ENVIRONMENTAL SAFEGUARDS

1. The tenth environmental supervision as part of the Mid Term Review (MTR) of the Eskom Investment Support Project (EISP) occurred during the period January 20 – 30, 2015. The supervision mission began with a meeting hosted by the Department of Public Enterprises, during which the Department of Water Affairs (DWA) presented progress on the Mokolo and Crocodile River (West) Water Augmentation Project (MCWAP Phase 1 and Phase 2) and the Department of Environmental Affairs (DEA) presented progress on the Waterberg-Bojanala National Air Quality Priority Area, status of Eskom’s application for postponement from compliance to the timeframes related to the MES, monitoring of sand mining operations in Lephalale and the Regional Environmental and Social Assessment (RESA) Phase 2.

2. Following is a summary of key aspects and actions:

A. Overall Compliance with the Environmental and Social Management Plan

3. In line with the Bank support for use of country systems for environmental and social compliance and enforcement, the mission commends Eskom for a good level of coordination among various Government, provincial agencies and stakeholders on follow up of various environmental and social aspects of the Medupi Power project. Key elements of this coordination include involvement of various national agencies, notably the Department of Environment Affairs (DEA), Department of Water and Sanitation (DWS), the South African Heritage Resources Authority (SAHRA); and various stakeholders on various compliance issues. Key areas of environmental challenges include:

- Air Emissions License: Particularly Eskom’s inability to operate under current license conditions for SO$_2$ remains$^1$
- Water management – Eskom is gearing to manage water generated during commissioning after heavy rains more effectively with implementation of temporary pipelines and pumps
- Allegations of grave desecration – Eskom appointed (through the established task team headed by the DEA and represented by heritage authorities and affected family representatives) an independent expert heritage consultant who is engaging with concerned community. The involvement of elders in the community through the local heritage expert is generating good will and good response and additional advertisements to be placed via local newspapers and radio announcements to cast the net as wide as possible
- Additional risk of incidents arising from various commissioning processes will need to be managed.

$^1$ As of 23 February 2015 this has been resolved in terms of a decision made by DEA on Eskom’s postponement application.
B. Environmental Monitoring Committee of the Medupi Project

4. The mission had a meeting with the Ms. Tanya Venter, the independent Chairperson of the Environmental Monitoring Committee (EMC). The EMC continues to play an important role in monitoring compliance with various environmental and social requirements for the Medupi project, as well as provide a platform for interested and affected parties to raise their concerns. The EMC with its Chair and 12 members has managed to remain very independent by inviting all stakeholders, including senior government representatives to discuss face-to-face critical issues of concerns to the community. It has evolved to facilitate free and clear communication and cooperation among local stakeholders, NGS, the community, Eskom, local municipal authority, Department of Environment Affairs, Department of Water and Sanitation and other local government agencies represented through local counsellor and village chief. The mission was informed that the EMC organized meetings on critical issues such as old Graves and related heritage on the Medupi site; water supply for the FGD systems; postponement of compliance with the timeframes of the new emission standards and its impact on the community living in Marapong; and degradation of the river due to sand mining etc.

C. Compliance with the New (point source) Emission Standards (in 2015 and 2020)

5. Eskom realizes that while Medupi will be able to meet the “existing plant” standards (which are applicable to Medupi), from April 2015, it will not be able to fully comply to the SO\textsubscript{2} requirements of the “New Plant” MES from 2020 until such time as the FGD system is installed and operated. Eskom has submitted its application to DEA seeking postponement from compliance with the new emission standards that would become effective from April 1, 2015, as well as with the even more stringent standards (to become effective on April 1, 2020). The mission was informed that DEA have processed Eskom’s application. Subsequent to the engagement with DEA in January 2015, the DEA issued Eskom with its decision on the application. The DEA have granted postponement for compliance with the MES for new plant from 1 April 2020 to 31 March 2025 with a limit of 3500mg/Nm\textsuperscript{3} during that period. A compliance of 500mg/Nm\textsuperscript{3} is applicable from 1 April 2025.

