J Hum Ecol, 39(2): 103-113 (2012)
PRINT: ISSN 0970-9274 ONLINE: ISSN 2456-6608 DOI: 10.31901/24566608.2012/39.02.03

The Potential Role of Insurance Law in Addressing Climate Change-related Risks and Disasters in South Africa

Kola O. Odeku

School of Law, Faculty of Management and Law, University of Limpopo, South Africa

KEYWORDS Global Warming. Insurance Covers. New Risks. Causality Businesses. Mitigation. Sustainability

ABSTRACT Global warming and climate change are now creating new risks and also altering risks we face on a daily basis. The impacts of these are usually on the environment, earth, and atmosphere with devastating effects on movable, immovable, living and non-living things which are all subjects of insurance. It is against this background that this paper examines the potential role of insurance law in addressing these novel weather events-risks and disasters. The paper argues that despite the fact that these risks are not expressly provided for or defined in the core laws regulating insurance law and business in South Africa, significant provisions are in the Long Term Insurance Law, general principles of insurance law and other related statutes to be the legal basis upon which these risks can be regulated and managed. The article offers insightful proposals for inclusions and reforms by engaging in comparative study.

INTRODUCTION

A lot of numerous scholarly works have been written on insurance risks reflecting South African perspectives. Components of these are in the areas of fire, natural disasters, automobile accidents, environmental hazards, pollution and so on with rigorous groundbreaking propositions for reforms. Global warming and climate change are creating new risks and also altering risks we already face and impacting between the interdependencies between these risks (Kousky and Cooke 2009). They are now making profound inroads to the insurance law and business. However, relatively few works have been done on the issues surrounding the role of insurance law in addressing climate related risks and disasters in South Africa. This scholarly inertia is best explained in the context that climate change related risks and insurance coverage for the risks under the insurance law is relatively a new concept. This is not peculiar to South Africa (an emerging economy) and other developing countries. Even, in the developed countries where insurance law is well advanced, they equally find it very difficult to comprehend the concept and how to factor it into their insurance law (Mills 2004).

Address for correspondence:
Prof. Kola O. Odeku,
School of Law,
Faculty of Management and Law,
University of Limpopo, South Africa,
Telephone: +27152682718, *Fax:* +27152672904
E-mail: kolawole.odeku@ul.ac.za

Indeed, it is interesting to note that in South Africa, some insurance companies have been vocal in their concerns about climate change and are constantly evolving in complexity to keep up with the latest trends by reacting swiftly to very high risk incidences or happenings such as climate and weather patterns while others are either unaware of the issue or are standing on the sidelines (Mills 2004). Even though the industry as a whole is in its "infancy" on climate change (Mills 2004), some insurers have started coming up with various innovations and initiatives by factoring the issues of climate change related risks and disasters into their insurance businesses (SA Insurance News) despite the fact that the core legislations (Long-term Insurance Act 1998; Short-term Insurance Act 1998) that regulate insurance business do not explicitly provide for or envisage risks arising from or associated with climate risks and disasters. Insurers are more accustomed to decision making in the face of uncertainty than most other participants in the economy (Mills 2004) and this has placed them on a very positive trajectory (Mills 2004).

Against this backdrop, it is pertinent to mention that very few insurance companies are remunerating on the idea of taking the challenge of providing insurance covers for risks arising from climate change disasters. While others have adopted equally strong views to the contrary and rather adopt a "wait-and-see" stance as aptly pointed out by Mills (Mills et al. 2001). This description perfectly fits the stance of most in-

surance companies, the regulators and governments. Rather than being proactive, they have been very complacent regarding effective reforms to the existing insurance law and business in order to bring these novel risks within the ambit of the law.

Objectives

The key objectives of this article are to namely, stimulate scholarly interest in a recondite area of insurance law and coverage for climate change related risks. Take for instance, industries in South Africa engage in activities that substantially use coal-fossil fuel to generate energy to power their industrial equipment and electricity. These activities make the country vulnerable to global climate change and various climate risks and disasters (Meyer and Odeku 2009). It is argued that while waiting for specific legislation to address climate risks, in the meantime, recourse can be had to the existing laws, common law and the principles of insurance law to address climate risks, such as insurance contracts, terms and conditions in insurance contract, full disclosures of climate risks during negotiation. This will motivate the insurers to act rather than refuse to provide insurance cover or opt out of climate change risks as was done elsewhere where the insurance company refused to cover homeowners insurance as a result of the devastating effect of hurricanes which wiped out all the profits it had generated in 75 years of selling home owners insurance (Mills et al. 2001). Sensitise the insurers on why they should be creative and develop new insurance products that will address climate risks. Present a modest proposal for the reform of the insurance legislations for the inclusion of climate change risks.

Being novel risks does not preclude an attempt at coming up with proposals for the reform of the law in line with the current challenges and incorporate them into the legal lexicon. This is achievable through vigorous intellectual discourse, conferences and in-depth qualitative and quantitative research analysis across the whole spectrum of disciplines and human endeavours in order to find an enduring and perpetual solution to the problem posed by climate change related risks and disasters (Field et al. 2007).

