

Cooperative environmental governance: At the coalface of sustainable infrastructure development in South Africa

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Abstract

In this article, large-scale infrastructure development is situated within the sustainability paradigm with an emphasis on questions about environmental impact. While the focus is on South Africa, the article contributes to the broader body of law and governance scholarship that deals with the complexity inherent in the search for infrastructure development that meets the demands of sustainability. The authors attend specifically to the role of cooperative environmental governance (CEG). They set out to explain the existence of and difficulty surrounding the legal duty of the South African government to pursue sustainability via its development-related decision-making processes. The prominence of the notion of cooperative government in South Africa's democratic government system is highlighted whereafter the authors evaluate the role of CEG in government decisions that they regard to be in need of an inclusive and holistic approach to sustainability. The difficulty inherent in marrying CEG with the pursuit of sustainability in large-scale project developments is explained with specific reference to the controversial Medupi and Kusile power station projects. In conclusion, the authors briefly outline the provisions of the 2014 Infrastructure Development Act and ask if and how the Act can cater for CEG through a limited environmental impact but can still adhere to the requirements that

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government decisions pass the tests of the Constitution and framework environmental legislation.

1 Introduction

The role of infrastructure development in developing countries and the range of accompanying challenges have been explored from different scholarly angles for many years.¹ The lack of adequate infrastructure is understood to impede economic development and overall progress in society.² Water, energy, transport, adequate housing and other infrastructure are regarded as key sources of development and as prerequisites for continued growth. Infrastructure development has been aptly described as ‘the great enabler’ that ‘enables economic growth and, as a result, it is the bedrock for better living conditions’.³

With its democratic transition, South Africa adopted a transformative Constitution⁴ that promises social transformation.⁵ The kind of progress and change necessary to effect this transition depends on infrastructure expansion. The government seems acutely aware of this fact. In July 2014, the Infrastructure Development Act⁶ (the Act) entered into force. This officially marked the moment where the government confirmed its commitment to economic growth and development through large-scale infrastructure projects. The Act makes it clear that in years to come, infrastructure development will be given priority in planning, approval and implementation (that is, it will be fast-tracked); and that national development goals will be promoted through infrastructure development.⁷ This is

¹See Ostrom *et al* *Institutional incentives and sustainable development: Infrastructure policies in perspective* (1993); Briceño-Garmendia *et al* *Infrastructure services in developing countries: Access, quality, costs and policy reform* (2004); Calderón and Servén *The effects of infrastructure development on growth and income distribution* (2004); and Bardhan and Mookherjee ‘Decentralisation and accountability in infrastructure delivery in developing countries’ 2006 (116)508 *The Economic Journal* 101-127.

²OECD *Promoting pro-poor growth infrastructure* (2006). available at www.oecd.org/dac/povertyreduction/36301078.pdf (accessed 2014-06-01) 1 June 2014).

³GIZ ‘Sustainable Infrastructure’ available at http://www.giz.de/en/ourservices/sustainable_infrastructure.html (accessed 2014-06-01).

⁴See Langa ‘Transformative Constitutionalism’ 2006 *Stell LR* 351-360; Moseneke ‘The Fourth Bram Fisher Memorial Lecture – Transformative Adjudication’ 2002 *SAJHR* 309-319; and Liebenberg ‘Needs, rights and transformation: Adjudicating social rights’ 2006 *Stell LR* 5-36, among others.

⁵See Feris ‘The role of good environmental governance in the sustainable development of South Africa’ 2010 (13) 1 *PER* 76.

⁶Infrastructure Development Act 23 of 2014 (GN 37712 in GG 2014-06-02).

⁷The Act builds upon the 2012 National Infrastructure Plan.

in addition to the fact that between 2009 and 2014 one trillion rand has been invested in public infrastructure in South Africa.⁸

Twenty years ago the Constitution of the Republic of South Africa, 1996 (the Constitution) pronounced a commitment to sustainability, inclusive of social, economic and environmental dimensions. It did so via the inclusion of an enforceable substantive environmental right. Since then the constitutional protection of environmental interests and the government's duty to pursue ecologically sustainable development have infiltrated various areas of public decision-making by virtue of an extensive environmental law and policy framework.⁹ The country's commitment to the protection of its natural resource base conjointly with socio-economic development also features prominently in the National Development Plan 2030,¹⁰ the National Framework for Sustainable Development and the National Strategy for Sustainable Development and Framework and Action Plan (NSDD 1).¹¹ One of the most recent sector-specific national policies that reiterates the constitutional environmental guarantee is the National Climate Change Response White Paper.¹² The White Paper explicitly restates and explains the government's undertaking to ensure climate-resilient development¹³ across all sectors.

Yet, despite two decades of environmental law and policy development that focuses on sustainable development, the new Infrastructure Development Act clearly accentuates the social and economic dimensions of sustainable development.¹⁴ The narrow focus of the Act and its pervasive downplay of the environmental dimension have been contentious from the initial adoption of the Draft Infrastructure Development Bill,¹⁵ the reason being that the Bill, and now also the Act, set out to regulate and precipitate government decisions of which the outcome may potentially have significant negative environmental impacts.

In the Constitution one also finds the pledge that the government will be expected to cooperate internally and to seek to establish and maintain good relations among the organs of state situated in the three arms and three spheres

⁸ State of the Nation Address by President Jacob Zuma (13 February 2014) available from South African Government Online at <http://www.gov.za/speeches/index.php> (accessed 2014-06-20).

⁹For a general overview see Glazewski and du Toit *Environmental law in South Africa* (2013).

¹⁰*National Development Plan 2030: Our future – Make it work* (2012) (the NDP) 197-216.

¹¹Department of Environmental Affairs (DEA) *South African National Framework for Sustainable Development* (2008) and the DEA *National Strategy for Sustainable Development and Framework and Action Plan* (NSDD 1) (2011-2014) available at:

https://www.environment.gov.za/?q=content/documents/strategic_docs/national_strategy_sustainable_development/ (accessed 2014-03-08).

¹²*National Climate Change Response White Paper* (2012) (White Paper).

¹³Climate resilient development is defined in the White Paper at 13.

¹⁴See, eg, the Preamble and s 2 of the Act.

¹⁵Draft Infrastructure Development Bill, 2013 (GN 99 in GG 36143 2013-02-08).

of government.¹⁶ Cooperative government explicitly manifests in the environmental context. In fact, CEG may be described as the mainstay of South Africa's framework environmental legislation. The National Environmental Management Act (NEMA) provides for CEG through the provision of principles for decision-making on matters affecting the environment, institutions to promote cooperative governance, and procedures for coordinating environmental functions in the public sector.¹⁷

Against the background of the recently promulgated Infrastructure Development Act and the range of impacts that the future fast-tracking of infrastructure development is expected to have, the objective of this article is to re-envision the notion of CEG and its role in sustainable development in South Africa. More specifically, government decision-making in large-scale infrastructure developments that are likely to have a detrimental impact on the environmental dimension of sustainability is called into question. The authors use as their conceptual lens some of the documented concerns that have in recent years emanated from the approval and development of the Medupi and Kusile coal-fired power stations in combination with some established principles and features of (effective) CEG. An ancillary objective is to determine whether or not any headway has been made with the 2014 Infrastructure Development Act.

In the first part, large-scale infrastructure development is situated in the sustainability paradigm with an emphasis on environmental impact. The complexity inherent in the search for infrastructure development that meets the demands of sustainable development in the wide sense is discussed. The second part explains the prominence of the notion of cooperative government in the democratic government system of South Africa. This discussion serves as the basis for the subsequent evaluation of the role of CEG in government decisions that require an inclusive and holistic approach to sustainable development. Part four depicts the difficulty of marrying CEG with the pursuit of sustainability in large-scale project developments, with specific reference to the Medupi and Kusile cases. The fifth part provides a brief outline of the provisions of the 2014 Infrastructure Development Act and questions whether and how the Act caters for CEG through limited environmental impact but nevertheless requires that government decisions to pass the provisions of the Constitution and framework environmental legislation.

