WHAT IS RESILIENCE?

Use this resource if you don't know much about resilience or if you want a quick refresh.

Hover your mouse over this box then press CTRL + Click to find out how to use the material presented. Alternatively go the contents page, pick a topic and start your journey from there.

DOI: http://dx.doi.org/10.12774/eod_tg.may2016.sturgessandsparrey

First published May 2016

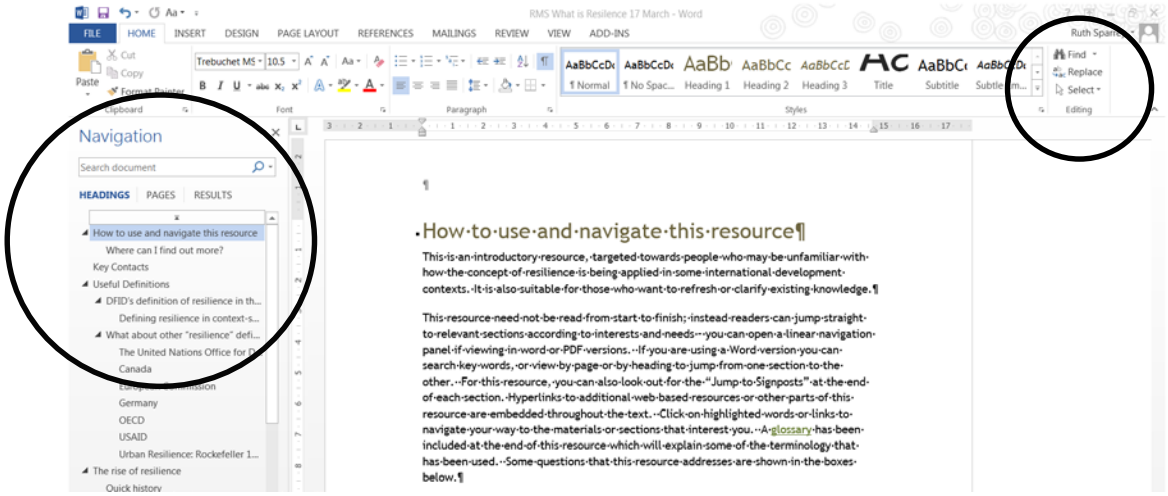
Table of Contents

HOW TO USE AND NAVIGATE THIS RESOURCE

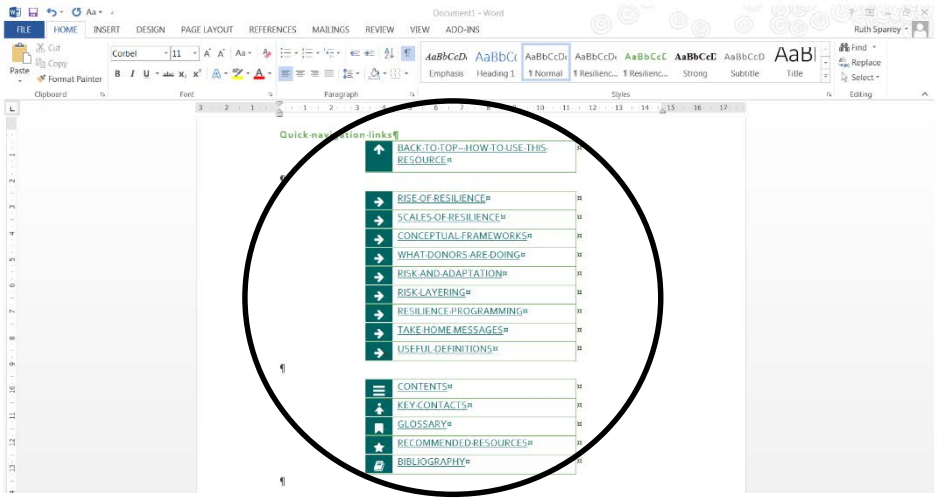
This is an introductory resource, targeted towards people who may be unfamiliar with how the concept of resilience is being applied in some international development contexts. It is also suitable for those who want to refresh or clarify existing knowledge.

This resource need not be read from start to finish; instead readers can jump straight to relevant sections according to interests and needs. Here are some ways that you can do this:

1. You can open a linear navigation panel if viewing in Word. From here you can search key words, view by page, or use the headings to jump from one section to the other. Pull up your navigation panel by clicking "Find" from the Home Tab on your document.



2. You can also look out for the "Quick Jump to" links at the end of each section. Click the hyperlink to where you want to go.



3. Hyperlinks to web based resources or other parts of this resource are embedded throughout the text. Click on highlighted words or links to navigate your way to the materials or sections that interest you.
4. A glossary has been included at the end of this resource which will explain some of the terminology that has been used.

To return to where you were before clicking a hyperlink press the ALT Key and the ← Left Arrow on your keyboard together. This acts like the back arrow on a web page.

5. Some questions that this resource addresses are shown in the boxes below.

How has resilience been defined?

What is the history of resilience?

What are the scales and dimensions of resilience?

What conceptual frameworks exist?

How does DFID conceptualise resilience?

How useful are the conceptual frameworks?

What does resilience programming look like?

How is resilience linked to risk and adaptation?

What is risk layering?

Practitioners may be most interested in the following sections:

- Defining resilience in context-specific ways
- DFID's disaster resilience framework – **practical example**
- What does resilience programming look like?

To jump straight to a relevant section, hover the cursor over the question without clicking, hold down the CTRL key, and then click.

Where can I find out more?

There are two ways to find further information.

1. Firstly, if you are DFID staff you can contact the DFID Virtual Community of Practice on Resilience, or get in touch with a key contact for specific expertise. We have started a list of key contacts which will be updated periodically. This resource is available to DFID personnel.
2. Secondly, you can follow the links embedded in the text or take a look at some recommended resources and ideas for further reading (see Recommended Resources).

