

Insurance as a Regulatory Mechanism Towards Sustainable Companies

Paper for the Conference *Towards Sustainable Companies*, 29-30 August 2011

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1. Insurance as a fulcrum institution for sustainable economies

Over the past decade there have been increasingly loud and persistent warnings from scientists (perhaps the loudest of these voices have been those of climate scientists) that the risk landscapes within which humans and other species operate are changing rapidly and perhaps irremediably. The primary reason for these changes it has been argued is the way in which human engagements with earth systems have impacted on these systems (anthropogenic effects). Although there has been much controversy surrounded these warnings they are increasingly being heeded globally by a variety of institutions within the public, private and civil society sectors. How they these warnings are being heeded varies widely and is shaped by the nature of existing institutional processes – in particular their mentalities and technologies.

Institutions whose core functions are concerned with responding to risks arising from bio-physical systems have, not surprisingly, been particularly aware of the warnings of scientists. This receptivity has been enhanced by the fact that these institutions have, over the past several decades, been impacted by bio-physical outputs (in particular catastrophes) that are causing them to question their risk assessment mentalities and technologies.

A new fundamental commitment to environmental sustainability is the operation of companies is necessary. We, in this paper, argue that traditional external regulation is an insufficient mechanism to facilitate such a transformation. We are arguing that there are two conditions that need to be fulfilled for this to happen.

- i) One needs to have a place within society, a set of institutions, that will be open to hearing (has a listening) the messages of the natural sciences, namely, that the world is different from the way we have imagined it in our minds, different from the sensibilities that shape the way in which we run our engagement with the planet (our economies).
- ii) This place, this set of institutions, needs to be influential, in the sense that if they change they will bring about changes way beyond themselves. They need to be leverage or fulcrum points.

If we look at what is currently happening there is quite a lot of condition 1. Lots of places are hearing the message of science, e.g. NGOs and others. However, there is not a lot with respect to condition 2. The focus for condition 2 has been on states, but these are not proving to be good listeners or good actors. We need to identify places that have a good listening (because of change they are confronting) and that have a direct impact on the way people and business engage earth systems (places outside of states).

One such set of institutions that potentially has the capacity for combining 1 and 2 is the insurance industry – an industry that has experienced increased, and unanticipated, claims from policyholders who have experienced a variety of bio-physical perils, in particular climate related perils.¹ This experience has been such that it has undermined the solvency of many companies and has come to be regarded within the industry globally as a serious threat to the solvency of the industry as a whole.

A key argument for the potential for insurance as a mechanism for sustainability has to do with the combination of its huge amount of resources, and its regulatory reach. The insurance sector is huge, representing in 2007 more than 4,000 billion US dollars; 7.6 percent of the world GDP.² This is more than three times the global defence expenditure the same year (Lobo-Guerrero 2011). Insurance is also a central part of the capitalisation process of a modern economy. It creates huge capital assets, and tends to foster industries around it: preventative measures and services, damage assessments, legal advice, new industry products, relief and reconstruction mechanisms, etc. The great life insurance companies were pioneers of epidemiology and public health, the fire insurance industry formed the first laboratories that tested and certified household appliances and other technical equipment, and established the first fire departments. Health insurers has more recently been innovative in measuring the effectiveness of medical procedures, etc. (Baker and Simon 2002). There is also a high correlation between the existence of insurance in markets and profusion of preventive mechanisms³. Insurers are among the largest real estate owners in the world and are therefore uniquely positioned to effect upgrading of the existing building stock and promote energy efficiency in buildings.⁴ The insurance industry is among the world's largest institutional investors.⁵ The industry's ability to direct capital investments makes it highly influential in driving company behaviour and market trends.

The insurance sector has the size and the scope to provide significant capital to cleaner energy technologies and help drive society towards a low-carbon economy.⁶ Both in its role as an insurer and investor, insurance is uniquely positioned to influence the behaviour of economic actors and improve their risk profile. Significantly, the insurance industry to a large extent acts inside the home or the business, where the power of the state has traditionally been expected to stop (Baker and Simon 2002). It also appears to be, due to its regulatory reach, '*the sleeping giant of power*' (Baker and Simon 2002: 12). If this regulatory power could be mobilised

¹ The focus of this research project will be on property/casualty insurance which is the insurance sector that is most vulnerable to global environmental changes, and also the sector of insurance that is the main driver of the search for new insurance 'imaginings' and technologies (Mills 2009).

² *The Geneva Reports. Risk and Insurance Research. The insurance industry and climate change – contribution to the global debate.* No 2, 2009, p. 14

³ Op cit, p. 19

⁴ Buildings are a major source of green house gas emissions accounting for approximately 1/3 of the contributions from cities, *The Geneva Reports. Risk and Insurance Research*, op. cite., p. 69

⁵ *ibid*, p. 69

⁶ *In the Front Line: The insurance industry's response to climate change*, REO Research, September 2007, F&C Investment, p. 11

for sustainability the consequences could be enormous. As noted by Richard Ericson ‘insurance is **the** institution of governance beyond the state’ (2003: 360).

This paper explores the role of insurance as a regulatory mechanism towards sustainable companies. It does by asking two questions:

- A. Is the insurance industry, particularly its leading international institutions, capable of developing insurance models that respond to contemporary global environmental change?
- B. And, is the necessary local uptake of these models taking place on company level?

Within the insurance industry the global level – with the Financial Initiative (FI) of the United Nations Environment Programme as the leading knowledge hub – has become the site for the most intense search for new insurance ‘imaginings’ and model building. The paper focuses on the role of FI to explore the first of these two questions. To explore the last question it looks at recent transformations taking place within a leading South African short term insuring company.

2. Insurance capacity for novel innovation

The history of insurance, as Lobo-Guerrero (2011) argues, points to a constant tension between ways of imagining the world and ways of making uncertainty matter. Insurance has always tried to move beyond its conceptual and practical borders, to ‘insure the uninsurable’, and to insure beyond what has been strictly calculable (Ericson et al 2003). Though actuarial knowledge has functioned as a core expertise of insurance, it has always been combined with other sources of knowledge in a rather un-academic and un-professional manner. Insurance, ‘operates instead as a bricolage, as an art of creativity combining available bits of knowledge taken from any necessary source, and putting it to work in relation to a specific problem’ (Lobo-Guerrero 2011: 127). New insurance ‘imaginings’ (Ewald 1991) have had enormous consequences as to how risks have been perceived and managed (Baker and Simon 2002). As humans confront what many think is the greatest challenge to their survival and prosperity on earth, this capacity of insurance for novel reimagining of the world and its place within it, might be a crucial source of innovation.

However, though scholars studying insurance scholars seem to be in general agreement as to the innovative capacity that insurance have shown, as an historical fact, they tend to disagree about the implications of this, and on the likelihood that this novelty can be brought to bear on the new global risks of our time.

The last decades have also witnessed a series of ‘demutualisations’ (Heimer 2003) of insurance companies which indicates a growing influence of stockholders in the insurance market and possibly a stronger emphasis on short-term profits. Another recent tendency has been a drive towards an increased diversification of insurance pools, whereby insurance companies compete by ‘cream-skimming’ the good risk clients and shutting out the bad ones (Baker 2008), a tendency which seem to

counteract the core risk-pooling logic of insurance. Some researchers argue that this may limit the capacity of insurance institutions to unite individuals and groups for long-term sustainability goals (Ericson, Barry and Doyle 2000). Heimer (1985) tends to see this as being in line with, and strengthening, a long term trend of insurance to drive out alternative and more social ways of managing risks, thereby undermining social ties by making relationships irrelevant in risk management. In Heimer's interpretation the spread of insurance works to diminish our repertoire of knowledge and action models related to risk, with negative consequences for the capacity for novelty and innovation. Ulrich Beck (1992) forwards a similar argument in his theory of the emergence of a new 'risk society'. His observations about the incapacity of insurance to manage catastrophic risk make a cornerstone of his claim that the emerging global threats are beyond our normal (insurance based) models of risk control (Lobo-Guerrero 2011). Ewald (1991) echoes Beck when he points to the new emphasis put on the precautionary principle which he sees as introducing a logic beyond risk management, that 'Brings us out of the age of insurance companies' (Ewald 1991).

Stone (1980), in analysing the development of insurance in the US, reaches contrary conclusions. In her mind, insurance, both public and commercial, has been one of the principle mechanisms of defining problems as amenable to human agency. In Stone's interpretation, insurance has been a moral opportunity (rather than an institution inviting 'moral hazards' as the economists claim). Insurance has invited public discussion on new challenges and problems, it has thought publics about individual and collective obligations, it has funded new helping technologies en enlarged social standards of service provision and it has offered arguments for equality and inclusion (ibid). Ericson and Doyle (2003, 2004), documenting through a range of empirical case studies that insurers have generally not backed off from insuring catastrophic risks, but rather responded in innovative ways to turn such threats into new opportunities, seem to support her arguments. Lobo-Guerrero (2011) in his study of environmental, kidnap and ransom and piracy insurance, reaches much of the same conclusion. In his interpretation the insurance industry has announced its willingness to embrace the new risks, not through a conservative approach of risk prevention, but through developing novel strategies of risk management, protection and compensation (ibid: 80).

