

From Shared Risk to Shared Value: The Business Case for Disaster Risk Reduction

Over the coming years, trillions of dollars of new business investment are set to pour into hazard-exposed regions. How the private sector – accounting for 70–85 percent of total investment – decides to place its funds will largely determine how much disaster risk is accumulated and how underlying risk drivers are addressed.

The relationship between business investment practices and disaster risk is poorly understood. The 2013 Global Assessment Report on Disaster Risk Reduction (GAR13) *‘From Shared Risk to Shared Value: The Business Case for Disaster Risk Reduction’* seeks to fill that gap. It explores why increasing disaster risk represents a growing problem for the economic and business community. It reveals that direct losses from past disasters are likely to be at least a 50 percent higher than previously reported. GAR13 also estimates average potential losses from future earthquakes and cyclonic winds alone at USD189 billion per year.

With this clearer picture of past and expected disaster losses the report challenges the private and public sector to move together from shared risk to shared value and highlights good practice for an emerging, more collaborative future.

Major disasters in Japan and Thailand in 2011 and the US in 2012 revealed how such catastrophes impact businesses. Earthquakes, floods and storms damage exposed facilities, interrupting and paralysing output and business processes.

But disaster risk does not stop at the factory gate. Businesses depend on infrastructure and public sector utilities. Damage to transport and energy networks, ports and airports or to neighbourhoods where employees live imposes additional costs. And in today’s

globalised world, even businesses in safe locations may be affected by disasters that hit suppliers and partners on the other side of the globe.

Extended insurance coverage may enable businesses to compensate for both direct loss as well as supply chain interruption. But disasters have broader, more pervasive effects. When business is interrupted, skilled workers may leave, market share may be lost, relationships with suppliers and partners may be severed and reputation may be eroded. Once business is lost, it may never come back.

Small businesses that serve local markets are more often affected directly by localised, more recurrent disasters, such as flooding or landslides. Many such businesses go bankrupt because they lack the cash flow or reserves to be resilient when hit. Large corporations, on the other hand, are largely buffered from local impacts in any particular place. However, if these disasters occur in regions where global enterprises are seeking to establish effective clusters of suppliers and vibrant consumer markets this may result in equally significant losses in the medium to long term.

Although hazards such as earthquakes, cyclones and tsunamis are natural in origin, there is nothing natural about the way disaster risk has become embedded in the contemporary business landscape. Decades of decentralising and outsourcing production to areas with comparative advantages, such as



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low labour costs and access to export markets, has enhanced competitiveness. However, because many of these areas are hazard prone, business exposure has dramatically increased.

Investors have paid insufficient attention to this trend. Country briefings, analysts' reports, competitiveness indices and business forecasts rarely mention disaster risk. Cities and countries, competing to attract investment, have generally downplayed the risks, in some cases even offering incentives to locate in hazard-exposed areas. And the pricing of risk in insurance markets has yet to act as an effective disincentive to investment in such regions.

Many of these risks and costs are externalised and transferred to governments, to society at large and to future generations. Disasters disproportionately affect lower-income countries, communities and households, and those who benefit least from wealth creation owing to economic globalisation.

Larger businesses perceive a riskier marketplace in today's world of economic and political turmoil, rapid technological change and increasing interconnectedness of global trade, financial markets and supply chains. For the private sector, this means an array of complex, unpredictable events and sudden change in which risks can manifest swiftly and unexpectedly, with far-reaching consequences.

Within this landscape, the reduction of disaster risks is taking on new significance. Investment in disaster risk management is increasingly seen less as a cost and more of an opportunity to strengthen resilience, competitiveness and sustainability.

And, if business becomes more risk-sensitive, governments will be encouraged to invest more heavily in disaster risk reduction: this will become a basic requirement for competitive countries and cities to attract investment.

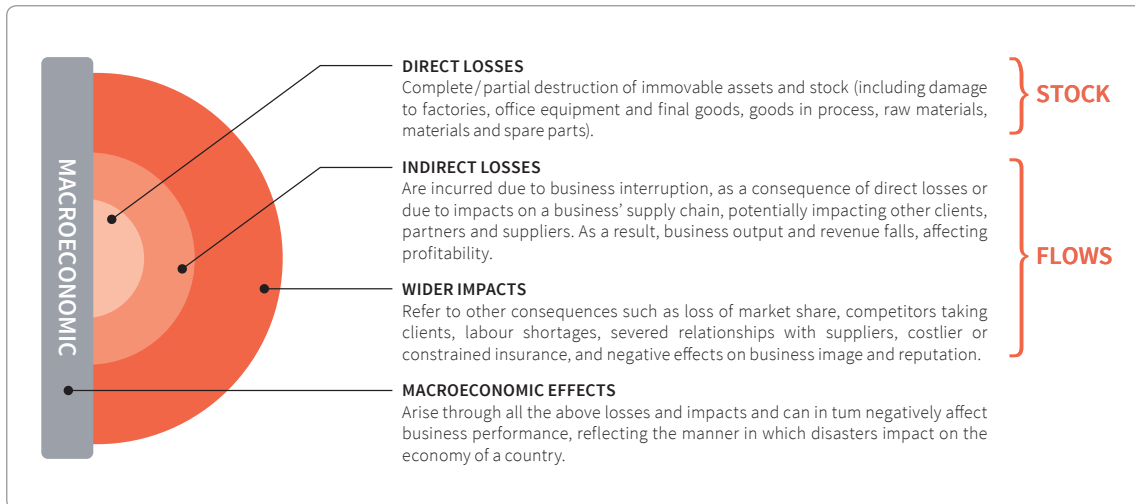
But above all, businesses now perceive investments in disaster risk management as a compelling proposition to create shared value. Investments in climate change mitigation, sustainable water management and green cities directly address these underlying drivers and at the same time become increasingly important in value creation for businesses of all types. Businesses are finding huge opportunities in disaster proofing new and existing infrastructure, buildings and supply chains.

The role of business in the future of disaster risk reduction is massive and needs to be duly recognised in the formulation of revised international frameworks for development that will be adopted in 2015.



Risky business

Catastrophes such as the 2011 Great East Japan Earthquake and Chao Phraya river floods in Thailand have focused attention on the growing impact of disasters on business. The private sector suffers direct losses when it has invested in locations exposed to hazards without adequate investments to reduce risks. They also experience indirect losses when production, distribution and supply chains are interrupted.



The growing impact of disasters on the private sector

As supply chains become globalised, the interruption of one critical node potentially produces ramifications and new vulnerabilities on a worldwide scale. The damage to one maker of microchips in Japan resulted in 150,000 fewer Toyota automobiles being manufactured in the US.

Even when businesses do not experience direct losses, they depend on public infrastructure. A survey of 1,200 businesses in Bogota (Colombia), Kingston (Jamaica), Miami (United States of America), San José (Costa Rica), Santiago (Chile) and Vancouver (Canada) highlighted that three of the top four hazard-related business disruptions were related to disruptions in power, telecommunications and water utilities

