹ 0.65 crore, Salaries & wages - ₹ 1.33 crore, supplies and materials - ₹ 1.20 crore, Motor vehicles - ₹ 0.44 crore, Machineries & Equipment - ₹ 0.22 crore, Other charges - ₹ 0.19 crore, Office expenses ₹ 0.06 crore, and other misc. items like medical treatment, wages, *etc.*, of ₹ 0.07 crore

Department. Further, the State Project Director, RUSA again submitted (31 January 2020) a revised proposal of ₹ 11.19 crore⁶⁷ to the Hon'ble Minister, H&TE Department for filling up the infrastructure gaps. However, the State Government informed (6 May 2020) that the Finance Department, GoM has rejected the proposals citing financial constraints of the State Government.

Thus, due to non-creation of posts and non-provision of funds by the State Government to meet the expenditure to operate the newly constructed Mizoram Engineering College at Pukpui, Lunglei District, the College is not yet operational (as of March 2024) even after lapse of five years and four months from the date of completion, resulting in idle expenditure of ₹ 26.00 crore. As such, the objectives of establishing Mizoram Engineering College to enable the local youth to pursue degree and master's degree level courses in Engineering, to enable those passing out from Polytechnics to pursue further studies and to serve as a centre of excellence for local industries in research and development field, *etc.*, remained unachieved.

Photographic appearance of the Administrative building and the Academic Block-1 building of the College are shown below:



The matter has been brought to the notice of the Department and the Government (July 2023). The Government while agreeing to the audit observation stated (28 July 2023) that the Department has accorded (without specifying the date) consent to Mizoram University to use the infrastructure of the Mizoram Engineering College as a temporary Campus (Southern Campus). The Additional Project Director, RUSA stated (November 2023) that creation and recruitment of teaching & non-teaching posts and technical support staff was yet to be done and there was no electricity and water supply connection in the College and the approach road which is three kms approximately was unpaved or kutchra road and as such it hindered the plying of vehicle during rainy season. The Additional Project Director, RUSA further confirmed (02 February 2024) that proposal for creation and filling up of posts were not submitted to the Government by the State Project Director, RUSA.

Thus, Mizoram Engineering College constructed at a cost of ₹ 26.00 crore remained idle due to non-provision of staff and funds for procuring furniture, equipment and books.

Recommendation: The State Government should initiate immediate action to complete the remaining works and operationalise the Engineering College.

⁶⁷ Construction of metal road (approach road) - ₹ 6.40 crore, providing water supply & storage - ₹ 2.07 crore, Providing power supply - ₹ 0.72 crore and construction of transit accommodation - ₹ 2.00 crore

PUBLIC HEALTH ENGINEERING DEPARTMENT**1.7 Undue financial benefit to contractors****The Department made payments of ₹ 1.82 crore before execution/ completion of the works based on false entries in the Measurement Books resulting in undue financial benefit to the contractors**

Clause 1, 2 and 3 of the Standard Operating Procedures (SoP) No. 5/20 for Central Public Works Department (CPWD) Works Manual, 2019 (adopted by the Government of Mizoram) based on Paragraph 5.12.1 of the CPWD Works Manual, 2019, provides that Measurement Book is the basis of all accounts of quantities, whether of works done by contractors or by labourers employed departmentally, or materials received and the payments to contractors and others for the work done or other services rendered are made on the basis of measurements recorded in the Measurement Book. It is considered as a very important accounts record and maintained very carefully and accurately as it may have to be produced as evidence in a court of law, if and when required. As per Clause 6 (k) of the SoP, all items of work in a project, irrespective of their cost, is measured and recorded by the Junior Engineer-in-charge of the work.

Kolasib Watson Division, Kolasib implemented three schemes executed under Jal Jeevan Mission for retrofitting/ augmentation with functional household tap connection (FHTC). The schemes were (i) North Thingdawl Water Supply Scheme, (ii) Saihapui 'K' Solar Pumping Water Supply Scheme and (iii) Buhchangphai Solar Pumping Water Supply Scheme.

