

Financing sustainable development

The critical role of risk and resilience

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This report represents one element of a continuing examination of the role of financing resilience and sustainable development by the United Nations Development Programme (UNDP) and the Swiss Government. It is in part the result of a high-level technical workshop convened by UNDP in May 2015 where 20 external experts joined a UNDP team to consider the Financing for Development negotiations (Annex II). The outcome of that workshop was a set of key messages crafted by UNDP for presentation at the Addis Conference on Financing for Development (these messages can be found in Annex III and at <http://bit.ly/1M56S8e>). This report builds on the outcomes of the workshop, presenting key aspects of the messages in graphic form.

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Acronyms

DRR	Disaster Risk Reduction	SDGs	Sustainable Development Goals
FDI	Foreign Direct Investment	SIDS	Small Island Developing States
FfD	Financing for Development	UN	United Nations
GDP	Gross Domestic Product	UNCTAD	United Nations Conference on Trade and Development
GFDRR	Global Facility for Disaster Reduction and Recovery	UNDP	United Nations Development Programme
GHA	Global Humanitarian Assistance	UNEP	United Nations Environment Programme
LDC	Least Developed Country	UNFCCC	United Nations Framework Convention on Climate Change
MDB	Multilateral Development Banks	UNICEF	United Nations Children's Fund
ODA	Official Development Assistance	UNHCR	United Nations High Commissioner for Refugees
OECD	Organisation for Economic Co-operation and Development		

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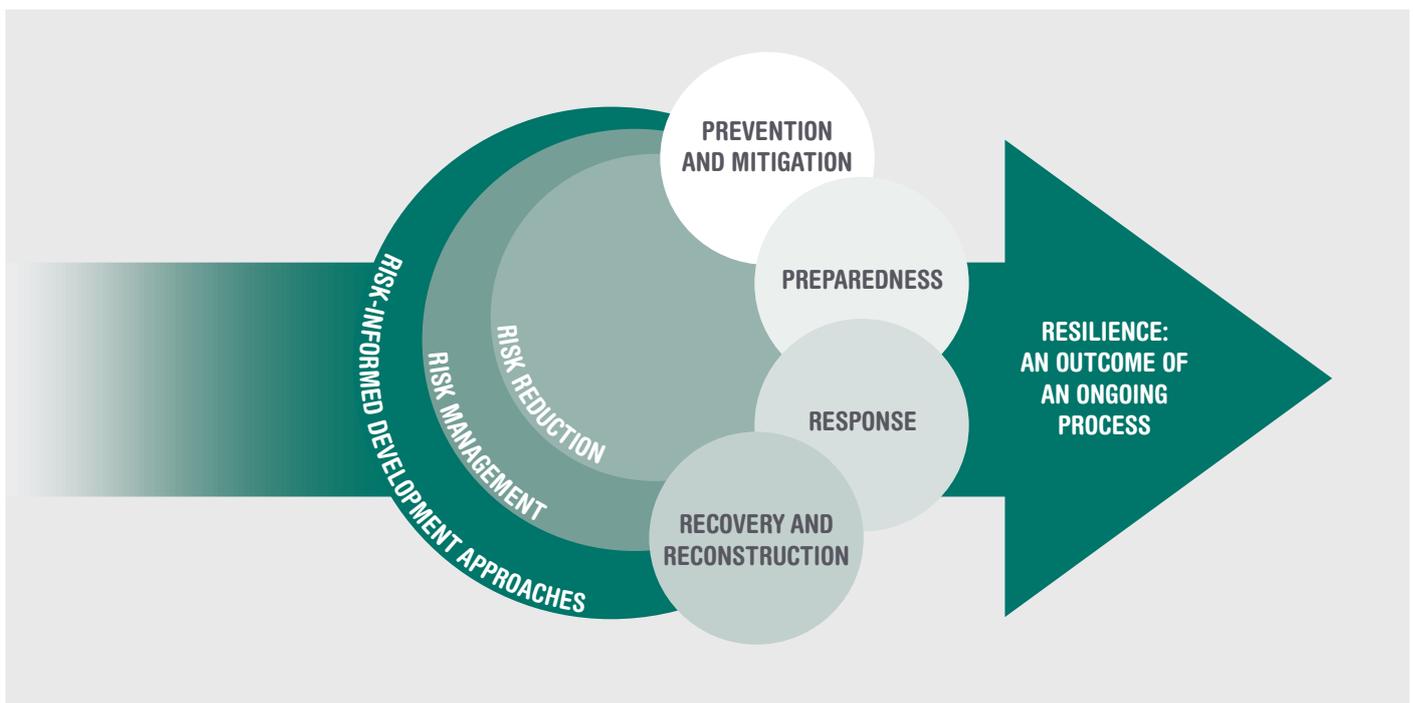
Introduction

Shocks and stresses are part and parcel of development pathways. Economies must withstand the impacts of conflict, natural hazards and climate change and resulting impacts on their financial, political and trade systems. In 2014, for example, 10.7 million more people were adversely affected by natural hazards across the globe than in 2013, and the number of displaced people due to conflict and persecution in the same year reached 59.5 million (GHA, 2015; UNHCR, 2015). These short-term shocks or long-term stressors – such as creeping changes in rainfall and average temperatures – can have real and lasting impacts that frustrate and even undermine the development and economic growth of nations and communities. Such shocks affect the development process via their impacts on education, health and economic productivity. However, shocks and stresses also have the potential to inform development progress. The Bangladesh cyclone of 1991, one of the deadliest on record, for example, triggered subsequent investments in cyclone shelters and early warning systems. The experience of the Ethiopian famine of the early 1980s heavily influenced the country’s Productive Safety Net Programme (PSNP), enabling rural poor facing food insecurity to become self-sufficient, and which became one of the most influential aid programmes in the last two decades.

Resilience refers to the anticipation of and adaptation to the risks of these shocks and stresses. The extent to which these risks are managed will determine the impact that shocks and stresses will have on various stakeholders and underpin their resilience to impacts. Taking into account vulnerability and capacity, building resilience can prevent crises from worsening or reduce long-term negative development impacts (Mitchell and Harris, 2012). An outcome of an ongoing process, resilience involves prevention and mitigation of risks, preparedness, response, and recovery and reconstruction (Kellett and Peters, 2014; Figure 1). Going beyond classic risk management, multiple risks and how they inform and influence each other are considered in a single context (Organisation for Economic Co-operation and Development (OECD), 2014).

The Third Financing for Development (FfD) Conference in Addis Ababa in July 2015 recognised that current global development policy, financing and investment patterns need to deal with new risks in an increasingly interconnected world (United Nations (UN), 2015). The Secretary General’s report on the post-2015 development agenda underscored this, referencing resilience in

Figure 1. Resilience is an outcome of an ongoing process to cope with risk



relation to disasters, climate change, reintegration after conflict, state fragility, peace building and financing itself (UN, 2014). Similarly, the Sustainable Development Goals (SDGs) acknowledge resilience both directly and indirectly. Under Goal 1 – reducing poverty in all its forms everywhere – Target 1.5 suggests that by 2030, the resilience of the poor and those in vulnerable situations must be built, and their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters reduced (United Nations General Assembly, 2015).

With a growing recognition, in the post-2015 development agenda, of the need to build resilience to a broad suite of shocks, the necessary financing must be considered. It is imperative that this goes beyond Official Development Assistance (ODA) or domestic public finance to include all future investments, ensuring that they do not lock-in or introduce risks. If the anticipated \$90 trillion in infrastructure investment over the next 15 years is not driven by low-carbon and climate resilient choices, the pace of climate change – and vulnerability to it – could increase dramatically. More remains to be done to ensure that all development finance (especially that spent in fragile and conflict-affected contexts) is risk-informed, and that financial flows adequately consider risks and build resilience. This report makes a case for financing that directly manages risk and builds resilience. It highlights that all forms of finance – including public and private, domestic and international – have a role in such an effort and demonstrates this through examples in key development themes. It ends by noting some of the operational aspects of how this might be achieved and development safeguarded.

Report rationale and genesis

In 2015, the United Nations Development Programme (UNDP) and the Swiss Government hosted a series of events around the financing of risk and resilience. This report is in part based on a set of key messages crafted from the work of a technical workshop featuring the involvement of experts from across the aid and financing worlds (see Annex II for participants). Subsequently, these messages were presented at a high-level meeting in New York and at the Addis FfD conference itself. Elaborating on some of these messages, this report is designed to influence state actors, development finance practitioners and private sector stakeholders. Data and examples are used throughout for emphasis, but this report is not a comprehensive analysis of the various risks, and the requirements, for building resilience. It does however make the case that better risk management and the building of resilience are imperative for sustainable development.

Why finance risk management and resilience?

Shocks and stresses are inherent to development

The many health threats, climate-related disasters, conflicts and other related humanitarian crises make development progress – already complex and non-linear – more difficult to achieve and sustain (Figure 3). These risks can damage productive assets, lives and livelihoods; constrain economic growth; put pressure on limited national resources and increase fiscal deficits; and impact health care, nutrition and education. They can highlight gaps in governance, or lead to collapses in governance in their aftermath. Acting at individual, community, national or even regional scale, these risks lower resilience to future shocks and slow development progress.

Greater attention should be paid to making societies more resilient. Increasing investments in resilience would ensure that people have resources and capacities to better reduce, prevent, anticipate, absorb and adapt to a range of shocks, stresses and uncertainties (Bahadur et al., 2015). Stemming from multidisciplinary origins and despite ongoing debate around its definition and practicality in application (Mitchell and Harris, 2012; OECD, 2013), one of the strongest features of resilience is that it captures a growing recognition that different types of risk are interconnected, driven by natural, geopolitical and economic factors, and that multiple risks must be considered together. Understanding the risks posed both now and in the future, and managing and integrating these

risks in development, peace consolidation and humanitarian programming, can help safeguard progress.

Better understanding the costs of crises will shape more appropriate responses

The costs of shocks and stresses are substantial (Figure 2). In 2014 alone, disasters affected more than 140 million people and cost \$99.2 billion worldwide (CRED, 2014). Evidence shows that cyclones have a dramatic influence on national incomes and long-run development by suppressing growth rates (Hsiang and Jina, 2014). The Ebola outbreak in West Africa has so far infected 28,331 people leading to 11,310 deaths and estimated loss in output of \$1.6 billion in 2015 for West Africa (World Bank, 2014; WHO, 2015). Syria's ongoing conflict had cost the country over \$200 billion by the end of 2014, or four times Syria's gross domestic product (GDP) in 2010 (UNDP, 2014). These costs can also spread beyond the host country borders (Box 1).