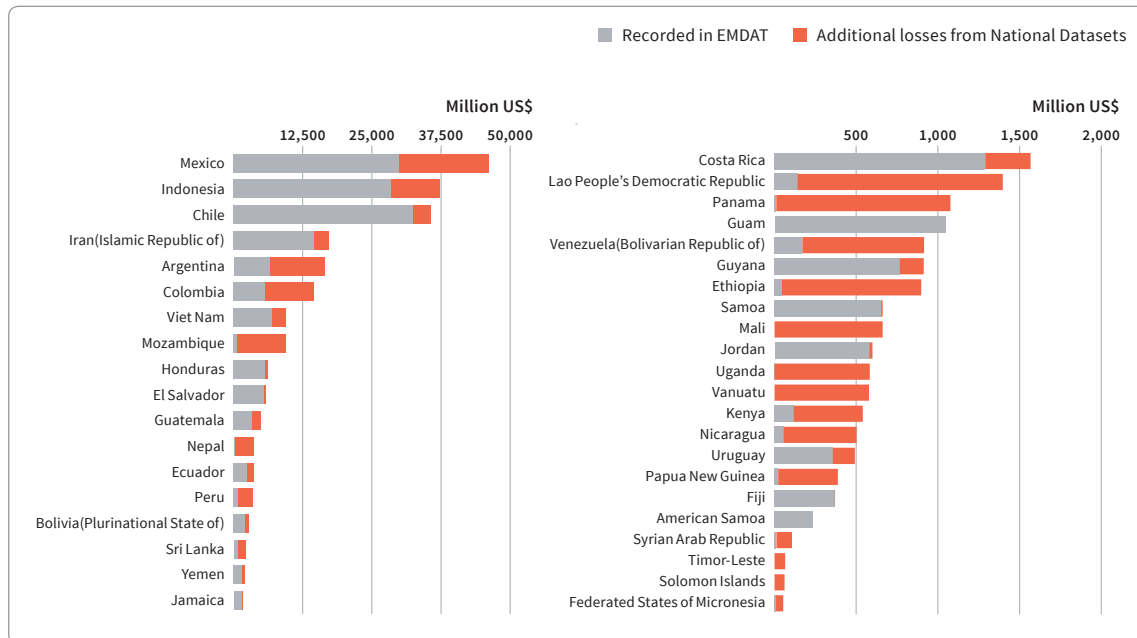
Large global businesses may be more resilient to disasters owing to diversified facilities and good insurance coverage. In contrast, informal sector producers and small and medium enterprises are more likely to be located in hazardous areas and less likely to have invested in protective risk-reducing schemes. A single disaster may wipe out all or a large part of these businesses' capital.

The wider impacts of disaster can linger for years. Before the 1995 earthquake, the port of Kobe was the world's sixth busiest. Despite massive reconstruction by 2010 it had fallen to 47th place. When business leaves, it may never return.



The full scale of disaster losses: at least 50 percent higher

‘One trillion dollars have been lost in the last decade due to disasters’. Such statements are familiar to investors but they only partially reflect total disaster losses. Now, a growing number of national disaster loss databases are providing access to detailed losses that was previously not possible.



Direct economic losses in 40 countries as estimated from national and global loss databases, 1981–2011 (in million US\$)

When these national level figures are combined with assessments as recorded internationally (by EMDAT), it provides a more complete picture of the real dimension of direct disaster losses. The scale of these ‘missing costs’ is revealed in the above figure for 40 selected low and middle-income countries.

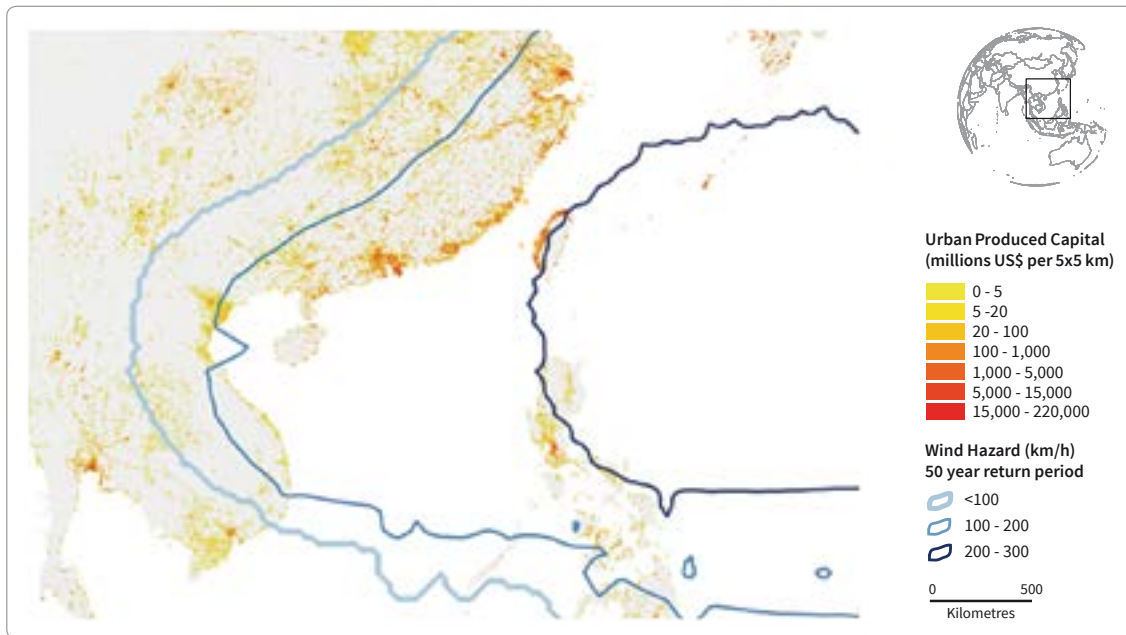
Between 1981 and 2011, total direct losses in these countries were approximately US\$305 billion, of which internationally reported events represent about 67 percent. The implication is that the

headline-grabbing figures recorded in global datasets over the last decade may be quite conservative. Once the losses associated with nationally reported smaller disasters are included, those figures are likely to be at least 50 percent higher. At the same time, these figures refer only to direct losses and thus exclude the cost of indirect losses and wider effects of disaster.



The hidden risks of economic globalisation

Many large businesses have decentralized, outsourced or off-shored operations worldwide as globalisation has eroded the barriers to such investment. Those low and middle-income countries that have been successful in attracting investment have seen spectacular increases in the value of produced capital. In East Asia and the Pacific, this value more than doubled from US\$4.6 trillion in 1995 to US\$10 trillion in 2005. Businesses have taken advantage of such factors as attractive labour costs and skills, access to export markets, good infrastructure, and a stable economic and political environment.



Produced capital stock in Southeast Asia exposed to one-in-fifty year tropical cyclone wind hazard

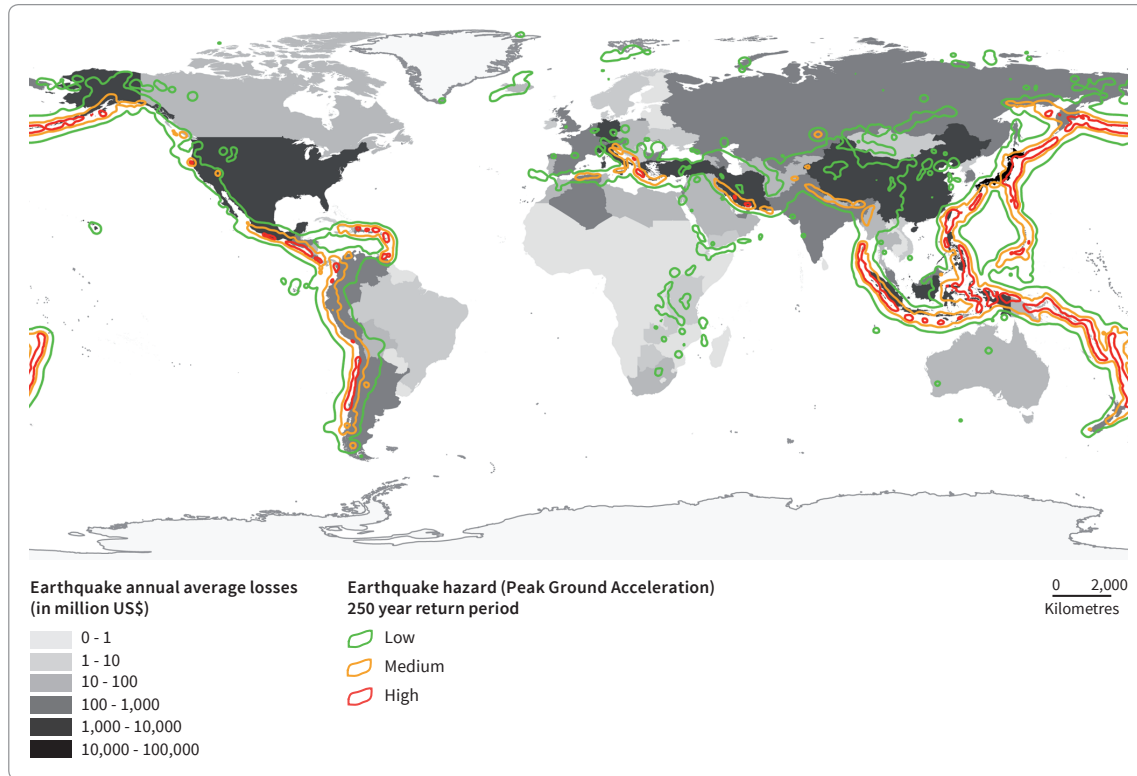
However, some of these successful regions are hazard-exposed. As such, population growth and economic assets have accompanied the build-up of investment into tsunami and cyclone-prone coastlines, flood-prone river basins and earthquake-prone cities. Between 1970 and 2010 the proportion of global GDP exposed to tropical cyclones increased from 3.6 percent to 4.3 percent.

