MIZORAM STATE POLLUTION CONTROL BOARD

No. H.88088/Poltn./50 (XIX)/18-MPCB/ : Dated Aizawl, the 19th June 2020.

To,

The Secretary,
Ministry of Jal Shakti,
2nd Floor, Block-III, CGO Complex,
Lodhi Road, New Delhi – 110003.

Subj.: Submission of monthly progress report of Mizoram for the month of May 2020 in compliance of Hon'ble NGT order on OA No. 673/2018

Sir,

With reference to the above cited subject, may I submit herewith monthly progress report of Mizoram for the month of **May 2020** on OA. 673/2018 as per your prescribed format for favour of your kind information and further necessary action.

Kindly note that due to the ongoing Covid-19 Pandemic lockdown, actions could not be taken much during the reporting month.

Yours faithfully,

Enclo: Progress Report, May, 2020

(C.LALDUHAWMA)
Member Secretary,
Mizoram Pollution Control Board

Memo No. H.88088/Poltn./50 (XIX)/18-MPCB/ : Dated Aizawl, the 19th June 2020.

Copy to: The Member Secretary, Central Pollution Control Board for kind information.

(C.LALDUHAWMA)
Member Secretary,
Mizoram Pollution Control Board

Mizoram State Pollution Control Board, New Secretariat Complex, Thlanmual Peng, Khatla, Aizawl, Mizoram-796001
Ph.No.2336173/2336590 Fax:2336591 Email:mpcb@mizoram.gov.in Website:http://www.mpcb.mizoram.gov.in

Monthly Progress Report by Mizoram (May, 2020)

(In the matter of Hon'ble NGT matter of O.A No 673/2018)

Sl. No.	Activity to be monitored	Timeline	Submission of progress by Mizoram – Compliance Status
1.	Ensure 100% treatment of sewage at least in-situ remediation	31.03.2020	• For the treatment of sewages for combating River Pollution, in-situ remediation such as On-Site Greywater Management System is considered most viable and feasible for the state of Mizoram. The Action Plan therefore focuses on the On-Site Management of Greywater which constitutes more than 90% of the total waste water generated in the catchment area of the polluted rivers. • Setting up of On-Site Greywater Management System has been initiated in by PHE Department, Govt. of Mizoram. • Information Education and Communication (IEC) and Capacity Building through door to door campaigns, town/village level sensitization and grass root trainings on proper waste management has been carried out in most of the villages/towns in the Catchment area of Polluted river stretches with about 25% achievements • Ground Survey/Technology options has been done & about 10% of work related to physical works has been completed for setting up of on-site sewage treatment systems in the catchment area of the Polluted Rivers.
	commencement of of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	31.03.2020	
2	Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning	31.03.2021	
3	Chief Secretary may set up appropriate mechanism at State level • Specifying accountability of nodal authorities not below the Secretary level • Chief Secretaries may have an accountable person attached in their office for this purpose	22.01.2020 22.01.2020	• Meeting of Chief Secretary, Govt. of Mizoram with secretaries of all concerned departments on NGT cases, held on 25.02.2020, discussed setting of appropriate mechanism for monitoring compliance of OA.673/2018 at State level. Officer in charge from CS Office has been appointed for conducting montly review meeting for the same. • Irrigation & Water Resources Department, Govt. of Mizoram has been notified as the Nodal Department for matters related to water bodies and River Rejuvenation in Mizoram vide Notification No.A.46012/1/2019-GAD dt.27.02.2020. Subsequently, River Rejuvenation Committee, Mizoram was re-constituted by Government of Mizoram vide Notification No.C.18014/295/2019-FST dt 12.05.2020 under the Chairmanship of Principal Secretary, E,F & CCD and the Chief Engineer, Irrigation & Water Resources Department was entrusted as the Member Secretary.

	• Monitoring at State level must take place	Fortnightly Commencing 21.12.2019	Monthly Review Meeting for March & April 2020 has been postponed due to Covid-19 Pandemics.
4	Progress report may be furnished by the States/UTs to • Secretary, Ministry of Jal Shakti • Member Secretary, CPCB	Monthly (preferably before 20th of every month)	• Updated report submitted regularly. • This report is for the month of **May,2020**
4.1	Progress Report may be compiled of details along with completion timelines on: i) Identification of polluting sources including drains contributing to river pollution and action as per NGT order in situ treatment		• Identification of contributing drains and polluting sources completed (100%), as depicted in the location maps of the rivers and detailed in the RRC approved Revised Action Plan, presented before 12th Meeting of Task Team held on 11.06.2020. Location maps showing contributing drains of the polluted rivers are attached at **Annexure-I (a) to I (i).**
	i) <u>Status of STPs, I&D and sewage networks</u> Details of existing infrastructure, Gap analysis, proposed along with completion of timeline		• On-Site liquid treatment system for Greywater at household levels is under process. This technology is considered most feasible for Mizoram in place of STP which involves complications and high costs for setting up and operations. • Achievements on setting up of On-Site Greywater Management System by PHE/UD&PA Department, Govt. of Mizoram is at **Sl No.2**
	ii) <u>Status of CETPs</u> Details of existing CETP and ETP infrastructure, Gap analysis, Proposed along with completion of timeline, No. of industries and complying status		• River Pollution due to industrial effluents is insignificant in case of Mizoram. There is no CETP in the State. • Inventory of water polluting industries in the catchment areas of the polluted rivers is completed and details provided in the RRC approved Revised Action Plan, presented before 12th Meeting of Task Team held on 11.06.2020.

	iii) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of existing infrastructure, Gap analysis, proposed along with completion of timeline		• Status of solid waste generation, existing management system, gap analysis in the catchment area of the polluted rivers is completed. Details along with proposed action with timeline is given at **Annexure-II** • Information Education and Communication (IEC) and Capacity Building through door to door campaigns, town/village level sensitization and grass root trainings on proper waste management has been carried out in most of the villages/towns in the Catchment area of Polluted river stretches with about 25% achievements • 11% to 50 % works on Segregation, setting up of Plastic Waste Collection Centre/Confined dumping ground for inerts and other wastes has been completed in the polluted river stretches.
	iv) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river		• Ground water quality of the catchment of polluted rivers is assessed wherever sampling locations/facilities for sampling is available. Sampling of drains and ground water in the polluted locations has been completed and water quality monitoring is being carried out.
	v) Preventing dumping of waste and scientific waste management including bio-medical wastes, plastic wastes and decentralizing waste processing including waste generated from hotels, ashrams etc		• The biggest waste dumping site at Tuirial, Aizawl which has been receiving maximum wastes from Aizawl city for a number of years is being closed down now and is soon to be replaced by Waste Management Resource Centre and Sanitary Landfill, newly constructed and commissioned by the State Govt. • Dumping of waste in unauthorised Dumping Sites has been by Deputy Commisioner and Aizawl Municipal Corporation • Status of action taken for adopting scientific waste management system as per proposed Action Plan is given in Sl No. 4.1 (iii).
	vi) Ground water regulation		• In Mizoram, surface water serves as the main sources of water for drinking, domestic and industrial purposes. Ground water extraction is insignificant.
	vii) Adopting good irrigation practices		• Provisions are made by the concerned department, i.e Irrigation & Water resources Department to adopt good irrigation practices in the State. However, irrigation is not practiced in the polluted location of the Rivers.
	(ix)Protection and		• There is no Flood Plain Zones in Mizoram as it is a hilly region.

