

THE MIZORAM STATE ACTION PLAN ON CLIMATE CHANGE

Overview
(in Mizo)



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STATE PROFILE

Mizoram hi India hmarch-hak State 8 zinga mi a ni a; a ram leilung ziarangah chuan Himalaya hmarch-hak tlangdung dangte ang bawkin tlangram chhengchhe tak a ni. He State hian ruahtui a dawng ṭhain kum tluanin a boruak a nuam hle. India ram state zawng zawng zingah ramngaw hring (forest cover) nei zau ber niin, a ram zau zawng atanga chhiara 89% zet chu ramngaw a ni. He State hi Indo-Burma Mega Biodiverse huam chhungah awmin, nungcha chi hrang tamna hmun, Biodiversity Hot Spot a ni nghe nghe bawk. He state-ah hian mihring an la tlemin ziak leh chhiar thiam an tam hle thung a, a ram mihring zingah hnathawk thei (productive age category) an tam ber bawk.



Kum 1950 atanga thlirin Mizoram boruak, sik leh sa hi a inhlakthleng nasa hle a, ruah sur nasain leimin a thlen chamchi a. Cyclone thlipui 198km/hr zeta na pawh a lo tuar tawh bawk. Sik leh sa inhlakthlengin nasa taka a nghawng mek avangin Mizoram tan hian ruahmanna ṭha leh hman tlak, sik leh sa inhlakthleng zel tur atan inhmakhua a lo ṭul ta a ni.

● SIK LEH SA DANGLAM DAN

Seasonal Trends (1951 to 2010)	Summer	Monsoon	Post monsoon	Winter
Mean Maximum Temperature (°C/yr)	+0.01*	+0.05*	+0.05*	+0.04*
Mean Minimum Temperature (°C/yr)	-0.01*	No trend	No trend	No trend
Mean Temperature (°C/yr)	No trend	+0.02*	+0.02*	+0.02*
Mean Diurnal Temperature Range (°C/yr)	+0.02*	+0.04*	+0.06*	+0.04*
Rainfall (mm/yr)	+2.80	+7.71	-6.19	-0.31

Note: Increasing (+) and decreasing (-) trends significant at 95% level of significance are shown in bold and marked with '*' sign .source: IMD, 2013.

● SIK LEH SA INTHLAKTHLENGIN A NGHAWNG DAN (Impact of Climate Change)

Bruak inhlakthleng avanga khaw lum tial tial leh ruahui tlak dan lo danglam zel hian kawng engkimah nghawng a nei nasa hle. Entiran, boruak lum zel avangin lei aṭanga boruak hnawng tham ral a sâng zel a, chu chuan ruahui tlak dan a tibuai a, tichuan khua a kheng a, thlai tharchhuah a nghawng ta a; heti ang harsatna laka inven nan ruahui dawhkhawl chungchangah ruahmanna siam a ṭul ta a ni. Thinglang mite khawsakphung leh ramngaw hi a inhlunzawm tlat a ni a; ruahui tlak dan mumal lo leh boruak lum zel hian ramngaw leh nungchaah nghawng a nei ang bawkin thlai tharchhuah dan leh hriselna thlengin a nghawng dawn a ni. Tin, ram puma kawlpetha tharchhuah 56% zet hi hydro power atanga siam a ni a, ruahui tlem zel hian State-in kawlpetha a thar chhuah a tihniam ngei dawn bawk. Chuvangin, Hydro Power project thar siam a nih reng rengin sik leh sa inhlakthleng dan thlir chunga ruahmanna siam ngei tur a ni.

HMABAKA HARSATNA LEH INPUAHCHAHNA (Vulnerability and Adaptive Capacity)

Hmun hrang hrangah sik leh sa inhlakthlengin nghawng a neih dan a inang vek lo ang bawkin harsatna lo thleng theiin a nghawng nat dan chu a tuartu a zirin a inang lo va. Harsatna lo thleng thei ten nghawng tha lo an neih lohna tur leh khawsak phung pangngaia kan khawsak chhunzawm theih nan, leilung hausakna hmanzai kawngah emaw, lo inruahman lawkna kawngah emaw a tangkai thei ang bera tunlai khawvelthiamna hman tangkai a tul a ni.