Businesses that have invested in such hazardous locations may find that their higher exposure is compounded by a lack of local capacity to reduce the associated vulnerabilities. As such businesses may be assuming risks and liabilities that will only become apparent when hazards occur.



Intensive Risksapes: waiting for the Big Ones

Catastrophic earthquakes or tsunamis may only happen every 500 or 1,000 years in any given place. As such, even though records may go back centuries, most of the extreme events that could potentially occur have not happened yet. And, although data on disaster loss provides a guide to the past, it is insufficient to predict and estimate losses that may occur at present and in the future.



Annual average loss from earthquakes

To overcome this, GAR13's global model estimates the probability of losses of a given magnitude in a country in a given period. For example, the model estimates losses that could potentially occur from a one-in-250-year earthquake (0.4 percent probability in any given year). It also estimates expected annual average loss from all events that could potentially occur.

Total global annual average loss for earthquakes is estimated at more than US\$100 billion. From tropical cyclone wind damage it is estimated at more than US\$80 billion. In absolute terms most of this expected loss is concentrated in high-income countries such as Japan

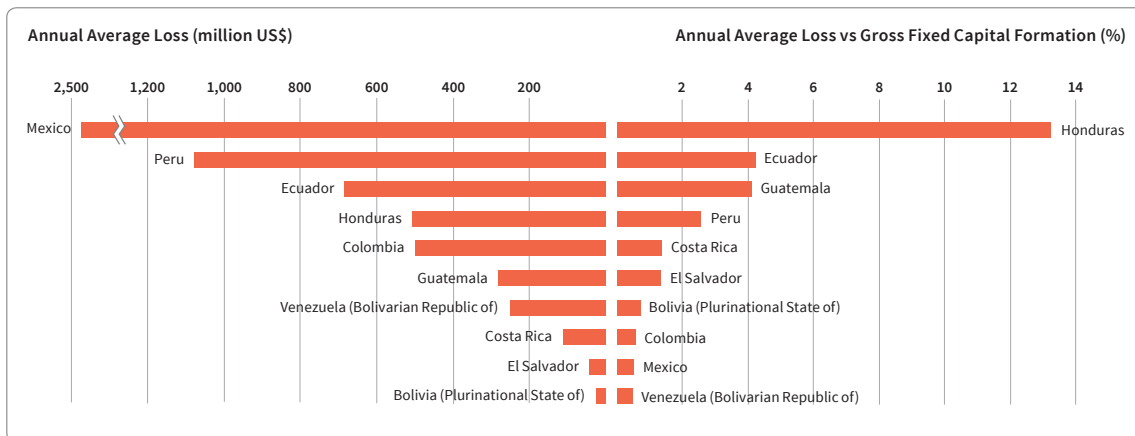
and the US. Japan alone has 15 percent of the world's urban produced capital. However, smaller countries have a higher proportion of their capital stock at risk and in lower income countries the vulnerability of buildings also increases risk. Several small-island developing states could lose over 20 percent of their capital stock in a one-in-250 year cyclone or earthquake.

Of particular concern is the location of critical facilities, including nuclear power plants and airports, in areas exposed to destructive tsunamis. Airport exposure is most critical in small island states. In the French Polynesia archipelago, for instance, a total of 26 airports are exposed.



Economic development often produces invisible risk

Accumulated losses from small-scale, highly frequent and localised disasters are similar in magnitude to those of major catastrophes. These losses contribute to declines in social welfare, economic growth and ecosystems. Analysis of new national disaster loss data confirms this regularly ignored truth. Communities, particularly in low and middle-income countries, experience regular small disasters that undermine local development as well as national competitiveness.



Absolute annual average losses (left) and as a proportion of capital formation (right), both calculated from hybrid risk models of selected Latin American countries

Badly planned urban development can generate flooding through increased run-off from impermeable surfaces, inadequate investment in drainage and water management and the development of low-lying flood-prone areas. The decline of regulatory ecosystem services, such as wetlands, aquifers, forests, floodplains and mangroves, exacerbate hazard levels. Low-income households often build informal dwellings in hazard-prone areas. Cities with weak governance lose control or even contribute to the above processes.

Often, government, insurance or international assistance do not fully absorb disaster costs. Some losses are absorbed by low-income households as well as business, particularly small enterprises and those in the informal sector. If these indirect losses to business could become

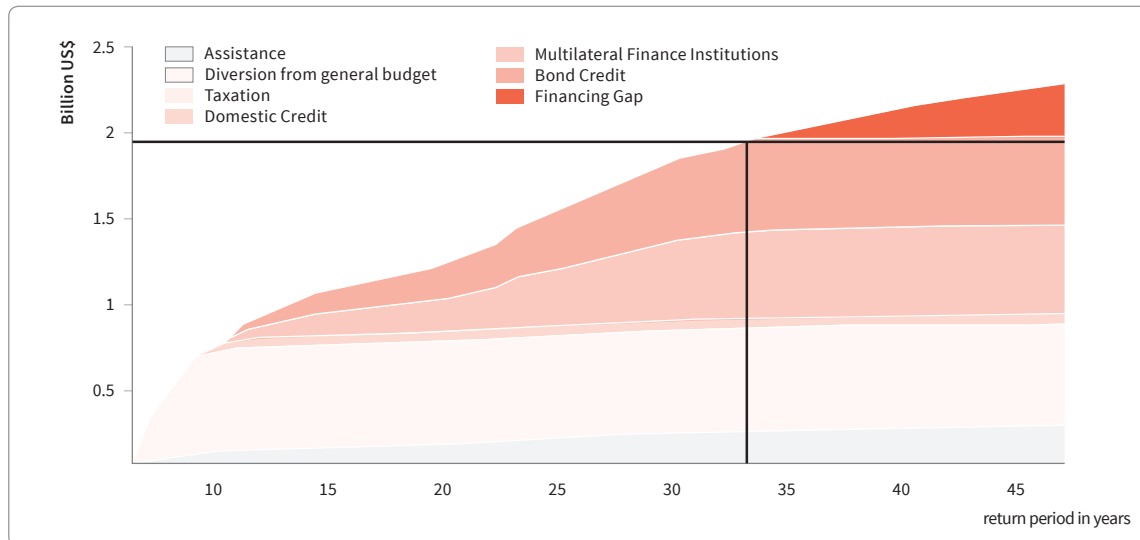
more visible, and indeed measured, the private sector may increasingly advocate for more public sector investment as a measure that would create shared value.

