

Table S1. Rainfall Data

Year	Kolasib	Mamit	Aizawl	Serchhip	Lunglei
	Rainfall in mm				
1999	2,223	2,335	2,563	2,350	3,763
2000	2,716	3,001	2,746	2,862	5,554
2001	4,204	2,317	2,401	2,253	3,641
2002	3,117	2,703	2,568	2,506	3,505
2003	2,866	2,513	2,815	2,746	3,382
2004	2,830	2,828	2,584	2,588	4,076
2005	2,537	2,056	2,114	1,424	2,774
2006	2,721	2,031	1,839	2,211	3,211
2007	3,104	2,979	2,486	2,968	4,437
2008	2,468	936	1,570	1,884.4	109.4
2009	1,781	3,741	1,592	1,994	1,680
2010	3,050	2,332	2,777	2,494	87
2011	2,348	2,188	2,156	1,953.2	3,164
2012	2,740	2,237	2,544	2,163	3,822
2013	2,859	2,333	2,078.2	1,953	4,152
2014	2,517	1,805.6	1,914	1,811	2,485.2
2015	2,444.9	1,955.9	2,551.3	2,207.6	3,080.4
2016	2,516.2	2,381.4	2,836.5	1,736.2	2,300.7
2017	2,716.4	3,493.1	3,251.8	1,943.7	3,021.7
Mean Annual	2,724.13	2,429.79	2,388.78	2,213.06	3,065.55

Table S2. Distribution of Major Litho-units

Litho-unit	Areal extent (km²)	Percentage
Sandstone	1,003.38	57.91
Siltstone & shale	685.15	39.55
Clayey sand	31.44	1.81
Gravel, sand & silt	12.63	0.73

Table S3. Distribution of Drainage Density Classes

Drainage density Class	Drainage density value (km/km²)	Areal extent (km²)	Percentage
Very low	7.77 – 8.29	253.39	14.62
Low	8.30 – 8.82	667.27	38.52
Moderate	8.83 – 9.35	661.37	38.18
High	9.36 – 9.88	122.76	7.09
Very high	9.89 – 10.38	27.62	1.59

Table S4. Lineament Density

Lineament density class	Lineament density values (km/km²)	Areal extent (km²)	Percentage	Lineament Orientation			
				N-S	NW-SE	E-W	NE-SW
Low	0 – 0.163	858.85	49.57	5	16	20	1
Medium	0.164 – 0.327	634.05	36.60	10	8	13	1
High	0.328 – 0.491	239.70	13.83	4	10	7	24

Table S5. Channel dimensions and Flow Accumulation of Tlawng River at Selected Sites

Location	Riverbed Elevation (m)	Chanel Width (m)	Channel Depth (m)	Slope (%)	Flow Accumulation (m³)
1	1428	0	0	Moderate (5-10)	0
2	546	12.01	16	Steep (15-30)	2,139
3	456	30.92	18	Steep (15-30)	7,224
4	455	30.04	22	Moderate (5-10)	9,969
5	438	21.24	19	Moderate (5-10)	12,508
6	424	21.25	33	Moderate (5-10)	17,688
7	376	42.06	45	Gentle (0-5)	24,532
8	367	32.36	38	Gentle (0-5)	26,936
9	367	38.24	24	Gentle (0-5)	29,797
10	363	54.42	55	Steep (15-30)	33,362
11	363	46.93	40	Moderate (5-10)	34,508
12	321	63.74	63	Moderate (5-10)	40,373
13	280	86.67	25	Moderate (5-10)	42,066
14	267	59.18	28	Gentle (0-5)	43,913
15	267	63.74	51	Gentle (0-5)	50,433
16	258	51.16	25	Gentle (0-5)	65,376
17	251	61.87	47	Gentle (0-5)	73,173
18	251	55.25	56	Gentle (0-5)	68,957
19	242	72.23	48	Moderately steep (10-15)	78,262
20	238	35.04	61	Gentle	80,479
21	230	43.33	59	Steep (15-30)	90,081
22	233	63.17	55	Steep (15-30)	97,274
23	223	89.33	73	Steep (15-30)	102,852
24	221	82.06	52	Moderate (5-10)	109,080
25	221	72.73	65	Moderate (5-10)	113,138
26	221	73.11	66	Gentle (0-5)	117,729
27	221	49.73	65	Moderately steep (10-15)	119,247
28	221	67.73	63	Moderately	126,397