Quick navigation links

↑	BACK TO TOP - HOW TO USE THIS RESOURCE

→	RISE OF RESILIENCE
→	SCALES OF RESILIENCE
→	CONCEPTUAL FRAMEWORKS
→	WHAT DONORS ARE DOING
→	RISK AND ADAPTATION
→	RISK LAYERING
→	RESILIENCE PROGRAMMING
→	TAKE HOME MESSAGES
→	USEFUL DEFINITIONS

☰	CONTENTS
🔖	GLOSSARY
★	RECOMMENDED RESOURCES
📖	BIBLIOGRAPHY

1. USEFUL DEFINITIONS

Resilience is multi-sectoral. While there is no standard definition of resilience, resilience is an agenda shared by actors concerned with threats to development, whether financial, political, disaster, conflict or climate related. Its recent prominence is largely due to increasing concerns over the inadequacy of recurring humanitarian responses to address underlying vulnerabilities and the need to shift thinking towards achieving lasting impact.

It is important for all of our work in international development. Whether we are working in health, governance, infrastructure, livelihoods, economics, private sector or climate change, resilience is a term we should all understand.

It crosses all development sectors. However, this resource (and related resources) focuses on **disasters, climate change, livelihoods, social protection and infrastructure**. Below we show how other organisations and agencies have defined resilience. You will see that the definitions have a lot in common:

- All definitions can applied at different scales or layers of risk – e.g. individual, household, community, states and institutions
- All require us to ask: resilience of who and to what?
- They require us to think about abilities to respond and timings of response
- And to identify what stresses and what shocks.

Take home message: They are all quite similar!

Click the bulleted links to read definitions of resilience.

- DFID
- The United Nations Office for Disaster Risk Reduction (UNISDR)
- Canada
- European Commission
- Germany
- OECD
- USAID
- Rockefeller – Urban Resilience

You can also review different conceptual frameworks and gain insight into what different donors are supporting by clicking these links.

- Read about Conceptual Frameworks
- Find out about what different donors are supporting

DFID'S DEFINITION OF RESILIENCE

> ***"The ability of countries, communities and households to manage change by maintaining or transforming living standards in the face of shocks or stresses without compromising their long term prospects"***

(DFID, 2011)

Useful links for more information on DFID's approach

- DFID's Disaster Resilience Approach Paper: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/186874/defining-disaster-resilience-approach-paper.pdf
- Also see this 2013 DFID presentation - Defining Adaptation and Resilience in DFID.

What do we mean by shocks and stresses?
Shocks are events that cause an immediate damaging impact. Covariate shocks such as natural disasters or spikes in food prices affect multiple households, communities or regions. Idiosyncratic shocks are smaller in scale - within a household, idiosyncratic shocks may include illness or death of a family member, loss of livestock or of employment.

Stresses are less severe but often longer-term trends that have slow onset impacts and undermine existing systems over time.

Shocks can be caused by long term or recurrent stresses that cause a system to reach 'breaking point' over time. (OPM, 2015)

(See 'Social Protection and Climate Resilience' resource for further information on climate shocks.)

Defining resilience in context-specific ways

Aspects of resilience that have been emphasised by different DFID country offices, as part of embedding programmes that build resilience are highlighted below. If you are DFID personnel you can contact the relevant office or, you can ask the Yammer Group to find out more:

- Community-based resilience in the absence of strong government or withdrawal of services as part of a transition phase (Sudan, Uganda)
- The combination of disaster risk management and climate change adaptation (Nepal, Bangladesh)
- Advocacy and influencing the government in countries where government is more capable (Malawi, Kenya); capacity development support where it is lacking (Sudan)
- Social protection mechanisms such as hunger or social safety nets, economic support 'ladders' (Kenya)
- Investment in the nutrition of children (Kenya)
- Conflict analysis and conflict-sensitive 'do no harm' approaches (Sudan, Uganda)
- Resilience as a multi-level factor, i.e. that levels of system, community, and individual can each be resilient and that their respective views of what resilience is could be different and even incompatible (Nepal)

» The integration and layering of pre-existing activities relevant to resilience with new specific disaster resilience initiatives (Kenya).

(DFID, 2013)

CLIMATE RESILIENCE

There is currently no exact definition of climate resilience but it incorporates disaster resilience as well as the ability to cope with longer term climate changes (including transformative change/tipping points) (DFID, 2013). Existing disaster risks are increased (in scale, frequency and variability) by climate change – as well as climate change causing slow-onset impacts such as temperature increase and sea-level rise (UNDP, 2011). *(See 'Social protection and climate resilience' resource for further information.)*

Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED) 3As resilience framework

The BRACED programme provides a framework for understanding/measuring the different types of capacities which help become resilient at different points in time:

» **Anticipatory capacity**: ability of social systems to anticipate and reduce the impact of climate variability and extremes through preparedness and planning

» **Adaptive capacity**: ability of social systems to adapt to multiple, long-term and future climate change risks, and also to learn and adjust after a disaster

» **Absorptive capacity**: ability of social systems to absorb and cope with the impacts of climate variability and extremes, i.e. to use available skills and resources, to face and manage adverse conditions, emergencies or disasters

» **Transformation**: pertains to the holistic and fundamental ways in which people's capacity to adapt to, anticipate and absorb shocks can be built, reshaped and enhanced

(See below - 'Linking resilience to risk and adaptation')

INFRASTRUCTURE AND RESILIENCE

The UN Sustainable Development Goals (SDGs) recognise the importance of resilient infrastructure. Goal 9 of the UN Sustainable Development Goals is to "Build resilient infrastructure to promote sustainable industrialization and foster innovation" e.g. through investment in transport, irrigation, energy, communications, water and sanitation infrastructure. Goal 11 is also linked – "Making cities and human settlements inclusive, safe, resilient and sustainable" (see Rockefeller's definition of urban resilience below).