Audit noticed that false entries were made in the Measurement Book about works which were either partially executed or not executed at all and payments of ₹ 1.82 crore (₹ 44.82 lakh + ₹ 21.48 lakh + ₹ 1.16 crore) were made to the contractors as discussed in the succeeding paragraphs:

1.7.1 Implementation of North Thingdawl Water Supply Scheme**Undue financial benefit in the execution of North Thingdawl Water Supply Scheme in retrofitting with functional household tap connection (FHTC) under Jal Jeevan Mission - ₹ 44.82 lakh**

Test check (January 2023) of records of the Executive Engineer (EE), Public Health Engineering Department (PHED), Kolasib Watson Division, Kolasib revealed that Government of Mizoram accorded administrative approval (December, 2021), for execution of North Thingdawl Water Supply Scheme involving retrofitting with FHTC under Jal Jeevan Mission at the estimated amount of ₹ 5.12 crore as per Detailed Project Report. The scheme was funded by Government of India (₹ 4.49 crore) and Government of Mizoram (₹ 49.92 lakh) and also through community contribution in kind, in the form of labour (₹ 12.90 lakh). Technical sanction of the scheme was accorded by the Chief Engineer, PHED, Zone-I (January 2022).

As per the Monthly Progress Report of the Division for the month of December 2022, expenditure of ₹ 4.39 crore was incurred towards the execution of the project as shown in **Table-1.75** below:

Table-1.75: Statement showing physical and financial progress as of December 2022

Sl. No.	Detailed Items of work as per approved Estimates	Estimated Amount (in ₹)	Unit	Quantity	Physical Progress (in per cent)		Financial Progress (in ₹)
					Quantity of Material	Quantity achieved	
1.	Pumping System	90,04,000	Job	1	40	45	78,83,615
2.	Reservoir	87,71,900	No.	4	38	43	26,82,000
3.	Pipe Works	2,06,93,354	Metre	14,060	95	95	2,06,81,457
4.	FHTC	61,62,647	Metre	19,500	95	90	61,62,524
	Public Contribution (in kind, in the form of labour)	12,90,000	-	-	-	100	12,90,000
5.	Approach Road	19,27,290	Metre	255	100	100	19,27,200
6.	Valves & Chambers	7,46,962	Job	1	100	100	6,84,509
7.	Security Fencing	5,50,525	Job	1	100	100	5,50,400
8.	Carriage	5,76,500	Job	1	100	100	5,76,355
9.	Contingencies	14,91,695	-	-	-	-	14,91,688
Grand Total		5,12,14,873	-	-	-	-	4,39,29,748

Scrutiny of the Accounts record, Measurement book and joint physical inspection of the construction works revealed that the Department incurred an expenditure of ₹ 44.82 lakh for works which were not executed at all in respect of North Thingdawl Water Supply Scheme and false entries were recorded in the Measurement book as detailed below:

(i) Supply, installation and commissioning of Electrical Driven Clear Water Pump Set of the Pumping Systems - ₹ 27.22 lakh

The supply order of material of the work/ job of supply, installation and commissioning of Electrical Driven Clear Water Pump Set of the Pumping System was issued (16 February 2022) to a contractor⁶⁸ without call of tender at an amount of ₹ 68.04 lakh. The terms & conditions of work/ supply order stipulated, *inter alia*, that payment of 50 per cent of the contract is to be made on receipt of supply order; 40 per cent on despatch of goods and the remaining 10 per cent on successful commissioning of the pump, subject to availability of fund. Further, the work should be completed within 60 days from the date of issue of the supply order.

Scrutiny of the Measurement Book No. 70 (R) NR revealed that the work was recorded as having commenced from 16 February 2022 and completed on 29 March 2022 and payment of ₹ 61.24 lakh (90 per cent of the contract amount) was made to the contractor on 30 March 2022 out of the total contract value of ₹ 68.04 lakh. It was, however, noticed during the joint physical verification with Department officials on

⁶⁸ M/s Johnson Diesel Sales & Service, Dawrpui, Aizawl

21 January 2023, nine months after the recorded date of completion and payment of ₹ 61.24 lakh to the contractor, that the electrical driven clear water pump set was neither installed nor proof of despatch of the water pump set found on record.

Thus, the payment of ₹ 27.22 lakh, which was 40 *per cent* of the contract value, over and above the admissibility of 50 *per cent* was undue benefit to the contractor as there was no proof of despatch of the water pump set on record.