				steep (10-15)	
29	138	44.19	64	Moderate (5-10)	129,343
30	121	44.32	74	Moderate (5-10)	142,887
31	104	58.10	56	Gentle (0-5)	145,518
32	104	57.60	77	Very steep (> 30)	155,640
33	104	33.14	75	Steep	157,066
34	96	38.10	66	Moderate (5-10)	159,241
35	96	47.63	77	Moderately steep (10-15)	168,413
36	90	62.10	66	Moderate (5-10)	174,992
37	85	52.71	62	Moderate (5-10)	177,733
38	81	57.15	51	Gentle (0-5)	183,480
39	81	39.31	55	Steep (15-30)	186,637
40	81	42.99	56	Gentle (0-5)	190,628
41	73	66.08	23	Steep (15-30)	191,302
42	73	84.21	28	Moderate (5-10)	196,850
43	73	59.88	27	Gentle (15-30)	203,617
44	71	52.51	36	Gentle (15-30)	205,431

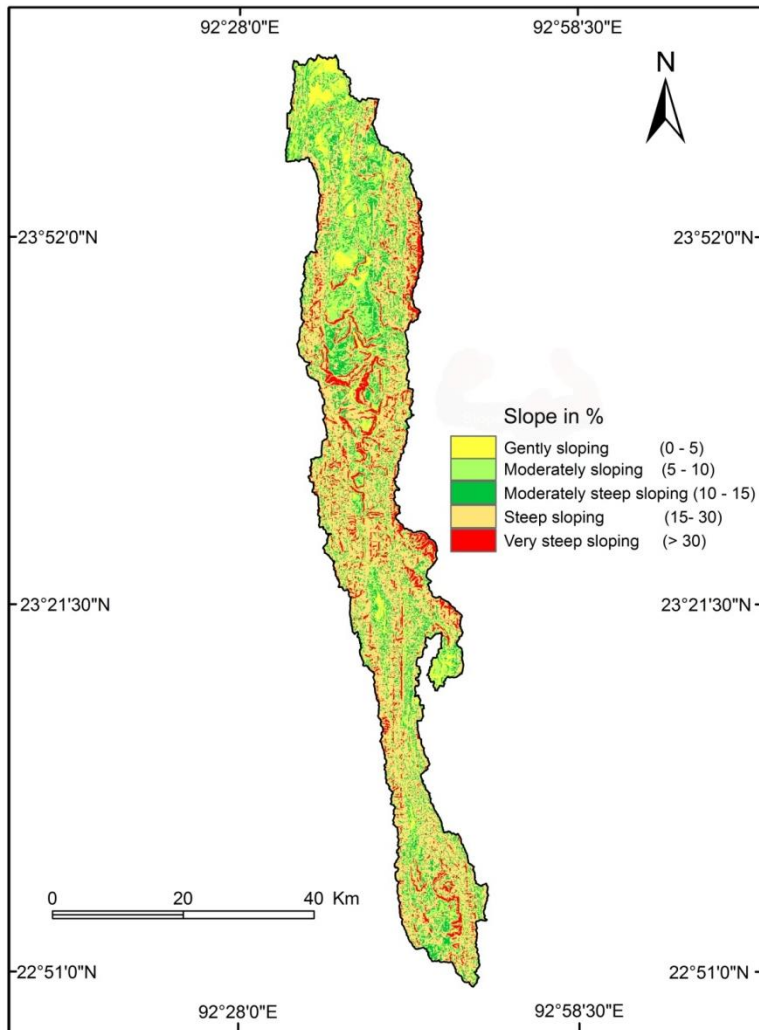


Fig. S1. Slope distribution in Tlawng river basin.