Nevertheless, infrastructure planning is not routinely integrated with other development programming. For engineers, the concept of resilience has generally been related to the structural integrity of physical infrastructure and systems. But in the context of the SDGs, there are two key aspects to consider:

» The resilience of infrastructure itself – and how this contributes wider economic benefits; and

» How infrastructure enhances resilience, both how it affects other infrastructure systems, and how it affects the resilience and livelihood options of individuals, households and communities.

To date infrastructure resilience has focused on the former. This has led to an increasing focus on the resilience of critical (important, often national) infrastructure.

When it comes to resilient systems, success is often something that doesn't happen. For example, success is when the city did not flood, the power did not turn off, even though the storm hit.

Climate resilient infrastructure should enable communities and wider society to both mitigate and adapt to climate change impacts. Ensuring the long-term integrity of infrastructure will not necessarily ensure climate resilient livelihoods. Infrastructure developed in isolation might even undermine livelihoods. For more information, see Paving the Way for Climate-Resilient Infrastructure (UNDP, 2011).

Urban Resilience: Rockefeller 100 Resilient Cities

Resilience is about surviving and thriving, regardless of the challenge

"Urban resilience is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience"

CHRONIC STRESSES: weaken the fabric of a city on a day-to-day or cyclical basis. Examples include: high unemployment, inefficient public transportation systems, endemic violence, and chronic food and water shortages.

ACUTE SHOCKS are sudden, sharp events that threaten a city Examples include: earthquakes, floods, disease outbreaks, and terrorist attacks.

Resilient cities demonstrate seven qualities that allow them to withstand, respond to, and adapt more readily to shocks and stresses.

1) *Reflective using past experience to inform future decisions*
2) *Resourceful recognising alternative ways to use resources*
3) *Robust well-conceived, constructed, and managed systems*
4) *Redundant spare capacity purposively created to accommodate disruption*

(Rockefeller Foundation) Click here to read more: http://www.100resilientcities.org/#/-_/

BACK TO TOP – USEFUL DEFINITIONS

RISE OF RESILIENCE
SCALES OF RESILIENCE
CONCEPTUAL FRAMEWORKS
WHAT DONORS ARE DOING
RISK AND ADAPTATION
RISK LAYERING
RESILIENCE PROGRAMMING
TAKE HOME MESSAGES

CONTENTS
HOW TO USE THIS RESOURCE
GLOSSARY
RECOMMENDED RESOURCES
BIBLIOGRAPHY

DEFINITIONS OF OTHER DONORS AND AGENCIES

The United Nations Office for Disaster Risk Reduction (UNISDR)

> ***"The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions"***

(UNISDR) Click here for more on UNISDR's definitions:
http://www.unisdr.org/we/inform/terminology#letter-r

Canada

> ***"The ability of individuals, households, governments, regions, and systems to mitigate, resist, absorb, and recover from the effects of shocks and disasters in a timely, sustainable, and efficient manner"***

(CIDA, 2012) Click here to read more: http://www.acdi-cida.gc.ca/INET/IMAGES.NSF/vLUImages/Evaluations2/$file/CIDA-learns-eng.pdf

European Commission

> ***"The ability of an individual, a household, a community, a country or a region to withstand, to adapt, and to quickly recover from stresses and shocks"***

(European Commission, 2012) Click here to read more:
http://ec.europa.eu/echo/files/policies/resilience/com_2012_586_resilience_en.pdf

Germany

> ***"The ability of people and institutions – be they individuals, households, communities or nations – to deal with acute shocks or chronic burdens (stress) caused by fragility, crises, violent conflicts and extreme natural events, adapting and recovering quickly without jeopardising their medium and long-term future"***

(Federal Ministry for Coperation and Development (BMZ)) Click here to read more:
http://www.bmz.de/en/what_we_do/issues/transitional-development-assistance/index.html

OECD

> ***"The ability of individuals, communities and states and their institutions to absorb and recover from shocks, while positively adapting and transforming their structures and means for living in the face of long-term changes and uncertainty"***

(OECD, 2013) Click here to read more:
http://www.oecd.org/dac/May%2010%202013%20FINAL%20resilience%20PDF.pdf

USAID

> ***"Resilience is the ability of people, households, communities, countries and systems to mitigate, adapt to, and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth"***

(USAID, 2012) Click here to read more:
http://www.usaid.gov/sites/default/files/documents/1870/USAIDResiliencePolicyGuidanceDocument.pdf