Clearly there are arguments for and against the assumption that insurance might become a key fulcrum institution for a transition towards more sustainable human practices on earth. To explore this question what is needed is more empirical research. What is very surprising is that despite the central regulatory role of insurance it has been almost completely ignored by the traditional humanities and social sciences. The work that has been done roughly breaks down into three groups: work on the origins and political trajectory of the welfare state (see, e.g., Skocpol 1992); work on the interaction of insurance organisations with their clients (see, e.g., Lipsky 1980); and work on the limits of the institutions of insurance (social insurance in particular) in achieving redistributive ends (see, e.g., Lipsky 1980). As noticed by Baker and Simon (2002), however, none of this work focuses broadly on insurance as such. With regard to the role of insurance in relation to the contemporary environmental challenges we know of only one academic work (Lobo-Guerrero 2011). It is crucial to fill in this knowledge gap, towards which this paper aims to make a modest contribution.

3. Traditional insurance imaginations and contemporary challenges

We begin this exploration by looking firstly to how insurance traditionally have imagined environmental risks. We will emphasise two aspects of this imagination; its notion of biophysical systems as stable systems, producing regular output, and its notion of environmental disasters or perils as ‘Acts of God’ (a technical insurance term) beyond the control or impact of humans.

Actuarial science and the instability of biophysical systems

Insurance companies the world over have traditionally understood the environmental risks they underwrite – for example, perils such as flooding, fire and storm surges -- as the products of biophysical systems (Nature). Nature has been assumed to act in very stable ways over the sort of “short” time periods that humans have been concerned about. Stability has been thought of as the norm. This understanding of stability is reflected in the way the weather, for example, is regarded as having stable seasonal patterns – in the Cape the South Easter in the summer, in Gauteng summer storms and so on. This stability also finds expression guidelines such as 10, 20, 50 and 100 year flood lines. Although earth sciences has steadily been developing better and better models of bio-physical systems insurance companies (like most of us) have tended to conceive of “Nature” very much as a “black box” and more specifically as what might be thought of, following Burris, et al. (2005), as an “outcome generating system” that has variable, but patterned, outcomes.

This stability has provided the basis for assessing the risk presented by a variety of environmental perils within the insurance industry. A crucial set of systems that have been built on this have been those developed by actuaries. Indeed the development of “actuarial science” has been very closely related to the development of commercial insurance – this is nicely reflected in the fact that the University of Pretoria, for example, has a “Department of Insurance and Actuarial Science”.

Insurance underwriting has traditionally used the outputs of actuarial predictions – predictions that rely on statistical calculations derived from the history of past events - - as crucial inputs in assessing and pricing perils. This has made the data generated by “claims” histories such an important feature of insurance underwriting and of the competitive relationship between insurance companies – the better ones actuarial data, the better ones risk assessments, the better ones profits and ones competitive advantage.

Recent global experiences of often catastrophic environmental events, together with advances in earth sciences that has led these natural scientists to conclude that earth systems are rapidly becoming far less stable over long periods of time than they have been, has led insurance companies globally to raise questions about the adequacy of their existing predictive methodologies. If ‘Nature’ is changing ‘its ways’ this calls into question the adequacy of a black box approach to understanding ‘her’ ways and of predicting ‘her’ future actions. This in its turn has raised questions about the adequacy of relying on analyses of the past performances of ‘Nature’ (and the statistical calculations that have been used to make future predictions) as a basis for predicting, and pricing, environmental risks within the insurance industry. And this,

in its turn, has led to a search for alternative methodologies for providing predictions of future events.

A significant development here has been initiatives that have sought to find new ways (systems) of calculating the probabilities of future events that are not exclusively based on historical data (“the black box” approach) but rather include methods that “open up the box” by building models of what is going on within these bio-physical boxes. These models (which are tested on the basis of their ability to predict past events) are then used as a basis for predicting the probability of future events occurring.

The anthropogenic factor: socio-biophysical systems and landscapes

The established model of insurance has tended to perceive natural perils as ‘Acts of God’ beyond human control. What this model has put emphasis on is accurate risk assessment to predict the frequency and magnitude of these perils. To the extent that insurance - at least in its modern commercial form - has engaged in risk management it has mostly focused on incentivising clients to protect themselves individually. The historical reputation of this model - it is seen as having worked well, it has been profitable – may not facilitate a change of established insurance ‘imagination’.

Researcher exploring earth systems has come increasingly to recognize that these systems are not simply biophysical systems but are in fact socio-biophysical systems. This thinking recognizes that there have been and continues to be profound anthropogenic influences that are shaping earth systems in very fundamental ways. This is the key insight associated with concerns about climate changes.

Climate has always been shaped by biophysical systems. What is now understood is that these biophysical systems are themselves being fundamentally shaped by human impacts, that is, by social systems – an understanding that fundamentally challenges deeply rooted assumptions about the independence of the social and biophysical realms.

This interaction between social and biophysical systems is now understood to having a fundamental affect on the way biophysical systems operate. These effects are two-way rather than one-way effects – changes in social systems are affecting biophysical systems and these changes in turn are acting back on, and affecting, social systems. It is this interaction and the affect that socially affected biophysical systems are having on social systems that is the basis for the now widespread concern that these affects will have negative, and indeed possibly catastrophic affects, on social systems, and thus on the ability of humans to maintain the levels of wellbeing that they have come to enjoy. The term used by Jared Diamond (2005) to point to the possible catastrophic impact of these expected changes (changes that have been outlined in considerable detail in series of international reports by earth system scientists) is “collapse”.

This wellbeing, ironically, has been directly dependent on economic developments that have relied upon the very social processes that are now being identified as damaging the environments that humans rely upon (sometimes termed ‘ecological services’). This irony is the source of a fundamental dilemma that human societies are currently facing across the globe – the more economies produce wellbeing through economic growth and development via the use of, for example fossil fuels, the more

they destroy the biophysical basis for this development. This dilemma is particularly acute in developing countries like South Africa that have a long way to go in generalizing the wellbeing currently enjoyed by their elites across their populations.

The social impacts on perils does not only take place through the impact of social factors on bio-physical systems but also take place through the way in which social systems are shaping the way in which these biophysical changes are expressing themselves through perils. For example, social systems have not only shaped the way biophysical systems operate but are shaping the way in which the events generated by these systems – for example, through torrential rain – impact the lives and property of people. An obvious, but important, example, is the way in which the impact of heavy rains is shaped by the way in which culverts and storm water drains are constructed and maintained. These secondary or proximate drivers of flooding can, and do, make all the difference in determining the extent and damage of flooding events. Early work by the International Institute of Environment and Development (London and Washington, DC) documented how environmental disasters in Africa were predominantly caused by such socio-political drivers (see Timberlake 1985).

What this indicate is that insurance will have to change its business model to cope with global environmental change. It will have to acknowledge that socio-biological systems has become increasingly unstable requiring an understanding of their dynamics, and it will have to acknowledge the crucial role of social aspects in producing socio-biological risks. What is being observed internationally, within insurance (see next section), is an emerging realization that insurers will have to make a much broader, and more parallel paradigm shift, to better engage in risk management, if they are to start to cope with the new challenges associated with climate change. This is going to require greater movement by insurance to adjust their business model, and a fundamental rethinking of how they operate today, obliging them to embrace new, more innovative solutions to achieve this. To say that insurers have played an exclusive risk assessment, rather than management role in the past, is not entirely correct, as there have always been aspects of risk management in their operations. But these activities have often played a marginal role in their business models rather than as a central component of them. The development of the car tracker industry is one such example, as is the development of private security. However, if insurance is to respond more properly to global environmental change the centre of gravity, within insurance, is going to have to shift from a focus on risk assessment and recovery to one on risk management and prevention. We now turn to an exploration of the UNEP FI to evaluate the extent to which this global program seems to be up to this challenge.

