FRACKING: AN ENERGY DREAM COME TRUE OR AN ENVIRONMENTAL NIGHTMARE?

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SUMMARY

This article investigates the judicial approach the courts are likely to take when they are asked to decide whether hydraulic fracturing, otherwise known as “fracking”, is an acceptable technique or not. The main focus of this article is to investigate whether the legislation put in place is consistent with the constitutional provisions aimed at protecting, on the one hand, the right to a healthy environment, health and life, and on the other hand, the right to promoting justifiable economic and social development. What will be considered is where these rights are likely to come into conflict with each other and how the courts are likely to deal with the issue. Prefacing this discussion is a brief investigation into the nature of fracking; the legislation that will govern the process and the constitutional rights likely to be effected by the technique.

1 INTRODUCTION

Few subjects the world over have divided people on such a large scale than hydraulic fracturing, otherwise known as “fracking”. So, when the people of the Karoo rally together at public gatherings and declare “This is God’s country”, denouncing the idea by emotionally asserting “It’s like you coming and drilling holes in our mother, and then leaving us to look after her and take her to hospital; leave the Karoo alone!!”,1 they are no different from citizens in Pennsylvania in the United States of America or Somerset in England. But, despite that the Karoo has been identified as an ideal site and the first exploration efforts are not far off.

This article looks briefly at the origin and development of fracking; the process itself; the legislative enactments and regulations likely to control the process; what constitutional rights are likely to be affected by fracking. The article will reveal that, when the fracking debate ascends into our courts and rights issues are addressed, a conflict between certain constitutional rights are likely to emerge. This article provides a suggested framework for the adjudication process by the courts.

2 ORIGIN AND DEVELOPMENT OF FRACKING

The method to stimulate shallow, hard rock oil wells was founded by oil producers in the 1860s in Pennsylvania, United States of America. The technique has over time used different substances, including nitro-glycerine, acid and water. Hydraulic fracturing was first experimented with in 1947, but it was really in 2010 when it was commercially executed on a large scale in the United States of America. The idea was extended to other countries, including Germany, Australia, China, Canada and Denmark. But, it was met with great resistance in Europe and elsewhere. France, for example, placed an outright ban in 2011. The threat to the environment became one of the primary concerns in Germany and the United Kingdom. The process was temporarily banned in both countries, but the United Kingdom has since lifted the moratorium and it has just been announced that licences have been awarded to successful explorers. Still, great resistance is shown all over England. Similarly, the South African Government, believed to be one of the biggest financial beneficiaries, removed the moratorium once placed in South Africa. But environmental activists, including the Treasure the Karoo Action Group, the Centre for Environmental Rights ("CER"), Sustainable Alternatives to Fracking and Exploration Alliance ("SAFE") and the Southern Cape Land Committee, fearing that ills will be brought to the environment, peoples’ health and even life, continue to oppose the idea. A renewed attempt has recently been made to have a new moratorium placed on fracking. The last salvo has thus not been fired as both parties are likely to turn to the courts for relief.

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9 Ibid.
3  FRACKING AND THE PROCESS ITSELF

Fracking is a mining operation to extract natural gas, using a technique called hydraulic fracturing. The operation consists of the following method: The process begins with a borehole drilled to some 4 to 5 kilometers below the ground, cutting through many geological layers and aquifers. The shaft is then lined with steel and cement casing. Monitors above the ground signal when drilling should shift horizontally, boring sideways to pierce long-running sections of shale bedrock. Millions of litres of water, mixed with sand and chemicals are then blasted under high pressure into the bedrock, causing the cracking of rock deep underground. That then releases trapped natural gas, methane, from the shale. The gas and water mixture then flows back up to the surface where the gas is separated from the water. While most of the water stays in the well-bore, up to 20 per cent is either re-used for more fracking or injected into disposal wells thousands of feet underground.

4  LEGISLATION AND REGULATIONS APPLICABLE TO FRACKING

The ground-breaking environmental conference in Stockholm in 1972 resulted in many governments facing up to their environmental responsibilities by creating legislation and/or incorporating that responsibility in their constitutions. South Africa is no different as measures have been introduced, both constitutionally and legislatively, to protect the environment. Because the process of hydraulic fracturing includes the use of land and water; industrial processes; energy generation; mining operations; chemical treatment and the like, all contribute to promote fracking operations, which will be monitored against the Constitution and legislative measures.

