


Land Procurement Alternate Model

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Land Procurement - Alternate Models

Background

- ❑ Coal Occurrence Site Specific and Land an input to coal production.
- ❑ RFCTLAAR ACT 2013 mandated compensation & RR cost increased by 14-16 % of initial Capital Outlay.
- ❑ Land cost in CPT enhanced from 5-10% to 30-40%
- ❑ Delayed land procurement delays project start - escalates project cost.
- ❑ Demand for permanent job - each family member.

Situation Analysis

- ❑ Non-displacing land acquisition (part land acquired)
 - No displacement but compensation and RR benefits paid for part land acquired – not entitled for employment - villagers demanding deemed land acquisition to claim employment (Odisha).
- ❑ Employment demand being linked to Per Unit of land acquired (say one employment per 2 acre) – despite exhausting all employable family members, families still want right to all (remaining) such employment and trade this (balance) right.

Production Loss due to land (non)-procurement

Area in Ha; Production in MT						
Subs.	2017-18		2018-19		2019-20 (Till Dec)	
	Denied Phy. Poss	Prodn Loss	Denied Phy. Poss	Prodn Loss	Denied Phy. Poss	Prodn Loss
ECL	10.04	2.64	8	2.07	7.5	2
BCCL	26.3	7.1	26.8	7.5	20.4	5.7
CCL	0	0	0	0	50	3
NCL	0	0	0	0	79	0
WCL	0	0	0	0	0	0
SECL	126.1	5.68	192.5	6.97	291.8	19
MCL	200	10	200	16	264.7	21.6
Total	362.4	25.42	427.3	32.5	713.3	51.3

Physical Possession denied even after providing R&R benefits over & above Schedule I, II, III of RFCTLARR Act 2013/Order2015

Situation Analysis....

- ❑ Local level agitations with all kinds of demands and frequent work disruptions common.
- ❑ Agitation/Work disruption - RR based employee of no help; instead participate in agitation.
- ❑ In general - Higher efficiency in contract mode than departmental (with some exceptions).
- ❑ Actual employment offered far exceeds sustainable ratio (per mine 150-170 employees - outsourcing).

Situation Analysis....

- ☐ Time lag between employment becoming due vis-à-vis actual event.
- ☐ Age of employment seekers varies greatly.
- ☐ High cost/gestation in Training & Capacity Building for fresh RR based employees – due to absence of prior-skilling and prior-training.

Land-Use and Land-Use Change

- ❑ Land under Forests and Agricultural shrinking – no replacement. Land-Use Change max from these two categories. Increased Yield based Land productivity restoration degrades remaining agri-land and brings other associated problems.
- ❑ Large chunks of mined lands pending for reclamation and restoration – no monitoring, no fear, no driver, no incentive and no initiative.
- ❑ Moratorium on land development and transaction once acquisition starts.

Land Management issues

- ☐ No provision for returning acquired land even when no longer required – a disincentive to reclamation.
- ☐ No management of huge tracts of lands unutilized (both acquired but not used, and de-coaled).
- ☐ Fresh/further unrest/ work disruption unaffordable. Already enough.
- ☐ Frequent and permanent displacement – can it be avoided to extent possible?

Land Management issues.....

- ❑ Coal as resource has limited future, less than total service period of a fresh employee.
- ❑ Land resource – limited, scarce, highly emotive and highly politicized.
- ❑ **Requires re-think on land procurement** (without creating unrest).