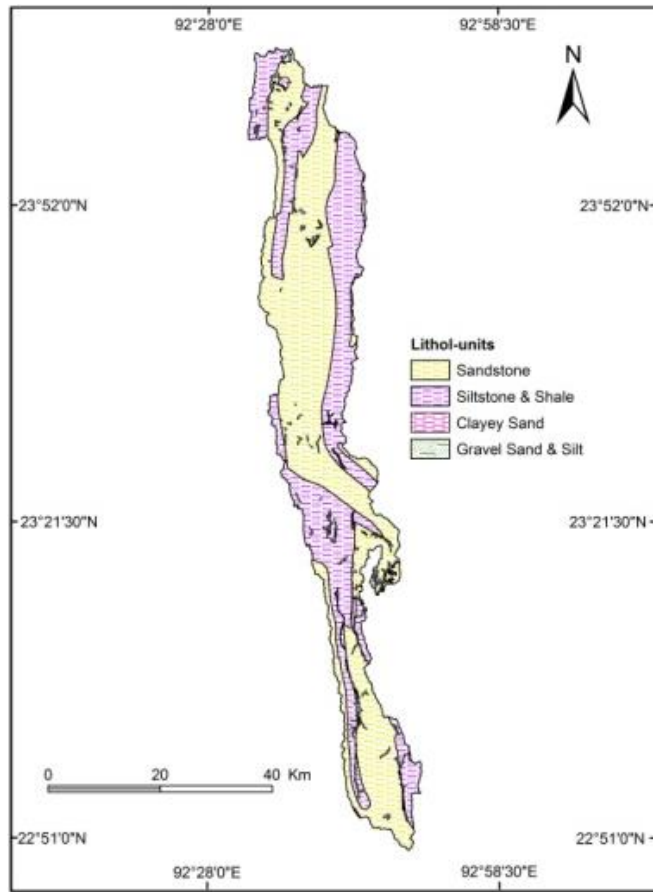


Fig. S2. Distribution of major litho-units in Tlawng river basin.

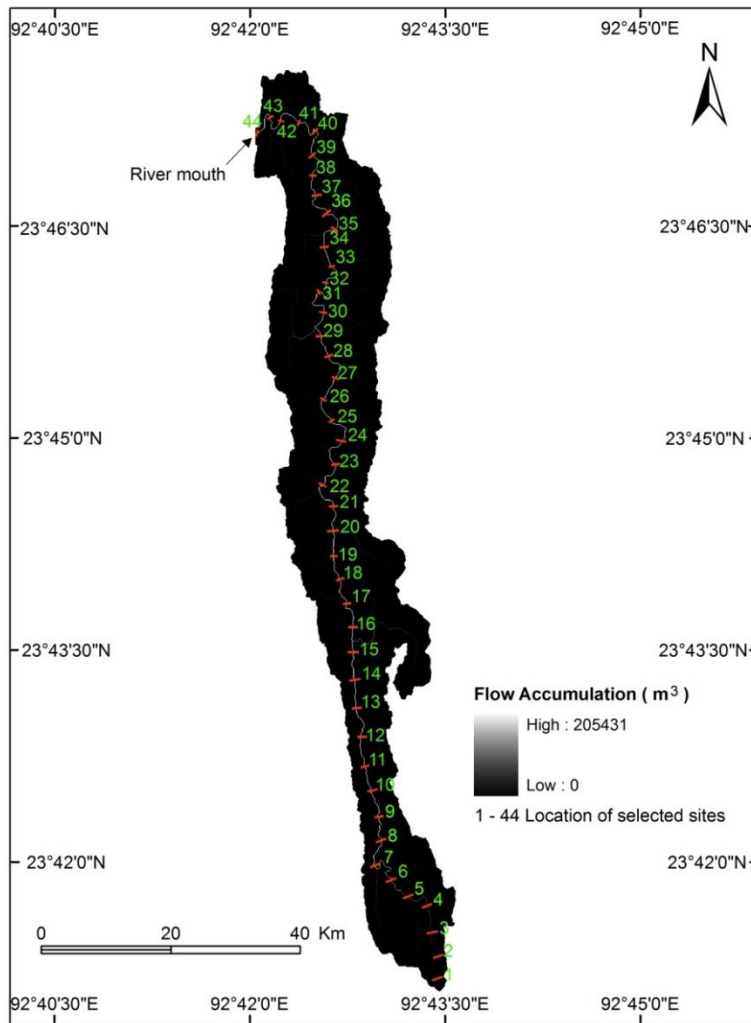


Fig. S3. Flow accumulation of Tlawng river basin.