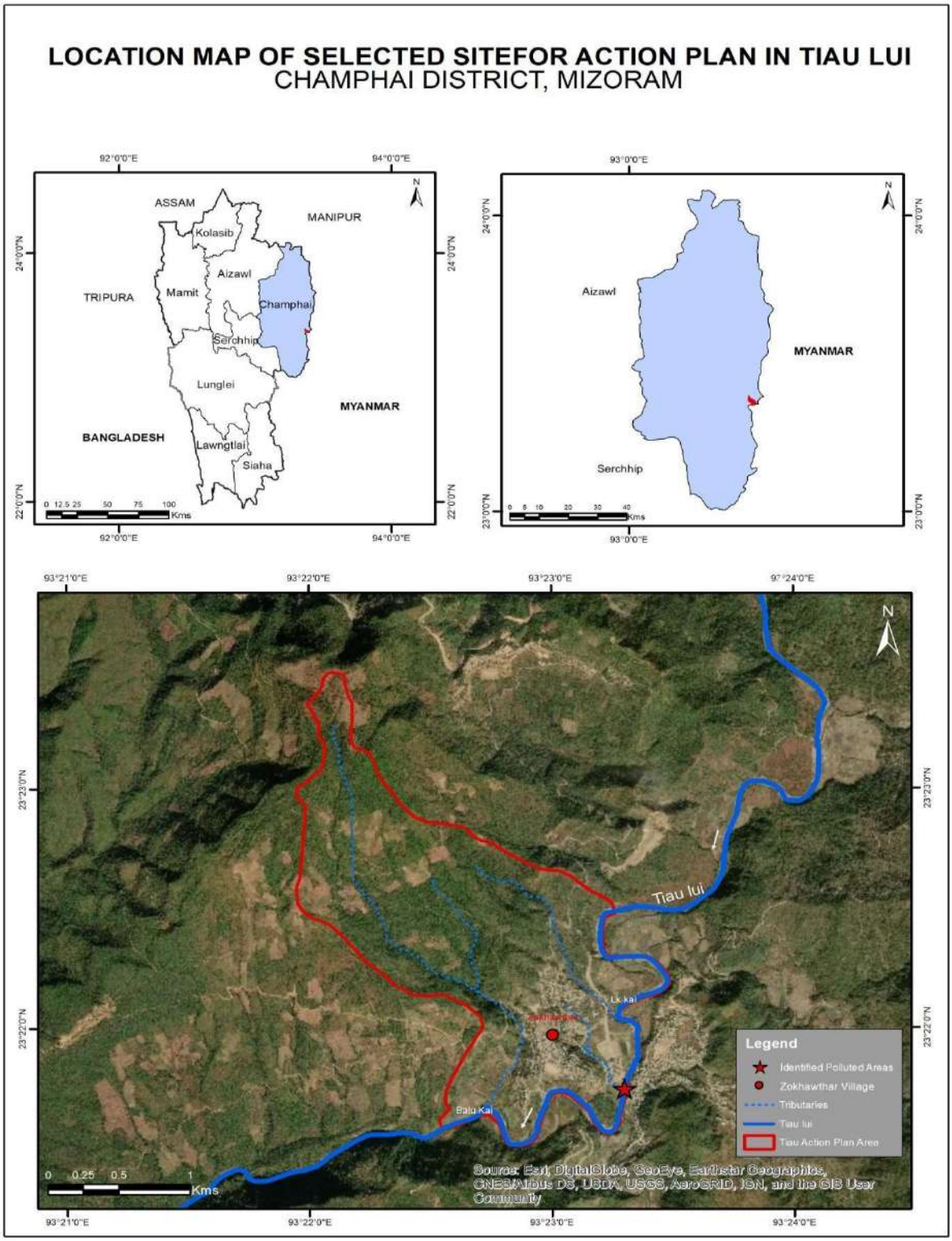
	management of Flood Plain Zones (FPZ)		
	(x) Rain water Harvesting		• Meeting of Chief Secretary, Govt. of Mizoram with secretaries of all concerned departments on 18.05.2020 has nominated the Nodal Department (Environment, Forests and Climate Change, Govt. of Mizoram) to be responsible for framing Policies and Action Plan for Rain Water Harvesting in Mizoram • As per the Action Plan of the polluted rivers, Rainwater harvesting has been initiated. Survey for setting up of Rainwater harvesting System is underway by PHE Department, Govt. of Mizoram.
	(xi) Maintaining minimum flow of river		• E-flow assessment is proposed to be taken up by Irrigation and Water Resources Department, Govt. of Mizoram. Action Plan with timeline for e-flow assessment is given **Annexure-III** • Some of the rivers already have Riverine Reserved Forests of about 800 metres on either side of the river banks which are well protected. However, for enhancing tree and vegetation coverage, afforestation activities in suitable catchment areas have been proposed and plantation drives initiated. • As per Action Plan, Plantation drives in the catchment area of Polluted Rivers already initiated by E,F & CC Department, Govt. of Mizoram and about 10% of the proposed works has been completed so far.
	(xii)Plantation on both sides of the river		
	(xiii)Setting up of biodiversity parks on flood plains by removing encroachment		

Note: The Revised Action Plan for four (4) rivers falling under category III & IV as approved by RRC was presented before the 12th Meeting of Task Team held on 11.06.2020. The task Team approved the Revised Action Plan with conditions. The recommendations of the Task team are being incorporated in the Action Plan for compliance of the Hon'ble NGT directions.

(C.LALDUHAWMA)
Member Secretary,
Mizoram Pollution Control Board

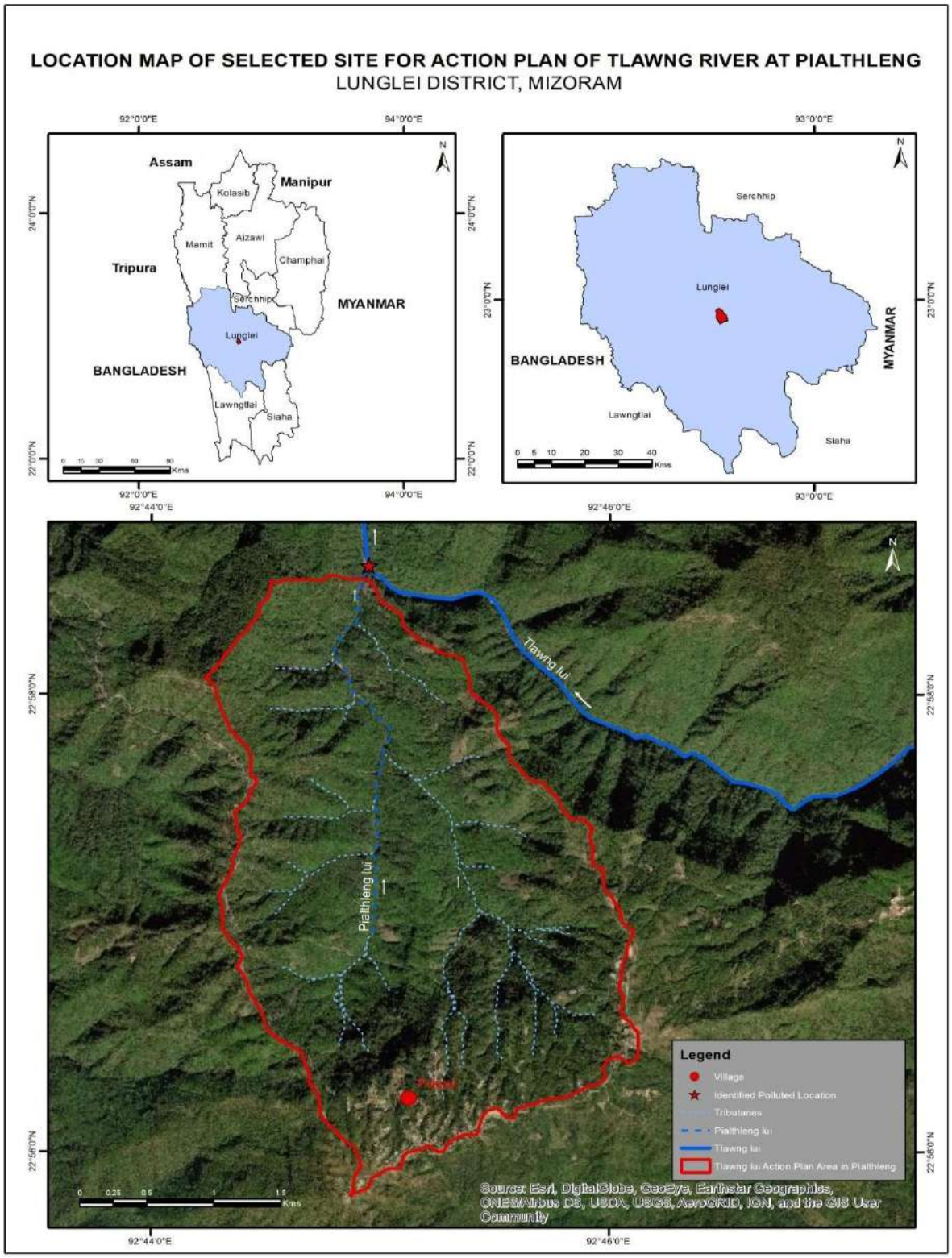
Annexure-I (a)