State hmasawnna dinhmun hian sik leh sa inhlakthleng avanga harsatna do let dan turah kori a tu hle a. Mizoramin hmasawnna kawng a zawh mekah hmun ruak zau tak awm mek tizim turin hmasawnna rahbi tuk a tul a. Chung zingah chuan buhfai indaihlohma (buhfai mamawh zat leh tharchhuah indaihlohma chu -74% zet a ni) kawngah te, rualkhai taka tui mamawh sem zai kawngah te, doctor indaihlohma te chu a langsar pawl an ni.

Heng hmasawnna kawnga harsatna sukiang tur hian Mizoram chuan ke a pen mek a. Entirnan, sawrkar policy, NLUP chuan tlangram lo neih bansan a, huan lo ram ram ng het nei turin loneitute tan kawng a hawnsak mek a. Tin, Mizoramah hian ziak leh chhiar thiam an tam hle a, a mihring 91% zet ziak leh chhiar thiam an ni bawk; chu bakah tunlai hmasawnna, telephone hmang tangkai an tam hle a, India ramah tele-density nei sang state 10 zingah a tel phak a; mihring awm zat zingah a tam zawk chu hna thawk thei an ni mek bawk.



● SIK LEH SA INTHLAKTHLENG ATAN RUAHMANNA (Climate Change Strategies)

Sawkar department hrang hrang, pawl, mithiam, zirna in sâng leh NGO te uluk taka an inrawnkawm hnuah Mizoram State Action Plan for Climate Change (SAPCC) chu peih fel a ni tawh a. Chutah chuan hetiang hian ruahmannna siam a ni:

- Research (zirbingna)
- Policy Initiative (Ruahmannna tha duan chhuah)
- Implementation of action for resource management (Ram leilung hausakna hmanzai kawnga ruahmannna tihpuitlin)
- Capacity Building (Mimal hriatna/theihna tihpun)
- Institutional strengthening (Pawl/zirna inte tihchak/thuam that)

Kum 5 chhung atana sum mamawh ruahman zat chu INR 3675.27 crores a ni.

S. No.	Mission Description	Budget (INR.Cr)
1	Water Mission	469.740
2	Sustainable Agriculture Mission	420.627
3	Mission on Sustaining Himalayan Ecosystems	131.200
4	Mizoram Green Mission	283.600
5	Sustainable Habitat Mission	1314.600
6	Climate Resilient Health Mission	301.500
7	State Solar & Other Renewable Energy Mission	158.175
8	Enhanced Energy Efficiency Mission	581.815
9	Strategic Knowledge Mission	14.000
Total		3675.257

Tuihna hian mitin khawsakphung a nghawng avangin Mizoram state chhunga tuihna awmte venhim leh tihpun hi Mizoram sawrkar thil ngaih pawimawh ber a ni. Sik leh sa inhlakthleng hian tuihna kiam leh insiam pun kawngah NASA taka nghawng a neih avangin MSAPCC chuan tuihna humhalh a nih theih nan National Water Mission milin hetiang hian ruahmanna a siam a:

- Sik leh sa inhlakthleng dan mila State Water Policy siam. Mizoram State Water Resources Council chuan hma a la ḥan tawh a ni.
- Sik leh sa inhlakthleng dan hriatchian leh zir a nih theih nan, boruak leh leilung inkara tui/hnawng chet vel dan zirna, “Hydro-Meteorological Observation Network” changtlung tak din.
- State chhungah tui mamawh tawk a awm theih nan lui leh a chhehvel enkawl dan tur, Integrated Basin Development Plan siam a, chutah chuan tuihna enkawl, tui dah khawl, ṭangkai zawk/renchem zawka tui hman, tui luang ral tur danna atana kawr khuah (check dam), mual khang zawnga khur laih (contour bunds trench), khur laih (recharge pits) leh lei chunglang kal ral a tlem theihna atana ruahmanna siam.
- Tui supply-tu department leh a mamawhtu, hmang ṭangkaitute tana zirtirna tha pek.