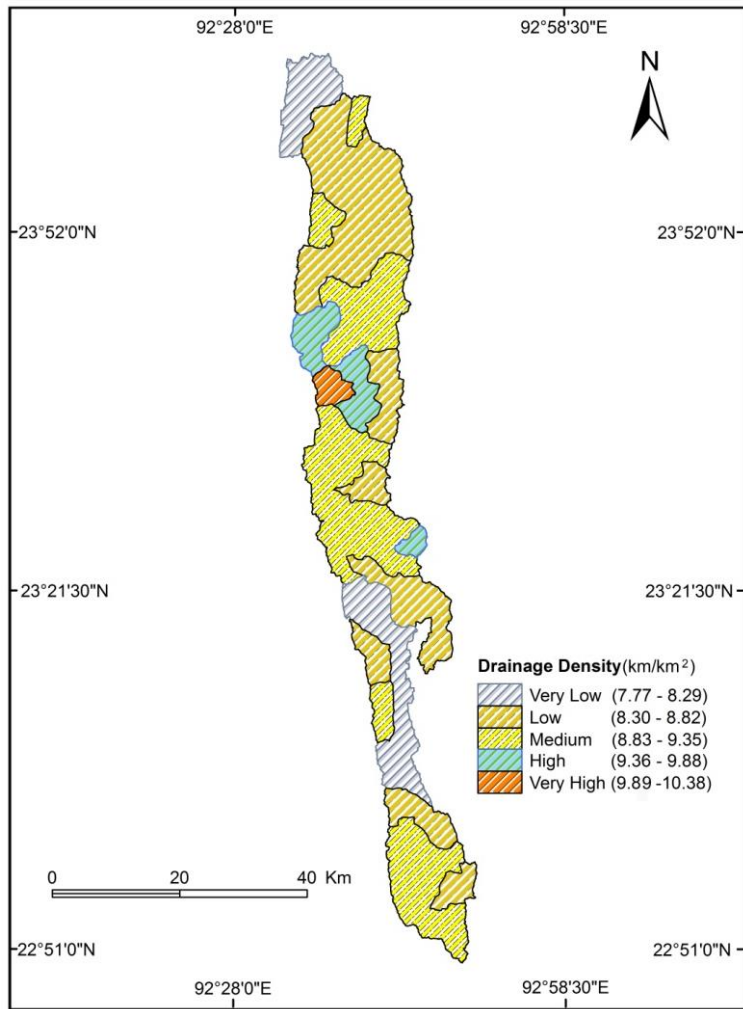


Fig. S4. Distribution of drainage density classes.

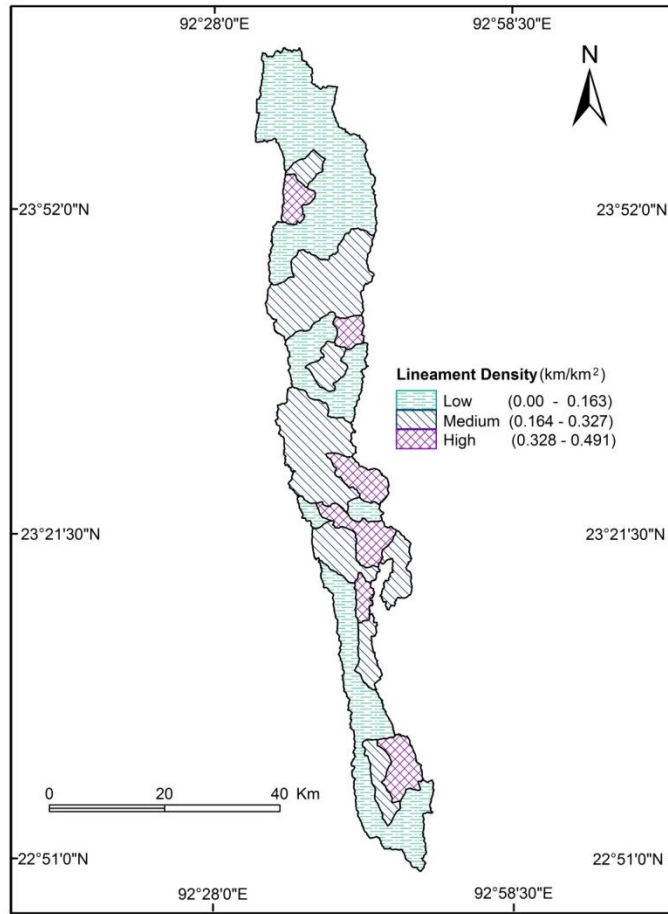


Fig. S5. Lineament density in Tlawng River basin.