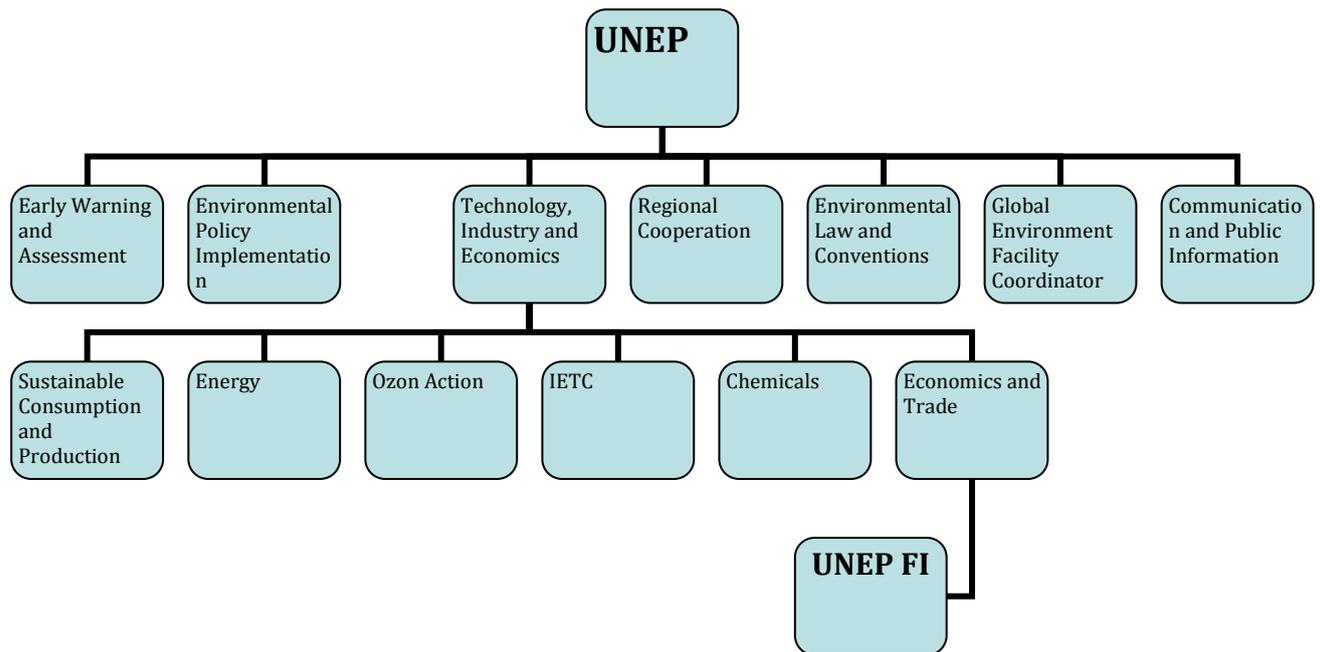
4. The UNEP Financial Initiative

Since the beginning of the 1920, and the launch of the League of Nations, there has been a great interest in international organisations and their bureaucracies in social sciences. However, according to Biermann and Sibernhäuer (2009), there has been a problematic gap in this literature when it comes to understanding the variations in influence from international organisations that are rather similar in mandate, size, financial means, and principals.

Meaningful progress or strategies from governments so far when it comes to environmental issues has been elusive. One explanation for the lack of strategies and progress is the characterisation of climate change as “wicked issues”; it “defies resolution because of the enormous interdependencies, uncertainties, circularities, and conflicting stakeholders implicated by any effort to develop a solution” (Lazarus 2008: 1160). Hence, it may prove difficult to organize within known structures, processes and institutions, and moreover lead institutions to be ‘path dependent’ and follow their known “trails” in dealing with these unpredictable issues. In the case of environmental change this is an important notion; in an area of wicked and super-wicked issues, there is a need for actors that support collective international interests as opposed to particular interests of powerful states. These challenges underline the need for investigating the role of international organisations in the global governance system as pointed out by Biermann and Siebenhäuer (2009); further knowledge on emerging systems of private regulation and governance in response to environmental change is crucial. This part focuses on UNEPs’ Financial Initiative and their role and influence through the insurance industry on environmental issues globally.

UNEP FI

The UNEP have since the 1990s been convinced that the financial sector has a valuable contribution to make in protecting the environment while maintaining the health and profitability of their businesses.

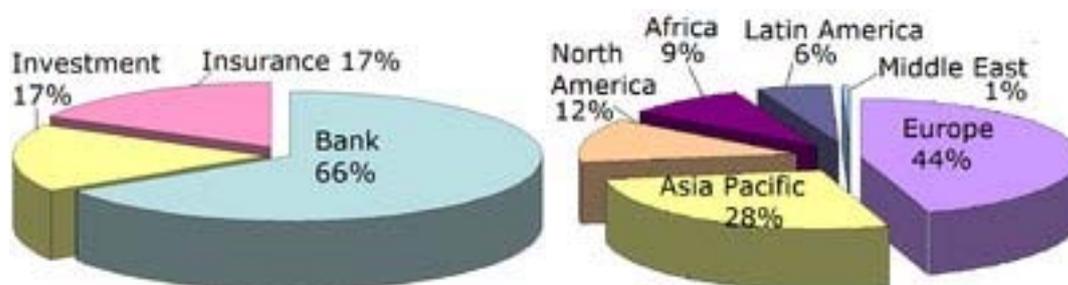


The UNEP Finance Initiative was launched in 1991 when a small group of commercial banks (i.e. HSBC Holdings, Deutsche Bank, Westpac, Royal Bank of Canada and Natwest) started collaborating with the UNEP in an attempt to raise the banking industry’s awareness of the environmental agenda. Prior to the Earth Summit in Rio in 1992, the UNEP Statement by Banks on the Environment and Sustainable Development was launched in New York and formed the Banking Initiative. (www.unepfi.org). In 1997, the UNEP Statement by Banks on the Environment and

Sustainable Development was redrafted, in order to broaden its appeal to the wider financial services sector, and the Banking Initiative was renamed the Financial Institutions Initiative (FII).

In 1995, leading insurance and reinsurance companies, (i.e. Storebrand, Gerling Global Re, National Provident, General Accident, Swiss Re and Sumitomo Marine and Fire), as well as pension funds, followed the banking industry in collaborating with the UNEP. They introduced the UNEP Statement of Environmental Commitment by the Insurance Industry, where the signatory companies pledge that they will “aim at achieving a balance of economic development, the welfare of people and a sound environment” (www.unepfi.org). The Statement acknowledges the principles of sustainable development and the precautionary principle. It also calls upon insurers to incorporate environmental considerations into their internal and external business activities. In 1997, the Insurance Industry Initiative (III) was formed.

From 1999 the FII and the III started to work more closely together on issues of mutual interest, and the first UNEP Financial Initiative Global Roundtable was held in Frankfurt in 2001 as cooperation between the two Initiatives. At the 2003 Annual General Meeting in Geneva, the two Initiatives agreed to merge, forming the UNEP Financial Initiative (FI). As of today there are over 200 company members of the initiative, including large international reinsurance companies like Swiss Re and Munich Re, and also market leading insurance companies like Lloyd’s and AIG. The initiative is run by its members, and supported by a secretary in Geneva.



UNEP FI Signatories by 1) category and 2) region (unepfi.org)

The Insurance Commission

The key initiative when it comes to insurance companies in the UNEP FI, is the Insurance Commission (previously called the Insurance Working Group) which has been charged with the responsibility to undertake and promote research, further education and development products and methodologies on sustainable insurance. Their mission is to raise awareness on environmental, social and governance (ESG) issues and promote adoption of sustainable insurance (unepfi.org). Sustainable insurance is a strategic approach, where insurance companies analyse, identify, manage and monitor ESG risks and opportunities in their operations and environment, which includes underwriting, claims management, sales and marketing, investment- and risk management. The commission consists of 22 member-companies which has

published several reports the past years, and hold meetings and seminars worldwide. According to their reports, the capacity of the insurance industry in addressing global sustainability issues, as risk managers, risk carriers and institutional investors have been underestimated⁷. We will further focus on the Initiative in creating new insurance ‘imagination’ and also discuss its possibilities for facilitating governance solutions in areas of ‘limited statehood’.

Insurance Imaginations

New insurance ‘imagination’ (Ewald 1991) have had enormous consequences as to how risks have been perceived and managed (Baker and Simon 2002). As humans confront what many think is the greatest challenge to their survival and prosperity on earth, this capacity of insurance for novel reimagining of the world and its place within it, might be a crucial source of innovation.

The UNEP FI seek to understand and inform on the impacts of environmental, social and governance (ESG) factors on the insurance industry and sustainable development, and find ways of unleashing the capacity of the industry in managing these ESG risks and discover the possibilities they entail (UNEP FI 2009). The initiative has already, in collaboration with the UN Global Compact, developed Principles for Responsible Investment (www.unpri.org). Over 400 institutional investors, representing more than US\$ 16 trillion in assets, have committed to implement the principles (UNEP FI 2008: 3). Also, the Insurance Commission, lead by a core group of UNEP FI members (The PSI-team), are working on a new set of Principles for Sustainable Insurance, which are scheduled to be launched at the 2012 UN Conference on Sustainable Investment in Rio de Janeiro (Rio+12 Conference) (UNEP FI 2011).