(ii) Supply, installation, testing and commissioning of 5-ton hand operated Traverse Crane of the Pumping System - ₹ 17.60 lakh

The supply order of material of the work/ job of supply, installation, testing and commissioning of 5-ton Hand operated Traverse Crane of the Pumping System was issued (16 February 2022) to a contractor⁶⁹ without call of tender at an amount of ₹ 17.60 lakh including Goods and Services Tax (GST). The terms & conditions of work/ supply order stipulated, *inter alia*, that payment of 90 *per cent* of the contract amount is to be made on receipt of the materials in full and in good condition and the remaining 10 *per cent* on successful commissioning of the pump, subject to availability of fund.

Scrutiny of the Measurement Book No. 70 (R) NR revealed that the work was recorded as having commenced from 16 February 2022 and completed on 29 March 2022 and full payment of ₹ 17.25 lakh was made to the contractor on 30 March 2022 excluding GST of ₹ 0.35 lakh which was deducted at source from the contractor's bill. It was, however, noticed during the joint physical verification with the Department officials on 21 January 2023, nine months after the recorded date of completion and full and final payment to the contractor, that the 5-ton Hand Operated Traverse Crane was neither installed at site, nor was there any record of its receipt in full and good condition.

1.7.2 Implementation of Saihapui 'K' Solar Pumping Water Supply Scheme

Undue financial benefit in the execution of Saihapui 'K' Solar Pumping Water Supply Scheme in augmentation with functional household tap connection (FHTC) under Jal Jeevan Mission - ₹ 21.48 lakh

Test check (January 2023) of records of the Executive Engineer (EE), Public Health Engineering Department (PHED), Kolasib Watson Division, Kolasib revealed that Government of Mizoram accorded administrative approval (December 2021), for execution of Saihapui 'K' Solar Pumping Water Supply Scheme in augmentation with FHTC under Jal Jeevan Mission at the estimated amount of ₹ 2.10 crore. The scheme was funded by Government of India (₹ 1.87 crore) and Government of Mizoram (₹ 20.74 lakh) and also through community contribution in kind, in the form of labour (₹ 2.21 lakh). Technical sanction of the scheme was accorded by the Chief Engineer, PHED, Zone-I (January 2022).

⁶⁹ M/s Johnson Diesel Sales & Service, Dawrpui, Aizawl

As per the Monthly Progress Report of the Division for the month of December 2022, expenditure of ₹ 1.24 crore was incurred towards the execution of the project as shown in **Table-1.76** below:

Table-1.76: Statement showing physical and financial progress as of December 2022

Sl. No.	Detailed Items of work as per approved Estimates	Estimated Amount (in ₹)	Unit	Quantity	Physical Progress (in per cent)		Financial Progress (in ₹)
					Quantity of Material	Quantity Achieved	
1.	Intake Arrangement	2,45,000	No	1	-	40	14,000
2.	Gravity Main	9,32,971	metre	650	90	80	9,32,901
3.	Treatment Plant	38,56,900	Job	1	50	40	17,19,840
4.	Solar Pumping System	58,72,000	Job	1	-	-	0
5.	Pumping Main	25,07,379	metre	1,850	90	60	25,06,581
6.	Reservoir	18,82,900	No	1	90	70	16,01,000
7.	Distribution Network	40,85,804	metre	3,900	90	80	38,79,996
	FHTC		metre	856.25	90	90	
	Public Contribution (In kind, in the form of labour)	2,21,000	-	-	-	100	2,21,000
8.	Feeding Main	8,67,311	metre	1,050	90	90	8,23,757
9.	Carriage of Materials	1,03,000	Job	1	-	90	1,03,041
10.	Contingencies	6,10,598	-	-	100	100	5,50,578
Total		2,09,63,863					1,23,52,694

Scrutiny of the Accounts record, Measurement Book and joint physical inspection of the construction works revealed that the Department incurred an expenditure of ₹ 21.48 lakh⁷⁰ for works which were either only partially executed or not executed/ constructed at all in respect of Saihapui 'K' Solar Pumping Water Supply Scheme and false entries were recorded in the Measurement Books as detailed below:

(i) Construction of Zo Rawra filter of the Treatment Plant - ₹ 6.77 lakh

The work of construction of Zo Rawra filter of the Treatment Plant was shown as executed at Saihapui 'K' as per Measurement Book, at a total cost of ₹ 6.77 lakh, departmentally through indent of materials worth ₹ 2.76 lakh⁷¹ (payment made on 13 September 2022) and by engaging muster roll labour between 22 June 2022 and 20 July 2022 with an expenditure of ₹ 4.01 lakh (payment made on 16 September 2022). As per Measurement Book No. 60 (M) NR, the supply of materials was recorded as having commenced from 13 June 2022 and completed on 20 June 2022 and the construction work, through muster roll labour, was recorded as having commenced from 22 June 2022 and completed on 20 July 2022. It was,

⁷⁰ ₹ 6.77 lakh + ₹ 14.71 lakh

⁷¹ Supplied by M/s Lalthakimi, Diakkawn, Kolasib

however, noticed during joint physical verification with Department officials on 21 January 2023, seven months after the recorded date of completion that the filter was not constructed.

