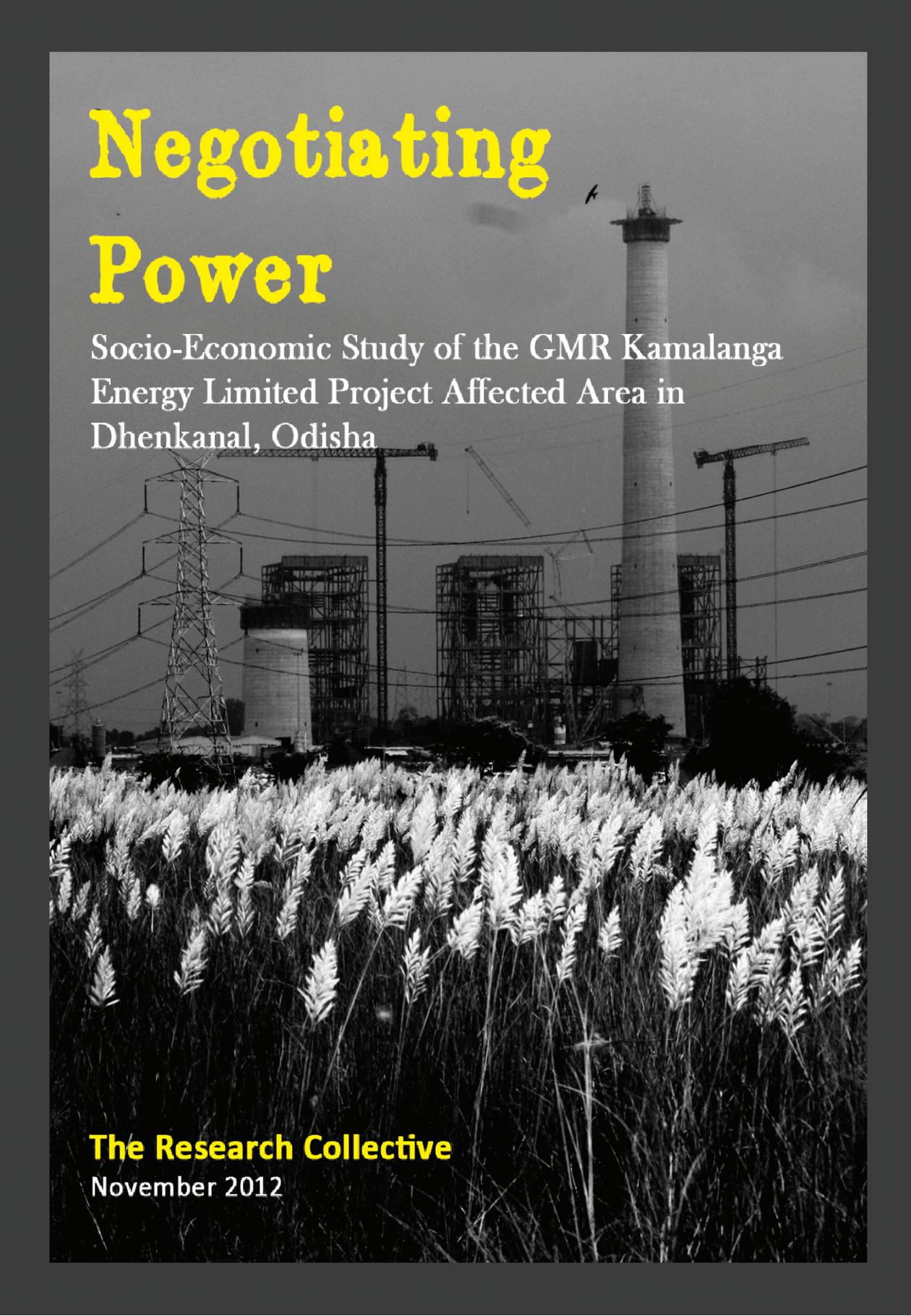


# Negotiating Power



Socio-Economic Study of the GMR Kamalanga  
Energy Limited Project Affected Area in  
Dhenkanal, Odisha

**The Research Collective**

November 2012

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## FOREWORD

This Socio-Economic study has been conducted, at the behest of Odisha Chas Parivesh Sureksha Parishad (Odisha Agriculture and Environment Protection Council), in the project affected area of GMR Kamalanga Energy Limited (GKEL) to understand the ground scenario post setting-up of the GMR Kamalanga Energy Limited coal-based thermal power plant by GMR Energy.

The survey was conducted over seven days in the affected villages of Kamalanga and Mangalpur panchayats. The villages from where land was acquired for GKEL include Kamalanga, Achalkot, Bagha Munda, Kalia Taila, Durgapur, Barasahi, Maniaveda, Manpur, Mangalpur, Senapathi Berena and Baghabatpur. A total of 103 sample households have been surveyed in nine of the affected villages. It has been ensured that the 103 samples chosen for this survey are representative of the affected villages and the four prominent castes. Even so, it is a shortcoming that women constituted only one fifth of the respondents.

The method of sampling adopted for the survey is a non-statistical method usually referred to as Judgmental Sampling. While using this method, the person doing the sample uses his/her knowledge or experience to select the items to be sampled. In this case, intense focus group discussions were held with different communities in different villages over a period of two days, to chart out a chronology of events and identify key issues, before beginning the five day survey. Additionally, a thorough reading of documents pertaining to the GMR Kamalanga Energy Limited such as official letters, records, reports and studies accessed through the internet and the Right to Information Act 2005 have aided us in writing this report.

We thank the villagers of Kamalanga and Mangalpur for cooperating with us during the focus group discussions and the course of the survey. We are grateful to Odisha Chas Parivesh Sureksha Parishad and the district administration for sharing essential information on the GKEL project. We sincerely appreciate Odisha Chas Parivesh Sureksha Parishad for initiating this effort to scientifically study the impacts of industrialisation in Dhenkanal, Odisha.

Rupesh Kumar and Ramani Ranjan  
Tata Institute of Social Sciences, Mumbai

## EXECUTIVE SUMMARY

India is witnessing an unprecedented boom in coal mining and establishment of new coal-fired thermal power plants. Odisha, being a cradle of natural resources and a hub of many industries, sites a significant amount of these planned power plants. Its coal deposits have been used for fulfilling the country's needs in the domestic and international market. The growing energy need of the country has rendered hundreds of thousands homeless and inundated many thousands of hectares of arable land; with minimal improvement to the energy shortage that the country is facing.

In June 2006, the Government of Odisha approved yet another Thermal Power Plant (TPP) to be set up by GMR Energy Limited in Kamalanga, Dhenkanal district. This is an area that has been ranked as the second most polluted area in the country by an Interim Report of the Central Pollution Control Board released in May 2012.

This study was conducted to comprehend the socio-economic realities of 11 villages in Mangalpur Gram Panchayat who have been affected by the setting up of GMR Kamalanga Energy Limited's (GKEL) coal based TPP, which is partly funded by International Finance Corporation (IFC). The results of the study expose the consistent patterns of development-induced displacement of communities from their lands, traditional livelihoods and natural resources. The approach to the study has been informed and developed through extensive focus group discussions, interviews and research through secondary data.