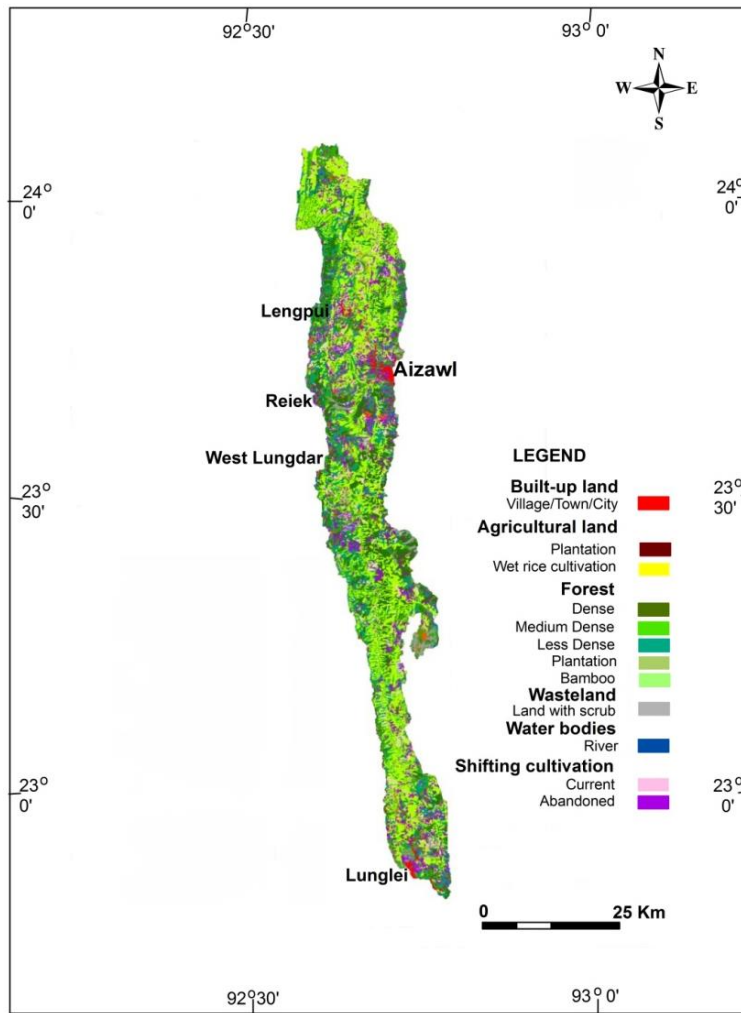


Fig. S6. Land use and land cover in Tlawng River basin.

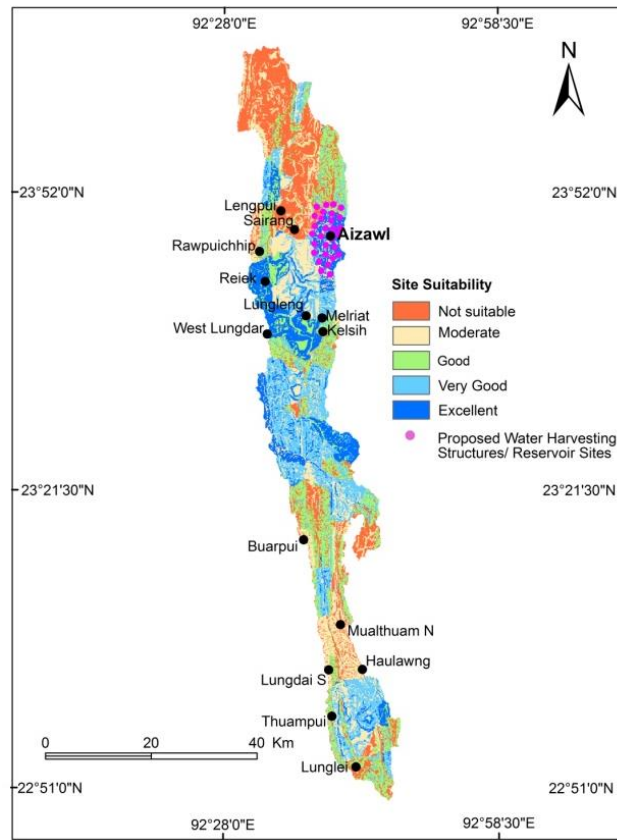


Fig. S7. Site suitability map of water harvesting structures in Tlawng River basin.