Agriculture hi Mizoram ang tlang chhengchhia-ah chuan hlawhtlinpui a harsa hle a; khaw lum zel hian thlai ngeih zawng boruak/hmun (zone) chu hmun sang lamah sawn chho hret hretin, chu chuan harsatna nasa tak a thlen mek a. Thlai natna thar leh thlai ei chhetu rannung pawh a pung chho zel tura rin a ni. Chung harsatna sutkian nan chuan MSAPCC chuan heng ruahmannate hi a siam a:

- Sik leh sa inthlakthlengin thlai, ranvulh, sangha khawi a nghawng dan, natna an tawh dan leh hri leng uluk taka chhinchhiah, invenna ruahman a, thlai thenkhat sik leh sa inthlakin a nghawng ve lohte chhinchhiah/zawnchhuah.
- Hmun awihtlan leh zawl zawnchhuah a, buh leh thlai tharchuahna atana sawngbawl.
- Wet Rice Cultivation (WRC) ram tichangtlun.
- Climate Smart Agriculture hmanga thlai/buh chinna hmun chei that a, System of Rice Intensification (SRI) hman.
- Thlai ei chhetu rannung leh thlai natna khuahkhirh kawnga ruahmanna siam.
- Ran chaw chin punna atana ram chhia (waste land) sawngbawl.
- Tuikhuah leh lui tui atanga sangha tam zawk tharchhuah
- Thlai tharchhuah dahthatna hmun tichangtlun leh a zawrhchhuah dan ruahman.
- Department leh mipui te hnena thlai natna/thlai ei chhetu rannung laka inven dan zirtir bakah thlai, thei, ran vulh leh sangha khawitute tana zirna in (training centre) din.



Green India Mission dungthula ramngaw venhim leh enkawl chu Mizoram Sawrkar thiltum a ni a; chutah chuan ramngaw siam belh te, rambua tih ngaw leh te, NTFP (Non timber forest products-thingzai tih loh ramngaw atanga thil dang hnephnawl thar chhuah) hmanga thingtlang mite eizawnna siamsak te a huam tel a. India rama ramngaw nei tha State te tan Central Sawrkar chuan fund a semzai danah 7.5% laia a duhsak bikna chu Mizoram pawhin a hmang tangkai ve thei dawn a ni. Chumi tihhlawhtlin nan chuan a hnuai tarlante hi ruahman a ni:

- Ramngaw humhalh kawnga hmalaknate dik tak leh tha taka thawh a nih theih nan GIS base monitoring system leh a tehkhawng siam.
- Mau, nauban, ramhmul damdawi leh ramngaw atanga hnephnawl(NTFP) lak chhuah dan chungchangah a hmasawn zawng leh ramngaw tichhe lova tharchhuah dan ruahman.
- Tlangram lo neih avanga rambua-ah (jhum land) thapui thawha thing phun beihpui thlak.
- Khawtlang mipuite nen tang tlanga thlai hnawksak (invasive species) tihrem kawnga ke pen.
- Ramngaw humhalh leh ei zawnna dap kawngah khawtlang mipuite zirtirna pek.
- Green India Mission tihhlawhtlinna kawnga zirtirna pek leh a kaihruaitu din.
- Department leh mipuite hnena ramngaw humhalh pawimawhna puanzar/zirtir.