D. Compliance with Ambient Air Quality Standards around the Medupi site

6. The Medupi Power Station has the required provisional Atmospheric Emission License (AEL). The mission was informed that Eskom has two continuous ambient air quality monitoring stations, one at Marapong, upwind of Matimba and Medupi station, and a new monitoring station recently commissioned in November 2014 downwind of both Medupi and Matimba station (as winds predominantly flows from north-easterly and easterly during daytime, and from easterly and east-north-easterly sectors during the night). The monitoring data show peak concentrations of particulates and NO\textsubscript{x}, during early morning and late evening, perhaps from dust from roads, motor vehicle emissions and domestic combustion processes. The monitoring records show no evidence of impacts due to dust and NO\textsubscript{x} from power station emissions. The monitoring data presented in graph (below) indicate there were no daily exceedances recorded during the entire monitoring period as well as permitted number of hourly exceedances (88 as per the standards) was not exceeded in any of the years. It is also interesting to note that annual SO\textsubscript{2} concentration concentrations are well below the national annual standard of 19 ppb.
E. Flue Gas Desulphurization Unit for Medupi

7. Eskom’s team reaffirmed its commitment and plan to install a FGD system for abatement of SO\(_2\) emissions from the Medupi power plant six years after the commissioning of each generating unit (as per the IBRD loan agreement). The Medupi operating units will enter commercial operation sequentially from 2015 through to 2019. The six generation units will each be retrofitted with a flue gas desulphurisation unit to be sequentially commissioned from six years after the commissioning of each generating unit, based on the current project schedule would be from 2021 to 2025 starting with Unit 6. The wet limestone open spray tower FGD system technology has been selected as the preferred solution. Eskom came to this preferred solution after studying various options including dry and semi-dry technologies as well as direct limestone injection into the baghouse. The wet scrubbers will achieve emissions below the
legislated emission limit of 500 mg/Nm$^3$ (dry) and/or a SO$_2$ removal efficiency of greater than 93% based on the worst coal scenario.

8. The previous mission also recommended that Eskom study an interim LIMB de-SO$_x$ technology. Instead, Eskom studied a dry limestone injection option into the baghouse. Eskom was concerned with the apparent lack of large reference units for LIMB technology and the WB agreed to assist by researching this more. Eskom did indicate some interest to possibly test LIMB in an existing smaller unit. Eskom has not decided yet if a flue gas inlet cooler will be required. The limestone for Medupi will be sourced within a 300 km radius and will be based on an 85% CaCO$_3$ purity. Kusile Plant will use 90% CaCO$_3$ but will be sourced within a larger 700 km radius and will be used as a back-up supply to Medupi if needed. A curve of Matimba station (below) indicates that SO$_x$ emissions of 3,500 mg/Nm$^3$ can be met up to a coal sulphur content of 1.5%. The Medupi worst coal specification has a sulphur content up to 2.2% maximum and so, based on Matimba data, the SO$_x$ emission limit of 3,500 mg/Nm$^3$ will be exceeded.

![Matimba Unit 6 SO$_2$ Emissions (mg/Nm$^3$, dry at 10% O$_2$)](image)

9. **Regional Environment and Social Assessment (RESA):** The mission also received updates on RESA study currently being undertaken jointly by a team of international consultants under guidance of the Government of South Africa and the Government of Botswana. The RESA will review the strategic, cumulative and trans boundary implications of development of coal based energy generation along South Africa and Botswana border, considering various development scenarios with potential impacts on air quality, water, economic, social, physical cultural heritage, climate change etc.

10. **Air Quality Management Plan (AQMP) for the Waterberg-Bojanala National Priority Area.** An AQMP has been completed based on a baseline assessment for air quality in
the region including air emissions inventory covering various sources including, among others, residential fuel burning, mining sources, vehicle emissions, and biomass burning. The AQMP is awaiting Ministerial approval and will be published for public comment. At that point members of the public will have the opportunity to formally submit their input and comments. The AQMP will then be finalized incorporating the received inputs and comments and promulgated for implementation. It is expected that the draft AQMP will be published by the end of February 2015.