¹⁶Chapter 3 of the Constitution.

¹⁷Act 107 of 1998 Preamble and chapters 1-5 of the NEMA.

2 The wickedness of 'sustainable infrastructure development' versus 'sustainable development thinking'

South Africa needs efficient transport, sanitation, energy and communications systems, for example,¹⁸ if it wants to prosper and provide a decent standard of living for its people.¹⁹ At the same time, the literature in the fields of human rights, sociology, anthropology, environmental management and sustainability studies deals fully with the significant environmental and non-economic social impacts that often accompany the expansion of infrastructure.²⁰ It follows that conventional infrastructure development juxtaposes the social, economic and environmental interests that people have.

Twenty-one years ago, Slocombe pronounced that 'making specific choices about land use, wildlife protection, and resource development that are acceptable to entire communities and regions, and that are sustainable, may be the hardest task we face in the coming decades'.²¹ He was right. The detrimental impact of large-scale infrastructure projects on water resources and air and soil quality, for example, is a cause for much concern, as is the ineffectiveness of environmental law and policy to achieve objectives such as the protection of water reserves and to curb land degradation.²² The implementation of large-scale projects with a significant carbon footprint and impact on resource availability categorically contradicts the call in international environmental law for the reduction of CO₂

¹⁸See Department of Performance Management and Evaluation and Development Bank of Southern Africa *The state of South Africa's economic infrastructure: Opportunities and challenges* (2012) 6, available at <http://www.gov.za/issues/national-infrastructure-plan/> (accessed 2014-06-10); Presidential Infrastructure Coordinating Commission: *A summary of the South African National Infrastructure Development Plan* (2012) available at <http://www.gov.za/issues/national-infrastructure-plan/> (accessed 2014-06-10) and the NDP (n 10) 160-161.

¹⁹See OECD *Promoting pro-poor growth infrastructure* (2006) available at www.oecd.org/dac/povertyreduction/36301078.pdf (accessed 2014-06-01).

²⁰Some of the common environmental harms include: the pollution of river systems when wastes and tailings are dumped; the uncontrolled spread of pollution or by-products resulting from construction and operations; and changes to patterns of fish migration and to the delicate biodiversity of rivers. See Oxfam Australia 'Issues and Impacts' available at <https://www.oxfam.org.au/explore/infrastructure-people-and-environment/oxfams-work-on-infrastructure-development/> (accessed 2014-06-02).

²¹Slocombe 'Environmental planning, ecosystem science, and ecosystem approaches for integrating environment and development' (1993) (17)3 *Environmental Management* 289-290.

²²See the analyses of the state of different environmental sectors in Department of Environmental Affairs *Environmental sustainability technical report* (2012) available at <http://soer.deat.gov.za/newsDetailPage.aspx?m=66&amid=13539> (accessed 2014-06-05).

emissions; the transition to low carbon economies; and the development of adaptive capacity.²³

It can be discerned from the vast number of documents and reports on the topic that most governments, developers and funding agencies agree in principle that infrastructure development is necessary but that it must also be sustainable. Yet finding and maintaining the intricate balance between the intertwined social, economic and *environmental* (our emphasis) dimensions of sustainable development is very difficult.²⁴ Cultivating the sustainability balance²⁵ amounts to dealing with a plethora of antinomies, as sustainable development is plagued by inherent conflicts and the need to compromise when choosing between things that seem equally important and desirable. This contrariness can be explained with reference to the South African economy's strong reliance on natural resource- and mineral-dependent industrial and social development.²⁶ It is not possible for the country to progress or for the socio-economic conditions of people to improve without large-scale industrial development and infrastructure expansion.²⁷ Both of these are necessary to alleviate poverty and to sustain the country's competitive participation in regional and global markets. At the same time, the inevitable cumulative short- and long-term negative impacts of industrial, technological and other infrastructure developments on the country's finite natural resources as well as on the protection of people's cultural, health and other non-economic interests bring into question issues of equality and social and environmental justice.²⁸

²³See, eg, the *Rio+20 The future we want outcome* document (2012) available at <http://www.un.org/en/sustainablefuture/> (accessed 2014-06-05) and the UNFCCC *Durban roadmap of implementation* (United Nations FCCC/CP/2011/9/Add.1) 2012.

²⁴Slocombe (n 21) 289-290 and Field 'Sustainable development versus environmentalism: Competing paradigms for the South African EIA regime' (2006) *SALJ* 413.

²⁵For a detailed discussion see W du Plessis and AA du Plessis 'Striking the sustainability balance in South Africa' in Faure and W du Plessis (eds) *The balancing of interests in environmental law in Africa* (2011) 413-458.

²⁶See Department of Performance Management and Evaluation and Development Bank of Southern Africa n 18) 62-64; 78-86.

²⁷These developments typically include coal mining, nuclear energy plants and hydrological fracturing ('fracking') facilities, infrastructure for ports, the extension of access to the energy grid and gas pipelines. Sch 3 of the Act provides for the expansion of communication technology, integrated urban space and public transport projects and water and sanitation infrastructure, for example.

²⁸See, eg, Christie *The constitutional and statutory role of local government in the sustainable development of communities affected by mining* (LLM dissertation, NWU (Potchefstroom Campus) (2010) and Field 'Public participation in environmental decision-making: *Earthlife Africa (Cape Town) v Director-General: Department of Environmental Affairs and Tourism and Another* 2005 (3) SA 156 (C) 122' 2005 *SALJ* 748-764.

It follows that from the perspective of sustainable development, for want of a better word, it is necessary that 'trade-offs' be made in decisions on infrastructure development between environmental protection and socio-economic priorities. Institutional difficulties complicate the matter. The current design of South African law, for example, demands that large-scale project developments be considered and authorised by a range of government departments. Authorisation involves an extensive range of authorities (and state-owned enterprises) situated in all three spheres of government. The installation of a cross-border gas pipeline or the large-scale extension of the electricity grid would typically involve several national and provincial departments, such as the departments of Cooperative Governance and Traditional Affairs, Energy, Human Settlements, International Relations and Cooperation, Mineral Resources, Public Enterprises, Rural Development and Land Reform, Transport, Economic Development, Finances, Water Affairs, and Environmental Affairs, as well as local authorities (municipalities). The priorities, the perceived status, policy ideals, leadership strengths and human and financial resources available to these government agents are always uneven – 'when a decision-maker, whether an administrative official or a judicial officer, takes into account sustainable development in the decision-making process, he or she inevitably makes a value-based judgment'.²⁹ Yet, while their mandates, focuses and values differ, partly as a result of their fragmentation, all these institutional agents act under the constitutional duty to protect the environment and to pursue sustainable development.³⁰ Understandably the fragmentation arising from the different regulatory and geographical focus, objectives and priorities of the state institutions involved in the approval of large-scale projects adds to the 'viciousness' of the pursuit of the sustainability balance.³¹

Such development has both positive and negative implications for civil society, which in the South African context can best be described as a melange of ethnicities, values, interests, cultures and beliefs. Many provisions found all over the Constitution and legislation compel government to meaningfully involve the private sector and community-based stakeholders in decision-making and approval processes – especially in the initial phases of a proposed development.³² These legal arrangements support the rights-based protection of civil society's

²⁹Feris (n 5) 88.

³⁰Section 7(2) read with s 24 of the Constitution.

³¹This is confirmed by the tone in which the NDP frames and discusses fragmentation in government. See the NDP (n 10) 154.

³²See, eg, ss 31 and 32 read with s 24 of the Constitution and s 2(4)(f)-(h) of NEMA.

environmental, cultural and socio-economic interests.³³ The constitutionally entrenched protection of these interests is regarded as one of the pillars of social justice and transformation and has in recent years often been judicially confirmed.³⁴ But the heterogeneous nature of South African civil society is such that one can hardly expect its contribution to the debate to be consistent or homogeneous.