Intended to save lives, alleviate suffering, and maintain and protect human dignity during and after emergencies, humanitarian expenditure is rising, reaching its highest levels in 2014 at \$24.5 billion, up from \$20.5 billion in 2013 (Figure 4). This resulted from a greater need, a greater and wider calculation of need, and a failure to adequately transition out of crisis. Two thirds of 2014 spending went to long-term recipient countries due to protracted

Figure 2. The costs of shocks are substantial and diverse

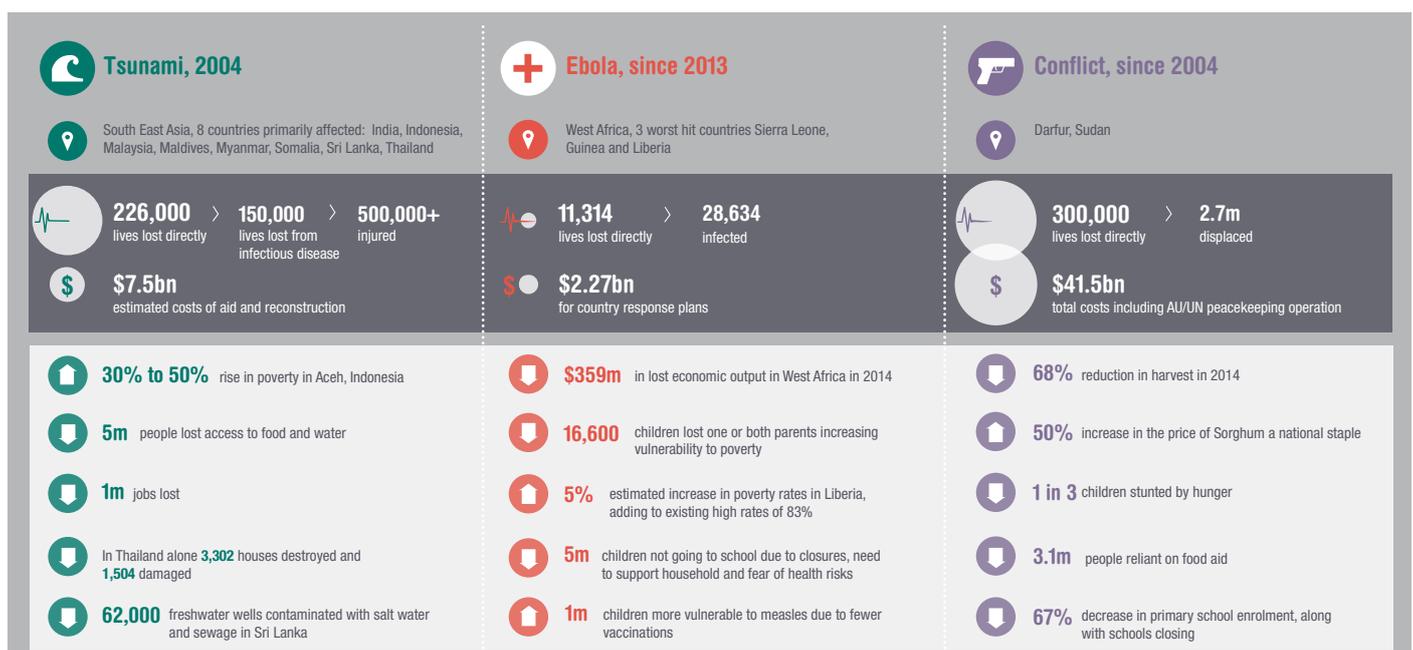
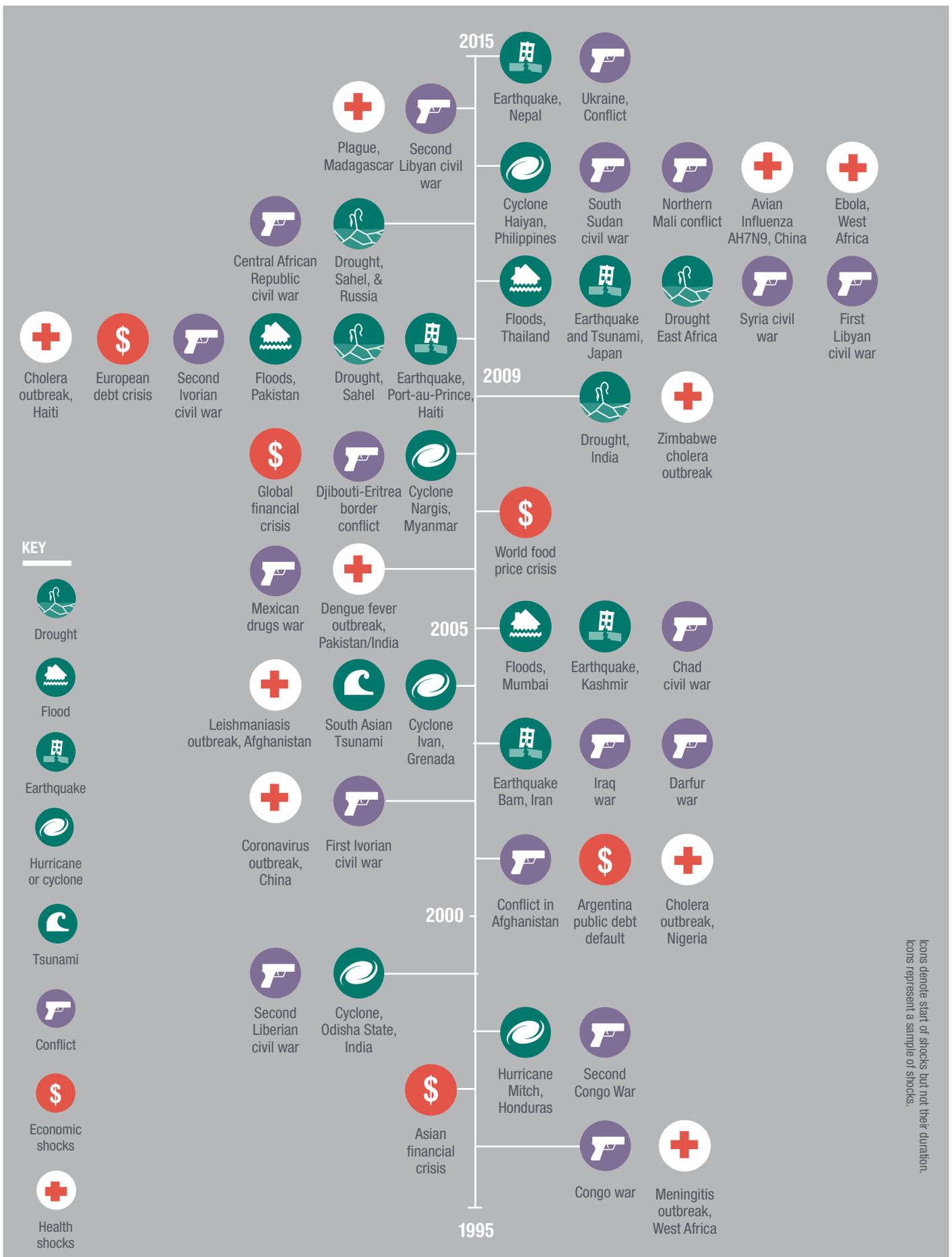


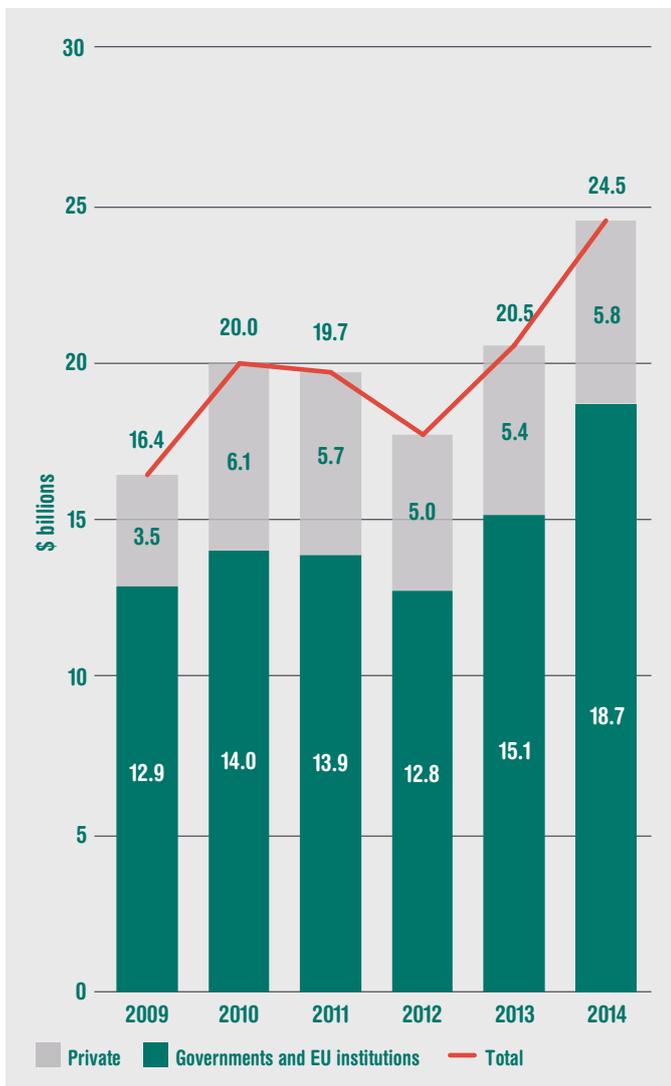
Figure 3. Shocks and stresses come in many forms



or recurrent crises and despite spending increases there was still a shortfall of assistance of \$7.5 billion in 2014 when comparing UN appeals with funding raised (GHA, 2015).

Better articulating and understanding the impacts of shocks and stresses allows for needs to be specifically addressed and resilience more proactively financed. This requires a shift in policy-making towards longer-term and often less visible investments as well as changes in the availability of response and recovery support (World Bank, 2013). The concept of resilience in a post-2015 agenda, therefore, requires stronger links between humanitarian and development finance including in what they set out to achieve and the methods by which it is achieved.