Map showing tributaries/drains connected to the Tiau river at the polluted location (Zokhawthar village near Tiau Bridge):



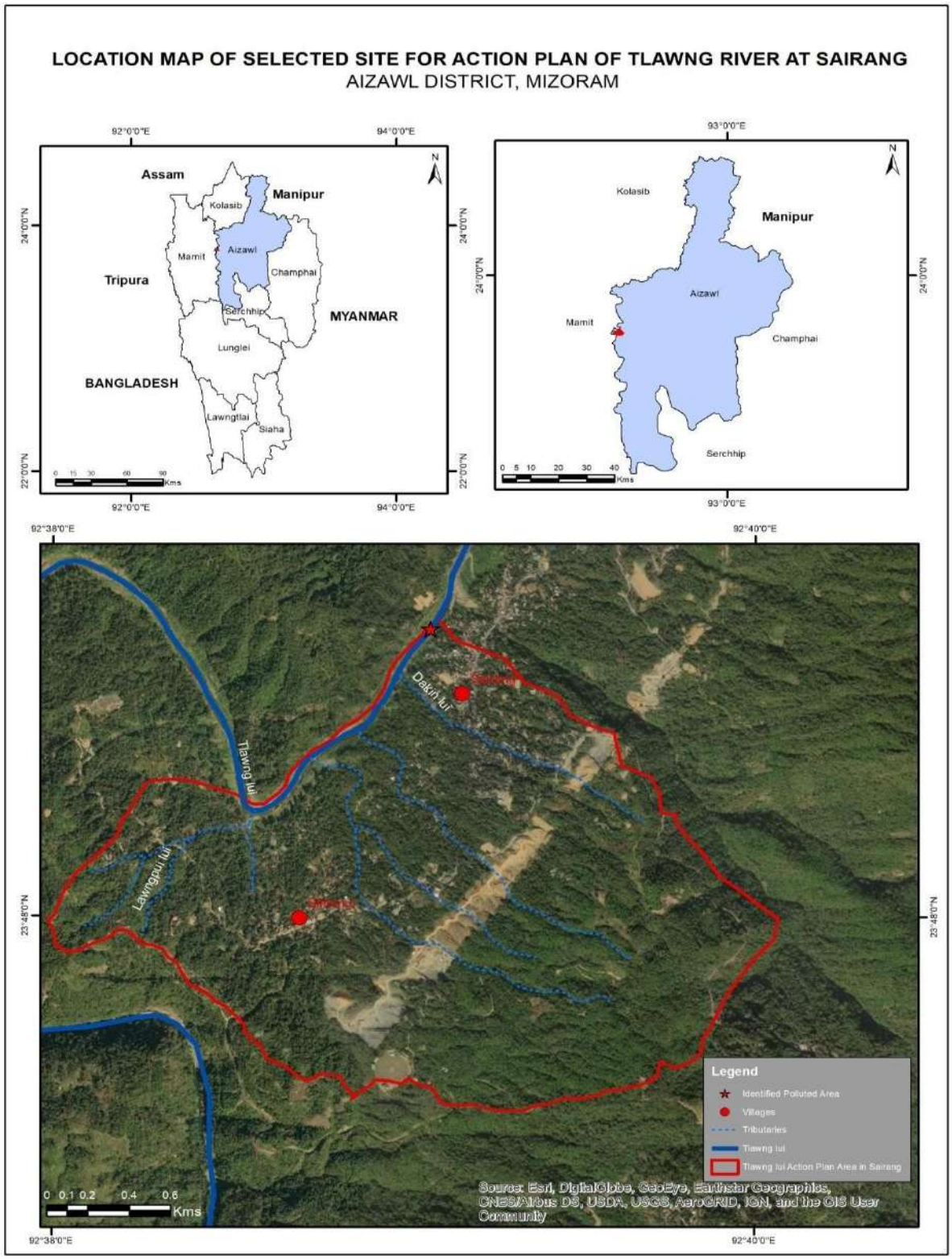
Annexure-I (b) (i)

Map showing tributaries/drains connected to the polluted locations of Tlawng River at Pialthleng, Lunglei:



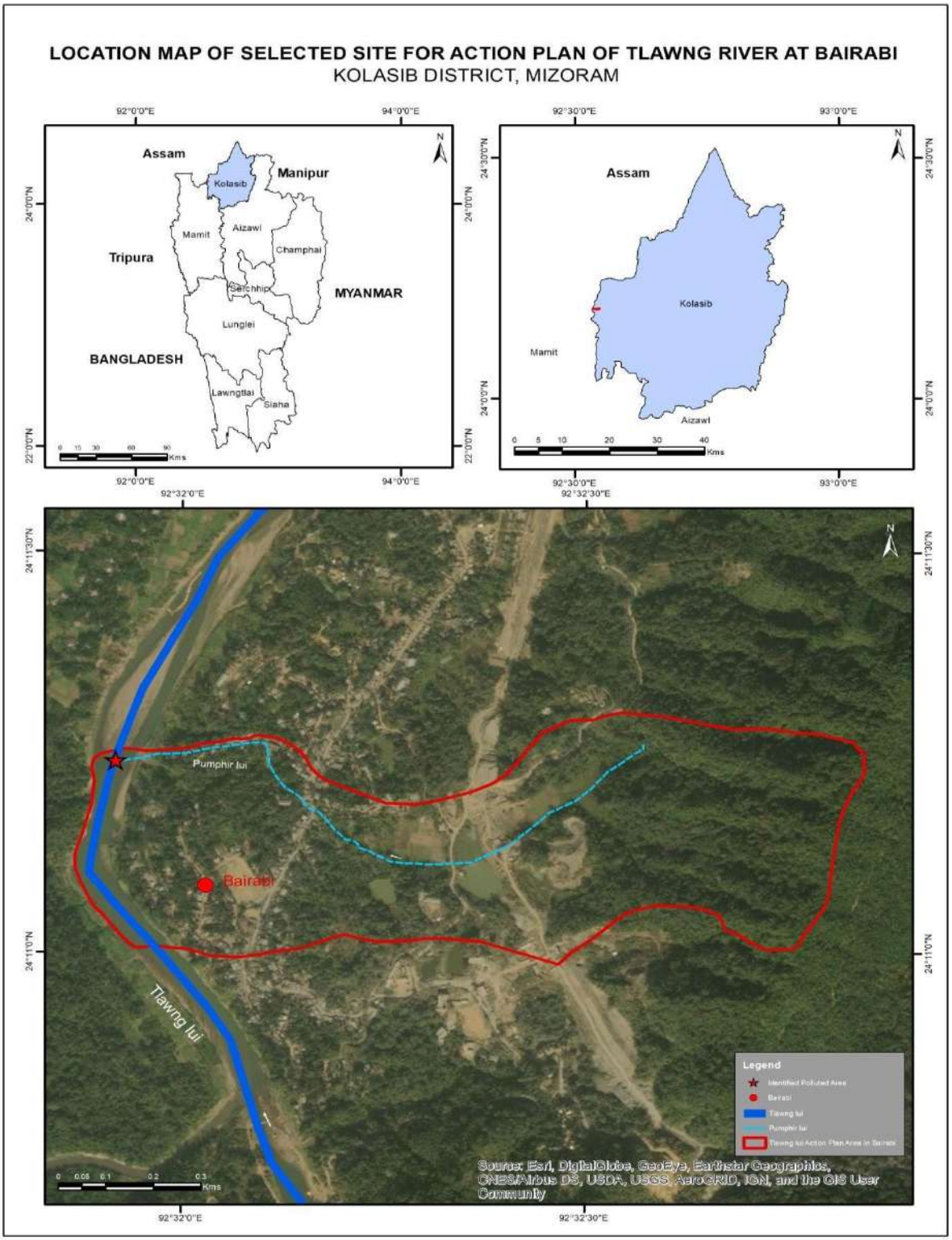
Annexure-I (b) (ii)