It follows that achieving and maintaining the sustainability-balance in government's planning, consideration, approval and implementation of large-scale projects is difficult. In fact, the decision-makers tasked with performing this balancing act with all procedural requirements in mind are confronted with a textually clear, constitutionally entrenched duty, the actual execution of which, however, requires that they solve a 'wicked problem'.³⁵ This dilemma echoes Rittel and Webber's description of policy problems such as sustainable development as 'wicked problems', that is, as forming part of a class of social system problems that are ill-formulated, where the available information is confusing, where there are many role-players and decision-makers with conflicting values, and where the ramifications of the whole system are thoroughly confusing.³⁶

It is our hypothesis that 'sustainable development thinking' and a more 'catch-all' concept of sustainability's social, economic and environmental dimensions may assist the authorities tasked with the complex duty of planning for, considering, authorising and implementing infrastructure projects.³⁷

The practical implications of 'sustainable development thinking' are thus explained with significant emphasis on the need for comprehensive information on the direct and indirect impacts as well as the immediate and cumulative social, economic and environmental impacts of developments. The institutional design of government and the position of decision-makers in government further impact on sustainable development thinking as:

³³The Bill of Rights in ch 2 of the Constitution contains various socio-economic rights that protect interests related to housing, property, the environment, culture, language, religion, health, children, etc.

³⁴See, eg, *Director: Mineral Development Gauteng Region v Save the Vaal Environment* 1999 2 SA 709 (SCA) and *Bengwenyama Minerals (Pty) Ltd v Genorah Resources* (CCT 39/10) 2010 ZACC 26 (30 November 2010).

³⁵See ss 7(2) and 24 of the Constitution and further *W du Plessis and AA du Plessis* (n 25) 427-434.

³⁶Rittel and Webber 'Dilemmas in a general theory of planning' 1973 (4) *Policy Sciences* 155-169.

³⁷This premise also finds support in the reasoning of Field (n 24). She supports in this article an understanding of sustainable development that comprises equity (social considerations) and economic and environmental interests.

[t]he manner in which legal regulatory decision-making has traditionally been parcelled out amongst the various components of the state administration seems clearly to function as a further constraint on adopting sustainable development thinking.³⁸

In similar vein, turf protection between government departments and intergovernmental discrediting or belittling of each other in decision-making processes intensify the implied fragmentation and may have undesirable and unsustainable results.³⁹

Cooperative government is one of the governance instruments that can facilitate the inclusive approach to sustainable development in government decision-making on and implementation of infrastructure developments. In a nutshell, cooperative government means that organs of state in the three spheres of government, 'bonded together by a common loyalty to the country, its people and the Constitution', co-operate to secure the well-being of people.⁴⁰ This understanding has been a focus area in environmental law research for a number of years already.⁴¹

3 The instrumental use of cooperative environmental governance

3.1 *The legal framework*

Cooperative environmental governance (CEG) is a sector-specific form of cooperative government.⁴² The Constitution provides that all organs of state across the national, provincial and local spheres of the government must cooperate in good trust and good faith.⁴³ A number of principles guide the relationship and interaction between national and provincial government departments, municipalities and semi-state institutions.⁴⁴ According to these principles, government actors must assist, support and inform one another of, and consult one another on, matters of common interest, for example.⁴⁵ Government

³⁸*Ibid* 420.

³⁹See Kotzé 'Improving unsustainable environmental governance in South Africa: The case for holistic governance' 2006 (9)1 *PER* 76 at 89-94.

⁴⁰Steytler and De Visser *Local government law* (2007) 16-3 and W du Plessis 'Legal mechanisms for cooperative government in South Africa: Successes and failures' 2008 (23) *SAPR/PL* 90.

⁴¹See, for example, W du Plessis (n 40) 87-110; Kotzé (n 39) 75-110.

⁴²Kotzé (n 39) 99. See also Bosman, Kotzé and W du Plessis 'The failure of the Constitution to ensure integrated environmental management from a co-operative governance perspective' 2004 (19) *SAPR/PL* 412-414.

⁴³Section 41 of the Constitution.

⁴⁴*Ibid*.

⁴⁵Section 41(1)(h).

actors must further cooperate with one another by coordinating their actions and legislation,⁴⁶ while they may not encroach on each other's geographical, functional or institutional integrity.⁴⁷

The constitutional principles are further extended in national legislation. The Intergovernmental Relations Framework Act 13 of 2005 (the IGRFA) and its Regulations provide for the establishment of intergovernmental structures.⁴⁸ They further regulate the conduct of intergovernmental relations⁴⁹ and the settlement of intergovernmental disputes.⁵⁰ Notably, chapter 3 of the Act acknowledges the potential for intergovernmental tension and the possibility that a lack of integration may occur in multi-sector, multi-stakeholder projects and programmes that involve different government spheres and/or departments.⁵¹ A mandatory implementation protocol (also referred to as a memorandum of understanding in the Implementation Protocol Guidelines (2007) (the Guidelines)⁵² is provided for projects or programmes dealing with the execution of authority on issues of national priority and when it will assist with inter-governmental coordination in a specific area.⁵³ It is an agreement where the implementation of a policy or the exercise of a public power or function depends on the participation of more than one organ of state in different government spheres. A typical example is an electricity project that involves the departments responsible for public works, energy, finance, housing, local government and traditional affairs in the national and provincial spheres as well as municipalities. In general, an implementation protocol constitutes a formal agreement between the parties and serves as a code of conduct in joint projects where the aim is to achieve an objective of the government.⁵⁴ The protocol sets out the roles and responsibilities of the parties.⁵⁵

Key non-governmental stakeholders may also form part of an implementation protocol where they have an important role to play in promoting some aspects of

⁴⁶*Ibid.*

⁴⁷Section 41(1)(g). The kind of coordination and cooperation envisaged by the Constitution is difficult to achieve, given the fact that the government comprises three different spheres in which a range of different government institutions operate. In the national sphere alone, a total number of 47 departments, institutions or line functions exist. Many different directorates and portfolios are situated in these structures. As suggested above, the mandates, objectives and functional powers of the three spheres vary considerably, as do their constituencies, their levels of capacity, their political will, and their resources.

⁴⁸Chapter 2 of the Act.

⁴⁹Chapter 3 of the Act.

⁵⁰Chapter 4 of the Act.

⁵¹See W du Plessis (n 40) 105.

⁵²GN 696 in GG 30140 2007-08-03.

⁵³Section 35(2) of the IGRFA.

⁵⁴Paragraph 3 of the Guidelines.

⁵⁵Paragraph 4.5 of the Guidelines.

the protocol.⁵⁶ It is thus possible to use a protocol to manage the conduct of key non-governmental stakeholders such as companies, developers or private service providers. Typical examples of such non-governmental stakeholders include mining companies and financial institutions such as the Development Bank of Southern Africa. In the protocol, parties must determine, agree on and state the institutional mechanisms, including their composition and functions that are necessary for effective management and implementation.⁵⁷ Notably, the emphasis falls on integration as opposed to mere coordination among government actors. The institutional mechanisms include decision-making mechanisms and measures for the management of possible conflicts, which renders an implementation protocol highly relevant for decision-making with respect to the approval of large-scale infrastructure developments. The management of sustainability conflicts may also be provided for. However, in the absence of clear criteria it would be difficult to determine which types of projects constitute a 'national priority', which determination would render an implementation protocol obligatory.⁵⁸ This leaves the adoption of implementation protocols voluntary in many instances.

