

Thar Coalfield Block-I (TCB-I)

PROJECT BRIEF

NOTE

Most of the information provided in this project brief on Thar Coalfield Block-I (TCB-I) is based on the interviews, meetings held with the representatives of the communities, civil society organizations (CSOs) and local media persons during my field visit to Thar in October 2019. Apart from these primary sources, some secondary sources like news clippings, web-links and the reports available online have also been used in its development. While writing it, I have tried to access the official project documents like feasibility reports, Environmental Impact Assessment (EIA), Social Impact Assessment (SIA), Resettlement Action Plan (RAP), etc. for referencing. However, I couldn't access any such official project documents. However, some project documents have been accessed just this week. In the light of these, this draft brief on TCB will be soon revised.

Since the topography and local culture are same both in Block-II and Block-I, it is assumed that the proposed mining and power generation interventions in Block-I are likely to induce almost same environmental and social issues which have been discussed in project brief on Thar Coal Power Project (Block-II). To avoid repetition of the information given in the project brief on Thar Coal Power Project (Block-II), details regarding the issues of air pollution, land degradation and livelihood losses are not given in this project brief. Rather this document covers only the problems of displacement and resettlement and site for disposal of saline and effluent water apart from the technical information about proposed mining and power generation interventions in TCB-I in this document.

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1. Development of Thar Coalfield Block-I (TCB-I): Out of Pakistan's total 186 billion ton coal reserves, 175 billion bt are located in southeastern district Tharparkar in Sindh. Spread over 90,000 square kilometers, Thar coal reserves are divided into 13 blocks. Since 2008, the federal (Pakistan) and provincial (Sindh) governments have been actively collaborating with the government of China to exploit Thar coal reserves, for power generation on 'fast track basis.' Thar Coalfield Block-II (TCB-II) was the first block to be developed by Sindh Engro Coal Mining Company (SEMC). A coal-based subcritical power plant built has already started generating electricity and connected to national grid in 2019 while a number of other coal-fired power plants are in pipeline in Thar Coalfield Block-II (TCB-II). Following the development of Block-II, recently the development of Thar Coalfield Block-I (TCB-I) has started.

In 2019, the development of Thar Coalfield Block-I started after a Chinese power company, Shanghai Electric, mobilized its machinery and begun mining work in Thar Coalfield Block-I (TCB-I) for the development of the mine and installation of the 1,320 megawatt (MW) supercritical coal-fired power plant.¹ Shanghai Electric is the largest manufacturer of power plant equipment in China and is listed on Shanghai and Hong Kong stock exchanges. It is a very large, financially sound and experienced company with a market cap of \$ 18 billion.² The Chinese company has started removing overburden to develop a mine so as to extract 7.8 million ton coal annually³.

Sino Sindh Resources (pvt.) Limited (SSRL) is the executive company in Thar Coalfield Block-I (TCB-I). While SSRL will be mining coal, China Power International Holding (CPIH) installing power plants. Sino Sindh Resources (Pvt) Limited (SSRL)—a subsidiary of Global Mining (China) Co—was awarded the exploration license in Thar Coalfield Block-I in October 2011. Detailed feasibility study was completed in March, 2012 and mining lease was issued in May, 2012. Global Mining China has acquired 100% shareholding of SSRL. The SSRL, which holds mining lease rights through international competitive bidding⁴, is going to establish an open-pit coal mine for 7.8 MTPA in Thar Coalfield Block-I and two mine mouth 2 x 660 MW power plants to be operated on indigenous coal i.e. lignite. Initially the mine would have capacity of 7.8 mtpa (million tons per annum), to be scaled up to 25mtpa. The SSRL and Shanghai Electric Group Co., Ltd (SEC) have initialed a ‘coal supply agreement’ for power generation through 2 x 660MW mine mouth power plants⁵.

In November 2019, the Private Power and Infrastructure Board (PPIB) approved execution of Implementation Agreement (IA) with Pakistan’s largest Thar coal based power generation project in Thar Coalfield Block-I (TCB-I) and also allowed extension in financial closing date of the project. The project is at advance stages of development as critical milestones which include issuance of Letter of Support (LOS) and signing of Power Purchase Agreement (PPA) have

¹ <https://tribune.com.pk/story/2075310/1-mining-work-begins-thar-coal-block/>

² <https://www.thenews.com.pk/print/33894-shanghai-electric-seeks-govt-permission-to-set-up-1400mw-coal-power-project>

³ <https://nation.com.pk/09-Oct-2019/chinese-firm-starts-mining-in-thar-for-generation-of-1320mw-coal-energy>

⁴ <https://www.thenews.com.pk/print/30353-work-on-1.3-billion-thar-coal-project-to-begin-in-may>

⁵ <http://sindhcoal.gos.pk/sino-sindh-resources-block-i/>

already been achieved and project is likely to start power generation by March 2021. Tariff of Rs. 8.0924 has already been given by the National Electric Power Regulatory Authority (NEPRA). Financial close of the project will be undertaken by the end of this year⁶. The project will be connected with Matiri-Lahore Transmission Line which is currently under construction and scheduled to be operational by March 2021⁷.