Figure 4. Spending on humanitarian responses continues to rise (2009–2014)



Source: Global Humanitarian Assistance (GHA), 2015

Investments in resilience reduce losses and deliver development progress

Ultimately, proactive spending to build resilience can avoid costs in the longer run. Although the methods and the quality and consistency of data vary, case studies make a strong case for

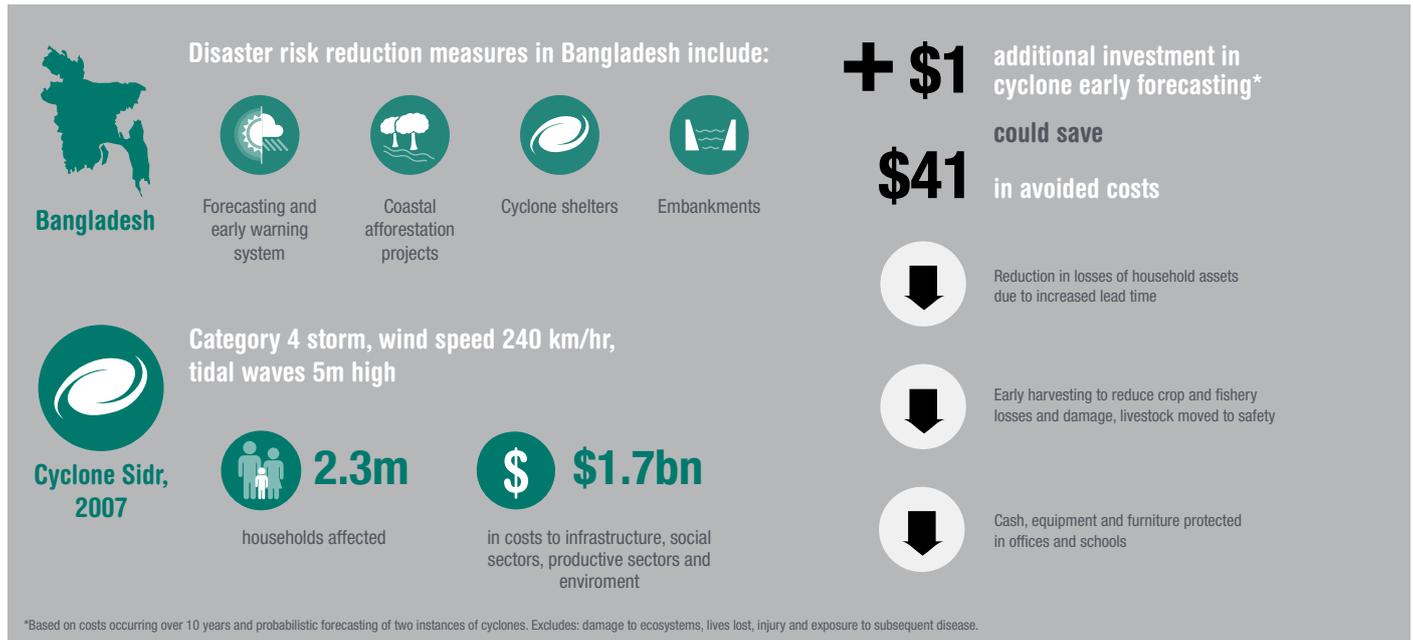
early investment in disaster risk reduction (DRR) for example. Studies have undertaken cost–benefit and probabilistic analyses of interventions, as well as before and after examples of comparable disasters showing lives and assets saved. In 2007, Cyclone Sidr in Bangladesh caused tidal waves and surges to break through coastal and river embankments; high winds and floods damaged housing, roads, bridges, and water and sanitation facilities causing electricity and communication services to fail and drinking water to be contaminated. Despite the strength of the storm, casualty rates were considerably lower than predicted, avoiding some of the secondary impacts on households and labour markets. This is credited to improved forecasting and warning systems, coastal afforestation projects, cyclone shelters, and embankments – all investments made since the devastating 1991 cyclone. Furthermore, it was estimated that over a ten-year period, for every \$1 invested in expanding and improving early warning systems in Bangladesh, \$40 could be realised in benefits from direct damage avoidance to buildings, belongings and crops (Subbiah et al., 2008; Figure 5).

Of course, there are trade-offs associated with all decisions including those regarding risk and resilience building. Investing in contingency funds and preparedness and ensuring infrastructure is insulated from potential hazards, for example, can mean the loss of those funds from other productive investments. There are also trade-offs to be made between strategies designed to reduce risk and build resilience. The scale and incidence of these costs, however, often depend on the timeline considered and the nature of benefits included. As shown above, the data on the cost–benefit of investments in disaster risk management, for example, are clear. A failure to ensure that risk and resilience investments are made can mean far greater financial losses later.

Without adequate risk management and an explicit intention to build resilience, the costs of inaction will grow and there will be fewer incentives to grasp growth and development opportunities

DRR investments have been shown not only to avoid losses when disasters strike but also to unlock development potential by bolstering economic activity and producing economic, social and environmental co-benefits (Tanner and Rentschler, 2015). In part, these stem from an increase in forward-looking planning, long-term capital investment and entrepreneurship; all of which can flourish when background risks are addressed. There are also broader social, economic and environmental spillover benefits such as improvements in water supply and drainage, crop diversification that reduces vulnerability to poverty, and use of shelters for community facilities (for example, clinics or schools) (Tanner and Rentschler, 2015). Benefits are also likely to be found when building resilience to shocks other than disasters and can extend beyond host country borders (Box 1). Without adequate risk management and an explicit intention to build resilience, the costs of inaction will grow and there will be fewer incentives to grasp growth and development opportunities.

Figure 5. Investment in early warning systems can significantly reduce the costs of cyclones in Bangladesh



Source: Subbiah et al., 2008

Box 1: The cross-border costs of conflict

The conflict in Darfur, originating in 2003 but experiencing a resurgence in violence since 2013, is thought to have taken as many as 300,000 lives; internally displaced 2.7 million people and led to massive losses in labour and agricultural productivity; increased deforestation rates; closed schools; and increased disease and malnutrition: two thirds of children are thought to be stunted by hunger. It has been estimated that if the conflict continues for between one and five years the associated costs to South Sudan would be between \$22 billion and \$28 billion (2015–2020).

The costs of conflict are not constrained to the country in which they manifest, however. Cross-border costs of conflict can take many forms. They can be macroeconomic, such as through the lost value of production and trade, often measured by reduction in GDP; or they can be direct costs of increased security and peacekeeping spending; or impacts on the informal economy and public goods (such as lower personal safety, health and environmental damages).

The cost of the Darfur conflict has spilled over Sudan's western borders into Chad and the Central African Republic and has influenced conflict and insecurity in Uganda and Kenya. It has been estimated that resolving Darfur's conflict within a year as opposed to allowing it to continue for another five years could save the neighbouring countries of Ethiopia, Kenya, Sudan, Tanzania and Uganda \$53 billion collectively (2015–2020). This includes through the avoidance of a decrease in remittances – as residents return to home countries – an increase in refugees and associated spending as well as in direct costs such as those of security and peacekeeping.

Sources: Frontier Economics (2015); Thompson Reuters Foundation (2015)

Only risk-informed development is sustainable development

The Addis Ababa Action Agenda reflects on risk and resilience and presents a post-2015 development finance agenda that recognises that achieving sustainable development requires nations and communities to be resilient – able to anticipate, shape and adapt to the many shocks and challenges they face (Box 2). Risk and resilience therefore has higher prominence in the post-2015 development finance agenda than ever before. This is in contrast to previous FfD conferences that have largely reflected the thinking and major issues of the time. In 2002, Monterey said little about the need to target the financing of risk and resilience for example.

Today, with the looming threat of climate change and the growing frequency and severity of disasters and ongoing conflicts, this development-financing model is not sufficient. Investments in infrastructure will fail if structures are built in seismic areas without adequate measures taken to reduce the impact of a potential earthquake. Poverty reducing strategies will fail if they do not consider whether the most vulnerable live in areas of high risk (often the case) and how the relevant coping mechanisms and capacities of families and communities can be built concurrently. A failure to invest in inclusive institutions in a post-conflict setting will prolong the risk of conflict and undermine long-term stability. It is increasingly clear, therefore, that development will only be sustainable if it is informed by considerations of risk.

Greater consideration of how to manage risk and build resilience is relevant in all countries. The biggest gains, however, could be made in the developing world. This necessitates a critical look at the types of finance employed. Official Development Assistance (ODA) is not sufficient, nor appropriate, in its characteristics to finance a complete solution, and broader sources must be employed.

The timing of finance is also important: there is a need for more proactive risk management allowing spending prior to shocks and stresses, faster delivery from all sources once shocks arise, and the provision of longer-term finance to support transitions out of crises. Overall, this means multiple risk management becomes a much higher priority in all development finance decisions. In some instances this may come with higher upfront costs – building road surfaces to higher technical specifications to withstand greater flooding or temperature extremes, for example, or hospitals and other public buildings to resist earthquakes – but in others, addressing risks could mean accepting higher asset maintenance costs or shorter lifespans of assets, and building assets in less vulnerable areas – not all of which necessarily raise costs (Watson and Nakhooda, forthcoming).

Box 2: Risk and resilience in the Addis Ababa Action Agenda

The third Financing for Development Conference in July 2015 in Addis Ababa delivered a strong articulation of the relationship between financing and resilience. Although hardly mentioned in an initial zero draft text, issues of risk and resilience reached considerable prominence in the final outcome document: the Addis Ababa Action Agenda. Within this text, paragraphs are dedicated to the importance of disaster and climate risk, with specific reference to fragile and conflict-affected countries, and to how economic shocks can, and frequently do, undermine development. A strong statement in the opening section of the agenda notes that “Shocks from financial and economic crises, conflict, natural disasters, and disease outbreaks spread rapidly in our highly interconnected world. Environmental degradation, climate change, and other environmental risks threaten to undermine past successes and future prospects. We need to ensure that our development efforts enhance resilience in the face of these threats” (p. 2).

Source: UN, 2015

Financing risk and resilience

Official Development Assistance should be targeted to those countries most vulnerable to multiple risks

Incidences of shock and stress are not isolated in poor, or even developing, countries. Such countries, however, often exhibit greater vulnerability to shocks and stresses; weaknesses in resources, governance and infrastructure can make these countries more susceptible to all shocks (whether financial, natural hazard or health related, for example) as well as less likely to be able to recover and rebuild. Low-income developing countries, for example, are those most affected by disaster fatalities from natural hazards (Hallegatte, 2014), and over 300 million extremely poor are likely to be living in the 49 most hazard prone countries by 2030 (Shepherd et al., 2013). Seventeen of the 48 Least Developed Countries (LDCs) have experienced conflict to the extent that large-scale external peacekeeping forces have been deployed (Manuel and Hoy, 2014). These countries are also those in which development progress stands to suffer most from a multitude of risks and also are countries within which ODA still plays an important role, relative to foreign direct investment (FDI) and remittances (Greenhill and Prizzon, 2012). Yet the

Figure 6. Official Development Assistance to least developed countries has declined in recent years