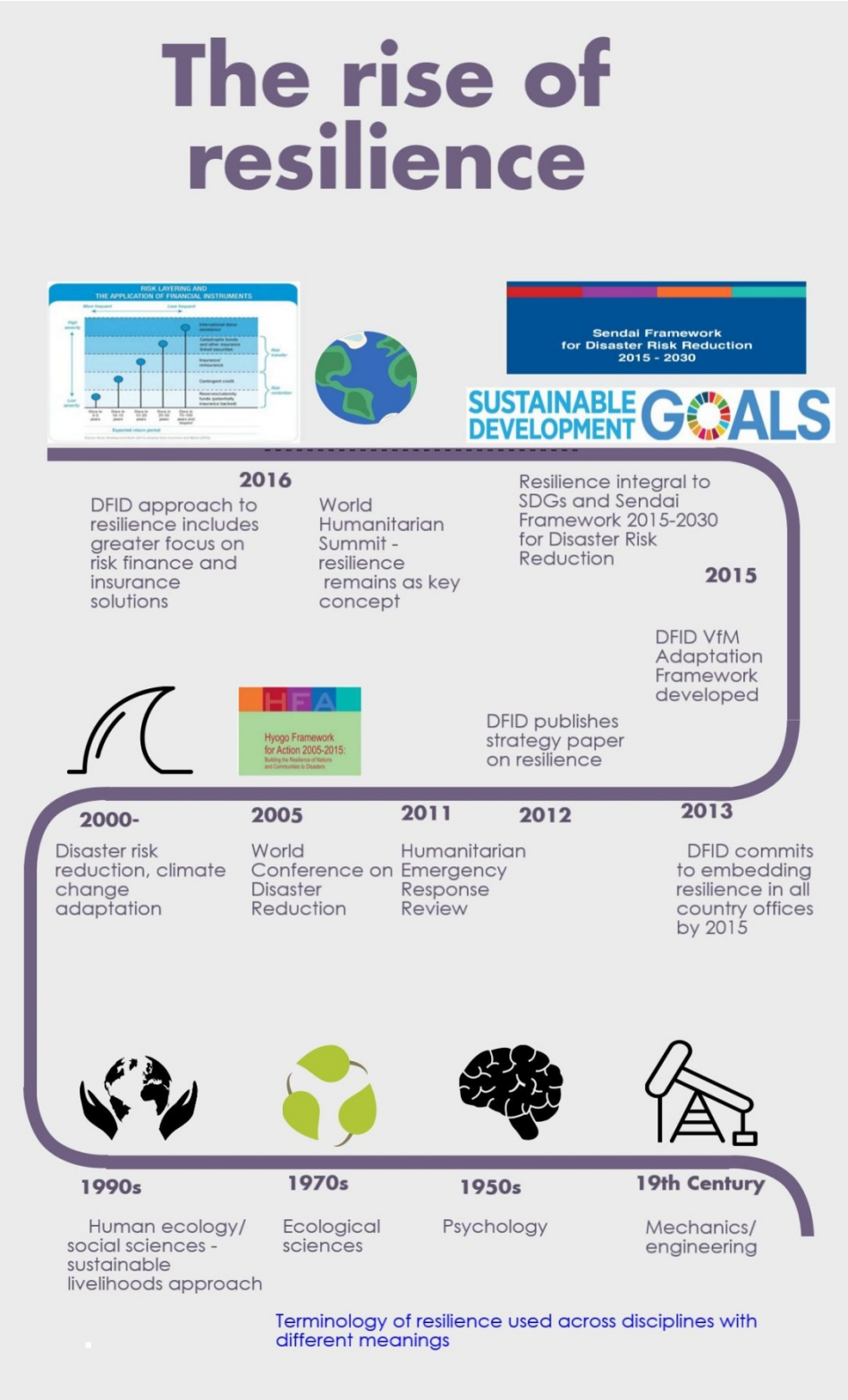
BACK TO TOP - DEFINITIONS

RISE OF RESILIENCE
WHY IS RESILIENCE IMPORTANT?
SCALES OF RESILIENCE
CONCEPTUAL FRAMEWORKS
WHAT DONORS ARE DOING
RISK AND ADAPTATION
RISK LAYERING
RESILIENCE IN PROGRAMMING
TAKE HOME MESSAGES

CONTENTS
HOW TO USE THIS RESOURCE
GLOSSARY
RECOMMENDED RESOURCES

2. THE RISE OF RESILIENCE

FIGURE 1: RISE OF RESILIENCE – A TIMELINE



QUICK HISTORY

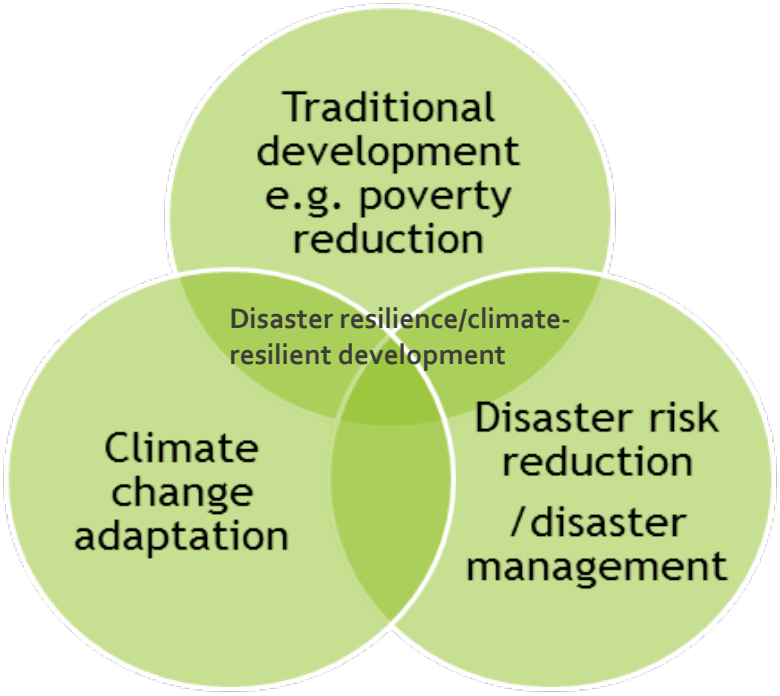
Resilience is not a new concept

It has a long history of use within multiple disciplines (e.g. behavioural social science and psychology, ecology from the 1970s, economics, engineering and infrastructure) as well as disaster risk reduction (DRR) and development assistance.

▶ Watch this Humanitarian Policy Group video **'10 things you should know about disaster risk reduction'** for a quick introduction to DRR.

Although vulnerability to shocks and stresses was a key part of the Sustainable Livelihoods Approach (SLA) adopted by DFID in the 1990s, the term resilience really started to gain importance following the UN's World Conference on Disaster Reduction in 2005. This led to the Hyogo Framework, which called for international actors to invest in disaster resilience, incorporating DRR, poverty reduction and climate change adaptation into a single framework.