The above diagram for ten Latin American countries highlights the annual average loss that would be expected from all disasters, intensive (i.e. major) and extensive (i.e. localised and recurrent), both in absolute terms and as a percentage of annual investment. This enables countries to develop a more complete analysis of risk and their contingent liabilities. It also lays the ground for risk assessments that would include indirect losses and liabilities currently absorbed – to a large extent – by individual businesses and households.



Countries least able to afford lost investment are losing the most

Resilience refers to the capacity of a country's economy to absorb losses and recover. Businesses are more likely to recover faster in a country where governments have the capacity to invest in recovery or where they have risk financing measures that cover most contingencies.



Fiscal vulnerability of Honduras to disaster loss

Unfortunately, some countries that can least afford to lose investment are losing the most. Thus, to protect economic growth, investment in risk reduction is vital.

In Mozambique, annual direct disaster losses surpassed investment three times between 1993 and 2011. In each episode, investment not only slowed down but actually reversed. In 2011, these losses represented 12 percent of Mozambique's annual investment, 8 percent in El Salvador; and about 6 percent in both Honduras and Nicaragua.

Economic resilience also depends on a government's ability to finance recovery

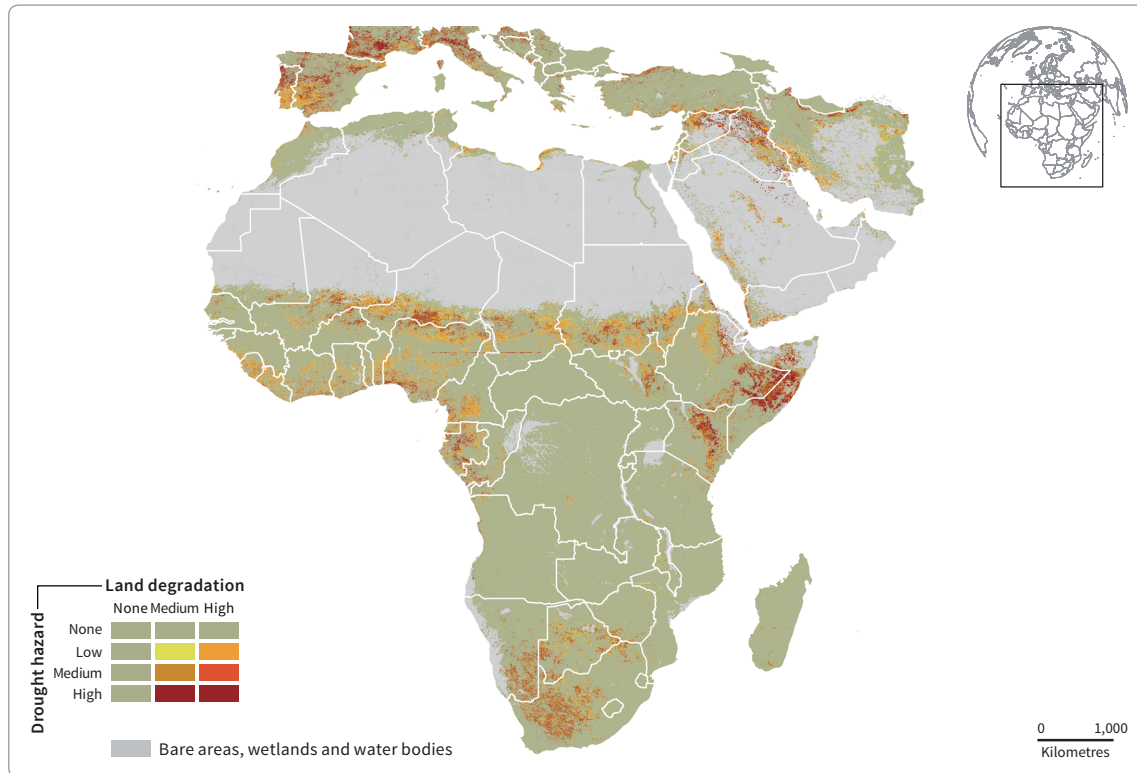
through an array of public and private mechanisms. In the case of Honduras, the government would face a financing gap, even in the case of one-in 33 year event, with potentially significant economic development setbacks, rendering it unable to provide timely relief and reconstruction efforts.

In the medium or long term, countries that have experienced intensive disasters may never recover lost growth. Countries affected by tropical cyclones experience lower GDP growth in the 15 years that follow. In countries with frequent severe cyclones – such as Madagascar and Philippines – and large risk-financing gaps, growth will be lower over several decades.



Natural capital risk compromises future wealth

Natural capital – the set of renewable and non-renewable natural resources, including agricultural land, fisheries, fossil fuels, forest resources, water, biodiversity and minerals – is the focus of massive business interest. Investment flows into this sector in the form of agribusiness, forestry and mining.



Land degradation is a key driver of agricultural drought

Many of the risks generated through this type of investment are externalised and transferred through mechanisms such as climate change, land degradation and the overexploitation of water resources. These become shared risks and costs; not only in space but in time because exhaustion of natural capital compromises the wealth of future generations. Estimation of natural capital is still in its infancy. As such, the costs to business as well as the shared risks and costs are rarely part of investment decisions.

Largely human-induced wild-land fires affect numerous 'services' in tropical ecosystems, including carbon storage, support to biodiversity, protection of water sources, reduction of land degradation and climate regulation. Such losses amount to US\$190 billion per year.

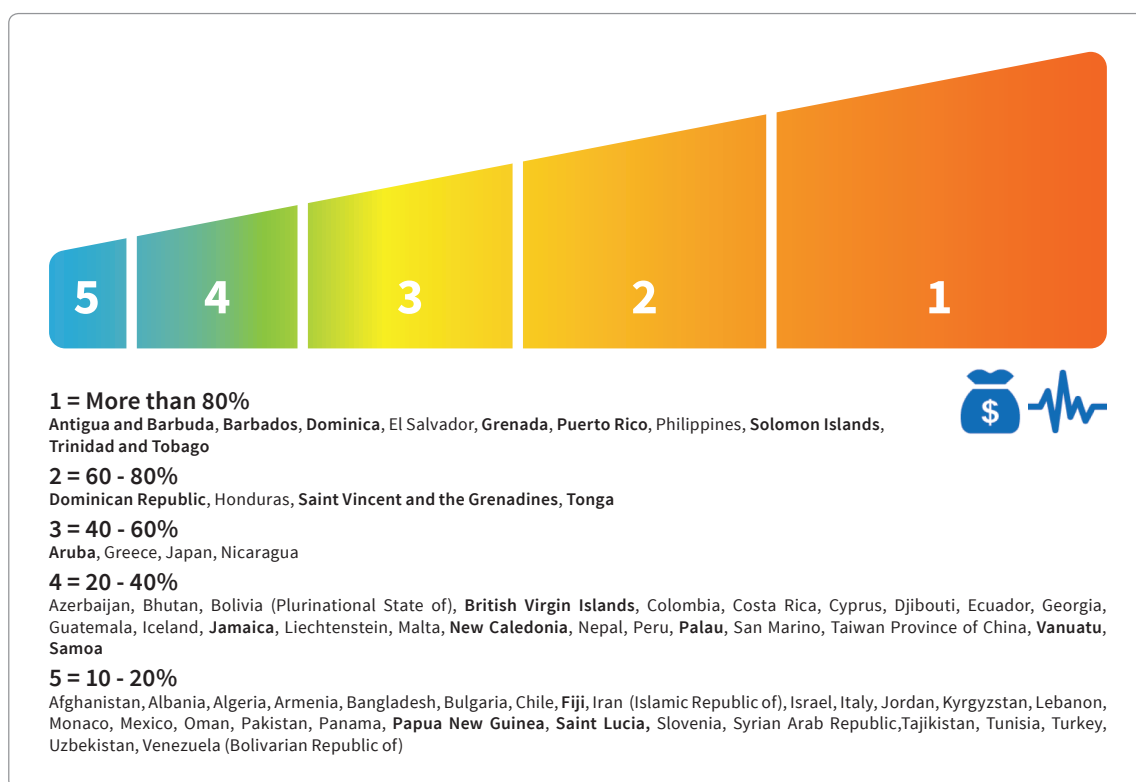
Land degradation, associated with intensive agriculture, overgrazing, salinisation from inappropriate irrigation, deforestation and the breakdown of traditional agro-ecological systems has been recognised as a key driver of agricultural drought risk. As the above map shows, large areas of Africa are experiencing both land degradation and severe soil moisture deficiencies. As a result, these areas are at risk of desertification, representing an irreversible loss of natural capital.