(ii) Construction of RCC reservoir of 1,00,000 litres capacity - ₹ 14.71 lakh

The work of construction of RCC reservoir 1,00,000 litres capacity was awarded (05 May 2022) to a contractor⁷² without tender for an amount of ₹ 16.01 lakh⁷³. As per Measurement Book No. 13 (M) NR-II, the work was recorded as having commenced from 02 June 2022 and completed on 12 July 2022 with an expenditure of ₹ 16.01 lakh, out of which ₹ 14.71 lakh was paid on 26 July 2022. It was, however, noticed during the Joint physical inspection with the Department officials on 21 January 2023, around six months after the recorded date of completion and payment of ₹ 14.71 lakh to the contractor, that the RCC reservoir was only partially constructed as shown below:



Picture: RCC reservoir of 1,00,000 litres capacity of the Saihapui 'K' Solar Pumping Water Supply Scheme at Saihapui

The Department made payments of ₹ 66.30 lakh (₹ 44.82 lakh + ₹ 21.48 lakh) in the execution of North Thingdawl Water Supply Scheme and Saihapui 'K' Solar Pumping Water Supply Scheme under Jal Jeevan Mission, as of December 2022, based on false entries in the Measurement Books, for works which were either only partially executed or not executed/ constructed at all in violation of the existing Rules resulting in undue financial benefits to the contractors.

The matter was reported to the Department and Government (September 2023). The State Government while agreeing to the Audit observation stated (November 2023) that the Hand Operated Traverse Crane and the Electrical Driven Clear Water Pump Set of the North Thingdawl Water Supply Scheme were received, commissioned/ fitted and operational on 4 and 6 February 2023 after 10 months of the recorded completion date of 29 March 2022, based on which 90 *per cent* and full amount respectively of the contract amount was paid to the contractor. It was also stated that the construction works of Zo Rawra filter of the Water Treatment Plant and RCC reservoir of 1,00,000 litres capacity

⁷² Pu Pachhunga, Bilkhawthlir, Kolasib District

⁷³ The term of payment was not stipulated in the work order

of the Saihapui 'K' Solar Pumping Water Supply Scheme were completed on 10 March 2023 after seven and eight months of the recorded completion date of 20 June 2022 and 12 July 2022 respectively, based on which payments of 100 *per cent* and 91.88 *per cent* respectively of the work value/ contract were made to the contractors. However, a joint physical verification with Audit and Department officials on 12 December 2023 revealed that Saihapui 'K' Solar Pumping Water Supply Scheme is yet to be commissioned. The Executive Engineer, Kolasib Watsan Division, Kolasib was again requested (17 January 2024) to state the reason for non-commissioning of the Saihapui 'K' Solar Water Pumping system. The Executive Engineer stated (23 January 2024) that all components of the project were completed except two *per cent* of the Water Treatment Plant, which is yet to be completed to achieve full functionality. The Executive Engineer's reply nullified the State Government contention that the project was completed by March 2023. Thus, it is evident that false entries were made in the Measurement Books to merit payments, in violation of the agreed terms and conditions without completion of the works, resulting in undue financial benefit to the contractors.

1.7.3 Buhchangphai Solar Pumping Water Supply Scheme

Undue financial benefit in execution of Buhchangphai Solar Pumping Water Supply Scheme under Jal Jeevan Mission- ₹ 1.16 crore

Test check (January 2023) of records of the Executive Engineer (EE), Public Health Engineering Department (PHED), Kolasib Watson Division, Kolasib revealed that Government of Mizoram accorded administrative approval (December 2021) for execution of Buhchangphai Solar Pumping Water Supply Scheme under Jal Jeevan Mission in augmentation with functional household tap connection (FHTC) at an estimated amount of ₹ 2.13 crore as per the Detailed Project Report. The scheme was funded by Government of India (₹ 1.90 crore), Government of Mizoram (₹ 21.10 lakh) and also community contribution in kind, in the form of labour (₹ 1.88 lakh). Technical sanction of the scheme was also accorded by the Chief Engineer, PHED, Zone-I (January 2022).