While the focus of this paper is to critically appraise and evaluate the potential role of insurance law in addressing climate risks and disasters, references will be made to contemporary literature from other disciplines relevant to the study. The reason for this is that, insurance is a unique subject; its business is sustained by a complex system of risk analysis, multi-faceted and cuts across various disciplines such as economics, (Reinecke et al. 2002). Risk management, financial risks mechanisms and actuarial science (Hyogo Framework). Reinforcing this assertion, the United Nations Framework Convention on Climate Change (UNFCCC) parties have identified both disaster risk reduction strategies and risk transfer mechanisms including insurance as potential elements in addressing climate change related risks and disasters (Warner 2010). Therefore, in law, insurance is a form of risk management primarily used to hedge against the risk of a contingent, uncertain loss.

In South Africa, insurance is governed by a blend of statutes, administrative, agency regulations and court decisions. The laws control premium rates, prevent unfair practices by insurers and guard against the financial insolvency of insurers to protect the insureds. It is pertinent to point out that this article is mainly based on the application of qualitative research method which is the traditional scientific method in legal scholarship but not necessarily quantitative data that are illustrative of concerns that form the crux of this study.

METHODOLOGY

This study is concerned primarily with exploring the role of insurance in mitigating climate change related risks and disasters. The units of analysis and units of observation in this study are the principle of insurance, global warming and climate change, carbon dioxide emission, climatic risks and disasters, short and long run insurance acts of South Africa. Units of analysis refer to the 'WHAT of your study: what object, phenomenon, entity, process, or event you are interested in investigating (Babbie and Mouton 2001). The units of analysis in a study are typically also the units of observation (Babbie and Mouton 2001). The points of focus of this article are the characteristics, orientations and actions of the objects being studied which is the potential role of insurance law in addressing climatic risks (Babbie and Mouton 2001).

This study makes use of content analysis methods. Content analysis methods may be ap-

plied to virtually any form of communication (Babbie and Mouton 2001). It analyses the content of texts or document such as case law, reports, newspapers, laws, policy documents, pieces of legislations, statutes and constitution (Mouton 2001). The term 'content' itself refers to words, meaning, themes or any message that can be communicated. Content analysis is therefore best suited to the purpose of this article because laws and legislations are analysed to determine the extent of how insurance law can be used to mitigate climatic risks; examine existing primary documents to determine how to realise this and factors responsible for non-realisation; analyses various legislations relating to insurance law and its potential role in addressing climate change related risks and disasters and how to combat them, and finally, examine some policies and government interventions that were inspired or influenced by insurance law to determine how they can enhance risks reduction regarding global warming and climate change in South Africa.

CLIMATE CHANGE RELATED RISKS IN THE CONTEXT OF INSURANCE LAW

The manifestations of numerous disasters and catastrophes that are plaguing the world has shown that these catastrophes were not just a harbinger of things to come, they are happening on daily basis. Without mincing words, climate change disaster is now real and it will continue to occur unless drastic action is taken to mitigate and abate it (Peara and Mills 1999). The impacts are being felt all over the world and have negative effects on different sectors. According to Munich Re Report, Losses from climate-related hazards are rising and currently account for about 100 billion dollars per year (Munich 2008). This pose as a major threat to the insurance sector considered to be the world's largest industry (Mills 2006). Against this backdrop, there should be a prompt response to this challenge by insurers using various strategies (Ross et al. 2007) that will create the certainty that businesses need in order to invest and grow (Mills 2006).

The past few years have been noted as amongst the worst years on record for extreme weather disasters in South Africa. Dreadful and more frequent storms are being experienced along the coastal areas in Cape Town and the rising sea levels are consequences of climate change and global warming. These climate changes are having a profound impact on the livelihoods and circumstances of poor people living in these areas causing damage running into tens of billions of rands (SA Insurance News 2009). This pose as a very real threat facing South Africa's coastal cities and regions as these are now causing increase in volume and value of insurance claims resulting from unpredictable weather patterns and extreme natural disasters-posing a major threat to the future existence of all insurers (SA Insurance News 2009). The foregoing events confirm the scientific evidence which had predicted that the African continent will be worst hit (Odeku and Meyer 2010). Changes in the climate undermine the resilience of poorer countries and their citizens to absorb loss and recover from disaster impacts, such as through decreases in agricultural productivity, water and energy stress, and increasing incidence of diseases (Warner et al. 2010). This combination of increasing hazard risk and decreasing resilience makes climate change a global driver of disaster risk that will increase the impact of disasters on the poor (Warner et al. 2010).