Some of the legislative measures can be found in the following legislative enactments. The National Environmental Management Act is central to the environmental right enshrined in section 24 of the South African Constitution. The Preamble to the Act guarantees “everyone the right to an environment not harmful to his or her health or well-being” by placing a duty on the State...
"to respect, protect, promote and fulfil the social, economic and environmental rights of everyone". The protection of the environment is both short-term as well as long-term. Any development therefore, has to be sustainable and includes the integration of social, economic and environmental factors in the planning, implementation and monitoring of decisions.

The Environmental Conservation Act, as the name signifies, seeks to conserve and protect the environment. The Act also provides which activities should be subjected to impact assessments before they commence. They could include land use; water use and disposal; industrial processes; energy generation; chemical treatment and the like.

The National Water Act 36 of 1998 aims to meet the basic human needs of the present and future generations. These include the equitable access to water; facilitating social and economic development; reducing and preventing pollution and contamination of water resources. National Government is viewed as public trustee and custodian of the water resources. Where processes are water-intensified, for example, fracking, such water use must be authorized by the Minister of Water Affairs and Forestry. The Minister’s decision could be influenced by, inter alia, the availability of water resources and the impact of fracking on our water.

The Water Service Act guarantees access to basic water and sanitation, necessary to secure an environment not harmful to human health or well-being.

Because fracking is regarded as a mining operation, the process will also have to comply with the provisions of the Mineral and Petroleum Resources Development Act, as amended (MPRDA). The Act includes a number of sections that give effect to rights entrenched in section 24 of the Constitution. The Minister, for example, who is the custodian of mineral rights can grant mining rights in respect of minerals, provided an environmental-impact assessment had been done. To augment any gaps in the regulatory framework governing the hydraulic-fracturing process, the Minister published proposed technical regulations designed to control the

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15 See the Preamble to the National Environmental Act 107 of 1998.
16 Ibid.
17 See s 1 of NEMA.
19 See the Preamble to the Environmental Conservation Act 73 of 1989.
21 See the Preamble to the National Water Act 36 of 1998.
22 See s 3 of the National Water Act 36 of 1998.
24 See The Proposed Declaration Of The Exploration For And Or Production Of Onshore Unconventional Oil Or Gas Resources And Any Activities Incidental Thereo Including But Not Limited To Hydraulic Fracturing As A Controlled Activity GG 36760 of 2013-08-13.
26 See s 2(a) of the Water Service Act.
28 See s 3 of Act 107 of 1998.
process of fracking. The regulations call for *inter alia* environmental-impact assessments and environment studies over the full cycle of the operations.

Being a signatory to the *International Convention on Biological Diversity*, Government has passed legislation in the form of the National Environmental Management Biodiversity Act. The Act contains a very important precautionary clause in that, where there is a threat of significant reduction or loss of biological diversity, but, inadequate or inconclusive scientific evidence is present to prove that, a cautionary approach is advocated. This is aimed at specifically to protect the fauna and flora, endangered species and bird life in the Karoo. The cautionary clause may serve as a handy indicator to the courts when confronted with interpreting an environmental issue such as fracking where insufficient research has been carried out in order to establish whether hydraulic fracturing is a safe method to extract gas from the rock formations.

The Promotion of Administrative Justice Act aims to promote the constitutional right to just administrative action. Any administrative action which has the potential of affecting rights of individuals adversely, must follow fair procedures. Those whose rights may be negatively affected should be afforded every opportunity to oppose such steps or procedures.

### 5 CONSTITUTIONAL RIGHTS LIKELY TO BE AFFECTED

Impact studies the world over have revealed that of the rights most likely to be infringed by the process of fracking, is the right to a healthy environment. Constitutionally, the protection of the environment has been incorporated in the South African Constitution. The Constitution places a positive duty on the Government to protect the environment for now and generations to come. A healthy environment in this context, includes