**F. Groundwater Monitoring at Medupi**

11. Eskom continues to undertake groundwater monitoring at six pairs of boreholes at the Medupi site, which are located mostly on the periphery of the site with average groundwater levels between 5-23 meters below ground level. The ground water quality results from sampling done in 2014 indicate no change from previous baseline results, which showed marginal to poor water quality not suitable for human consumption. According to reports these groundwater qualities are similar to national (baseline) groundwater quality and does not indicate clear or adverse impact resulting from Medupi construction activities. The results indicate monitoring wells MB1S and 1D have been demolished and no further monitoring will occur at this borehole. The monitoring well MBH2S was dry throughout the monitoring period, while the monitoring well MBH2D, 4D, 4S and 5D have the most parameters exceeding aesthetic and acute chronic health limits. The cause for the elevated parameter concentrations in MBH2D and 5D are unknown, since no known sources exist within sources within close proximity of the boreholes. However, Eskom has declared that groundwater should not be used for human consumption. An investigation was launched to determine if there were any visible signs of an oil/gasoline or petroleum spill in the areas of these two boreholes, however none were found. During the October 2014 monitoring run hydrocarbon scans and algae counts were conducted, which did not indicate presence below the detection limit. DWS has accepted Eskom’s proposal for expansion of groundwater monitoring network. Drilling of more monitoring boreholes will soon commence.

**G. The Status of Water Supply for the Medupi Power Project**

12. **Status of funding of the MCWAP Phase Me.** The DWS has secured funding for MCWAP-1. Construction is almost complete and full water delivery is scheduled for March 31, 2015. As a result of two phases of debottlenecking of MCWAP-1 completed in October 2013, the total capacity was enhanced from 14.5 million m$^3$/year to 23.1 million m$^3$/year, which is sufficient to run four units of Medupi without FGD.

13. **Status of MCWAP-2.** The GoSA has agreed to finance the part of MCWAP-2 that commits to supply water to the municipalities on condition that DWS would mobilize balance funding, i.e. for the commercial portion of the users. The DWS needs to have the Water Use Licenses and Signed Water Supply Agreements (WSA) with potential users of the water before funding can be secured for commercial portion. The mission was informed that the Fiscal Liability Committee of the National Treasury recommended to the Minister of Finance a funding strategy for a 75 million m$^3$/annum pipe with a guarantee via Department of Energy for future energy requirements. The Guarantee will have certain conditions to be confirmed with various Ministers for which official confirmation is expected before end February 2015. Once funding strategy is confirmed, project sizing could be finalized and Minister of Water and
Sanitation can approve the project scope, which will trigger commencement of final design activities. In order to deliver water from MCWAP–2 by November 1, 2020, key actions include: securing funding for the project; deciding on the MCWAP-2 transfer capacity; confirming the transfer capacity; and undertaking Environmental Assessment and Environmental Authorization. DWS aims to initiate procuring consultants to undertake Environmental Assessment Practitioner by February 2015.

H. Environmental, Health & Safety (EHS) Performance at the Medupi Construction Site

14. **Accidents Record.** In the year Eskom achieved an excellent EHS performance with 12-month rolling average Lost Time Incident (LTI) of Zero (against Eskom’s target of Zero). In 2014, the Lost Time Incidents Rate (LTIR) ranged between 0.23 (Jan) to 0.11 (Dec), compared to a range of 0.13 (Jan) to 0.17 (Dec) in 2014. The mission was informed that the 12 month rolling record of LTI (Jan-Dec) shows a declining performance in 2014 compared to 2013, which is being addressed. A total of 11 incidents were recorded in December 2014, which included no major injuries.

15. **Compliance Monitoring by ECO and Third Party.** The independent Environmental Control Officer (ECO) continues to monitor and report on environmental issues (such as noise, dust, air quality, ground water, potable water, waste handling etc.) to DEA and the Environmental Monitoring Committee (EMC) monthly. The last quarterly report (December 2014) for Medupi indicates no major noncompliance. The dust monitoring management for the last period at site was found to be in compliance, indicating no exceedances (as per SANS1929:2011 standards). The dust has not been observed to cause a nuisance beyond the site boundary with regular dust suppression.

16. **Oil Spill Management.** During the last quarter (ending December 2014), the Medupi site witnessed nineteen (19) hydrocarbon spills with an approximate 759.5 liters being spilled during the month of November 2014, which seem to indicate significant increase in incidents. A regular inspection by contractors is needed to identify vulnerable areas and detect leaks/spillages timely. The mission was informed that contractors have been advised to intensify training, education and awareness programs with their staff on site around the proper use, handling and disposal of hazardous substances as well as spill response.
17. **Wastewater Management.** In October 2014, Medupi witnessed spillage of about 3500 Liters waste water (effluent) at the sewage treatment plant, which was caused by an electrical fault in a circuit breaker. While the incident was mitigated, the matter was reported to the DEA and DWS in compliance with the NEMA. A temporary bypass system has been installed to move water between the various facilities around (CWD Dams, CSY PCD, ASH Dump and RWD). This has reduced the risk of over-spilling while the water treatment plant is being commissioned and water need for production purposes increases. While Eskom has submitted the Water Use License (WUL) amendment application for changes to dams on excess CSY and ash dump for approval, a revised WUL is yet to be issued. A new contractor has been appointed to optimize and run the sewage treatment plant and train the operators.

