

CLIMATE CHANGE AND THEIR IMPACT ON INSURANCE

Pushpendr Singh Gaur

Director

Institute of Engineering & Management Science , Lucknow

INTRODUCTION

Indians should be concerned about climate change since this phenomenon might have substantial adverse impacts on them. Not all possible consequences of climate change are yet fully understood, but the three main 'categories' of impacts are those on agriculture, sea level rise leading to submergence of coastal areas, as well as increased frequency of extreme events. Each of these pose serious threats to India.

However, these are long term issues. The overriding immediate concern for India should be the fast pace at which negotiations are taking place on the climate front. India's main energy resource is coal. With the threat of climate change, India is called upon to change its energy strategy based on coal, its most abundant resource, and to use other energy sources (e.g. oil, gas, renewable and nuclear energy) instead, which may turn out to be expensive. Thus, an immediate issue is to come up with a better negotiation strategy such that we have more freedom to decide which type of energy we use, how we generate power, how to reduce methane emissions by agricultural practices or forestry and so on. Negotiations are important for us as a means to reduce or postpone future vulnerability by getting the developed countries to reduce their emissions.

Their Impact is:

Risk of Lower Agricultural Production

Risk of Sea Level Rise

Risk of Extreme Events

The Costs of Changing Energy Strategy

DIFFERENT CONSEQUENCES ACCORDING TO THE COUNTRY

Consequences depend also on the development level of the impacted areas. Advanced societies have the financial and technical possibilities to cope with the effects of weather disasters. After the heat wave of August 2003, the French government assessed the final tool of the disaster and designed a “heat plan”, consisting of three types of actions:

1. An alarm system based on a partnership between Meteo France, which publishes a daily map called “heat vigilance”, and the health authorities. The Institute de veile sanitaire (InSV) gathers the data coming from Meteo France, the emergency services in hospitals and the firemen. The InSV is in charge of alerting the Health Department in case of a heat wave. There are three alarm levels according to temperature: the “seasonal watch”, the “warning and action”, and the “maximal mobilization”.
2. Actions were carried out in retirement homes and hospitals. Retirement homes were obliged by law to set up air-conditioned rooms. These facilities are subsidized up to 40 per cent of the total amount by the Government, with the result that today nearly 100 per cent of retirement homes are equipped, against 13 per cent in 2003. To avoid overbooking the hospital emergency wards, a list of all general practitioners present during the summer is available by calling a phone number. Lastly, funds were granted to hospitals to appoint seasonal workers or to pay overtime hours.
3. As loneliness is an additional risk factor, the “heat plan” suggests that the population at risk register on a list. When the alarm is activated, the local authorities, with the help of associations, visit the frailest old persons and deliver bottles of water.

The “heat plan” proved its efficiency in July 2006. The Institute national de prevention et d’education pour la sante launched radio campaigns to encourage citizens to be aware of their frailer neighbors. Prevention messages were largely relayed by the media.

In spite of the exceptionally long heat wave, there were no more deaths due to it than in each of the past 3 years: 112 deaths, including 66 old people, compared to 15,000 deaths in 2003.

In the emerging countries, demography and lack of infrastructures increase the number of victims. Most of the developing countries are located in areas where global climate change produces its worst effects. Extreme weather conditions in and desert climates are accentuated and endemic diseases in tropic or subtropical areas spread rapidly.

Furthermore, the countries have not yet enough resources to face natural disasters. In the case of the tsunami of December 2004, populations had little chance to survive because no warnings were given in time. However, the first waves hit Sumatra within 30 minutes, Bangladesh and Thailand 30 to 60 minutes later, which would have been sufficient to escape for at least part of the victims. But, except in Japan and Hawaii, local populations do not benefit from adequate alarm systems and preventive

education. Those systems are expensive and they are not considered as a priority when the living standards are low.

Emerging economics are threatened. Means used to face disasters are no longer available for economics and social development, and populations become more and more vulnerable.

A FEEBLE IMPACT OF PERSONAL INSURANCE RESULTS FOR THE MOMENT

It is very difficult to know precisely the real impact of climate change on personal insurance.

In the north, for the moment, the number of deaths is limited and has no effect on the global mortality rate. Besides, it is often difficult to weigh up the part due to climate disasters in the morbidity increase since the consequences of climate change could have been compensated by other factors. In the developed world, insurance can help deal with the effects of natural disasters.

In the south, the insurance cost of natural disasters is low due to the very low insurance coverage, especially in personal insurance. Life insurance in the emerging countries represented only 12 per cent of the total premiums in 2005, while the inhabitants accounted for about 85 per cent of the world population.

NUMEROUS QUESTIONS FOR THE FUTURE

This situation raises numerous questions for the future. Global warming will probably not slow down in the near future. On the contrary, pollution will worsen as emerging countries adopt our way of life and increase their energy consumption.