Some of the most severe impacts of the GKEL TTP on the community are relating to land alienation, depletion of ground water table, pollution, diversion of ayacut land, loss of irrigated land, loss of labour, loss of access to forest lands and its produce, loss of community commons and meagre award as compensation for land. It is astounding that GKEL has been granted clearance to site its project on the Rengali Irrigation project area. Diverting such land for industrial use not only denies farmers of prime irrigated land for cultivation but also affects the irrigation project as a whole. The GKEL project is located 2 kilometres from the River Brahmani, which is fast losing life owing to discharge of toxic waste water by the industries already situated along its course. The Odisha State Pollution Control Board has downgraded the River as being unfit for domestic use. Though Water for the GKEL project is to be sourced only from the River, villagers alleged that water is extensively drawn through bore-wells; the effects of which are already impacting ground water aquifers in the area.

Challenging the often used argument that setting up new industries in rural areas generates employment, this study reveals that a majority of the people in these 11 villages have lost their livelihood without being compensated with employment in the company. The number of landless families has increased from 6% to 29% amongst the respondents. Promises of a secure company employment, which was used to attract families to part with their land, have largely been un-fulfilled. GKEL had promised permanent employment to 92% of the respondents while only 11% have been provided employment under sub-contracts. On the contrary, 64% of the respondents used to hire locals from the OBC, dalit, and adivasi community as farm labourers, contributing to local employment.

This kind of poorly planned industrialisation is also setting a dangerous trend where women are being alienated from income generation. In Mangalpur Gram Panchayat, with land averted for the project, women who were engaged as farm labourers have been left today without any alternative source of livelihood.

## OVERVIEW OF ANGUL AND DHENKANAL DISTRICTS

Odisha is a mineral rich state bearing 16.92%<sup>1</sup> of the country's mineral reserves including 33.91% of iron ore, 27.59% of coal and 49.74% of bauxite reserves. Chromite, nickel ore, graphite, bauxite, and manganese are also found in abundance in the state. Out of the state's 668.14 lakh tonnes of coal reserves, 445.61 lakh tonnes (67%) lie within the district of Angul. The contiguous areas of Thalcher-Angul-Meramandali-Dhenkanal include 162 RED category industries (category A & B)<sup>2</sup> with a large number of coal mines, coal-fired thermal power plants, aluminium smelters and steel plants. Some of the biggest names in the coal, energy and power sector operate here - Mahanadi Coalfields Ltd, National Aluminium Company, National Thermal Power Corporation, Bhushan Steel, Jindal Steel and Power, Monnet Power, Utkal Coal Ltd, Lanco Power, Rungta Mines Ltd, Nava Bharat Ventures Ltd, MGM Mines Ltd, GMR Energy, Sree Metaliks Ltd, and Essar Steel.

Large scale industrialisation without sufficient state regulation and monitoring affects both human and environmental life. Studies conducted in the last decade have confirmed that the air and water quality of Angul and Thalcher area have deteriorated significantly due to coal mining, thermal power plants, smelters and other allied activities. The industries are located along the 25 km stretch of River Brahmani, which has been classified as 'D' category<sup>3</sup>, by the State Pollution Control Board of Odisha, meaning that the waters thereof are unfit for bathing and drinking.

### CRITICALLY POLLUTED AREA

In 2009, the Central Pollution Control Board (CPCB) conducted an environmental assessment based on calculations of Comprehensive Environmental Pollution Index (CEPI) in 88 industrial clusters across the country. The study found 43 of these industrial clusters to be critically polluted. Angul ranked as the seventh most polluted area with a CEPI score of 82.09.

CEPI is a scientific method developed by the CPCB along with IIT-Delhi, State Pollution Control Boards and other environmental institutes to evaluate and rank critically polluted areas. Critically polluted areas are those where air, water and land pollution exceed the assimilative capacity of the environment, affecting human health. CEPI was devised with the objective to prepare remedial action plans to facilitate pollution abatement and restore environmental quality of respective industrial clusters.

Based on this report, on 13 January 2010 the Ministry of Environment and Forests (MoEF) placed a temporary moratorium on consideration of environmental clearance for projects located in the 43 critically polluted areas. This moratorium was lifted on 31 March 2011 for 25 of the 43 critically polluted areas, including Angul-Dhenkanal, on the assurance of the State Pollution Control Boards that time-bound action plans for improving the environmental quality in the areas had been drawn and implemented. Conversely, the 2011 CPCB Interim Report of Environmental Pollution Index, released in May 2012, reveals that pollution levels have increased in many of the critically polluted areas. Angul now ranks second on the list of critically polluted areas, with a CEPI score of 89.74.

<sup>1</sup>Govt. of Odisha, Economic Survey, 2005-06 (Bhubaneswar: Govt. of Odisha, 2006)

<sup>2</sup>Classification of industries, Ministry of Environment and Forests - <http://envfor.nic.in/legis/ucp/ucpsch8.html>

<sup>3</sup>121st Report of Committee on Petitions. 2004. Rajya Sabha Secretariat. New Delhi.

<http://164.100.47.5/book2/reports/petition/121streport.htm>

## OVERVIEW OF THE GKEL PROJECT

GMR Kamalanga Energy Limited, a subsidiary of GMR Energy, is constructing a 1400 MW coal-based thermal power plant in Kamalanga, Dhenkanal district, Odisha. The Memorandum of Understanding (MoU) between GMR Energy Limited and Odisha State was signed on 09 June 2006 to set up a Thermal Power Plant (TPP) of 1000 MW with 2 units of 500 MW. The environmental clearance by MoEF for phase I (3x350 MW) was granted on 05 February 2008 and the proposal for phase II (1x350 MW) was cleared on 05 December 2011. Due to the 2010 MoEF moratorium on new projects in critically polluted areas, GKEL's proposal for phase II was first deferred by the Ministry on 01 May 2010. However, the High Level Clearance Authority of Odisha headed by the Chief Minister cleared the proposal for expansion on 28 January 2010, while the Ministry's moratorium was in effect.



**Construction at the GKEL plant site**

The time schedule for commissioning the project from the date of signing the MoU is 60 months, which indicates that the plant should have been commissioned by June 2011. Current activity, such as land acquisition or construction, in the absence of an extension of the original MoU, could be termed illegal.

The total project cost of the 1400 MW project is Rs.5733 - Rs.4540 crores for Phase I and Rs.1193 crores for Phase II. Finance for Phase I is being met through a combination of debt and equity at 3:1 ratio with Infrastructure Development Finance Company (IDFC) as the

lead lender and debt arranger. The debt component of Rs.3405 crores is tied up with 13 banks, including State Bank of India. The equity portion of Rs.1135 crores is tied up between GMR Energy and IDFC.

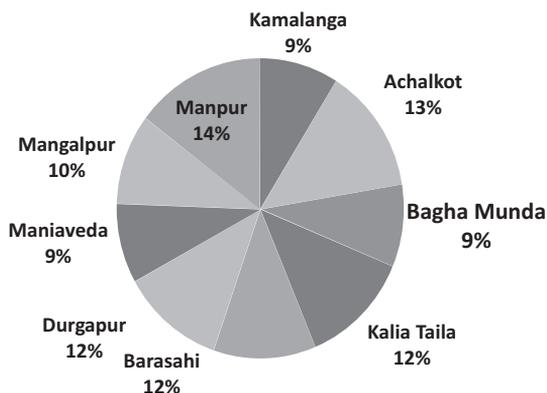
The total land requirement for the project is 1050 acres as per the MoEF clearance. Coal for the first three units of 1050 MW is to be sourced from the Thalcher Mahanadi Mine. The Rampia and Dip Side of Rampia coal block, located in Mahanadi Coalfields in Odisha, was allocated to six firms - Arcelor Mittal, Reliance Energy, Lanco Group, GMR Energy, Navbharat Power and Vedanta subsidiary Sterlite Energy - in January 2008. For the added capacity of 350 MW, GMR Energy reported that coal will be imported from Indonesia until domestic linkage is obtained. Railway track hopper, for which clearance was granted by the Rail Traffic Clearance in July 2007, is to be setup for receiving and unloading coal from the mine, which is 43 kilometres from the proposed plant. As of December 2011, GKEL had tied up 85% of its power sale with Power Purchase Agreements (PPA) with GRIDCO (Formerly Grid Corporation of Odisha), Haryana Power Trading Corporation (HPGCL) and PTC India Limited (Formerly Power Trading Corporation of India Ltd).

