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The Eskom Investment Support Project

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Table of Content

Abbreviations	iii
1. Introduction	1
2. The Eskom Investment Support Project and its Context	2
3. The Requesters and their Claims	3
4. The Inspection Panel's Findings	
a. On the Structural Level	6
b. On the Project Level	9
5. In the Aftermath	13
6. Conclusion	15
Statement of Originality	17
Bibliography	18

Abbreviations

EIA	Environmental Impact Assessment
EISP	Eskom Investment Support Project
GHG	Greenhouse Gas
MCWAP	Mokolo-Crocodile Water Augmentation Project
NEMA	National Environment management Act
SDR	Safeguard Diagnostic Review
UCS	Use of Borrower/Country System

1. Introduction

The Medupi power station project, or Eskom Investment Support Project (EISP) as it is called in World Bank circles, gained vast attention. For its enormous size and capacity, as the biggest single project of Eskom, the highest loan ever granted by the World Bank and because of its controversial stance in South Africa and internationally. The latter is because of its potential negative impact on the local, national and global environment in general and especially due to effects on water resources and air quality. In addition, the EISP is the first large-scale project based on a borrower country's legal system and institutions, instead of on the World Bank's safeguard policies as usual. This led to a faulty project application on the structural level and influenced the project's impacts on the environmental and social spheres. Finally, it is questionable how far the funding of a large-scale coal plant by the World Bank, in relation to the project's volume, is an effective tool for poverty alleviation, which is the primary declared objective of all World Bank action.¹

The request to the inspection panel was filed on the 6th of April 2010 by groundWork and earthlife Africa, two organisations that represent the local communities. Relating to the requesters' claims the panel investigated the project's compliance regarding OP 1.00 (Poverty Reduction), OP/BP 4.00 (Piloting the Use of Borrower Systems to Address Environmental and Social Safeguard Issues in Bank Supported Projects), OP/BP 4.01 (Environmental Assessment), OP/BP 4.04 (Natural Habitats), OP/BP 4.11 (Physical Cultural Resources), OP/BP 4.12 (Involuntary Resettlement), OP/BP 7.50 (Projects on International Waterways) and OP/BP 10.04 (Economic Evaluation of Investment Operations).²

In the following, this paper wants to give an overview of the project and its components, as well as a brief outline of the historical background and about Eskom. Secondly, an introduction to the requesters will follow, as well as a presentation of their claims and concerns regarding the EISP. Thereafter, the paper will present a trenchant review of the Inspection Panel's findings on all single claims. In contrast, it will be depicted how the management responded to the claims and the inspection. Moreover, the paper will take into account further studies, data, positions and developments that were not considered by the panel's investigation or emerged later. In conclusion, it will discuss what can be learned from the EISP's misconstruction, the inspection's findings and the first attempt to use a borrower's system.

¹ World Bank, 2011, p.viii

² World Bank, 2010b, p.5

2. The Eskom Investment Support Project and its Context

The economy of South Africa belongs to the most energy-intensive ones in the world and has its foundations in the 1960s boom in mining and associated heavy industries. Back then, in response to the high energy demand, Eskom, a parastatal agency of the South African state and main energy supplier, expanded its supply capacities enormously. Under Apartheid, growth stagnated and energy was oversupplied during the 1980s and early 1990s, because of international economic isolation. Heavily subsidisation of industrial consumers became entrenched and reliance on cheap electricity was established, also due to lobbying of the Energy Intensive Users Group, an industrial umbrella organisation, that pushed for long-term contracts to save prices beneath the cost-reflective levels. After Apartheid the economy flourished again, while the emerging economy and rising number of connected households led to an increasing energy demand. Additionally, technical and maintenance issues of power stations and the national grid forced Eskom regularly to exert load shedding. Therefore, it came and still comes to repeating partial blackouts throughout the country.³

To encounter the latent undersupply, Eskom planned to expand capacities again and conceived a dry-cool coal-fired power station called Medupi. The plant site is located in the Waterberg district near the town Lephalale in north-eastern South Africa.⁴ Besides Medupi, Matimba is the only other coal plant in the Waterberg basin, which is assumed to be the reserve of almost half of South Africa's coal resources. The other 12 Eskom coal plants are located in Mpumalanga province, where the other major coal deposits of South Africa are available and where Kusile, a plant similar to Medupi, is also under construction.⁵ With a capacity of 4800 MW, Medupi will be the largest dry-cool coal plant in the world and has a planned operational life of 50 years.