New models of agricultural drought risk provide a clearer picture of potential crop losses. In Mozambique, agriculture contributes 25 percent of GDP. The model estimates that the country risks losing, on average, 0.12 percent of its GDP every year owing to the probable loss of 3 percent of its maize production from drought.



Small islands, big opportunities

Given their small size, the expected annual average losses from earthquakes and tropical cyclone wind damage in small island developing states (SIDS) represent respectively only 2 per cent and 1.4 per cent of the global total. However, precisely because they are small, 8 of the 10 countries that would lose the largest proportion of the value of their produced capital stock in a one-in-250 year earthquake are SIDS. In the case of a one-in-250 year cyclone, they comprise 6 of the 10 countries most at risk.



Probable maximum losses from earthquakes as a percentage of gross fixed capital formation are particularly high in SIDS

SIDS contribute less than 1 percent of total carbon dioxide emissions. But climate change is likely to disproportionately increase their disaster risk, due to sea level rise and associated flood and storm surge hazard, increasing cyclonic wind intensity, erosion, saltwater intrusion into coastal aquifers and worsening water scarcity and drought. The effects of disaster loss are amplified because hazards may affect their entire territory and economy.

Countries with low levels of investment and high average annual losses are less likely to be able to absorb losses, even from more frequent, less severe events. Jamaica observed annual average losses between 1991 and 2011 equivalent to 2.6

per cent of its average annual investment. This contributed to its sluggish growth in this period. As the graph shows, expected losses from a one-in-250 year earthquake could exceed 80 percent of annual investment in some SIDS.

However, because of this combination of high risks and low resilience, SIDS are where investments in disaster risk reduction and climate change adaptation are likely to reap the greatest benefits. It would enable SIDS to attract investment, strengthen resilience and improve competitiveness and sustainability.



New wave of urbanisation: a huge challenge and opportunity

A new wave of urbanisation is unfolding in hazard-exposed countries and regions with weak capacities to manage disaster risks in urban development. The urban population of sub-Saharan Africa is expected to grow from 298 million in 2010 to 1,069 million in 2050. In India it is expected to grow from 379 million in 2010 to 875 million in 2050.



Changing a city's riskscape: green roofs in Quito, Ecuador

This represents both a huge business opportunity as well as a challenge for disaster risk reduction. One estimate projects urban development investment to increase from US\$7.2 trillion in 2011 to US\$12 trillion by 2020.

The short-term profitability of speculators, weak regulatory frameworks and the absence of clear accountability for shared risks and costs generated by real estate development conspire against building safe and resilient cities, even in high income countries. Since 1989, for example, 7 to 11 percent of new housing in the UK has been built in areas with 'high flood risk'.

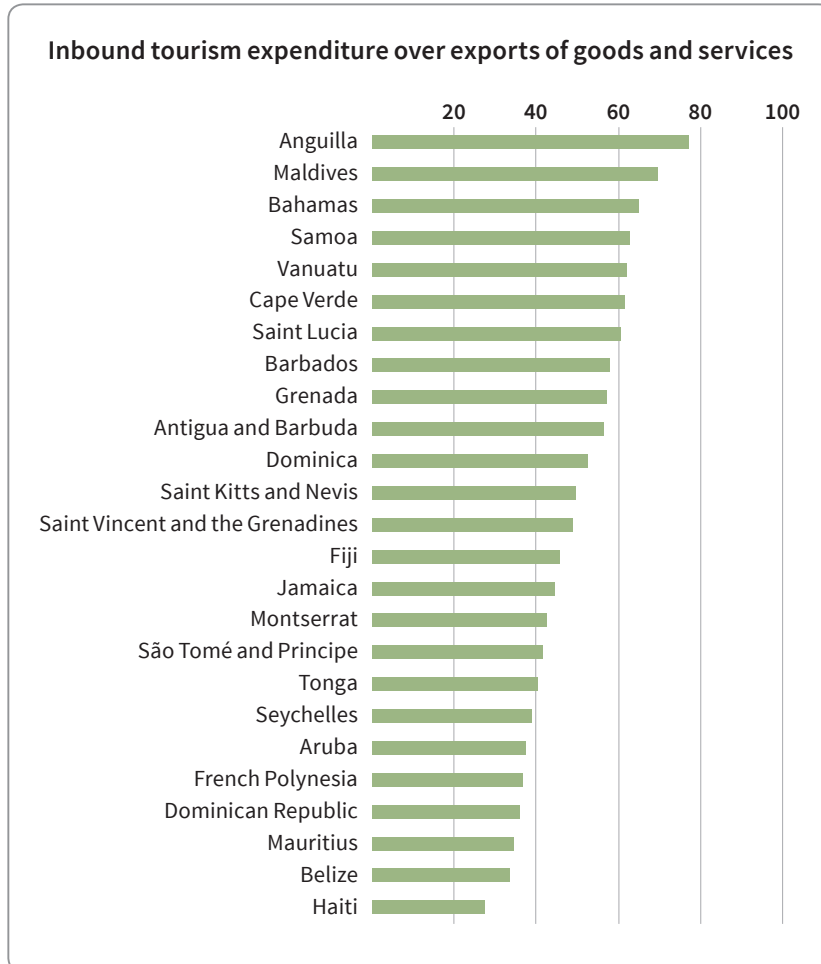
Investment in infrastructure influences how cities grow. For example, more than 50 stations on the new metro line in Delhi are located in areas of high earthquake hazard and one was built in a flood-prone area. Risks to the metro itself have been reduced through tougher building codes but this is not necessarily the case for the surrounding real estate developments.

Urban governments that seek to attract investment are entering into innovative partnerships with businesses as well as with low-income communities to address climate change, improve security and effectively manage risk. New approaches, such as green building, that highlight environmental and social sustainability are becoming a value proposition for the construction and real estate sector.



Hazardous leisure

Tourism is booming and contributes 9 percent to global GDP and 4.6 percent to worldwide capital investment. Small Island Developing States (SIDS) are heavily dependent on the sector with international tourism receipts accounting for 51 percent of export value in 2007. Yet, this dependency coupled with high levels of disaster risk makes many of these countries vulnerable.



