

MANAGING DISASTER RISK AND STRENGTHENING FINANCIAL RESILIENCE

DISCUSSION PAPER

**Priority action areas for the post-2015 Framework for
Disaster Risk Reduction (HFA2) from a business
perspective: ICC input to the
UN World Conference on Disaster Risk Reduction
(March 2015, Sendai, Japan)**

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Summary: Key concepts in brief HFA2 priority areas from a business and risk advisory industry perspective

The UN reports an increase in country investment related to risk reduction, as well as the development of risk transfer mechanisms, such as insurance and marked disaster bonds. Financial preparedness is a critical component of effective disaster risk management, and private insurance is a key tool in achieving it. By shielding societies from catastrophic disaster losses and securing funding for disaster response, insurance helps to ensure that development gains already made are protected and that future development is sustainable. In the context of the post-2015 framework, four priority action areas stand out from an business and insurance industry perspective: (i) strengthening the provision of pre-event risk transfer mechanisms and financing tools; (ii) building cost-effective disaster risk reduction strategies by quantifying and pricing risk; (iii) advancing centrally coordinated risk management approaches; and (iv) building cost-effective disaster risk reduction strategies by using analytical models to quantify and price risk.

1. Pre-event risk transfer mechanisms and financing tools

Financial preparedness is essential to make funding available quickly for disaster response, recovery and reconstruction and ensure that individuals, businesses and governments have the resources necessary to manage the economic consequences of disasters. The financial impact for governments has increased exponentially over the past years. As an example, when Hurricane Hugo hit Florida in 1989, the US federal government covered less than 25% of the total costs of the disaster; for Superstorm Sandy in 2012, the federal government covered more than 75% of total cost. The economic impact can be mitigated *before* a disaster strikes using pre-event risk transfer mechanisms and financial management tools, including insurance, in combination with physical risk reduction measures.

Part of the solution is to close the financial protection gap between economic and insured losses. Pre-event financing tools have a distinct advantage over post-financing measures. They can reduce the financial burden on the government after a disaster, lower the volatility of the state budget and improve planning certainty for the public sector. Such an approach not only increases the government's financial flexibility, but different instruments also cover different needs after a disaster. Insurance often presents the most cost-effective way of dealing with the financial risks posed by low-probability, high-severity events. Introducing disaster insurance for homeowners, businesses is therefore a key measure to strengthen financial resilience. In its effort to contribute to disaster risk prevention and management, the insurance industry has developed several financial mechanisms, including disaster bonds. Success stories showcase the use of 'catastrophe' bonds in Mexico, Turkey, and several US states.

2. Risk pricing

Saving lives and reducing human suffering through risk prevention measures are of course the highest priorities for policymakers. But one of the biggest challenges they face is identifying the most cost-effective ways to prevent, mitigate and reduce risks. Insurance is a helpful tool in this effort. It quantifies the risks and thus puts a price tag on them. This allows policymakers to compare the costs and benefits of different risk reduction alternatives. By putting a price tag on risk, insurance also promotes the right incentives to invest in those measures that promise to yield the biggest economic rewards. At the same time, however, appropriate investments need to be made in prevention measures to keep insurance affordable. Thus, risk prevention and risk transfer are mutually reinforcing.

3. The role of the Chief Risk Officer

Effective disaster risk management requires an integrated approach, from risk identification and assessment to prevention and mitigation - across sectors. The UN has designated the projected increase in number of countries benefitting from national and local disaster risk management strategies as a key priority. Disaster risk financing, including financial risk transfer, should be part of a comprehensive country risk management strategy. The UN emphasizes the importance of disaster risk management as an essential component of governance at local, regional, and global levels. The creation of a Chief Risk Officer (CRO) function could be a good start to adapting a risk governance framework to local requirements. In practical terms, such an integrated approach demands a high degree of coordination among relevant public and private entities. The task of the CRO is to monitor the entire risk landscape facing their country, region or city through an integrated risk management process, set priorities and coordinate actions to minimize the human and economic impact of unforeseen disaster events.