Land and R&R status of CIL



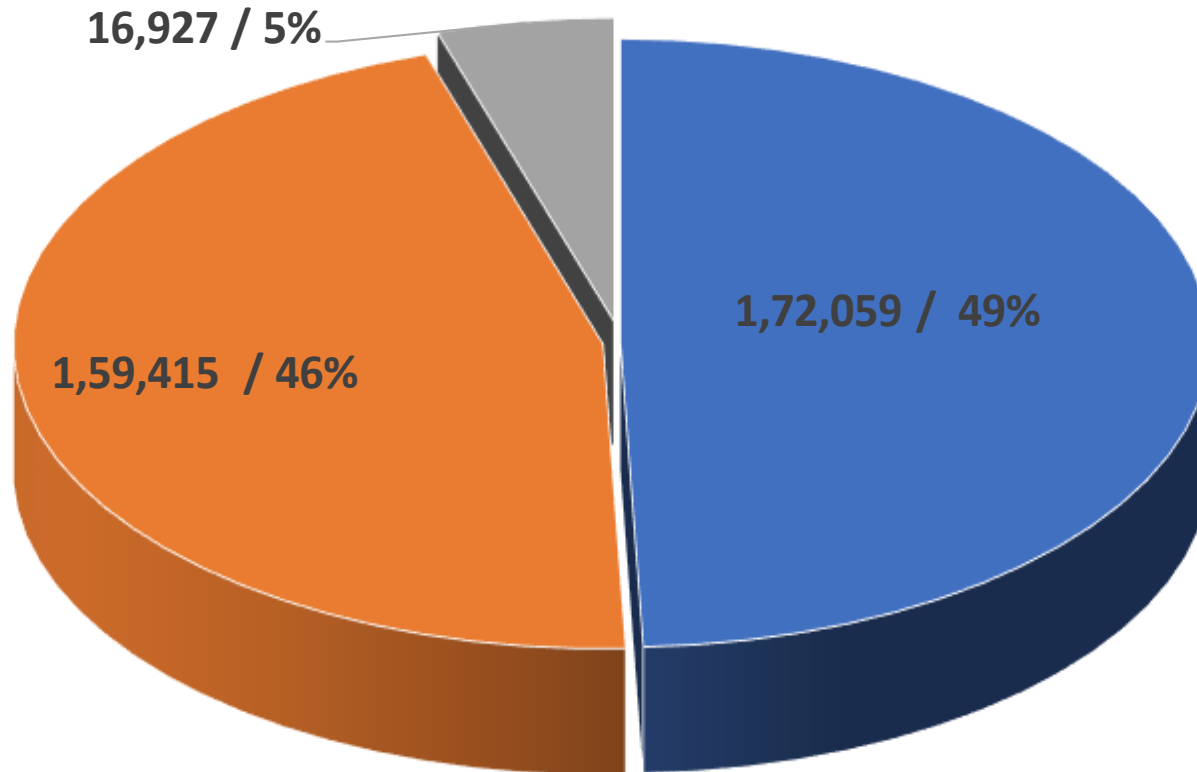
Land Acquired/Possessed by CIL & its Subsidiaries

(up to 31.12.2019)

(Area in Ha.)

Period	Status	Area	Diff (area & %)
PRE-NATIONALISATION	Acqrd	60,165	17,350 ha
	Possd	42,815	71.16%
POST NATIONALISATION	Acqrd	2,10,603	87,524 ha
	Possd	1,23,079	58.44%
TOTAL LAND	Acqrd	2,70,768	1,04,874 ha
	Possd	1,65,894	61.27%
Employment given for land			75,034
Comes to 1 Employment per 5.5 acre			

Mining Right/ Lease



- Mining Right under CBA (A&D) Act 1957
- Mining Lease under Nationalisation Act
- Mining Lease Obtained under MMDR Act / MC Rule

Year Wise Land Requirement CIL

(1 BT Production Plan)

Area in Ha.

Year	Forest	Govt.	Tenancy	TOTAL
2020-21	4,292	962	4,056	9,311
2021-22	5,418	737	5,609	11,765
2022-23	4,079	548	3,845	8,473
2023-24	2,797	480	4,444	7,722
Total	16,587	2,729	17,955	37,272
Emp. slots @1 Job/2 acre Tenncy land= No.				22,174
PAF No.				42,537
Employable Adults/PAF (Conservative)				2
Likely quantum of emp. demand				85,074
Challenge foreseeable!!!				