Contribution of tourism to exports of goods and services, annual average 2006–2010

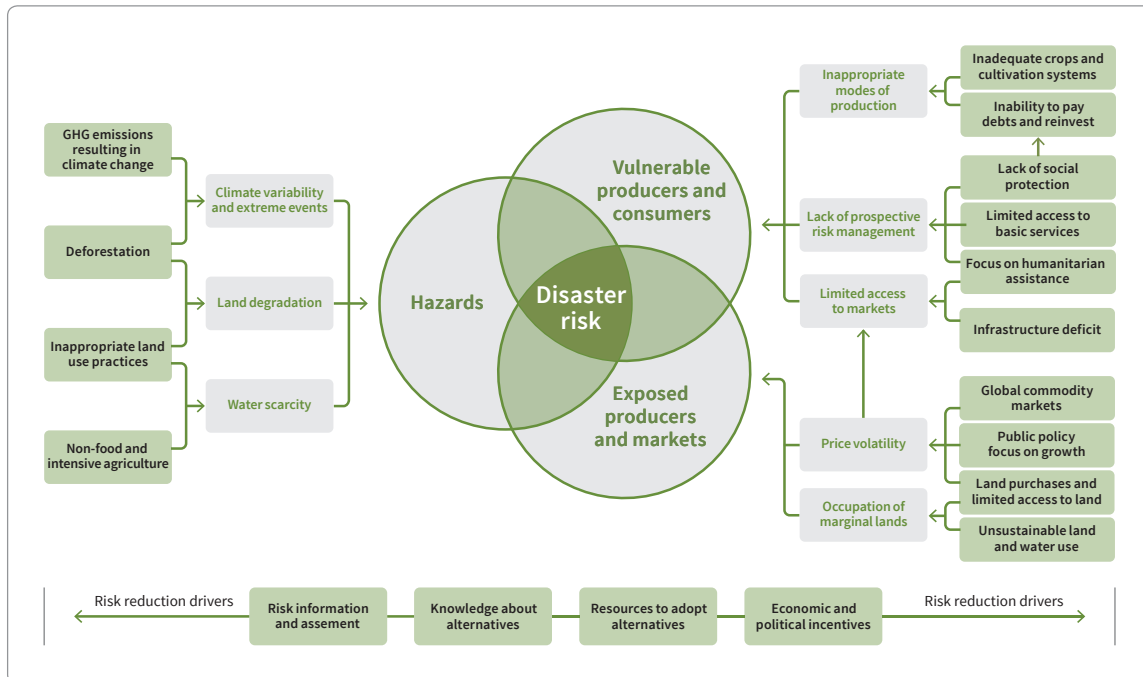
Because resorts attract further development and infrastructure, the ownership of risk in these investments is usually not well defined. Indeed, it can become a shared cost often borne by those who benefit least from the return on such investments. After the 2009 floods in Nadi, Fiji, one-fifth of all small and medium businesses registered with the Chamber of Commerce had to close down; only a handful eventually reopened.

Despite recurrent disaster losses in SIDS, there is little disincentive to continued investment in hazard-prone but sought-after beachfront locations. Yet, there are signs that disaster risk reduction can present a triple win situation for investors in the industry, SIDS governments and communities in tourism destinations. Certification programmes and voluntary rating systems are increasingly accepted by clients and supported by governments as propositions to create shared value.



No free lunch: Agribusiness and the risks to food security

Food security depends more on how much households can buy than on how much they can grow. Rising food prices have hit many low-income rural and urban households alike. At the same time, price hikes have stimulated new investments in agricultural and global food production. Large agribusinesses are investing in export-oriented agriculture, particularly in sub-Saharan Africa. Globally, 13 of the top 20 target countries for international investment in agricultural land acquisitions are in Africa. Most of these countries have a high share of agricultural GDP and also high levels of food insecurity.



The multiple dimensions of disaster risk in agriculture

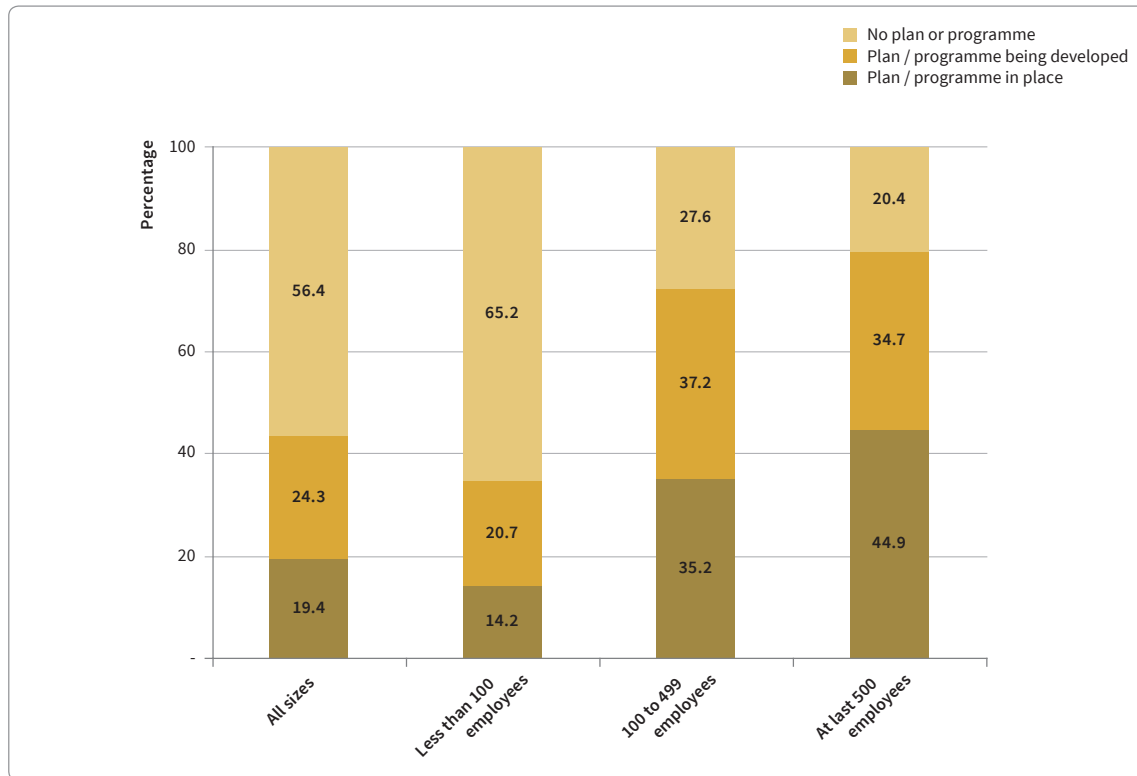
Investments into regions with high but poorly understood agricultural drought and other hazards, generates risks of future and more severe food price spikes. These rises occur when production shortfalls are magnified by commodity markets and other factors such as increasing demand; the production of biofuels; and lower global stocks. This poses a greater threat to the food security of low-income rural and urban households than drought itself.

Given the risks posed by large agribusiness investments, and an approach to food based on decades of massive investment in humanitarian assistance, a new paradigm is urgently required. New partnerships between smallholders, local and national governments and large agribusiness companies may pave the way for a longer-term strategy that effectively strengthens the resilience of smallholder farmers.



Survey of small and medium enterprises highlights incapacity to manage risk

Large businesses—particularly those with global operations—are more sensitive to risks, especially those of a financial, economic, market and legal nature. Disaster risks are rarely considered. This practice is also reflected in curricula of many business schools. Business surveys, though, highlight a rising imperative to manage disaster risks.



Percentage of companies with business continuity plans or crisis management programmes (by company size)

Small and medium-sized enterprises are more likely to lack capacity to manage disaster risks. In a survey of 1,200 companies in six disaster-prone cities in the Americas, 45 percent of businesses with at least 500 employees had a business continuity plan or crisis management programme. However, only 14.2 percent of companies with less than 100 employees had such a plan.