As per the Monthly Progress Report of the Division for the month of December 2022, expenditure of ₹ 1.94 crore was incurred towards the execution of the project as shown in **Table-1.77** below:

Table-1.77: Statement showing physical and financial progress as of December 2022

Sl. No.	Detailed Items of work as per approved Estimates	Estimated Amount (in ₹)	Unit	Quantity	Physical Progress (in <i>per cent</i>)		Financial Progress (in ₹)
					Material	Quantity Achieved	
1.	Intake Arrangement	2,42,000	No	1	-	30	2,19,029
2.	Gravity Main	7,17,670	metre	500	100	100	7,17,554
3.	Treatment Plant	42,64,900	Job	1	60	50	28,87,248
4.	Pumping System	91,69,476	metre	1,400	80	50	86,80,061
5.	Reservoir	18,82,900	No	1	90	70	18,81,815
6.	Distribution System	43,01,552	metre	3,850	90	90	41,08,523
	FHTC		metre	2,581.25	90	80	
	Public Contribution (In kind, in the form of labour)	1,88,000 ⁷⁴	-	-	-	100	1,88,000

⁷⁴ The estimate of ₹ 212.93 lakh was excluding Public Contribution of ₹ 1.88 lakh

Sl. No.	Detailed Items of work as per approved Estimates	Estimated Amount (in ₹)	Unit	Quantity	Physical Progress (in per cent)		Financial Progress (in ₹)
					Material	Quantity Achieved	
7.	Carriage of Materials	94,500	Job	1	-	90	93,148
8.	Contingencies	6,20,190	-	-	90	90	6,20,154
Total		2,14,81,188	-	-	-	-	1,93,95,532

Scrutiny of the Accounts records, Measurement Books and joint physical verification of the construction works revealed that undue financial benefit of ₹ 1.16 crore⁷⁵ was given to the contractors for works which were either only partially executed or not executed at all and false entries were recorded in the Measurement Books as detailed below:

(A) Irregular payments in respect of Water Treatment Plant

The works of construction on water treatment plant with the estimated amount of ₹ 42.65 lakh were divided into three components viz., (i) Construction of baffle wall sedimentation tank, (ii) Construction of Zo Rawra filter and (iii) Construction of clear water sump of 1,00,000 litres capacity. It was observed that the Department incurred an expenditure of ₹ 28.87 lakh as of December 2022 for works which were either only partially executed or not executed at all as detailed below:

a) Construction of baffle wall sedimentation tank of water treatment plant - ₹ 14.25 lakh

The work of construction of baffle wall sedimentation tank was awarded (05 May 2022) to a contractor⁷⁶ without call of tender at an amount of ₹ 14.25 lakh. Scrutiny of the Measurement Book No. 51 (M) NR revealed that the work was shown to have commenced from 16 May 2022 and completed on 15 July 2022. The contractor was paid the full amount of ₹ 14.25 lakh on 26 July 2022. It was, however, noticed during joint physical verification with Department officials on 21 January 2023, six months after the recorded date of completion that the baffle wall sedimentation tank was at the very initial stage of construction and not completed as shown below:



Picture: Construction of baffle wall sedimentation tank of water treatment plant at Buhchangphai

⁷⁵ ₹ 14.25 lakh + ₹ 6.77 lakh + ₹ 7.85 lakh + ₹ 16.01 lakh + ₹ 2.81 lakh + ₹ 66.93 lakh + ₹ 0.90 lakh

⁷⁶ Pu Lalhmuchhuaka, Buhchangphai, Kolasib District

(b) Construction of Zo Rawra filter of Water Treatment Plant - ₹ 6.77 lakh

The work of construction of Zo Rawra filter at a total cost of ₹ 6.77 lakh was shown as executed departmentally at Buhchangphai through indent of materials worth ₹ 2.76 lakh⁷⁷ (payment made on 26 July 2022 and 13 September 2022) and by engaging muster roll labour between 17 June 2022 and 15 July 2022 with an expenditure of ₹ 4.01 lakh (payment made on 26 July 2022). As per Measurement Book No.59 (M) NR, the construction work was recorded as having commenced from 8 June 2022 and completed on 14 June 2022. It was, however, noticed during the joint physical verification with the Department officials on 21 January 2023, seven months after the recorded date of completion that the filter was not constructed.

