Application (Form –I)

FOR

EXTENSION OF VALIDITY of ENVIRONMENTAL CLEARENCE

Granted by

MoEF Vide F. No. J-12011/56/2006-IA-I dated 04.04.2007.

For

Establishment of 96 MW Rongnichu Hydro Electric Project at East Sikkim

BY

HYDRO POWER
in partnership with river

MADHYA BHARAT POWER CORPORATION LTD

1st Floor, Vanijya Bhawan, Devendra Nagar Square, Jail Road, Raipur

Chhattisgarh

Ph: 0771 -2214210

Prepared on:

24.12.2016

FORM – 1

APPLICATION FOR OBTAINING ENVIRONMENTAL CLEARANCE VIDE PARA 6 OF S.O.1533 OF MoEF NOTIFICATION DATED 14th SEPTEMBER 2006

(I) **Basic Information:**

S.No	Item	Details	
1.	Name of the Project/s	Extension of Validity of Environment Clearance granted for 96 MW RongniChue Hydro Electricity Project, East Sikkim of Madhya Bharat Power Corporation Ltd.	
2.	S. No. in the schedule	Category 'A', Sr. No. 1 (c). River Valley Projects	
3.	Proposed Capacity / area / length / tonnage to be handled/ command area/lease area/ number of wells to be drilled.	Proposed Capacity :	96 MW Hydro Electricity Project
		Area:	59.948 Ha.
		Length:	13.8 K.M (approx.)
		Tonnage to be Handled:	N.A
		Catchment Area:	190 KM^2
		Lease Area:	33.717 Ha
		Number of wells to be drilled	N.A
4.	New/Expansion/Modernization	**New** - Extension of Validity of Environment Clearance granted for 96 MW RongniChue Hydro Electricity Project, East Sikkim of Madhya Bharat Power Corporation Ltd.	
5.	Existing Capacity/Area etc.	N.A.	
6.	Category of project i.e. 'A' or 'B'	Category "A".	
7.	Does it attract the general condition? If yes, please specify.	No	
8.	Does it attract the specific condition? If yes, please specify.	No.	
9.	Location	Barrage: $27^0$16'27" N $88^0$35'38" E Powerhouse: $27^0$10'58" N $88^0$32'27" E Survey of India Toposheet No. 78A/11/3 and 78 A/12/1. Location Map is enclosed as **Annexure I**	
	Plot/Survey/Khasra No.	387, 717,392, 6,20,9, 557, 743, 226/P, 359/P, 127/P, 129/P, 271/P, 362/P,361/P, 371/P, 371/P, 129, 129, 1265, 1265, 1204,2099/2290,	

		2099/2291, 2213, 719/P, 720/P, 163, 164, 204/P, 205/P, 206/P, 172/P, 173/P, 174/P, 170/P, 169/P, 390/P, 391/P, 1576, 1438, 1439, 1441, 1394, 1558, 1447, 1450, 1444, 1452, 1584, 1377, 1378, 1397/P, 1398/P, 1252/P, 1257, 1259, 1266, 1397/P, 1398/P,1252/P, 1395/3393, 1287/2664, 1395, 1288, 1287, 1284, 1273, 1272, 1271, 1396, 1270, 1269, 1267, 1261, 1266, 1266/2514, 1202, 1201, 1203, 1902/3008, 2105/2435, 2105/2310, 2099, 2096, 2082, 2083, 2097/2805, 2097/2807, 2097/3062, 2098/3065, 2097/2803, 2294/2804, 2093/2802, 2094, 2095, 2085/2398, 2085/2396, 2085/2397, 2093/2799, 2294/2801, 2097/2800, 2089, 2091 etc.
	Village	Barrage: Namli Village Powerhouse: Rangpo
	District	East Sikkim
	State	Sikkim
10.	Nearest Railway station/airport along with distance in kms.	Nearest Railway Station: New Jalpaiguri. Nearest Air Port: Bagdogra
11.	Nearest Town, city, District Headquarters along with distance in kms.	Town/ City : Gangtok (16KM) / Rongpo (4KM) District HQ: Gangtok (16KM)
12.	Village Panchyats, Zilla Parishad, Municipal Corporation, Local body (complete postal address with telephone nos. to be given.)	Village Panchayats : Namli Thesil: Gangtok District: East Sikkim State: Sikkim
13.	Name of the applicant	M/s Madhya Bharat Power Corporation Limited
14.	Registered Address	E-585 Ground Floor, Greater Kailash – II, New Delhi 110048, Delhi Ph: +91-771-2214210 Fax: +91-771-2214213 Email: techinical@mbpcl.co.in
15.	Address and correspondence:	
	Name	Mr. P. S. Dutta Gupta
	Designation(Owner/partner/CEO)	Whole Time Director
	Address	M/s Madhya Bharat Power Corporation Limited, 1st Floor, Vanijya Bhawan, Devendra Nagar Square, Jail Road, Raipur – 492001 (C.G)
	Pin Code	492 001
	E-mail	pduttagupta@seml.co.in
	Telephone	0771- 2214210
	Fax. No.	0771- 2214213
16.	Details of Alternative Site	No any alternative site has been identified/