Global warming and climate change are all about risks to both movable and immovable assets which are usually subject of insurance cover. But, the point is that these types of risks are novel to the insurance law and business. Insurers are now battling with how to comprehend and underwrite climatic risks. While there have been various policies, initiatives, schemes to address these novel risks in sub-Saharan African region, there have not been any specific law that clearly spell out how the insurance law should address the risks. For instance, in South Africa, there seems not to be coverage for damage related to climate change. This is because these laws preceded recent worldwide/global actions against global warming and climate change. In order to resolve these vexed and mind-boggling issues, some scholars have attempted to explain the risks in the context that climate change should be considered as an environmental issue which should be adequate to cover environmental liability policy in order to claim for damages and losses associated with climate change such as flood, wind, heat, earth movements, drought, collapse and so on (Gerrard 2007). This effort is commendable because the manifestations of the risks impact the environment. But the contention is that the scientific

evidence and the international community have confirmed that they are unique, new risks and disasters which are altering the world's weather, affecting the earth and therefore require immediate attention of all the role players and stake holders in the world.

The insurance industry is highly monitored, supervised, controlled and subject to very tight and stringent regulations such that an intending insurer must comply strictly with the processes of registration and operation of insurance business. For instance, disclosing the types of the risks that can be underwritten, protection of customers and the contract of insurance and so on (Liedtke 2009).

Admittedly, insurance coverage involving climate change risks is a nascent field. The option to develop and advance this field is for the insurers to address these risks. This is because, by the nature of their business, it is expected that their expertise in insurance law and business should play an important role in crafting contract of insurance and request for a full disclosure of risks that are considered to be climate-change related from their customers before any cover is approved. Armed with this information and knowledge, they would be able to develop products and services to cover future risks and mitigate future potential liability issues (Munich 2008).

The mere fact that we have knowledge of climate change risks and the consequences should be the overarching reason for us to intensify adaptation and mitigation because failure to do this is particularly critical to insurance industry as it directly affects the very core of property and casualty businesses, that is, the risk landscape that is insured (Herweijer 2009). It is against the backdrop of the foregoing that this article emerges as a modest attempt at providing insight into an otherwise recondite terrain.

The Intrinsic Role of Insurance Law

We live in the world where we are exposed to various types of risks on a daily basis either through exposure to losses and damages as a result of engaging in business activities that are considered by their nature-hazardous and risky. In modern day, people who operate such risky businesses or are exposed to such risks usually look up to insurance for potential relief or take measures to protect the business and themselves against their losses or damages on the occurrence of the risks insured in order to get back on track (Reinecke et al. 2002). In this sense, insurance serves as service to those who are in or operating such risky and dangerous businesses (Reinecke et al. 2002). Furthermore, insurance also serves a social role of selling safety to its various customers who are duly protected under the insurance Act and Consumer Protection Act.

Against the above explanation, these days, these tasks are being undertaken by professional insurers possessing various skills and expertise (Ross et al. 2007). These professionals are therefore expected to address the challenges and sensitise the society on what to do or should not do (Ross et al. 2007). These tasks should be well articulated under the law, particularly in insurance law, (Reinecke et al. 2002) that is based on the voluntary or compulsory conclusion and consequences of insurance contract. The implication of this is that as soon as the contract is concluded by the parties, it becomes valid and obligates the insurer to take the risks to which the insured is exposed and at the same time obligates the insured to pay the premium agreed to (Reinecke et al. 2002). In a summary, the contractual relationship created by the insurance contract becomes legally enforceable at the occurrence of the event as this will enable the insured to file a claim and prove the damages (Ncube 2010).

While there have been frantic efforts at reforming and incorporating climate risks into the insurance law and transaction in the developed countries, this is not the case in developing countries despite the fact that residents of the developing countries are often the most vulnerable to the impacts and risks of climate change (Odeku and Meyer 2010). They live in appalling poverty conditions hence most of the households and businesses usually have no insurance coverage for catastrophic risks (Ncube 2010). Sometimes, these risks are dealt with by a mix of social networks and informal post-event credit which are, in most cases, not legally binding and enforceable (Ncube 2010).

On the international scene, the recent Cancun Climate Change Summit in Mexico had commenced the steps towards the need to develop climate insurance risks and this initiative was generally embraced by the international com-

munity and the developing countries that were targeted as the potential beneficiaries. This has brought optimism on how to address the resilience of the people, particularly in the developing countries in order to reduce vulnerability from climate related risks and disasters.

The summit in Mexico requested countries to submit views on the possible development of a climate and disaster risks insurance facility that would pay out after a severe weather event. This presents an excellent opportunity for the African States, together using the African Union as a common front and platform upon which to brainstorm, on how to develop and submit a workable legal framework on climate insurance risks. The achievement of this model at the international level might form the basis of a legal framework for climate change insurance law at the domestic levels which may be adopted to suit the legal regimes of each State.

Examination of Climate Risks and Disasters under the Insurance Law

The nature of the insurance business determines the premium to be collected and this is divided into life or non-life insurance business. In South Africa, these are known and called short term and long term insurance businesses respectively. The issue and concern of climate change related risks fall within the ambit of (long-term trend) (PriceWaterhouseCoopers 2008) that is, long-term branches of insurance law (PriceWaterhouseCoopers 2008). The physical manifestations of these disasters in numerous ways have now confirmed that the impact of climate change disasters and catastrophes are well pronounced and overwhelming in non-life insurance ((Liedtke 2009). It is therefore important to embark on how best these risks and disasters could be addressed under the insurance principles and law.