R&R Requirement (1 BT Program)

2020-21	No. of villages	81
	No. of PAFs	8,765
2021-22	No. of villages	80
	No. of PAFs	11,293
2022-23	No. of villages	73
	No. of PAFs	11,389
2023-24	No. of villages	63
	No. of PAFs	11,090
Total in 4 yrs	No. of villages	297
	No. of PAFs	42,537

Existing Mode of Land Acquisition

Rights required for coal mining

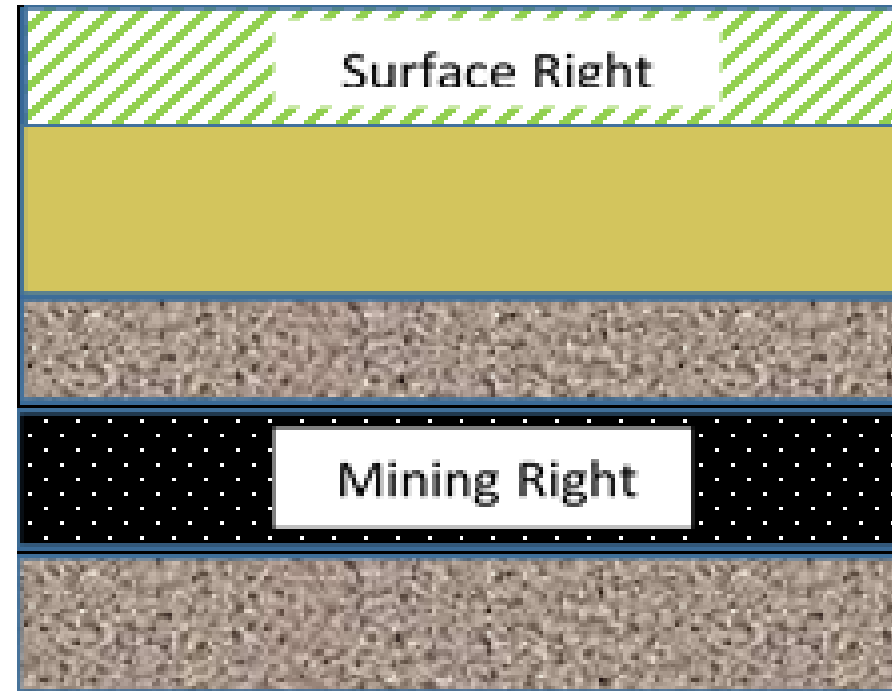
Surface Rights (Land)

- CMN Act, 1973
- CCMN Act, 1972
- L.A. Act, 1894 (now RFCTLARRA Act, 2013)
- CBA (A&D) Act, 1957
- State Code
- Direct Purchase
- Long term transfer/lease of Govt. land.
- Forestland - FC Act 1980

*Land includes, Tenancy Land, State Govt Land, Forest Land

Mining Rights (Sub soil)

- Coal Mines Nationalisation Act (Coking & Non-coking)
- MMDR Act
- CBA (A&D), 1957



Land Procurement Models

Options for land procurement

➤ Surface Right of **tenancy land**

- ☐ Acquisition – Most used
- ☐ Out right purchase / Direct Purchase – Seldom used
- ☐ Land Lease – Rent – Not used

➤ Surface right of **Govt. land**

- ☐ Long term lease
- ☐ Perpetual lease
- ☐ Forestland use change and diversion

Alternatives Available

- Model adopted by RWE Power, Germany: Re-Cultivation of Mined out Land and Return to original owners (successors)
- Annuity
- Revenue/Profit Sharing – Direct stake in Mine
- Local Area Development Fund, HP
- Commutation of land lease rent
- Periodic increase in lease rent

Lease on land rent basis

- Lease on a predetermined rent for required period
 - Periodic Rent Revision
- Return - duly reclaimed
- Feasible for non-residential areas
- For residential areas - alternate residential facility with all amenities
- Land rent – less than purchase/acquisition cost

Local Area Development Fund (LADF) Himachal Pradesh

Local Area Development Fund (LADF) model of Himachal Pradesh

- When CSR wasn't Mandatory – HP introduced LADF
- Applicable on Hydro-Electric Projects
- HP Hydro Power Policy, 2006 – Construction Phase - contribution to LADF –
 - 1.5% of project cost (above 5 MW)
 - 1% of project cost (up to 5 MW)
- In 2011, GoHP issued new LADF guidelines – applicable to Operation Phase also.
- Made provision for 1% free power component to LADF – Operation Phase – about 40 years

HP LADF model....