## PROFILE OF THE COMMUNITY

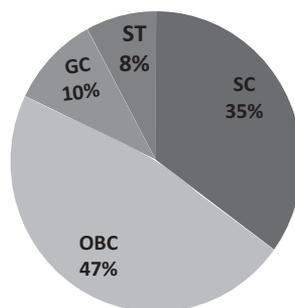
As per the 2010 'village wise R & R survey' for GKEL, the total number of project affected persons is 5053 from the five villages of Mangalpur, Manpur, Kamalanga, Senapathi Berena and Baghabatpur. The village of Kamalanga has 7 hamlets – Kamalanga, Achalkot, Bagha Munda, Kalia Taila, Durgapur, Barasahi and Maniaveda. A total of 1038 acres of both private and government land, along with village commons, has been acquired for GKEL from these villages which fall within Mangalpur Panchayat, Odapada Block, Dhenkanal district.

This survey has been conducted in the villages of Manpur, Mangalpur, Kamalanga, Achalkot, Bagha Munda, Kalia Taila, Durgapur, Barasahi and Maniaveda. Of the 103 respondents surveyed, 9 belong to Kamalanga, 14 to Achalkot, 9 to Bagha Munda, 13 to Kalia Taila, 12 to Barasahi, 12 to Durgapur, 9 to Maniaveda, 10 to Mangalpur and 15 to Manpur. Thirty five percent of the respondents belonged to Scheduled Caste, 47% to Other Backward Caste, 10% to General community and 8% to Scheduled Tribe.

**Diagram 1: Village-wise distribution of respondents**



**Diagram 2: Community-wise distribution of respondents**



**Table 1: Community-wise and village-wise distribution of respondents**

Name of the Hamlet	Total	Community of respondent			
		SC	OBC	General	ST
Kamalanga	9	1	5	3	0
Achalkot	14	3	7	0	4
Bagha Munda	9	7	2	0	0
Manpur	15	5	7	3	0
Kalia Taila	13	3	9	1	0
Barasahi	12	3	5	0	4
Durgapur	12	9	3	0	0
Mangalpur	10	1	6	3	0
Maniaveda	9	4	5	0	0
Total		36	49	10	8

**Gender:** 82% of the respondents were male and 18% were female.

**Age:** 21% of the respondents were between the age of 60 & 80, 40% between the age of 40 & 60, 38% were between the age of 20 & 40 and 1% was below the age of 20.

**Marital status:** 100 respondents were married, 1 respondent was unmarried and 2 respondents were widowed.

**Family size:** 23% of the respondents had a family with 5 or lesser members, 52% of the respondents had a family with 6 to 10 members, 18% of the respondents had a family with 11 to 15 members and 7% of the respondents had families with more than 15 members.



**A project affected family outside their kutcha house in Kamalanga**

Fifty four percent of the respondents live in kutcha houses and forty six percent live in pakka houses. A kutcha house includes those constructed with mud, bricks, asbestos sheets, etc while a pakka house is constructed with brick and cement.

**Table 3: Community-wise distribution of educational qualification**

Educational Qualification	Total	Community of respondent			
		SC	OBC	General	ST
Std 1–5	35	15	12	3	5
Std 6–10	35	11	20	4	0
+2	4	1	1	1	1
Graduate	2	1	0	1	0
ITI/diploma	2	0	2	0	0
Illiterate	25	8	14	1	2

**Table 2: Community-wise distribution of type of house**

Type of House	Total	Community of respondent			
		SC	OBC	General	ST
Kutcha	56	22	26	3	5
Pakka	47	14	23	7	3

The literacy rate of the sampled population is 76% while the District rate is 79%. Forty two percent of the respondents have attended High School but only 8% of them have completed standard 10.

**Eighty eight percent of the respondents stated that their children attend government schools, three percent stated that their children attended the GMR DAV School and nine percent of the respondents stated that their children attended other schools.** The GMR DAV School set up at Kamalanga became functional from the academic year 2011-12.

**Table 4: Community-wise distribution of schools attended by children of respondents**

School	Total	Community of respondent			
		SC	OBC	General	ST
Government	52	21	22	6	3
GMR DAV	2	0	1	1	0
Other	5	1	4	0	0
Total No of respondents	59	22	27	7	3

\*Only 59 respondents answered questions in this section

## IMPACTS ON WATER DUE TO GKEL

The Environmental Clearance granted by the MoEF states that the 'water requirement (for the project) will be 32,000 m<sup>3</sup>/day and will be sourced from River Brahmani. Water linkage for 30 cusecs was granted on 07 May 2005 and (clearance for the) balance 16.0 cusec is awaited.' The clearance also stipulates that no ground water shall be extracted for the project at any stage, including construction and lean seasons.

The villagers reported that the company extracts ground water from deep bore wells, of approximately 800 feet dug within the plant premises, severely affecting the ground water table. The company has also dug borewells on private land in the villages and transports this water through water tankers to the plant premises. During the course of this survey, the researchers witnessed GKEL's tankers transporting water from a borewell in Maniaveda village. GKEL's plans to sink borewells in Durgapur village have also been mentioned in district records<sup>4</sup>.



Water tanker operated by GKEL parked at Kamalanga

The survey indicates that after the construction of the thermal power plant by GKEL the number of people using public wells and tubewells in the villages has decreased by 15%, thereby increasing reliance on open sources of water. The number of people drawing water from open sources such as ponds and rivers has increased from 25% to 34%.

Table 5: Availability of water from different sources before and after onset of GKEL

Source of water	Before onset of GKEL (percentage)	After onset of GKEL (percentage)
Public Tubewell/borewell	66	51
Private Tubewell/borewell	9	11
Tanker from GKEL	0	4
River & pond	25	34

Sixty percent of the respondents affirm that the quantity of water available in their village has decreased since the construction of the GKEL plant. Eighty three percent of the respondents report that the quantity of water available in the area five years ago was sufficient and seventy seven percent of the respondents report that water in their area is insufficient today. Only four percent of the respondents reported that water was reached to them through tankers provided by GKEL.

<sup>4</sup>Minutes of a meeting between the company and the community at the Office of the Sub-collector dated 13.04.2010



An unused public tubewell (hand pump adjacent to GKEL compound wall

**Forty percent of the respondents affirm that quality of water available in their village has deteriorated since the onset of GKEL in the area.** Eighty eight percent of the respondents report that the quality of water available in the area prior to the construction of GKEL plant was good while only forty eight percent of the respondents report that quality of water available today is good.