Proposals for Coverage of Climate Related Risks under the Insurance Act

Even though the long term insurance Act does not define insurance law or insurance contract thereby creating a gap, the gap can be bridged by having recourse to the meanings and definitions ascribed to them by common law, insurance principles and case law definitions or drawing inference from how they have been defined or explained by other terms in the Act. All valid contracts of true insurance are construed and well defined in the Act as policies. Policy means any valid insurance contract whatever may be the form in which the rights and obligations of the parties to the contract are expressed or created in writing or orally. The Act uses the word "includes" to enlarge the definition of what constitutes "policy" in order to broaden the scope of policy to include what was not contemplated or envisaged under the ordinary meaning and definition by the drafters of the Act. Consequently, risks and disasters such as devastating weather storms, wind and climate related risks which were hitherto not envisaged by the legislature and the drafters of the Act will now fall within the definition of policy.

The manifestations of climate risks or disasters will impact and affect movable and immovable assets covered under various policies. The insurer and insured have legal responsibility to ensure that mitigation and adaptation of climate change are put into consideration before an insurance contract is concluded. Interestingly, by virtue of section 31(1), the Long term Insurance Act provides that a claim qualifies as an asset in the Republic only if it is enforceable in accordance with the law of the Republic and realizable in the republic. In terms of section 31(3)(14), immovable property in the Republic falls within the purview of kind of assets that are contemplated in section 31(1)(b). By virtue of section 31(3)(20) other claims not specifically mentioned in the Act are also covered and entities mentioned in section 31(3)(20)(b), can file for claims. These provisions may serve as legal basis for coverage and claims relating to climate related risks and disasters under the Act. The dynamism of this is that insurers will not have reason to avoid coverage for climate related risks as it has been demonstrated that such risks may now fall within the insurance Act.

In South Africa, another significant insurance principle that can be used to provide coverage for climate change risks is all-risks insurance. This covers all risks whatsoever or loss from whosesoever cause arising anywhere in the world which the insured may sustain (Reinecke et al. 2002). The overall benefit of an all-risks clause is the wider cover it provides to the insured (Reinecke et al. 2002). It is therefore incumbent on insurers to take advantage of these provisions and come up with innovative insur-

ance products in this regard. In so doing, insurers would be seen as walking the talk by providing covers for climate related risks so as not to make their business become insolvent.

The Need for a Full Disclosure of Climate Related Risks

Parties to a contract of insurance have the duty to disclose certain facts within their knowledge during pre-contractual period and renewal. For the business or transaction relating to climate risks, it enhances the ability of insurers to evaluate the impacts of climate change on the business. The disclosure will build confidence and helps regulators to meaningfully monitor insurers' financial condition and the progress they are making toward managing climate change risks (Ceres 2008).

Failure to disclose may result in a breach of affirmative warranty in which one of the parties is induced to enter into a contract or agree to specific terms in it, whereas, this would not have happened if those facts had been disclosed. The implication of this is that, by virtue of section 59(1)(2)(c) of the Long term Insurance Act, this might materially affect the assessment of the risk under the policy at the time of issue, but the policy cannot be invalidated by virtue of section 51(1)(2)(a). For the purposes of insurance for climate related risks, the duty to disclose should not be by that of the insured but also by the insurer using its expertise to detect any latent or hidden risks inherent in the thing to be insured as this will align with the insurer's duty of good faith. The reason why assessors and experts should be involved is that being a new set of risks, insurers may not be able to know the contents of the risks involved in what to be insured as this may result in wrong judgment. This is where the expertise of other trade allies and insurance intermediaries such as brokers, agents, actuarial science, loss adjusters and risk managers are most needed as this will reinforce the best practices on behalf of insurance customers. Acting or doing business contrary to the forgoing will be tantamount to engaging in undesirable business practice in flagrant violation of section 50 of the Long Term Insurance Act (Ross et al. 2007).

The existence of the fiduciary relationship between the insurer and insured also enjoins the insurers to assist the insured where they do not sufficiently disclose their potential carbon risks. In this regard, Swiss Re has introduced questionnaire to their customers which demand for disclosure of necessary information on their carbon footprints and risks. The positive effect of this is that it stimulates the policyholders to focus on their climate related exposures before the policies are issued and also monitor their activities not included in their operations at the time the policies were issued (Ross et al. 2007).

As earlier mentioned, the insurers in developed countries are being proactive in all aspects of fighting climate change risks and disasters. In the UK, the Association of the British Insurers now compliments the efforts of the government and the regulators by taking it upon itself to regulate the activities of its members. This has led to the introduction of the guidelines on climate disclosures to its members which is worthy of emulation and also should serve as an encouraging example to South Africa's insurers. The guidelines read:

"*[Our] 'Guidelines on Responsible Investment Disclosure' require companies to identify and manage material environmental, social and governance risks to the long and short-term value of the business, including Climate Change where appropriate. The Company's disclosures should include information on how the Board considers these risks and the policies, procedures and verification systems in place to manage them. The ABI has advised its Pension Fund Trustees that it supports the Climatewise principles and suggested that this should be taken into account when considering investment decisions (ABI 2008)*."