2. Coal Reserves in TCB-I: Thar Coalfield Block-I has measured coal reserves of 620.42 million tons⁸. The coal seams in TCB-I Sinhar Vikian-Varvai are from 0.20 to 22.81 meters thick. The thickest coal seam is 22.81 meters, found at a depth of 167.61 meters. The minimum and maximum depth at which the first coal bed was hit is 137.04 and 178.72 meters. The Isopach map of cumulative coal thickness in Block-I show that the coal is decreasing towards south and southwest of the block while it is increasing towards east and north. The coal zone is more than 20 meters thick is in between and to the east of Sonar Vikian and Varvai. The thickest coal bed called the "Thar Coal Seam" is persistent over most of the area in the block. It attains a maximum thickness of 22.81 meters and has a uniform thickness of over 15 meters in most of the area. It covers an area of about 80 percent of the block. The thickness of the overburden as found in the drill holes varies from 137 to 189 meters in the area. It consists of three kinds of material: dune sand, alluvium and sedimentary rocks of the Bara Formation above the first coal bed. The thickness of dune sand throughout the area (at inter dune drill sites) ranges between 51 and 90.70 meters and averages around 68 meters; alluvium thickness ranges between 58 and 100 meters and averages around 76 meters. The thickness of the bedrock above the first coal seam is normally quite thin and is generally less than 15 meters beneath the alluvium bedrock contact. In a few drill holes alluvium is found directly on the first coal seam. The bulk of the coal i.e. more than 90 percent is present between 50 and 120 meters below the sea level and can be mined by removing an overburden of 200 meters⁹.

⁶ <http://www.radio.gov.pk/21-10-2019/delegation-of-shanghai-electric-cm-sindh-discuss-thar-coal-block-1-project>

⁷ <https://dailybw.com/2019/11/23/private-power-and-infrastructure-board-greenlights-thar-coal-block-i-project/>

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<file:///D:/Coal,%20Climate%20Change%20and%20Renewable%20Energy%20Sources/Project%20Briefs/Thar%20Coal%20Power%20Plant/Readings/eptkriact8vqCoal%20Mining%20In%20Tharparkar%20Potential,%20Concerns%20and%20Remedies.pdf>

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<file:///D:/Coal,%20Climate%20Change%20and%20Renewable%20Energy%20Sources/Project%20Briefs/Thar%20Coal%20Block-I/Information%20Memorandum%20for%20Thar%20blocks%202010.pdf>

3. Project Location: The Project area at Thar Coalfield Block-I (TCB-I) Sinhar Vikio-Varvai (Coal Mine area) is located in tehsil Mithi of district Tharparkar. Thar Coalfield Block-I (TCB-I) falls largely in union council (UC) Khario Ghulam Shah. However, some of its area also includes UC Sonal Veh, UC Kehri and UC Islamkot¹⁰.

4. Cost and Loan: Total cost of the 1,320 MW coal-based power plant is estimated to be US \$ 1912.12 million.¹¹ The Shanghai Electric will invest \$4 billion at Thar Coal block one and will build two more power plants of 1,320 MW there¹². However, no information is available regarding the percentage of loan amount and the equity of the Chinese company.

5. Villages and population to be affected: Nine villages falling in the project location—including Var Wahi, Male-jo-Tar, Saren-jo-Tar, Sinhar Vikio, Ajbe-io-Tar, Khario Ghulam Shah, Til Wahi, Bhave-jo-Tar and Shahmir Vikio/Qurban Vikio—are likely to be affected by mining in TCB-1. These villages, according to 1998 census, have 1013 households and a total population of about 7,566. Three villages, namely Virvai, Tilvai, and Khario Ghulam Shah are located within the proposed mining area while part of Ajbe-jo-Tar is at margin. Tilvai village, from where the project's mining activity will be initiated, is situated 16 Km from Islamkot. Village Virvai is located in the 'initial mining' area, while Ajbe-jo-Tar in the 'second mining' area.