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30 See s 3 of the Regulation.
31 See s 3(1) of the Regulations.
32 This treaty was adopted at the Earth Summit in Rio de Janeiro on 5 June 1993.
33 See Act 10 of 2004.
34 See s 75(2) of Act 10 of 2004.
36 See Act 3 of 2000 (also known as “PAJA”).
37 See s 4(1) of PAJA. This section provides for “procedurally fair administrative action” including “the holding of public meetings”.
40 See s 24(b) of the Constitution calls for the prevention of pollution, promoting conservation and securing sustainable development.
human health care, free of illness or death; the preservation of plants and animals; an environment free of pollution and water contamination.\textsuperscript{41} What is key to a healthy environment is access to natural resources, including sufficiently clean water.\textsuperscript{42} To this end, socio-economical rights including health care, food, water and social security are guaranteed.\textsuperscript{43} The protection and promotion of these rights extend specifically to children who are guaranteed a right to basic nutrition.\textsuperscript{44}

The right to life\textsuperscript{45} is sometimes adjunct to a right to a healthy environment. With the exception of human dignity, there is no other right enshrined in our Constitution that is more constitutionally protected than the right to life.\textsuperscript{46} It is especially during well suspension and abandonment that scientists have cautioned that this period poses a great risk to life.\textsuperscript{47}

The other constitutional rights most likely to be adversely affected, include the right to have one’s right to dignity and physical integrity respected and protected. The contamination of water, resulting in unnecessary bouts of diarrhea, dizziness, muscle spasms and other problems, may very well impact on those rights.

Public participation in all decisions taken regarding the exploration of shale-gas fracturing is a very important stage of the fracking programme. Here, the Constitution expects the Government to follow transparent and reasonable procedures involving all administrative decisions.\textsuperscript{50} Those sections may be used by community groups to establish the effects of fracking on their lives and well-being.\textsuperscript{51}

Exponents of the pro-fracking programme will find much of importance in the following constitutional rights to advance their cause. Section 9 affords

\textsuperscript{41} See s 24(a) of the Constitution provides that “everyone has the right to an environment that is not harmful to health or well-being”.

\textsuperscript{42} See s 25(4)(a) of the Constitution.

\textsuperscript{43} See s 27(1)(b) of the Constitution.

\textsuperscript{44} See s 28(1) of the Constitution.

\textsuperscript{45} See s 11 of the Constitution deals with the right to life which is an absolute, unqualified and inalienable right.

\textsuperscript{46} See S v Makwanyane 1995 (3) SA 391 (CC), 1995 (6) BCLR 665 (CC) par 144: and for a very instructive discussion on the right to life see Chaskalson, Marcus and Bisho Constitutional Law of South Africa (1996) 15-1.

\textsuperscript{47} See Lakani “Could the Benefits of Fracking Outweigh the Disadvantages?” Answer It http://answerit.news24.com/Questionscould%20the%20benefits%20of%20fracking%... (accessed 2014-02-14); and see, however, Regulations 47,48 and 49 in Chapter 5 on the management plans put in place to counter the risks associated with well suspension and abandonment.

\textsuperscript{48} See s 10 of the Constitution.

\textsuperscript{49} See s 12(2)(b) of the Constitution; and see also Pejan, Du Toit and Pollard “Using Progressive Realization and Reasonableness to Evaluate Implementation Lags in the South African Water Sector” 27 October 2011 Paper presented to the Water Research Commission.

\textsuperscript{50} See s 32 of the Constitution regarding access to information; see also s 33 that guarantees reasonable and fair administrative action; and see also Murombo and Valentine “SLAPP Suits: An Emerging Obstacle to Public Interest Environmental Litigation in South Africa” 2011 27 SAJHR 82 90.

\textsuperscript{51} See The Director, Mineral Development Gauteng Region and Sasol Mining (Pty) Ltd v Save the Vaal Environment and Others 1999 (2) SA 709 (A).
individuals the right to “equal protection and benefit of the law”. This section also promotes equal enjoyment of all rights and freedoms, including “economic rights” and “freedom and security of person”. Bearing in mind the potential benefits that the fracking may bring with it, including job creation, cheaper energy and increased revenue, spending on education, health and infrastructure will benefit all South Africans, equally. These benefits also encompass the right to “economic freedom”.

Section 25 of the Bill of Rights deals with property rights, including land rights. The said section provides that “no-one may be deprived of property except in terms of law of general application”. To allow mining operations to take place on private property without an owner’s consent, would amount to an unconstitutional infringement. Where the property is State-owned, a compelling argument may well be made out why the exploration of shale gas should take place. Job creation, cheaper energy, increased Government revenue and the realization of socio-economical rights are some of the factors likely to be advanced.