Map showing tributaries/drains connected to the polluted locations of Tlawng River at Sairang



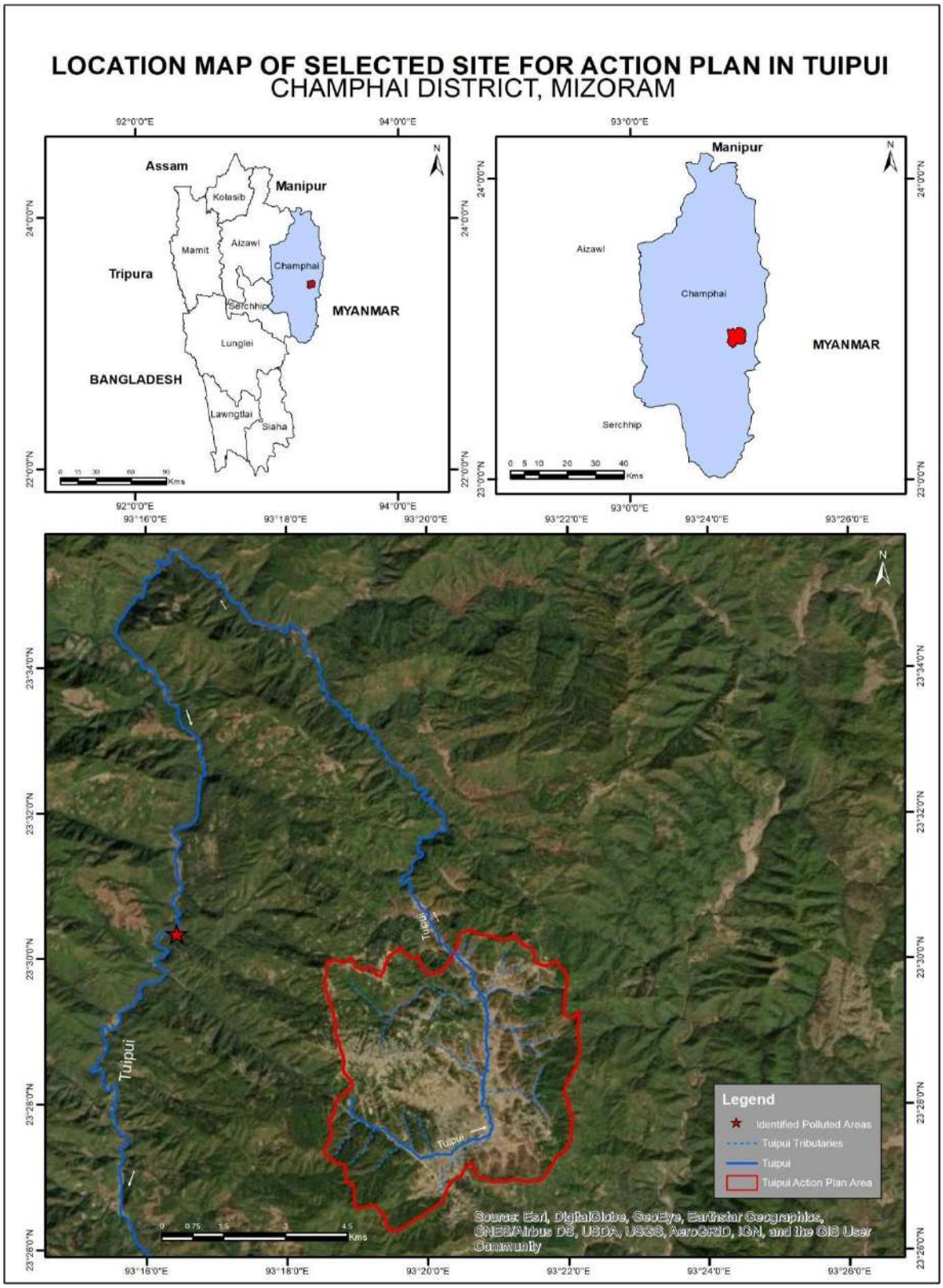
Annexure-I (b) (iii)

Map showing tributaries/drains connected to the polluted locations of Tlawng River at Bairabi



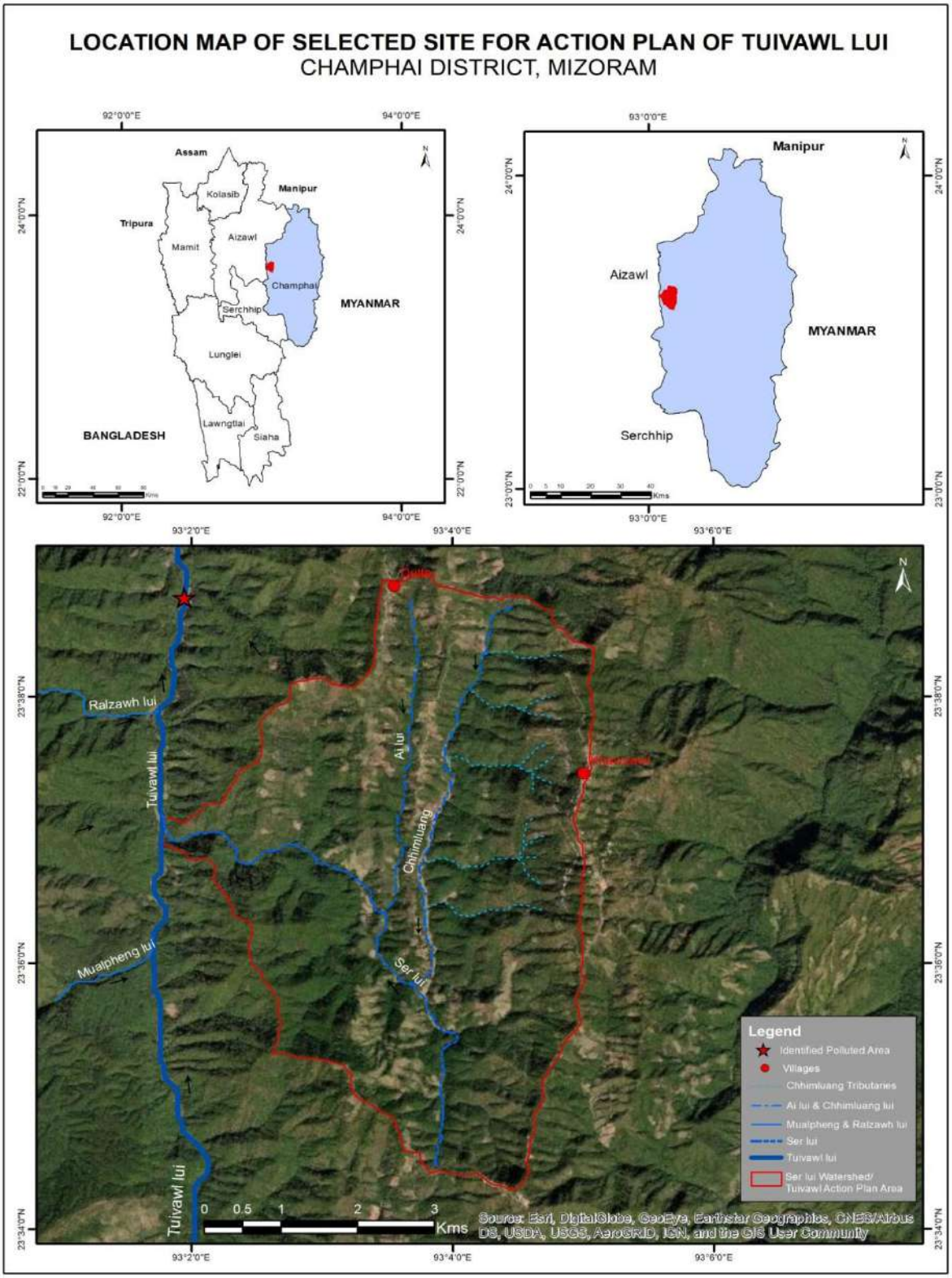
Annexure-I (c)