Diagram 3: Quantity of Water

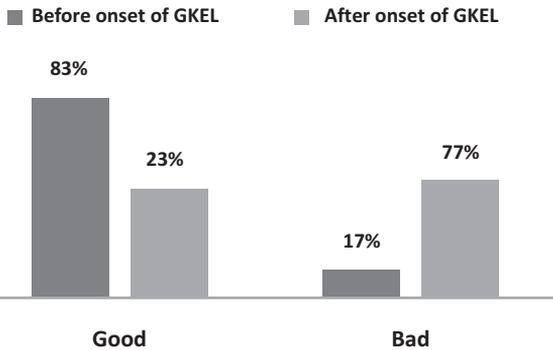
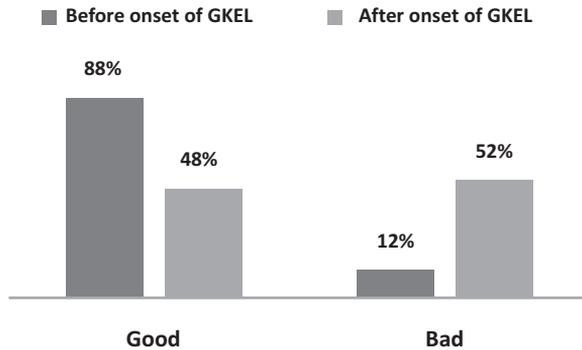


Diagram 3: Quality of Water



This could be for the reason that, with the drying up of public wells and tubewells, reliance on other sources such as open ponds has increased as shown in Table no.5. Open water sources are highly susceptible to pollutants, which has been further affected by the increased vehicular traffic in the area since construction at the site began.

## DIVERSION OF AYACUT<sup>5</sup> LAND

Contradictory to the claim made in the June 2011 Environmental Impact Assessment (EIA) report that the GKEL project did not acquire irrigated land, the project site falls within the Rengali Irrigation Project area. The canal work of this irrigation project was approved by the Planning Commission of India in 1978 and was partially funded by the World Bank and Japan International Cooperation Agency (JBIC). The total planned area to be irrigated by the Rengali left and right canal is 1.14 lakh hectares and 1.25 lakh hectares respectively.

<sup>5</sup>Area served by an irrigation project such as a canal, dam or a tank

The site of the power plant directly cuts across the Kharagprasad branch canal under the Rengali Right Bank canal. Constructed at the cost of Rs.1948.76 lakhs, the Kharagprasad branch canal is one the biggest canals in the circle, accounting for numerous branches, distributaries, minor and sub-minor canals. In February 2007, GKEL proposed to Odisha Industrial Infrastructure Development Corporation (IDCO)<sup>6</sup> 'to change/close off all distributary and other canals passing through the site'. This proposal, if implemented would affect an ayacut of 1230 hectares. Studying the impacts of this proposal, an irrigation department report<sup>7</sup> dated 06 June 2007 recommended against the proposal of realignment of the canal 'in the larger interest of the state and long term agriculture'. **According to the Office of the Chief Engineer & Basin Manager, Dhenkanal, this realignment would adversely affect agriculture in Kamalanga, Budhapank, Senapathi Berena, Mangalpur and Baghabatpur.**

Subsequently, the company made a second altered proposal<sup>8</sup> to the Principal Secretary, Water Resources Department which 'would affect 303 hectares of ayacut land'. The 'in principle' agreement to the proposal was granted by the Water Resource Department in mid 2009, along with transfer of 16.72 acres of land, which was earlier acquired by the irrigation department for laying the canal, in favour of the company.

**Table 6: Loss of ayacut land**

S.No	Name of Canal	Total CCA* in Ha*	Loss of CCA in Ha
1	Barasahi distributary	25.50	7.00
2	Badhialpasi sub-distributary	73.10	73.10
3	Jamupasi distributary	40.90	40.90
4	Senapatiberana distributary	79.55	79.55
5	Manpur distributary	84.30	56.80
6	Manpur distributary – II	50.70	50.70
7	Matiasahi sub-distributary	38.10	24.30
8	Maniabeda sub-distributary	75.00	75.00
9	Bhagamunda sub-distributary	42.20	28.00
	Total	509.35	435.35

\*Culturable Command Area \*Hectares

**It is important to note that the 2008 MoEF's environmental clearance stipulates that 'No Water bodies (including natural drainage system) in the area shall be disturbed due to activities associated with the setting up / operation of the power plant.'**

Issues regarding diversion of ayacut land

- GKEL acquired 455.35 hectares of ayacut land which is under the command area of Rengali Canal.
- GKEL changed the alignment of minor and sub-minor canals and diverted natural drains passing through its site. This is in violation of the condition in the MoEF clearance that, 'No Water bodies, including natural drainage system, in the area shall be disturbed due to activities associated with the setting up / operation of the power plant.'
- GKEL acquired 16.72 acres of land which was an intrinsic part of the Rengali irrigation project from the Water Resource department. This diversion of land, which was originally purchased by the Irrigation Department for public purpose, to a private company is illegal as per the Supreme Court order which states, 'the government cannot change the land use after acquiring land for public purpose.'

<sup>6</sup>Vide its letter GEL/KTPP/IDCO/05/07 dt. 15.02.2007

<sup>7</sup>Report by Er. B.K.Mohanty (M.Tech, IIT - Delhi), Superintending Engineer, Angul Irrigation Circle, Angul

<sup>8</sup>Vide its letter No.HO/P&A-LA-E-4643/06 dt. 23.08.2007

By the company's own admission<sup>9</sup>, the Kurunti distributary has been damaged by construction activity. Also in October 2010<sup>10</sup>, the Collector, Dhenkanal asked GKEL not to use the canal banks for transporting materials as the company's heavy vehicles had damaged a branch canal of Kharagprasad canal. **The villagers allege that the sub-canal system in the area is affected by GKEL's construction activity which has blocked a number of canals. The flow of water in some canals passing through the premises of the plant has completely stopped.**

## LAND ACQUISITION FOR GKEL

Land acquisition for GKEL power project began in 2007. The MoEF clearance for Phase I of the project states that 'the land requirement for the project shall not exceed 1050 acres for all activities / facilities of the power project including colony (45 acres) and ash pond (474 acres)'. The MoEF clearance for phase II (1x350 MW) spells out that no additional land for the expansion is required. The approval from the Department of Energy, Odisha has been granted for acquisition of 915.2 acres of private land. However, GKEL's Monthly Status Report 2009<sup>11</sup> claims that the total land requirement is 1175.76 acres with government land of 145.10 and private land of 1030.66 acres.

S.No	Name of Village	Extent of land to be acquired for GKEL
1	Mangalpur	228.305
2	Kamalanga	566.040
3	Baghabatpur	35.440s
4	Senapathi Berena	82.490
	Total	912.275



**A 2011 picture of GKEL plant site**

Also it is interesting to note that while the MoEF permits a total of 1050 acres of land for the project and the June 2011 Environment Impact Assessment (EIA) claimed that 1038 acres of land was already in the possession of the company, land acquisition for GKEL is ongoing. A letter<sup>12</sup> from the District Office, Dhenkanal to the Chief Secretary, Odisha dated 28 July 2011 mentions that land acquisition of about 56.96 acres for laying of a water pipe line between the company premises and River Brahmani, laying of tower line and laying of approach road is under progress. This data indicates that

the current acquisition could move beyond the permitted extent of 1050 acres, in violation of the MoEF clearance. Also, given that the company's Memorandum of Understanding expired in June 2011, the current acquisition could be termed illegal.