6 CONTENTIONS LIKELY TO BE RAISED BY THE PARTIES

6.1 Anti-fracking contentions

Although it is uncertain to predict what legal issues are likely to be raised in opposition to the gas exploration and exploitation, it is likely that anti-fracking lobbyists may well assert that the constitutional imperatives and legislative requirements in respect of the consultation process involving the public, had not been met by Government and/or organs of State. The principle of thorough consultation before decision-making, has wide international recognition. Whether or not the applicants will succeed is a question of fact and must be decided as such.

But, the attack most likely to come against the Government and/or organs of State would emanate from their approval of the technology, without greater certainty whether the process is suitable to the South African

52 See s 9(1) of the Constitution.
53 See s 9(2) of the Constitution.
54 See s 22 of the Bill of Rights of the Constitution which provides that every citizen has the right “to choose their trade, occupation or profession freely”.
55 See s 25(1) of the Constitution.
56 Ibid.
57 See s 32 (access to information) and s 33 (right to be listened to) of the Constitution.
58 See s 2 of NEMA regarding the public’s involvement in the decision-making process. Section 2(4)(f) sets out the procedure; see also the National Water Act 38 of 1998 regarding fracking been declared a controlled activity for water use; see further the Mineral and Petroleum Resources Development Act 28 of 2002 as amended providing the sharing of the effect of the regulations with the general public.
60 See Birnie and Boyle International Law & the Environment 2ed (2002) 86; and Van Wyk 2014 Stell LR 43.
61 See Bato Star Fishing (Pty) Ltd v Minister of Environmental Affairs and Tourism 2004 (4) SA 490 (CC); (2004) (7) BCLR 687 par 48 and 49.
conditions or not. In this regard there appears to be a lack of research evidence on fracking.\textsuperscript{62} It is believed that the Nelson Mandela Metropolitan University is currently engaged in a scientific study into a three-year shale-gas research project at a cost of R16-million.\textsuperscript{63} Of great use to the debate could be that the thrust of the argument could go around the controversial drilling technique and its consequences. Scientists believe that breaking up rocks deep underground under high pressure, creates cracks in the rock formation, causing a permanent disturbance, inducing seismicity.\textsuperscript{64} That may also lead to the escape of radioactive elements, posing a significant risk to the environment as valuable water resources, including aquifers, rivers, wetlands and existing drinking water may be contaminated.\textsuperscript{65} The threat of gas emissions through venting and leaks poses a further risk to air quality.\textsuperscript{66} So is the fear that chemical-filled water flowing up to the surface will end up becoming wastewater, thus replenishing our ground-water reserves.\textsuperscript{67} Because water is such a scarce commodity in the Karoo, that will ultimately lead to a shortage of supply of water for human and animal consumption, as well as aquatic life.\textsuperscript{68}

International studies have outlined also that the release of cancer-causing chemicals such as benzene and methane may be catastrophic to human health and safety.\textsuperscript{69} The illnesses include headaches, diarrhea, dizziness and muscle spasms.\textsuperscript{70} It could cause cancer, result in kidney and liver


\textsuperscript{63} See the recent article on fracking in Preller 23 July 2014 The Herald 9.


\textsuperscript{65} See Van Wyk 2014 Stell LR 37–38.


failure and may even lead to loss of life. Besides human life, livestock, wild animals, as well as aquatic life, are particularly vulnerable. So is the serious ecological damages and long-term destruction of ecosystems. The environment it is feared, will ultimately be compromised.

6.2 Pro-fracking contentions

On the other side of the coin, the Government and those private companies who have an interests in fracking, are likely to argue that the technique is not such a great threat to the environment. South Africa, being in a desperate need to keep up with energy demands, instead, is under pressure to find new, cheaper and cleaner energy sources than coal. Fracking will provide a cleaner energy source with lower carbon emissions than coal; thus meeting the standards set by the Copenhagen Accord.