Map showing tributaries/drains connected to the Tuipui river at the polluted location (Near PHE Water Treatment Plan, Tuipui River, Champhai)



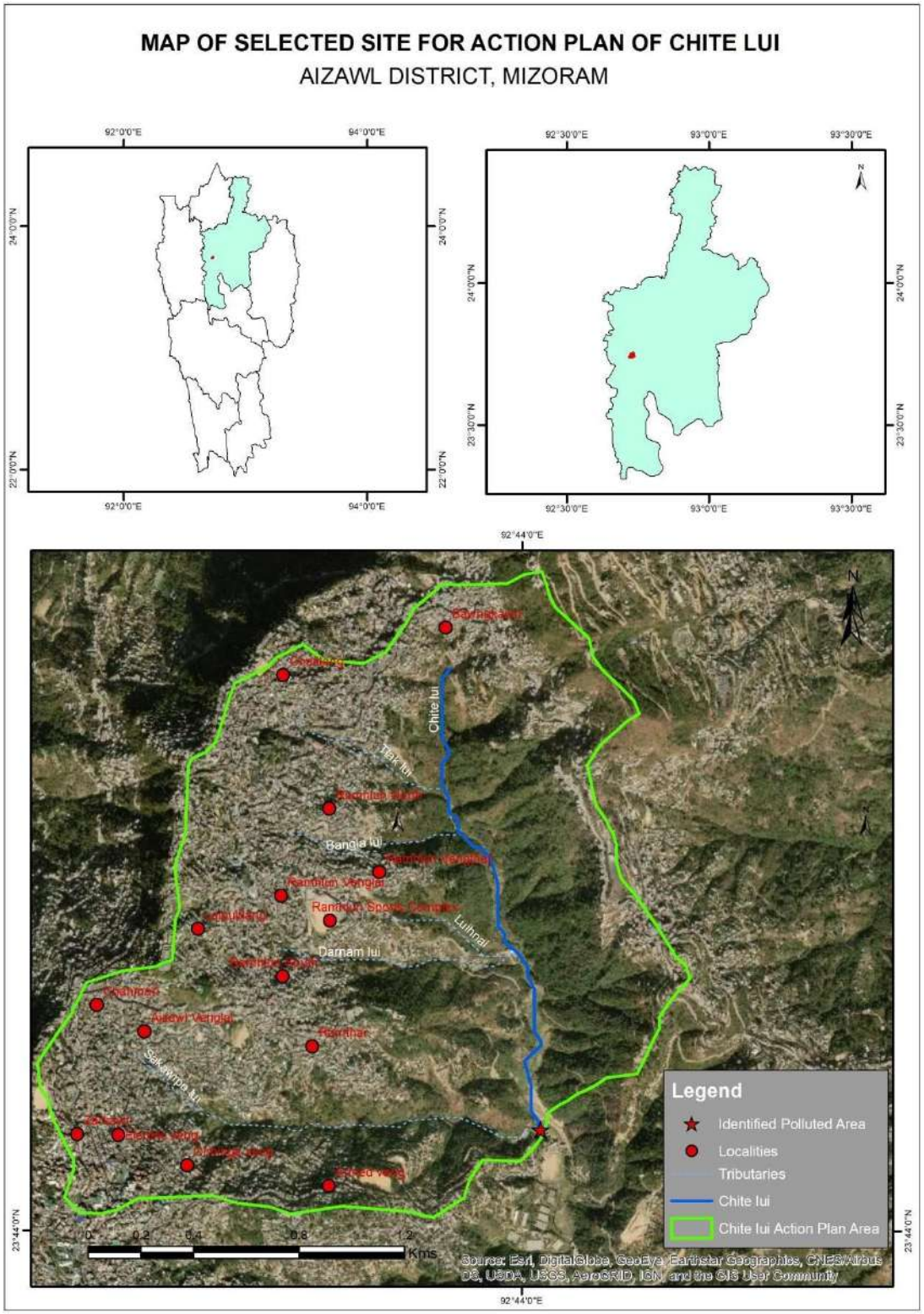
Annexure-I (d)

Map showing tributaries/drains connected to the Tuivawl river at the polluted location (Near Tuivawl Bridge at Keifang)



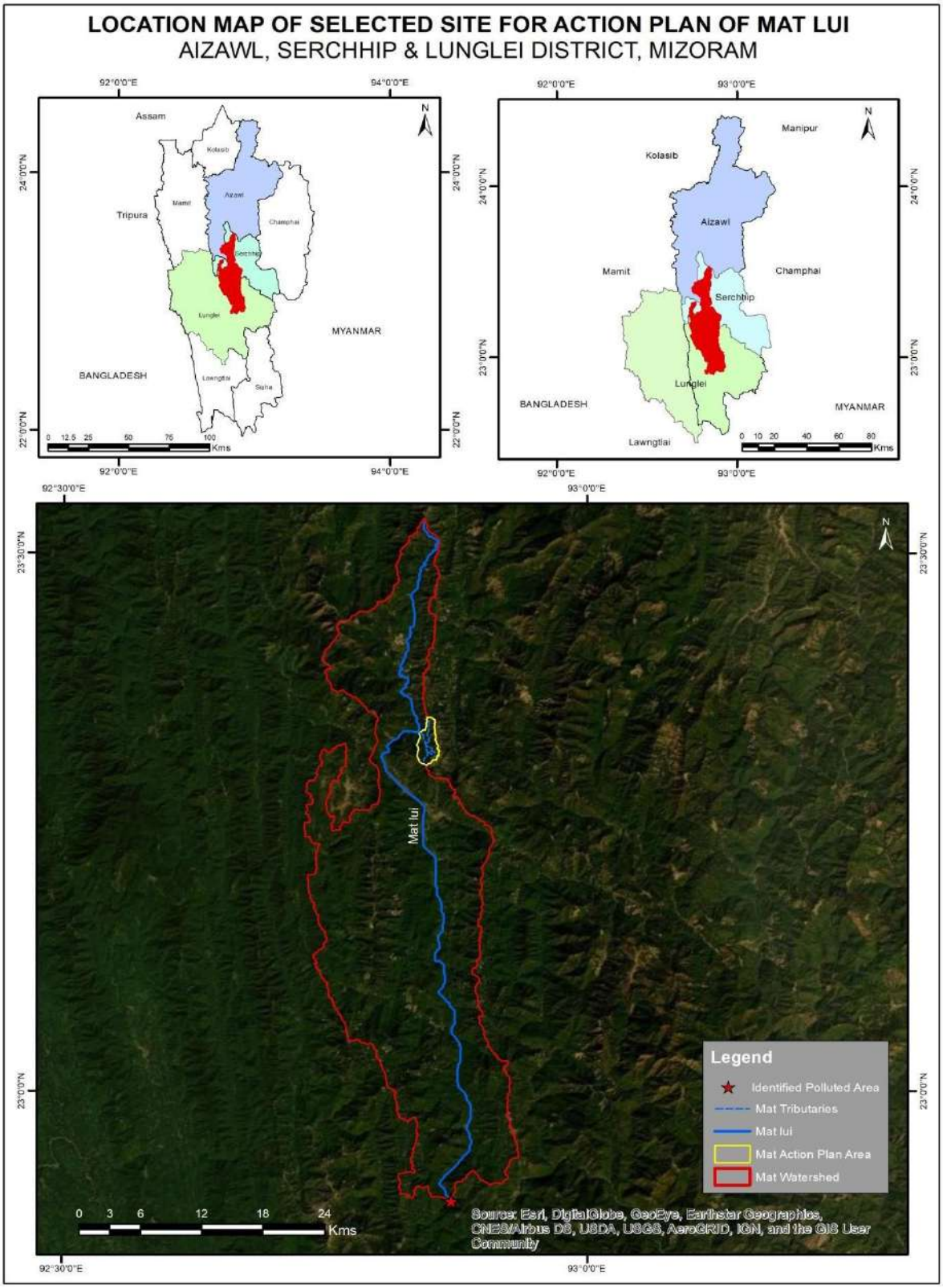
Annexure-I (e)