The Minister also published Framework/Guidelines for Managing Joint Programmes (2007),⁵⁹ which contains principles to inform participation and coordination between organs of state in the same sphere – for example, different departments situated in the national or provincial spheres, such as the departments responsible for energy, water and finance. The Framework *inter alia* provides that before joint projects such as multi-actor infrastructure development projects are implemented, scoping studies must be carried out to determine the scale and time frame of the project.⁶⁰ The same scoping study must be used to determine the nature of a project before it commences.⁶¹ The principles in the Framework may be made part of an implementation protocol in large-scale infrastructure projects that involve the private sector and two or more actors in any of the spheres of government.

The NEMA, South Africa's framework environmental law, provides for cooperative environmental government, specifically.⁶² It is significant that the NEMA's overall objective is to realise the constitutional environmental right

⁵⁶ *Ibid.*

⁵⁷ Paragraph 4.8 of the Guidelines.

⁵⁸ As explained above, in the consideration of a single project, various interests and priorities perceived through the lenses of economic growth, different environmental government agents will grade environmental protection or socio-economic development differently.

⁵⁹ GN 696 in GG 30140 3 August 2007.

⁶⁰ Paragraph 4.

⁶¹ *Ibid.*

⁶² See the detailed discussion by W du Plessis (n 40) 94-97.

through intergovernmental cooperation, consultation and support.⁶³ In the Preamble to NEMA it is explicitly stated that the law should 'promote certainty with regard to decision-making by organs of state on matters affecting the environment', and 'establish procedures and institutions to facilitate and promote cooperative government and intergovernmental relations.' The NEMA principles⁶⁴ also make it abundantly clear that 'development must be socially, environmentally and economically sustainable'⁶⁵ while 'the social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment'.⁶⁶ The NEMA lays down four further principles directly relevant to the present discussion: 'decisions must be taken in an open and transparent manner';⁶⁷ 'there must be intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment';⁶⁸ 'actual or potential conflicts of interest between organs of state should be resolved through conflict resolution processes'; and 'the environment is held in public trust for the people'.⁶⁹ The relevance of these and other NEMA principles lies therein that they must direct and determine if and how the South African government approves of large-scale infrastructure development projects that involve multiple state and other parties.

Chapters 2 and 3 of the NEMA are devoted to institutions and procedures for cooperative government. It is provided, for example, that the Minister responsible for environmental affairs may establish any forum or advisory committee and determine its composition and functions.⁷⁰ Some of the instruments for CEG provided for in the Act include environmental implementation plans, environmental management plans and environmental outlook reports.⁷¹ Chapter 5 is devoted to integrated environmental management and *inter alia* provides that one of the objectives of integrated environmental management is to 'ensure that the effects of activities on the environment receive *adequate consideration before actions are taken* (our emphasis) in connection with them'⁷² and to 'ensure the consideration of environmental attributes in management and decision-making which may have

⁶³Preamble to NEMA.

⁶⁴Section 2 of the NEMA contains a list of national environmental management principles that apply throughout the Republic to the actions of all organs of state that may significantly affect the environment (s 2(1) of NEMA).

⁶⁵Section 2(3).

⁶⁶Section 2(4)(i).

⁶⁷Section 2(4)(k).

⁶⁸Section 2(4)(l).

⁶⁹Section 2(4)(o).

⁷⁰Section 3A.

⁷¹Sections 11 and 16A of the NEMA.

⁷²Section 23(2)(c). [Own emphasis.]

a significant effect on the environment.⁷³ Explicit provision is furthermore made for the 'mainstreaming of environmental management' in decision-making⁷⁴ and environmental authorisations via impact assessment procedures, environmental management programmes, etc.⁷⁵ It follows that the NEMA provides for governance instrumentation that must be adopted and used in developments of any kind that may potentially have an environmental impact. 'Adequate consideration' of environmental impact is, however, potentially put in jeopardy the moment that any environmental evaluation that must inform government's decision-making processes is expedited.⁷⁶

What can be gleaned from the legal provisions above and what do they suggest as far as CEG towards sustainable large-scale infrastructure development is concerned?

First of all, cooperative government is a constitutionally set ideal as well as a duty of the entire government. The Constitution contains broad principles that mainly serve to provide some direction to decision-makers. The IGRFA is slightly more explanatory, while useful governance instruments exist in terms of its Regulations. As far as it concerns CEG *per se*, the NEMA makes provision for directive principles while it statutorily creates instrumentation to inform and facilitate collaboration and coordination in environmental decision-making and practice. Some failures and successes with CEG in South Africa have been recorded.⁷⁷

How to avoid the lack of recognition and some of the CEG failures in the infrastructure development context? With its reference to the 'public trust', the NEMA confirms that South Africa's natural resources are in the hands of the government, while there is prominent emphasis on the accompanying need for the estimation and integrated management of environmental impacts. To the extent that most large-scale infrastructure development projects will require an environmental impact assessment (EIA) to be performed and that decisions regarding existing and forecast environmental impacts will depend heavily on the interpretation and evaluation of the outcome of the EIA process, a lot seems to depend on the NEMA process. But EIA processes usually emphasise the environmental dimension of sustainable development. An EIA can therefore not be considered to be the instrument that will provide all-encompassing and

⁷³Section 23(2)(e).

⁷⁴Section 23A.

⁷⁵Section 24.

⁷⁶In addition to the overarching provisions and instruments in the NEMA, CEG has also permeated sector-specific environmental legislation. The National Environmental Management: Integrated Coastal Management Act 24 of 2008 (NEM: ICMA) offers one of the best sectoral examples of mechanisms for CEG. See ch 5 and ss 51 and 52 of the Act.

⁷⁷See W du Plessis (n 40) 106-107.

adequate information on the three dimensions of sustainability. At most, it is one of several reports and sources of information that will be on the cards once decision-makers from the various spheres and arms of government gather to decide whether to go ahead with an infrastructure development project, or not. It is exactly at this juncture where the adoption of an inclusive sustainability approach through CEG appears to be most elusive. Alarming, it is also at this stage that definitive future outcomes are both purposely and inadvertently being shaped.

Is there any other feasible solution other than to beg for the government's compliance with and use of the legal framework for CEG? Is it possible for government decisions to be taken that complement the nested features of sustainability and that cater for all three of the dimensions of sustainable development in a fair, just and responsible way? Is there a way to secure that those intergovernmental decisions on the approval and implementation of large-scale infrastructure projects are in the final instance taken with sustainability as the guiding objective?

The next part of this article briefly considers the features and some requirements of 'effective' CEG in the search for potential answers. Our point of departure is that on the basis of the criteria for effective CEG perceived through the use of the GEG instrumentation provided for in the existing South African law framework, enough regulatory instruments are available to facilitate government decisions that reflect an understanding of the interconnected nature and oneness of the three constituent dimensions of sustainable development; and maintain the necessary degree of focus on the environmental dimension in the approval and implementation of large-scale infrastructure development projects.

3.2 Effective' cooperative environmental governance

It is possible to discern from the existing literature⁷⁸ some benchmarks that have been established for effective CEG. Effective CEG comes about when many government agents with different agendas, varying ideals and distinguishable mandates manage to overcome the problems created by factors such as the separate training of experts on the three dimensions of sustainability; habitual collection of data separately under the three sustainability dimensions and the (common) division of government mandates into separate social, economic and ecological portfolios.⁷⁹ Effective CEG and intergovernmental decision-making are

⁷⁸The literature is to be found in the fields of governance studies, public administration, policy-making, geography, planning, and public administration.

⁷⁹See Gibson 'Beyond the pillars: Sustainability assessment as a framework for effective integration of social, economic and ecological considerations in significant decision-making' (2006) (8)3 *Journal of Environmental Assessment Policy and Management* 259; Kotzé (n 39) 75-110; and W

further said to require that: a) all decision-makers be brought to the decision-making table;⁸⁰ b) decision-makers arrive at a collective and implementable decision based on an integrated understanding of sustainability;⁸¹ c) collaborative intergovernmental 'organisation' or structural arrangements are sustained throughout the life-cycle of a project;⁸² and d) for the purposes of an integrated approach to sustainability, decisions are based on an assessment of sustainability.