- Allotted amount direct cash transfer to all families of Project Affected Area.
 - 85% equally among the long term residents of GP
 - 15% to BPL families in PAA, over and above 85%.
- Family as standing in Panchayat Parivar Register (PPR) on cut-off date (land acquisition notice issued only when papers accompanied by a certified copy of PPR); Bank A/C details also obtained.
- PP entitled to claim/deduct damages (from Op. Phase LADF) for obstruction of work by local people during construction phase of project.

Model adopted by RWE Power, Germany: Re-Cultivation of Mined out Land

Cross Section (SW - NE) Through the Lower Rhine Basin

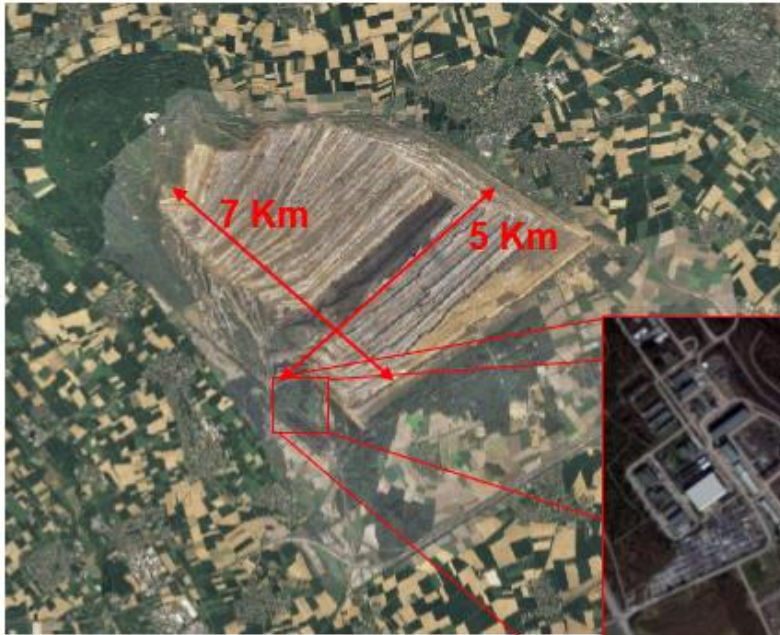


Schematic - Typical continuous RWE Mine in soft rock conditions



Model adopted by RWE Power, Germany: Re-Cultivation of Mined out Land

Example: The Hambach Opencast Mine Key Figures



Coal Production: 40 Mt/a
OB Production: 250 Mbcm/a
W:C Ratio: 6,2 : 1
Personnel: 1480 FTE
Shift structure: 3Shifts / 8h