<sup>9</sup>Vide its letter GKEL/Canal/25 to Executive Engineer, Rengali Right Canal Division dt. 27.09.2010

<sup>10</sup>Vide its letter No.14/6//LA

<sup>11</sup>Vide its letter GKEL/BBSR/ENERGY/09-10/139 to Additional secretary, Department of Energy. dt.18.04.2009

<sup>12</sup>Vide its letter No.1246/LA dt. 28.07.2011

Even while dealing with requisition for additional land acquisition, the Collector, Dhenkanal, has written<sup>13</sup> to GKEL on 03 June 2011 stating that lack of accurate information provided by the company and submission of a socio economic survey report inconsistent with the state guidelines<sup>14</sup> has not allowed the state to compile the percentage of land already lost to the GKEL project.

### **New acquisition of land for GKEL**



### **Issues with Public Consultation and Acquisition**

The villagers alleged that the state administration did not hold public consultations on the project and its impacts before the process of land acquisition began. The Odisha State Pollution Control Board records that the public hearing, as per the norms of the Environmental Impact Assessment regulation, was held on 13 August 2007 at the Meeting Hall of the Block office, Odapada, Dhenkanal. Villagers contend that very few of them had known about the public hearing and participated in it. On the demand of the GMR Panchayat Strariya Grasta Khashayti Praja Sangh, a local GKEL affected people's organisation, a meeting was arranged on 16 October 2007 at the Kamaleshwar temple in Kamalanga to clarify issues pertaining to land acquisition for the GKEL project. This meeting was presided by the District Collector, Mr. Jamil Ahmed Khan and attended by about 500 villagers along with top officials from GKEL and the then local Congress MLA, Sudir Kumar Shamal. It was reported to the researchers that no consensus was reached at this meeting.

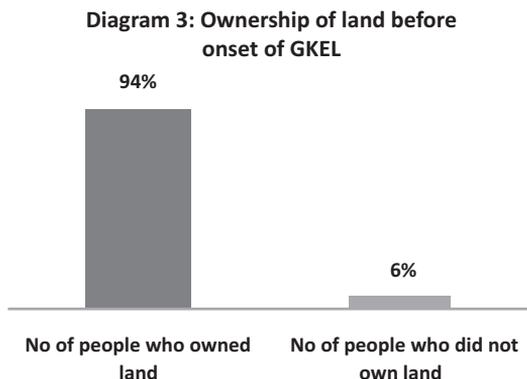
During the focus group discussions, numerous families asserted that they were coerced into parting with their land to the project through middlemen. Villagers claim that they were threatened with losing the entire award money if they did not pick up the cheques immediately. Also, several families lost their land overnight when GKEL constructed its compound wall enclosing land that belonged to them. Villagers of Achalkot, a village with a predominant adivasi (scheduled tribe) population, alleged that standing crop was destroyed by goons employed by GKEL in their village, when families refused to part with their land.

<sup>13</sup>Vide its letter No.908/LA dt. 03.06.2011

<sup>14</sup>Issued by the Revenue & Disaster Management Department

## Extent of Acquisition

The study found that **land was acquired for GKEL from all the 97 respondents (94%) who owned land**. Three of the SC families and three of the OBC families did not own any land. Ninety five of the ninety seven, who owned land, also held title deeds. The survey shows that agriculture was the primary livelihood as 96 out of the 97 respondents, i.e. 93%, used to cultivate on the land that was later acquired for GKEL. While paddy was the main crop, a variety of pulses such as dhaanu, beeri, moong, vegetables such as harat, badam, brinjal, potato, cabbage, yams and fruits such as water melon are cultivated in the area.



The project acquired less than an acre of land from 25% of the families, between 1 and 5 acres of land from 44% of the families, between 6 and 10 acres of land from 10% of the families, between 11 and 15 acres of land from 12% of the families and above 15 acres of land from 6% of the families.

**Table 7: Extent of land acquired for GKEL from each community**

Amount of land acquired	Community of the respondent				Total
	SC	OBC	General	ST	
Less than 1 acre	5	18	0	2	25
1 – 5 acres	18	16	5	5	44
6 – 10 acres	3	5	2	0	10
11 – 15 acres	2	6	3	1	12
Above 15 acres	5	1	0	0	6
Landless labourers	3	3	0	0	6
Total	36	49	10	8	103

A little over 40% of respondents reported that they had parted with irrigated land to the GKEL project countering the company's claim in the Environment Impact Assessment report that only rain fed single crop agricultural land had been acquired.

**Table 8: Type of land acquired from different communities**

Community	Irrigated	Non irrigated	Part Irrigated	NA	Total
SC	12	20	1	3	36
OBC	26	18	2	3	49
General	2	8	0	0	10
ST	3	5	0	0	8
Total	43	51	3	6	103



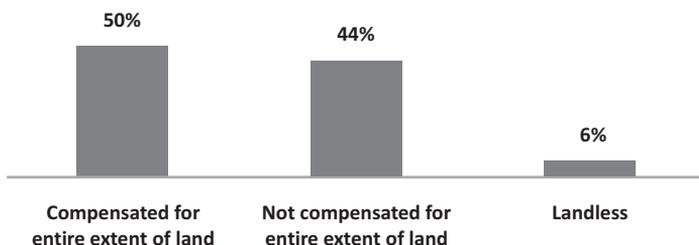
**Irrigated land acquired for the GKEL project**

Another issue that surfaced was that of fourteen homestead land losers; families who owned and cultivated land in the absence of title deeds. The fourteen families complained to district authorities in 2010 that they allowed GKEL to begin work on their land after signing an agreement in 2009 with GKEL for receiving alternative land, permanent employment and proper valuation against the lease agreement. However, until May 2012, the families had not been compensated.

### **Award for Acquired Land**

The award fixed for land acquired for the GKEL project is 3.5 lakhs plus solatium at 30% for an acre of land and 5 lakhs plus solatium at 30% for an acre of land with a house on it. It is odd that the district administration has fixed a common price for land of different types. For example, the statement of mean average sale rate for land in the last 3 years shows that the mean average for agricultural land in Mangalpur is Rs.3,99,638 per acre – almost a lakh higher than the amount paid by GKEL to Mangalpur residents.

**Diagram 6: Compensation award for land acquired**



The survey found that 50% of the respondents were compensated for the entire extent of land lost to GKEL while 44% of the respondents claim that compensation was not paid for the entire extent of land lost by them. The ownership of some parts of land was contested and remained as ‘left-out’ land. Left out land consists of land that falls beneath power lines laid by National Aluminium Company Limited (NALCO) which has not been acquired by GKEL, but has been included within their compound. A letter<sup>15</sup> from the Director, GMR Energy dated 17 April 2007 to IDCO asks that 28.16 acres of land falling under the ‘Tower Line’ not be included within land acquisition and that the company is considering outright purchase of the said strip at prevailing benchmark rate. However, the original owners of such land have neither been compensated by NALCO or by GKEL so far. Errors and differences in title deeds which were left uncorrected before drawing up awards have also allowed small pieces of land belonging to various villagers to be left uncompensated.