The Initiative spread new ideas and models of management concerning risks through these principles and recommendations on dealing with sustainability issues like climate change, micro-insurance, lifelong income, health, emerging manmade risks, environmental liability, natural resources, recycling and internal efficiency (UNEP FI 2007). The principles are developed by the members of the initiative, and communicated through publications, meetings and seminars. Due to the high number of member institutions, and the leading global role of many of them worldwide, the impact of the Initiative on the industry may be immense. When becoming a signatory member, the businesses approve to showing commitment to the principles of sustainable finance, they commit to getting actively involved in the UNEP FI network and their activities (in particular the UNEP FI’s annual meeting), report to the Initiative on progress (best practice) and pay an annual membership fee based on the total assets of the company (unepfi.org). Thus, there is a certain obligation and expectation of participation when becoming a member. Further, besides being a coalition of some of the world’s largest and most resourceful insurance companies, the initiative also cooperate with other influential organisations like other UN organisations, ClimateWise, The Geneva Association and The Munich Insurance Initiative (MCII). There are high levels of pressure on corporate decision-makers in terms of responses to societal issues like climate change. Thus, according to DiMaggio and Powell(1991) it is, in such conditions of uncertainty, likely that

⁷ Global State of Sustainable Insurance 2009, Insuring for Sustainability 2007, Risk, the Environment, and the Role of the Insurance Industry 2003.

companies imitate other organisations, especially those that are considered successful. This process is called mimetic isomorphism, and it further gives UNEP FI a potential of being an important contributor in global climate governance considering that some of the worlds' most powerful insurance companies and actors are part of their coalition.

Another important incentive that might increase the spread of new insurance imaginations is the economic gain of implementing the new technologies and mentalities; *membership in UNEP FI is not only about surviving this public scrutiny; it is also about learning how to turn it into an opportunity for growth and shaping the sustainable finance agenda as it develops* (unepfi.org). The insurance business may gain substantial assets by finding new areas of insurance, and by collectively working on influencing the national governance systems. The increase of storms, drought and flooding in many areas have caused several insurance companies to lose their solvency, something that for example caused the liquidation of many insurance companies in New Orleans after the Hurricane Katrina (Brunner and Lynch 2010). On the other hand, by identifying new areas of insurance and accessing new clients through e.g. micro-insurance in developing countries, the insurance industry also have economic gains in their active membership in UNEP FI. Here they get access to examples of 'best practice', the latest academic research, and seminars and conferences that inform them on how to access new markets and develop new mentalities or "imaginaries". In this way, insurance companies have economic incentives of taking action, and may further improve the national environmental governance if they manage to influence and cooperate with their national and local governments; something that the UNEP FI express as essential. Underdal (2010) emphasise the possible value of the financial sector on environmental governance; 'the political feasibility of a policy programme can be enhanced by combining measures that (a) offer tangible (short-term) benefits to specific sectors of the economy or segments of society, and (b) conform to core values or ethical principles subscribed to by the attentive public. This particular configuration of private profit and public virtue can be remarkably effective in generating support for effective environmental governance' (Underdal 2010: 392).

Governance in areas of limited statehood

When talking about climate change governance, we refer to the pursue to preserving an economic and social system that are able to adapt and respond efficiently to climate changes in the present and in the future, but also a system that maintains a stable climate as a public good (Harman et al 2011). The South African society is characterised by widespread poverty and inequality, high levels of crime, coupled with low levels of state capacity. Thus, the national and local government has a multitude of important issues to address, like education, health services, informal settlements etc., something that constraint their response and adaption to climate change. On the other hand, South Africa has a long tradition of well-established and powerful insurance companies that has a broad outreach in all areas of society. It can be argued that there is an issue of 'limited statehood' in South Africa, meaning that the *political institutions are too weak to hierarchically adopt and enforce collectively binding rules* (Börzel and Risse 2010: 113). This in turn increases the possibility for other actors to influence and shape the response to climate change, which also gives powerful international actors like UNEP FI grand possibilities of influence through their members (several of the largest and well-established insurance companies in

South Africa are members of the Initiative), but also collectively as a powerful international organisation. Thus, instead of operating in the shadow of the host state ('shadow of hierarchy') with strict regulations and wide participation at all levels, as is the case in many westernised countries, companies in areas of limited statehood operate in the 'shadow of anarchy' (Hamman et. al 2011). The absence of a strong hierarchical state provides companies with an incentive to fill the governance gap, thus granting them with grand opportunities to e.g. shape the regulation in climate governance.

The UNEP FI is especially involved in, and occupied with, the insurance sector in developing countries. In 2010 UNEP FI, together with ClimateWise, The Geneva Association and MCII, published a statement where they call for changes in the adaptation to climate change in developing countries⁸. Among other things they urge governments to appoint a national risk officer with mandate to *develop a holistic risk management culture, facilitating community, regional and state level loss reduction activities, climate-proofing existing infrastructure investments and putting in place appropriate zoning and building codes and enforcing these* (UNEP FI 2010). Further they call for good corporate governance frameworks, reliable risk exposure data, and private-public partnerships.

A conclusion to our first research question might therefore be as follows:

The leading players in the insurance market are beginning to realise that their model of risk management is an insufficient response to contemporary challenges (UNEP FI 2007). The emerging perception is that if the insurance industry is to survive and continue to play a vital role in helping society mitigate and cope with uncertainty, it will need to move from being a 'risk carrier' to becoming an active 'risk manager' (i.e. playing an active role in governing human engagements with ecological processes that shape risk and resilience). The international insurers have therefore begun to review their risk management approaches. On one hand there is a new tendency of trying to incentivise clients not only to protect themselves and their properties, but also to behave more responsibly in relation to the challenge of global warming (requiring clients to report on their CO2 emissions, incentivising low carbon practices through the insurance contract, etc.)(UNEP FI 2009). But beyond this, insurers within the FI network are beginning to realise that clients have limited effects on the risks they insure, which are much more effected by the behaviour of other regulatory institutions, such as national and municipal governments. They are realising that to manage these risks more properly they have to start engaging with these institutions and build cooperative forms of risk management (UNEP FI 2009). If this emerging trend is institutionalised, insurance might become a very important facilitator of collaborative environmental risk management that enrolls actors across the public and private divide.

⁸ Global Insurance Industry Statement on: Adapting to climate change in developing countries. 2010

The next crucial question to explore is therefore: how are the knowledge and models that are developed at these global insurance hubs impacting on the practices of other (more nationally based) insurance companies.

5. Sunrise Insurance – a leading short term insurer in South Africa

The contemporary centralisation drive in the South African insurance marked contrast to the historic roots of the insurance industry in the country, in particular the history associated with Sunrise Insurance (short-term insurance) and its early subsidiary, Sunset Insurance (life insurance). Their first decade of operations, throughout the 1920s, was marked by an exclusive presence in rural areas, in South Africa. Sunset, from its origins as a mutual insurance provider, had obligations only to policyholders while Sunrise followed suit in 1953, by cancelling its early share capital and itself converting to a mutual insurer.⁹

During this period, when the policyholder was the primary consideration, both Sunset & Sunrise emerged as a co-operative, “one could not opt out” type venture, aimed at supporting vulnerable communities, particularly the Afrikaans agricultural sector for which Sunset/Sunrise focused their business. This typified the attempts of early Afrikaaners to support each other in their struggles to survive in southern Africa, especially in their attempts to shift their relationship with the English from one of subservience to one of independence. The roots of these insurance initiatives, both in SA and elsewhere, can be compared closely to modern savings schemes, such as Stokvels, where people pool their resources to enable them to share in a common benefit.

However, following South Africa’s emergence from Apartheid, and the major trend of global mutual insurers to become publically listed, the subsequent demutualisation of Sunset (and its now subsidiary Sunrise) in 1998, brought with it the introduction of shareholders and the introduction of “value” (or profit) into their business model. This put pressure on the established role that these institutions played in supporting vulnerable communities, not only because they had to now reconfigure their cost-matrix, but because satisfying shareholder needs started to take priority over the needs of existing policyholders within their risk pool (i.e. the clients).

There is little doubt, within the company, that demutualisation was a necessary step to take, if not vital to its longer term survival, by helping to reinvent themselves in the new South Africa, as offering more “globally competitive financial services”.¹⁰ However, with demutualisation, came a series of unintended consequences that fundamentally, and irreversibly, changed the relationship between mutual insurer, there to support the “community” at all costs, and a company now torn between managing its own business risk exposure (i.e. servicing shareholders), rather than that

9 {A proud history - Santam}

10 See <http://www.economist.com/node/604592>, viewed 12th March 2011.

of its clients. It is this shift which helps to explain the motivation behind the strong drive to centralisation currently being seen within Sunrise.

A change of business model

With the 'demutualisation' the way Sunrise came to do its business was to run it in accordance with a 'distribution' model. The focus was on selling large quantities of the same product, with minor differentiations. As a executive officer said 'It was all about driving sales, sales, sales'. Insurance policies, as one of our informants stated, were 'sold on fear', with very little emphasis on informing clients about their risks and what their need for insurance actually was. Legislation interfered minimally with this business model.