Source: OECD, 2015a

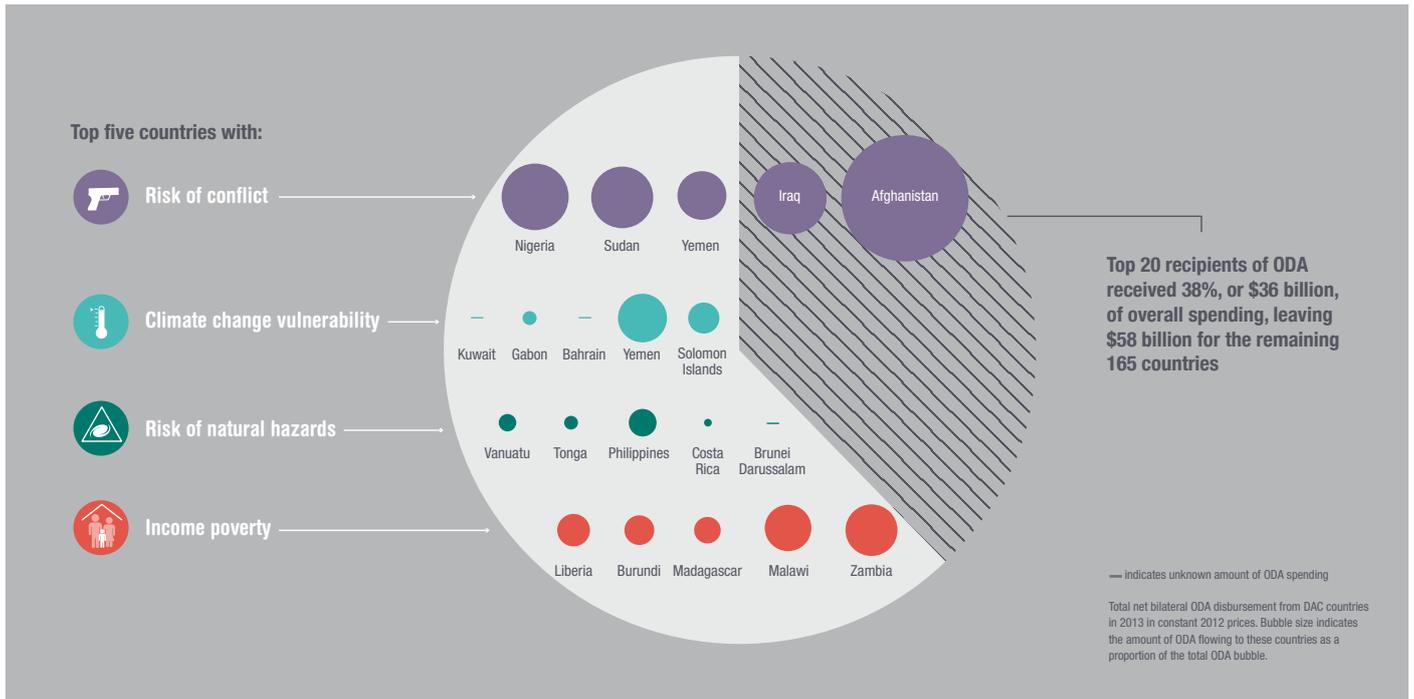
volume of ODA to the LDCs has declined in recent years from 51% of total ODA in 2010, or \$46 billion, to 39%, or \$38 billion, in 2014 (Figure 6; OECD, 2015a).

The current distribution of ODA appears to insufficiently reflect the vulnerabilities of countries to a multitude of risks (Figure 7). This finding has been echoed in the DRR literature. Kellett and Caravani (2014) consider 20 years of ODA financing for DRR, finding that countries most affected by drought receive very little financing. Niger, Eritrea, Zimbabwe, Kenya and Malawi are all countries with high drought risk but have received just \$117 million in DRR ODA combined, over the period 1991 to 2010. Instead they find that ODA for DRR is heavily concentrated in relatively few, mostly middle-income countries: the top ten recipients received \$8 billion, while the remaining 144 received \$5.6 billion combined. Furthermore, while fragile and conflict affected states are recipients of significant amounts of ODA overall, it is not distributed evenly between countries (Box 3).

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Rethinking the way in which the limited ODA available is spent is necessary in order to better incorporate risk and resilience. ODA fulfils important functions that other sources of finance cannot. It has, for example, assumed a role in research and development, capacity building and raising awareness in ways that private finance often cannot. Supporting what are often considered classic government functions, it addresses market failures and contributes to the provision of public goods. Therefore it is a vital resource for building resilience, often a public good, and in highly vulnerable poor countries. A balance of allocation between income groups, risk levels and other factors must be found to best deliver development progress. Such thinking is emerging (Guillaumont, 2015) but will need to evolve substantially to reach consensus for aid financing.

Figure 7. Official Development Assistance should be targeted at countries most at risk



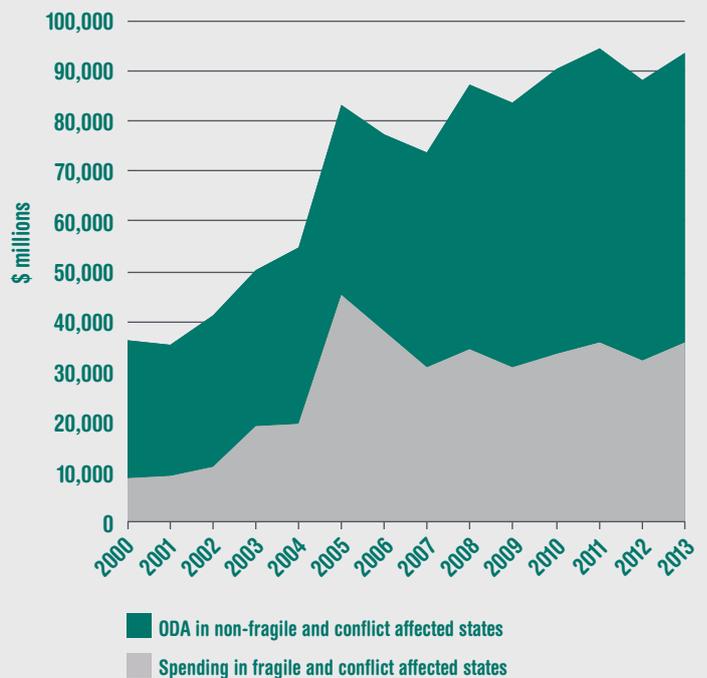
Source: World Risk Report, 2014; Global Conflict Risk Index 2015; ND-GAIN, 2015; OECD Stat, 2015; Povcal, 2015.

Box 3: ODA spending in fragile and conflict affected states

While fragile and conflicted affected states have made development progress, they still lag behind other developing countries. The 50 countries and economies that are considered fragile and conflict affected in 2015 contain 43% of the people living in income poverty today (on less than \$1.25/day). Many of these countries are also vulnerable to other risks such as climate change. While significant amounts of ODA are spent in fragile and conflict affected states (Figure 8), it is spent unevenly between countries. Afghanistan and Iraq for example both receive significant flows (together amounting to 22% of all flows to fragile states between 2003 and 2012), and are both within the top 20 recipients of ODA. While countries such as Guinea and Madagascar remain on the fragile states list, but receive much less ODA and have been classified as 'aid orphans'.

With scope for substantial development benefits, increased spending on risk and resilience building in fragile and conflict affected states could provide clear gains. In their 2015 recommendations for 'sustaining peace', the High-level Independent Panel on Peace Operations noted a need for investing in preventing conflict and mediation, scaling up finance for the peace-building fund, establishing country-level financing support for political settlements, and using assessed – rather than voluntary – financial contributions. Scaling up finance in fragile and conflict affected states includes ODA spending, but also wider peace and security spending. Much of the \$8.27 billion considered peace-keeping financing for 2015 is not considered ODA. These financing flows, whilst

Figure 8: Significant amounts of ODA are spent in fragile and conflict affected states



largely about securing and sustaining peace, should also be considered as contributing to the foundation of long-term resilience before, during and after crises.

Source: OECD, 2015c; UN General Assembly Security Council (2015)

Source: OECD Stat, 2015

Private actors are central to delivering more resilient development

Growing evidence shows the benefits of adopting a risk-informed approach in the private sector. Risks undermine productivity and business growth, therefore impacting on companies' profits (Watson et al., 2015b; Crawford and Seidel, 2013). Following the 2011 floods in Thailand, 14,000 businesses were shut down nationwide. Car companies saw production in Malaysia, North America and Japan slow or halt due to the lack of parts, with ensuing losses of \$1.25 billion to Toyota and \$1.4 billion to Honda (ISDR, 2013). In order to secure future profits, the private sector must continue to manage the variety of risks that its business activities face.

Private sector activities also contribute to risk-informed development. There are opportunities for business and investment in managing risk and building resilience, for example. Resilience and risk management products, such as insurance, create long-term potential for new markets and growth opportunities in the private sector (Rockefeller Foundation, 2013). Financing of projects, developing and deploying technologies and innovative solutions (such as in food, health or logistics), or enhancing the scale and effectiveness of particular solutions could generate returns on investment as well as delivering resilience (SEI, 2009; Agrawala et al., 2011; Averchenkova et al., 2015). Furthermore, there are investment opportunities for the \$110 trillion of assets held globally by banks and investment companies, insurance companies and private pensions, sovereign wealth funds, operators and developers, infrastructure and private equity funds, and endowments and foundations (Bhattacharya et al., 2015; Table 1). Similarly, companies may want to divest from those products that may become stranded or devalued as a result of risks. Many of these growth and investment opportunities can be found in emerging and developing economies and, in a virtuous cycle, a more resilient economy can lead to greater opportunities.

Table 1: Institutional Investor Assets held globally in 2015

Investor class	Investible assets (\$ trillions)
Banks and Investment Companies	69.3
Insurance companies and private pensions	26.5
Sovereign wealth funds	6.3
Operators and developers	3.4
Infrastructure and private equity funds	2.7
Endowments and foundations	1
Total	109.2

Source: Bhattacharya et al., 2015; groupings based on investment motivations, risk appetites and regulatory restrictions on their investments.

It is unclear just how much private finance flows to addressing risk and building resilience. This is not only a result of a lack of transparency in private finance flows, but also because few investments in resilience are uniquely focused on resilience; they are integrated within broader investments. Yet it is clear that private finance is critical to meet the financing needs for sustainable development, not least because 'the needs are huge' and public finance will be insufficient (ICESDF, 2014; UNCTAD, 2015; Table 2). While the World Investment Outlook notes its estimates of investment to meet the Sustainable Development Goals, in the hundreds of billions, are preliminary and uncertain, it emphasises the scale of the financing challenge to be met. All sources of finance will clearly play important and complementary roles in supporting progress towards the SDGs.

Encouraging greater investment in resilience from the private sector requires reducing barriers to private investment such as over-regulation, insufficient access to long-term finance under affordable terms, and a high level of real and perceived uncertainty (such as first mover risks and long payback periods) (Trabacchi and Mazza, 2015). Governments have a responsibility to put appropriate policy and regulation in place to create an enabling environment for the private sector to address risk and invest in resilience, as well as to protect those who may bear short-term costs. In addition,

Table 2: The investment needs in developing countries to meet the proposed Sustainable Development Goals are high

Sector	Description	Total annual investment required (\$ billion) between 2015 and 2030
Power	Investment in generation, transmission and distribution of energy	630–950
Transport	Investment in roads, airports, ports and rail	350–770
Telecommunications	Investment in infrastructure (fixed lines, mobile and internet)	230–400
Water and sanitation	Provision of water and sanitation to industry and households	410
Food Security and Agriculture	Investment in agriculture, research, rural development, safety nets etc.	480
Climate Change mitigation	Investment in relevant infrastructure, renewable energy generation, research and deployment of climate-friendly technologies	550–850
Climate Change adaptation	Investment to cope with impact of climate change in agriculture, infrastructure, water management, sustainable forestry, etc.	80–120
Ecosystems and biodiversity	Investment in conservation and safeguarding ecosystems, marine resource management, sustainable forestry, etc.	70–210
Health	Infrastructural investment, e.g. new hospital	210
Education	Infrastructural investment, e.g. new schools	330

Source: United Nations Conference on Trade and Development (UNCTAD), 2014

governments can provide information, fund research and development, and form public-private partnerships to encourage resilience building, particularly where outcomes are public goods (and therefore there are incentives to free-ride on the actions of others). Governments must also avoid generating new risks. The Thai government, for example, encouraged FDI in the watershed of the Chao Phraya river basin through tax privileges and sectoral incentives before the 2011 floods. Since then, it has relocated industry away from flood prone areas and set up a National Catastrophe Insurance Fund in an attempt to reassure businesses and attract FDI back to the country and region (ISDR, 2013).

