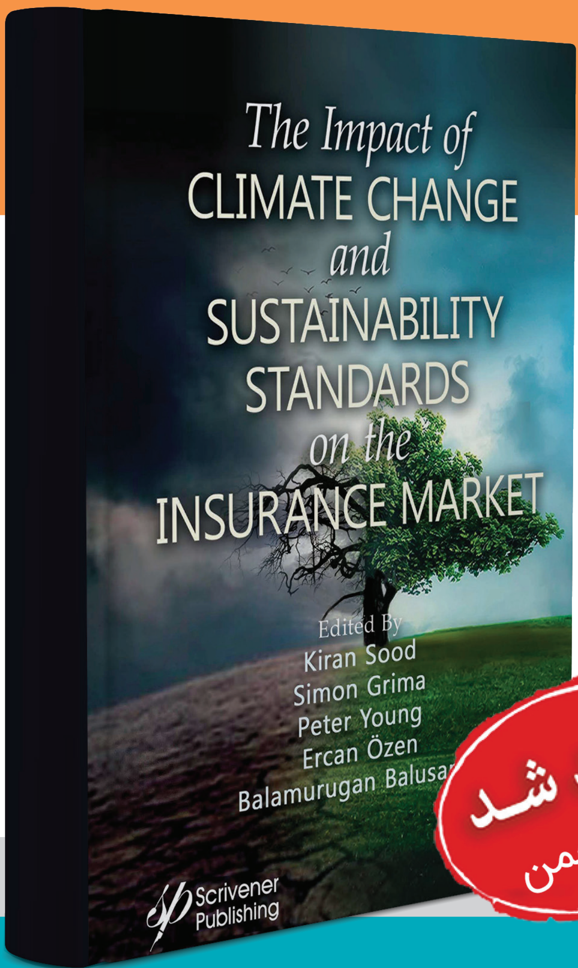
فـراخـوان
ترجمه کتاب



تمدید شد
تا ۲۳ بهمن

پژوهشکده بیمه

پژوهشکده بیمه، به منظور کمک به گسترش دانش بیمه‌ای، ترجمه کتاب

The Impact of Climate Change and Sustainability Standards on the Insurance Market

را در دستور کار خود قرار داده است. لذا از کلیه اساتید، پژوهشگران، صاحبنظران و کارشناسان دعوت می‌شود که در صورت تمایل به ترجمه کتاب مذکور، کاربرگ درخواست ترجمه پیوست را به همراه سوابق علمی و اجرایی خود و ترجمه صفحات ذکر شده با ذکر عنوان کتاب، حداکثر تا تاریخ ۱۴۰۲/۱۱/۰۷ به آدرس ایمیل nashr@irc.ac.ir ارسال فرمایند.

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18

Climate Change and the Insurance Sector: An Analysis of Sustainable Development in India

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Abstract

Climate change and its impact is devastating in the world over. As per, World Health Organization (WHO), the climate change is anticipated to be reason of nearly 2,50,000 deaths each year[1]. Furthermore, by 2030 the potential cost of the harm to health is projected to be varying from $ 2 to 4 billion per year. To deal with this, United Nations Environment Programme (UNEP) Financial Initiate devised Principles of Sustainable Insurance (PSI). PSIs aim to improve business performance, develop innovative solutions, reduce risk and contribute to economic, social and environmental sustainability. All the economies are expected to be affected by climate change and India due to its dependence on natural resources is projected to lose 35% of GDP by 2050. Therefore in this article an attempt has been made to analyze the sustainable efforts undertaken by Indian insurance sector in lines with the Climate Change.

***Keywords*:** Sustainability goals, climate change, principle of sustainable insurance, insurance industry, India

18.1 Introduction

With the changes in global climate, the interest of insurance sector has inclined towards the Sustainable environment [1]. As a matter of fact, it is

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[1]https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health

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the insurance sector which will be widely influenced by the global climate changes. Therefore, world over, one quarter of the top insurance companies has tied up for the insurance sector protection. Due to the increased climate risk, United Nations Environment Programme (UNEP) Financial Initiate has classified Environment, Social and Governance (ESG) Risks to be the major risks for the insurance Sector. To deal with these Risks, (UNEP) Financial Initiate in the year 2012 created Principles of Sustainable Insurance (PSI). PSIs aim to boost business performance, cultivate innovative solutions, moderate risk and contribute to economic, social and environmental sustainability.