While Medupi's construction already started in 2007, the project faltered during the world economic crisis of 2008 due to a lack of funding. On the one hand because of the crisis itself and on the other hand because of private capital being adverse to the low energy prices, that were not profitable to invest in. As a "lender of last resort" the World Bank approved the loan for the Eskom Investment Support Project on 8th April 2010. With a volume of US\$ 3,75 billion, the project received the biggest single loan from the Bank ever since and includes three components. Primarily, a supercritical 4,800 MW coal plant with related transmission lines. Furthermore, a 100 MW wind power project and a 100 MW solar power park. The third

³ Bohlmann et al., 2016, pp.451f

⁴ Eskom, 2014

⁵ Pinson, 2015, p.8

component includes additional sector investments, the Majuba railway for coal transportation, as well as technical assistance for efficiency improvements and renewable energy projects. The request relates mostly to the first component.⁶

The granted IBRD loan provides \$3,750 million in funding for Eskom Holdings Limited, as the borrower, with a guarantee from the South African Government. The second component is enabled by a \$350 million Clean Technology Fund. Additional funding of \$2663.80 is granted by the African Development Bank and European Investment Bank and another \$2361.25 is provided by the European Export Credit Agencies Coface and Hermes, and Japan International Cooperation Agency.⁷

Today South Africa relies heavily on coal since it is cheap and abundant, and therefore the primary energy source. Energy production accounts for 83% of all South African emissions, while about 90% of energy is produced from coal. Industrial production hereby demands two-thirds of all energy in South Africa, whereas 15% of households still had no access to the grid in 2013.⁸ Moreover should be emphasized that, while poverty rates rose from 1995 to 2011 from 31% to 46% and quarter of the South African population is living from less than 2 dollars a day, the connection to the grid is no guarantee that one can afford the energy.⁹ Enabled by the long-term 25-year contracts for industrial users, the price gap between households' and industry's energy pricing amounts to a factor of 2.3 and is underlined by the fact that the lowest income quarter of the population only consumes 2,4% of the energy.¹⁰

The Waterberg basin is an arid and semi-arid region, with considerable water stress. Next to household demand, agricultural production is a major consumer of water and next to mining and tourism the most important economic pillar of the communities. The region is therefore highly exposed and vulnerable to Medupi's ambient impacts that might arise and hence would materialise in social, ecological or economic damage.¹¹ The following paragraph will give an overview of the requesters' claims and give detailed information where necessary.

3. The Requesters and their Claims

The request was filed by two organisations, groundWork and earthlife Africa, who represented

⁶ World Bank, 2010b, p.1

⁷ World Bank, 2010b, p.2

⁸ Pinson, 2015, p.10

⁹ Pinson, 2015, pp.6f

¹⁰ Pinson, 2015, pp.22f

¹¹ World Bank, 2011, pp.20f

the concerned community members and acted on their behalf. While inspection requests mostly relate to already materialised harm and real violations of the Bank's policies, the request for the EISP was submitted two days before the board of executive directors had scheduled the project approval. In this case, the community had various concerns beforehand, regarding the direct negative impacts of Medupi on the environment and the communities. Including further adverse, transboundary effects and several concerns related to the policy application and performance in assessment, mitigation, monitoring and prevention. In fact, the requester's claims can be related to two different levels of the EISP. On the one hand, structural and systemic concerns and on the other hand concerns regarding the project and its direct impacts.¹²

Relating to the structural level, the claims referring to OP/BP 4.00 (Piloting the Use of Borrower Systems) embody a premiere. Overall, it was the first time that the bank fully applied this policy in a project of this size and additionally, it was the first time that the inspection panel had to investigate this policy's application. In detail, the EISP was implemented by largely relying on South African laws, policies and institutions, instead of the Bank's regulations and safeguard policies. Even though it is part of the OP/BP 4.00 requirements, that the Bank has to assess the equivalence and acceptability of the borrower's system compared to the Bank's own policies, the requesters claimed that the national legal framework won't be adequate substitution to protect environment and people. In addition, OP/BP 4.00 includes requirements to fill regulatory gaps. This relates to Eskom's policies and does not include the need to change South African laws. In conclusion, the requesters claim that the perception of South African laws, institutions and policies to be equivalent and acceptable, is incorrect and that they would be insufficient to prevent social and environmental harm.¹³