Combining finance sources and tailoring delivery to the task is necessary

It is not just the absolute amount of finance for building resilience that is important. In many instances, multiple sources and instruments of finance are necessary to achieve both the desired scale of finance and outcomes, each bringing different benefits (and also costs). Blended finance can capitalise on the expertise of multiple actors, for example, while different financial instruments and finance channels allow flexibility in timing, debt and other conditionalities that are fit for a particular context. Insurance, social protection and cash transfers are some examples where finance sources can be combined to suit delivery in a particular risk management context.

Insurance is a risk transfer tool with a critical role to play at multiple scales and in many sectors of the economy including financial services, agriculture and health care (Rockefeller, 2013). Insurance markets exist at various scales including sovereign, commercial, private and micro-level, therefore varying in public and private finance engagement. The insurance industry has an incentive to manage risks, and is used to protect assets and capital bases and to recover from shocks by providing timely post-crisis

finance. This can greatly reduce financial pressures following shocks and stresses, particularly where insurance payments are triggered by substantial deviation from risk models rather than reporting of losses (Figure 9). Building on its drought insurance product, African Risk Capacity (ARC), a specialised agency of the African Union, intends to launch a sovereign insurance product to contain future disease outbreaks. Its establishment would reduce reliance on the often-slow mobilisation of finance from humanitarian appeals and international development organisations, instead ensuring immediate funds in response to crises, rapidly executing prepared and vetted response activities (ARC, 2015) and contribute to greater macroeconomic stability.

Catastrophe bonds can serve a similar purpose in providing much needed liquidity in the immediate aftermath of shocks. Offered by the World Bank, the Catastrophe Deferred Drawdown Option for example, is a development policy loan. It acts as a contingent credit line thus providing immediate liquidity to member countries of the International Bank for Reconstruction and Development in the aftermath of a disaster. Such provision of immediate access to funds to governments when liquidity constraints are highest acts as bridge financing whilst funds from other sources – such as international humanitarian responses – are being mobilised. This can not only result in more rapid responses to that reduces overall costs, but can also help to provide overall financial stability.

Social protection efforts in developing contexts can also deliver long-term community and family resilience. Such policies and programmes work to reduce poverty, diversify livelihoods and promote inclusive growth, thereby enhancing the capacity of families and communities to manage an array of risks. The Addis Ababa Action Agenda refers to social protection as one of the cross-cutting areas for provision of basic services (UN, 2015). It provides access to resources such

Figure 9. Catastrophic risk insurance plays a role in preparing for and recovering from shocks



Figure 10. Social protection delivers long-term community and family resilience



Source: Greenhill et al., 2015

as productive investments, education and health, often to the least resilient in the population. These then allow them to make savings and invest in activities that benefit their livelihoods (Rockefeller Foundation, 2013). The costs of social protection schemes such as cash transfer are often quite small as a share of GDP and with high welfare gains are often affordable in all but the poorest countries (Figure 10). The extension of coverage or duration of programmes – through extraordinary payments or transfers and modification of rules and requirements for participation – can also help post-crisis (Bastagli, 2014).

In the wake of a shock, cash rather than food and non-food items can promote choice and empowerment, thus delivering greater resilience by stimulating local markets. Compared to in-kind approaches, using cash in emergencies has been consistently shown to be a more efficient way to deliver support (Cabot Venton et al., 2015).

This is not least because the cost to aid agencies of getting cash to people is generally less than the cost of delivering in-kind aid. The benefits of cash also span many aid sectors. Goods and services that households are able to access as a result of cash transfers, although variable between households, span different aid sectors, delivering results that would be difficult or impossible to replicate via in-kind assistance. However, the overall efficiency of cash, as compared with other transfers, depends on the prices of commodities that recipients purchase in local markets, which can vary significantly over time and between seasons, even within countries. A good grasp of local context and market analysis is therefore critical.

Key post-2015 development themes in which progress is vital

Risk-informed infrastructure investment can reduce risk and build resilience

Infrastructure is a central component of a country's economic growth, development, poverty reduction and environmental sustainability (Bhattacharya et al., 2015). With a typically long lifespan, any new investment or upgrading of infrastructure must be informed by current and future risk in its design and operations to decrease its vulnerability. Infrastructure investment must also support the building of resilience to society more broadly. Existing and proposed initiatives to boost infrastructure investment must better integrate multiple risk considerations to capitalise on this opportunity to build resilience.

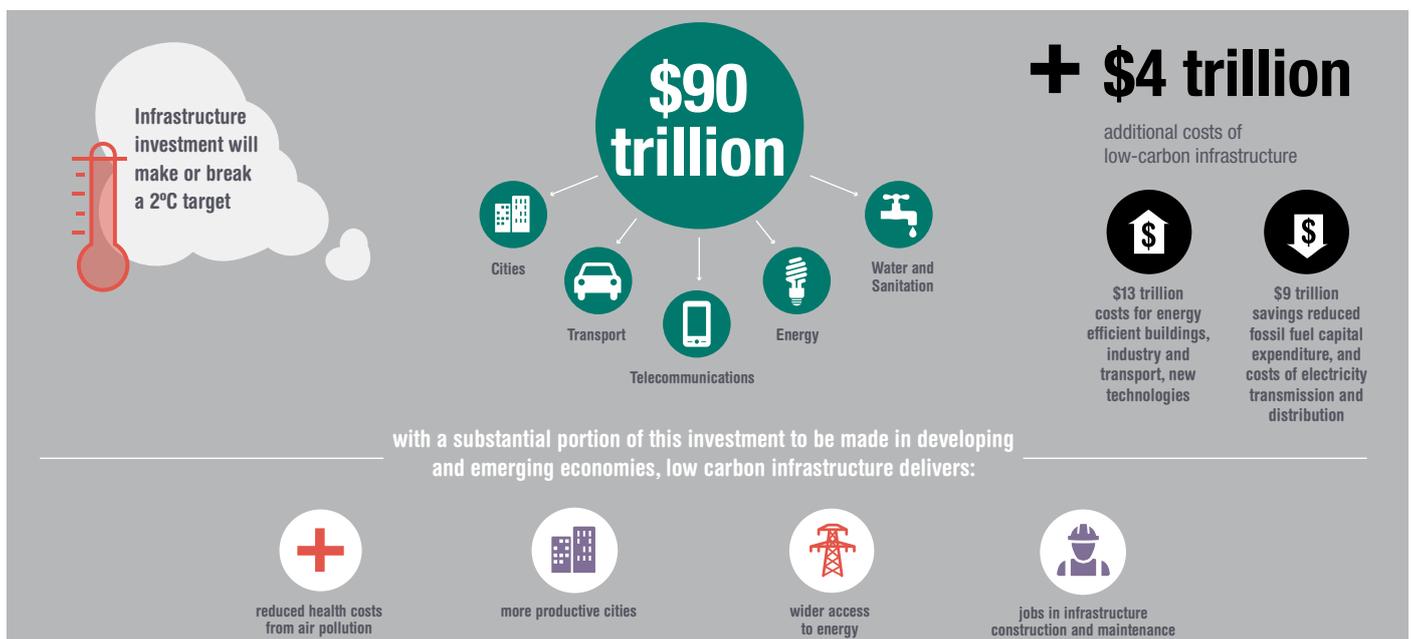
Climate change provides us with an example of this. Sea-level rise and increased climate-related weather events pose direct threats to infrastructure into which resilience must be built. In addition, high-carbon assets could face early closure or loss in value, due to reduced demand, resource insecurity, climate change policies and regulation (Carbon Tracker Initiative and Grantham Research Institute on Climate Change and the Environment, 2013). This means that infrastructure, as a major source of greenhouse gas emissions and with a long lifespan (particularly in the case of energy and transport), must be low carbon to avoid exacerbating climate change. Furthermore, if an infrastructure is vulnerable to climate

shocks and stresses, it could leave people without access to electricity, water, health and emergency services and so less able to recover and rebuild (Guthrie and Konaris, 2012; Rydge et al., 2015). Protecting an infrastructure from physical damage due to climate events therefore allows economic growth to continue in its wake.

Over the course of the SDGs, infrastructure investment of \$90 trillion globally is needed in cities, transport, energy, telecommunications, water and sanitation (NCE, 2014). An additional \$4 trillion, or \$270 billion annually, would ensure this is low-carbon infrastructure investment (Figure 11). This estimate factors in both costs and savings; costs would be for more energy efficient buildings, industry and transport, as well as additional technologies required, while savings would be made through reduced fossil fuel capital expenditure, in electricity transmission and in distribution (NCE, 2014). With as much as 60% of this investment to be made in emerging and developing economies, the opportunity for infrastructure to contribute and protect development progress is high. Additional benefits of mitigation action can include: increased energy security, decreased air pollution, and income from reducing deforestation and restoring degraded farmland (NCE, 2014; Granoff et al., 2014).

While multilateral development banks (MDBs) such as the World Bank and African Development Bank (ADB) have raised climate

Figure 11. Low carbon infrastructure delivers economic and development benefits



standards, which should filter through to the World Bank's Global Infrastructure Facility (an open platform to facilitate structuring of complex public-private partnerships) and the ADB's Africa50 Infrastructure Fund (an source of funding and a platform to reduce bottlenecks in realising infrastructure on the continent), more needs to be done to specifically consider broader risk and resilience requirements. More recent initiatives, such as the G20's Global Infrastructure Initiative, and young development banks, such as the Asian Infrastructure Investment Bank and the New Development Bank, must adopt standards not only to improve the quality and delivery of infrastructure but also to adequately take risk into account given the lasting impacts of infrastructure on development trajectories.