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	examined, if any location of these sites should be shown on a topo sheet.	examined. Hydro Electricity project is site specific project and site allotted by state Govt. of Sikkim.
17	Interlinked Projects	No
18.	Wither separate application of interlinked project has been submitted?	Not Applicable
19.	If yes, date of submission	Not Applicable
20.	If no, reason	Not Applicable
21.	Whether the proposal involves approval/clearance under: if yes, details of the same and their status to be given. a) The Forest (Conservation) Act, 1980 ? b) The wildlife (Protection) Act, 1972? c) The C.R.Z Notification, 1991?	 Yes; Diversion of Forest for Non Forest use is granted under FCA 1980. Not Applicable Not Applicable
22.	Whether there is any Government Order/ Policy relevant/relating to this site?	No
23.	Forest land involved(hectares)	25.1388 Ha
24.	Whether there is any litigation pending against the project and /or land in which the project is proposes to be set up? a) Name of the Court b) Case No. c) Order/directions of the Court, if any and its relevance with the proposed project.	No

(II) Activity

1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	Yes	Temporary change in land-use/ land cover is envisaged at barrage site, powerhouse, and tunneling access road, building and infrastructure site during construction. Permanent change in land use / land cover and topography is envisaged at barrage site, power house site and approach road.
1.2	Clearance of existing land, vegetation and buildings?	Yes	Partial Clearance of trees/plants and shrubs (the total land requirement being 59.948 Ha split into Forest Land and Private Land)
1.3	Creation of new land uses?	Yes	Temporary change in land-use/ land cover is envisaged at barrage site, powerhouse, and tunneling access road, building and infrastructure site during construction. Permanent change in land use / land cover and topography is envisaged at barrage site, power house site and approach road
1.4	Pre-construction investigations e.g. bore holes, soil testing?	Yes	Drilling, Drifting, Geo-Physical and Rock-Mechanical testing, water and soil testing etc.
1.5	Construction works?	Yes	Construction of Barrage, Intake Portal, Head Race Tunnel, Surge Shaft, Upper Horizontal Pressure Shaft, Valve House, Vertical Pressure Shaft, Lower Horizontal Pressure Shaft, Service Bay, Power House and Tale Race Channel.
1.6	Demolition works	No	Not required
1.7	Temporary sites used for construction works or housing of construction workers?	Yes	Temporary sites for construction, storage, office, mess and housing has been built.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	Barrage, Office building, Service Bay, will be constructed; linear structures like approach road and transmission line will also be constructed.
1.9	Underground works including mining or tunneling?	Yes	Underground Tunneling
1.10	Reclamation works?	Yes	Low Laying areas is being reclaimed as per the project requirement.
1.11	Dredging?	No	Not applicable