FIGURE 2: THE RELATIONSHIPS BETWEEN DEVELOPMENT, ADAPTATION AND DISASTER RISK REDUCTION



(Adapted from Ranger, 2013)

The UK's 2011 Humanitarian Emergency Response Review (HERR) led to the integration of resilience into DFID's humanitarian policy and DFID made a commitment to embed resilience in all country offices by 2015, following a DFID 2012 strategy paper on building resilience. Additionally, DFID's 2013-2015 'Future Fit' (see pages 8-10 of this DFID presentation – Environment, Climate Change and Development) strategy aimed to build resilience to climate change as a core part of DFID's future operations, with a particular focus on food and agriculture, water, sustainable energy, and cities.

In 2015, DFID developed a Value for Money (VfM) Adaptation Framework to assist with design, sequencing and prioritisation of resilience building options. DFID's focus has also shifted towards building resilience through insurance and risk finance solutions (if you have access to Team Site see 'Dull Disasters' a DFID paper and forthcoming book written by Daniel Clarke and Stefan Dercon).

Resilience is not a fad

Resilience is set to remain as a core part of the global agenda for at least the next decade - the Sustainable Development Goals specifically refer to building the resilience of the poor as well as resilient infrastructure and cities. Resilience is an integral part of the Sendai Framework for DRR 2015-2030 (successor to the Hyogo Framework) as well as the World Humanitarian Summit that will take place in May 2016.

Critics may see resilience as the latest development buzzword and the term has been criticised for being ill-defined (interesting ODI opinion piece – 'The Relevance of 'Resilience'') and hard to measure as well as for shifting the onus of recovery to populations ill-equipped to take it on.

BACK TO TOP – RISE OF RESILIENCE

DEFINITIONS
WHY IS RESILIENCE IMPORTANT?
SCALES OF RESILIENCE
CONCEPTUAL FRAMEWORKS
WHAT DONORS ARE DOING
RISK AND ADAPTATION
RISK LAYERING
RESILIENCE PROGRAMMING
TAKE HOME MESSAGES

CONTENTS
HOW TO USE THIS RESOURCE
GLOSSARY
RECOMMENDED RESOURCES
BIBLIOGRAPHY

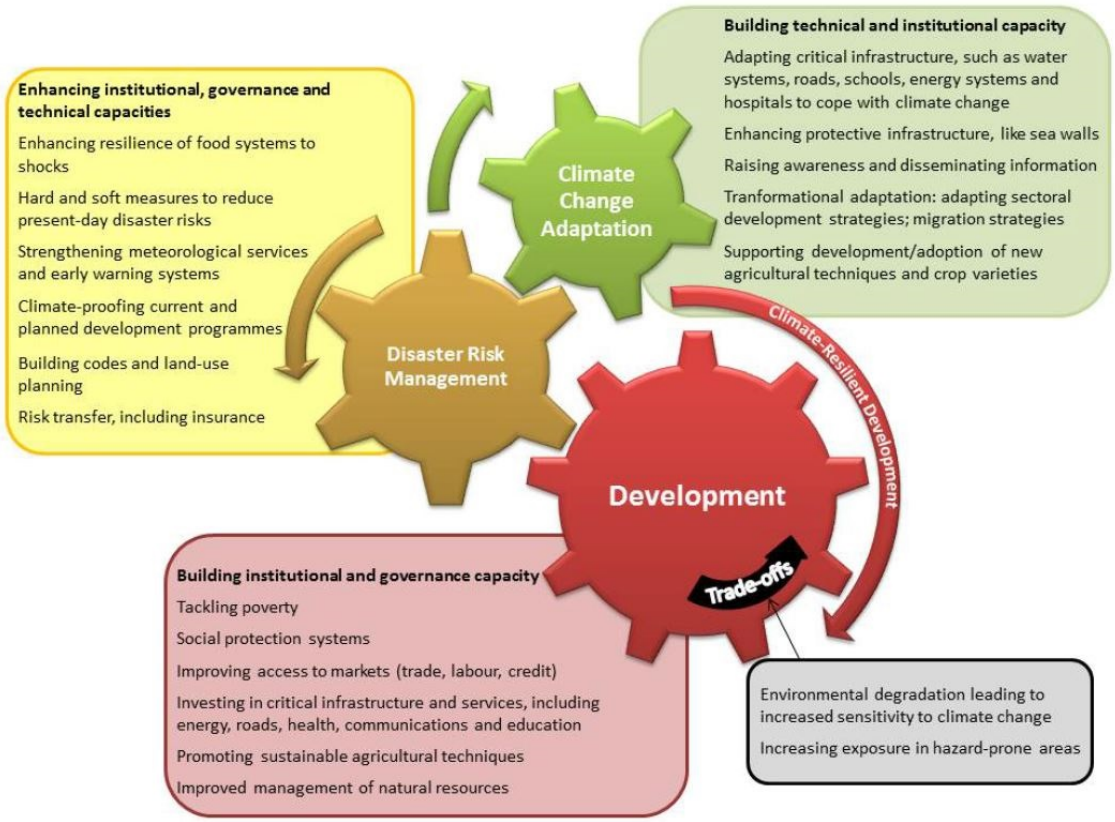
WHY IS RESILIENCE IMPORTANT?

The frequency and severity of weather-related hazards is increasing. Urbanisation will increase exposure and vulnerability. By 2050, 66% of the world's population is projected to be urban (UN, 2014). The IPCC's Fifth Assessment (IPCC, AR5) recognised that many global risks of climate change (heat stress, flooding, landslides, water scarcity) are concentrated in urban areas and that building resilient infrastructure systems could significantly reduce the urban population's vulnerability and exposure.

Extreme weather events in the past 20 years have had an impact on more than four billion people, claiming over 600,000 lives and resulted in nearly $US 1.9 trillion in economic losses (Bringing resilience to scale, GFDRR, 2015).

Resilience can be seen as a bridging construct to break down silos between different sectors/disciplines and provide a common agenda. Although the approaches used for climate resilience change adaptation and disaster risk management originated from different disciplines, the two communities of practice are increasingly converging. Focusing on vulnerability and resilience lends a practical dimension to discussions of the relief-to-development continuum. Infrastructure investments should be planned as part of a climate resilient, low carbon development pathway.