Furthermore, impact of climate change on all the economies is devastating and India is not an exception to that. Due to the vast coastline, reliance of two-third of the population on Agriculture and dependence on annual monsoon, India is among the most vulnerable countries to climate change. On Climate Change Index of 48 countries India ranks at 45[2]. It is anticipated that due to global warming by 2048, India's economic damages are projected to be around 35% of GDP[3]. Similarly, a report by the United Nations Intergovernmental Panel on Climate Change (IPCC) Working Group (WG)-II described, India to be the most economically harmed country due to climate change. The report stresses on the risks like water scarcity and rising sea levels. In addition to this, in India, by the year 2050, estimated 35 million people can get affected by coastal flooding every year, which may increase to 45–50 million people at risk by the end of this century.

In the similar context, Mohanty [2], on a district level and created a Climate Vulnerability Index (CVI). They observed that 27 out of 35 states are highly vulnerable to floods, droughts and cyclones in the near future. However, their analysis as depicted in the Table 18.1 suggests that, central and western areas are prone to droughts like situations. Whereas, north-eastern and northern areas are prone to extreme floods. Meanwhile, India's south and eastern areas are exposed to cyclones. Likewise, Southern and East India is vulnerable to a combination of floods, droughts and cyclones like natural calamities [5].

On the contrary, Indian Insurance Sector is widespread and growing. The anticipated growth of life insurance industry from 2019 to 2023 is CAGR of 5.3%[4]. India achieved a penetration rate of 4.2% of the GDP

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[2]Swiss Re Institute, The economics of climate change: no action not an option. April 2021.
[3]Hadi Riachi, 2021, How insurance can support a more sustainable India, Swiss Re institute.
[4]https://www.ibef.org/industry/insurance-presentation

Table 18.1 Climate vulnerability of different Indian zones.

Zone	Extreme event		
	Flood	**Drought**	**Cyclone**
Northern	High	Medium	Low
Southern	High	High	High
Eastern	High	Medium	High
North-Eastern	Medium	Low	Low
Western	Medium	High	Medium
Central	Low	Medium	Low
High: (0.41-1) Medium: (0.21-0.40) Low: (0.00-0.20)			

Source: Mohanty [2].

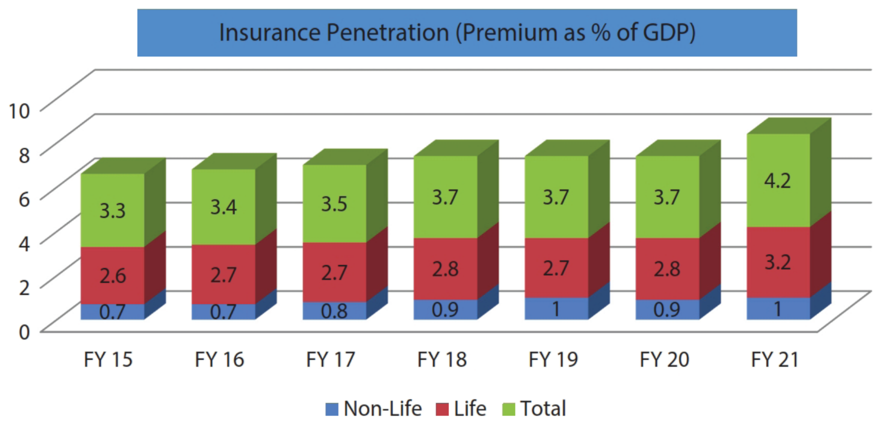

Figure 18.1 Insurance penetration over the years. **Source:** IBEF [3]

with 3.2% for life insurance and 1% for the non-life insurance sector in the financial year 2021 (Figure 18.1) [6].