During the last decade or so, a number of factors have contributed to undermine this business model. The most important factor has to do with the increasing competitive game of insurance, to some extent due to the emergence of bank insurance, but mostly due to the introduction of direct insurance, selling policies over the phone or by the web through centralised call-centres. The direct insurers discovered a gap in the market, a gap they opened, as one Sunrise employee noticed, 'because 'we had allowed our agents, the brokers or whoever, to run the business on our behalf'. All the direct insurers introduced client-centric pricing, segmenting the market into different insurance pools depending on risk. They reduced costs both in this way and by selling insurance independent of intermediaries, and in this way profiled themselves as adding value to the policy holders. As a Sunrise manager stated 'direct insurance turned the insurance industry on its head'.

Another source of change came from legislation. The main national regulator of the insurance industry, the Financial Service Board, acknowledged that many insurance agents abused their clients by not informing them properly about the details of the insurance contract, by over-selling insurance and by generally not practicing to the best interests of their clients. The board first tried in different ways to persuade the insurance industry to become more professional and to better respond to the needs of its clients. As this did not succeed, however, it introduced new legislation to regulate the industry in more detail to protect the clients. One practice prohibited by the new legislation was profit sharing between insurance underwriters and insurance agents, which had been a significant mechanism for Sunrise to incentivise its brokers to offer them good business. With brokers' income reduced to flat commissions they went for more volumes, selling policies with little concern for 'moral hazards' and the increased risks that this implied for Sunrise. Brokers had nothing to lose by including risky clients. The company experienced some years of big losses.

Sunrise responded to this situation by moving in the same direction. It could not compete against direct insurance through a reliance on broker discount, because brokers tended to give the same discount to all its clients. It had to compete by re-taking control over risk assessment and pricing, and by segmenting its own insurance pool. Within insurance there is generally thought to be a close correlation between the degree of control one has over pricing and degree of profit. A major response of Sunrise has therefore been to centralise operations, which was seen as necessary both to save costs, but also to help the brokers to be able to compete with 'direct'.

A third factor that has driven a change of Sunrise's business model was the need to re-brand the company after 1994. Sunrise has had a strong brand in traditional markets.

It emerged through the Afrikaner emancipation after the defeat in the Boer War, and was always seen as a typical Afrikaner company. With the defeat of Apartheid it needed to rebrand itself a leading insurance firm in a new political and economic context, nationally and globally. A related aspect of this was the low general trust of insurance in South Africa. As Sunrise leaders experienced this situation, insurance had become ‘trivialised, devaluated and commoditised’. Perceiving itself as a leading short term insurer, company leaders felt an obligation to reclaim a leadership role and re-institutionalise the value of insurance. It wanted to rebrand itself, to build a new sense of community around its practice. To do this it sought for vision in its historical roots of being a risk pooling and risk management mechanism for a collaborative community. Leading officers felt that the company, in a radically different context, ought to find a way of building on the same noble principles. One way it started to do this was to focus on safety, to build safe communities. From there it was a close distance to the adoption of a new strategy to rebrand as a sustainable, and profitable, leading short term insurance company.

When Sunrise started to re-brand as a sustainable insurance company it looked at international trends, to the Global Reporting Initiative, to consultants within South Africa, etc. It started to engage with ClimateWise and UNEP, and with the leading international re-insurers like Swiss-Re and Munich-Re. In the beginning it was mostly a process ‘at academic level’ as noticed by one of the initiators, of learning and speaking about what others had learned. The sustainability change in Sunrise started with the establishment of an environmental forum, engaging people from different departments within the firm. The forum became a meeting place where engaged people started to ask core questions about ‘what do we do?’; ‘what is important for us?’; can we actually start lifting Sunrise’s corporate responsibility?. The group started to look at energy efficiency, Sunrise’s own carbon footprint, recycling, etc. An idea that gradually came up was that if Sunrise wanted to claim space for environmental leadership it had to set itself up as a sustainable risk manager. The company committed itself to sustainability at board level. It initiated what has been named as an ‘Eco-centric Journey’, dedicated to explore its own and the insurance industry’s role as facilitators towards a more sustainable economy.

The next step of Sunrise was to engage with the industry associating body, SAIA. The company brought SAIA purposefully in to take the lead in the industry. It dedicated an employee in a 20% position to assist SAIA with this operation, seeking to show the association the advantages of taking environmental leadership and making it lucrative for them to do so. The company employee assisted SAIA in putting together an entire plan for a sustainable South African insurance industry and sought to use the industry body as a way to influence the process. In March this year SAIA, assisted by Sunrise, hosted the UNEP FI African conference.

A key challenge, as perceived, has been and still is how to embed sustainability concerns within the core activities of the company. A strategic move has been to change the environmental forum into a Systemic Risk Forum with a mandate to look at every kind of systemic risk challenge facing Sunrise. This move was seen as a way of selling ‘green’ internally, to prevent it from becoming isolated within the firm and to tie more prominence and priority to the stated sustainability goals of the company.

A final driver of change is directly related to the impact of new environmental risks. Globally, losses from climate change have been escalating at an average of 37 % per

decade, while weather related losses now account for 25 % of all insurance claims, up from barely a fraction in the late 1950s. However, while growth remains positive in developing countries, this is largely due to the industry's small footprint (thus growth potential) rather than because developing countries are at any less risk, or exposure, to climate change, than developed ones. In addition, increasing claims, coupled with rising volatility in equity markets has called into question the capital levels at both insurer and re-insurer levels globally, suggesting that the industry may simply not have enough funds to finance claims in the event of an extreme year payout.

In South Africa, the situation is not too dissimilar. Between 2003 and 2008, the Western Cape (which includes the Southern Cape) experienced over R2.5 billion worth of damage from just eight severe storm events.¹¹ While over R2 billion of these losses were carried by local and provincial government, the costs will ultimately bear on the shoulders of the tax payer, reflecting the impact that climate change has, both on local communities (indirectly increasing pressure on the clients of insurers) and on national economies more broadly.

At Sunrise, of the R 60 million paid out in claims classified as "Special Perils" (i.e. severe weather events), over the past 15 years, 75% occurred over the past five. A broad analysis of Sunrise's statements, over the past seven years, indicate that claims have increased at a faster rate than premiums and that the company's two largest insurance classes, motor and property, is where the biggest erosion is occurring.¹²

Sunrise's response to its new competitive situation

Centralisation

In response to the challenges that Sunrise, like other traditional insurers, are increasingly being exposed to is a realisation that they need to start focusing on broad cost reduction, within their premium structure, rather than simply continuing with the same model of how they have offered insurance in the past.

The primary response by insurance seems to be on two fronts:

- reducing management costs; and
- improving the capacity to assess risk.

Reducing management costs

At the heart of this seems to be a primary response to target the management costs of the premium structure, particularly those costs associated with maintaining the network of regional administrative offices across South Africa.

There has been a broad reduction observed in the numbers of regional staff at these centres; in one instance dropping from 12 down to just two, while their profile, as a

11 Holloway, A. Fortune, G.; Chasi, V. 2010, 'RADAR (2010) Western Cape; Risk and development annual review', Disaster Mitigation for Sustainable Livelihoods Programme.

12 Preparing Umbrellas before the Rain

point where clients are able to interact with the company, has also been reduced. The Sunrise regional staffs new title as “Relationship Managers” requires them to focus on servicing brokers administrative needs, when needing to interact with the company rather than engaging in risk analysis.

In what appears to be a clear attempt at competing with the direct insurance model, which they perceive as having many financially competitive advantages, Sunrise has begun to offer insurance direct from head office, allowing clients the opportunity to bypass the broker (often seen as a “middle-man”), should they wish, and instead deal direct with the company.

This centralisation has also seen an increase in the ability of existing clients to start administering their own policies, especially with regard to claims, direct with head office. This has led to a rapid expansion in the size, scope and role that these centralised call centres are beginning to play.

Changing the relation to its brokers

Centralisation is all about changing the relationship between Sunrise and its distribution channel, its brokers.

Sunrise remains strongly committed to its traditional business model which has relied heavily on broker distribution as a key mechanism to build and maintain brand loyalty. The independent brokers, both on the commercial and the personal side, have a stronger hold on their clients due to the personal relationship. For Sunrise, brokers are the crucial link to its customers. 96 to 98% of the revenue comes through the approximately 2.500 brokers it engages across the country. Most of them are individual agents, but there are also large, national broker houses. The tendency, however, is that Sunrise’s personal insurance line is moving towards direct sales through centralised call centres

Historically brokers had a large discount window, but with centralisation of risk assessment and pricing, Sunrise has narrowed this opportunity. However, the company still segments its brokers by the quality of their practice. Good brokers, who Sunrise believes look after their clients and minimise losses, are lent more credibility. They are allowed to give their clients better rates and are therefore likely to get more business. Brokers get 15% commission for each policy, while Sunrise takes between 4 to 6%.

Traditionally Sunrise only to a limited extent engaged in advising clients about risk management. The company has more defined its role as making clients and potential customers aware of their risks, but not to the point of trying to influence their behaviour. That was not the point of departure. The underwriters, of course, to some extent sought to incentivise clients to look after their risks, by increasing or decreasing the deductibles of clients according to their individual risk profile. Basically, however, Sunrise left it to the clients to find their own solutions. With the change of business strategy, however, all of this has changed.