Mizoram Mission on Sustaining Himalayan Eco-System-in a tum ber chu National Mission on Sustaining Himalayan Eco-System thil tum zulzuia ramngaw leh nungchaa kan hausakna venhim a ni. Chutiang ti tur chuan a hnuai a ruahmannate hi siam a ni:

- Nungcha tinreng leh ramngaw hausakna, thing leh mau leh NTFP-ah sik leh sa-in nghawng a neih dan zir chian.
- Ramsa vâng leh thi mang tep tawhte tana ramngaw tha humhalh.
- Ramngaw leh nungchaa State a lo hausak zel theihna tura hmalak
- Ramngaw pawimawhna (suma chantir theih loh chi) zir chian leh sik leh sa inthlakin eco-system a nghawng dan zirchian
- Leilung hman dan azira carbon awm dan zirchian
- 135000 Ha-a zau lei chunglang luang ral tur venhim
- Mizorama wetland pahnih humhalh leh venhim
- Ramhmul damdawi/nauban zir chian leh humhalh
- Bio-diversity park din
- Ramngaw leh nungcha venhim a, thingtlang mite hnena eizawn nan eco-tourism hman tangkai
- ENVIS Centre din
- Tlangram lo neih dan leh notified forest ram luah chungchanga policy siam that
- Ramngaw atanga hnephawl thar chhuahte awlsam thei ang bera hrallh



Mizoram Habitat Mission-in a tum ber chu sik leh sa inhlakthleng avanga khawsak phung leh ei bar zawnna kawnga harsatna nasa tak thleng thei laka khawpuia chengte tana ruahmanna tha siamsak a ni; chumi atan chuan hetiang hian ruahmanna siam a ni:

- Sik leh sa inhlakthleng avanga thil thlengte zirbingna leh chutiang hmachhawn tura lo inhmakhua.
- Khawpui leh a chhehvela tuihnate awmze nei leh a hmasawn zawnga hman tangkai.
- Khawpui thli/bawlhhlawh/hnawmhnawk pail dan tha duan chhuah leh khawpui leh a chhehvel ram cheimawi.
- Khuarel chhiatrupna thleng thei atana lo inruahman lawkna duan.
- Renchem tako kan hmanraw neihte hmanzai dan inzirtir leh renewable energy (leilunga chakna thahrui awmsa, kiam thei lo chi) hmang tangkai tura inzirtir.
- Lirthei avanga boruak chhia siam chhuah tihtlem leh CHG.





Hriselna kawnga harsatna sutkian a nih theih nan hengte hi ruahman a ni:

- Sik leh sa inthlak avanga malaria natna darh dan chhin-chhiah leh zirchian.
- Min hual veltu chhunglam leh pawnlama nunna nei/nunna nei lote awm dan phung tidanglamtu zir chian.
- Ruahmanna felfai tha tak siamchhuah.
- Khawlum avanga harsatna thleng zirchian a, sik leh sa inthlakthlengin harsatna a siam loh nan kawng hrang hranga eizawngtute tana ruahmanna duanchhuah leh zirtirna pek.
- Tui atanga natna puang thei chhinchhiah leh sik leh sa inthlakin natna a tih hluar dan zirchian.
- Natna puang that thei laka invenna tur inkaihhruaina/ruahmanna siam a, mipui hnena zirtir.
- Natna puang avanga thihna thleng thei laka lo inhmakhua dan tur buatsaih leh endik
- Sik leh sa inthlak avanga natna puang that thei rang taka hriat lawk dan tur zirma buatsaih leh natna puang that a awm thulha chetlak dan tur buatsaih
- State chhung hmun tam taka natna hrik endikna hmun (laboratories) din
- Hriselna lama thawktute hnena sik leh sa inthlakthleng avanga natna awm theite zirtir leh lo hmachhawn tura zirtirna pek.