It is said that fracking would have a substantial and benefiting impact on job creation in a country where the unemployment rate is so high. The generation of a large source of revenue would help to reduce poverty; ensure socio-economic empowerment in the educational and health sectors and promote infrastructural development. That should take South Africa a step closer to meeting the United Nations Millennium Development

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75 See King “Shale Gas Energizes Government” 14 September 2012 Mail and Guardian mg.co.za/?article/2012-09-14-00-shale-gas-energizes-government (accessed 2013-09-15).
goal target of poverty reduction in 2015 and beyond.\textsuperscript{79} That in turn, will also help to redress the inequality left by the \textit{apartheid regime}.\textsuperscript{80}

It may well be argued that the environmental danger, mooted by exponents of anti-fracking, represents an unjustifiable hindrance to much needed social development and economic advancement. Government may assert that it has put in place sufficient legislation to protect the environment and the public against any risk of harm.\textsuperscript{81} Support for this may be found in the Government’s attempt to reinforce the legislative requirements by introducing regulations "to augment gaps identified in the current regulatory framework governing \textit{inter alia} hydraulic fracturing …"\textsuperscript{82}

The draft regulations among other things, provide mechanisms to assess the impact fracking may have on the environment, fresh-water resources and biodiversity. They include \textit{inter alia} geological and geo-hydrological assessments prior to a well design and seismicity assessments prior to conducting fracking operations.\textsuperscript{83} Other controls include water management,\textsuperscript{84} waste-management plans\textsuperscript{85} and management plans to prevent spillage and fugitive emissions.\textsuperscript{86} The regulations provide plans for emergency situations\textsuperscript{87} and contingency plans to minimize any risk where adverse predictions are established.\textsuperscript{88}

But, unless those gaps are satisfactorily addressed to guarantee a healthy environment, free from causing ill health, it may well be argued that the draft regulations in their present form are inadequate. The Cape Town-based Centre for Environmental Rights, after considering the proposed fracking-technical regulations,\textsuperscript{89} found that the regulations are, however, "inadequate and flawed". Some of the shortcomings identified include that nothing is built into the present regulations to hold fracking companies to account for any mishaps or negligence; there are no effective means for "public participation in the fracking debate". The Centre is very critical of the reliance placed by the South African Government on the industry standards published by the American Petroleum Institute (API), for the oil and natural-gas industry.

\begin{itemize}
\item \textsuperscript{82} See the Preamble to the Regulations.
\item \textsuperscript{83} See s 6(1) of the Regulations.
\item \textsuperscript{84} See Regulation 30(5).
\item \textsuperscript{85} See Regulation 40.
\item \textsuperscript{86} See Regulations 43 and 44.
\item \textsuperscript{87} See Regulations 43(3) and 44(1).
\item \textsuperscript{88} See Regulation 3(2)(k).
\item \textsuperscript{89} See the GG 36938 of 2013-10-15.
\end{itemize}
Instead, the Centre argues, reliance should have been placed on international standards and best practices.

7 POSSIBLE JUDICIAL APPROACH TO FRACKING

The dispute will probably take the form of review proceedings on motion application. The court would then be obliged to resolve the issues between the parties by following the approach set out in Plascon-Evans Paints Ltd v Van Riebeeck Paints (Pty) Ltd and decide the case on “those facts averred in the applicant’s affidavits which have been admitted by the respondent, together with the facts alleged by the respondent, justifying such an order”. The final relief is generally decided on the respondent’s version.

The question that falls to be decided is whether the fracking technique will have a damaging effect on the environment, causing harm to human, animal and aquatic life. The acceptance or not of the technique thus lies at the heart of the dispute between the parties.

7.1 Applying the law to the possible contentions

The central issue in all likelihood, will focus on the reasonableness or otherwise, of the authorities granting licences to prospective explorers and the impact the decision will have on the constitutional rights of those affected. Here, the court is obliged to apply the applicable legal principles against the backdrop of the Constitution. Section 2 of the Constitution provides that our Constitution is “the supreme law of the Republic. Any law or conduct inconsistent with it, is invalid and the obligations by it must be fulfilled”. It follows that any legislation or conduct in conflict with the Constitution, is invalid. “Conduct” in this sense, includes decision-making. A court is therefore, enjoined to invoke the Constitution as a prime source to assess such legislation or conduct. That, a court does by identifying if any of the constitutional rights provided for in the Bill of Rights is likely to be adversely affected. But, those rights are never unlimited. But, only a “law of general application”, provided the limitation is reasonable and justifiable, can