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1.12	Offshore structures?	No	Not applicable
1.13	Production and manufacturing processes?	Yes	The Kinetic energy of water will be utilized for generation of electrical energy.
1.14	Facilities for storage of goods or materials?	Yes	Storage Facility has been provided during construction works for Construction Material, Explosives stored in magazines (Permission for use and storage of Explosives has been granted for 20 MT), Mechanical equipment, Machinery and Spares.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	Solid Waste: Muck Excavated during underground works: Part of Muck generated is being dumped in Pre-identified Dump yards. The remaining muck generated is being utilized as construction material by processing in the following facilities: • 3 Nos of Crushing Plant at Barrage site and Power House site – For Crushing the Muck and utilize as compacting material for backfill of low lying area • 1 no Brick Plant of capacity 25,000 TPA which consumes 8000 TPA or 5000 m3 quantity of muck to Manufacture of Brick utilized for Infrastructure Development at the Project Area. Liquid effluents: Tunnel Seepage Water Sedimentation & Filtration system has been provided for Tunnel Seepage Water. Clear filtered water is being discharge to the river.
1.16	Facilities for long term housing of operational workers?	No	Not envisaged
1.17	New road, rail or sea traffic during construction or operation?	No	Temporary traffic during construction phase.
1.18	New road, rail, air waterborne or other transport infrastructure including new	No	Development of new approach roads for access to project components

	or altered routes and stations, ports, airports etc?		
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	Not applicable
1.20	New or diverted transmission lines or pipelines?	Yes	New Transmission Line is being established
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of water courses or aquifers?	Yes	Impounding of river water for diversion into head race tunnel for Hydro Electricity Generation..
1.22	Stream crossings?	No	Not applicable
1.23	Abstraction or transfers of water from ground or surface waters?	Yes	The design discharge is diverted into a tunnel from Barrage. After Barrage the tributary is charged by 12 nos of Nallas which provides ample amount of water even during non-peak period. However during the lean season when the River flow is less, a discharge of 10% of the average of such period is Sacrificed as Environmental Discharge (Sacrificial Discharge)
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	The Proposed HEP is based on run-off river scheme. The design discharge is diverted into a tunnel from Barrage. After Barrage the tributary is charged by 12 nos of Nallas which provides ample amount of water even during non-peak period. However during the lean season when the River flow is less, a discharge of 10% of the average of such period is Sacrificed as Environmental Discharge (Sacrificial Discharge)
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	Construction material will be transported by road and stored in an area earmarked for it as temporary storage material yard.
1.26	Long term dismantling or decommissioning or restoration works?	No	Not envisaged

1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	Not envisaged
1.28	Influx of people to an area in either temporarily or permanently?	Yes	Temporary and permanent Influx of people to the project site and to the adjoining areas.
1.29	Introduction of alien species?	No	Not envisaged
1.30	Loss of native species or genetic diversity?	No	Not envisaged
1.31	Any other actions?	No	Not envisaged

2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply)

<table>
<tr><th>S. No.</th><th>Information/Checklist confirmation</th><th>Yes/No</th><th>Details thereof (with approximate quantities/rates, wherever possible) with source of information data</th></tr>
<tr><td>2.1</td><td>Land especially undeveloped or agricultural land (ha)</td><td>No</td><td>Use of Private Agricultural Land, Government Land and Forest Land for establishment of various project components
The total land requirement being 59.948 Ha split into Forest Land and Private Land</td></tr>
<tr><td>2.2</td><td>Water (expected source & competing users) unit: KLD</td><td>Yes</td><td>Water Requirement during Construction
<table>
<tr><th>Particulars</th><th>Water Requirement (KLD)</th><th>Source</th></tr>
<tr><td>Concrete</td><td>37</td><td rowspan="2">Tunnel Seepage Water</td></tr>
<tr><td>Drilling</td><td>48</td></tr>
<tr><td>Domestic</td><td>30</td><td>From Filtration plant</td></tr>
<tr><td>Total</td><td>115</td><td></td></tr>
</table>
No process water will be required during operation. Only 2 KLD Domestic water will be required.
There is no competing users.</td></tr>
<tr><td>2.3</td><td>Minerals (MT)</td><td>No</td><td>Not Applicable</td></tr>
<tr><td>2.4</td><td>Construction material – Stone, aggregates, and/soil (expected source – MT)</td><td>Yes</td><td>
<table>
<tr><th></th><th>Qty</th><th>Units</th></tr>
<tr><td>Cement</td><td>2,371,002</td><td>CUM</td></tr>
<tr><td>Sand</td><td>175,348</td><td>CUM</td></tr>
<tr><td>Stone</td><td>118,550.08</td><td>Tones</td></tr>
</table>
</td></tr>
</table>