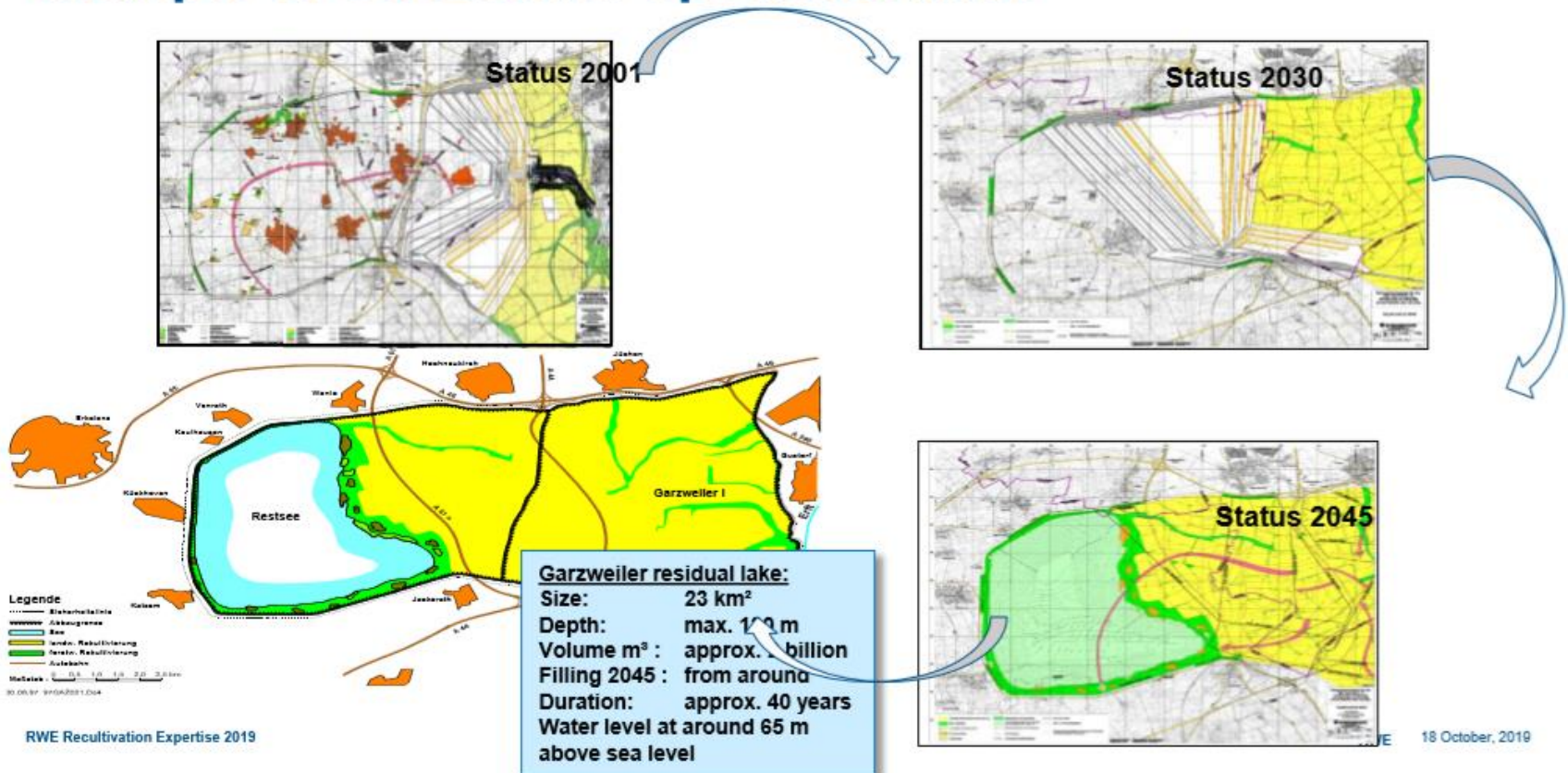
Model adopted by RWE Power, Germany: Re-Cultivation of Mined out Land