(c) Construction of clear water sump of 1,00,000 litres capacity - ₹ 7.85 lakh

The work of construction of clear water sump of 1,00,000 litres capacity was awarded (19 May 2022) to a contractor⁷⁸ through tender for an amount of ₹ 14.09 lakh. As per measurement Book No. 51 (M) NR, the work was recorded as having commenced on 12 September 2022. The date of completion was recorded as 9 November 2022, the same date on which the measurement was recorded. Out of the contract amount of ₹ 14.09 lakh on this work, a sum of ₹ 7.85⁷⁹ lakh was paid to the contractor on 23 November 2022. It was, however, noticed during the joint physical verification with the Department officials on 21 January 2023, two months after the recorded date of completion that the clear water sump was not constructed.

(B) Irregular payments in respect of Reservoir

The works on construction of reservoir with the estimated amount of ₹ 18.83 lakh was executed as two components viz., (i) Construction of RCC reservoir 1,00,000 litres capacity, executed through a contractor, and (ii) Construction of security fencing of RCC reservoir 1,00,000 litres capacity, executed departmentally. It was observed that the Department incurred an expenditure of ₹ 18.82 lakh as of December 2022 for works which were either only partially executed or not executed at all as detailed below:

(a) Construction of RCC reservoir 1,00,000 litres capacity - ₹ 16.01 lakh

The work of construction of RCC reservoir 1,00,000 litres capacity was awarded (05 May 2022) to a contractor⁸⁰ without call of tender for an amount of ₹ 16.01 lakh. As per Measurement Book No. 9(M) NR, the work was recorded as having commenced from 13 May 2022 and completed on 14 July 2022 with the expenditure of ₹ 16.01 lakh paid on 26 July 2022. It was, however, noticed during the Joint physical verification with the Department officials on 21 January 2023, six months after the recorded date of completion that the RCC reservoir was not completed as shown below:

⁷⁷ Supplied by M/s Lalthakimi, Diakkawn, Kolasib

⁷⁸ M/s Engineering & Geo-Solutions Consultancy Services, Zarkawt, Aizawl

⁷⁹ Contract amount ₹ 14.09 lakh – amount withheld ₹ 6.24 lakh for clear water sump work = Amount paid ₹ 7.85 lakh

⁸⁰ Pu V. Vanlalchhanchhuaha



Picture: Construction of RCC reservoir 1,00,000 litres capacity at Buhchangphai

(b) Construction of security fencing of RCC reservoir 1,00,000 litres capacity - ₹ 2.81 lakh

The work of construction of security fencing of the RCC reservoir was not included in the approved components of the scheme. However, the work was executed at a total cost of ₹ 2.81 lakh departmentally through indent of materials worth ₹ 2.15 lakh. Out of the materials supplied⁸¹ of ₹ 2.15 lakh, payment of ₹ 1.47 lakh was made on 13 September 2022 and of ₹ 0.68 lakh on 23 November 2022. It was also observed that expenditure of ₹ 0.66 lakh was incurred by engaging muster roll labour from 26 July 2022 to 06 August 2022 (payment made on 16 September 2022). As per Measurement Book 51(M) NR, the work was recorded as having commenced from 18 July 2022 and completed on 25 July 2022. It was, however, noticed during the Joint physical verification with the Department officials on 21 January 2023, six months after the recorded date of completion that the security fencing was not constructed.

(C) Irregular payments in respect of Pumping System

The works on construction of pumping system with the estimated amount of ₹ 91.69 lakh were executed as two components viz., (i). Supply, installation & commissioning of solar water pump including all necessary accessories *etc.*, and (ii). Construction of control room, both of which were executed through a contractor at ₹ 67.83 lakh. It was observed in these works that the Department incurred an expenditure of ₹ 67.83 lakh as of December 2022 for works which were not executed at all as detailed below:

(a) Supply, installation & commissioning of solar water pump including all necessary accessories, *etc.* - ₹ 66.93 lakh

The work/ job of supply, installation & commissioning of solar water pump including all necessary accessories was awarded (19 May 2022) to a contractor⁸² through tender for an amount of ₹ 66.93 lakh. As per measurement Book No. 51 (M) NR, the work was recorded as having commenced on 12 September 2022. The date of completion was

⁸¹ Supplied by M/s Lalthakimi, Diakkawn, Kolasib

⁸² M/s Engineering & Geo-Solutions Consultancy Services, Zarkawt

recorded as 9 November 2022, the same date on which the measurement was recorded. Full payment of ₹ 66.93 lakh was made to the contractor on 23 November 2022. It was, however, noticed during the joint physical verification with the Department officials on 21 January 2023, two months after the recorded date of completion that the solar water pump was neither installed nor available.