The latter benchmark is arguably the most novel in the present discussion. It has in recent years been suggested that an integrated approach to decision-making where sustainability is concerned requires that information be generated on the basis of sustainability *vis-à-vis* environmental or other types of impact assessments. Gibson argues that assessment for the purposes of decision-making towards sustainability outcomes requires a package of regime and process design features/components for making viable decisions.⁸³ These components are not limited to the idea of sustainability as they include: a) sustainability assessment that is built into a larger overall governance regime and that is designed to respect interconnections among issues, objectives, actions and effects and that spans all of the activities from broad agenda setting to results monitoring and response; b) design assessment and decision-making processes with an iterative conception-to-resurrection agenda aiming to maximise multiple, reinforcing net benefits through selection, design and adaptive implementation of the most desirable option for every significant project-level undertaking; c) explicit basic rules that discourage trade-offs to the extent possible while guiding decision-making on those trade-offs that are unavoidable; d) means of combining, specifying and complementing generic criteria and trade-off rules with attention to case and context-specific concerns, objectives, priorities and possibilities; e) integrative, sustainability-centred guidelines, methods and tools to help meet the key practical demands of assessment and decision-making; and f) the facilitation of public scrutiny and effective public participation in government's decision-making process.

The benchmarks for effective CEG do not offer an exhaustive list that would apply to every situation under all circumstances. They do, however, suggest that effective CEG with respect to large-scale infrastructure development requires at a minimum: that government decisions be based on assessments of different

du Plessis (n 40) 87-110.

⁸⁰Holley and Gunningham 'Natural resources, new governance and legal regulation: When does collaboration work?' (2011) 24 *New Zealand Universities LR* 315.

⁸¹*Ibid.*

⁸²*Ibid.*

⁸³See Gibson (n 79) at 259-260, and 268-277, respectively.

kinds throughout the lifecycle of an infrastructure development project; that the selection of the most desirable options be pursued for instance with respect to the use of alternative and less natural resource-intensive technologies; the establishment of general and very specific decision-making rules where trade-offs between competing interests (such as cultural heritage protection versus water conservation) are unavoidable; the adoption/development of instruments, guidelines and methodologies for decision-making and implementation that are focused on sustainability in the broad sense (such as representation on decision-making structures, management and planning instruments pertaining to the development itself, information-based instruments for government and public use, monitoring, etc.); as well as the involvement of all interested and affected parties – including traditional communities, for example.

4 Medupi and Kusile and infrastructure developments to come

4.1 Introduction

Is it necessary for government decision-making on infrastructure development to be singled out as an issue of concern as far as sustainability is concerned, and as an issue that renders it necessary to resurrect questions about the effectiveness of CEG specifically? The next two sections illustrate by way of a mostly anecdotal account of available information how the environmental impact of recent infrastructure developments such as large coal-fired power stations (Medupi and Kusile specifically) are indeed not negligible in a country that has a pristine yet vulnerable environmental resource base, while the government recently committed itself in terms of law to what can best be described as a future renaissance of infrastructure development.

4.2 Medupi and Kusile: The background

In response to South Africa's shortage of power, which was brought about by an increased growth in economic activities as well as by a growth in the population, Eskom, the country's main and until recently only producer of power, has launched what it calls a so-called 'new build process'.⁸⁴ Part of this process has been the approval, the construction and the commissioning *inter alia* of two new coal-fired power stations, the Kusile and Medupi Power Stations.

Kusile is close to the existing Kendal Power Station in the Nkangala District of the Mpumalanga Province. The site is approximately 1 355 hectares in size and is Eskom's most advanced coal-fired power plant project. Usually, a coal-fired

⁸⁴Bignaut *et al* *The external cost of coal-fired power generation: the case of Kusile 2* (2012).

power station takes approximately ten years to build. Due to the capacity constraints described above, the Kusile project has been fast-tracked, however, in the hope that completion would take only about eight years. Medupi will eventually consist of six units, each rated at approximately 800 MW installed capacity, providing a total of 4800 MW. Once finished, the station will be one of the largest coal-fired power stations in the world. Anglo Coal will provide the required coal supplies.⁸⁵ The combination of the resources is expected to yield not less than 800 million sales tons over a period of not less than 47 years.⁸⁶

The Medupi Power Station Project⁸⁷ has been described as 'the aspiration of a developing country'. Its purpose is to satisfy South Africa's own national energy needs as well as those of six of its neighbouring countries that will continue to be dependent on South Africa for the foreseeable future.⁸⁸ Medupi is one of the largest construction projects in South Africa's history and, once completed, the 4800 MW Medupi will be the biggest dry-cooled⁸⁹ power station in the world. The boiler and turbine contracts for this power station are the largest contracts that Eskom has ever signed in its 86-year history.

The Medupi project was approved in December 2006 by the then Minister of Environmental Affairs and Tourism and others at a cost of R32 billion. In the years that followed, the Strategic Electricity Plan of Eskom called for an increase in supply requirements. As a result, approximately R92 billion was required by 2013 for the six-unit station. It follows that while the initial specifications of the project remained the same, its configuration changed over time and the project continues to expand in terms of its costs.⁹⁰

⁸⁵The New Largo and Zondagfontein collieries.

⁸⁶More information is available at Eskom Kusile Power Station Project at <http://www.eskom.co.za/c/article/58/kusile-power-station/> (accessed 2013-06-16).

⁸⁷The power station was formerly known as Project Alpha and Charlie. It has later been renamed Medupi which means 'rain that soaks parched lands, giving economic relief'.

⁸⁸For recent reports on progress in this regard see 'Medupi-linked water scheme delayed but "poses no risk" to start up' (2014) *Mining Weekly*, 3 March, available at <http://www.miningweekly.com/article/medupi-linked-water-scheme-delayed-but-poses-no-risk-to-start-up-2014-03-03> (accessed 2014-06-24).

⁸⁹Due to the limited availability of water in the Lephalale area, dry cooling has been preferred to wet cooling. Still, the Department of Water Affairs had to allocate the required quantities of water for the first three units of the Medupi plant from the Mokolo Dam reservoir, and to make provision for the last three units from the Crocodile West Water Transfer Scheme, which it has yet to construct.

⁹⁰Minister of Public Enterprises in response to question 834 posed in Parliament on 23 April 2012. Parliamentary Monitoring Group: Public Enterprises available at <http://www.pmg.org.za/node/34186> (accessed 2014-03-03).

4.3 *Government approval of Medupi and Kusile in the face of sustainability concerns*

The approval of Kusile and Medupi unleashed several controversies relevant to the environmental dimension of sustainable development.⁹¹ One of the issues concerns the intergovernmental authorisation processes. Of concern to many remains the fact that the National Energy Regulator of South Africa (NERSA) approved Medupi and Kusile despite: a) the government's CO₂ reduction pledge,⁹² b) South Africa's express commitment to renewable energy expansion as opposed to coal-based energy,⁹³ and c) wide-spread NGO, academic and public outcry.⁹⁴ In other words, the government's approval of the projects seems to have contradicted some of its own environmentally oriented policies and to have gone against the wishes of the broader society. A key concern that is downplayed in the environmental profiling of Medupi and Kusile is that the two facilities necessitate the expansion of new and existing coal mines. Conservative estimates suggest that the two facilities alone will increase coal consumption by 1.7GT3, or roughly ten percent of South Africa's remaining coal reserves. The coal combustion processes and associated coal mining activities that are necessary for the operation of Kusile and Medupi, more specifically, raise concerns about water quality, air quality and health impacts as well as about potential negative effects on climate mitigation efforts.⁹⁵

Further, while sources of Eskom information abound about the environmental soundness of Kusile and Medupi, very little is being stated about the cumulative environmental impact and any future, still undeterminable social and environmental impacts of the larger project development. Also, while most reports – including those published by Eskom – acknowledge that water scarcity is an issue and the potential impact of the facilities on underground water resources, not much more is being stated other than that attempts will be made to limit the impacts. The ways in which the impact on air quality will be limited and mitigated

⁹¹Most recently, in June 2014, the health impacts and social costs of Eskom's proposed non-compliance with mandatory air emission standards came under the spotlight with specific reference to larger power stations such as Medupi and Kusile. See Myllyvirta 'Health impacts and social costs of Eskom's proposed non-compliance with South Africa's air emission standards' (2014) available at <https://badbreathe.wordpress.com/2014/03/27/health-impacts-and-social-costs-of-eskoms-proposed-non-compliance-with-south-africas-air-emission-standards-greenpeace-internaional/> (accessed 2014-06-24).