We can be sure that consequences on health will mainly be negative. Heat waves may increase the mortality rate even in the north. For instance, the annual excess summer-time mortality attribute able to climate change by 2050 is estimated to increase several fold.

Experts predict the following:

- A multiplication of some pathologies due to heat and humidity, either directly, such as gastroenteritis, diarrheas, salmonellas, or via the multiplication of transmission vectors (mosquitoes) such as lyme disease, malaria, etc.
- A geographical expansion of tropical infections such as dengue fever, and these tropical diseases could spread all over the world due to tourism.
- A rise in heart and respiratory diseases: pollution that is worsened by global warming is responsible for more allergies and asthma.
- An increase in skin cancers due to greater exposure to the sun.

- Disasters and epidemics will lead to an increase in psychological diseases. The death of loved ones or the displacement of populations may provoke mental diseases.
- Last but not least, displaced populations and famines could also bring about conflicts.

Concerning the consequences on personal insurance, experts reckon that a bird flu pandemic, for example, hitting mainly the working population, such as the Spanish flu in 1918, could have heavy consequences. It could impact the technical results of health and death contracts, though this could be compensated in some countries by benefits in annuity products. And it would probably impact the financial results, due to a downturn in the global commercial exchanges and economic activity, followed by a crisis of the stock markets worldwide.

However, these possible effects could be limited by preventive behavior in which personal insurers could take part.

The increasing role of personal insurance

Personal insurers, whose responsibility is to protect policyholders and their families from the risks of day-to-day life and who are involved in key issues facing the society, could play an increasing role in facing the consequences of the global climate change.

Insurers can expect to play three main roles:

1. They will have to evaluate risks more precisely to be able to price and cover them. Until now, natural disasters linked to climate change have had little impact on personal insurance results. However, insurance development in the south where the consequences of climate change are higher will lead insurers to evaluate risks more accurately to accumulate enough capital to face the claims.

Pricing is based on accurate statistics (mortality and morbidity rates linked to disasters, frequency of events...), which are difficult to establish for largely unpredictable weather disasters. But large natural disasters, such as the South Asia tsunami, can help to improve understanding of how a tsunami propagates and to better assess the risk. Actuaries and organizations such as the World Health Organization, which is working on the impact of climate change on health in the long term, must also develop new tools to evaluate the effects of the climate change on human morbidity and mortality.

Taking up the challenge of prevention

2. Insurers need to promote risk prevention and encourage their clients to adopt the appropriate behavior.

Personal insurers can encourage socially responsible behavior in the companies in which they invest. CNP Assurances incorporates sustainable development criteria in its analyses, using internally developed information such as non-financial data, social responsibility rating agencies, questionnaires, interviews, and so on. A certain proportion of its own portfolio is invested in socially responsible

investment funds. And it also offers ethical investments to its group insurance clients. As the largest private owner of forests in France, CNP Assurances forest management is based on sustainable management guidelines that led it to obtain the Program for the endorsement of Forest certification (PEFC). An insurance Company can help to limit global climate change by adopting environmentally sound practices, such as energy saving measures and waste recycling.

Personal insurers can make their policyholders aware of the dangers of climate change and develop risk prevention. Until now, in Europe, particularly in France, development of personal insurance has aimed at maintaining the same standards of living and health to people living longer. However, the fear of risk reinforces the need for insurance. And new risks give rise to new needs in insurance all over the world. People are looking not only for financial cover in case of disease or death, but also for more and more services.

To meet the needs of their clients, insurers are developing innovative services linked to insurance contracts. Studies prove that people attach great value to information. In France, more and more insurers have set up 24/7 call centers in charge of delivering information about risks and diseases and the ways to avoid them. Regarding the diseases linked to global climate change, insurers are providing practical health information on required vaccination in the different regions, dangers of great sun exposure, precautions to take in case of heat waves, and so on.

Personal insurers are also developing assistance services, such as psychological help, making contact between clients and providers, portals offering information and solutions adapted to the needs of their clients.

Helping to develop insurance in the emerging countries

3. Insurers would have to help take up the challenges of development. At the world level, solutions are mainly the matter of intergovernmental decisions, within the scope of the Kyoto agreements. At the national and local levels, insurers must participate in conferences and roundtables to share information and help governments to implement innovative solutions. Concerning natural disasters such as the South Asia tsunami for example, insurers can help understand the phenomenon and set up appropriate preventive alarm systems to avoid high human and material losses.

Because of globalisation and links between economics and health, insurance must be developed in the emerging countries. The increase in the standards of living tends to raise the need for insurance worldwide, non-life as well as personal insurance.

But insurers have to adapt their methods and products of emerging countries, first by defining what can be insured and secondly by finding how to cover the financial risk. Micro-insurance, linked to micro-credit and consisting in offering essentials low-cost guarantees adapted to the specific needs of emerging countries, could help to increase the standard of living and to cope with some of the climate change consequences worldwide.