Regarding the project level, the investigation request addresses probable health impacts due to increased emissions, especially particulates and sulphur dioxide. In addition, impacts on air impacts on water, and related effects on water supply were expected to be significant. The operation of Medupi is extraordinarily water-intensive, primarily because of sulphur scrubbers that will be implemented to diminish sulphur dioxide emissions, but also will account for half of the required water when in operation. By considering probable upstream effects, especially on coal mining, the strain on water and increase of pollution, due to acid mine drainage which is a common consequence of mining, would be significant according to the requesters. Furthermore, an expansion of mining would be likely to affect environmental and social

¹² World Bank, 2011, p.ix

¹³ World Bank, 2010a, pp.3f

conditions. Primarily because of increased exploitation of natural resources and changes in the landscape, and secondly because of an expected influx of workers and poor working conditions. Similarly, the requesters expect emerging cumulative impacts due to existing and proposed plants in the Waterberg district and nearby Botswana. According to the requesters, those would not have been anticipated by the Bank and included in the scope of the project's associated facilities, for whom the Bank's policies also apply. In general, the communities feared a detrimental impact on their livelihoods, particularly in relation to agriculture, livestock rearing and eco-tourism. They moreover expected restrictions to their cultural practices and saw their grave sites and the availability of traditional medicines endangered. Additional harm to their livelihoods was expected by the requesters because of involuntary resettlement by virtue of the wind, solar and rail projects in the Waterberg district. Generally, the request points out the inconsistency with human rights provided by the South African constitution, which grants an environment free of harm for health and well-being and underlines the importance of ecologically sustainable development and environmental preservation. In this regard, the requesters claim, that no adequate consideration of alternatives to coal had taken place. They moreover stress that the cost-effectiveness calculations by the World Bank's management would not properly represent the real effective costs, by underestimating externalities, and additionally because of the harm arising from climate change, to which the coal plant's operation would contribute.¹⁴

The requesters also question how poor South Africans would benefit from the EISP, while they are yet relatively less connected to the grid, can't afford electricity, fear price increases and are disadvantaged by unfair pricing practices. Thereby, the requesters point out an improper pursuit of the Bank's aim to alleviate poverty. Moreover, the requesters feared negative impacts on the economy because of the loan's size, which might lead to currency devaluation and could require higher tariffs and exports to compensate for the loan. Finally, they claim that the Bank would have a certain guilt because of its former cooperation with the apartheid regime and should issue reparations.¹⁵ The next paragraph will present the Inspection Panel's findings, the argument between the panel and management and the underlying reasons. For the sake of clarity, the analysis will be separated into the structural findings and the findings on the project level.

¹⁴ World Bank, 2011, pp.1ff

¹⁵ World Bank, 2011, p.3f

4. The Inspection Panel's Findings

a. On the Structural Level

In advance of the panel's findings regarding the structural shortcomings in relation to OP/BP 4.00: Piloting the Use of Country Systems (UCS), a short introduction to the policy will be given. While the Bank developed a remarkable set of requirements, regulations and policies for project implementation, many borrower states cannot provide a comparable framework. In order to guarantee specific loan conditions and more importantly specific safeguard policies for social and environmental protection, this external framework is necessary. On the opposite, this approach narrowed the borrowers' influence, limited the possible ownership, disregarded incentives for capacity building and removed oversight from the borrower country. To encounter these tendencies, the UCS approach follows several principles and objectives.¹⁶

First of all, the UCS was invented to scale up development impacts. The underlying expectation is, that good practice will have a broader impact and strengthen borrower countries to conduct development projects in the future. A second intention is to deepen a borrower country's ownership. By involving a country full scale, with its legal framework, institutions and practices, a more suitable and sustainable development effect shall be achieved. Furthermore, as a third objective, capacity building is aimed to be induced. Based on participative aspects and close involvement, development programs are expected to increase the capacities of a borrower country's system in the long run. Fourth, closer cooperation shall facilitate the harmonisation of the different national, international and global development institutions. The exchange and efforts to harmonise policies and frameworks are intended to entrench them in that way. The last objective is rather practical and is motivated by cost-effectiveness. By using existing institutions, frameworks and practices, simplification can be achieved and enables lower transaction costs.¹⁷