Sunrise’s current vision is to differentiate itself from its competitors by promising to manage, proactively, the risks it its customers. The company has established a risk management hub to drive this agenda. This group has focused on the risk management

supply chain. They are negotiating with suppliers about giving discount for clients of Sunrise on the premise that they use particular products or professional service providers, as a way of managing and minimising the risks of their customers. This also ties in with the solar water heater program that Sunrise has initiated. The risk management group is negotiating a discount for clients if they decide to exchange their electric heater for a solar based one, and also reducing their insurance premium due to the lower risk associated with an out-house installed heater.

Sunrise realises, however, that its broker environment is the key to support clients with pro-active risk management. In the personal lines, in particular, risk management all depends on what the brokers do, or don't do. Sunrise vision is therefore to equip its brokers with the tools and the expertise they need to engage them in risk management. The company are organising conferences – 'In tune with Tomorrow' – to facilitate a reflection on the broker's role in the new competitive and regulatory environment.

As perceived by the Sunrise leadership, however, many brokers have had the same business model for years. As seen from the head office these brokers are in a 'comfort zone' just maintaining their client relations, not showing any interest to engage in asset management. Many brokers are not looking after their clients, they just want to earn their commission and sell their policies. Very few of them, as perceived by management, walk into the houses of their customers to advise them on what they ought to do from a risk perspective.

Brokers, on their hand, are complaining that their role in relation to clients has been reduced due to the centralisation of risk assessment and pricing, and claim that Sunrise shows little real interest in the risk challenges experienced by individual clients or local communities.

In practice, though Sunrise has a vision of creating a market based on broker assisted risk management of personal homes, the centralisation of core insurance operations seem to undermine much of the potential to realise this vision. The idea of becoming a proactive risk advisor is still mostly an empty promise. What has still not been created internally is a delivery mechanism that delivers on that promise. The change in Sunrise's technology of risk assessment (see next section) may well imply an even emptier promise of risk management.

Improving risk assessment

Sunrise's core knowledge base has been, and still is, actuarial science. The actuaries base their practice on historical data to do their modelling. Historical data builds up through information on claims and losses. As perceived by the company's managers Sunrise has a big advantage by having the biggest set of historical data among the South African insurers, after 92 years of operation. Because of its superior set of historical data and deeper understanding of risks, Sunrise have the capacity to take on risks it believes is mis-priced by other insurers with less access to such data.

A strong trend over the years has been to make the actuarial practice more and more into an objective science based on statistics and probability theory. The introduction of direct insurance has increased this tendency. Their actuarial practice is based on pure mathematical calculations, with no leeway and no broker intervention. Seen from a purely actuarial point of view Sunrise's distribution model undermines actuarial precision and thereby also scientific pricing. This is seen most clearly on risk

portfolios with huge volume, such as motor vehicles. The direct insurer 'Outsurance', for instance, has 25 rating figures for cars, while Sunrise has only 6 because it keeps its actuarial models simpler and adds the local knowledge of brokers. A clear tendency, however, is a growing differentiation between Sunrise's personal and commercial insurance lines. Within personal insurance the relevance of broker risk assessments is being reduced, while in commercial it is still important.

Actuarial work is reactive, they don't try to predict what is going on and then get ahead. They are looking for factors that impact on risks, but only through historical data. They see no benefits of trying to get ahead of things. If they discover a new risk factor, then they need to start measuring it, to build historical data. The actuaries in Sunrise feel no pressure to start making predictions based on scientific modelling as developed by the different natural science disciplines. The actuaries do not foresee that their historical models will change. To the contrary, they perceive actuarial models as having superior credibility and much better predicative capacity than models based in science.

Actuaries develop rating and pricing models, based on their historical data, which they give to the underwriters. What the actuaries offer is a purely theoretical prize based on their statistical calculations, the underwriting department then makes it market related. If the underwriters, however, pick up what seems to be a new trend, for instance more sudden fires, they go back to the actuarial department and ask them to look once more at the rating, to re-survey the risks and sharpen their models. Risk assessments and pricing, therefore, has always been outcomes of a negotiation between actuaries and underwriters, and to a decreasing extent between them and the brokers.

The other side of the coin, however, is a growing acknowledgement within Sunrise management group that actuarial calculations, due to contemporary changes in weather and climatic conditions, is becoming less reliable. This has made the underwriting function much more important, which is one of the reasons that it has been centralised. A key role of the contemporary underwriter function has come to be in touch with environmental trends. Sunrise management has realised that actuarial expertise must be combined with other scientific models that attempt to predict the future by other means. The company acknowledges that it needs concerted efforts to gather new kinds of information to determine how it can move into a predictive space and thereby differentiate itself from its competitors.

The centralisation of operations has therefore also inadvertently led to a centralisation of risk assessment, as Sunrise is seeking to streamline its management of risk assessment. As a result, traditional insurers are actively seeking to improve the quality and accuracy of the tools they depend upon to help calculate the probability of risk occurring. This is linked to the fact that, due to the changing socio-ecological landscape they are operating within, they now realize they can no longer depend upon - and simply improve - the use of actuarial (past) modelling to identify what risks to admit into their 'insurance pool' and under what conditions (excess/deductibles/premium rate etc).

Instead, Sunrise, and other insurers, are becoming aware of the need to shift the focus of their statistical analyses of probability, based on past events, to more theoretically

based analyses, tested on past events, but are better suited at helping predict future events in a more dynamic, changing landscape.

This has led to a strong trend towards new, more predictive forms of risk analyses. In particular, Sunrise appears to be investing, substantially, in improving its own modelling of risk, increasingly relying on the use of Geographic Information Systems (GIS) in an attempt to model how particular risks are likely to impact assets in the future. One of the main aims of this drive is to improve the level of granularity of these models, to as high a degree as possible, so that risks can start to be assessed on an erf-by-erf basis and, in so doing, allow Sunrise to exclude risks that they perceive as having too great a potential for loss.

These GIS models are being developed both in house, but also increasingly making use of products available on the broader market, such as the Department of Science & Technologies (DST) 'South African Risk & Vulnerability Atlas',¹³ which offer insurers what appears to be an easy way to strengthen the reliability of their source data and capacity to effectively increase their understanding of how risk impacts on insured assets. Uptake appears to be strengthening.

This centralisation of risk analysis, coupled with the reduction in regional representation, indicates the growing assumption by insurers, and particularly their risk averse underwriting divisions, that 'scientific' data is now fundamentally more effective than the local knowledge based assessments they have relied upon in the past. Decisions can now be made swiftly and consistently, often based on little more than a physical address or GPS coordinate, and actuaries are able to be involved, controlling all stages of the underwriting process, a role previously influenced, disparately, by brokers and regional staff. It seems this move is largely being driven by the underwriting departments of insurers who, by the risk averse nature of their actuaries, are constantly seeking ways to improve the reliability of the risk carrying component of insurance.

However, insurers are also seemingly aware that when engaging in risk assessment, they are walking an increasingly narrow path, one that is fast becoming hemmed in by the mounting pressures of competition (and the need to write new business) on the one side, and the potential for loss on the other. As such, insurers realise that they need to ensure that their pricing of risk remains balanced and accurately reflective of the risk market.

While GIS may significantly assist in their better understanding this risk landscape they are exposing themselves too, there is also general acceptance that these models still have a long way to go and that there are many variables in a socio-ecological landscape that influence vulnerability (particularly the 'socio' impacts) which may not adequately be factored into these quantitative analysis.

But what these new models are having an impact on, is by allowing insurers to become more decisive in which risks they are willing to accept, and which they are not.

¹³ See <http://www.rvatlas.org/>, viewed 23rd January 2011.

Discussion

Benefits of centralisation

This drive for centralisation, both in its management and in its risk-analysis practices has evolved as a result of a perceived set of clear benefits for Sunrise.

Firstly, reducing the number of regional staff has directly helped lower, what is largely seen as unnecessary overheads for Sunrise, as operations are seen as being performed more efficiently - and hence more cost-effectively - via centralised operations.

Sunrise, now offering direct lines of communication allow, if not encourage clients to engage direct with head office, eliminating the slow process of administering claims via regional offices or through brokers. This has helped reduce not only management costs but levels of bureaucracy, streamlining service delivery and helping standardise conditions under which insurance cover is provided to clients, and where.

Most importantly, removing the human relationship element from the process of risk analysis is seen as helping to eliminate the element of human “sympathy” or “loyalty” that might otherwise influence decisions over whether to accept risks, into a pool, or not. The GIS models, are not only attractive for their capacity to improve the statistical understanding of risk, but provides Sunrise with a tool to help manage the more irrational (emotional) element of their business model, one which they have struggled to control in the past.

Centralising risk analysis also allows for a reduction in policy response time, helping Sunrise introduce and amend conditions by which assets in its pool are admitted, and more rapidly and efficiently. This has provided Sunrise with the opportunity to improve its competitiveness, against more dynamic and flexible competitors.