18. **Surface water Quality.** The surface water quality monitoring results (October 2014) indicate that the clean water dam does not comply with the IWUL guideline for Medupi Surface water in terms of pH and fecal coliform. Similarly the water from dirty water dam, ash dump and coal stockyard pollution control dam also does not comply with the IWUL guideline for Medupi Surface water in terms of pH, electrical conductivity and manganese. Water quality did not comply with the SAWQG for Agricultural use; Irrigation in terms of pH complied with the General Limit. The fluoride concentration of locality (EM DWD, EM Ash Dump and EM CS PCD) exceeded the general authorization limit for 2013. As per the reports low concentrations of Fluoride can be expected in the water as the base line data indicated that Fluoride occurs naturally in the area.

1. **Sand Mining in the Mokolo River**

19. The mission was informed by Department of Environment Affairs (DEA) about steps taken towards resolution of community concerns relating to over extraction of sands from Mokolo River. The mission received reconfirmation from Eskom that sand requirements for Medupi are sourced only from a legally authorized sand quarry site, and the Medupi project stopped buying sand since July 2014. Based on the mission’s recommendation and complaints from riparian farmers (on the Mokolo and Matlabas rivers respectively who expressed concern over the severe impact due to over-extraction of sand), the DEA started an investigation through a Task Force, during August 2014. Simultaneously, the DEA (Enforcement Division) also
directed 31 sand mining operations in the area to cease all operations and issued with compliance notices. The Task Force assessed the status and impact of sand mining operations along the Mokolo River, particularly the river ecology and water balance issues. In the Limpopo district near Lephalale, the investigation targeted 10 sites, which led to criminal investigation against some operators as well as fines. There is no evidence to indicate that Eskom or Medupi project is sourcing sand from operators or from the area under investigation. According to DEA, all the current operators are in the possession of mining permits, with some in the process of getting renewed. The detailed investigation report including list of actions is expected to be finalized by February 28, 2015. The mission requested DEA to share a copy with the Bank, including public disclosure of the report.

20. As part of strategy to prevent continuation of environmental damage of the Mokolo River, as well as to improve the accountability for proper safeguards during sand mining operation, the government has brought about major changes to the South African Environmental Legislation/system in December 2014, for permitting sand mining. There is more clarity of roles for regulatory authority for mining and the environment, consistent with the existing MPRDA and NEMA. As per the amended legislation, the Department of Mineral Resources (DMR) has been assigned the role of competent authority for compliance with the environment requirements. This essentially means that DMR would be fully accountable for ensuring environmental compliance while managing sand mining permits, while the DEA would be the appeal authority for any aggrieved party. This change is expected to significantly improve environmental management in sand mining operations in the Mokolo and Matlabas River.

21. The mission met with a riparian farmer to discuss the implications of changes in the regulations on sand mining in the area. While acknowledging that Eskom may not be sourcing any more sand from the Mokolo River, the farmer conveyed her continuing concern related to past sand mining activities impacting the water quality and flows. The mission recommends that ECO follows up on the outcome of the DEA’s technical investigation on the issues of sand mining to share the findings with the farmers. The mission also reiterated its confidence in the process followed by the DEA, including importance of expected actions and accountability of various parties related to mitigation of adverse impacts and restoration of the ecology of the Mokolo River.