In the same vein, in the US, The National Association of Insurance Commissioners has come up with a white paper on climate change which explicitly recommends that state insurance regulators should develop standardized climate-risk disclosures that answer the following questions:

"*1. Are insurers adequately including climate risk, and climate-risk changes, in their internal risk assessment process?*
2. Are insurers adequately informing and incentivizing policyholders as to their risks?
3. Are the insurers' governance structures sufficient to keep their board members informed about climate risk?
4. Are insurers taking adequate steps to mitigate their own risks and to foster policyholder mitigation? (NAIC 2008)."

All these measures are currently being implemented in these countries in order to assist the insurers to take appropriate steps to ensure that there is full disclosure of climate risks of the thing to be insured and also to assist them in other evolving risks. These initiatives and oversights are now paying off and are equally assisting the insurers to offer advice to the insured on what to do to mitigate their risks.

The Overarching Role of Regulators

Admittedly, through legislation, financial oversight and monitoring, government can provide incentives for insurance to promote risk-reducing activities (Warner et al. 2010). In 1990, the Financial Services Board (FSB 1990) an independent institution was established and conferred with the responsibility of overseeing the South Africa's Non-Banking Financial Services Industry in the public interest. Insurance industry falls within the scope of FSB. FSB has been playing active supervisory roles regarding existing insurance risks. It is proposed that this supervisory role should be extended to climate related risks in view of the newness of the risks to both insurers and insureds. While it is conceded that at the time FSB was established, climate related risks were not in vogue and were not envisaged or contemplated, as a regulatory body, the FSB should be able to confront these areas of risks by ensuring that competent and skillful people are used for monitoring and oversights. It is in this regard that encouraging supervisory examples from other developed jurisdictions should be considered for adoption and implementation. Hence, the proposals discussed hereinafter should serve as an impetus to foster contemporary information on how to supervise climate change related risks and how best to integrate such information to the South African model culminating into substantial reform to the activities of the FSB. More importantly, it will assist the regulators to give best advice in the circumstances thereby assisting the insurers not to go bankrupt or become insolvent. Against this backdrop, drawing on contemporary comparative analysis on the issue, we offer the following insights below.

Whatever is insured, whether movable or immovable assets are vulnerable to weather-related events. In developed countries, insurance regulators are aggressively moving forward to influence and sensitize insurers on the need to pay greater attention and action to climate change-related risk (NAIC 2008). Even though the prime function of the regulators is to ensure constantly insurance availability and affordability to insurance customers and at the same time guard against insurance insolvency. In view of the novel risks posed by climate change, the regulators have to compliment the insurers by providing expertise, skills and technical know-how for the purposes of coverage for climate related risks.

In the same vein, regulators should ensure that any rules and policies that may pose as obstacles to realization of covers for climate related risks should be properly addressed. This is to ensure that insurers do not intentionally decline covers. The responsibility of the regulators is to allay the fears of the insurers by ensuring that necessary education and information are disseminated to the effect that even if the item to be insured contains climate risks, this should not preclude cover, provided all the necessary analysis and assessment have been diligently carried out and an expert has given the go ahead. This will promote the idea of learning through experience thereby increasing the volume of covers to climate related risks. This is what is in vogue in the developed countries. It makes good business sense which should be considered for implementation. Undoubtedly, the FSB and insurance industry share the common objective of improving confidence in the sector in order to provide covers for climate related risks rather than avoiding or totally declining covers (Stokes 2011). The regulators should also be more proactive by supporting and encouraging the insurers in initiatives leading to positive outputs and innovations such as new products, services and financing of climate-friendly technologies and practices such as low premiums for motorist who drive less or drive as you pay and also encourage the use of renewable energy and energy efficiency which are known to reduce greenhouse gas emissions causing climate change. Craft disaster-resilient approaches that are sustainable and sustainability strategies that are disaster-resilient (Ceres 2008). The overall benefit of this is that exposure to and manifestation of climate risks will be reduced and this will have positive impact on insurance business as there will be few claims.

In the housing and building sectors, the regulators should act as a bridge between the government and insurers to ensure partnerships

with governments by actively participating in and offering advice on the need for improved land-use planning and enforced building codes as these are considered to restore and maintain the insurability of extreme weather events (Ceres 2008).

More importantly, regulators would be seen to be carrying on their regulatory and supervisory responsibilities effectively. They may propose that henceforth, in all insurance covers, there should be full disclosure of climate risks both in the core business or insurance and in the selection of weather sensitive investments that could affect their solvency (Ceres 2008).