FIGURE 3: INTERSECTION BETWEEN DEVELOPMENT, ADAPTATION AND DISASTER RISK MANAGEMENT GOALS



Development, adaptation and disaster risk management as three interlinked policy goals, with examples of policies and programmes for each

(Source: Ranger, 2013, p. 8)

The resilience concept recognises **vulnerable communities as the key actors in their own future**. Resilience-based analysis sees the response to stress as an **opportunity to strengthen** the community, household, or institution, or value chain.

Resilience can be a virtuous dynamic. Resilience fuels resilience. When resilient households, communities or systems are able to withstand minor shocks, this initial robustness may extend to other areas, creating a "snowball" effect of greater and greater resilience. This goes into reverse when systems are rigid.

Failure to overcome initial stressors compounds the inherent weakness of the rigid system. (DAI, 2013)

Neglecting resilience strategies imposes high financial costs. There is growing evidence (e.g. Savage, 2015 and Cabot Venton et al., 2013) that building resilience to stresses and shocks saves money as well as reducing poverty.

For another overview, see this GSDRC Topic Guide on Disaster Resilience

BACK TO TOP – WHY IS RESILIENCE IMPORTANT?

DEFINITIONS
RISE OF RESILIENCE
SCALES OF RESILIENCE
CONCEPTUAL FRAMEWORKS
WHAT DONORS ARE DOING
RISK AND ADAPTATION
RISK LAYERING
RESILIENCE PROGRAMMING
TAKE HOME MESSAGES

CONTENTS
HOW TO USE THIS RESOURCE
GLOSSARY
RECOMMENDED RESOURCES
BIBLIOGRAPHY

3. SCALES OF RESILIENCE: RESILIENCE OF WHO/WHAT?

These scales should not be seen as mutually exclusive – there is overlap between needs at different scales. The International Climate Fund (ICF) fourth Key Performance Indicator (KPI 4) deals with resilience at individual level.

Individuals

- May face internal ('idiosyncratic') shocks such as illness, death/birth of family member, loss of livelihood or job, and external ('covariate') shocks – climatic or price shocks and climate stresses, reaction to seasonal shifts e.g. employment
- May require support to maintain/enhance livelihoods assets (human, physical, natural, financial and social capital as per the Sustainable Livelihoods Framework).

Households

- Overlaps with individual considerations; households may also require support in accumulation or protection of household assets (e.g. land, livestock, property, labour) and diversification of income streams

Communities

- May have needs around responding to macro-shocks (economic, political e.g. conflict or climate disasters) and adapting to longer term stresses (e.g. slow on-set climatic change, urbanisation)
- Social/community networks may require support in provision of formal and informal safety nets, infrastructure, community early warning systems, community micro-insurance/micro-finance/savings schemes, migration as adaptation strategy

Infrastructure

- Resilience of infrastructure can relate to the integrity of a physical structure or individual infrastructure assets at community level
- It can also refer to the resilience of infrastructure systems at national level
- There is also the question of how infrastructure affects resilience of other systems and scales e.g. impact on the wellbeing and livelihood options of individuals, households and communities

Countries

May have needs around:

- Maintaining long-term robust service delivery systems e.g. healthcare, education, water, transport and physical infrastructure – critical infrastructure and infrastructure systems
- Functioning markets and private sector, e.g. to provide credit, finance or insurance to vulnerable people
- Management of climate hazards and long term stresses, adaptation planning
- Access to financial instruments for managing risk – contingent credits, emergency loans, insurance and international aid

- State-level conflict

Governments

May face challenges in:

- Investment decisions and programming e.g. establishing effective national social protection and safety net programmes, resilient infrastructure, basic service provision, investment in technology, early warning systems, using government reserves
- Establishing enabling laws and policies (*institutions* and governance processes) e.g. resilient urban planning, responsible investment, addressing drivers of ecosystem degradation, encouraging markets, for example, to provide credit to vulnerable people

  Emergency response and disaster preparedness strategies across local and national government levels.

DIMENSIONS OF RESILIENCE

The framing of resilience in terms of dimensions follows the recognition that a multi-dimensional approach is required to address multiple, interacting factors. A 2015 review[1] of five frameworks (ACCRA, FAO, University of Florence, Oxfam and Tulane University) identified the following dimensions as consistently represented across the literature:

- Assets
- Access to services
- Adaptive capacity
- Income and food access
- Safety nets

Other dimensions included:

- Livelihood viability (in the context of stresses, shocks & uncertainty)
- Governance contexts – wider societal and institutional resilience
- Physical and economic connectivity
- Individual well-being in the form of 'psychosocial status' (e.g. of household heads)
- Physical security
- Knowledge and information
- Integrity of the natural and built environment, including infrastructure
- Household structure and characteristics
- Debt and credit

The DFID Disaster Resilience Framework sets out 3 broad dimensions of resilience: exposure, sensitivity and adaptive capacity.

[1] Brooks, N.; Aure, E. and Whiteside, M. (2014) Final report: Assessing the impact of ICF programmes on household and community resilience to climate variability and climate change, Evidence on Demand, UK.

Exposure: Assessment of the magnitude and frequency of shocks or the degree of stress.

Sensitivity: The degree to which a system will be affected by, or respond to, a given shock or stress.

Adaptive capacity: Ability of actors (individuals, communities, governments) to adjust to a disturbance, moderate potential damage, take advantage of opportunities and cope with the consequences of a change.

(Also see BRACED 3As of resilience.)