<sup>15</sup>Vide letter ref: GEL/KTPP/BLR/IDCO/007/029



**Palm trees chopped down in Kamalanga for GKEL project**

Twenty four percent of the respondents state that their house was on the land that was acquired for GKEL. Seventy eight percent of the respondents lost trees along with their land. The leaves of palm trees were used in building huts and as roofing material while fruits were consumed or sold in the market. Two thirds of the respondents used parts of the tree, leaves, fruits, and seeds for domestic purposes while one-tenth also made monetary gains by sale of the same. People report that a medium to big tree provided

an average income of Rs.500 every year. While most of the respondents claimed that they were not compensated for trees they owned, an ex-GKEL contractor clarified that only families who were aware of the tree auditing process by the Land Acquisition Office could benefit a proper assessment in their case. Therefore most families, unaware of the process, were not compensated properly for trees.

### **Current Land Ownership**

The percentage of respondents who own land has reduced from 94% to 71% owing to acquisition of land for GKEL. **The number of landless amongst the respondents has increased from 6% to 29%.** That the local economy and social fabric is undergoing a transformation is evident from the fact that even though 71% of the respondents own land presently, only 43% of them continue to cultivate. Change in labour trends and aspirations of people, lack of facilitating resources such as water, cattle and adequate land along with the existing burden of crop failure and inadequate governmental aid for farming has caused agriculture to be viewed as unsustainable. Experiences from the surrounding areas, where it has become impossible for farmers to cultivate amid the pollution from coal-fired thermal power plants and mining have also caused villagers in the GKEL project affected area to lower their dependence on agriculture.

**Table 9: Current ownership of land**

<b>Extent of land</b>	<b>Frequency</b>	<b>Percentage</b>
Less than 1 acre	38	37
1–5 acres	30	29
6 and more	5	5
No land	30	29
Total	103	100

**While 29% of the respondents do not own any land today, 37% own less than an acre of land showing that ownership of land has decreased. Only 34% of the respondents own more than one acre of land.**

## DISCREPANCIES IN THE EIA REPORT

Perusal of various documents pertaining to the project has exposed inconsistency in information provided by the company. The findings of this study indicate that the EIA report<sup>16</sup> submitted by GKEL is of poor quality with several of the claims, made by the company in the report, being untrue.

Listed below are some of the gaps identified.

Claims made in the EIA	Stipulation as per MoEF's EC	Contradiction
All facilities for phase I & II will be contained within 1038.5 acres of land.	Total land requirement shall not exceed 1050 acres for all facilities of the project'.	GKEL's own Status Report claims that the total land requirement for the project is 1175.76 acres.
No irrigated or double crop agricultural land was acquired for the project.		More than 40% of the respondents (of the survey) stated that they practiced double-crop agriculture on land acquired for GKEL. Also, hundreds of hectares of Rengali Irrigation project land have been diverted to the project!
Water for the project will be sourced from River Brahmani.	No ground water shall be extracted for the project at any stage.	GKEL extracts water through bore wells dug both within and outside of the plant premise.
Conducted socio-economic -environmental survey of project affected area which has been approved by the Government of Orissa.		The Collector, Dhenkanal, has stated in writing that the socio economic survey report submitted by GKEL is inconsistent with state guidelines issued by Revenue & Disaster Management Department and that submission of such a report has not allowed the state to compile the percentage of land lost to GKEL.

## CULTIVATION AND LABOUR

In the June 2011 EIA report, the existing land use pattern of the project site stated that no double crop agricultural land was acquired and 83 acres of (rain fed) single crop agricultural land was acquired. However, the survey finds that 40% of the respondents did double-crop cultivation and 54% did single crop cultivation. Two-thirds of the respondents did seasonal cultivation and one-third cultivated year round. Sixty three percent of the respondents used the agricultural produce for domestic consumption and thirty percent also sold part of the agricultural produce after domestic use.

Diagram 7: Pattern of cultivation

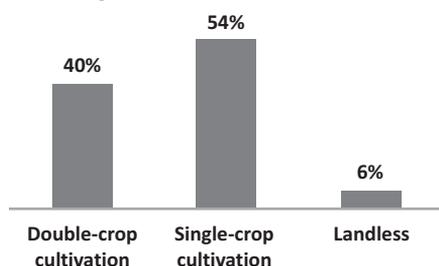
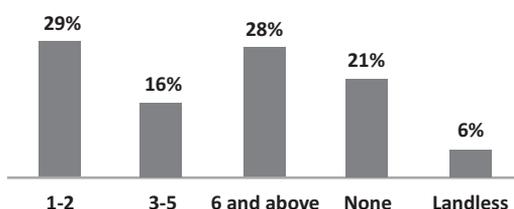


Diagram 8: Number of family members engaged on own farms



Agriculture being the primary source of livelihood, atleast one member of 73% of the families and 6 or more members of 28% of the families surveyed used to engage in agricultural work on their farms.

<sup>16</sup>It is in similar context that the National Green Tribunal (NGT) asked the Ministry of Environment and Forests (MoEF) in June 2012 to "evolve a mechanism to check the correctness or otherwise of draft EIAs (submitted by project proponents)".

## Women and Labour

Women, especially from SC, ST and OBC families, played an important role in the family contributing considerably to cultivation on family farms. Women from the same communities also constituted a significant percentage of farm labour. However in the present situation, due to lack of land and resources to continue cultivation, women have been limited to home duties. Apart from a very small percentage which has been engaged in CSR activities such as tuition and tailoring, the others have neither been assured nor provided alternative employment.

## Hired Farm Labour

Sixty four percent of the respondents hired farm workers, contributing to local employment. Every agricultural season, forty seven percent of the respondents stated that they hired between 5 and 15 farm workers, twelve percent hired between 16 and 45 farm workers and six percent hired more than 50 farm workers. The respondents state that they hired farm labour for a month or lesser (18%), for one to two months (37%) and for more than 2 months (10%). Forty eight percent of the respondents hired daily wage labourers from within their village, 12% hired from nearby villages while 4% hired labourers from both within and outside. The Scheduled communities constituted the major share of farm labour, with over 25% from the dalit community alone.

## ACCESS TO FORESTS AND FOREST RIGHTS ACT 2006

Forest land of 78.5 acres, located centrally in Kamalanga village, has been diverted to the GKEL project. While the stage I clearance was granted for the project on 29 December 2008, the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006 was in force. The Act demands that both individual and community rights over forest land be settled. GKEL's acquisition of 78.5 acres of forest land without settling the rights of the community is a violation of the Act.

Before GKEL acquired the forest land, 67% of the respondents had access to forests. Majority of them (64%) used the forest produce for domestic consumption. **Currently, not even one of the 103 respondents have access to any forest.** The villagers are now dependent on the market for what was traditionally available to them in the forests. Households have shifted away from firewood to coal for cooking stoves. This has increased the expenditure towards food preparation as every bag of coal, which roughly lasts a family of 10 members for 30 days, costs Rs.600. Forest land of 78.27 acres has been made available at Budhiparbata, Odapada for compensatory afforestation.

## LIVESTOCK AND GRAZING LAND

GKEL acquired grazing lands belonging to both Kamalanga and Manpur village. The grazing land for the revenue village of Kamalanga was located centrally on a 60 acre plot of land locally referred to as Sattiya Maniya. This entire piece of land was acquired by GKEL and until November 2011, no compensatory land was allocated for the 7 hamlets of Kamalanga. It is reported that a 10 acre plot of undeveloped land has been marked as alternate grazing land along the River Brahmani, 5 kms away from Sattiya Maniya. GKEL has also constructed a pump house over this piece of land. The village of Manpur received compensatory grazing land within close distance of the village. However, this has not served its purpose as the land is undeveloped and unsuitable for grazing.