Reclamation



Model adopted by RWE Power, Germany: Re-Cultivation of Mined out Land

Opencast mine planning from start to finish example of Garzweiler opencast mine



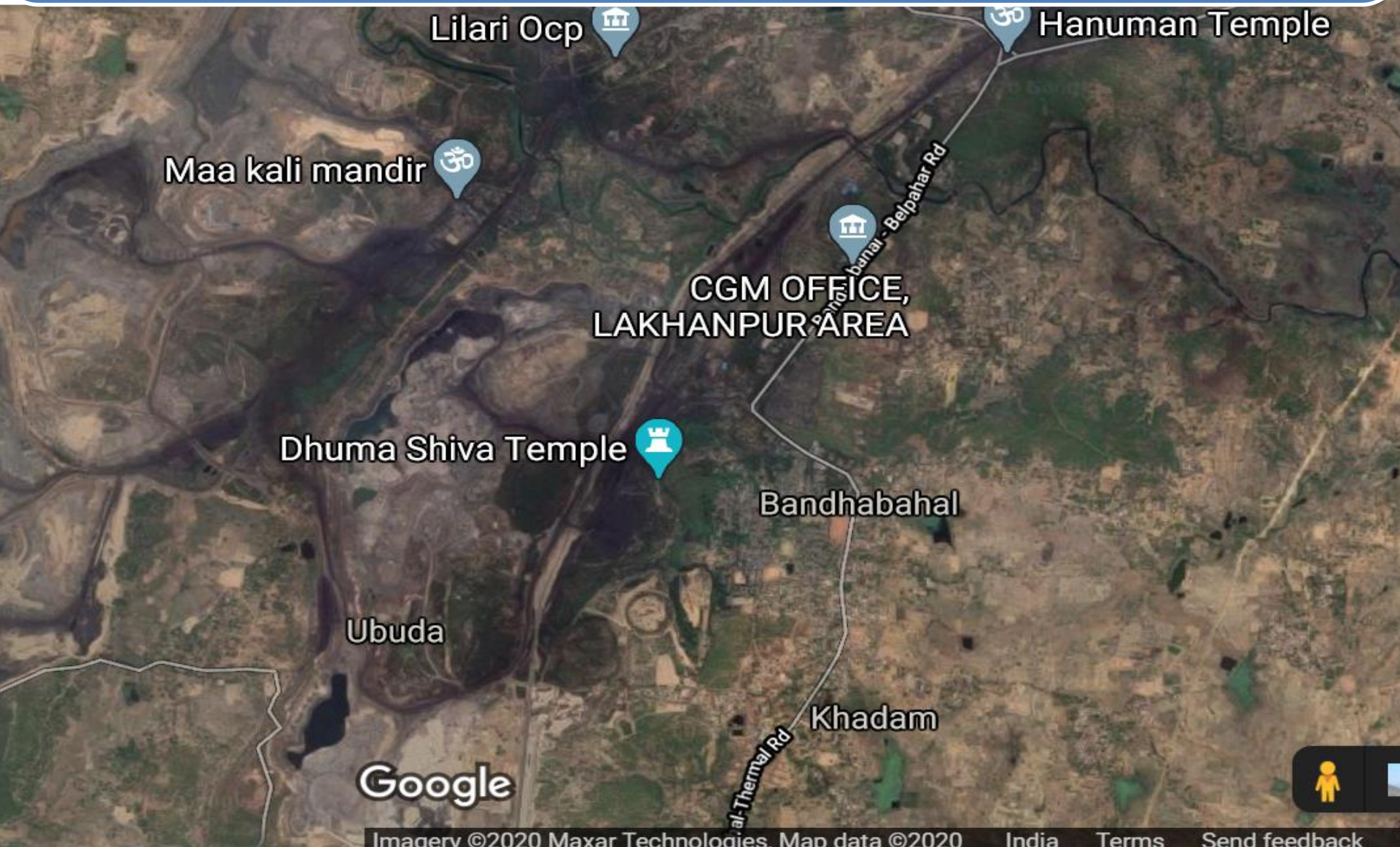
Model adopted by RWE Power, Germany: Re-Cultivation of Mined out Land

- Recording of Pre-mining Condition: involving Govt. agency;
- During mining operation topsoil stacked separately;
- Spreading of OB & topsoil in de-coaled area in uniform compact layers;
- Efforts to gain original fertility of land through farming – 7 to 10 yrs
- Engagement of Land Oustees – temporarily in horticulture jobs at project;

RWE Power, Germany Model....

- Restoration process completes only when chemical composition of soil and surface topography attained the level of pre-mining condition
- Land owners resettled back post-restoration: resulting in no change in social/demographic structure of the village;
- **Right on the land never changes in the process**

Way Forward – Alternate Model Proposed



Alternate Model Proposed

Best mix of many available options

- Necessary legal framework to support the model, if not available, shall be created.
- Typically a 1 MT project with strike length of 2 kM advances 150m to 200m every year.
- 8-10 years to de-coal, move mine front safely away.
- In some cases, duration may be more, where land is required for haul road and mine infrastructure.
- Land duly reclaimed/restored returned after de-coaling.
- Date to return land, recorded prior to possession.

New Model - Way Forward....

- Recording of pre-mining surface topography, soil composition, soil fertility (crop yield per unit area) through Govt. Machinery.
- Compensation for the period of use to be paid in some form – Leasehold/lease-rent/simple rental basis (legal provisions may be required).
- Payment for Land on monthly/annual basis – commutation option to be made available.
- Periodic revision of rent as per land revenue practice/code of the State.

New Model - Way Forward....