In addition, increasing the level of contact, between insurer and insured, can help Sunrise start to build closer relationships (i.e. loyalty). This has been lacking in the past when clients have been forced to deal primarily through independent brokers, another competitive advantage direct-insurers have held over Sunrise.

This might also be beneficial, as brokers are felt, by some within Sunrise, to exhibit loyalty more to clients than the insurers they represent, in some cases even being alleged to assist clients submit claims that are escalated to the “detriment of the insurer”.

But the broadest benefit of this drive for centralisation by Sunrise, and possibly its biggest motivating factor, is the emphasis on impacting on the premium structure that traditional insurers have largely been confined by. It is doing this in three ways:

1. By centralising its operations is targeting its management costs,
2. Offering more direct forms of insurance (i.e. eliminating the brokers) is targeting its commission costs.
3. Improving the use of GIS, not only to further assist in streamlining operations, but to directly target the claims-ratio, by improving the quality (potential risk) of assets Santam admits into its ‘pool’, is challenging its claims-ratio.

The thinking behind this is simple. If Sunrise can achieve lower costs (management and commission) and losses (claims), this will lead to a premium structure with less pressure and thus more potential for a healthy profit margin.

The company can also argue that as it becomes better at analysing and excluding high risk assets, so it reduces the burden on other clients, with less exposure, to absorb the losses of the high risk few, leading to lower inflationary pressures on its premiums.

These advantages are particularly important as they are not only beneficial to the company, in achieving better, and more stream-lined control over its exposure, but provides a clear and understandable competitive advantage for Santam.

Disadvantages of centralisation

However, centralisation does not come without cost, and it is possible that this drive towards may, in actual fact, undermine the very competitive edge that traditional insurers have held over their (direct-insurance) competitors. Specifically, this refers to both the regional presence that traditional insurers have had in South Africa and their historic role in engaging directly with (particularly rural) local communities.

There is evidence, from observations of Sunrise practice in the Eden district municipality, and contrary to the generally perceived view at 'head office', that there is, in actual fact, a degree of loyalty that exists between clients and more established insurance companies, or at least with the brokers representing them. This is often evidenced in a high number of long-term relationships, in some cases running over several decades.

This is often enforced by some clients who still prefer to do their insurance transactions face-to-face and "not over a telephone" with unidentified insurance agents who they feel are largely unfamiliar with the local realities of their area and unsympathetic with their personal circumstances. This is particularly enforced in times of loss, when having the capacity for personal interaction, particularly in assisting in the (seen as complex) process of claiming is a key service that quality traditional insurers, and their intermediaries, have provided in the past. Brokers are keen to stress that it is this additional "service", that they provide clients who prefer "someone to do a job they can't do better themselves", that justifies the increased premium often associated with policies with embedded commission costs. After all, many brokers see the commission they receive not as a share of the business sold for Sunrise, but rather payment from the client, for services rendered.

So with the rise of more centralised, GIS based risk analysis, so to come the fear that these new statistical models, limited in scope and depth by the variables selected, may not yet be an adequate method for accurately assessing risk. To compound this, as Sunrise continues with its centralisation of operations, actively reducing representation at the local level, the company is becoming increasingly dependent on these new models, as it move towards quantitative risk analysis trumping more qualitative methods.

The casualty in all this has been the system of rich "local knowledge", within Sunrise's broad and diverse network of brokers and regional staff that has developed over time, and who played central roles in the risk assessment process in the past. Yet this knowledge is no longer viewed as valuable and is "drifting away".

This might impact negatively in several ways. The loss of local knowledge may lead insurers to become increasingly unable to take into account more localised adaptive or mitigative measures, taken by clients, who reduce their risk profiles in ways centralised models are unable to account for. Furthermore, by weakening the “community”, built by traditional insurance companies over time, and limiting engagement between clients and regional intermediaries, limits face-to-face interaction and loses many of the inter-personal bonds that have maintained client loyalty in the past. This would encourage clients to start searching more indiscriminately for policies, basing their decisions on policy cost than on the overall level of service provided. In so doing, this may lead to increased competition, within the market place, as insurance becomes increasingly focused on centralised risk carrying, and impacting directly on Sunrise’s market share. This is part of the scepticism, by the regional representatives at least, towards centralisation of risk analysis and the unilateral approach to policy assessment. Of course part of this fear is in the potential loss of business for brokers, but as the success of Sunrise, in regional areas at least, is largely dependent on the success of its brokers, this is none-the-less important.

This increasing dependence on centralised GIS based decision-making, also increases the likelihood of head office taking more broad and decisive decisions which may contradict actual realities. One example, from the 2007 flooding events in Sedgefield, highlighted how regional staff, knowing the “situation on the ground”, had to temper a broader knee-jerk reaction by head office who sought an immediate reduction in exposure in the Garden Route.

“After the [2007] floods... M&F just cancelled the policies, we weren't that strict to start off with... I think at the time people over reacted, in the extent that it got the whole company of Santam going 'oh we mustn't insure on the Garden Route, we mustn't insure'... I think that they just over reacted. I mean that [head office]... don't always know the situation”¹⁴

And this gets to the crux of the problem. While this drive to centralise, both operations and risk assessment, may help reduce the claims-ratio (eliminating most likely claims) in the short-term, in general a focus primarily on risk assessment will weaken insurers as they pro-actively shrink their own available client pool, reduce potential premium income, limit their capacity to diversify exposure and thus hinder their ability to expand their business further.

And as the risks of environmental change increase, in line with expectations, to continue a strategy of simply eliminating risky assets, must only see the impact on Sunrise, and its bottom line, come under additional pressure.

Stakeholder engagement

As discussed earlier, risk elimination is being effectively managed by Sunrise, through its centralisation of operations, including the standardisation of insurance policies, contracts and procedures, maintaining its underwriting portfolios that

¹⁴ Santam Relationship manager 2010: interview 03.

balance and diversify risk in the move towards improving GIS modeling to better understand the risk the company carries.

Sunrise is also pro-actively engaged in the successful transfer of risk, making broad use of re-insurance for its actuarial risk, occasional use of catastrophe (CAT) bonds¹⁵ for extreme losses and careful management of its investment portfolios to account for any fluctuations in the financial markets.

However, while Sunrise's increased reliance on forward-looking statistical models, to help it better understand the risk it carries, is at one level progressive, in challenging its paradigmatic reliance on actuarial analysis of past data, it is at another level conservative as it still remains within the broader paradigm within which insurance has come to rest. That is as a risk pooler and assessor, rather than as an active risk manager.

To achieve this, an understanding needs to be reached that the core drivers of risk often originate outside of the insurer-client relationship, and that the biggest impact is derived from adaptation and mitigation strategies in the wider socio-ecological landscape. However these will often be drivers external to the direct sphere of influences (i.e. client-insurer) that insurers are most used to, and comfortable in engaging with.

This will require very different forms of engagement as, in the past, the broader drivers of risk were largely taken for granted and treated as immutable, perceived technically, as "an act of god" and thus out of the hands of insurers. Part of the reason for this is associated with the very deep and widespread mentality, that humans have had, in the belief that exposure is often nothing to do with human actions but "just the way things are", or a product of earth systems operating outside of the sphere of human influence.

Yet while Sunrise is becoming more aware of its need to increase its engagement in risk management, at the same time it is losing vital control over its clients exposure, through its centralisation policy and withdrawal from the physical risk landscape it operates within.

Collaboration with other fulcrum institutions

Risk management partnerships, between insurance and other fulcrum institutions are of critical importance if the industry is to effectively engage the broader drivers of the risk it faces. A healthy working partnership with government is a crucial feature of this as both seek communities who are stable, resilient and able to focus on building and strengthening economies than on managing unnecessary vulnerabilities. Many development decisions, taken by local government, have direct impacts on insured assets, particularly in areas related to planning, disaster management and other environmental and climate change related issues, while a supporting role might also

¹⁵ A high-yield debt instrument that is usually insurance linked and meant to raise money in case of a catastrophe such as a hurricane or earthquake

include research, education, emissions' reduction, land-use planning, disaster preparedness and the provision of backstop re-insurance.¹⁶

It is through policy and legislation that government has most impact as it can encourage wide-ranging change across large geographical areas and diverse populations. Development and planning is a crucial component in this regard as many of the challenges faced in Eden district are linked to poorly planned development, excessive land-surface hardening and developers who are rarely, if ever held accountable for poor planning and construction practices.

Thus there is potential for a symbiotic relationship to exist, where local government and other fulcrum institutions and insurance form public-private partnerships, one providing the framework for sound and sustainable development while the other protects and insures new and existing assets, supporting further growth and limiting governments liability as 'the insurer of last resort'. Yet there is little evidence, if any, of any formal interaction between the insurance industry - "*lazy with their focus on profit*",¹⁷ - and local government, especially in Eden.

There are a number of ways in which insurance can better engage. It was widely agreed in Eden that insurance needs a more forceful "*voice within government*"¹⁸ and for both institutions to stop working "*in silos*"¹⁹ as, through not doing so, Sunrise continues to increase its exposure to risk.