Disaster risk management in most global businesses remains focused on business continuity planning. Most businesses are engaging in some form of disaster risk assessment and management for their supply chains, and are increasingly moving towards the setting of risk management

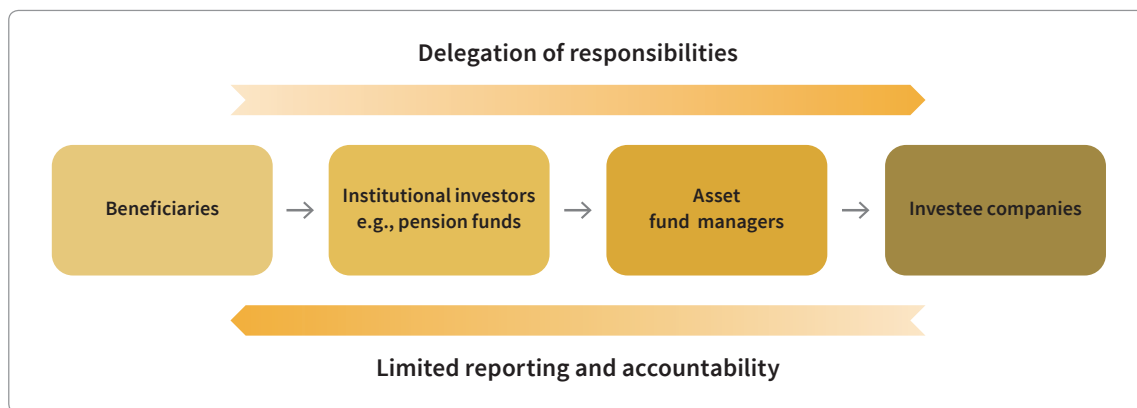
standards, which suppliers have to comply with. However, these changes are still incipient and are only reflected in more recent (three-to-four year) risk management policies.

Encouragingly, a number of large global businesses are now demanding risk assessments from small businesses that are key suppliers. A few companies have successfully combined enhanced information of potential disruptions, supply chain and financial impact with simulations of disaster events to reach a more comprehensive understanding of risk drivers and geographical concentration of risk as a basis for their supply chain management



The US\$80 trillion disaster risk blind investment industry

Institutional investors manage assets worth more than US\$80 trillion yet disaster risk is rarely considered in their decision-making. The beneficiaries of such funds are often disconnected from how portfolios are managed, including how much is at risk from disasters. And because the financial market is increasingly disjointed from the real economy, it causes a further disconnection between asset managers and how funds are ultimately used.



The institutional investment value chain

The volume of financial capital has ballooned. Its associated hidden risks only began to be revealed in the financial crisis that began in 2007. The increasing sophistication, complexity and opaqueness of financial instruments means that securities and bonds for businesses with high levels of disaster risk are bought and sold without considering how these risks may affect asset values.

Disaster risk information is not generally included in business surveys, forecasts and briefings that guide investors and credit ratings. For example, the 2012 EIU country report of Indonesia does not address disaster risk at all. The implications of disasters on a country's fiscal policy, infrastructure and utilities, and overall enabling business environment are not well understood with potentially serious consequences for investment decisions.

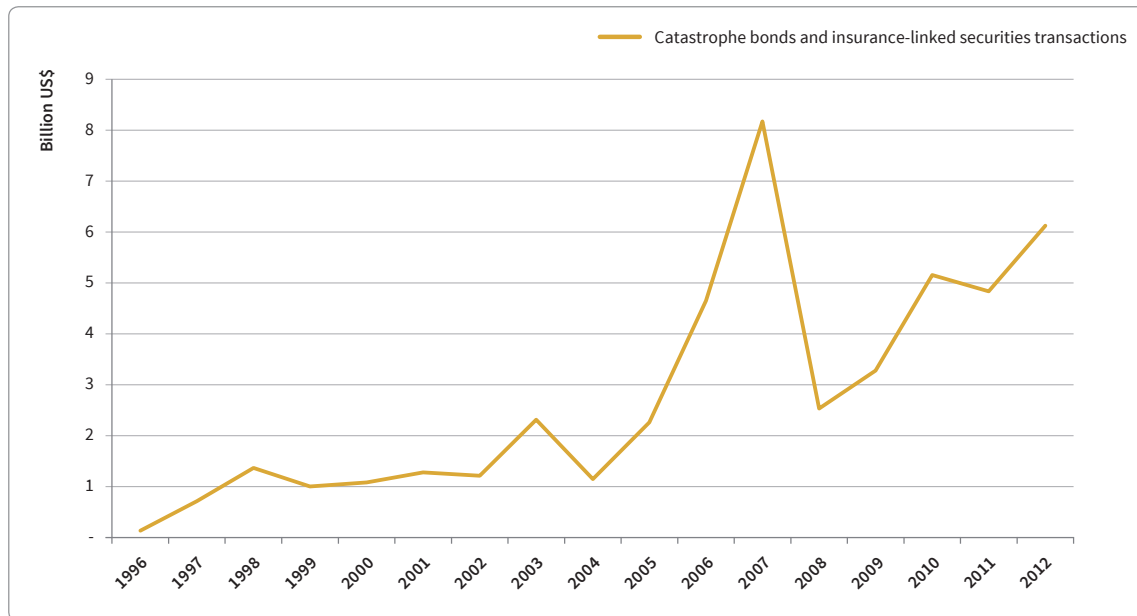
Recent efforts concerned with climate change have begun to show results with a few asset owners and fund managers (about 10 percent overall) integrating environmental, social and governance issues into their investment process. Regulators are requiring that businesses disclose hidden risks and a changing approach to investment is taking root in some large institutional investors.

The threat of falling equity prices or negative analyst ratings for businesses that do not manage or disclose their disaster risks may, in time, become a powerful incentive that rewards those businesses and governments, which more effectively manage those risks.



Securing investment means defining the right price of risk

Insurance pricing and availability has a big influence on investment. Businesses can only obtain loans and other forms of finance once their facilities are insured. Costly premiums may make business look elsewhere. Conversely, when premiums are too low, it may encourage investment in hazard-prone areas.



Over-supply of capital results in a steady growth of insurance-linked financial products

Insurance can provide protection from asset loss and even supply chain interruption, but does not compensate for wider effects, such as low employee morale, increased absenteeism, stress or unrest, low productivity, declining customer demand and goodwill, and other impacts. In other words, insurance is not a substitute for sound risk-based investment decisions.

In rapidly growing economies, particularly in Asia, insurance penetration is spreading faster than disaster risks are being reduced. This increases the exposure of the insurance industry to high and growing losses.

In principle, insurance should also act as a powerful incentive for disaster risk reduction if premiums represented the real economic value of risk. Although risks in developed markets, such as Europe, Japan and the United States of America, are modelled with precision, this is often not the case in new and emerging insurance markets.

Similarly, when governments subsidise insurance to increase penetration rates these under-priced premiums do not reflect risk levels or provide incentives to invest in disaster risk reduction. In addition, when governments act as insurers of last resort, this may encourage moral hazard and perverse incentives in favour of investment in hazard-exposed areas.

Recent catastrophes such as the Christchurch earthquakes and flooding in Thailand are forcing the insurers to reconsider how to price intensive risks.

Financial markets are increasing the supply of capital to the insurance industry through insurance-linked securities and similar financial products. This increases the choice of insurance products available to manage disaster risks. However, these advantages may be undermined if asset managers and catastrophe bond issuers favour short-term gains in bond prices over more sustainable long-term returns from potentially more realistic risk analysis.



Anticipating risk helps secure competitive advantage

It is more cost-effective to reduce extensive risks for events with low to medium-sized losses than to rely on risk-financing strategies. And prospective risk management which factors risk reduction into investment planning is more cost-effective than having to correct risk levels once the investment is made. Without prospective risk management, countries will lose competitiveness and the ability to guarantee the infrastructure that business requires to be competitive itself.



Efficiency of risk management instruments for different return periods

Countries such as Costa Rica, Panama and Peru, have incorporated analyses of disaster risk into public investment planning. However, where political pressure favours a particular investment, this may override other considerations.

Land-use planning is another challenge. Different public and private institutions transform the landscape of city regions often pushing different agendas and operating outside an overall coherent risk management framework.