⁹²To be read against the objectives and content of the National Climate Change Response White Paper (2012).

⁹³For instance, the White Paper on Renewable Energy of November 2003, which sets out a policy objective for the uptake of renewable energy of 10000 Gwh contribution to final energy demand by 2013.

⁹⁴Coetzee, Daniel and Woolfrey *An overview of the political economy of South Africa* (2012) 5.

⁹⁵Blignaut *et al* (n 84) 2.

are described in somewhat more detail, although it is also not widely known to what extent the government and Eskom are collaborating with the Botswana Department of Environment on regional air quality monitoring, for example. It is further anticipated that Medupi and Kusile will emit approximately 60 million tons of CO₂ annually (excluding the CO₂ emissions from construction, transports and coal mining).⁹⁶ Blignaut indicates that when considering a range of global damage costs of between \$0.8/tCO₂, the estimated damage cost of Medupi and Kusile is between R350 million and R49 billion per year. The most likely range is between R6.3 billion and R10.7 billion per year. He indicates that this converts to a damage cost of between R0.10 and R0.17/kWh when assuming a net combined generation capacity of 8 688 MW and a load factor of 85 per cent, which leads him to conclude that:⁹⁷

After considering the cost of renewable electricity generation technologies as per the IRP,⁹⁸

it was estimated that, for the most part, it would be possible to develop the same amount of installed capacity as the two power plants, using the damage cost only, in less than 20 years. That implies that over the 50-year life-span of Medupi and Kusile the alternative installed capacity of renewable energy technologies could have been more than doubled.

In the case of Medupi, significant funding had to be obtained from the World Bank. The World Bank's involvement and its own system of checks and balances subsequently resulted in alarming environmental information being generated. A year and a half-long investigation by the Bank's Inspection Panel in 2011, for example, criticised the Bank for having insufficiently taken health, water scarcity and the pressures on local services into account when it supported the Medupi plant through its \$3.75 billion loan.⁹⁹ The internal investigative report also suggested shortcomings in the EIA and Record of Decision. The sequencing of the EIA process, for example, raised questions with regards to the adequacy of

⁹⁶Blignaut 'Climate change: The opportunity cost of Medupi and Kusile power stations' (2012) (23)4 *Journal of Energy in Southern Africa* 67-73.

⁹⁷*Id* 72-73.

⁹⁸Department of Energy *Integrated Resource Plan for Electricity 2010-2030* available at http://www.energy.gov.za/files/irp_frame.html (accessed 2013-06-20).

⁹⁹This World Bank Inspection Panel? The confidential content of the World Bank Inspection Report was leaked to the the public domain in 2011 and is no longer readily accessible. See in this regard Friedman 'Auditors find World Bank skipped policy steps in approving huge South African coal plant' 2011 *ClimateWire* (2 December) available at: <http://www.minesandcommunities.org/article.php?a=11350> (accessed 3 March 2014).

the assessment, evaluation and mitigation phases.¹⁰⁰ The environmental management plan (EMP) for the construction and operation of Medupi was claimed to be vague to the extent that the actions that were said to have been taken were generalised and performance targets were absent in many cases.¹⁰¹ It also found that the Bank's steps to mitigate Medupi's estimated 25 million metric tonnes of greenhouse gas emissions were lacking.¹⁰² The panel called the World Bank's statement at the time of the loan, that its partnership with South Africa would over the long-term serve to lower the country's emissions trajectory, 'overly optimistic', given that Medupi will emit significant levels of GHGs.¹⁰³ But in reviewing the controversial Medupi loan (to which the United States of America and others in the World Bank boards refused support) the inspection panel was most critical when it came to water, finding that while Bank management studied the availability of water to run the power plant, it did not dwell on what impact the use of those resources might have on other users – including the access and water pollution impacts.¹⁰⁴ The specific impacts flagged in the report include the expansion of the Grootegeluk Mine to supply Medupi with coal, additional river-based sand excavation from the Mokolo River for Medupi's construction, and phases one and two of the Mokolo-Crocodile (west) Water Augmentation Scheme.¹⁰⁵ All of these projects are governed by legally required environmental authorisation processes, but the developments and their cumulative impacts would not have been necessary in the first instance if alternatives to the construction of Medupi could have been found.¹⁰⁶

As indicated at the beginning of this article, industry is often quite aware of the need to pursue sustainability through its activities and to safeguard the environmental dimension of sustainable development. Eskom is not an exception in this regard. It merits mentioning that Medupi, for example, attempts to stay in

¹⁰⁰See Morgan 'Medupi: Enviro Minister needs to lead a major compliance audit of power station impacts' 2011 *DA Newsroom*, 13 December, available at <http://www.da.org.za/newsroom.htm?action=view-news-item&id=10128> (accessed 2014-03-05).

¹⁰¹*Ibid.*

¹⁰²Friedman (n 99).

¹⁰³For the most recent recorded information see Myllyvirta (n 91).

¹⁰⁴Friedman (n 99).

¹⁰⁵See the (then) Department of Water Affairs and Forestry *Mokolo-Crocodile (west) Water Augmentation Project Feasibility Study: Technical Module* (2009) available at <http://www.dwa.gov.za/Projects/MCWAP/Documents/Technical%20Module/Supporting%20Report%206.pdf> (accessed 2014-03-05).

¹⁰⁶See Morgan (n 100). In 2007 Eskom carried out comprehensive and independent EIA studies for the Medupi coal power plant and separate EIA studies for the associated facilities including the transmission lines between the plant and other sub-stations. The EIA resulted in an environmental authorisation from the DEA – i.e. the necessary environmental authorisations were obtained. Eskom has also received a permit from the former Department of Water Affairs on the allocation of water for the Medupi plant to be sourced from the Mokolo Dam reservoir, for example.

line with environmental law and policy through the work of a so-called 'eco'-team of four people who are responsible for the audit-based monitoring of environmental law compliance and for the monitoring of specific environmental issues such as waste management.¹⁰⁷ An EMP is in place for the development and operation of the site, while Eskom attempts to resort to the cleanest available options in the construction and operation of its sites, such as solar water heating and an electricity savings campaign.¹⁰⁸

4.4 *Lessons learned from an infrastructure future in the waiting*

It is early days for Medupi and Kusile as far as their positive and negative overall sustainability impacts are concerned. To what extent they will have contributed towards the pursuit of infrastructure development that meets the sustainability requirement may be known only years into the future. For the moment, however, it is possible to conclude that it appears on the basis of documented information, that more could have been done on the part of government to safeguard the environment, which could have been achieved by heeding the NEMA principles and those legal arrangements for CEG that are aimed at sustainable development. Still, we are also the first to agree that it is certainly easier to critique the government's decision-making processes in hindsight, and that some of the scholarly and other inputs that followed only after Medupi and Kusile had already been given the go ahead may have been of far greater use and value if they had been available earlier on.