91 1984 (3) SA 623 (A).
92 See Plascon-Evans Paints Ltd v Van Riebeeck Paints (Pty) Ltd supra 634H–634I quoted in BP Southern Africa (Pty) Ltd v MEC for Agricultural, Conservation, Environment and Land Affairs 2004 (5) SA 124 (W) 135H–136A.
93 See Ngqumba v Staatspresident 1988 (4) SA 224 (A) 261B and 263D; and Rawlins v Caravan Truck (Pty) Ltd 1993 (1) SA 537 (A) 541J–542B.
95 See s 2 of the Constitution.
96 S 7 of the Constitution, inter alia, affirms the democratic values of “human dignity, equality and freedom” and directs that the State must “respect, protect, promote and fulfil the rights in the Bill of Rights".
validly be limited. Section 36 of the Constitution therefore plays an important role when courts have to balance certain constitutional interests.

To some scientists, fracking poses a serious threat to the environment. If they make out a compelling argument, our courts will not hesitate to protect those adversely affected by the threat. It has been stated before that the importance of the protection of the environment, cannot be gainsaid. To this end, the framers of the Constitution impose a duty on the Government to put into place measures aimed at protecting the environment from degradation. Our courts have recognized that environmental considerations, often ignored in the past, have today been given a rightful prominence by their inclusion in the Constitution.

On the other hand, the court will have to add weight to the Government’s argument that it has put sufficient measures in place to minimize the risk to the environment. It may argue that it is not only the environment that the court should look to for resolving environmental issues. Economic and social interests should receive equal protection. The National Environmental Management Act, under the principle of sustainable development, requires that the Government “will consider social, economic and environmental factors when planning, implementing and evaluating decisions taken”. Allied to that is the argument that, given our unfulfilling past and the inequalities that still exist, there is an urgent need for socio-economic growth today.

Besides considering the provisions of NEMA and the accompanying regulations the court will also have to consider the provisions of the National Water Act to ensure that enough has been done to protect the environment and encourage social and economic development. But, development at all costs, is also taboo. This is made clear in the Mineral and Petroleum Resources Development Act. While the Act does recognize the

97 See s 36 or so-called limitation clause in the Constitution.
98 See s 24 of the Constitution.
99 See Fuel Retailers Association of Southern Africa v Director-General: Environmental Management, Department of Agriculture, Conservation and Environment, Mpumalanga Province supra par 102.
100 See s 24 (b)(iii) of the Constitution.
101 See Director: Mineral Development, Gauteng Region and Sasol Mining (Pty) Ltd v Save the Vaal Environment supra 719C–719D.
103 See s 2(4)(o) of NEMA provides: “the environment is held in public trust for people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the peoples’ common heritage”.
104 See the Preamble to NEMA in conjunction with s 1(1) of the Act.
107 See MEC, Department of Agriculture, Conservation and Environment v HTF Developers (Pty) Ltd 2008 (2) SA 319 (CC) par 65.
108 See Act 28 of 2002 also known as MPRDA.
development of mineral and petrol resources, it does not give a free rein to Government or developers. What is called for is that a balance be struck between development and conservation. Such an approach would be consistent with the Constitution which is rooted in the economic, social and environmental circumstances of the country. Our courts therefore have to strike a fine balance between environmental protection and the promotion of economic and social development.

But, striking a balance between the constitutional rights by the courts is not such an easy task as those rights represent different interests. Balancing them may lead to tension from within the realm of those rights. The difficulty lies in deciding sometimes which of the rights should be given the greater weight. In deciding whether the fracking technique is acceptable or not, the Constitution enjoins the courts to protect the environment from degradation, but, simultaneously to advance socio-economic rights. It is a rather strange phenomenon as the rights affected are subsumed under one broader right, namely the environment. Unlike a situation where conduct may be adjudged to affect pollution and ecological degradation, here the court will have to exercise a preference for one of the rights in the substratum. This may not be without some difficulty. The case of *BP Southern Africa (Pty) Ltd v MEC for Agriculture, Conservation, Environment and Land Affairs* may be instructive. In that case, the applicant sought the review and setting aside of a decision by the respondent to refuse the applicant’s application for authorization to develop a filling station on one of its properties. The Department, in refusing the application relied *inter alia* on the protection of the environment as provided for by the Environment Conservation Act 73 of 1989. The applicant on the other hand, relied on the socio-economic considerations provided for in the Constitution.