Climate finance for adaptation can build resilience to other shocks

Unabated climate change threatens our ability to eradicate extreme poverty (Granoff et al., 2014). The poor will be most heavily and directly impacted by reduced primary sector productivity, increasing exposure to climate extremes, increasing child malnutrition, higher airborne disease incidence and secondary impacts on child and female education, fertility and violence (Watson et al., 2015a; Gutierrez et al., 2014). Table 3 shows how millions of people could be pulled into poverty between 2030 and 2050 as a result of declining primary sector productivity, climate extremes and child malnutrition and stunting, under a two degrees Celsius mean temperature rise (Granoff et al., 2014). Responding to climate change to manage shocks and stresses entails both mitigation and adaptation measures. Under almost all scenarios, global greenhouse gas emissions must be net zero by 2100 to limit the temperature increase to two degrees Celsius, avoiding dangerous and irreversible change (IPCC, 2014). While developed countries need to make, on average, the deepest cuts against current emissions, even developing countries will need to reduce their forecasted emissions. **Even if we achieve zero net emissions by 2100, the world cannot avoid the impacts from current and historical emissions. Adaptation is therefore necessary to limit climate change impacts and capitalise on opportunities.**

The international community has committed to mobilising \$100 billion a year by 2020, from both public and private sources, to

address the climate-change needs of developing countries (United Nations Framework Convention on Climate Change Conference of Parties (UNFCCC COP) decision 2/CP.15); however, there is debate on definitions and progress to this end (Bodnar et al., 2015). In 2014, however, the OECD and Climate Policy Initiative (CPI) estimated that \$62 billion flowed for actions to help mitigate and adapt to climate change in developing countries (OECD, 2015b). Of this, between \$2.2 billion and \$2.9 billion is estimated to flow from dedicated climate funds, equating to pledges of over \$11 billion since their establishment (Nakhoda et al., 2014; CFU, 2015). The MDBs reported spending \$4.4 billion on adaptation in 2014, and developing countries are also investing increasing amounts of their own funds in climate change responses (World Bank et al., 2015; Bird, 2014). Several developing countries have also contributed to new global climate funds. Chile, Colombia, Indonesia, Mexico, Mongolia, Panama, Peru, and South Korea, for example, have all contributed to the capitalisation of the newest financial mechanism of the UNFCCC, the Green Climate Fund. In 2015 a number of new commitments have been made to scale up climate finance both from countries and from development banks (UNFCCC, 2015). Yet, while the costs of adaptation are complex to estimate, they fall short of what is currently available. Between 2015 and 2030, \$80–120 billion a year could be needed in developing countries to meet a two degree Celsius warming target (UNCTAD, 2014).

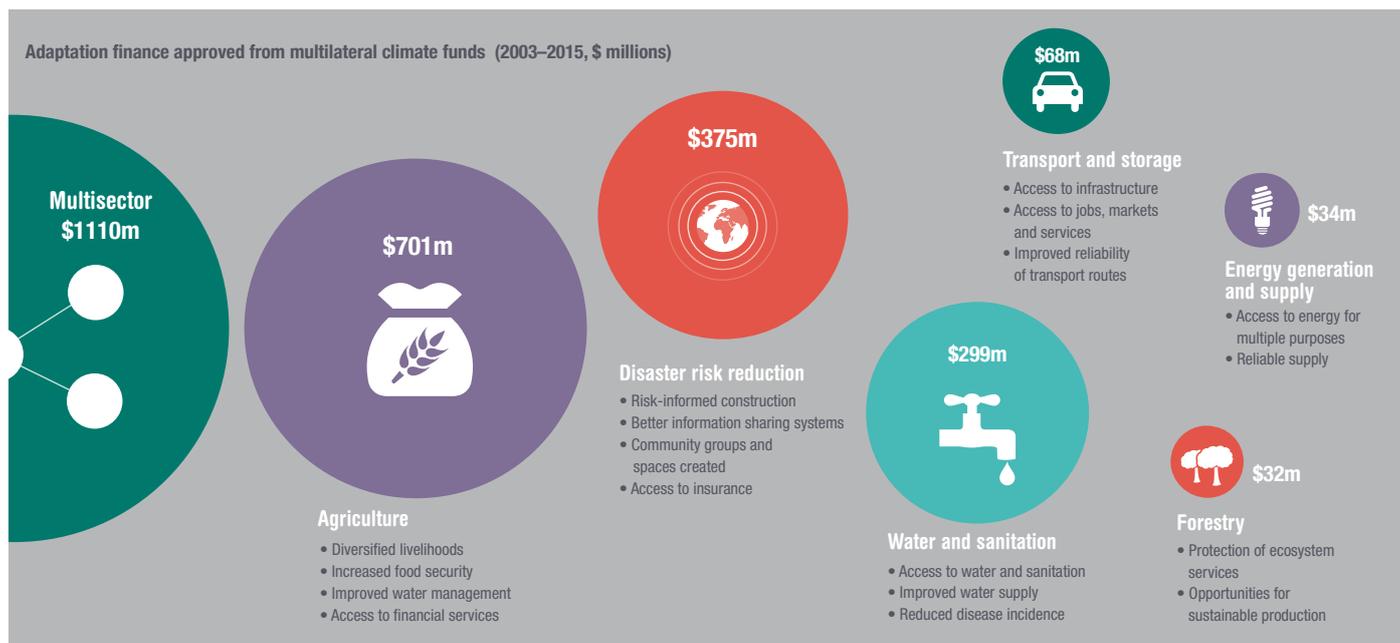
Even if we achieve zero net emissions by 2100, the world cannot avoid the impacts from current and historical emissions

The increasing flow of adaptation finance has the potential to build resilience to shocks and stresses beyond those caused by climate change. Adaptation finance from the dedicated multilateral funds, for example, has been programmed in a number of sectors that contribute to resilience more broadly (Figure 12). As an example, more than \$405 million of adaptation finance approved for projects has been spent on DRR since 2002, focused on early warning systems, coastal infrastructure, information systems and capacity building (Caravani, 2015).

Table 3: Risks of poverty from temperature rise of two degrees Celsius, 2030–2050

Impact pathway	Number of people entering poverty in a 2 degrees Celsius average temperature change scenario	Description
Decline in primary-sector productivity	250–500 million people in extreme or 'moderate' poverty (living on less than \$2 per day) exposed to multi-year, possibly decadal, set-backs to their efforts to exit extreme poverty.	Estimated impact of the decline in agricultural and livestock productivity are applied to the likely size and distribution of the rural poor in 2030 in sub-Saharan Africa and South Asia.
Increased exposure to Climate extremes (drought)	An additional 100–150 million of the extreme or moderate poor in rural areas are pulled deeper into poverty through exposure to extreme drought.	Estimated impact of droughts on the livelihood of poor rural households by combining historic damage data, projected future droughts, and the likely size and distribution of the rural poor beginning in 2030 across regions.
Child malnutrition and stunting	About 120 million additional children are malnourished and 90–120 million suffer stunting (30–40 per decade).	Estimated impact of climate change on the number of additional children suffering from malnourishment and stunting as a result of climate change over the course of each decade in sub-Saharan Africa and South Asia as global temperatures warm to 2.0°.

Figure 12. Climate finance for adaptation can deliver resilience more broadly



Source: Climate Funds Update, 2015

Finance in the wake of crises must support resilience building

Significant public resources, both domestic and international, have been spent on protracted crises, such as those in the Congo Basin or Sahel countries. In such cases, finance from all sources is critical, but current spending must capitalise on opportunities to build in more resilience to future shocks and stresses in order to deliver sustainable development after or during crises (Box 4). Particularly important in this regard is *transition finance*, a term used to capture

flows of funds for recovery, reconstruction, security and peace-building activities (OECD, 2010). Transition finance comes from a variety of sources, including domestic resource mobilisation and debt relief, yet the volumes of funds available, and the existing sources of transition finance and the instruments employed, remain fragmented and sometimes are in competition. Many post-conflict countries receiving funding through the UN managed humanitarian appeal system, are the same countries who were receiving funding 10 years, and sometimes 20 years ago, suggesting a failure to transition.

Box 4: Improving public health systems after the West African Ebola outbreak

The West African Ebola outbreak was the most dramatic major epidemic of recent times. As of December 2015 it has taken over 11,000 lives and infected more than 28,000 across Guinea, Liberia, and Sierra Leone, the three worst-affected countries. Many households have lost breadwinners, have fewer resources to invest in enterprise and savings, and have spent productive time caring for sick relatives and friends. Fear has led to a slowdown in mining operations and in trade. Schools have closed, some for good, as have local government buildings. Mothers are thought to be avoiding hospitals, and families are failing to seek pre-natal care such that early childhood vaccinations are falling behind. The economic impacts include forgone output, higher fiscal deficits, rising prices, lower real household incomes and greater poverty. The World Bank estimated that the impact on economic output was already as high \$359 million and fiscal impacts reached \$328 million in 2014 (World Bank, 2014).

As the outbreak comes under greater control, it has sparked critical analysis of national health systems in the worst-affected countries and how they could be more resilient in the face of major shocks. In Sierra Leone it has been argued that prior to the outbreak, aid was too focused on private sector growth, largely targeted to trade liberalisation and economic policies around

privatisation and deregulation, and not enough on building a strong or integrated public health system (Kentikelenis et al., 2014). However, a more resilient health system isn't just about having more resources but about spending resources differently to avoid doing 'more of the same'. Building trust and legitimacy, for example, is necessary as evidenced by the active avoidance of health facilities and, in some cases, public health teams during the height of the outbreak, as is rethinking approaches to capacity building that have dominated support over the last decade (Denney et al., 2015).

Using the momentum generated by the Ebola outbreak to instigate more thoughtful change towards resilient health systems is critical. The enormous strain of Ebola on national health systems has only made it more difficult for local health services to cope with common illnesses.

Building a more effective health system could increase resilience by reducing exposure to infection and by minimising the impact of health ailments on livelihoods and economic development (Bloom et al., 2015). Investing in global health governance to support sustainable and rapid response programmes is necessary, as is greater health investment in Guinea, Liberia, and Sierra Leone (see Oxfam, 2015, for example), but the opportunity exists to build back a more resilient system that rethinks current investment approaches and priorities.

In the case of conflict, building greater resilience through transition finance necessitates less-siloed support and a more critical look at the underlying drivers of conflict; which requires much stronger national government participation to succeed in delivering a transition towards sustainable development. Fragile and conflict-affected states are likely to need particular financial solutions. This includes tailored investment such as more pooled funding instruments that collectively approach the risks of transition (OECD, 2010), social safety nets to build household resilience, or a move to multi-year planning cycles that navigate post-shock transitions. Post-shock transition is complex, but it is a vital link between humanitarian and development finance in fragile and conflict-affected countries. **Above all else there needs to be a realistic price placed on achieving and keeping peace, a significant investment in long-term stability and transition, with the objective being the delivery of peace and security, good governance and long-term inclusive and stable development.**

Enhancing macroeconomic stability protects development progress

Macroeconomic stability supports stability in resource allocation decisions, investment and growth (World Bank, 2005). Correspondingly, swings in economic activity, unsustainable debt levels and volatility in exchange rates and financial markets strain public budgets and can endanger development progress (ILO et al., 2012). The impact of Malawi's 2001–2002 drought and floods on national maize production, for example, nearly brought the country to financial crisis. Domestic public debt increased exponentially as the budget had no contingencies for the food crisis that followed, because 50% of national diets rely on maize. The country ultimately spent 5% of GDP on food relief, including through emergency imports. Furthermore, as a result interest rates rose to 9.1% of GDP, or 40% of domestic revenues, just two years later (Syroke and Nucifora, 2010).