(b) Construction of control room - ₹ 0.90 lakh

The work of construction of control room was awarded (19 May 2022) to a contractor⁸³ through tender for an amount of ₹ 0.90 lakh. As per measurement Book No. 51 (M) NR, the work was recorded as having commenced on 12 September 2022. The date of completion was recorded as 9 November 2022, the same date on which the measurement was recorded. Full payment of ₹ 0.90 lakh was made to the contractor on 23 November 2022. It was, however, noticed during the joint physical verification with Department officials on 21 January 2023, two months after the recorded date of completion that the control room was not constructed.

Thus, the Department made payments of ₹ 1.16 crore in the execution of Buhchangphai Solar Pumping Water Supply Scheme under Jal Jeevan Mission, as of December 2022, based on false entries in the Measurement Books, for works which were either only partially executed or not executed/ constructed at all in violation of the existing Rules resulting in undue financial benefits to the contractors.

The matter was reported to the Department and Government (October 2023). The State Government while agreeing to the Audit observations stated (November 2023) that the constructions of baffle wall sedimentation tank and Zo Rawra filter of the water treatment plant, RCC reservoir and the security fencing thereof, and the control room of the solar water pumping system were completed between 10 and 30 March 2023 after four to eight months of the recorded completion date between 14 June 2022 and 9 November 2022, based on which full amount of the work value/ contract amount was expended. It was also stated that the construction of clear water sump of the water treatment plant was completed on 10 April 2023 after five months of the recorded completion date of 9 November 2022 based on which 55.71 *per cent* of the contract amount was paid to the contractor while the supply, installation & commissioning of solar water pump including all necessary accessories, *etc.*, was stated to have been successfully tested and commissioned on 17 August 2023 after nine months of the recorded completion date of 9 November 2022 based on which full payment was made to the contractors. However, a joint physical verification with Audit and the Department officials on 12 December 2023 revealed that the whole project of Buhchangphai Solar Pumping Water Supply Scheme is yet to be commissioned. The Executive Engineer, Kolasib Watsan Division, Kolasib was again requested (17 January 2024) to state the reason for non-commissioning of the Buhchangphai Solar Water Pumping system. The Executive Engineer stated (23 January 2024) that all components of the project were completed except one *per cent* of the Water Treatment Plant, which is yet to be completed to achieve full functionality. The Executive Engineer's reply nullified the State Government contention that the project was completed by August 2023. Thus, it

⁸³ M/s Engineering & Geo-Solutions Consultancy Services, Zarkawt

is evident that false entries were made in the Measurement Books to merit payments for works which were either only partially executed or not executed/ constructed at all resulting in undue financial benefit to the contractors.

Recommendation: *The Department needs to take steps to ensure authenticity of the entries in the Measurement Book before processing bills for payment.*

ART AND CULTURE DEPARTMENT

1.8 Idle expenditure

Due to incomplete design/ improper planning, the newly constructed State Museum with an expenditure of ₹ 3.22 crore was lying idle for more than 12 years

Ministry of Culture, Government of India sanctioned (March 2006) ₹ 3.00 crore out of the total project cost of ₹ 3.62 crore as a one-time financial assistance for construction of Mizoram State Museum and released the sanction amount of ₹ 3.00 crore⁸⁴ during the period between March 2006 to June 2017. As per the sanction, the Art and Culture Department, Government of Mizoram was to contribute ₹ 0.62 crore.

The objectives of the State Museum as per the concept note were to:

- Preserve and save the cultural identity and heritage of the State,
- Create awareness for art & culture and rehabilitation & preservation of antique,
- Provide information and entertainment for consortiums of art & culture,
- Increase access to antiques and relics collections, and
- Impart knowledge to public upon the past cultures.