Map showing tributaries/drains connected to the Chite River at the polluted location (Near Armed Veng, Aizawl)



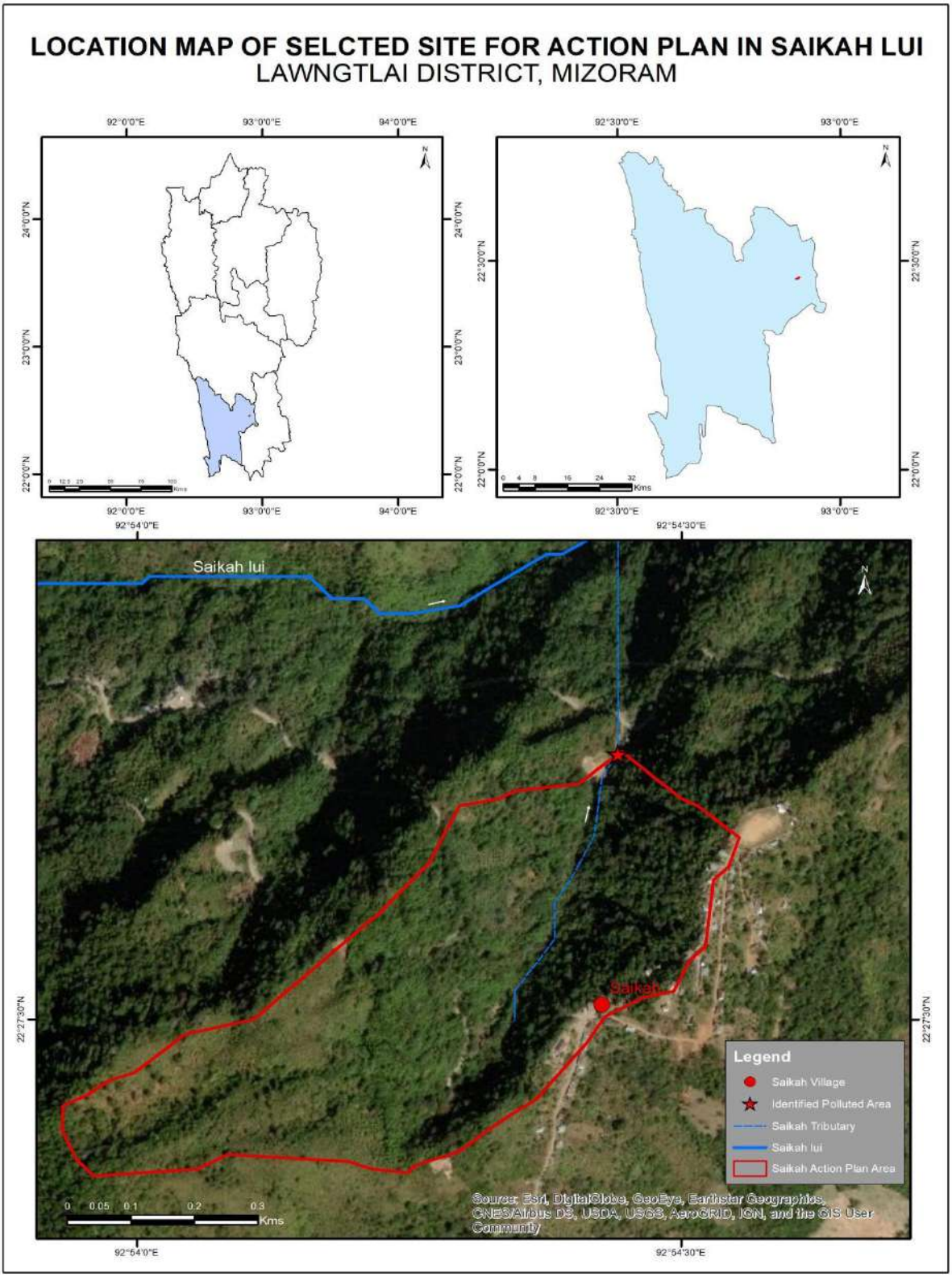
Annexure-I (f)

Map showing tributaries/drains connected to the Mat River at the polluted location at Lunglei District



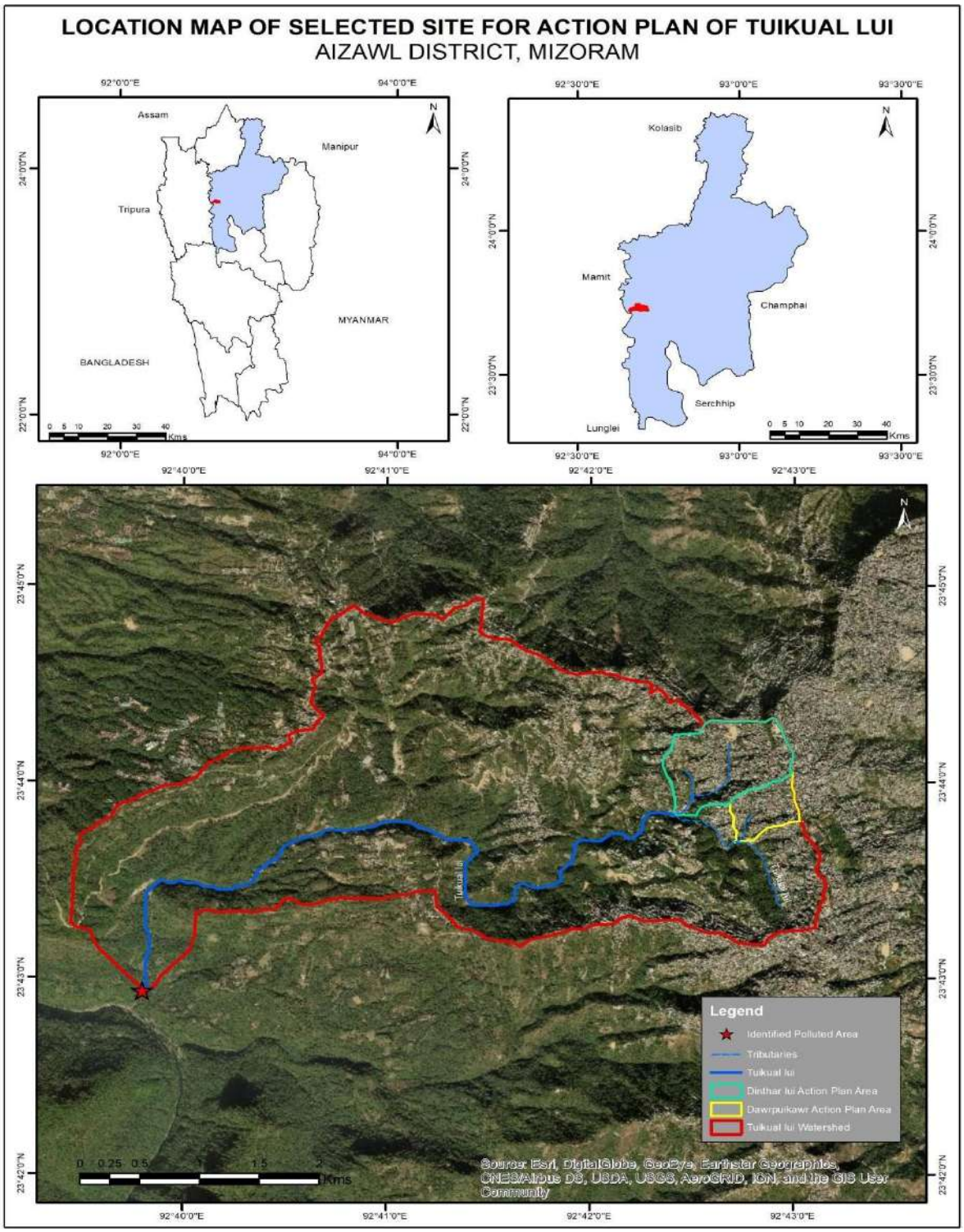
Annexure-I (g)