It should be emphasized that applying UCS does not narrow the World Bank's accountability to ensure policy compliance and does not limit the panel's control function.¹⁸ Before applying the UCS, the World Bank's management is obliged, on the basis of OP/BP 4.00, to assess the equivalence and acceptability of a borrower country's system. Furthermore, the borrower and the Bank have to take measures to fill recognised policy gaps between the Bank's policies and the borrower country's system. On the one hand, the borrower is responsible to implement and ensure equivalence and acceptability. On the other hand, the Bank is responsible to determine

¹⁶ World Bank, 2011, p.24

¹⁷ World Bank, 2011, p.25

¹⁸ World Bank, 2011, p.26

the conditions and supervise the project. If unacceptable changes occur, possible through legislation cycles, the Bank's contractual remedies will engage.¹⁹

The requesters' claim stated the inappropriate equivalence and acceptability of the South African system and its capability to prevent social and environmental harm since the borrower's system would be inadequate for this matter. In its response to the claims, the Bank's management ensured the proper assessment and application of OP/BP 4.00 and that South Africa has a comprehensive framework. While admitting that enforcement might be challenging the management is "trustful" regarding Eskom's compliance. To assess the requirements of OP/BP 4.00, the Bank's management conducted a safeguard diagnostic review (SDR). Hereby, while the general equivalence of environmental and social regulations was approved according to the management, one important gap was found: Eskom's performance regarding the expected sulphur dioxide emissions and ambient impacts on air quality and health was insufficient. According to the SDR, excused by the belated engagement of the World Bank to the project, a compromise was found: Eskom has to apply the sulphur scrubbing facilities as soon as it is operationally possible.²⁰ This is controversial so far, as the National Environmental management Act (NEMA) of South Africa, the central legal framework for environmental concerns, includes the comprehensive consideration and assessment of environmental, social and economic impacts as well. Furthermore, it demands a risk-averse and cautious approach and responsible action that takes the full life cycle of a project into consideration.²¹ Obviously, this was not the case. Hence, the SDR addresses a gap, that should have been non-existent according to NEMA.

Additionally, according to the panel's findings, 2 major equivalence gaps are not sufficiently recognized in the SDR. Namely, the missing equivalence of regulations related to water use and mining activities, and the inequivalent requirements for assessment of cumulative impacts and environmental management, as they are demanded in OP/BP 4.00. Since water is the most limiting factor and resource in South Africa, especially for the local communities in the Waterberg district, the lack of recognition increases vulnerability and exposure. In addition, the extent of cumulative impacts is a far-reaching finding of the panel's investigation, because it highlights the impact on water resources and accounts mining as an associated occurrence.²² The panel points out, that cumulative aspects are very likely, especially regarding further coal plants and coal mines in the Waterberg district. In particular, the panel emphasizes the

¹⁹ World Bank, 2011, p.28

²⁰ World Bank, 2011, pp.38f

²¹ World Bank, 2011, p.40f

²² World Bank, 2011, pp.43f

expansion of the Grooteegeluk Mine, which is the only coal mine in the Waterberg district and the only supplier of Medupi. As a result of these foreseeable cumulative effects, impacts on the local economy, water resources, air quality, livelihoods and public infrastructure can not only be expected, according to the panel's findings, they will be more severe than stated by the SDR.²³

What is striking, is the management's reliance and trust in Eskom's capacities and degree of self-regulation. In contrast to the gaps and shortcomings of the South African legal framework, the management's analysis of Eskom's practices and policies found that these gaps would be fully addressed and covered.²⁴ The panel relates to this circumstance in its evaluation of the management's recognition of acceptability during the SDR. As concluded in the SDR, Eskom's policies and practices demonstrate a high level of consistency with good practice. Whereas the recognised shortcomings stress a lack of institutional and administrative, governmental capacities and the in general unacceptable reliance on Eskom's self-regulating practices.²⁵

Relating to the filed request, the community members were concerned about certain capacity lacks in the borrower country's institutions. Nevertheless, the SDR did assess the capacities in general, but primarily those of Eskom. This represents an inconsistent approach to capacity assessment. According to the panel's findings, the budgets for environmental management and personnel capacities were insufficient to bear and accompany a project like the EISP. The panel also stated that the local authorities were severely under-resourced.²⁶ Furthermore, the lack of institutional capacity, can not easily be replaced or substituted by Eskom's probable capacities. In the first place, reliance on Eskom's capacities does not assure correct implementation, since Eskom is not independent. Secondly, represents a self-regulating approach and an inadequate application of the acceptability measures in general.²⁷ A final weakness that was mentioned by the panel, relates to the general challenges that arose due to the belated engagement of the World Bank to the EISP. The panel notes, that most of the found structural shortcomings would not have occurred if the Bank had introduced specific conditions and measures earlier in the process.²⁸ The following paragraph will deal with the panel's findings related to direct impacts on the project level, partially due to the structural shortcomings presented above.