Social

A. Medupi Legacy Programme

22. Eskom continues to implement its ambitious Corporate Social Responsibility Program, which prioritizes investments based on social and economic needs of the community. The mission was informed that the program includes providing new health care and monitoring services through a Mobile Medical Bus, which has focused on schools; extending support to child care through improvement of infrastructures in crèches; income support and training services etc. which has seen 1652 between June and December 2014; the target is to reach 6000 by June 2015:

Medupi Pediatric Bus - Impact to date (June to December 2014):
• Visited 14 schools, 6 Crèche's, 1 Old Age Home
• 1652 children seen to date
• 116 learners referred to hospital due to serious ailments or chronic eye infections
• 97 children had skipped immunizations
• 14 spectacles issued
• 29 severe dental treatments
• 6 weeks support to HPV campaign

Expected Impact by June 2015 is at least 6000 children

• Medupi has donated drinking water to Shongoane Clinic and 2 primary schools with 900 children to the tune of 20,000 litres per day;
• Refurbishment of NST Majadibodu; and
• Community donations of 15 laptops to medical students, Lephalale FM radio, Tsogang Youth Group; 4 classrooms to Lephalale TVET to help with overcrowding, and installation of solar pump for an agriculture project, in addition to environmental benefits this provides a saving of R80 per day for the farmers.
B. Sustainable Enterprise Development

23. Under this program:

- Medupi has supported entrepreneurs whose activities have grown to creating more local jobs;
- Established Young Entrepreneur Development Initiatives: Medupi supported Youth owned Lephalale Security Company, which started its operations in 2010 and had twenty three (23) employees in its first year. Currently it employs 135 (40 Women and 95 Men). Medupi Project also supported an Adapt a Youth Entrepreneur Campaign organized by Limpopo Economic Development Agency in Lephalale that was attended by 27 young entrepreneurs from all over Limpopo;
- Medupi also supported the program of “women employing their husbands”: Excellence Example was registered in 2012 and started its operation in 2014 with 99 (10 Men, 89 Women, out of which were 45 Youth). The owner, Ms. Daphney Morifi, is a graduate of Eskom’s Contractors’ Training Academy. Medupi also supported Makalane Plant that started in 2009 with 1 employee and 2 minibuses. Currently it employees 20 people (5 women and 15 men) among which 19 are youth and has a fleet of 19 minibuses.
- Program facilitating local suppliers to Medupi. The program has benefited 28 Suppliers from Lephalale Municipality. The program is facilitated by Mr Stan Close from the company called Ikusasa.

C. HIV and TB Screening Program

24. Between 15 and 19 September 2014, Medupi project conducted screening program for TB on 1,794 people who comprised 1,660 males and 134 female. Furthermore, the Project conducted HIV/AIDS tests to 1,521 workers made up of 1,417 males and 104 were females. A condom distribution program was also undertaken where 8,912 condoms were distributed to 7,860 male and 1052 female users. In addition, 109 people underwent MMC (male medical circumcision).

25. Employment figures. As of 30 November 2014, Medupi Contractors employed 14,923 people, representing a slight increase of about 9.5% from the May 2014 figures. Among these were 3,006 unskilled workers all locally recruited. Semi-skilled workers were 5,143 of which 2,416 were locally sourced. Skilled workers numbered 4,458 of which 689 were locally recruited. Supervisors were 2,316 among which 219 were locally recruited. These figures represented workers coming from Lephalale and Waterberg areas representing 42.4%; other parts of South Africa were 47.9%; with 6.2% being non-South Africans and other was put at 3.5%. Among the total number of employees, the youth represented 55.20%, females were at 6.85% and people with disabilities were 0.31%. This shows that Medupi contractors are striving to achieve inclusivity in its employment policies.

D. Issue of Graves

26. The Mission was briefed about progress being made in resolving the graves issues. As was presented by one of the affected persons, the process has taken almost 7 years now and it is high time a solution was found. Eskom acknowledged this fact and assured the affected persons
that the process is on-going and there is need for time to ensure that the proper processes are undertaken to allow for an independent, open, transparent and thorough heritage assessment to resolve the matter once and for all. An agreement was reached at the May 2014 meeting, chaired by the Department of Environmental Affairs (DEA), and attended by Family Representatives, Limpopo Heritage Resources Authority (LIHRA), South African Heritage Resources Authority (SAHRA), African Development Bank (AFDB), Independent Environmental Control Officer (ECO) for Medupi, Eskom Medupi, and Eskom head office that a heritage assessment process should be followed. The meeting sought to establish an agreed plan of action, which will facilitate reaching closure on the matter in a way that all parties shall agree to. The study is being conducted by a team of independent experts in parallel to the oversight of the Commission for the Promotion and Protection of the Rights of Cultural, Religious and Linguistic Communities (CRL). The Task Team set up for the program met and drafted the Scope of Work for the second Heritage Impact Assessment (HIA II).