	BACK TO TOP - SCALES OF RESILIENCE

	DEFINITIONS
	RISE OF RESILIENCE
	WHY IS RESILIENCE IMPORTANT?
	CONCEPTUAL FRAMEWORKS
	WHAT DONORS ARE DOING
	RISK AND ADAPTATION
	RISK LAYERING
	RESILIENCE PROGRAMMING
	TAKE HOME MESSAGES

	CONTENTS
	HOW TO USE THIS RESOURCE
	GLOSSARY
	RECOMMENDED RESOURCES
	BIBLIOGRAPHY

4. CONCEPTUAL FRAMEWORKS

This section considers some of the different conceptual frameworks that have been drawn up for framing resilience. You can also learn about what features they have in common and some of the relative pros and cons of each. The frameworks presented are hyperlinked below:

- DFID's Disaster Resilience Framework
- The UN Disaster Risk Management Framework
- Oxfam's People-Centred Resilience Approach and Dimensions of Resilience
- USAID's Conceptual Framework for Resilience
- Food and Agriculture Organisation (FAO) Framework for maximising the nutritional impact of resilience programmes

These frameworks have arisen due to differing organisational programming, policy priorities and purposes, as well as the fact that there is no agreed definition of resilience among the international community. However, in practice, these conceptual frameworks have not always been directly linked to frameworks to measure resilience, even within the same organisations. *(See 'Measuring Resilience' resource for more information.)*

WHAT THE CONCEPTUAL FRAMEWORKS HAVE IN COMMON

- They attempt to take a holistic and multi-sectoral approach, typically linking humanitarian relief or disaster response to livelihoods (but also other sectors – nutrition, sanitation, social protection, climate change etc.)
- They understand the dynamic and multi-dimensional nature of vulnerability or resilience (e.g. DFID and USAID both use the terms of sensitivity, exposure and adaptive capacity), and focus on building capacities or assets to deal with disturbance.
- They explicitly or implicitly appreciate the need for risk management measures to mitigate or prevent disturbances.

BACK TO TOP

COMMON FEATURES

PROS AND CONS

WHAT ARE THE RELATIVE PROS AND CONS OF THESE FRAMEWORKS?

TABLE 1: STRENGTHS AND WEAKNESSES OF DIFFERENT CONCEPTUAL FRAMEWORKS

FRAMEWORK	STRENGTHS	WEAKNESSES
DFID Disaster Resilience Framework	Able to harmonise conceptualisation across different programmes and disciplines	Unclear if it captures how resilience changes over time
UN Disaster Risk Management Framework	Demonstrates the continuum between risks, disasters and longer term development	Less emphasis on human assets and capacities
Oxfam People Centred Approach	Addresses gender, sustainable livelihoods and natural resources	Less emphasis on identifying shocks and stresses
USAID Conceptual Framework for Resilience	Comprehensive and practical, with focus on adaptive capacity and risk reduction	Unclear if it captures how resilience changes over time
FAO – Maximising nutritional impact for resilience	Using nutrition lens makes it easier to understand/visualise how it would be applied	Narrow view of resilience due to focus on nutrition (though it incorporates livelihoods, disaster risk)

BACK TO TOP

COMMON FEATURES

PROS AND CONS

DFID'S DISASTER RESILIENCE FRAMEWORK

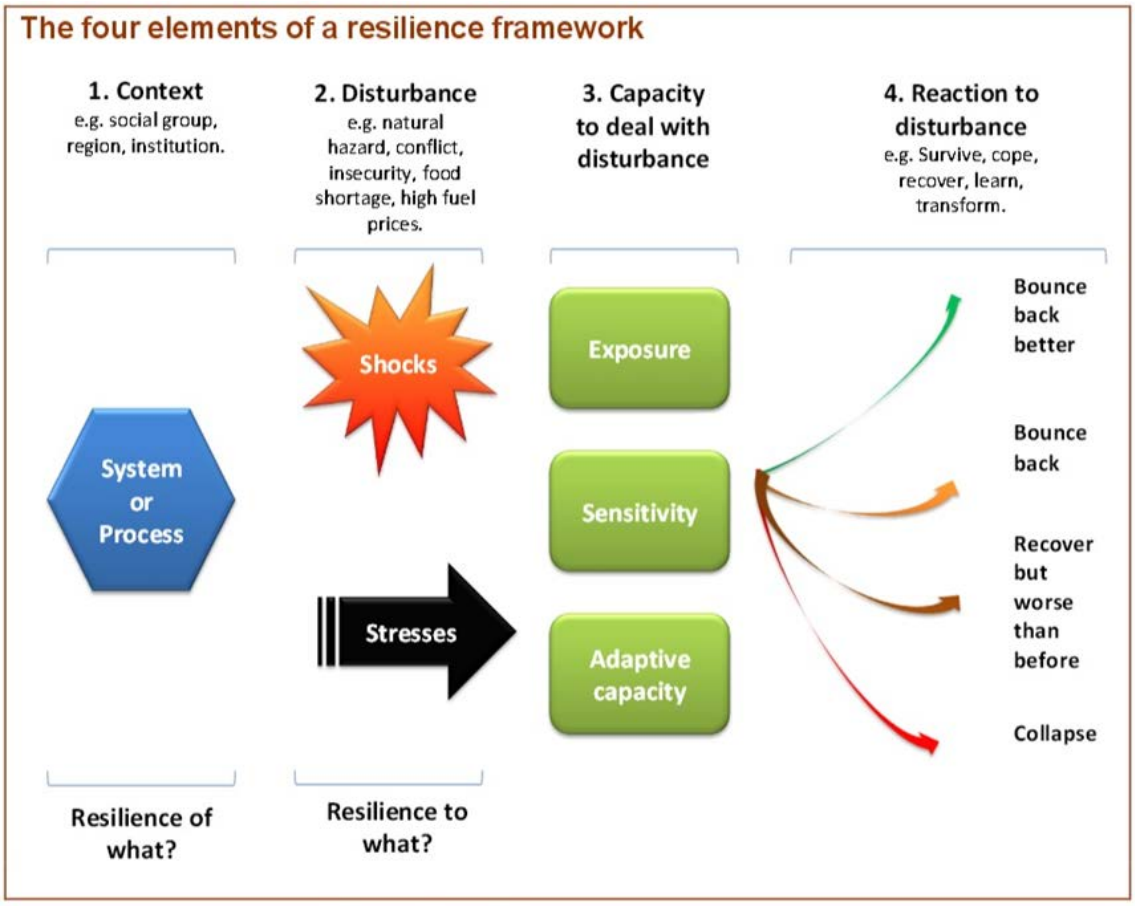
Key policy document - Defining Disaster Resilience: A DFID Approach Paper

This framework sets out the four elements (context, disturbance, capacity to deal with disturbance and reaction to disturbance) that should be considered in supporting resilience building through DFID's operations.