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
2.5	Forests and timber (source – MT)	No	Not Envisaged
2.6	Energy including electricity and fuel (source, competing users) Unit: fuel (MT), energy (MW)	Yes	Electricity Requirement. During Construction: 2000 KWh During Operation: 500 KWh
2.7	Any other natural resources (use appropriate standard units)	No	Not applicable

3. Use storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	No	Not applicable
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	Not applicable
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	A positive effect is envisaged in the up-liftment of the living standards of the people by generating employment and several other indirect opportunities.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.	No	Not envisaged
3.5	Any other causes	No	Not envisaged

4. Production of solid wastes during construction or operation or decommissioning (MT/month)

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes	No	About 5 Lac CUM of Overburden (Muck) will be excavated. The muck excavated is being utilized as raw material for captive Brick Plant, a part is also being used for filling/leveling low lying area and the balance muck is being disposed of at Pre-identified Dump yards. On saturation the Muck Dump Yards will be Rehabilitated and Restorated as per pre defied methodology.
4.2	Municipal waste (domestic and or commercial wastes)	No	About 5 TPM of municipal waste is generated from Septic Tanks which is vermi-composed and used as manure for green belt development.
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	No	
4.4	Other industrial process wastes	No	Not Applicable
4.5	Surplus product	No	10% overload during peak season.
4.6	Sewage sludge or other sludge from effluent treatment	No	
4.7	Construction or demolition wastes	No	Not envisaged
4.8	Redundant machinery or equipment	No	Not envisaged
4.9	Contaminated soils or other materials	No	Not applicable
4.10	Agricultural wastes	No	Not applicable
4.11	Other solid wastes	No	Not applicable

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	Yes	Emission from combustion of fossil fuels in DG set.
5.2	Emissions from production processes	No	
5.3	Emissions from materials handling including storage or transport	No	
5.4	Emissions from construction activities including plant and equipment	Yes	Emission from DG set, vehicular movement, excavators, tippers and other construction equipment.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	Dust is one of the major particulate emissions arising from the construction activity and operation of stone crusher. This will be suppressed by water spraying. Sewage will be treated in septic tanks followed by soak pits. This will eliminate the dust and odor problems.
5.6	Emissions from incineration of waste	No	
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	Not applicable
5.8	Emissions from any other sources	No	Not envisaged

6. Generation of Noise and Vibration, and Emissions of Light and Heat:

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	Yes	There will be generation of some noise and vibration created by Turbine Generators, Crushers and vehicular movement. But this noise and vibration

			will be site specific and will not be transmitted outside the plant premises. The noise levels will be kept below the permissible limits
6.2	From Industrial or similar processes	No	
6.3	From construction or demolition	No	Not envisaged
6.4	From blasting or piling	Yes	Permissible level of Noise and vibration from Blasting, Crushers, Drilling etc is being maintained.
6.5	From construction or operational traffic	Yes	There will be generation of some noise and vibration during the vehicular movement. But this noise and vibration will be site specific and will not be transmitted outside the plant premises. The noise levels will be kept below the permissible limits.
6.6	From lighting or cooling systems	No	
6.7	From any other sources	No	Not envisaged