The survey finds that the ownership of livestock has reduced drastically since acquisition of land for GKEL in the villages. Lack of grazing land, lack of use for cattle without agriculture and lack of space for cattle sheds have caused 83% of the respondents to sell all or part of their livestock in the last four years. Thirty percent of the respondents do not own any cattle currently.

**Table 10: Reasons for selling cattle**

Reason for selling cattle	Frequency	Percentage
No grazing land	32	31
No use for cattle in agriculture	26	25
No space for cattle sheds (no lands)	6	6
Combination of all three reasons	19	18
Financial needs	2	2
NA	18	18
Total	103	100



**Cattle stray into GKEL premises in search of fodder**

For lack of other grazing lands, villagers in Kamalanga continued to use Sattiya Maniya for grazing until the compound wall was constructed around the plant. Villagers reported injury and death of a number of cattle, after being entangled in the barbed wire fence around the plant. **Seventy four percent of the respondents state that the village grazing lands were taken over by GKEL and sixty eight percent of the respondents state that there are no grazing lands available at present.** Livestock in the area included cows, buffaloes, oxen, goats and hens.

## **IMPACTS OF INCREASED VEHICULAR TRAFFIC**

The villagers reported that the heavy vehicles used by GKEL have damaged public roads, rendered roads unsafe for both adults and children, and caused heavy and toxic air pollution. The heavy vehicular traffic between the company premises at Mangalpur and the NH55 at Kontamania has damaged the Revenue department road. In a meeting convened by the Additional District Magistrate between GKEL's management and affected villagers on 20 April 2011, it was concluded that vehicles for industrial activity be restricted between 8 pm and 6 am. GKEL was asked to prioritise repairing and widening of the roads. The villagers allege that GKEL's heavy vehicles continue to use the road during the day and that the condition of the road is deteriorating in the absence of repair work. A 2007 study on air pollution in Angul-Thalcher reported that frequent movement of vehicles in the industrialised area lead to significant air pollution load.



**Village roads and connective bridges damaged by heavy vehicles operated by GKEL**

## IMPACTS OF BLASTING

The blasting activity at the construction site of the GKEL project has affected houses in the surrounding villages. Those most affected due to blasting are in the villages of Maniaveda, Achalkot, Durgapur, Bagha Munda and Kamalanga. The blasting has also severely affected the Maniaveda Primary School. The three room school is located 50 feet away from the company premises. The blasting activity at GKEL which began in 2008 has caused severe cracks in the building, especially in the ceilings. "It is not safe anymore to run a school in the premises. During rains, 2 out of 3 rooms are unusable due to heavy leakage through the large cracks. And the blasting is so loud that we cannot conduct our classes" reported Jali Jena, Principal of the school.

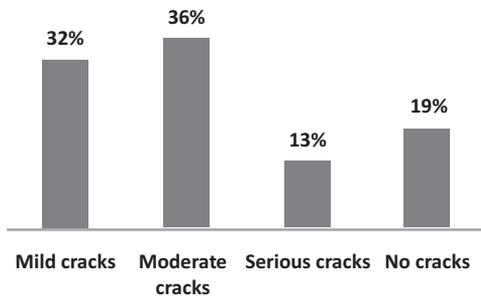


**Concrete house in Kamalanga severely damaged by blasting**



**A resident shows a wall collapsed due to blasting in her kutchha house in Kamalanga**

**Diagram 9: Effects of blasting on houses**



**Eighty one percent of the respondents reported that their houses were damaged.** Thirty two percent of the respondents reported that the cracks on walls, ceilings and doors were mild, 36% reported moderate cracks and 13% reported severe cracks.

## EMPLOYMENT WITH GKEL

The villagers reported that employment with the company was promised for one member of every family which gave land for the project. On failure to do the same the villagers, faced with lack of income, constituted a committee with representatives from 9 wards of Kamalanga. The committee, represented by nine members, met with the district officials and company management with a demand that GKEL provide employment to one member from every family who lost land. After the first set of talks, the committee became fractioned. The villagers alleged that the committee was purposely broken and that seven out of nine representatives had been bought over by the company. The seven members signed an

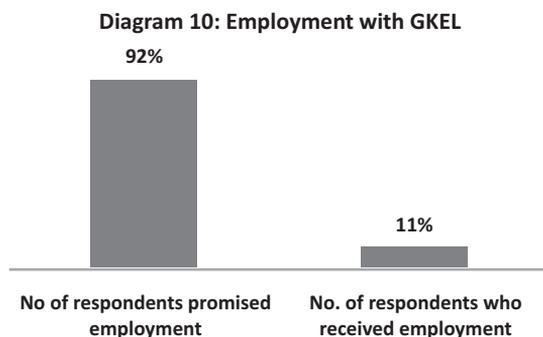
agreement with the Sub-Collector and GKEL agreeing for 30 jobs per ward, i.e., 270 jobs in 9 wards. Similar agreements were reached in the villages of Mangalpur and Manpur. Two hundred and seventy jobs were provided to the villagers of Kamalanga through sub-contractors. Out of the 270 who were given work through contractors at GKEL, only half continue to work at the company. The remaining workers have quit working as the wages paid by GKEL through the contractors are low - Rs.90 and Rs.120 for 10 to 12 hours of work.

A 2010 monthly status report put the total number of unskilled & semi-skilled labourers hired by GKEL at 752. Villagers affirmed that GKEL sources a large part of its workforce from outside the area. A Labour camp/colony has been constructed in Durgapur village for the migrant workers who are employed to do the construction work at the site.

The proceedings of the Rehabilitation and Periphery Development Advisory Committee (RPDAC) dated 07 June 2010 at the Dhenkanal Collectorate state that the company had signed a supplementary MoU for providing employment to the locals in accordance with the guidelines issued by the Government which are as follows.

Unskilled and semi skilled	A minimum of 90% of total requirement from the local people
Skilled	A minimum of 60% of total requirement from the local people
Supervisory & managerial	A minimum of 30% of total requirement from the local people
Senior executives	Open market based on merit

The minutes of the meeting state that the Managing Director, GKEL, had assured the Committee that the project was in strict adherence to the said guidelines and that labour was sourced primarily from among the Project Affected People.



The survey found that prior to land acquisition for GKEL, 57% of the respondents depended only on agriculture and 37% depended on agriculture along with other income sources. Seven percent of the respondents depended on daily wage. **GKEL had promised permanent employment, at the time of land acquisition to 92% of the respondents while only 11% have been provided employment under sub-contracts.**

## STATE REPRESSION

The first Rehabilitation and Periphery Development Advisory Committees' (RPDAC) meeting was arranged for at the Collectorate on 07 June 2010. It was attended by Revenue Divisional Commission, the District Collector, Managing Director - GKEL, local Member of Legislative Assembly (MLA) and Member of Parliament (MP), Zilla Parishad President, Block President - Odapada, along with representatives from Non-governmental Organisations (NGO) & Self Help Groups (SHG). The community was represented by one villager from Kamalanga and one from Mangalpur villager.

The villagers reported that there was a widespread fear that neither one of the two village representatives would sufficiently represent the demands and needs of the community. Thousands of villagers from all the affected villages gathered at the District Collectorate on the day of the meeting and asked to participate. The villagers allege that apart from shutting the gates on them, they were not allowed to sit in the shade inside the Collectorate or drink water from the Collectorate. Being a hot June day in Odisha, struck by intense dehydration, many of the villagers fainted. The villagers returned to their home by the evening. On the way back to the villages, some of the vans carrying villagers made a detour and headed towards the company premises.