As far as the insurance density is concerned, it was observed to be US$ 78 during financial year 2021. Life insurance industry premiums in India are estimated to touch Rupees 24 lakh Crore ($ 317.98 Bn) by FY31. In the last 5 years, the total number of lives covered almost doubled from 12 crore to 23 crore. Overall, there are a total of 34 non-life insurance and 24 life insurance companies in the Indian insurance market. In the general and health insurance market, the market share of private sector companies increased from 48.03% in the FY20 to 49.31% in the FY 21. Furthermore, government has eased the Foreign Direct Investment (FDI) laws in the insurance sector, by increasing the FDI limit from 49% to 74% [7–9].

In a nutshell, with the rising pace the future looks favorable for the insurance sector in India. However, the role of Insurance sector is to channelize the accumulated capital into productive investments, to mitigate the losses and encouraging financial stability. But due to the rising risk of the climate changes, the sustainable measures are required to be taken by the Insurance sector. Therefore, this study is an attempt to understand the sustainable efforts undertaken by Indian insurance sector in lines with the Climate Change (PSIs).

18.2 Purpose

As discussed above, Indian economy is going to get adversely affected by climate change. Recent COVID-19 pandemic has highlighted the scale and context of problems India and has also exposed the extent of vulnerability to society and economy from such adverse shocks. Usually losses caused by natural disasters were covered through informal risk sharing at community level or were funded by the government at center or state level. However, with increasing government efforts, awareness programs and financial inclusion, people have started opting for organized channels. At the same time, the insurance sector in India is growing. With further very high scope for insurance penetration, Insurance sector can be a key player in the effort towards Sustainable India (Nirantar Bharat) which can other than prioritizing climate change resilience can also boost social inclusion and protection. Therefore in this article an attempt has been made to analyze the sustainable efforts undertaken by Indian insurance sector in line with the climate change.

18.3 Methodology

This article is an attempt to explore the support of the insurance industry and its part in endorsing PSIs. The present study is theoretical and focuses primarily on the secondary data sources from books, research articles, journals, and websites. In order to fulfill the objective of the study, we will critically review previous articles and will also try to explore the steps considered in lines with the sustainability goals.

18.4 Findings and Discussion

As discussed in the previous sections, India's vulnerability to the climate change is quite high. India will be suffering losses of around $9 to10 billion yearly due to extreme climate events among which about 80% of the losses remain uninsured [4]. In a report by The Hindu Business Line (The insurance sector and governments need to coordinate to hedge natural disaster risks) it was highlighted that, Since 1900, India witnessed a total of 756 natural calamities (droughts, storms, floods, earthquakes, landslides, etc.) out of which 354 were witnesses from 2001 to 2021 and 402 were from 1900 to 2000. This suggests that the frequency and intensity of the natural disasters have amplified in India. Whereas, only 8% of the total losses are covered, leading to 92% protection gap for the period from 1991 to 2021. Considering the floods of 2020 only in India, insurance cover was available only to the magnitude of 11% out of the total economic losses of $7.5 billion[5]. Hence, an early intrusion is required to bridge the protection gap, which is in all lines (life & non-life) of insurance.

India is third largest consumer of the energy consuming country in the world[6]. India is also the fourth largest Green House Gas (GHG) emitter in the world[7]. The India's major share of GHG is dominated by emissions from energy sector by 68.7% followed by agriculture 19.6%[8]. However, Energy and Agriculture are the major areas that will be affected by the climate change in India [4]. In terms of energy sector, India is planning to meet its energy requirements by increasing its coal based electricity generation. However, doing this will attract international pressure in the increasing share of carbon footprints and it will be also against the India's 2030 climate commitments. Similarly, in Agriculture, the shortage of water is already a challenge for India. Deteriorating climate will further lead to El Niño kind of effect, which may lead to irregular monsoons and droughts. This could also lead to the food insecurity. Further agriculture is a source of income for large population in India. Therefore, an urgent intervention by the government is required in this context.

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[5] Nov 26, 2021, The insurance sector and governments need to coordinate to hedge natural disaster risks, The Hindu Business Line.

[6] India Energy Outlook Report 2021.