²³ World Bank, 2011, p.63

²⁴ World Bank, 2011, p.46

²⁵ World Bank, 2011, p.47

²⁶ World Bank, 2011, pp.48f

²⁷ World Bank, 2011, p.50

²⁸ World Bank, 2011, p.52

b. On the Project Level

Above all, the panel recognised shortcomings in the management's assessment of key documents that display the findings of beforehand conducted anticipation and assessment processes. Despite the management states in the SDR, that unanticipated impacts were experienced by Eskom, namely capacity limits in wastewater treatments and substandard practices in solid waste disposal, this was not true. The panel found that these impacts were anticipated by the Environmental Impact Assessment (EIA), which was also the basis for authoring the SDR, but the findings were not properly incorporated by the management. Furthermore, the description of mitigation measures was found to be neither comprehensive nor extensively detailed. These underlying shortcomings should be taken into account, for the following presentation of most panel's findings.²⁹

The impacts on water resources might be the most variously affected and far-reaching component of the EISP's externalities. They also were central concerns of the requesters and were expected to have a severe impact on the environment and the community's livelihoods. Nevertheless, the management's response does whether particularly address this concern, nor provide further detailed information besides mentioning that the Mokolo-Crocodile Water Augmentation Project (MCWAP) will meet the anticipated demands. The MCWAP involves an additional pipeline from Mokolo Dam to supply water for Medupi and another pipeline that will transfer water from the Crocodile River to meet demands.³⁰ The panel found that associated and indirectly related impacts on water resources, like the expansion of the Grootegeeluk mine, additional sand mining for construction matters in the ambient river beds and the MCWAP's impact on the tributaries and external water resources, were not adequately addressed.³¹

While the panel perceives the expansion of the Grootegeeluk mine by 40% as a notable associated impact, the management does not, because the expansion will not exceed already permitted boundaries and therefore would not require further assessments. Relating to the sand mining activities and possible severe impacts on waterways, water quality and ecosystems, the management responded that these are conducted by sub-contractors and are therefore not immediately associated with the project. Finally, MCWAP mitigates the impact on water scarcity in the Waterberg district but does not properly take into consideration the effects on downstream consumptive use of other users, that might occur along the Limpopo River and all tributaries. Furthermore, MCWAP was originally planned to be conducted unrelated to Medupi.

²⁹ World Bank, 2011, p.62

³⁰ World Bank, 2011, p.65

³¹ World Bank, 2011, pp.68ff

The extent of MCWAP with both pipelines became only necessary because of Medupi.³² Overall the assessment, anticipation and mitigation of possible impacts on water resources were inadequately applied, according to the panel, and do not reflect a risk-averse and cautious approach.

The requesters' concerns related to the impacts on air quality and health address another far-reaching potential harm. According to the management's response, possible impacts were adequately assessed and addressed with appropriate mitigation measures in place and in case harm might arise, monitoring would help to identify and encounter the occasions. The management perceives the above-mentioned late implementation of sulphur scrubbers as bearable. Hereby, the emissions of sulphur dioxide will be untreated for up to five years, until MCWAP is finished and supplies enough water to enable the operation of the water-demanding sulphur scrubbers.³³

Referring to the panel's findings there are clear inconsistencies with applicable standards on air quality and a distinct probability of harm that is not covered by the applied regulations. First, the emission of sulphur dioxide will violate South African air quality standards during the five-year period of inoperative sulphur scrubbers, since these applications are responsible for clearance of over 90% of the emitted sulphur dioxide. Additionally, the granted permission to run Medupi for up to 5 years without sulphur scrubbers might be too optimistic, since water supply is not yet assured and delays are likely to occur. The potential harm will be unforeseeable.³⁴ Furthermore, the anticipation of exposure to the emitted air pollution is reliant on insecure perceptions. Key to the expected ambient health impacts are considerations of scarcely populated, downwind, high-impact areas and crowded, upwind, low-impact areas. In this relation, the panel points out the questionable certainty these calculations are relying on and the considerable remaining risk. Compliance with certain regulatory standards can thereby not be granted. Finally, the management's assessment does not sufficiently consider the probable emerging impacts on health and fails to address the subsequent effects in economic and social terms, neither for the Waterberg district nor for transboundary impacts in Botswana.³⁵