- **Creating Direct stake of PAFs in Coal Mine through Revenue Sharing (in % terms) -**
 - ✓ only from concerned Mine's operation.
 - ✓ as DBT to PAFs' account.
 - ✓ for life of mine.
- Revenue Share amount: 10% of Mine revenue.
- Obstruction to work by local people to result in proportionate loss of revenue share.
- No employment against land procurement.
- If employed, only Land Rent i/c upfront payment.

New Model - Way Forward....

- Optional engagement of PAF in horticulture/farming – farming skill retained, sustaining farm produce availability in area.
- PAFs may start pilot framing for reclaiming/restoring de-coaled and backfilled void;
- For such farming an amount equal to salary of Cat-I (of CIL) payable for a period of 4 years.
- Additional RR benefits may be extended viz. facility in project hospitals, schools, Skill development, vocational training etc.
- Reclamation/restoration integral to land procurement

New Model - Way Forward....

Reclamation/restoration Process

- Mining Company to Spread OB & topsoil in de-coaled area in uniform compact layers.
- Restoration completes only when chemical composition of soil and surface topography restores to pre-mining level.
- Efforts to gain the original fertility of land through mix of pilot and natural farming in 8-10 years.
- To overcome OB swell factor, sand production plan (Sand Mining framework - Ministry of Mines) may be introduced.
- State Govts. may restrict riverbed mining in favor of lifting of sand from OB.

Win-Win for ALL

For Coal Companies

- Reduced Initial Capital Outlay & cost of production
- Reduced Local level agitations/work disruptions
- Land owners interest in smooth functioning of Mine
- No obligation for permanent employment - Reduced overhead cost
- Obligated to restore/reclaim, return de-coaled land
- Reduced T&CB cost from employing untrained land losers
- No issue of encroachment over un-utilized land

For Land Owners

- Transformation from **employee to stake-owner**
- No loss of land or social fabric
- Social status improves or at least remains intact
- Planned, modern Residential Resettlement Area
- Direct Stake of land owners; they become shareholder & receive amount linked to revenue collection from mine.
- Will have Money, spare time and opportunity to start business, pursue alternate vocation, allied agricultural activities, improving farming

For Land Owners.....

➤ Secured earning:

- Upfront Payment: 20% of the Land Cost
- Remaining 80% in form of Annuity
- Revenue share DBT @ 10 % of mine revenue
- Payment for pilot framing @ Rs. 15,000/- per month

➤ Land ownership never changes: Intact village Social structure; Emotional connect to land & surroundings remains protected.

➤ Post-reclamation, land returned to land owners.

For Land Owners....

- Possibility of business proliferation through the commuted income; in form of share based income in CHP (creating local stake in CHP will see road transport diminish); other mining & allied activities;
- Substantial enhancement in rural income: may become an important driver for local economy;
- Farming resumes on return of land, no change of profession. Middle aged farmers unable to re-skill themselves for a new profession;

New Model – Cost Benefit Analysis

New Model: Cost Benefit: Assumptions

Dhuptala OC of WCL

Production Capacity	:	2.50 Mty
Stripping Ratio	:	5.34 m ³ /t
Sale Price	:	1200 Rs./t
Life	:	21 years (2 yrs of contrn. & 19 yrs of prodn.)
Land	:	825 ha tenancy land + 50 ha Govt. land
Employment against land acquisition	:	1018 (@ 1 job/2 acre land)
Manpower required in the Project	:	174

Cost Benefit: Assumptions

Alternative - I	Alternative - II
Cost of Tenancy Land incl. compen. = Rs. 369.73 Cr.	Upfront Payment 20% of Land Cost = Rs. 73.94 Cr.
Cost of Govt. Land and Village Rehabilitation = Rs. 174.28 Cr	Cost of Govt. Land and Village Rehabilitation = Rs. 174.28 Cr.
Surplus Manpower loaded in project = $1018 - 174 = 844$ with CTC of Rs. 7.037 lakhs per annum per person = 59.39 crores per annum	Rental cost of Land (80% of land cost in Annuity) = 14.09 Cr. per annum (for 21 yrs)
	Revenue Share from Mine @10% of gross revenue = Rs. 29.97 Cr. per annum (for 19 yrs)
	Cost of Temporary engagement/Horticulture (= Rs. 15000 per PAF/month) (for 19 yrs)