4. Building cost-effective disaster risk reduction strategies by using analytical models to quantify and price risk

In light of rising disaster losses and increasing complexity of risk, natural hazard risks have to be better understood, evaluated and managed by taking into account a broader array of considerations and disciplines. This is at the heart of Willis Research Network's recent multi-sectoral initiative on 'Integrating Natural Disaster Risks & Resilience into the Financial System'. It calls for the integration of disaster risk and resilience in the general accounting and regulatory frameworks across both public and private sectors. Under the proposals, corporations and public sector agencies would be required to assess and disclose their future contingent liabilities from natural disasters. By moving risk mitigation, mutualisation, pooling and transfer higher onto the global policy agenda, such an arrangement would help facilitate and mobilize financing for disaster risk mitigation and climate adaptation.

Introduction

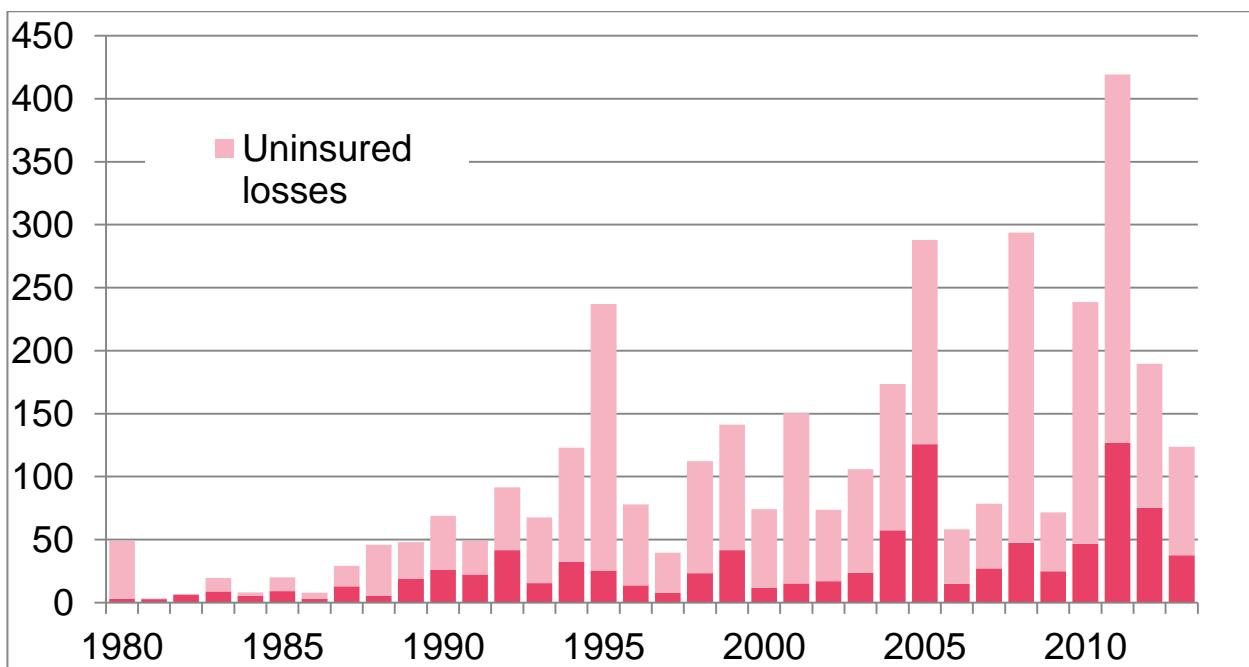
The goal of the United Nations World Conference on Disaster Risk Reduction, that will take place from 14 to 18 March 2015 in Sendai, Japan, is to build on the "Hyogo framework for action" (HFA) on Disaster Risk Reduction established in 2004, and to reach agreement on an enhanced framework (HFA2) which drives disaster risk reduction and incentivizes cooperation between public and private sector stakeholders.

The International Chamber of Commerce (ICC), the world business organization, and which also serves as the Conference's organizing partner for the Business and Industry Major Group, has prepared this discussion paper as input to the Sendai conference. The paper highlights key aspects of sound disaster risk management that the global business community should encourage the public sector to take on and that the insurance and risk advisory industry in particular can help drive in order to foster resilience of societies and business.

I. Background and relevance for the business community

Business activity can be disrupted severely by the impact of natural disasters. Based on data from the re/insurance industry, we are seeing increasing economic losses from natural disasters around the world. The reason for this is twofold: (i) development and economic activity create value and prosperity. (ii) Much – and ever more – of this economic value is concentrated in urban areas which are particularly exposed to natural disaster risk, with some 1.8 billion people expected to move into cities over the next 30 years. Business interruption as a consequence of natural disasters potentially affects both the production industries with factories on the ground and the service industries.