The raised claims relating to climate change, primarily address the Bank's potential leverage and in this case the potential refusal of a new large-scale coal plant on South African ambitions to reduce its greenhouse gas (GHG) emissions. In response, the management emphasizes the

³² World Bank, 2011, p.69

³³ World Bank, 2011, pp.85f

³⁴ World Bank, 2011, p.88

³⁵ World Bank, 2011, pp.89f

efficient nature of a modern coal plant, the implementation of a renewable energy component to the project and the general non-existence of a policy, that relates to climate change, that could be violated. Despite the fact that OP/BP 4.00 addresses adverse transboundary impacts and requires compliance with international environmental agreements, the panel admits that there is no operational policy that explicitly covers climate change, that South Africa's commitment to the Copenhagen Accord is voluntary and investigation on this concern is not applicable. Nevertheless, the panel's report provides profound data addressing GHG, which was later criticised by the Bank's management.³⁶

Regarding the requesters' claims on the Bank's non-compliance to social safeguard policies, the panel admits a high probability of emerging social problems due to an influx of labourers. In particular, additional pressure on social services and local administration, housing and health conditions and infrastructure such as roads, sanitation facilities and waste management. The panel emphasizes the lack of resources and staff of the Lephalale municipality and therefore non-existent mitigation measures. It is noted by the report, that Eskom already provides considerable support, especially on infrastructure such as roads, but that the lack of adequate assessment and identification are in general non-compliant with existing NEMA principles.³⁷

Another requesters' claim addresses the inadequate anticipation, quantification and valuation of costs and benefits of the EISP, as required by OP. 10.04 (Economic Evaluation) and OMS 2.20 (Project Appraisal). Generally, the panel admits the challenges of quantifying externalities, nevertheless, the report points out several shortcomings regarding the identification and valuation of external impacts. Neither health nor environmental harm were adequately evaluated and accounted. Furthermore, the costs and benefits of operative and inoperative sulphur scrubbing facilities were not taken into consideration, as well as the additional water demand of adversely associated projects. Hence the requirements for risk-adverse and cautious implementation were violated. In general, the panel states the non-compliance of practices in this regard, based on OMS 2.20 and OP 10.04. Due to these shortcomings, the application of reasonable cost-benefit calculations was impossible and therefore prevented an adequate consideration of alternatives.³⁸

Undoubtedly, many of the EISP's conceptual shortcomings could lead to impacts on livelihood and local poverty reduction. The requesters especially referred to expected effects on agriculture, livestock rearing and ecotourism. In contrast, the management assured that

³⁶ World Bank, 2011, pp.98ff

³⁷ World Bank, 2011, pp.110ff

³⁸ World Bank, 2011, pp.115ff

appropriate measures are in place and the fear of detrimental impacts is unfounded. OP/BP

4.00 requires special attention for environmental injustice against vulnerable parties and OP 1.00 (Poverty Reduction) demands the implementation of an increase of opportunity, to empower and enhance security for the communities. In fact, prospects are mixed. On the one hand, tourism might increase, and industrial expansion could lead to higher incomes and more employment opportunities. On the other hand, the EISP's impact on landscape, habitat and wildlife might reverse effects on tourism and expanding industries could equally narrow agricultural farmland and threaten livestock rearing due to impacts on water resources and air pollution. Furthermore, the panel found no direct benefits or attempts to approach inclusive development strategies. Overall, the assessment of possible effects on poverty and livelihoods was neither properly assessed nor backed by any empirical analysis and in effect not compliant with the policies' requirements.³⁹

The requesters' claims that relate to impacts on cultural heritage and expected restrictions to their cultural practices, fear narrowed access to grave sites and limited availability of traditional medicines. Additionally, involuntary resettlement took place by virtue of the wind, solar and rail projects in the Waterberg district. In this case, the panel's findings approve the management's statement that no significant impacts have to be feared and all measures and mitigation processes were in place. Gravesite replacement and resettlement took place under consideration of ethical and appropriate standards with the involvement of the local communities and affected.⁴⁰