Cost Benefit: Cost Per Tonne

Fig in Rs./te

Particulars	Existing Model	New Model
Cost of Govt. Land and Village Rehabilitation	123.05	123.05
Cost of Capital for Tenancy Land Acquisition/ Upfront Payment @20%	324.61	68.66
Land Rent Cost (80% in Annuity)	0.00	103.94
Revenue Share (@10%)	0.00	126.79
Cost of Temporary engagement @ Rs. 15,000/- per person per month	0.00	128.72
Inflow from DMF: @75% of DMF collection from the Mine	0.00	(-) 13.26
Cost of Surplus 844 manpower (@ CTC of 7.037 lakh / annum)	358.26	0.00
Cost Per Tonne (incl. Op. Cost)	2005.36	1737.34
% of Land Component in CPT	40.19 %	30.90 %

Package for PAF: Earning Per Acre

Rs. Lakhs per Annum

	Present	Proposed
Land Compensation (LC) @ Rs. 18.15 Lakh (one time) ~ Rs. 7200/- per mon	0.86	
Upfront (@20% of LC)		0.17
Land Rent (@80% LC)		0.69
Category –I Wage (@ Rs. 26400/- Basic & 14% DA) per Months for 2 acre of land	1.80	
Revenue Sharing @ 10% of Gross revenue		1.47
Horticulture /Farming @ Rs. 15000/- per /mon for 2 acres of land		0.90
Total	2.66	3.23 ⁴⁷

Package for PAF: Earning Per Acre....

- Earning per Acre increases from Rs. 2.66 Lakh/yr to Rs. 3.23 Lakh/yr, without changing land ownership pattern & other settings.
- **Indicative;** Calculated for High Density Population: further modeling and fine-tuning will give more options.

Conclusion: Feasible, Attractiveness for PAFs via sensitivity analysis; should be tried in field for medium sized mine, moderate density population.

New Model – Financing Options

New Model – Financing Options

- To be in-built in Project Cost – initial upfront payment
- Annual Land Rent – from Annual Cash Flows
- Revenue Share: -
 - ✓ From Project's Annual Cash Flows
 - ✓ DBT from/in lieu of part of DMF
- Revenue Share allotted as a cash transfer to PAFs:
 - ✓ 85% equally among PAFs of Gram Panchayat
 - ✓ 15% to BPL families among PAF over & above 85%.

New Model – Financing Options

- To be in-built in Project Cost
- Additional Financing from DMF
- DMF money for DBT to PAFs as part of Revenue Share
- The amount is allotted as a cash transfer to PAFs:
 - 85% equally among the long term residents of Gram Panchayat
 - 15% to BPL families in the Project Affected Area, over and above 85%.

Utilisation of DMF

- Mining leases executed **before** 12th January, 2015 - **30%** of royalty
- Mining leases granted **after** 12th January, 2015- **10%** of the royalty
- Most Coal Blocks of CIL fall in 30% category
- As on 31 Dec 2019, Out of Rs 35,013 Crs, collected since inception; Actually Spent – Rs. 11,946 Cr; Remaining unutilized amount Rs. 23,066 Cr.

Utilisation of DMF

- DMF for entire life of mine; hence, huge amount to accrue for a small area.
- DMF target area is too small for this large amount.
- Several development programmes also running parallel in the same area.
- Coal bearing areas - mostly Tribal Area – has earmarked non-lapsable dedicated fund.
- DMF activities largely infrastructure related.
- Saturation reaches in two to three years.

Utilisation of DMF

- DMF works executed through contractors – no direct benefit to local communities.
- Part of DMF fund disbursement to PAFs as DBT most desirable.
- Availability of liquid cash in local market bound to boost several economic activities.
- DMF allocation
 - ✓ First 3 years – 100 % to Local Infrastructure
 - ✓ After 3 years – 25 % to Local Infrastructure and 75 % as DBT to PAFs (debitable against Revenue Share from mine)

Ask ?

Don't hesitate. Even Einstein asked questions.