6. Land acquisition, displacement and resettlement:

In the absence of project-related official document it is difficult to ascertain total land to be acquired for coal mining and production of coal based electricity in Thar Coalfield Block-I (TCB-I). According to a news report¹³, total land to be acquired for the TCB-I is 8,216 acres including, 6,322 acres of government land and 1,894 acres of government land. However, there exists a controversy between the official and local people's understanding about the status of government land. Most of the land tilled by local population as *yaksaala* (lease?) or used as

¹⁰ https://www.researchgate.net/publication/281121869_ENVIRONMENTAL_DEGRADATION_-_SOCIAL_UPGRADATION_POVERTY_NEXUS_IN_THAR_COALFIELD_BLOCK_-_1

¹¹ <http://cpec.gov.pk/project-details/9>

¹² <https://arynews.tv/en/shanghai-electric-cm-sindh-thar-coal/>

¹³ <https://tribune.com.pk/story/2084530/1-shah-directs-chinese-company-revolutionise-desert-agriculture/>

gowchar (grazing land) is officially considered as ‘government land’ while the local population considers it their land.

“The government was acquiring land in Sindh according to the laws which have nothing to do with the land tenure in Thar. Land tenure in Thar is different from other parts of Sindh. So land acquisition in Thar under the laws applicable to other parts of Sindh is nor right,” said Ali Akbar Rahimoon a representative of civil society adding that: “due to faulty legal and administrative processes adopted for land acquisition and resettlement, no compensation against yaksaala and gowchar are being made to the displaced communities.”

Due to recent development of Thar Coalfield Block-I (TCB-I), displacement of two villages in is on cards as the construction work has already started in the area. Though no displacement and relocation has started yet, a number of villages, particularly Warwai and Talwai, are bound to be displaced and relocated in Block-I. Among other losses, livelihood disruption is the most widespread concern among the communities to be displaced.

The district government has already started holding consultative meetings regarding the displacement and relocation of Warwai and Talwai villages. In this regard, around 12 consultative meetings attended by the representatives of affected communities, private companies, revenue department, district administration and local elected representatives have been held in deputy commissioner’s (DC) office in Mithi.

Besides, the local politicians and elected representatives have also been holding meeting in the affected villages. They have been convincing the communities to develop consensus regarding the amount of compensation and other issues involved in their relocation. In a meeting held with the residents of Warwai Lanja regarding this project brief, the villagers said though meetings regarding their displacement and relocation were going for long but their frequency has considerably increased in recent months.

They raised their concern regarding the meetings held at DC office. These are attended by few notables from the villages to be displaced. These meetings exclude a large number of people to be displaced and relocated. Instead of holding closed door meetings at limited scale, the government should hold public hearings in the villages to be affected, they demanded.

While referring to the places considered for their relocation, including Khario Ghulam Shah, Malhaytar and Mari Tar, they said they were not ready to shift there since the land available in these villages was insufficient. They said they were ready to surrender their land for Thar Coal Power Project only if the government showed its readiness to take their on lease; provide them royalty on coal to be extracted from their land; and provide them an alternative *gowchar*, grazing land.

Meanwhile the provincial government of Sindh has been showing its concern about 600 families to be displaced due to the coal mining and installation of the power plant. Syed Mural Ali Shah, chief minister of Sindh, is reported to have directed the provincial minister of energy to ask the Chinese company to construct a residential colony for the affected families on the model of ‘Senhri Dars Model Village. The colony must have good houses, paved roads, school, park, mosque, temple, playground, and small market,’ directed the CM. He gave the example of the Suneri Dars village constructed by the Sindh Engro Coal Mining Company (SEMC) for displaced people of Block-I. According to the CM, the model village school there was flourishing with even those children who had not been enrolled before attending the school¹⁴.

Disposal of saline and effluent water:

Like the Thar Coalfield Block-II (TCB-II), development of Block-I or (TCB-I) will also require a site for disposal of saline and effluent water produced in wake of mining and power production processes. Different sites for disposal of saline and effluent water from Block-I are presently under consideration. Regarding the site for disposal of saline and effluent water in TCB-I, no authentic information is presently available. There are reports that Kherio Ghulam Shah is where the Dumping site and evaporation pond will be located.

¹⁴ <https://tribune.com.pk/story/2075310/1-mining-work-begins-thar-coal-block/>

Sino Sindh Resources (private) Limited (SSRL) was considering two places—Dabri and Saringwari—as a site for disposal of saline and effluent water, said Manzoor Rahimoon, mining engineer, SSRL, while talking to this scribe. Some residents of the villages around Gorrano reservoir fear disposal of saline and effluent water from Block-I will be linked to the pipeline discharging into Gorrano Reservoir. However, the possibility of disposal of waste water of Block-I into Gorrano reservoir is dismissed by others on the ground that the reservoir does not have enough capacity to hold the water from two coal blocks.