In conclusion, it is important to emphasize that the request was filed 2 days before the Bank approved the loan. Therefore, refer the claims to concerns that had not yet materialised when the panel investigated the EISP. This made it difficult for the panel to put pressure on the management. In effect, the management emphasized in its response to the panel's report that no Action Plan is required, due to the lack of emergencies that arose. Furthermore, the management repeatedly stated its confidence in the applied mitigation, monitoring and response measures by Eskom and the South African administration.⁴¹ The following paragraph will dive into the latest developments of Medupi, and further critique on the EISP and current data.

³⁹ World Bank, 2011, pp.119ff

⁴⁰ World Bank, 2011, pp.125ff

⁴¹ World Bank, 2012, pp.97f

5. In the Aftermath

Taking into consideration the broad variety of shortcomings, misconceptions and inconsistent practices, it is important to grasp upon current data and the latest developments in relation to the EISP to final classify the consequences of these failures. A major adversely related impact is an effective increase in energy prices of 140% between 2008 and 2012. Especially delicate that this is mainly affecting households since industrial users are still backed by their long-term contracts with Eskom.⁴² Indeed, the growth and “development” of unsustainable energy solutions and extractivism can hardly be considered as a net gain. Instead of implementing sustainable, long-lasting, independent solutions, the EISP represents tremendous harm and threats in the form of pollution, degradation, depletion and waste, with all their social and economic consequences.⁴³ Therefore it is also questionable how far the World Bank’s basic objective of poverty alleviation was pursued. In contrast, national sustainability and energy security could have been enabled by clean energy projects of comparable capacity. In fact, the government announced 28 renewable energy projects in 2011, by leveraging private capital by lower operational costs than with coal.⁴⁴ As stated above, the lack of private capital just required the involvement of the World Bank as a lender of last resort, since energy prices did not cover the operational costs which led to a poor rate of return. In July 2017 Eskom secured another US\$ 1,5 billion loan from the China Development Bank because of a massive cost overrun. In December 2017, the fourth of six units was linked to the grid. Due to technical issues, strikes, problems with subcontractors and cost overrun, the project is now delayed by 7 years and is expected to be completed in 2019.⁴⁵ Obviously, the EISP did not support South Africa’s independence, since it is now reliant on further financial support, which represent a long-term binding to the international development institutions. While the management emphasises the economic importance of Medupi and the harm of further blackouts that would diminish economic growth in South Africa, the latest studies on Medupi’s economic importance are more conservative. Without Medupi, the GDP would be 3.15% lower in 2019.⁴⁶ In contrast, the following paragraph will present what costs arise due to the externalities of Medupi.

Regarding the external costs and benefits of the EISP, it was emphasized in the panel’s report that the impacts were poorly evaluated. In fact, Eskom was granted an exception from complying with the newly issued minimum emission rates for all its plants. According

⁴² Bohlmann et al., 2011, pp.451f

⁴³ Bond, 2010

⁴⁴ Thomas Reuters Foundation, 2018

⁴⁵ Energy Business Review, 2017

⁴⁶ Bohlmann et al., 2011, p.450

to Greenpeace the externalities of Medupi alone account for up to US\$ 17 billion. The estimation takes into account about 2,800 deaths per year related to air pollution, neurotoxic effects, hospital admissions and respiratory diseases linked to pollution with all social and economic consequences and long-term impacts.⁴⁷ As presented above, coal mining also threatens water security in the foreseeable future. The Waterberg district already suffers from severe water scarcity. Nevertheless, Eskom is defined as a prioritised strategic water user of national importance.⁴⁸ Problematic is, that EISP's reliance on the Limpopo River and its tributaries will affect the shared watercourse and the downstream neighbours of South Africa: Botswana, Mozambique and Zimbabwe. With an additional demand of 12 million m³ water per year, significant consequences are likely to occur.⁴⁹