Fig. 1 Natural catastrophe losses 1980-2013, in USD billion (2013 prices)



Source: Swiss Re Economic Research & Consulting, sigma catastrophe database

Sound risk management requires both preparations by the individual company and also by the community (city, region, country) in which it is active. In fact, whether a community provides adequate protection to both its citizens and the businesses operating within its borders can be a decisive criterion when it comes to making investment decisions. In other words, communities who foster resilience by protecting their societies, their businesses, their infrastructure against shocks from natural disasters are more attractive for investors.

This is why the business community globally must have a keen interest in sound disaster risk management by the communities in which they operate and in encouraging governments and public stakeholders to focus their attention on fostering resilience by diligent disaster risk management.

II. Key objective: integrating financial resilience in the post-Hyogo framework (HFA2)

Disasters can have widespread adverse effects. They not only cause harm and damage to lives, buildings and infrastructure, but can also significantly impair economic activity. The financial costs from disasters may be catastrophic in nature and generate huge losses for households, businesses and governments. Financial preparedness is therefore key to effective disaster risk management. Without further risk reduction measures, disaster-related loss and damage will not only continue to increase but could also endanger key sustainable development goals.¹

For all these reasons, the elaboration and adoption of a post-2015 framework (HFA2) for disaster risk reduction comes at a critical time. Together with ongoing negotiations on climate change and the envisioned Post-2015 Development Agenda – which will include a set of sustainable development goals - it presents a unique opportunity to define and agree on an overall cohesive, coherent, and harmonized post-2015 paradigm that underscores the importance of managing risk to both the humanitarian and development agendas.² In this context, the new framework should place greater emphasis on disaster risk financing as a critical complement to risk reduction and prevention measures. Since effective risk management requires action from a variety of public and private sector actors, the framework also needs to address the specific contributions of all relevant stakeholders.

In regard to financial strategies for disaster risk management, policymaking responsibilities involve key decisions to ensure that individuals, businesses and governments have the resources necessary to manage the adverse economic consequences of disasters. These impacts can be mitigated *before an event occurs* through pre-event risk transfer mechanisms and financial management tools, including insurance, in combination with physical risk reduction measures. Such an approach depends on a comprehensive identification and accurate evaluation of natural disaster risks, including the quantification and estimation of their financial costs.

With its risk expertise and financial capacity, the private sector, and the insurance industry in particular, are well positioned to contribute towards the development and implementation of integrated risk management strategies that build economic resilience and ensure that future development is sustainable.

The specific support that the insurance industry can provide is twofold:

- The insurance and risk advisory industry benefit from extensive benchmarking data, which can be integrated into a risk model applicable at both global and local levels.
- Market capacity to fund natural catastrophe risk transfer strategies is developing around the world, with insurance-linked securities and disaster bonds becoming widely available.

From a private sector perspective, there are four priority action areas in the post-2015 disaster risk reduction framework: (i) strengthening the provision of pre-event risk transfer mechanisms and financing tools; (ii) building cost-effective disaster risk reduction strategies by quantifying and pricing risk; and (iii) advancing the concept of centrally coordinated risk management approaches, (iv) building cost-effective disaster risk reduction strategies by using analytical models to quantify and price risk.

¹ Disaster Risk Assessment and Risk Financing: A G20/OECD Methodological Framework (2012). Available: <http://www.oecd.org/gov/risk/g20oecdframeworkfordisasterriskmanagement.htm>.

² UNISDR Special Representative of the Secretary-General for Disaster Risk Reduction's proposed elements for consideration in the development of the post-2015 framework for disaster risk reduction (2013). Available: <http://www.unisdr.org/we/inform/publications/35888>.