The Court per Claassen J found that the right to a healthy environment is on a par with the right to freedom of trade, occupation, profession and property entrenched in the Constitution. None of them enjoyed priority over any other of them. The Court preferred an integrated approach when determining if the environment would be adversely affected or not. The

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109 See the Preamble to the Act particularly the Affirmation Clause; see also *BP Southern Africa (Pty) Ltd v MEC for Agricultural, Conservation, Environment and Land Affairs* supra 150C–D.

110 See s 24(b)(iii) of the Constitution.

111 See s 24(b)(iii) of the Constitution which provides for the protection of the environment through sustainable development; and see also *Fuel Retailers Association of South Africa v Director General: Environmental Management Department of Agriculture, Conservation and Environment Mpumalanga Province* supra on the Constitutional Court’s balancing approach to sustainable development.

112 See s 24(b)(iii) of the Constitution.

113 Ibid.

114 See *Harmony Gold Mining Co Ltd v Regional Director: Free State, Department of Water Affairs and Forestry* [2006] SCA 65 (SA) par 17; and see also *Harmony Gold Mining Company Ltd v Regional Director: Free State Department of Water Affairs* [2014] 1 All SA 553 (SCA) par 19.

115 Supra.

116 143B of the judgment with reference to s 22, 24 and 25 of the Constitution.

117 143B–C/D of the judgment.

118 151E of the judgment; and the integrated approach was re-emphasized in the case of *Fuel Retailers Association of Southern Africa v Director-General Environmental Management,*
Court suggested that, besides protecting the environment, our courts should likewise develop and protect the socio-economic interests. An equilibrium between the competing considerations needed to be sought.

Besides having to balance the protection of the environment on the one hand and the development of socio-economic interests on the other, our courts may also be asked to balance socio-economic rights where they come into conflict with each other. Because the protection of the environment is vital to the enjoyment of other rights contained in the Bill of Rights, the environmental right must therefore be protected for the benefit of the present and future generations. A safe environment is a universal human right, applicable to the whole world. Not surprisingly, NEMA provides that the protection of the environment is a global responsibility and must be discharged in the national interest. This is consistent with international conventions, aimed at a safe environment, thus ensuring that human and animal health and life are not being compromised.

Because the long-term effect of fracking is described by many scientists as harmful to health and well-being of human beings and animals, the process, unless executed in a safe way, would equally pose a threat to public health. That ultimately affects the general welfare of a nation. The concept "general welfare" has its roots in the ancient legal maxim "salus populi suprema lex esto" which is generally translated as, "the health of the people should be the supreme law". Most countries place a premium on

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156J–157A/B of the judgment.

157H of the judgment with reference Bato Star Fishing (Pty) Ltd v Minister of Environmental Affairs and Tourism 2004 (4) SA 490 (CC).


See Minister of Public Works v Kyalami Ridge Environmental Association (2001) 7 BCLR 652 (CC) regarding balancing the rights to housing and the right to a healthy environment to prevent homelessness.

See, inter alia, the right to dignity (s 10); the right to life (s 11); the right to health care (s 27).

See the Fuel Retailers Association of South Africa v Director General: Environmental Management Department of Agriculture, Conservation and Environment Mpumalanga Province supra (CC) par 102, wherein the Constitutional Court with reference to a Global Judges’ Symposium on Sustainable Development and the Role of Law held in Johannesburg on 18–20 August 2002, emphasizes the role of the Judiciary in the protection of the environment.

See s 2(4) of the Act 107 of 1998.

See, inter alia, the Universal Declaration of Human Rights 1948; International Covenant on Economic, Social and Cultural Rights also known as ICESCR 1966. Article 12 explicitly sets out a right to health which includes access to safe and portable water and adequate sanitation, healthy occupational and environmental conditions http://www.humanrights .is/the-human-rights-.


the health care of their citizens. Obstacles to public health, including air pollution, war and malnutrition, should be corrected as they run counter to the “supreme law”. Fracking may well be included in this category if it can be shown that the technique compromises public health.

Public health should therefore be at the forefront when the fate of the fracking technique is finally decided by our court(s). Besides balancing economic and social interests with environmental considerations, the court(s) are enjoined to consider the other constitutional rights, including the right to life, health care, dignity and bodily integrity. They are perceived to be the most fundamental of all human rights. If compromised, they may influence the general welfare of our nation.