Test check (February- March 2021) of records of the Director, Art and Culture Mizoram, Aizawl revealed that Government of Mizoram accorded (March 2007) administrative approval for ₹ 3.62 crore for construction of Mizoram State Museum by the Art and Culture Department, Government of Mizoram. The State Public Works Department (PWD) executed the construction of the State Museum through a contractor⁸⁵ at the agreed amount of ₹ 3.22 crore. The construction of the State Museum at Mizoram New Capital Complex (MINECO⁸⁶) started in September 2007 and was completed in October 2012. However, the State Museum building was handed over by the PWD to the Art and Culture Department only in July 2019, after more than six years of completion of construction, without any recorded reason on delay in handing over the property. The Department stated (November 2021) that the State PWD did not incorporate the inner furnishing of the Museum in the detailed project report (DPR) and as a result the Art and Culture Department could not utilise the Building/ Museum. It was also stated that under Smart City Scheme, installation of showcases/ galleries, electrification and all other furnishings will be executed in a short while.

⁸⁴ ₹ 1.93 crore as first instalment released on 02 March 2006 + ₹ 0.32 crore as Second instalment released on 28 March 2006 + ₹ 0.50 crore as first part of third instalment released on 28 March 2016 + ₹ 0.25 crore as second part of third instalment released on 28 June 2017 = ₹ 3.00 crore

⁸⁵ Pu F. Lalmalsawma, Tuikual South, Aizawl selected on tender system

⁸⁶ Initially planned at Berawtlang and shifted to New Secretariat Complex, Aizawl, which is renamed as Mizoram New Capital Complex (MINECO)

Thus, audit observed that the Museum building was lying idle for more than 12 years since the completion of construction of the building inclusive of a period of more than four years after the building was taken over by the Department. Photographs of State Museum showing the ongoing refurbishment works (as of 19 April 2024) are shown below:



State Museum: Interior open space showing a provision for passenger lift



State Museum: ceiling, showcase/ galleries, wooden flooring

The matter was reported to the Department and Government (December 2023). The State Government while agreeing to the Audit observation stated (January 2024) that the State Museum was constructed, as designed, without the provision of galleries to showcase the artefacts and antiquities, which are of utmost necessity for the functioning of the Museum. On further enquiry, it was observed that Aizawl Smart City Limited under Urban Development and Poverty Alleviation Department has been carrying out refurbishment works, including provisions of galleries, ceiling, firefighting equipment, Air conditioning, flooring, doors & windows, *etc.*, of the State Museum, MINECO at a cost of ₹ 3.92 crore⁸⁷ by executing deed of agreement with a contractor⁸⁸ on 23 November 2021 and subsequent supplementary agreement on 30 October 2023. The target date of completion as per the supplementary agreement was 31 March 2024. However, the updated physical progress was 92 *per cent* and the financial progress was 60 *per cent* as of 05 March 2024.

The Chief Executive Officer, Aizawl Smart City Limited stated (22 April 2024) that the re-furbishment work could not be completed by 31 March 2024 and the Museum building will be handed over to the Art and Culture Department as soon as the project is completed.

The Director, Art and Culture Department reiterated (01 May 2024) that there was no showcase in the galleries for displaying of artefacts as well as office furniture for the officers and staff. It was further stated that all electric lines/ cables connecting lights, air conditioner, exhaust fan, elevators, *etc.*, were stolen (without mentioning the time of occurrence) by miscreants resulting in delay in completion of the on-going refurbishment work. The Director, however, stated that the year of completion of the State Museum as 2012 was a typing mistake and should be read as 2019. He also attributed the delay in completion to late release of the third instalment by the Ministry of Culture, Government

⁸⁷ ₹ 1.81 crore as per original agreement + ₹ 2.11 crore as per supplementary agreement = ₹ 3.92 crore

⁸⁸ M/s Zamzo Engineering Construction and Consultancy, Aizawl selected on open tender

of India. The contention of the Director that the Museum was completed in 2019 is not tenable as the Engineer-in-Chief, PWD had already stated (May 2016) that the civil work of the State Museum was actually completed on 02 October 2012. This date also conforms with the date of completion as per the handing and taking over charge note of the State Museum.

Thus, due to incomplete design/ improper planning, the State Museum was constructed at a cost of ₹ 3.22 crore without showcases for displaying artefacts and antiquities and internal furnishings resulting in non-utilisation of the State Museum for more than 12 years, necessitating additional budgetary allocation of ₹ 3.92 crore for refurbishment. Consequently, the objective of preservation and providing knowledge and awareness of cultural identity, heritage, antiques and relics of the State remained unachieved till date (April 2024).