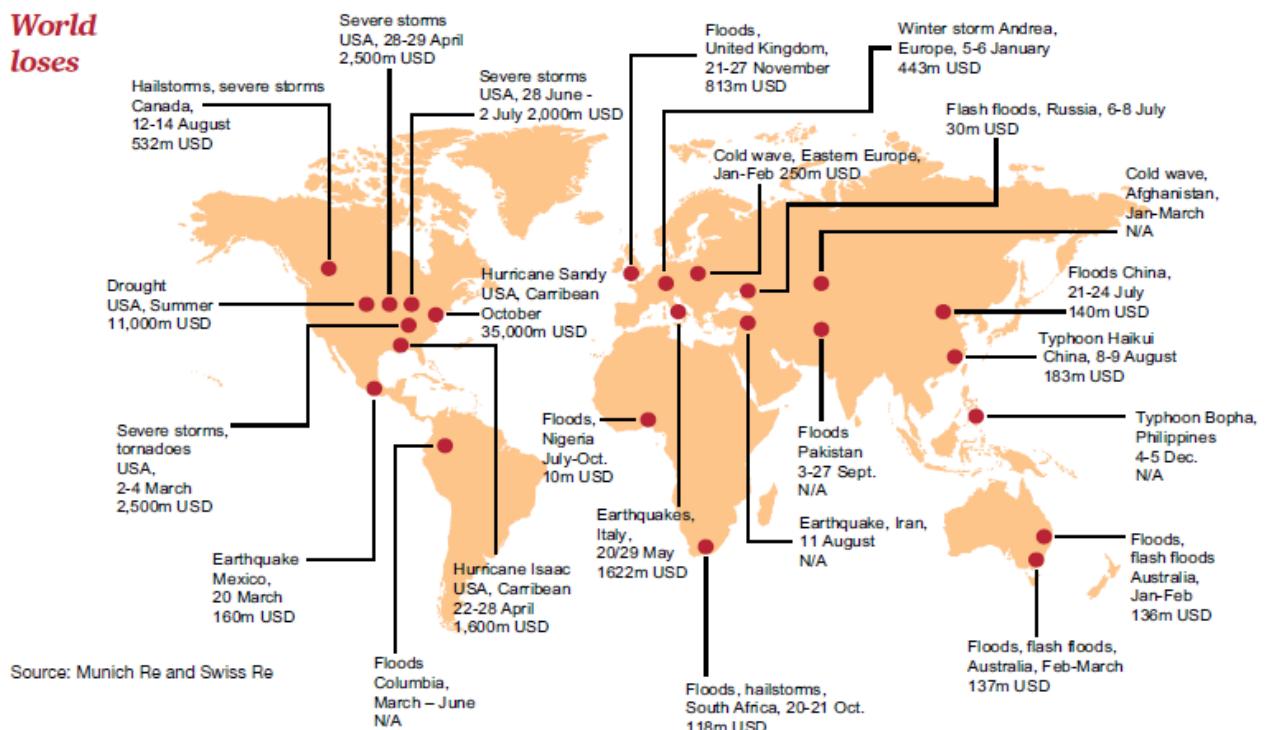
III. Closing the financial protection gap: towards pre-event risk transfer mechanisms

The economic cost of natural catastrophes has increased markedly. In the 1980s, inflation-adjusted costs were on average about US\$25 billion, in the 1990s this increased to US\$95 billion per year. In the last ten years, economic damage reached an annual, inflation-adjusted average of US\$130 billion. This is mainly due to economic development and population growth, a higher concentration of assets in exposed urban areas, inadequate preparedness, and in the case of extreme weather events increasingly climate change.³

Economic losses not only vary substantially by country and disaster event, but a large part of these costs are not insured. On average, over the last twenty years only 20 to 40% were covered by insurance. Particularly in developing and emerging markets, insurance coverage is not widespread. Measured in premiums as a percentage of GDP, average insurance penetration rates in the non-life sector reach only 2.9% in developing countries, far below the 8.6% seen in industrialized countries. This means that developing countries face the largest gap between insured and economic losses.⁴

As a result, the majority of these losses fall back on individuals and the government. In those instances, the public sector not only has to shoulder the cost of relief and recovery, but also has to pay for the reconstruction of public infrastructure. And when individuals and firms are underinsured, which is generally the case in many developing economies, the government is often expected to support private rebuilding efforts by providing transfer payments as well. The consequences are wide-ranging, from slower economic growth, shortfalls in tax revenues and the loss of hard-won development gains.

Fig. 2 Overview: Recent natural disaster loss events (2012/2013)



Source: PwC: Expanding the potential of ILS, Sept. 2013, p. 13, based on Munich Re and Swiss Re data.