A resident of Maniaveda said, “There were many amongst us who had been paid by the company to instigate others. We were unaware of this situation. Some villagers who felt completely dejected, on instigation by the hooligans, decided to take on GKEL. About 4 to 5 buses diverted on-route to the villages and went into the company premises. The angry mob destroyed company property by pelting stones. Surprisingly, the Closed Circuit Television (CCTV) cameras were not functioning on this day”.

Following this, the police along with the contractors of GKEL filed a case against 500 un-named villagers. The same day at around 12 midnight, the police raided Achalkot, conducting arbitrary searches and forcibly entering houses where people were sleeping. The police picked up those who came in sight along with some ‘noted trouble makers’. The police raids continued for the next three days repeating the same acts in all the affected villages. Sensing trouble after the first attacks, the villagers left their homes and ran away to nearby towns, forests and river banks. Over the three-day raid, 48 persons were arrested and a case was registered on 6 more persons who were ‘absconding’. The 48 persons, including 4 women, were beaten in the police station before being remanded. The case is on-going.

**The survey shows that following the police raids on 07 June 2010, 70% of the respondents had fled their homes and run away to the safety of river beds, forests, and houses of relatives.**

**Table 11: Community-wise distribution of respondents who fled their homes on 07 June 2010**

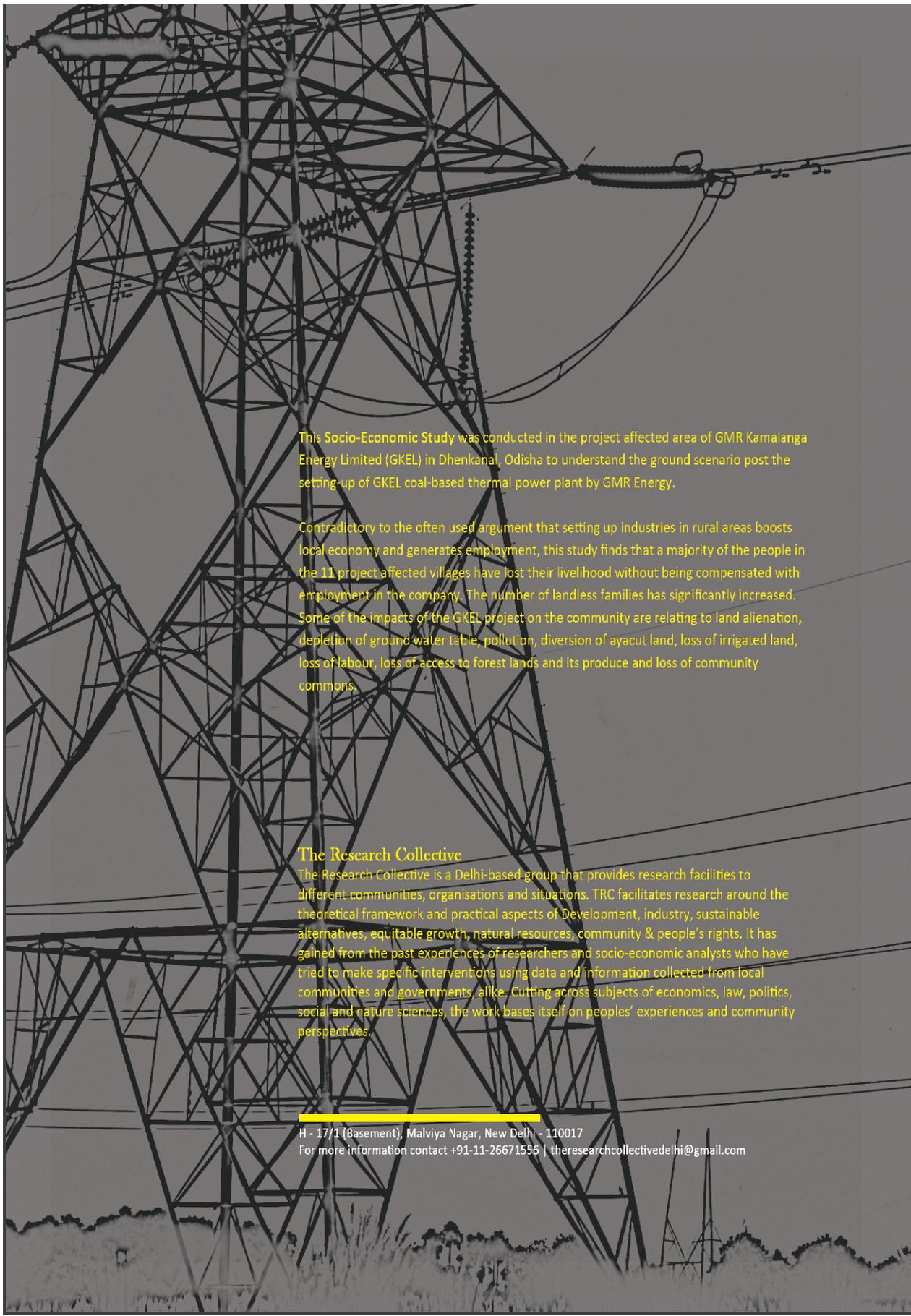
Community of respondent	Respondents who fled homes on 07 June 2010		Total
	Yes	No	
SC	29	7	36
ST	8	0	8
OBC	33	16	49
General	2	8	10
Total	72	31	103

On 07 June 2010, 80% of SC respondents fled their home, 100% of ST respondents fled their homes, 67% of OBC respondents fled their homes and 20% of General community respondents fled their homes. Police cases in connection with the 07 June 2010 incident have been registered against 23% of the respondents or a member of their family. Villagers reported that **immediately after the 3 day incident of police harassment, when most villagers had run away from their homes, trees from the marked lands were cut down and the land was levelled using bull-dozers.** Within three months much of the ground work had been completed.

Enquiry into the 07 June 2010 incident has also revealed a veiled nexus between GKEL and the local Police force. Two of the police officers from the Bhushan Police Station, Dhenkanal, who played an important role in the raid and arrest of villagers in June 2010, are currently employed with the company. The former Assistant Sub-Inspector (ASI), Sur Pratap Mishra, is the Chief Security Officer while former Inspector In-charge (IIC), Prahalad Nayak, is a Security Officer at GKEL.

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This Socio-Economic Study was conducted in the project affected area of GMR Kamalanga Energy Limited (GKEL) in Dhenkanal, Odisha to understand the ground scenario post the setting-up of GKEL coal-based thermal power plant by GMR Energy.

Contradictory to the often used argument that setting up industries in rural areas boosts local economy and generates employment, this study finds that a majority of the people in the 11 project affected villages have lost their livelihood without being compensated with employment in the company. The number of landless families has significantly increased. Some of the impacts of the GKEL project on the community are relating to land alienation, depletion of ground water table, pollution, diversion of ayacut land, loss of irrigated land, loss of labour, loss of access to forest lands and its produce and loss of community commons.

### The Research Collective

The Research Collective is a Delhi-based group that provides research facilities to different communities, organisations and situations. TRC facilitates research around the theoretical framework and practical aspects of Development, industry, sustainable alternatives, equitable growth, natural resources, community & people's rights. It has gained from the past experiences of researchers and socio-economic analysts who have tried to make specific interventions using data and information collected from local communities and governments, alike. Cutting across subjects of economics, law, politics, social and nature sciences, the work bases itself on peoples' experiences and community perspectives.

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