In the US, the regulators have taken steps to offer professional assistance to the insurers. One of such is the establishment of a working group conferred with the responsibility of analyzing the threats of climate risks and disasters. This effort led to the publication of a white paper with the following key findings:

"1. Insurers across all business lines face risks from climate change;

2. Insurer investments are sources of considerable concern as insurers might see the losses they underwrite escalate even as their assets decline in value from climate impacts;

3.Insurance regulators play a critical role in understanding this evolving risk, ensuring that insurers have adequate liquidity, capital reserves and reinsurance to meet the expected increase in catastrophic loss, educating consumers about the changing risks, and forwarding risk-reduction activities to maintain a viable insurance market and engaging with other policymakers to advance aggressive climate legislation."(Ceres 2008).

The impact of climate change is not localized. It transcends geographical boundaries and affects both living and non-living things irrespective of where they are situated or located on the planet earth. With this revelation, the findings highlighted above are also relevant and applicable to South Africa. The FSB will fare well by following the US approach and come up with its own model that will conform with South African insurance business and legal regimes.

ANCILLARY LEGAL FRAMEWORKS AND INITIATIVES TO ADDRESS CLIMATE CHANGE-RELATED RISKS

South African government, realizing the potential negative and devastating impacts of climate change related risks which are now threatening development gains in all sectors of the economy and the country, has introduced numerous legislations, policies, measures, strategies and guidelines on climate change with the aim of reducing the country's greenhouse gas emissions, promote clean environment and sustainable development in all sectors of the economy in the country through various government departments.

The South African Constitution (1996) is the Supreme law of the country. Section 24(a) of the Constitution affords every person the right to an environment which is not harmful. Global warming and climate change are part of this right because the manifestation impacts the environment and atmosphere in different dimensions. Section 24(b) provides the impetus for the enactment of a number of environmental statutes as well as putting environmental issues firmly on the executive and judicial agenda including initiation of a number of environmental and climate change law.

Against the above backdrop, the government has legislated and introduced significant legislations, policies, guidelines and various initiatives to foster the realization of the right to an environment which is not harmful. These legislations serve as disincentives to perpetrators from continuing to act in a manner that make the environment hazardous, unfriendly and vulnerable to global climate change (ECA 1989). The importance of this is that a well-managed environment through the enabling statues and initiatives (Ross et al. 2007) that prescribe stringent and punitive sanctions against the perpetrators will prevent or drastically reduce pollution, ecological degradation, promote conservation, secure sustainable development and use of natural resources while at the same time promoting justifiable economic, social development and sustainable development (van der Linde and Feris 2010). Furthermore, efforts to reduce greenhouse gas causing climate change and environmental management and its enforcement are complimentary and mutually inclusive because they regulate diverse thematic areas such as conservation, pollution, mining and water management (van der Linde and Feris 2010). The implementation of this will be relevant and beneficial to the insurance industry in the sense that the efforts will help reduce the occurrence of disasters because by doing things right, the possibility of

the manifestation of the occurrence of the climate related risks insured will be minimal. In the same vein, the insurers' financial portfolio will be strengthened because they will not be threatened by huge insurance claims which might result in situations of insolvency.

Initiatives by Insurers to Address Climate Change-related Risks

Despite the fact that the insurance companies in South Africa do not have the sophistication of addressing climate related risks, they are striving by taking various initiatives backed up with actions to address the risks and disasters. The insurance industry in South Africa is now working closely with all stakeholders; the government, the regulators, the wider community and its clients in order to pro-actively address climate change related risks which is a critical global challenge. While it is desirable to provide insurance covers to these risks, it is equally important to ensure that an attempt is made to take steps to avoid the catastrophes in the longer term. Every small act done or step taken towards this is also equally important as it all adds up to achieve sustainability. This is the reason why the insurers should promote loss prevention on all levels, align their business terms with risks reducing behavior and ultimately craft new insurance solutions (Kirk 2009). The concern is that in South Africa, properties located around the coastal areas are vulnerable to climate change related risks. This is the reason why the insurance companies are now paying more attention to the beachfront properties and properties built on floodplains. Insurers are now working closely with and advising the local municipalities to prevent further developments taking place in these high risk areas in order not to make the property become uninsurable as this will have a negative effect on the property values, which will act as a deterrent factor for property developers to invest in these properties. This strategy will help to contain the current exposure of insurance companies (SA Insurance New 2009).

The enactment of the National Environmental Management: Integrated Coastal Management (2008) is a step towards the right direction. The Act provides for the establishment and management of coastal protection zone above the high-water mark. The overall benefit of this is that certain activities are prohibited in these areas and there are strict controls over developmental projects as they will be subjected to environmental impact studies before they are executed. The Act gives the state and its agencies wider power to prevent development of areas too close to the sea.