Mizoram State Solar Policy 2015-in a tum ber chu, ni zung chakna thahru 80 MW siamchhuah leh 2021-2022 ah chuan a tlem berah ni zung chakna thahru 10.5% hman ṭangkai hi a ni. Ni chakna thahru bakah hian thli (wind), biomas leh luitui atāngā kawlpetha siam chhuah (hydropower) theih a ni bawk. Heng leilung chakna thahru kiam thei lo (renewable energy) te hi kawlpetha mamawhna sang zel phuhruk nan a tam thei ang ber hman ṭangkai a tum a ni; chumi atan chuan hetiang hian ruahmanna siam a ni:

• **Stand Alone Solar Power Plants:** Ni zung chakna thahru hmanga thingtlang khaw 10-a kawlpetha pek. JNNMS hnuaiah in leh sumdawnna atana hman tur 250WP Solar PV Power System za (100) din. Kum 2016-2017 chhunga ni zung hmang kawlpetha siamchhuahna, amaha intodelh 0.80 MW siamchhuah leh 2021-2022 ah 1.60MW siamchhuah.

• **Grid Interactive Solar Power:** Lengpuiah ni zung chakna hmanga kawlpetha siamchhuahna, 1MW pe chhuak thei din; kum 2022 hmain 2MW a chak kawlpetha pe chhuak thei tura tichangtlun.

• **Off Grid Solar Application:** Mamawh dan azir zelin ni zung chakna hmanga tui tihlumna 100 LPD leh 200 LPD hmun za(100) a din.

• Leilung chakna thahru hmanga kawlpetha siamchhuaktute leh ZEDA thlunzawm a, State chhung hmun tina kawlpetha an pek chhuah dan tur ruahmansak.

• Renewable energy hman kan uar zel theihna atana hma latu tur ZEDA thahru tihchak leh thuamthat.

• Renewable energy hman ṭangkai, siam chhuah leh enkawl zui kawngah ITI tan zir dan thar ruahman leh School hrang hranga heti lam hawi inzirtir.

• Hetiang lam kawnga kan ṭhanharh zel theih nan khua leh tuite hnena zirtirna pek.

• Renewable energy hman ṭangkai kawnga hmasawn zel dan tur ruahmanna siam.

Mizoram Enhanced Energy Efficiency Mission-in a tum ber chu ram pum huap, National Mission ke pen ruala pen ve a ni. Chumi tur chuan hetiang hian ruahmanna siam a ni:

- Energy service company an nih theihna tura sumdawngte hriatna tihpun.
- ITI atanga mamawh tawk mithiam chherchhuah leh chutiang mil tura an zirlai siam that.
- Kawlphetha renchem a nih theih nan kawlphetha heh lo hmanraw hman thatzia mipuite hnena zirtir leh zirna in hrang hranga zirtirna pek.
- Harsatna awm thei sutkian nan sum leh paia ṭanpui dan tur ruahman.
- ECBC Code hmanga in sak.
- Mipui nawlpuite zirtir nan vantlang in leh hmunte kawlphetha heh lo hmanraw hmanga thuam that.
- AT&C loss tihtlem a, T&D (Transmission & distribution) network tichangtlun nan ruahmanna siam.
- HT< line tichangtlun a, transformer hluite te a ṭha ber chi a thlak.
- Kawlphetha hmangtu in tina meter dah vek leh 20Kw chung lama chak kawlphetha sem chhuah bakah, ralkhat aṭanga endik dan tur ruahman.
- Daihzai zawka kawlphetha hman a nih theih nan leh sum hloh a tlem theih nan a sem chhuah kawngah franchise model (chanvo in semzai) hman.
- In 150000(Nuai khat singnga)-a kawlphetha heh lo LED êng vuah.
- Street light 5500-ah tuna hman mek 250HPSV lamp chu 90W LED lamp hmanga thlak.
- Sawrkar in leh office-ah kawlphetha renchem uar – ZEDA- in kawlphetha hman dan a endik tawh Sawrkar in(building) hmun 7-ah demonstration project kalpui tur a ni.