Medupi and Kusile are certainly not the last large-scale projects that South Africa is going to see approved, and the future should draw on the historical lessons learned. They were approved prior to the Parliament's 2014 endorsement in law of the future pursuit of extensive infrastructure developments of different kinds. Recently the President announced that plans for the financing of the next

¹⁰⁷For informal reporting on the efforts made towards compliance with environmental law and environmental management on the Medupi site, see Vermeulen 'Utility complete Medupi coal stockyard study' 2012 *Engineering News*, June, available at <http://www.engineeringnews.co.za/article/eskom-completes-medupi-coal-stockyard-study-2012-06-29> (accessed 2014-06-04). It is stated in the report that the Medupi Project has, for example, has, for example, obtained ISO14001 Environmental Management System certification which, on the basis *inter alia* of the EIA studies conducted identifies issues and environmental impacts and puts programmes and procedures in place to manage such impacts.

¹⁰⁸See Eskom Medupi Power Station Project available at http://www.eskom.co.za/Whatweredoing/NewBuild/MedupiPowerStation/Pages/Medupi_Power_Station_Project.aspx (accessed 2014-06-04).

large coal-fired power station, Coal 3, 'will be speeded up'.¹⁰⁹ It is hoped that Medupi and Kusile will continue to serve as critical laboratories of experimentation and for examining how government decisions should or should not be made in future.¹¹⁰ On this basis, in the final part of this article we examine to what extent the 2014 Infrastructure Development Act caters for CEG and facilitate an inclusive approach to sustainable development in the decisions required of government.

5 A wicked problem 'solved'? The 2014 Infrastructure Development Act

The features and impacts of every infrastructure project are different. For example, only some will match or exceed the size and complexity of Medupi and Kusile. South Africa's 2014 Infrastructure Development Act (IDA)¹¹¹ testifies to the fact that the country is due to engage in infrastructure projects of all kinds.¹¹² The kinds of developments that will be pursued and fast-tracked¹¹³ include, for example, mining, electricity generation and transmission, communication technology, municipal infrastructure and the building of schools and hospitals.¹¹⁴ The 'strategic integrated projects' (SIPs) that are provided for are public infrastructure projects that consist of one or more installations, structures, facilities, systems, services or processes.¹¹⁵ Deliberate mitigation measures

¹⁰⁹State of the Nation Address by President Jacob Zuma (17 June 2014) available from South African Government Online at <http://www.gov.za/speeches/index.php> (accessed 2014-06-20).

¹¹⁰Both of the 2014 State of the Nation Addresses by President Jacob Zuma put emphasis on Medupi and Kusile. The President observed *inter alia* that the Energy Security Cabinet Subcommittee will ensure that Eskom receives the support it requires to fulfil its mandate and that it remains focused on achieving its goals and targets; and that 'There are some urgent activities that we [government] are engaging in, in the short term. Progress at Medupi power station construction site will be accelerated.' See the 2014 State of the Nation Addresses delivered on 13 February 2014 and 17 June 2014, respectively, available from South African Government Online at <http://www.gov.za/speeches/index.php> (accessed 2014-06-20).

¹¹¹Act 23 of 2014.

¹¹²The objectives of the Act include to identify and implement strategic integrated projects which are of significant economic or social importance to the Republic and to create a statutory instrument to 'unblock' obstacles to the expeditious implementation of the national infrastructure plan. Section 2 of the Act outlines nine specific objectives.

¹¹³One of the objectives of the IDA as set out in its Preamble is to ensure that infrastructure development in the Republic is given priority in planning, approval and implementation.

¹¹⁴Sch 3 of the IDA outlines 18 strategic integrated projects that will exist when the Act commences.

¹¹⁵'Strategic integrated projects' and 'infrastructure' are both defined in s 1 of the IDA. 'A strategic integrated project is defined as 'a public infrastructure project or group of projects contemplated in section 7 and may comprise of one or more installation, structure, facility, system, service or process relating to any matter specified in Schedule 1 or which had been added by the Council in terms of section 7(1)(a). ...Infrastructure is defined as installations, structures, facilities, systems,

aside, many of the infrastructure projects to come are likely to have negative environmental impacts.¹¹⁶ Every project will require different types of approvals, authorisations, licences, permits and/or exemptions from organs of state in the three government spheres.¹¹⁷ It follows that the entry into force of the IDA is highly significant for the re-evaluation of CEG. The two questions that are most relevant for the present analysis are: a) to what extent is provision made for CEG in the facilitation and coordination of public infrastructure developments to come; and b) how do the measures for CEG (if any) fare against the benchmarks for effective CEG and environmental law?

The IDA is about improving the management of infrastructure during all life-cycle phases including planning, approval, implementation and operation.¹¹⁸ One of the explicit objectives is 'the alignment and dedication of capabilities and resources for the effective implementation and operation of strategic integrated projects across the state in order to ensure coherence and the expeditious completion of infrastructure build and maintenance programmes'.¹¹⁹ In order to achieve the objectives of the Act a number of institutional structures are created. These include the Presidential Infrastructure Coordinating Commission,¹²⁰ the Council¹²¹ and the Management Committee¹²² and implementing structures such

services or processes relating to the matters specified in Schedule 1 and which are part of the national infrastructure plan'.

¹¹⁶Some of the inevitable environmental impacts associated with large-scale infrastructure development have been referred to in paras 1 and 2 above.

¹¹⁷'Approval, authorisation, licence, permission or exemption' is defined in section 1 of the Act as any of these 'which in terms of any relevant law requires one or more of the following- a) the consideration of jurisdictional facts; b) the consideration of certain requirements or criteria; or c) the exercise of a discretion whether or not to grant the approval, authorisation, licence, permission or exemption; and includes decisions in respect of environmental authorisations, the zoning of land or any planning, use or development of land'.

¹¹⁸Preamble to the IDA.

¹¹⁹Section 2(1)(c) of the IDA.

¹²⁰Section 3. The Commission acts through the Council, which has the following members: the President; the Deputy President, Ministers designated by the President, the Premiers of the Provinces, and the Executive Mayors of metropolitan councils as well as the chairperson of SALGA (the South African Local Government Association).

¹²¹Ss 3 and 4. The functions of the Council are set out in s 4 and include, for example, the coordination of the determination of priorities for infrastructure development.

¹²²Section 6. The main objective of the Management Committee is to support the Council and to see to the implementation of the Council's decisions. The Committee and its chairperson are appointed by the President from the ranks of the Council.

as the Secretariat,¹²³ and steering committees¹²⁴ for each SIP. Provision is also made for processes relating to the implementation of SIPs¹²⁵ and for inter-governmental reporting.¹²⁶ It is further provided that the Act may be extended through the publication of regulations, guidelines and targets relating to skills development, the Green Economy, rural development and local industrialisation, for example.¹²⁷

The legislature has succeeded through the IDA in creating an institutional framework and order whereby it will be possible to fast-track any identified SIP. At face value the various decision-making forums that will probably soon be established go a long way towards making cooperative government as envisioned in chapter 3 of the Constitution and the IGRFA, possible. Provision is made for several structures that, once they are established, should get the ultimate authorities from different sectors together around a single decision-making table.

As far as making specific provision for CEG is concerned, though, the Act disappoints. Against the background of the constitutional environmental duty that is shared among all organs of state (including the ministry responsible for economic development) as well as the principles in the NEMA that must guide all relevant decisions of the government, the narrow focus of the IDA is alarming.

¹²³Ss 9 and 10. The Secretariat of the Commission is appointed by the President and consists of Ministers and Deputy Ministers. It is chaired by the Minister responsible for economic development. The Secretariat's duties include coordinating the implementation of SIPs, ensuring that members of a SIP steering committee 'have the skills and capabilities to properly perform their functions', and 'issu[ing] guidelines relating to the manner in which a steering committee must perform its functions'.