27. The current process has provided for concerned family representatives to visit the sites and perform their cultural rituals associated with graves. This was done as part of the EMC meeting of 9 December 2014 held at Ditheku Primary School in Marapong, which was preceded by members of the Public entering the site along with EMC Members, Eskom team members and specialists from Mbofoho Consulting (the appointed independent heritage impact assessment consultants). From this site inspection a number of additional potential graves sites were identified, as well as potential graves site were marked that are alleged to have been disturbed by the project. This information was collected by the independent heritage consultants who will be validating claims and putting forward recommendations. The assessment is currently underway and it is expected to be concluded in February of 2015. The final presenting conclusions and recommendations is expected by end March 2015.

28. Reading the minutes of the EMC, where a thorough count of events were presented, it is clear that the appointed independent heritage impact assessment consultant will have to manage the expectations of the affected families and communities as regards the outcome of the study. The appointed independent heritage impact assessment consultant will play a crucial role in this regard so as not to create situations that shall subject Eskom to untenable situations and perpetuate the disputes with communities. It is anticipated that the role of the South African Commission for the Promotion and Protection of the Rights of Cultural, Religious and Linguistic (CRL) will play a similar critical role.

29. The CRL has been involved as they have received multiple complaints from around the country. However, those from Lephalale may have a link to the Medupi project. Many complaints allege exhumation and destruction of graves and denial of access to graves to family members of the deceased (farmers, RPD houses, shopping center development, mines, municipal reservoir, Medupi). Eskom has committed to undertake all reasonable measures that conform to South African legislation, including environmental, heritage assessments and public participation. The mission was informed that Eskom has committed to engage the community and relevant authority to deal effectively with cultural graves issues in consultation with the affected parties.
E. EMC Meetings

30. The attendance to EMC meetings has improved over time and 3 meetings were held during the period under review. It was noted that the communication at these meetings have improved with the use of a translator. The first was a special meeting held on 18 September 2014 at Machauka Lodge, Lephalale, which was attended by 14 people (three from EMC, two from Project and nine Interested and Affected Parties (I&APs)). This provided a platform (closed meeting) for I&APs to raise their concerns regarding sand mining operations in the Mokolo River in Lephalale. The second was a public meeting held at Traditional Council Offices in Shongoane. This was attended by 49 people; being 9 from EMC, 11 from the project, 1 from DEA, and 28 I&APs including 1 from World Bank and the other from Earthlife Africa, Johannesburg. This meeting provided feedback to the Community on issues regarding heritage and air quality and provided the attendees an opportunity to raise any additional concerns. The third was also a public meeting, which was held at Ditheku Primary School, Marapong. This was attended by 58 people; 6 from EMC, 14 from the project, 6 from Authorities (DWS, DEA, Waterberg District Municipality), 32 I&APs including one from Earthlife Africa, Johannesburg and 1 from Ward Committee. This public meeting was preceded by an EMC Site Visit (08/12/2014) that allowed members of the Public to enter the Medupi project site along with EMC Members, Eskom team members and specialists from Mbofho Consulting to point out potential graves/burial sites and to perform the necessary rituals associated with the graves.

F. Draft Procedure for the Management of Involuntary Resettlement and Relocation

31. Eskom shared with the World Bank and African Development Bank the draft Procedure for Management of Involuntary Resettlement. Eskom is reviewing the procedure to (i) ensure that a sustainable resettlement and relocation action plan is developed, agreed and implemented through a meaningfully consultative process between the Affected Community/ies and or Person/s, Government, Eskom and other identified role players; and (ii) ensure compliance, where required, with the terms of financing advanced to Eskom, where the financiers have particular requirements to be met in respect of resettlement. This initiative also provides assurance to the lenders of Eskom’s commitment to social protection and mitigation of impacts that befall communities due to development projects. Some of the observations made during the discussions included: (a) the issue of legal and illegal settlers including squatters, (b) clear definitions of eligibility and entitlements, and (c) the notion of replacement values vs. market values. Eskom endeavored to reflect these issues clearly in the procedure, and also take into consideration appropriate references to AfDB policy and procedures guiding involuntary resettlement.