In the case of medium to extreme losses, risk financing underpins macroeconomic stability and facilitates the financing of recovery. However, much risk financing

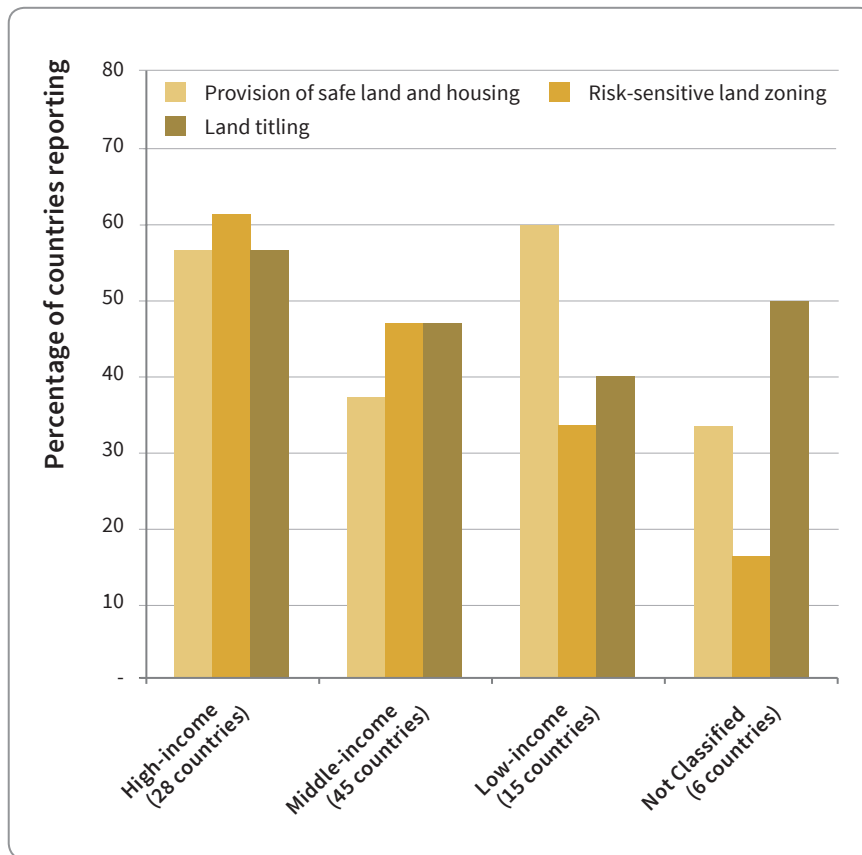
reflects a vision of disasters as 'external' shocks rather than as a result of investment flows. As such, the cost of risk financing is likely to rise except where countries invest in risk reduction.

The role of business is gaining importance. Local governments can find strong allies among businesses with significant fixed assets to more effectively manage disaster risks. However, business participation in disaster risk governance frameworks is still limited. Only 28 countries have reported that private sector bodies are represented on their national platforms for disaster risk reduction.



Policies largely peripheral in addressing underlying risk

Governance arrangements to manage disaster risks have evolved significantly. More cities and countries have reformed their legislation, policy and institutional frameworks. Multi-sector committees now coordinate different ministries and departments; responsibilities are decentralised to local governments and dedicated budget lines are established.



Countries reporting on regulatory mechanisms for risk-sensitive investment

But most of these systems remain focused on preparedness and response. Countries have been less successful in achieving risk-sensitive investment: Less than half report having simple regulatory mechanisms for provision of safe land and housing for low-income communities, risk-sensitive land zoning and private real estate development, or land titling. From that perspective, policies, frameworks and legislation have been largely peripheral in addressing underlying risk drivers. A major gap exists between their development and implementation on the ground.

The global economy is characterised by competition between countries and cities to attract investment on the basis of real

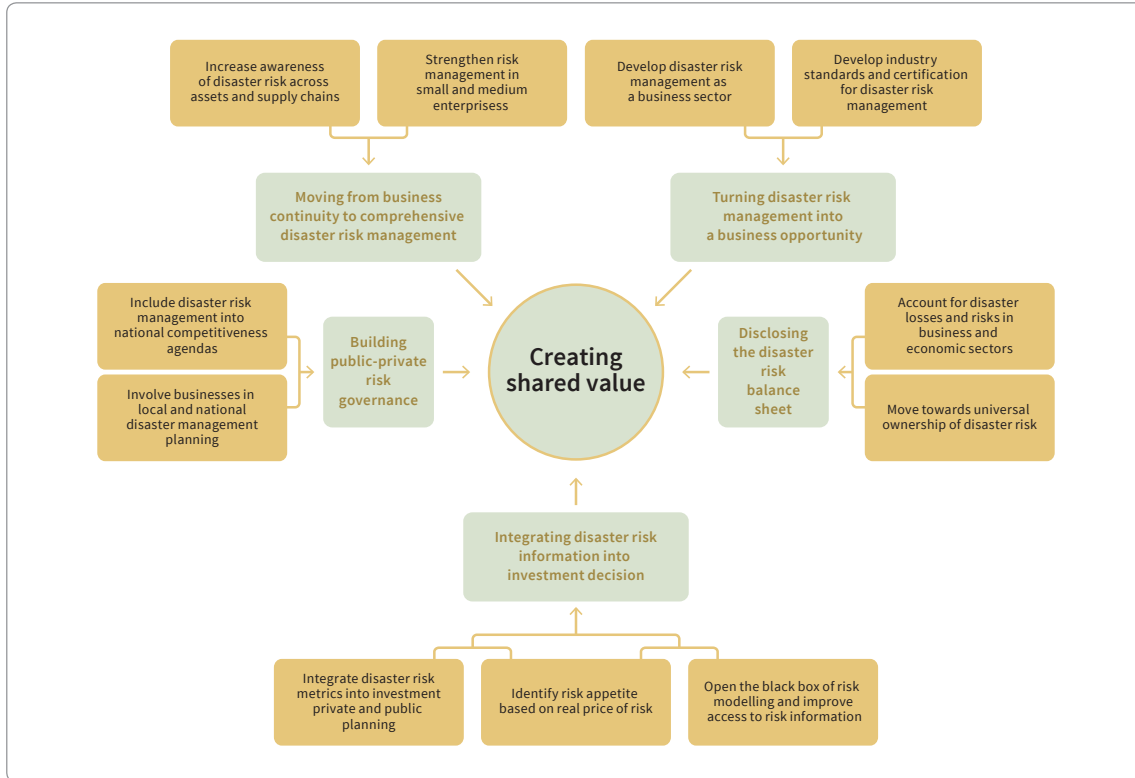
or perceived comparative advantages. However, there is little evidence of the engagement of investment boards, trade ministries and private investors in national disaster risk frameworks. Coordination between economic promotion and growth policies on the one hand, and disaster risk management on the other, is absent.

Few countries are able to quantify investments in disaster risk reduction and hence estimate resulting costs and benefits. There is, though, anecdotal evidence from budget allocations and HFA reports of an increase in such expenditure.



From shared risk to shared value

Businesses able to estimate and manage their disaster risks will be less likely to invest in hazard-prone areas. And if they do, they will more likely invest in measures to reduce the vulnerability of their facilities. The same businesses will be more likely to have addressed disaster risks in their supply chains. And the disaster risks they have decided to accept will be explicit rather than hidden on their balance sheets.



Key areas for the future of risk governance

More importantly, they will have recognised that investing to avoid shared risks and costs and to address underlying risk drivers, in partnership with the public sector and civil society, is not only good but rather essential for business itself. Unless those shared risks are transformed into shared values, future business will not be competitive, sustainable or resilient.

Some encouraging trends are emerging:

- » More businesses will shift their focus from preparing for and responding to disasters to identifying, analyzing and managing disaster risks.
- » Businesses will increasingly integrate disaster information into a broader analysis so that investment decisions are taken with eyes wide open.

- » Behaviour will change over time as businesses scrutinize the disaster risk internalised in locations before deciding investments. This in turn will influence government approaches to risk reduction
- » Businesses will begin to undertake integrated reporting of disaster risks providing a fuller picture of exposure and performance.
- » In 2014, for instance, USD1.9 trillion of foreign direct investment (FDI) is foreseen, and businesses now see disaster risk management as an opportunity and a key sector in what is a huge market.