CONCLUSION

From the foregoing expositions and analysis which have shown that though climate related risks are new, the insurance companies have the knowledge of these risks. Consequently, it is incumbent on them to take innovative steps to address them by being proactive in all aspects of climate change risks and disasters, not just to drop premium or increase premiums on climate risks. Being a new phenomenon, there is a need for clear and explicit legal framework to address the risks and disasters. In the same vein, existing statues, legislations, measures and strategies against activities that are promoting climate change should be implemented to the letters. Insurers should also be proactive by advising their customers to take steps towards mitigation and adaptation such as compliance with building codes, ensuring that there is massive reduction of the use of fossil fuel to power equipment, advising on the need to switch to renewable energy and energy efficient appliances both domestically and in the industrial sectors, ensuring compliance with international instruments, initiatives, strategies and policies to reduce the amount of carbon dioxide in the atmosphere.

RECOMMENDATIONS

To realize effective climate change risk reductions and losses, there is a need to ensure that institutions are strengthened by making the legal system to enforce insurance contracts, ensuring full disclosure of risks to be insured. Investing in disaster risk reduction measures, such as raising community risk awareness to reduce vulnerability and enforcing building codes, is a first step toward reductions in climate risks and disasters. The potential role of the insurance companies is to be a stronger proponent in the fight against climate change.

ACKNOWLEDGEMENTS

This work is a revised version of the paper presented at the 8th International Workshop on

Commercial Law organized by University of South Africa and Nedbank South Africa on 3 August 2011. I would like to thank the participants for their useful comments.

REFERENCES

ABI 2008.Association of British Insurers—Guidelines on Responsible Investment Disclosure. From< http//www.ivis.co.uk.> (Retrieved April 16, 2009).

Babbie E, Mouton J 2001. *The Practice of Social Research*. Oxford University Press.

Ceres 2008. Coalition of Investors, Environmental Groups (Ceres)-The Association of Chartered Certified Accountants (ACCA) Sustainability Reporting Awards. From <http://www.ceres.org/Page.aspx?pid=433> (Retrieved October 23, 2009).

ECA 1989.Environment Conservation Act. From <http://www.acts.co.za/enviro/> (Retrieved March 16, 2009).

Field, B, Mortsch D, Brklacich M, Forbes L, Kovacs P, Patz A, Running SW, Scott MJ 2007. North America. Climate Change 2007: *Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge, UK: Cambridge University Press.

FSB 1990. Financial Services Board Act 97 of 1990. From<http://www.cgap.org/gm/document-1.1.5989/Financial%20Services% 20Board% 20Act%20No%2097of%201990.pdf> (Retrieved March 19, 2009).

Gerrard M 2007. *Global Climate Change and U.S Law*. American Bar Association Section of Environmental, Energy and Resources Press.

Harmon K 2009. Are Insurance Companies New Climate Ally? From <http://www.bing.com/search?q=Katherine+Harmon% 2c+Are+ Insurance+ Companies+ New+ Climate+ Ally%3f&src= IE-SearchBox& adlt=strict& first=11&FORM= PERE> (Retrieved November 27, 2010).

Herweijer C 2009. Maintaining Insurability in a Changing Climate, Insurance Risk. From <http://www.insuranceerm.com/analysis/maintaining-insurability-in-achanging-climate.htm> (Retrieved 23 July 2010).

Hyogo Framework 2005. Article 4 ii)(k): "Promote the Development of Financial Risk-sharing Mechanisms, Particularly Insurance and Reinsurance Against Disasters." From < http://www.unisdr.org/we/coordinate/hfa> (Retrieved October 10, 2011).

Kirk L 2009. Challenges Facing the Short-term Insurance Industry. *The Insurance Institute of South Africa's (IISA) Annual Conference* held at Sun City in the Pilansberg 8-29 June 2009.

Kousky C, Cooke R 2009.Climate Change and Risk Management Challenges for Insurance, Adaptation, and Loss Estimation. From <http://ideas.repec.org/p/rff/dpaper/dp-09-03-rev.html> (Retrieved September 9, 2009).

Liedtke P 2009.The Green Reports No. 2 of 2009: Risk and Insurance, Insurance Industry and Climate Change Contribution to the Global Debate, The Geneva Association for the Study of Insurance Economics). From <http://www. geneva association.org/PDF/Geneva_Reports/Geneva_report[2].pdf> (Retrieved June 4, 2010).

Long-term Insurance Act of 52 of 1998. From <http://www.acts.co.za/long-term_ins/index.htm> (Retrieved February 6, 2009).

Short-term Insurance Act of 53 1998. From <http://www.acts.co.za/short-term_ins/index.htm> (Retrieved February 6, 2009).

Meyer E, Odeku K 2009. Climate change, energy and sustainable development in South Africa: Developing the African continent on a crossroads. *Sustainable Development Law and Policy*, 10(3): 49-50.

Mills E 2004. Insurance as an Adaptation Strategy for Extreme Weather Events in Developing Countries and Economies in Transition, New Opportunities for Public-Private Partnerships. From <http://www.sciencemag.org/content/309/5737/1040.full> (Retrieved 19 August, 2011).

Mills E 2006. *The Role of NAIC in Responding to Climate Change: Testimony to the National Association of Insurance Commissioners*. San Antonio, Texas, USA: Climate Change and Global Warming Task Force.