¹²⁴Sections 10-12. Every SIP is overseen by a steering committee as far as its implementation and operation are concerned. A steering committee consists of the appointed SIP coordinator and of persons 'representing departments and other organs of state affected by the strategic integrated project'. These persons may include officials in any of the three spheres of government that are responsible for the environment: water affairs, public works, spatial planning and land use management, for example. S 12(5) provides that a member of a steering committee must have the relevant knowledge, skills and experience in his or her field of work so as to enable the committee to perform its functions effectively and expeditiously. Notably, a member of the steering committee has the authority to take decisions 'on behalf of the organ of state he or she represents' excluding any decision to grant an approval, authorisation, licence, permission or exemption and provided that the necessary authority has been delegated or assigned to him or her. It is the steering committee of a SIP that is responsible for full legal compliance with all applicable laws.

¹²⁵These processes include: The identification of all required approvals, authorisations, licences, permissions and exemptions required to enable the implementation of the SIP and processes related to the actual approvals (including the EIA) and accompanying consultation and public participation processes. See ss 14, 15, 17 and 18 of the Act.

¹²⁶Section 19 determines that the Minister responsible for economic development must on a quarterly basis report to the Council and Management Committee on each SIP. This amounts to reporting to the President or the Deputy President as the chairperson of the Council. No provision has been made, however, for wider reporting to any or all of the affected divisions and departments in the three spheres of government.

¹²⁷Section 21.

Nowhere in the Act is any reference made to the obligation for decisions on infrastructure development to be in line with or to complement sustainable development, for example. Throughout the text of the IDA the emphasis falls on economic development, 'economic equality and social cohesion', and development that is of 'economic and social importance'. There is no explicit acknowledgment of the fact that in the consideration, planning and implementation of the SIPs, the pursuit of sustainable development with its embedded environmental, economic and social dimensions must be pursued. On the contrary, it is for example provided that: 'Every organ of state must ensure that its future planning or implementation of infrastructure or its future spatial planning and land use is not in conflict with any strategic integrated project implemented in terms of the Act.'¹²⁸

It would be wrong, however, to suggest that the environment and measures for CEG are altogether excluded from the Act. Section 2(2) of the IDA states that '(a)ny person exercising a power in terms of this Act must do so in a manner that is consistent with the Constitution'. This implies that every decision taken by any of the structures provided for must conform with the section 24 environmental right and the section 27(1)(b) right of access to sufficient water, for example. In principle, provision is also made for the representation of environmental authorities on the SIP steering committees¹²⁹ while all environmental laws will have to be complied with in the approval and implementation of a SIP.¹³⁰ EIAs must also be done when so required in terms of the NEMA.¹³¹

Still, the IDA would not have established any new decision-making bodies if the decision-making processes that are already in existence sufficed. The Act was promulgated to achieve a very specific purpose – to fast-track identified SIPs. While the call for cooperative government is heard throughout the text, the recurring theme is the accelerated approval of any identified SIP. Despite the IDA's provision for representative decision-making structures and its creation of opportunities for collective intergovernmental decision-making on infrastructure development, it fails to compel decision-makers to consider every SIP through the lens of sustainability and to base their decisions on the principles known to underpin sustainable development. Another concern is that the negotiation process that must follow the refusal by the environmental authorities to grant a required environmental authorisation does not seem to provide for inclusive and

¹²⁸Section 8(4)(a) of the IDA.

¹²⁹Section 12(1).

¹³⁰Section 15.

¹³¹Section 18 read with ch 5 of the NEMA.

participatory review of the original decision.¹³² The opportunity for stakeholders and role players other than government to have a say in the steering committee and Secretariat's 'second round' consideration of the environmental authorisation is also not clear. In fact, given the objective with the IDA and the functions of the Secretariat, it is also not clear that the usual administrative processes of appeal and review will be fully upheld.

However, all is not necessarily 'lost' as far as it concerns infrastructure development that will enable an inclusive sustainability approach and that will adequately cater for the elements of effective CEG. The Minister responsible for economic development may in consultation with the Council make regulations regarding any matter that may or must be prescribed in terms of the IDA and any ancillary or incidental administrative or procedural matter which it is necessary or expedient to prescribe for the proper implementation or administration of the Act.¹³³ Regulations of this kind may typically be developed in the form of rules and guidelines for actual decision-making processes in the SIP steering committees. In other words, it is possible in principle for the Minister to develop rules and guidelines to direct the way in which six, ten or twenty Ministers and other organs of state responsible for the identification and implementation of a SIP eventually make a decision on the basis, for example, of the inclusive consideration of all sustainability concerns or 'trade-off' scenarios triggered by a proposed SIP. One of the functions of the Secretariat is also to issue guidelines relating to the manner in which a steering committee must perform its functions.¹³⁴ The composition of the steering committees in terms of skills and capabilities¹³⁵ and the proper and continuous training of steering committee members may also assist to prevent the taking of decisions in a careless and desperate way.

6 Conclusion

The desire to achieve sustainable infrastructure development may appear to be farcical if one takes account of Rittel and Webber's statement of more than 40 years ago that:

With wicked problems ... any solution, after being implemented, will generate waves of consequences over an extended – virtually an unbounded – period of time.

¹³²Section 15(4) and (5) merely provides that 'if the approval, authorisation, licence, permission or exemption is not granted the relevant authority must provide reasons for such refusal to the steering committee and the applicant' and the 'steering committee must, without delay, report to the Secretariat the outcomes of all applications for approvals, authorisations, licences, permissions and exemptions'.

¹³³Section 21 of the Act.

¹³⁴Section 10(f) of the Act.

¹³⁵As required by s 10(e) of the Act.

Moreover, the next day's consequences of the solution may yield utterly undesirable repercussions which outweigh the intended advantages or the advantages accomplished hitherto.¹³⁶

The most prominent policy governing the infrastructure renaissance expected to take place in South Africa in the near future is the 2014 Infrastructure Development Act. It caters for cooperative governance in its own way, albeit with a very specific objective in mind – the fast-tracking of infrastructure development. Whether or not it will assist to provide and meet the requirements for effective CEG is highly questionable. We are not convinced that the outcomes of the Act will necessarily pass the muster of South Africa's constitutional and framework environmental law with its emphasis on sustainable development.

It has been stated that the 'genius of the sustainability concept is its insistence on interconnections and interdependencies'.¹³⁷ Sustainable development as called for in section 24 of the Constitution, the NEMA and in various national environmental and planning policies, demands government decision-making that searches for the links between matters and seeks mutually reinforcing gains on all fronts. In the end it is neither about balancing interests nor about compromises. It is about integrating and avoiding trade-offs to the fullest extent possible.¹³⁸ Unfortunately, the IDA does not seem to acknowledge this, and may be characterised as simply adding more institutional structures to a legal framework that is already loaded with structures that can facilitate decisions of the kind necessitated by large infrastructure development projects. Except for the brief mention of EIA requirements, there is no acknowledgement in the IDA of other CEG instruments such as EMPs, strategic environmental assessments (SEAs), or implementation protocols.

What seems to be necessary on the basis of the anecdotal account of the Medupi and Kusile cases is a move away from the (mere) statutory creation of additional institutional structures to facilitate intergovernmental decision-making.¹³⁹

What is now needed, especially with the push to implement various SIPs across South Africa, is government decisions directed by inclusive assessments of different kinds (that is, not only EIAs) throughout the lifecycle of projects and the choice of the most desirable options with respect to the use of alternative and less natural resource-intensive technologies. Also the establishment of general and very specific decision-making rules where 'trade-offs' (compromises) between competing social, economic and environmental interests are

¹³⁶(N 36)163.

¹³⁷Gibson (n 79) 266.

¹³⁸Gibson (n 79) 266.

¹³⁹See also the discussion of W du Plessis (n 40) 107.

unavoidable; the adoption, development and effective use of either new or existing instruments, guidelines and methodologies for decision-making; as well as implementation which is inclusively focused on sustainable development. And finally, the involvement of the full range of interested and affected parties – including civil society, the scientific community and financiers.