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, ground water, coastal waters or the sea:

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials	No	
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	The sewage is being treated in conventional septic tank followed by soak pit. This tank is cleaned periodically and the sludge generated will be used as manure in the green belt. Hence all the effluents will be recycled and managed adequately to maintain no discharge outside the premises and to avoid contamination of land and water.
7.3	By deposition of pollutants emitted to air into the land or into water	No	
7.4	From any other sources	No	Not envisaged
7.5	Is there a risk of long term	No	

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
	build up of pollutants in the environment from these sources?		

8. **Risks of accidents during construction or operation of the Project, which could affect human health or the environment**

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	No	Adequate fire, safety infrastructure and trained personnel have been /will be made available at the site.
8.2	From any other causes	No	No other causes envisaged.
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquake, landslides, cloudburst etc)?	Yes	The Seismicity at the Project Site is Seismic Zone IV. There is larger land slide prone area south-east of Gangtok City. It is very Active landslide. However, it is located at a distance of 12 Km from the project site.

9. **Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality.**

S. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
9.1	Lead to development of supporting, facilities, ancillary development stimulated by the project which could have impact on the environment e.g.: • Supporting infrastructure (roads, power supply, waste / waste water treatment, etc. • housing development • extractive industries • supply industries • other	Yes	Supporting infrastructure like road transport, communication, drinking water, sanitation and other facilities are developed and same shall continue & improved due to proposed activities. Development ancillary industry to support to plant requirements. Increased Employment opportunities due to the establishment of Project. This all will contribute in raising the socio-economic status and standard of living of the nearby villagers and will not have any negative impact on the surrounding environment.

S. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
9.2	Lead to after use of the site, which could have an impact on the environment	No	Not envisaged
9.3	Set a precedent for later developments	Yes	Improvement in quality of life due to direct & indirect employment opportunities during construction and operation phases. Ecological balance by sustainable development. Precedent for later industrial developments in the area.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	

III. Environmental Sensitivity

Sl. No.	Areas	Name /Identity	Aerial distance (within 15 km) Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value.	NA	NA
2	Areas which are important or sensitive for ecological reasons – Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Fambong Lho Wildlife Sanctuary Rongnichue River (Tributary of Testa River)	Within 5.5 Km Project is being established on Rognichue River
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	NA	NA
4	Inland, coastal, marine or underground waters	NA	NA
5	State, National boundaries	West Bengal State	Within 1 Km aerial distance from Power House
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	NA	NA
7	Defense installations	Army Area -Army station at Bardang Village	2 Km from Adit-III
8	Densely populated or built-up area	Namli & Mazitar villages	Within 3 Km from Power House
9	Areas occupied by sensitive man-made land uses (hospital, schools, places of worship, community facilities)	Rumtek Monastery, Place of Worship	Within 4 Km Primary Health Center, School and other community faculty are available within 15 KM from Project Site
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	NA	NA
11	Areas already subjected to pollution or environmental damage. (Those where existing legal environmental standards are exceeded)	NA	NA

12	Areas susceptible to natural hazard which could cause the project to present environmental problems (earthquake, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)	Seismic Zone IV	Active Landslide located within 12KM

IV. PROPOSED TERMS OF REFERENCE FOR EIA STUDIES

EIA/EMP studies report has already been submitted to MOEF while obtaining the Environmental Clearance granted vide MoEF **F. No. J-12011/56/2006-IA-I dated 04.04.2007.**

"I hereby given undertaking that the data and information given in the application and enclosures are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance give, if any to the project will be revoked at our risk and cost.