Perhaps the simplest way to engage, would be through the use of the various line functions, within the industry, an area where Relationship Managers may, through application of their 'local knowledge' be able to "*bring the right people to the table*"²⁰ and play constructive roles in collaboratively engaging industry, government and relevant stakeholders. This could be both through informal interactions but also via more aggressive lobbying including, in some instances, litigation to effect or enforce positive policy change.

Insurance also has access to resources which it might "*offer municipalities*",²¹ helping simplify their responsibilities and increase their governance capacity. Of particular value, might be the extensive and valuable datasets and models, currently being developed by Sunrise across Eden. This data, while useful for the industry in its risk assessment, would be equally valuable to municipal departments, particularly planning and disaster risk management, who may be better able to make more informed decisions with access to it. Sharing data may support more aligned decision-making and faster disaster response, in turn potentially reducing overall vulnerability for assets. However, Sunrise still fears for the competitive edge it may lose if it shares, what it sees, as valuable intellectual property, and the company must start to question whether the broader, longer-term benefits, of sharing its data, outweigh the more immediate risks to its market share.

16 Mills, E 2005, 'Insurance in a climate of change', American Association for the Advancement of Science, vol. 309, no. 5737.

17 Santam broker 2010: interview 04.

18 Santam broker 2010: interview 02.

19 Santam Relationship Manager 2010: interview 05.

20 *ibid.*

21 *ibid.*

Disaster Risk Management (DRM), tasked with coordinating a response to disasters, directly represents the interests of the insurance industry, in managing hazards faced by communities, that often directly impact insured assets. Here too there seems to be little meaningful collaboration with Santam. One area for potential participation may be through participation, in the 'Joint Operating Committee', formed during major crisis' to help guide disaster response. Participation could be in-kind, through expert knowledge and, in some instances financial through the provision of additional physical response capacity.

Finally, the role of communities, to affect change at the municipal level, must not be overlooked, and a well-informed, educated population may have a more profound impact on the activities of local government than insurance could reasonably hope to achieve alone. Educating clients to put pressure on government might be a persuasive approach to take, with examples including the role of 'Fire Protection Agencies' and 'conservancies', groups of motivated property owners who have vested interests in reducing their own, and their immediate communities exposure to risk. (Unis and Doeppie).

More recently it has dawned on the Sunrise management group that it, to manage risks more properly, will need to be more inclusive, and take more concerted efforts to involve other institutional partners. A new manager position on 'stakeholder engagement' has been set up. Sunrise has some earlier experience to build on when developing this new function, for instance it has been involved with fire protection associations in the Free State, and it has collaborated with Department of Water Affairs on developing new forms of crop insurance. For the most part, however, moving into the institutional landscape of risk management is an entirely new environment.

The new management position of stakeholder engagement has four strategic objectives: i) proactive engagement with government on risk management, ii) building the image of Sunrise as a transformed responsible corporate citizen, iii) engaging with stakeholders within the business (always inform clients), and, iv) be the industry leader in proactive risk management.

A few examples will show how Sunrise has experienced its move into the new playing field of collaborative institutional risk management. An early initiative was to make contact with the South African Local Government Authority (SALGA), the national association of municipalities. In conversations with SALGA they brainstormed ideas as to how Sunrise could support SALGA's agenda and vice versa. The outcome of these meeting was, however, that what SALGA said it wanted was for Sunrise just to support it with money. What Sunrise quickly realised was that such a support would live the company with not influence as to how the means were used or for what purpose. Fortunately national government came in to broaden the participation the outcome of which was a new program to support poor municipalities particularly vulnerable to environmental changes, to which Sunrise committed itself.

Another initiative taken was to move in another direction, to start building relations to one of the most effectively run municipalities. Sunrise started to engage with City of Cape Town (CCT) municipality around various forms of risk management; fire management, physical security, etc. However, something of the same happened, CCT said it wanted to develop visible policing and 'we want more metro police on the beat,

we don't have the budget and we need it'. Again the company was primarily challenged to bring in more money.

A more productive relationship has recently been developed with the University of the Western Cape in the educational field. The Law Faculty of the university is training police officers from the Western Cape Province to improve their investigate skills, and Sunrise has begun to support them with insurance case studies, which are very complex and utilisable material in this regard. A nice symbiotic relationship has emerged, you police candidates improving their investigate skills and at the same time beginning to understand some of the problematic that Sunrise grapple with, like insurance fraud. Better police capacity is developed that might nurture both public and private ends.

As Sunrise is taking on these new initiatives it gradually learns to become a more competent player in the field of collaborate risk governance. However, although the new function is in principle strongly supported by the top managerial leadership in Sunrise, there are still a range of factors constraining its further development. The most obvious is the established model of insurance which has tended to see natural disasters as 'Acts of God' of which no human control was possible, has put emphasis on accurate risk assessment and has limited its risk management to incentivise clients to protect themselves individually. The historical reputation of this model - it is seen as having worked well, it has been profitable - does not facilitate a change of established insurance 'imaginings'. The traditional model is also supported by a range of regulatory mechanisms within the company; established routines and standard operating procedures, short-term incentive mechanisms, technologies for measuring performance, etc. The 'change agents' within the firm, who are exploring options for long term sustainable insurance practices, and who are in need of slack resources to develop new technologies, are confronted with pressures to document profit, and are asked critical questions about how the new initiatives creates competitive advantages for Sunrise and how to avoid that the benefits are shared across the industry (the free rider challenge.)

6. Conclusion

We have in this paper documented that changes to earth systems, and their impact on earths environments (such as climate but certainly not limited to climate) have rung alarm bells within the insurance industry globally. This has led to two forms of action within the insurance industry. First, action that is intended to mitigate the impact that social systems are having on biophysical systems (for example, by reducing the carbon emissions of industrialized economies). Within the world of commercial insurance these mitigative actions have been, to date, driven almost exclusively by the UNEP FI program and the global reinsurance industry that has begun to use their enormous investment muscle to promote the development of lower carbon economies (especially within Europe). As the paper has documented, there is an intense and ongoing search for new insurance imaginings taking place within these leading international insurance hubs.

Second, actions have been taken by the insurance industry more generally (at international and local levels) to take earth systems changes (in particularly those that have affecting climate) into account in their underwriting decisions. At this second

level actions are also being taken to shape the risk management actions that clients of insurance can take in response to the perils that affect them (for example perils such as fire, flooding and sea surges and their impact on their lives and property). Some insurers have more recently engaged in more concerted efforts to build collaborative risk management arrangements with other institutions - notable with national and local governments. The British Association of Insurers is a leading hub in this regard ().

Sunrise, along with many other insurance companies worldwide, has, over the past several years, experienced an unusual number of expensive claims in response to environmental perils – in particular, flooding, storm surges and fire. The magnitude and frequency of these events has raised questions about the stability of this risk environment and Sunrise's understanding of it. Sunrise has also been acutely aware of similar events globally and the impact that they have had on the insurance industry worldwide – tsunamis, tornadoes, cyclones, torrential rain, fires and so on. These and other catastrophic events have raised concerns, locally and globally, about the sustainability of the insurance industry. For example, in the aftermath of catastrophic events in the US a number of insurance companies have become insolvent.

While Sunrise is still in the processes of shaping its understanding of, and response to, these developments it has already begun to shift its thinking and its systems. This has already brought about significant changes. Sunrise has been actively responding to these and related developments in a variety of ways. These responses have been in part shaped by the changes we have outlined but they have also been shaped by other external developments (for example, developments that are affecting Sunrise's place within the insurance industry) as well as by its internal institutional environment (for example, by its established underwriting and risk management practices).

These external and internal environments have been shaping Sunrise's response to the shifts in socio-biophysical systems in ways that might be thought of as constituting two sides of a single coin. One internal side of this coin is Sunrise's existing systems, in particular its underwriting and risk management arrangements. The external side of this coin is profitability pressures. Both sides of this coin have been working together to drive change in a direction that is at once innovative and conservative. Put differently innovation is taking place within established 'action frames' – more of the same but with the same tweaked in innovative ways.

This mixture of sameness with innovation has pluses and minuses with respect to its Sunrise's level of 'enterprise risk'. Remaining within the frame of a general course of action that has worked well in the past means that Sunrise is, and can, rely upon established ways of thinking and associated systems. One of the pluses of this, and there are several, is that radical changes are not required and Sunrise can rely on well established 'rituals of comfort' (Braithwaite). On the minus side is the concern that this 'tinkering' may not be enough to enable Sunrise to respond adequately to the challenges a changing socio-biophysical environment is presenting to it.

What this paper suggests is that local take up of the new insurance imaginations that are developed and driven by the internationally leading insurance hubs is going to be a challenge, and the key, to further progress. Further research ought to explore the enabling and disabling conditions for this to happen. To identify such conditions what

is needed is carefully designed comparative research projects to explore how global developments meets local contingencies within the insurance sector.

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