Given the fact that South Africa has introduced very sophisticated legislative measures, including regulations in an endeavor to take reasonable steps to prevent pollution, ecological degradation and to promote conservation, our court(s) will have to decide whether the measures taken suffice to bring about a safe fracking process. Because fracking is a relatively new concept to our continent, and scientifically not much has been documented on the potential impact fracking may have on the environment, economy and socially, much uncertainty still surrounds the consequences. The issue to be decided can simply not be decided without the court(s) relying on expert guidance through expert opinion on affidavit or evidence. Here, the opinion of a geohydrologist, expressing his/her expert opinion the effect of fracking on water supplies, for example, will be instructive. The contributions the amicii curiae, likely to be admitted to the proceedings, may also be invaluable and likely to influence the outcome of the judicial proceedings. The court(s) may also include in its wide spectrum of considerations, international perspectives and experiences and take cognizance of international law.

But, before those ideas are accepted in South Africa, what needs to be considered is whether they are compatible with the situation and conditions, here. What we do know is that serious concerns exist in other regions about the impact of fracking on the environment. And while the mysteries of fracking still loom large, what is suggested is that the court adopt a cautious

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129 Ibid.
131 See S v Mkwanyane supra par 25.
133 See Gentiruco AG v Firestone SA (Pty) Ltd 1985 (1) SA 720 (Z) 724I on the value of expert opinion.
134 See Rule 16A of the Uniform Rules of Court in respect of the admission of an amicus curiae in proceedings before the High Court. For an instructive case on the role of the amicus curiae see Hoffman v South African Airways 2001 (1) SA 1 (CC) par 63 and other cases that followed.
135 See BP Southern Africa (Pty) Ltd v MEC for Agricultural, Conservation, Environment and Land Affairs supra 157B–C with regard to the influence of s 39(1)(b) of the Constitution.
136 See s 39(1)(b) which obliges courts to consider international law when interpreting the Bill of Rights. See also s 233 and 239(1) of the Constitution which oblige courts to interpret legislation in conformity with international law.
approach.\textsuperscript{137} What it means is in the absence of scientific certainty, the court should rather err towards caution and not accept the fracking technique at all, especially where there is a risk of serious or irreversible damage.\textsuperscript{138} If it is found that not enough environmental-risk assessments have been carried out, the court should call for greater investigations in the form of impact assessments before any go-ahead is given for the process to start. That accords with the European Court’s decision in \textit{Taskin v Turkey},\textsuperscript{139} in which the court suggested that no decision should be taken unless appropriate investigations and studies had first been carried out to allow them to predict and evaluate in advance the effects of those activities which might damage the environment and infringe individuals’ rights. It is a principle that should have a bearing on a court’s decision whether or not to allow fracking.\textsuperscript{140}

8 CONCLUSION

Although job creation and the invention of domestic energy are vital to our nation’s existence, fracking should not be allowed to be explored, unless, reliable scientific evidence is produced that will show proper legislatively controlled mechanisms and supervision have been put in place, free of hazards to the environment and that no threat to health or life exists. The degradation of the land, pollution of ground water and the air remain serious concerns and cannot be ignored. The need for an emergent economy and socio-economic development can never outweigh the right everyone has to “an environment not harmful to their health and or well-being”.

\textsuperscript{137} See Kantor “Fracking – A Cautious and Risk-averse Approach” December 2011 \textit{De Rebus} 32; and see also Glazewski \textit{Environmental Law in South Africa} 2ed (2005) 18.

\textsuperscript{138} See s 75(2) of the National Environmental Management Biodiversity Act 10 of 2004; and see also the cautionary remarks made by Murphy J in \textit{HTF Developers (Pty)Ltd v Minister of Environmental affairs and Tourism} 2006 (5) SA 512 (T) par 16.

\textsuperscript{139} 2006 42 EHRR 50.

\textsuperscript{140} See the Constitutional Court decision in \textit{Fuel Retailers Association of South Africa v Director-General: Environmental Management, Department of Agriculture, Conservation and Environment, Mpumalanga Province supra (CC) par 98; and see also MEC, Department of Agriculture, Conservation and Environment v HTF Developers (Pty) Ltd supra par 65.}