[7] https://www.wri.org/insights/interactive-chart-shows-changes-worlds-top-10-emitters

[8] https://www.climatelinks.org/resources/greenhouse-gas-emissions-factsheet-india

18.5 Opportunities for Sustainable Insurance

Performance Guarantees: The Indian Insurers in case of renewable energy projects at present offers insurance only for project and for its operations. Leaving a wide scope for additions of covering risks related to natural calamities, costs uncertainty, project quality and energy performance. Therefore, the insurance products related to quality guarantee on a longer duration basis can add more viability to the projects and make the investments more attractive.

Green Bonds: Green bonds aids in reducing the burden related to the financial cost of green projects. Companies investing in renewable energy projects are availing green bonds as they are cost effective. In India, Green Bonds were primarily issued in 2015 by Yes Bank for 5 billion INR. However, the proceedings collected from these green bonds can be only invested in projects related to sustainable waste management, clean transportation, clean and renewable energy, etc. The minimum subscription amount is INR 10 Lakh with a yield of around 6–10%.

Yield Companies: In India due to huge transaction costs, small market share and due to illiquidity the Re-insurance and Insurance companies refrain from direct investments in clean energy projects. However, Insurance companies can avail the benefits of using pooled or joint investments like publicly traded Yield companies which facilitates longer term support at the same time liquidity on shorter durations. One of such companies is set up as a subsidiary of SunEdison. TerraForm Global Inc. the main aim of this subsidiary is to invest in clean energy projects in developing nations such as China, South Africa, Brazil and India.

Credit guarantees and equipment insurance: Companies like Swiss Re are facilitating farmers across globe to purchase insurance by providing partial credit guarantee risk coverage. However, due to regulatory obligations in India private entities cannot issue credit insurance. Ministry of Agriculture, in the year 2013, started a credit assurance fund of $ 15 million for farmers to aid them investment in modern farm equipment's by without collateral credit scheme. This scheme was aimed to help 250 farmers groups. This scheme could also be extended to the farmers practicing sustainable farming techniques, such as, drip irrigation, which saves water and energy during farming. Netafim and New India Assurance has jointly collaborated to provide insurance for drip irrigation equipment's in Gujarat. Such practice can be extended to other states also.

Insurance products tied with mobile solutions: The use of mobile phones is quite high in India (77%), which can also be an advantage for the insurance companies to target the market. The mobile phones can be used as a source of

providing early warning system to mitigate the anticipated risks. Furthermore, it can also assist in the direct beneficiary payments in case of the claims settlement. In India, few of the app based financial services providing companies have started selling insurance in addition to the basic financial products. This will further improve the penetration of insurance and provides additional funds for the sustainable farming to the farmers in India.
Weather based insurance products: Government incentives and packages in case of crop damage takes time in calculation of the actual loss. however, in alternate to that the Index based schemes can settle the losses within 2 months. Due to this feature, the Weather based insurance products are gaining popularity these days. Its size has increased from mere 1 million policy holders in 2009 to 13 million in 2013. Swiss Re and Allianz Re are testing pilot projects in various states of India, where, remote sensor based on site information can be collected in place of collecting it from weather stations at different locations. This will further help in the changing climatic conditions [10, 11].

In a nutshell, using such measures and investing in renewable energy projects the insurance companies in India can achieve a Triple win formula, that is, achievement of the governments Nirantar Bharat commitments of 2030, boost in the countries energy production and reduction in the dependence on foreign energy [12].

18.6 Conclusion

As government is promoting Insurance sector by implementing various reforms, the Insurance companies in India at present are focusing on their growth and increasing their market share. However, with the existing competition in the market due to recent reforms in the Foreign Direct Investment (FDI) the insurers must try to position themselves apart from the competition. The challenge for the insurers is that with the changes in environmental goals the expectation of the policy makers from insurance sector are increasing. This can also open new opportunities for the insurance sector. Therefore, the answer to this challenge is designing of suitable novel products to cover risks associated with climate change and the corresponding sustainability/green insurance. PSI has set new challenges and opportunities for all the insurance companies the world over. PSI has positioned the insurance sector to cater to the increasing demand by providing environmental friendly products and refinancing opportunities to the business world. Theoretically, our work will help policymakers, corporates and other stakeholders in better understanding the role of insurance companies to cater climate change and sustainable development.