Map polluted location oat Saikah Stream, Saikah Village, Lawngtlai District



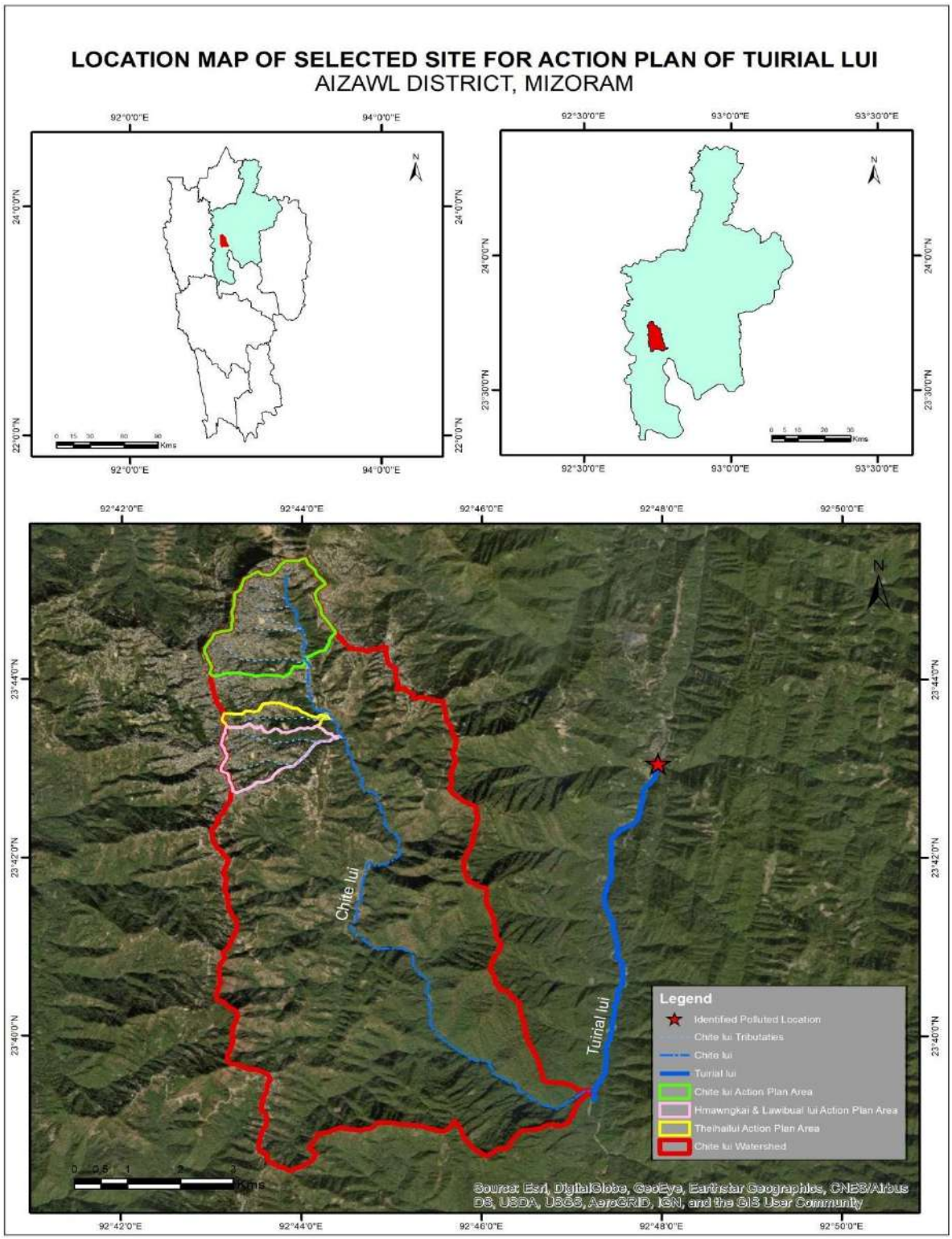
Annexure-I (h)

Map showing tributaries/drains connected to the Tuikual River at the polluted location at Reiek Kai, Aizawl District.



Annexure-I (i)

Map showing tributaries/drains connected to the Tuikual River at the polluted location at Reiek Kai, Aizawl District.



ANNEXURE-II

Status of solid waste generation, existing management system, gap analysis in the catchment area of the polluted rivers

1. SOLID WASTE/SEWAGE MANAGEMENT IN THE CATCHMENT AREA OF TIAU RIVER								
Proposed Action	*Quantity of waste generated*	*Quantity treated/ System adopted*	*Gap in Treatment*	*Achievable Goal/ Target*	*Time target*	*Achievement*	*Estimated Cost (Rs. in lakh)*	*Responsible Department*
Adopting scientific Solid Waste Management System	253 Kg/day	Open Dumping	100%	**250 HH** 253 Kg/day (Solid waste)	i) Information Education and Communication (IEC) and Capacity Building through door to door campaigns, town/village level sensitization and grass root trainings. (By March 2020) i) Compost Pit/Bin for biodegradable waste at household & Community level (By Dec.,2020) ii) Non-biodegradable Waste • Segregation • Plastic Waste Collection Centre • Confined dumping ground for inerts and other wastes (By Feb.,2020)	100% 25% 11%	21.00 (Rs.8400 per household)	PHED