Furthermore, more coal plants are underway to meet South Africa's future energy demand, which will require up to 35 new coal mines.⁵⁰ In effect, renewables will only make up 9% of South Africa's energy supply by 2030, whereas 50% would be realistic and 94% could be possible by 2050, if South Africa would have stepped back from coal, according to Greenpeace.⁵¹ The problem is that these coal-reliant and carbon-intensive projects locked South Africa into a fossil pathway for the next 50 years. Between 2008 and 2010, 56% of all energy-related World Bank loans engaged with fossil projects, of which half were using coal. The World Bank misses its catalysing potential to channel private and public capital into less carbon-intensive infrastructure projects and to promote renewable energy projects. Also, in relation to poverty alleviation, renewable energy would be more effective, since renewables create more lasting jobs (12,6 per GWh) compared to coal (0,7 per GWh).⁵²

Regarding the structural shortcomings, certain inconsistencies with OP/BP 4.00 can be recognised that should be addressed in order to improve the approach and to enable security and clarity for borrowers, requesters and the general public. What is striking, is the management's reliance and trust in Eskom's capacities and degree of self-regulation. In contrast to the gaps and shortcomings of the South African legal framework, the management's analysis of Eskom's practices and policies states that these gaps would be fully addressed and covered.⁵³ In relation to earlier World Bank infrastructure projects in India, Randeira brought up the concept of the cunning state. This notion is coined on a government playing the weak

⁴⁷ Pinson, 2015, pp.18f

⁴⁸ Steele, 2012, pp.9ff

⁴⁹ Amerasinghe and Porter, 2011, pp.5ff

⁵⁰ Pinson, 2015, pp.18ff

⁵¹ Pinson, 2015, pp.26f

⁵² Zacune, 2011, pp.5ff

⁵³ World Bank, 2011, p.46

negotiator in a poorly defined nexus of law, regulations, norms and institutions. She especially points out the blurring distinctions between law and policies on a national and international level.⁵⁴ In the case of the EISP, the Bank's management can be seen in a similar position regarding OP/BP 4.00. Relating to the panel's findings a fragmentation of functions and responsibilities can be recognised between the Bank, Eskom and the South African authorities that stems from an obvious lack of overall coordination. In relation to the requesters' claims concerning impacts on water resources and air pollution, the EISP's externalities, cumulative effects, costs and the extent of the project were vastly underestimated, as presented above. To prevent such dilutions of accountability in the future, the panel's investigation of the structural shortcomings will help. Admittedly, the intentions of OP/BP 4.00 are remarkable and represent an important attempt to relocate power, empower borrower countries, enhance ownership and entrench sustainable development. In contrast, this will only prove to be successful if OP/BP 4.00 is applied in a more adequate, consistent and transparent manner.

6. Conclusion

In conclusion, the EISP is a delicate and questionable project. Most of the recognised shortcomings and misconceptions can be related to the World Bank's belated engagement with the project. In effect, many inadequate assessments and considerations impinge in severe externalities, especially related to impacts on water resources and air quality. Furthermore, the faulty assessment, recognition and valuation of externalities led to fallacious estimations of the EISP's benefits. Hence, the World Bank's management not only failed to properly evaluate alternatives on the basis of consistent cost-benefit calculations. It also missed the basic option to refuse and dismiss a project that does not comply with World Bank policies. Relating to the question if the World Bank has learned its lessons over time⁵⁵, this project shows the attempt to approach a more inclusive and participatory implementation process. Nevertheless, it also shows the remaining weaknesses of large-scale infrastructure projects applied by the Bank. Moreover, this case highlights the contentious potential of the fact that all claims must refer to violated World Bank policies. Proper anticipation and mitigation seem only to be relevant and necessary during conception. Yet, first impacts materialise and the real costs become apparent. Undoubtedly, the World Bank had the constitutional potential to apply its policies and use its leverage to conduct an environmentally, socially and economically sustainable infrastructure

⁵⁴ Randeira and Gunder, 2011, pp.187ff

⁵⁵ Also see: Treakle, Fox and Clark, 2003

project, that would have been based on participative and inclusive partnership measures with the borrower country. The panel's report shows, that the World Bank failed to realise this chance.

Statement of Originality

I, Philipp Wachsmann, hereby insure that the following work is my own. I have not altered any other works or aid-materials completely or in part without proper indication. All aspects, which make use of other works in the wording or the sense, have been cited with the correct source information. This applies also to designs, sketches, figurative representations, etc. as well as to sources from the Internet. I am familiar with the methodology of proper citation.

A handwritten signature in blue ink, appearing to read 'Philipp Wachsmann', with a stylized flourish at the end.

14.03.18, Kassel

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