Mills E, Lecomte E, Mills V 2006. From Risk to Opportunity: How Insurers can Proactively and Profitably Manage Climate Change. From <http://www. ceres.org/pub/docs/Ceres_Insurance_Climate_%20Report_082206.pdf> (Retrieved February 4, 2011).

Mills E, Lecomte E, Peara A 2001.U.S. Insurance Industry Perspectives on Global Climate Change. From <http://insurance.lbl.gov/pubs.html> (Retrieved July 7, 2011).

Mouton J 2001. *How to Succeed in Your Master's and Doctoral Studies*: *A South African Guide and Resource Book*. Pretoria, South Africa: Van Schaik Publishers.

Munich 2007.Topics Geo: Natural Catastrophes 2006: Analyses, Assessments, Positions. From <http://www.wmo.int/pages/publications/meteoworld/archive/june08/auld_en.html> (Retrieved 29 July, 2011).

Munich 2008.Will Climate Change Alter Liability Risks? From <http://www.munichre.com/en/ts/geo_risks/climate_change_and_insurance/climate_liability_workshop/default.aspx> (Retrieved 21 July 2010).

NAIC 2008.National Association of Insurance Commissioners 'Climate Change Study Focuses on Insurance Impact. National Association of Insurance Commissioners News Release. From <http://naic.org/Releases/2008_docs/climate_study.htm> (Retrieved February 16, 2011).

NAIC 2008.National Association of Insurance Commissioners. The Potential Impacts of Climate Change on Insurance Regulation. National Association of Insurance Commissioners News Release. From< http://naic.org/Releases/2008_docs/climate_study.htm> (Retrieved February 16, 2011).

Ncube M 2010. Climate Risk, Temperature Dynamics, and Insurance in South Africa (2010) 1 Market

Brief . Volume 1, issue 1 1st July 2010. From <http:// www. afdb.org/fileadmin/uploads/afdb/Documents/Publications/Web%2 0ECON%20 Market% 20Studies% 20Climate%20Article% 20_2_. pdf> (Retrieved February 12, 2011).

NEMA 2008. National Environmental Management: Integrated Coastal Management Act, No. 31884 Government Gazette. From<http://www.bing.com/search?q=National+ Environmental+ Management+ Integrated+Coastal+ Management+Act& src=IE-SearchBox& Form= IE8SRC&adlt=strict> (Retrieved May 10, 2010).

Odeku K, Meyer E 2010. Climate change surge: Implementing mitigation and adaptation strategies in South Africa. *Journal of African Law*, 54: 159-183.

Pasquini L, Ziervogel G, Cowling M, Denichaud G 1999. *The United Nations University (UNU) and the Potential Role of Insurance, Sustainability Accounting, Management and Policy*. United Nations University Press.

Peara A, Mills E 1999. Climate for change an actuarial perspective on global warming and its potential impact on insurers. *Journal of the American Academy of Actuaries* 2: 16-23.

PriceWaterhouseCoopers 2008. Insurance Report Emerging from the Storm, the Day after Tomorrow for Insurance. From< http://www.pwc.co.za/en_ZA/za/assets/pdf/pwc-insurance-day-after-tomorrow-sa-perspective-10-09.pdf> (Retrieved November 16, 2009).

Reinecke P, van der Merwe S, van Niekerk P, Havenga P 2002. *General Principles of Insurance Law.* Durban: South Africa: LexisNexis, Butterworths.

Ross C, Mills E, Sean B 2007. Limiting liability in the greenhouse: Insurance risk-management strategies in the context of global climate change symposium: Climate change risk. *Stanford Journal of International Law*, 43A: 251-263.

SA Insurance News 2009. SA Insurance News and Information Top of Form, 'The Effect of Climate change on Insurance.' From <Insurance and Climate Change\SA Insurance, Satam and Insurable Interest in Cape Town.mht> (Retrieved May 14, 2010).

Stokes G 2011. Regulator Seeks Partnership with Industry Bodies. From <http://www.fanews.co.za/article. asp?Front_Page_Features;25,Straight_ Talk; 1146,Regulator_seeks_ partnership_with_ industry_ bodies;9308> (Retrieved June 21, 2011).

The Constitution of the Republic of South Africa 1996. From < http://www.info.gov.za/documents/constitution/index.htm> (Retrieved March 6, 2009).

van der Linde M, Feris L 2010. *Compendium of South African Environmental Legislation*. 2nd Edition. Pretoria, South Africa: University Law Press.

Warner K, Ranger N, Surminski S, Arnold M, Linnerooth-Bayer J, Michel-Kerjan E, Kovacs P, Herweijer C 2009. Adaptation to Climate Change: Linking Disaster Risk Reduction and Insurance. United Nations International Strategy for Disaster Reduction Secretariat (UNISDR) Palais des Nations CH-1211 Geneva 10, Switzerland. From <www.unisdr.org.> (Retrieved August 2, 2010).