All governments must carefully manage external public debt. Debt as a share of GDP has been particularly high in OECD countries recently (OECD, 2013). High levels of public debt are also a key challenge in many Small Island Developing States (SIDS), particularly in the Caribbean where the 2012 debt-to-GDP ratio was on average 70% (Figure 13). This is exacerbated by their vulnerability to climate change and environmental shocks that put additional pressures on government resources (UNDP and UN-OHRLLS, 2015). Policies that support investment, despite creating some debt, are important for all economies. Excessively high debt levels, however, create vulnerabilities that can amplify and transmit macroeconomic price shocks and can lead to sovereign default (OECD, 2013). Such debt levels can potentially lead to higher interest rates, lower credit ratings and currency devaluation that impose social costs, including by diverting significant budget resources away from other development priorities such as education and health spending.

There is a need to enhance the debt management capacities of many developing countries. This means careful evaluation of what debt can be taken on, under what terms and conditions, for specific investments. Achieving appropriate levels of public borrowing can also mean setting fiscal policy to reduce deficits and borrowing.

Fiscal regulation (taxing and spending actions) and, in some instances, monetary policy (affecting interest rates and money in circulation) can also help identify threats to stability and prevent spread of debt-induced impacts across sectors, mitigating cyclical fluctuations (OECD, 2013).

Figure 13: The debt-to-GDP ratio in Small Island Developing States is substantially higher than in developing countries as a whole



Source: UNDP and UN-OHRLLS, 2015

Financing instruments, including those already employed by international development cooperation agencies and the private sector, have become more diversified and sophisticated over recent years and also can help countries to more effectively manage macroeconomic risk. For example, there are a range of innovative financing instruments that include the following: countercyclical lending instruments that see debt service fall or become zero for a specified period when a major shock occurs; GDP-linked official sector lending where debt service is tied to economic performance; local currency financing that strengthens local actors, such as domestic financial institutions and local governments, and reduces currency risk; credit guarantees to reduce or share risk; blending of grant financing from one entity with loans from another institution to reduce the cost of financing and leverage additional financing; green (and blue) bond financing and debt-for-nature swaps; asset-backed Islamic financing instruments; and insurance instruments. Many of these financial instruments are designed to share or reduce risk in different ways between the parties involved and should be expanded post-2015.

How do we embed risk and resilience in decision-making?

Develop and employ practical tools to guide risk-informed approaches

Assessing risks of all kinds is the bedrock of investments in resilience. Finance alone will not be sufficient to respond to risk and build resilience to shocks and stresses. Making appropriate decisions relies on understanding and calculating risks, itself reliant on good information. A key limitation in many sectors, improving data and impact modelling can lead to more responsive investment and planning decisions that choose to reduce, accept or transfer risks, thereby building resilience to shocks.

There have been recent advances towards risk assessments that are useful in this regard. The 2014 report of the Global Facility for Disaster Reduction and Recovery (GFDRR) reviews best practice, noting the increased availability of hazard data and models and those for identifying, analysing and managing risks. There is also a growing trend for such tools and data sets to be made freely available. Purely technical assessments, however, are noted to fall short of success. The successful application of risk assessments requires information to be appropriately targeted to end-users and integrated within existing institutional processes (GFDRR, 2014).

There also need to be incentives to deliver greater resilience. This can include requiring certain regulatory or non-regulatory standards to be met at the individual investment or portfolio level. A number of assessment methodologies already exist in both the public and private sectors for vulnerability to climate change, conflict, and climate-related hazards, for example. Better use and management of these methodologies to capture underlying drivers of risk, such as social, political and cross-border dynamics, will be important, as will establishing methods to use them in combination. These shared tools could then be systematically applied to screen investments in sustainable development for both the risk to that development (from issues such as conflict, disaster, climate) and the way in which that investment can impact on future development (and on those same issues.)

Institutions have begun to make efforts to include risk in their decision-making. The MDBs have, for example, established climate-related targets for their portfolios and greenhouse gas accounting tools (World Bank et al., 2015). These targets and tools focus attention on the MDBs support for conventional energy infrastructure and policies as well as approaches that reduce investment in carbon intensive industries, ultimately seeking to reduce the impacts of climate change. The World Bank has also committed to integrate climate and disaster risk considerations in all its International Development Association (IDA) Country Partnership Frameworks. Such measures could also be adopted in national and regional development banks, particularly those in developing and emerging economies.

Build capacity and leadership to affect change

Delivering on risk and resilience requires a much more prominent place for it within discussions of financing for development. National capacity and national leadership is central to this end. Capacity includes relevant expertise and technology to develop and understand models of multiple risks, but also institutional capacity, specifically that which enables countries to adequately govern risks. This will engage not only relevant line ministries in countries but also financing and planning institutions, particularly as a risk management response will require the sourcing and leveraging of finance from multiple sources.

Making such risk management and resilience building a priority for development progress is not easy, yet the public and private sectors alike must be held accountable for their investments

Leadership to deliver change is necessary to influence behaviour, power and the priorities of relevant stakeholders. In the Philippines, for example, the country's development plan elevates disaster risk to a level akin to that of national security. There is a highly risk-aware culture in government and civil society that has led to comprehensive legislation and the development of key institutions to the extent that Philippines is often regarded as a case study of successful disaster risk reduction and management (Kellett and Peters, 2014). Making such risk management and resilience building a priority for development progress is not easy, yet the public and private sectors alike must be held accountable for their investments and any additional risks they introduce, or fail to take into account. It is the skills to interpret risk through to leadership, however, that can translate into greater action to build resilience.

There have been a number of recent international policy processes through which progress is emerging. For example, the Hyogo Framework, the Third Financing for Development Conference and agreement of the SDGs have all provided international leaders with the opportunity to focus attention on these issues and instigate a process of change. Parties to the UNFCCC have also agreed to limit global temperature rise to 2 degrees (see Annex IV for other relevant commitments made at COP21). This COP21 ambition must translate into low-carbon, climate resilient action to lower the impacts of climate change. The World Humanitarian Summit need to capture this momentum and embed risk and resilience – and the means to finance measures to this end – within their outcomes. Recognising the interconnectedness of existing and emerging risks and how finance can best deliver risk-informed, resilient development is key to delivering on an ambitious post-2015 agenda.

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Special thanks to UNDP Team Leaders, Jo Scheuer and Pedro Conceição.

Annex III: Key messages crafted from the May 2015 Expert Workshop, New York

Financing the sustainable development goals: the critical role of risk and resilience

Earthquakes, cyclones, droughts, conflicts, Ebola, economic crises and commodity price shocks. Shocks and stresses strain countries and communities, and set back development. For the Financing for Development (FfD) agenda, this issue is critical. Volatility is the world's new normal.

This document is part of an ongoing project by UNDP and the Government of Switzerland to highlight the critical need to appreciate the role that shocks and stresses play in development, and the role of risk and resilience considerations in all forms of finance – public and private, national and international – play in achieving long-lasting sustainability. As part of this work a technical workshop on the 28th May 2015 in New York City. At this event close to 20 external experts joined a UNDP team to consider the latest Addis outcome document (1). This document builds on the results of that workshop to present a set of messages to Financing for Development (FfD) decision-makers. It should be noted that it does not represent an official opinion of either UNDP or the Government of Switzerland, nor the expert representatives who have contributed to its development.

Key messages: Overarching

Shocks and stresses are inherent to development

The development process is inherently complex and non-linear, and shocks and stresses are part and parcel of its progress. Development needs to be rethought where investments in risk and resilience are part of the process. This rethink demands a financial articulation.

Successful development is not 'business as usual'

The current draft of the FFD Action Agenda document implies that, in our ever-more complex and inter-connected world, and the very ambitious nature of sustainable development goals currently being discussed, a different model of financing than was reached in the Monterey Consensus on Financing for Development is needed (2). That model said little about the need to target the financing of risk and resilience. Yet, we live in a volatile world, one where shocks and stresses are the new norm, and becoming more frequent and more severe. The human costs are high. Climate change is arguably the most important long-term stressor on development. There are human and financial implications of this new reality.

The cost of crisis needs to be articulated

The cost of crises, the cost of inaction, needs to be articulated by the Action Agenda. There needs to be more discussion on the seemingly intractable rise of humanitarian spending (which has now reached close more than US\$24 billion a year, three times more

than a decade earlier (3)), the challenge countries face in mobilizing funds during crises and shocks, or the costs of failing to transition out of crises situations. In 2007 the cost of conflict in Africa was estimated to be at least US\$284 billion, representing an average annual loss of 15% of Gross Domestic Product (4). Similarly, some consideration is needed on consequential financial requirements arising from crisis, such as displacement (which has reached record levels this year at 59.5 million people, with average displaced time being 17 years (5)) or the impact of conflict across a border to a neighboring state. (Tanzania, for example, loses 0.7% of its annual GDP for each neighbor in conflict (6)). And more can be done to articulate the financial implications of 20 years of disasters (7) claiming 1.35 million lives and reaching up to US\$3 trillion (8) in financial losses, or that some small island developing states lose the equivalent of 300% of GDP in a single disaster.

Development must be risk-informed in order for it to be sustainable

Achieving sustainable development will be impossible unless nations and communities are resilient, able to anticipate, shape and adapt to the many shocks and challenges they face. Firstly, if development investments need to be risk-informed in order to be sustainable, each investment can add or reduce risk. Yet many investments do not have as their first motive the reduction of risk.

Secondly, investments now in prevention and preparedness for all hazards, natural to man-made, public health or energy, will minimize risk and future costs. And finally, crucial for the future, an understanding and articulation of risk, by stripping away the 'unknown' to incentivise growth. 'Risk-pricing' (the extra investment needed to ensure risk-informed development) is therefore essential or ensuring we have development plans able to face the challenges of shocks and crises. The price of risk needs to be factored into all development costs and investments.

The evidence is clear: investments in resilience reduce losses and deliver on development

Investing in early response to drought in Kenya could save US\$20 billion over 20 years. Flood management in Mexico reduced losses by three times more than the needed investment costed. Yet this is only half the picture, since the investment in risk-informed development and broad resilience has much wider impacts. Investments in water-supply protection in Bolivia not only delivered 14 times more value than the original investment, they also increased water supply,

irrigated area and household income. Such investments therefore help countries avoid losses, protect development and deliver co-benefits, including the unlocking of growth potential by tackling 'background' risk.

Key messages: Financing approaches

Aid needs to be better targeted

Currently aid is highly concentrated, with 10 countries receiving 37% of official development assistance (ODA) and the top 20 getting 56%. The share allocated to the poorest and most vulnerable countries, such as least developed countries (LDCs) and small island states (SIDS), has come under pressure; in 2014 bilateral aid to least developed countries fell by 16% (9). In addition, aid shocks are still a common occurrence, especially in the most fragile countries. The ‘kind’ of aid finance also matters for risk and resilience. For example, humanitarian financing (which adds little to long-term sustained development) is a sizable component of ODA to conflict-affected countries. The money that is invested in supported countries to reduce their disaster risk is largely spent in middle-income countries that have both more capacity and financial ability; over 20 years 12 of the poorest countries received a combined US\$34.9 million on disaster risk reduction but US\$5.6 billion of largely disaster-related emergency aid, one for every 160 dollars (10). Similarly drought affected sub-Saharan African countries receive very little financing for disaster risk reduction at all. There needs to be a rethink in the way in which the limited ODA available is spent, both where and on what.