³ Swiss Re Sigma database. <http://www.swissre.com/sigma/>

⁴ Closing the financial gap: new partnerships between the public and private sector to finance disaster risks (2011). Swiss Re publication. Available: http://www.swissre.com/rethinking/crm/Closing_the_financial_gap.html

The faster a country can return to its normal state of affairs, the smaller the long-term impact of a disaster. Historically, however, most governments have financed disaster expenses only after a catastrophic event has taken place. Measures include reallocating funds, increasing taxes, accessing domestic and international credit markets, borrowing from multilateral financial institutions or applying for international aid. Yet these initiatives clearly have drawbacks. Budget reallocation is a fast remedy, but available funds are usually small. Raising taxes can hurt an already fragile economy battered by a natural disaster. And the cost of borrowing money from national or international financial markets can be very high, particularly after a devastating event.

The UN identifies the reduction of economic loss resulting from disaster risk as an actionable priority for the post-2015 sustainable development framework. In order to mitigate the mounting exposure to catastrophes, a broader distribution of risk and a more diversified financing mix are called for. As countries step up efforts to strengthen their resilience, they must not only focus on saving human lives but also on alleviating the financial burden on the government and the general public to ensure funding is available. Part of the solution is to build up financial reserves pre-event and close the financial protection gap between economic and insured losses by extending insurance coverage for disaster risk.⁵

Pre-event financing tools, including insurance, have a number of distinct advantages over post-event financing measures. Instruments that build up financial reserves or provide contingent funds as well as insurance or reinsurance solutions can reduce the financial burden on the government after a disaster, lower the volatility of the state budget and improve planning certainty for the public sector. Such an approach not only increases the government's financial flexibility, but different instruments also cover different needs in the wake of a disaster.

In developed countries with a functioning insurance market, there is a lesser need for the government to actively absorb natural catastrophe risks. In countries where the insurance market is not yet sufficiently developed, however, the government may need to play a more active role as an enabler of risk transfer. In addition, governments themselves may choose to buy private insurance coverage in order to pre-finance public disaster expenses. Such public-private risk transfer solutions either complement the existing insurance market in the case of severe risks or help bridge a financing gap in countries that – due to their low level of development - lack a functioning insurance market altogether.

Amongst the success stories related to risk transfer mechanisms for natural catastrophes, Turkey is a good example. Recently, the Turkish government decided to place a US\$100 million bond to mitigate earthquake risk, which was later raised to US\$400 million due to high demand. With a yield of 2.5%, the Turkish Catastrophe Insurance Pool effectively purchased US\$400 million of earthquake protection for an annual 'premium' of US\$10 million. This is one possible pre-event risk transfer scenario; however, the insurance market capacity and adaptability allow for varied solutions in terms of local risk transfer.

⁵ Unmitigated disasters? New evidence on the macroeconomic cost of natural catastrophes (2012, V. Goetz, V. Dahlen, Saxena). Working Paper. Bank for International Settlements. Available:
<http://www.bis.org/publ/work394.htm>

IV. Quantifying and pricing risk: building a cost-effective disaster risk reduction strategy

For policymakers and disaster planners, the aim of saving lives and reducing human suffering through risk prevention measures is of course the most important priority. Building financial resilience and protecting economic development gains is a close second. But one of the biggest challenges policymakers face is how to identify the most cost-effective ways to prevent, mitigate and reduce risks with limited resources. Insurance is a helpful tool in this effort. It quantifies the risks and thus puts a price tag on them. This allows policymakers to compare the costs and benefits of different risk reduction measures and make more informed choices about those measures that promise to yield the greatest economic returns.

Since no community can afford to prevent damage from every imaginable risk event, transferring the risk to the private insurance and capital markets usually proves to be the most economical risk reduction measure to protect against low-frequency, high-severity disaster events. At the same time, keeping insurance prices in check by minimizing residual risks through prevention measures is equally important. Improving defences against storm-surge waves, for example, has the dual benefit of reducing exposure to storm perils while at the same time ensuring that risk transfer options continue to be affordable for less frequent, more severe storm events. Importantly from a business perspective, such protection – for example of a city against flooding from its river – increases the attractiveness for business investments – simply because business is in a safer place than in an unprotected city. In turn, by putting a price tag on risk, insurance provides a strong incentive to invest in the most cost-effective prevention measures. Thus, risk prevention and risk transfer are mutually reinforcing.