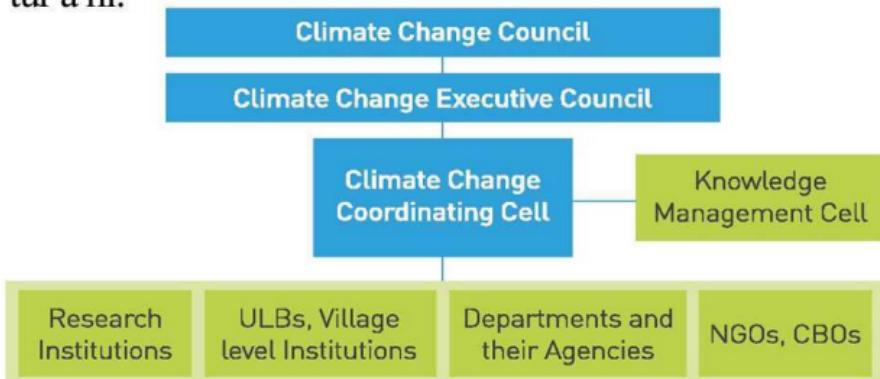
Sik leh sa inhlakthleng dan, a nghawng, chumi atana hmalam hun thlirlawk, harsatna kan tawh theih dan, chumi tihnepl dan leh min nghawng nep theih dan tura lo inruahman lawk kawngah hriatna leh thiamna kan neih zual zel theih nan tunlai thiamna hmanraw changkang ber ber bakah, kan lo chinthan dan ɻhate chu Sawrkhar hmalakna hnuia hnathawh tinrengah hman ɻangkai zel tur a ni a. Mizoram Climate Change Management Cell chu heng a hnuia tarlante tihlawhtling tur hian din a ni:

- Sik leh sa inhlakthleng chungchanga hriat tur pawimawh, a nghawng, harsatna lo thleng thei, kan chaklohna lai tihchak leh lo inruahman dan chungchangah kan mamawh tinreng hriatna hnar atan.
- Sawrkhar department te mamawhna zawn ɻheuha zirtirna leh kaihhruaina petu atan.
- Local council, municipal, district leh state level-a CHG chhinchhiah leh chumiin a nghawng ɻha lo laka inven dan ruahman



● IMPLEMENTATION ARRANGEMENT

Chief Minister kaihhruaina hnuia din, Climate Change Council chu State chhunga thuneitu lian ber, Climate Change chungchanga thutukna siamtur a ni. Chumi tha tichak tur chuan a hnuiah Chief Secretary kaihuainain Executive Council din a ni a. SAPCC hmalak dan endik turin Climate Change cell din dan tur ruahman a ni tawh bawk. Tin, an bengtihvar nan Climate Change Knowledge Management Cell din a ni bawk a. National Action Plan on Climate Change thiltumte tihhlawhtlin a nih theih nan leh State Mission thil tumte tihhlawhtling turin a kaihhnawi Sawkar department hrang hrang chuan Urban Local Bodies (ULB) kaltlangin hma an la ang a, thingtlang khuate pawhin hma an la bawk ang. Chung hmalaknate chu zirna in, NGO, CBO ten an tawiawm ngei tur a ni.



● MONITORING, EVALUATION AND FEEDBACK

Sik leh sa inhlak tleng avanga harsatna sutian dan tur leh hmalakna kawng hrang hrangte hi a huap a zau em avangin uluk taka endik a țul a; hmalakna kawnga thil zirchhuah awm theite pawh hmalam hun atana finchhuahtu/kawng kawhhmutu atan hman ṭangkai a nih theih nan uluk taka chhinchhiah zel tur a ni. Chutiang a nih theihna tur chuan chhum lo chat lova endik hna chu kalpui tur a ni. Chutiang atana inkaihruaina tlangpui pawh ruahman a ni bawk.

**Published by the Government of Mizoram
with support from the Deutsche Gesellschaft
für Internationale Zusammenarbeit (GIZ)**

**Deutsche Gesellschaft für Internationale
Zusammenarbeit GmbH**

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Content Editing: IORA Ecological Solutions Pvt. Ltd.

Design and Layout: Vertiver.com

Photo credits: <http://www.mizoram.nic.in/>

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