Date: 24.12.2016
Place: Raipur

P. S. Dutta Gupta
Whole Time Director
Madhya Bharat Power
Corporation Limited

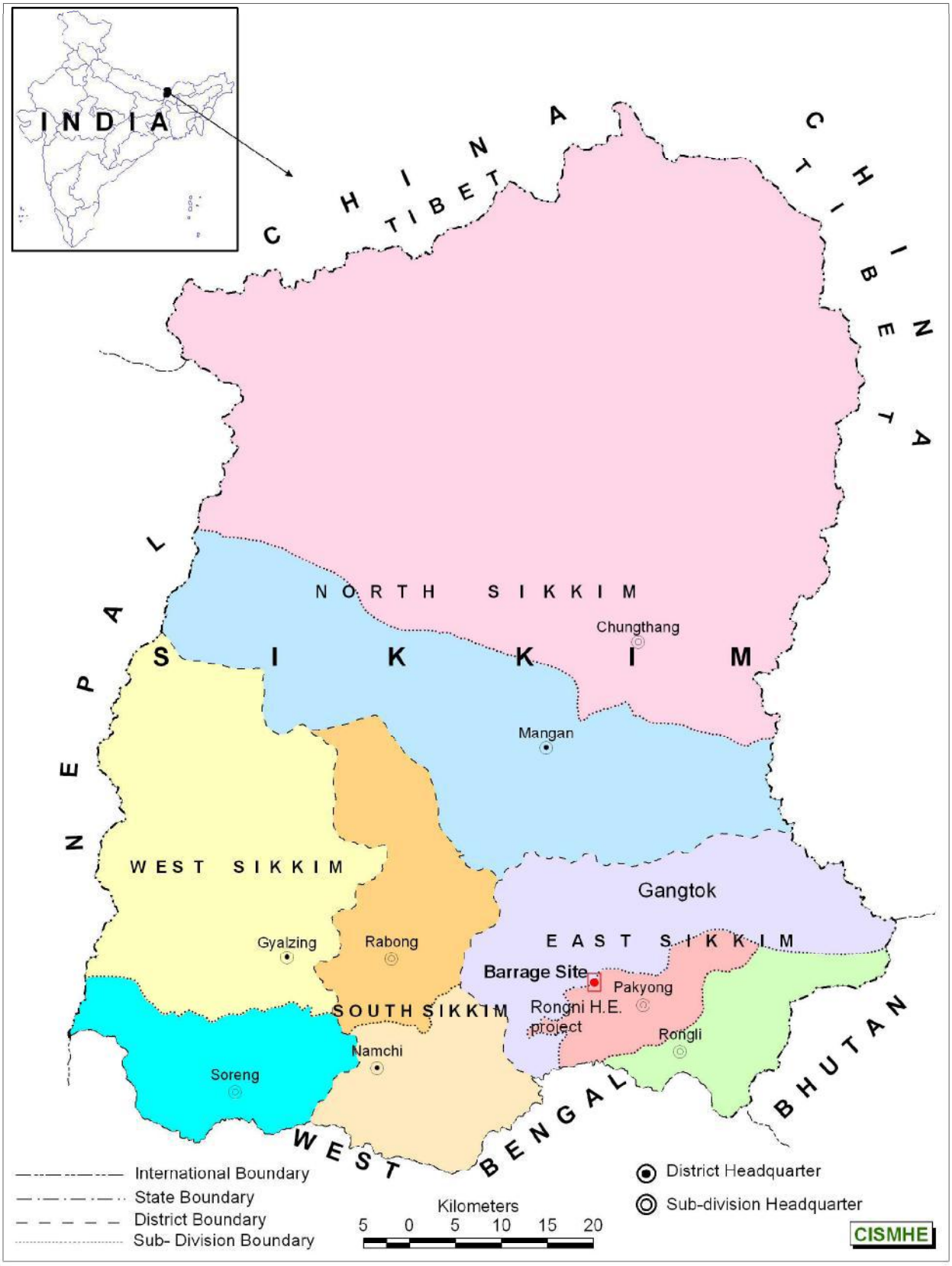

Fig 1.1 Location map of proposed Rongni H.E. project