Decision-makers, however, will still have to make policy and investment choices under a large degree of uncertainty about future economic growth and the impact of climate change.⁶ Their best option is to cater for a variety of different disaster risk scenarios by taking a long-term view of a country's or a location's total climate risk. Such an approach is at the heart of the Economics of Climate Adaptation (ECA) methodology.⁷ This concrete methodology considers not only the disaster risk posed to society from today's climate, but also the impact of climate change and the expected future value of economic development. The ECA analysis framework thus enables a concrete mapping of a city's, region's or country's concrete risk exposure - and it also provides a basis for political decision making in that it allows for a prioritization in the allocation of public funds for risk mitigation measures. The ECA framework thus facilitates sound governance by rationalising both the risk analysis and the political decisions that build on the insights gained.

Climate adaptation is therefore an integral part of disaster risk reduction and goes hand in hand with sustainable development planning. The ECA approach presents a strong case for immediate action. It shows that well-targeted, early investments in infrastructure, technology, capacity, behaviours or risk transfer measures are likely to be cheaper and more effective than complex disaster relief efforts after the event. By combining risk prevention and risk transfer measures as part of a comprehensive risk management strategy, local and national decision-makers will make their communities more resilient to climate change and better prepared for disaster risks without comprising future adaptive capacity. In so doing, adaptation not only helps societies secure development gains already made, but it also ensures that any future growth is sustainable.

⁶ If unaddressed, climate change, coupled with economic growth, is likely to significantly increase disaster-related losses over the next decades. According to the Economics of Climate Adaptation (ECA) studies, climate risks could cost emerging economies up to 19 percent of their total gross domestic product by 2030.

⁷ Economics of climate adaptation: Shaping climate-resilient development (2010). A report of the Economics of Climate Adaptation Working Group.

Available:http://www.swissre.com/rethinking/shaping_climate_resilient_development.html

V. Integrated risk management approach: the central role of a Chief Risk Officer

Disaster risk financing, including financial risk transfer, should be part of any comprehensive country risk management strategy. This integrated approach enables governments to set priorities and determine the most appropriate course of action to protect society from the financial costs of catastrophic events. Integrated risk management follows four stages: from risk identification and assessment to risk mitigation and adaptation.

An integrated risk management process should include a thorough analysis of the risk landscape, including environmental, political, social and health aspects. The insurance and risk advisory industry can play a role in providing risk data in order to create a scientific model for analyzing current and future exposures at global and local levels. Integrated risk management enables political and public sector decision-makers to determine their priorities in advance and protect communities from the financial costs of peak risks. These large risks not only emanate from natural catastrophes but also from man-made disasters such as terrorism as well as pandemics and unanticipated longevity, the phenomenon of people living longer than originally projected and therefore creating pension cost liabilities.

A comprehensive country risk management approach allows governments to minimize risks wherever possible and transfer the costs where necessary. It is essential to increase risk transparency and make informed decisions about the most appropriate risk transfer solutions. Once the risk assessment is done, the government must decide on different measures. There is a natural trade-off between risk mitigation and risk transfer. Investing in better building codes may cost some initial investments in the immediate term, but they pay off in the long run with lower levels of physical destruction in the event of disaster and lower insurance prices.

In practical terms, an integrated risk management approach demands a high degree of coordination among relevant public and private entities. This is why a central coordinating figure – a Chief Risk Officer (CRO) – built on the function long-since established in the corporate world - would usefully be appointed to head up such efforts. The task of the CRO is to monitor the entire risk landscape facing their country through an integrated risk management process, set priorities and coordinate actions to minimize the human and economic impact of unforeseen disaster events.

Conclusion

Saving lives, and reducing human suffering through risk prevention measures should be the main priority of policymakers and disaster planners. Therefore, governments and societies should invest in preventive measures such as robust infrastructure, financial preparedness and health care systems that can handle the repercussions of such events, and insurance can play a useful complementary role to governments' preventive measures. The insurance and risk-advisory sectors can make a valuable contribution towards efforts aimed at achieving financial resilience and strengthening disaster risk management for the benefit of business and society alike.

As risks become increasingly complex in hazard-prone areas and connected through supply chains, cross-border investments and climate change, they also become more costly and difficult to insure. Strong public-private partnerships are therefore vital to provide adequate coverage to populations threatened by large natural disasters. The business sector has a natural interest in working with public sector stakeholders to ensure sound risk analysis and adequate risk management and mitigation measures. Joint action to improve disaster risk preparedness creates a win-win situation. It is an essential part of good governance.





The world business organization

The International Chamber of Commerce (ICC)

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