Private sector investment is essential to deliver on development

Resilience is as much an issue for private as it is for public financing. This is important for a number of reasons. Firstly, it is clear that the ambitious post-2015 development agenda (11) cannot be achieved by public finance alone, whether international or domestic. Secondly there is private money available that is actively looking for investment opportunities, such as the US\$7.8 trillion of assets the mutual and cooperative insurance sector holds (12). Thirdly, the fact that between 70% and 85% of all global investment comes from the private sector demands attention, if we wish all development, for example to be truly risk-informed. Incentives for the private sector to responsibly focus on sustainable development should be a focus for the FfD Action Agenda. Financing discussions should focus on how private sector investments can be adequately leveraged towards sustainable development. This should also include the barriers to investment such as over-regulation, weak financial structure/oversight and a high level of uncertainty (especially in developing contexts.) How do we build the capacities of countries to develop and manage high quality projects? And what role is there for FfD in that capacity building?

Insurance has a critical role to play

The insurance sector can help countries and communities reduce risk, recovery from shocks and support a return to a development path. The mapping out of climate risks, creation of resilient supply chains and supporting better health are roles that the insurance sector can play in building resilience. Shocks can destroy asset/capital bases – insurance can help protect those assets. Systems of social and financial resilience are key to protecting asset/capital bases from erosion on the account of crises.

Social protection delivers long-term community and family resilience

Social protection is a key element of community and family resilience, and is critical to the reduction of risk (through reduced vulnerability). The Addis Action Agenda refers to social protection as one of the cross cutting areas for provision of basic services to those below the poverty line. In line with this idea, promoting the

use of crisis-linked social protection is critical since this mechanism provides immediate access to financial resources to least resilient populations.

Key messages: Thematic

Make infrastructure investments deliver on resilience, not contribute to risk

Effective, reliable infrastructure underpins economic activity, and a failure to adapt, increases the possibility of adverse economic impacts. Ensuring all investments are risk-informed is an opportunity to reduce, rather than lock-in risk. An estimated US\$6 trillion a year is to be spent between now and 2030 on new infrastructure, such as for energy, roads, houses, schools, hospitals and other public services (13). This investment needs to not only be informed by risk considerations, but also support the actual reduction of existing risks. These investments should also support the transition to economies that deliver growth and contribute to a reduction in climate change at the same time.

Make climate central to discussions

Climate change needs to play a central role in all our global development discussions. A changing climate is arguably the largest single global risk to sustainable development, there exists a significant investment from the international community in climate-related financing mechanisms, and both mitigation and adaptation can help deliver on sustainable development. The essential inter-related benefit of adaptation financing in both reducing the impact of climate change and supporting long-term development, is especially important for low-income countries and SIDS. The cost of adapting to climate change in developing countries alone is estimated to be at least US\$70 billion per year through to 2050 (14).

Focus on building out of crisis

Humanitarian financing is at an all-time high. Protracted crises last decades. Transition out of crisis appears impossible. At the same time there is much that can be done with sustained, predictable finance. Firstly, in those contexts of crisis and post-crisis, financing can increase the resilience of communities and countries (including those that may be ‘hosting’) through investments in social safety nets and multi-year planning cycles. Secondly, and more importantly, financing in protracted crises can tackle the underlying reasons for humanitarian need through realistic investments in peace, security, governance and long-term development. The financing discussions should articulate how fragile and conflict-affected states need particular financial solutions; without such tailored investment, close to 20 countries (and their populations) will not have sustainable development.

Enhance macro-economic stability

The impact of both internal and external shocks and stresses over the last ten years has proven the need for significant investments in macro-economic stability. On the one hand there is a need to enhance the debt management capacities of countries. Debt financing is not necessarily a negative, with it meeting urgent needs, maintaining fiscal stability, and creating new opportunities for risk-informed development; but it can also increase the risk of debt crises in the future. Access to the right kinds of finance is key to both mobilizing resources for resilience. Tools such as GDP-linked bonds and counter-cyclical loans are important innovations in financial instruments that can help reduce macroeconomic risk, and should be expanded post-2015.

Key messages: Operational

Build capacity and leadership

The development of national capacity and national leadership is central to delivering on risk and resilience, and needs a much more prominent place within our future financing of sustainable development. Specific references that need to be emphasized include investments in human and institutional capacity, specifically capacity that enables countries to adequately govern risk (which includes investments in supporting institutions such as those responsible for financing and planning). This capacity should be extended to ensure the effective management and leverage of financial sources of all kinds towards ensuring development remains risk-informed.

Develop and use practical tools for risk-informed development

Investments in resilience should focus on a set of measures to ensure that all investments in sustainable development consider the risks posed to development through shocks and stress. This includes significant investments in the better management and usage of the many assessments for risk already undertaken. It should include the financing of comprehensive risk assessments, such as social and political dynamics, drivers of risk, cross-border dynamics etc. These shared tools should then be used much more systematically to screen investments in sustainable development for both the risk to that development (from issues such as conflict, disaster, climate) and the way in which that investment can impact on future development (and those same issues).

Tailor the channel of delivery to the task

Both the international system and national governments should invest in innovative ways of delivering aid and social protection. For example, using cash rather than food and non-food items in crisis situations, will promote choice and empowerment, and help deliver resilience through stimulating local economies and markets. Technology must play its part, with mobile and internet technology increasingly being used to finance of social protection and emergency aid, especially in hard-to-reach areas.

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1. For a full list of those who attended the workshop please contact Jan Kellett at UNDP, jan.kellett@undp.org.
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3. Global Humanitarian Assistance Report, Development Initiatives, 2015.
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12. www.icmif.org/global-mutual-and-cooperative-market-infographic-2014
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Annex IV: Climate Finance Pledges at COP21

Source: Nakhooda, S., Watson, C. and Barnard, S. (2015). Climate Finance Pledges at COP21. Available at: www.odi.org/opinion/10196-infographic-climate-finance-pledges-cop21-paris

TAKING A CLOSER LOOK AT ADAPTATION FINANCE POST PARIS



The Paris agreement:

- aims to keep warming well below 2 degrees C and aim for 1.5 degrees, while recognising all countries will need to adapt to some climate change
- the green climate fund to support national adaptation plans
- scaled up finance will balance adaptation and mitigation
- priorities and needs of LDCs and SIDS to be addressed
- the Adaptation Committee will review the adequacy and effectiveness of adaptation finance



New insurance programs: the International Cooperative & Mutual Insurance Federation 5-5-5 **Initiative**, the G7 **InsuResilience Initiative** and the UN Secretary General's **Climate Resilience Initiative**



The **Paris Pact on Water and Climate Resilience**, a coalition of nations, river basin organisations, business and civil society aiming to direct \$1 billion to increase water resilience



Resilient food and agriculture: The **Agro-Ecology Transition in West Africa** and the **4/1000 Initiative** to increase soil carbon and deliver food security



Adaptation finance from climate funds increased 10%. \$320 million to the **Adaptation Fund** and **Least Developed Countries Fund**. \$1.2 billion for integrated programs through the Green Climate Fund, Global Climate Change Alliance, and forest funds

Further initiatives supporting adaptation to climate change and building resilience can be found on our cities and new finance commitments infographics

WHAT FINANCE WAS COMMITTED AT THE PARIS CLIMATE TALKS?



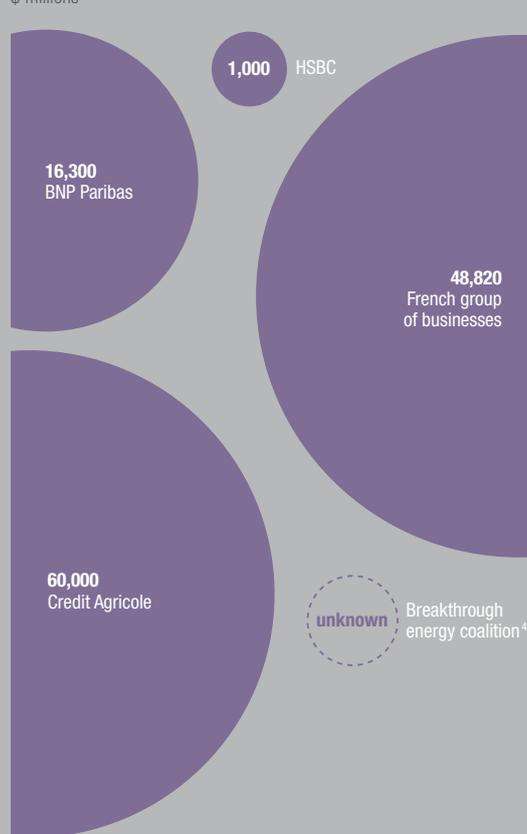
NEW INITIATIVES¹

\$ millions



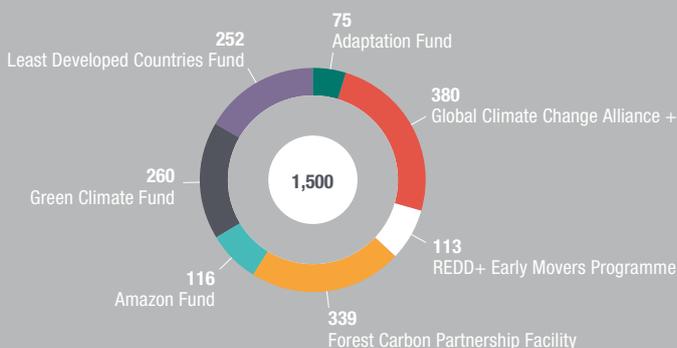
PRIVATE SECTOR ANNOUNCEMENTS¹

\$ millions



CONTRIBUTIONS TO CLIMATE FUNDS

\$ millions



OTHER



26 financial institutions representing 11,000 billion in assets adopt Principles to Mainstream Climate Action within Financial Institutions



Portfolio Decarbonisation Coalition representing 600 billion in assets committed to high carbon divestment



Fossil Fuel Divestment Campaign representing 500 institutions and 3,400 billion in assets committed to high carbon divestment

1. Analysis based on publicly available information, not comprehensive in coverage
 2. Figure represents mid of reported range of \$30-60 million
 3. Amount represents insurance coverage rather than investment
 4. Commitments of the Breakthrough Energy Coalition are linked with those of Mission Innovation

Shocks and stresses are part and parcel of development pathways. Conflict, natural hazards, climate change and their impacts on financial, political and trade systems can lower the resilience of individuals, communities and nations to future shocks and slow development progress. Increasing investments in resilience would ensure that people have the resources and capacities to better reduce, prevent, anticipate, absorb and adapt to a range of shocks, stresses and uncertainties.

For state actors, development finance practitioners and private sector stakeholders, this report makes a case for financing that directly manages risk and builds resilience. It highlights that all forms of finance – including public and private, domestic and international – have a role in such an effort and demonstrates this through examples in key development themes.



*Empowered lives.
Resilient nations.*



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