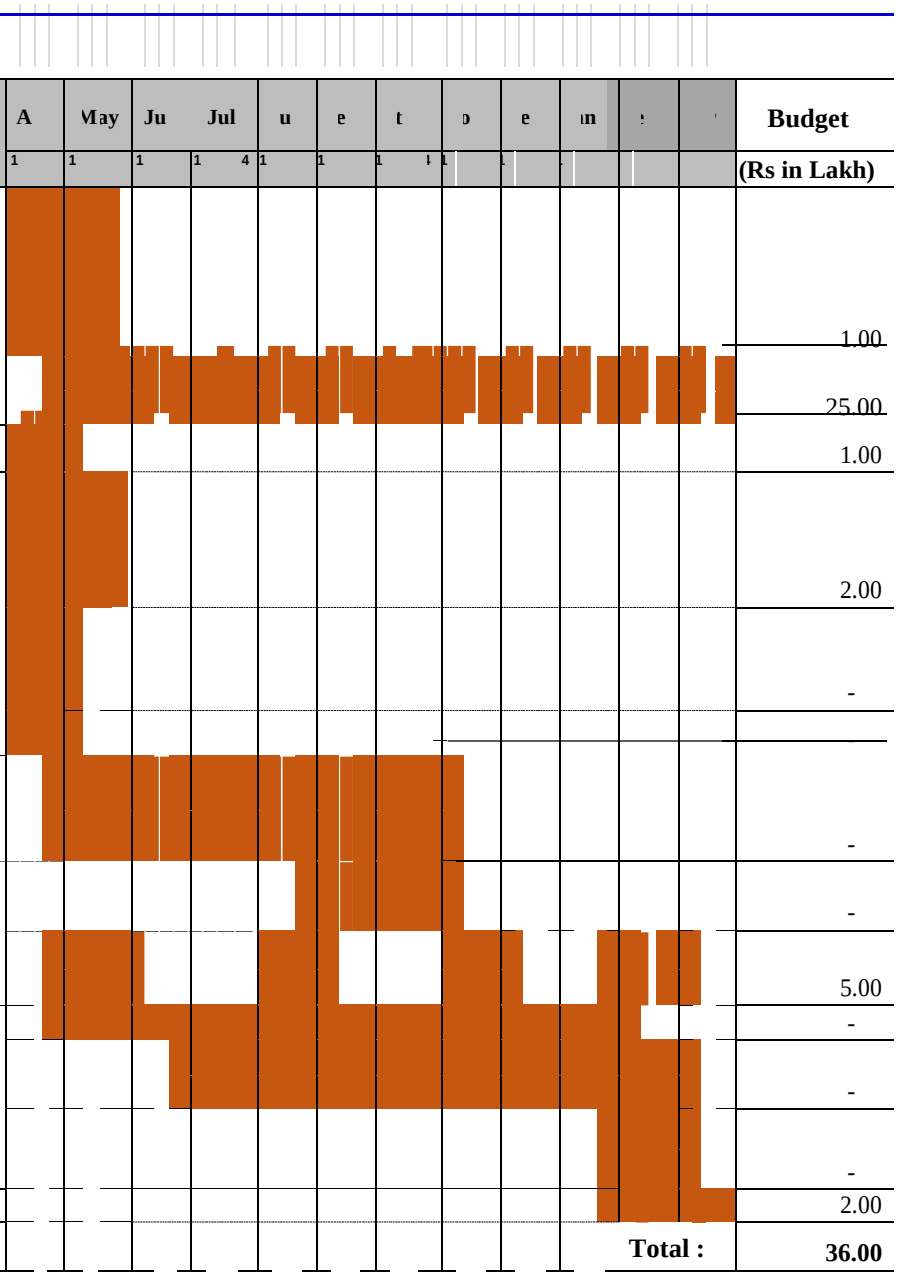
2. SOLID WASTE/SEWAGE MANAGEMENT IN THE CATCHMENT AREA OF TLAWNG RIVER								
Proposed Action	*Quantity of waste generated*	*Quantity treated/ System adopted*	*Gap in Treatment*	*Achievable Goal/ Target*	*Time target*	*Achievement*	*Estimated Cost (Rs. in lakh)*	*Responsible Department*
Adopting scientific Solid Waste Management System	Zotlang & Mausen = 7700 Sairang = 184 Sihhmui = 73 Bairabi = 123 Total - **8080** **Unit:** *Kg/day*	Open Dumping	100%	**8070 HH** **12120 kg/day** **Solid Waste**	i) Information Education and Communication (IEC) and Capacity Building through door to door campaigns, town/village level sensitization and grass root trainings. (By March 2020) ii) Compost Pit/Bin for biodegradable waste at household & Community level (By Dec.,2020) iii)Non-biodegradable Waste • Segregation • Plastic Waste Collection Centre • Confined dumping ground for inerts and other wastes (By Feb., 2020)	50% 25% 11%	677.88 (Rs.8400 per household)	Mausen village by PHED Towns (Zotlang. Sairang & Bairabi) by UDPA

3. SOLID WASTE/SEWAGE MANAGEMENT IN THE CATCHMENT AREA OF TUIPUI RIVER								
Proposed Action	*Quantity of waste generated*	*Quantity treated/ System adopted*	*Gap in Treatment*	*Achievable Goal/ Target*	*Time target*	*Achievement*	*Estimated Cost (Rs.in lakh)*	*Responsible Department*
Adopting scientific Solid Waste Management System	1161 Kg/ Day	Open Dumping	100%	**5806 HH** Population 1161 Kg/Day	Information Education and Communication (IEC) and Capacity Building through door to door campaigns, town level sensitization, Mid & Mass Media and grass root level trainings for ensuring: • Segregation of wastes at household level • Composting of biodegradable wastes for energy recover • Proper disposal (3R Techniques etc • Landfilling for inerts (By Dec., 2020)	50%	488.00 (Rs.8400 per household)	UDPA

4. SOLID WASTE/SEWAGE MANAGEMENT IN THE CATCHMENT AREA OF TUIVAWL RIVER								
Proposed Action	*Quantity of waste generated*	*Quantity treated/ System adopted*	*Gap in Treatment*	*Achievable Goal/ Target*	*Time target*	*Achievement*	*Estimated Cost (in Rs.)*	*Responsible Department*
Adopting scientific Solid Waste Management System	330 Kg/day	Open Dumping	100%	**220 HH** **330** Kg/day (Solid waste)	i)Information Education and Communication (IEC) and Capacity Building through door to door campaigns, town/village level sensitization and grass root trainings. (By March 2020) iii) Compost Pit/Bin for biodegradable waste at household & Community level (By Dec.,2020) iv) Non-biodegradable Waste • Segregation • Plastic Waste Collection Centre • Confined dumping ground for inerts and other wastes (By Feb.,2020)	100% 25% 11%	18.48 @Rs.8400 per household	PHED

ANNEXURE-III

PERT Chart for E-flow Assessment for the nine (9) Polluted River Stretches

Action Plan & Budget

Name of Plan/Task	No.	Implementation Stages/Activity (Timeline of Activity)/Indicator	Budget (Rs in Lakh)
Environmental Flow Assessment	1)	Collection of available hydrological data (Station data) from Department of Agriculture and from Directorate of Science & Technology and available hydro-meteorological dataset online{for analysis (checking, filling of missing data, etc.) of data with available hydro-meteorological dataset online}.	1.00
	2)	Collection of discharge data of streams/rivers draining to the polluted rivers	25.00
	3)	Purchase of IMD rainfall data and other meteorological data set	1.00
	4)	Purchase of High-resolution satellite imagery (from NRSC etc) and Soil map from NBSS & LUP and a comparison with satellite datasets such as Sentinel, Landsat, ALOS-AVNIR-2, PALSAR, PALSAR-2 mosaic etc	2.00
	5)	Preparation of Basins, Sub-Basin, Catchment and Sub-Catchment level maps from Digital Elevation Model (ASTER, SRTM, ALOS, etc.) using ArcGIS.	-
	6)	Identifying all the gauged catchments within the state.	
	7)	Modelling of the ungauged catchments from the gauged catchments using forward stepwise-regression analysis and also using HEC-HMS.	-
	8)	Obtaining of different flows quantiles i.e, Q5, Q50, Q75, Q90, Q95 (Qmax, Qmin etc.) and flow duration curves.	-
	9)	Testing water quality of rivers, irrigation water and drainage water from irrigated area using water quality lab of	5.00
	10)	Modeling of non-point source contaminant using SWAT.	-
	11)	Linking the groundwater data from NHP and GW projects to intermittent rivers.	-
	12)	Defining the natural flow regime from the observations obtained from the analysis to assess overall implications for water	-
	13)	Implementation, monitor and feedback.	2.00
		Total :	**36.00**