Many development interventions have focused on individual elements of the resilience framework e.g. disaster risk reduction (DRR) work has focused on reducing sensitivity and exposure to shocks, while livelihoods work has focused on adaptive capacity, looking at assets and diversification of income.

Using resilience as a concept is intended to strengthen harmonisation between different programmes and disciplines e.g. DRR, social protection and climate change adaptation.

FIGURE 4: DFID'S DISASTER RESILIENCE FRAMEWORK



(Source: DFID, 2011)

1 **Context**

'Resilience of what?' This is about identifying and strengthening resilience in a social group, socio-economic or political system, environmental context or institution.

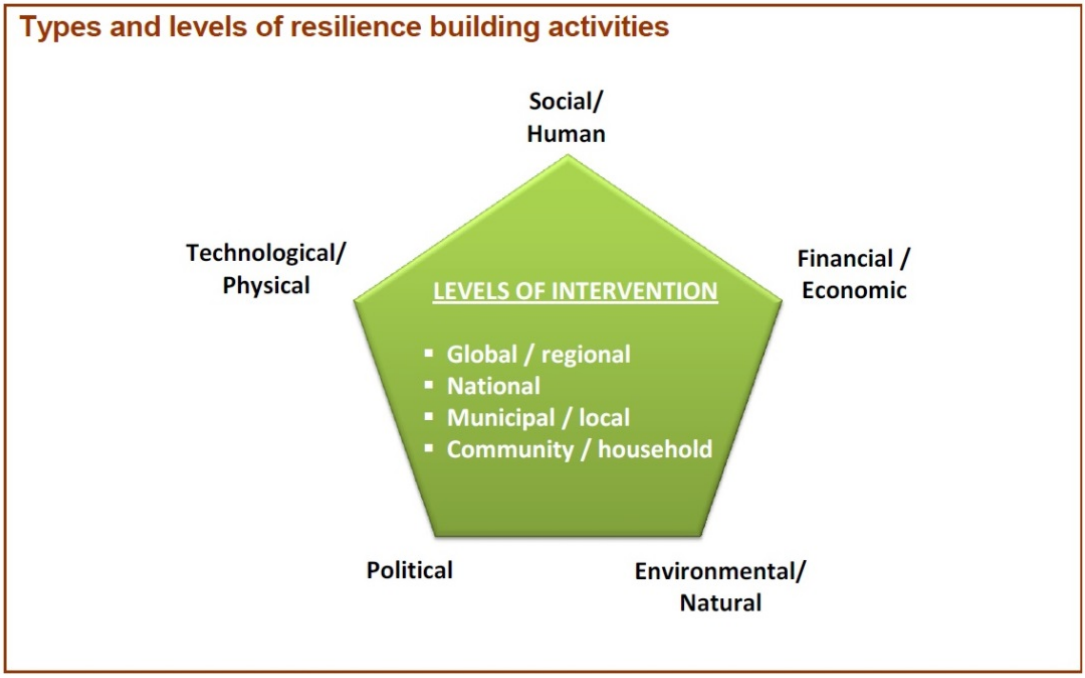
2 **Disturbance**

'Resilience to what?' Disturbances usually take the form of shocks (sudden, disaster-related or conflict-related shocks) or stresses (long-term trends e.g. natural resource degradation, demographic change). Countries often face multiple, inter-connected shocks and stresses.

3 **Capacity to deal with disturbance**

Ability of system/process to deal with the shock or stress. Based on the dimensions of exposure, sensitivity and adaptive capacity. A key determinant of exposure, sensitivity and adaptive capacity is the set of resources/assets (see picture below) that can be utilised in the face of a stress or shock.

FIGURE 5: CLASSIFYING RESILIENCE BUILDING ACTIVITIES ACCORDING TO THE ASSETS PENTAGON OF THE SUSTAINABLE LIVELIHOODS FRAMEWORK



(Source: DFID, 2011)

Exposure: Assessment of the magnitude and frequency of shocks or degree of stress.

Sensitivity: The degree to which a system will be affected by, or respond to, a given shock or stress.

Adaptive capacity: Ability of actors (individuals, communities, governments) to adjust to a disturbance, moderate potential damage, take advantage of opportunities and cope with the consequences of a change.

4 **Reaction to disturbance**

Reaction might be a 'bounce back better', whereby capacities are enhanced or sensitivities are reduced, leaving a system that is more able to deal with future shocks and stresses (upward trajectory). An alternative reaction might be a 'bounce back' to a pre-existing condition (flat trajectory), or to 'recover, but worse than before' – with reduced capacities (downward trajectory). In the worst-case scenario, there is 'collapse', leading to a catastrophic reduction in capacity to cope in the future.

What does this look like in practice?

Let's look at an example from Bangladesh and work through the four parts of the framework: Context, Disturbance, Capacity to deal with Disturbance and Reaction to Disturbance. The figure below shows Rupban and outlines her needs. Rupban lives in Bangladesh. **How can DFID respond?**

FIGURE 6: EXAMPLE OF DFID'S RESILIENCE CONCEPT IN PRACTICE

(Source: DFID, 2013, p.11)

Context: Rupban and her household live in a small rural setting in Bangladesh. The village is prone to cyclones and flooding.

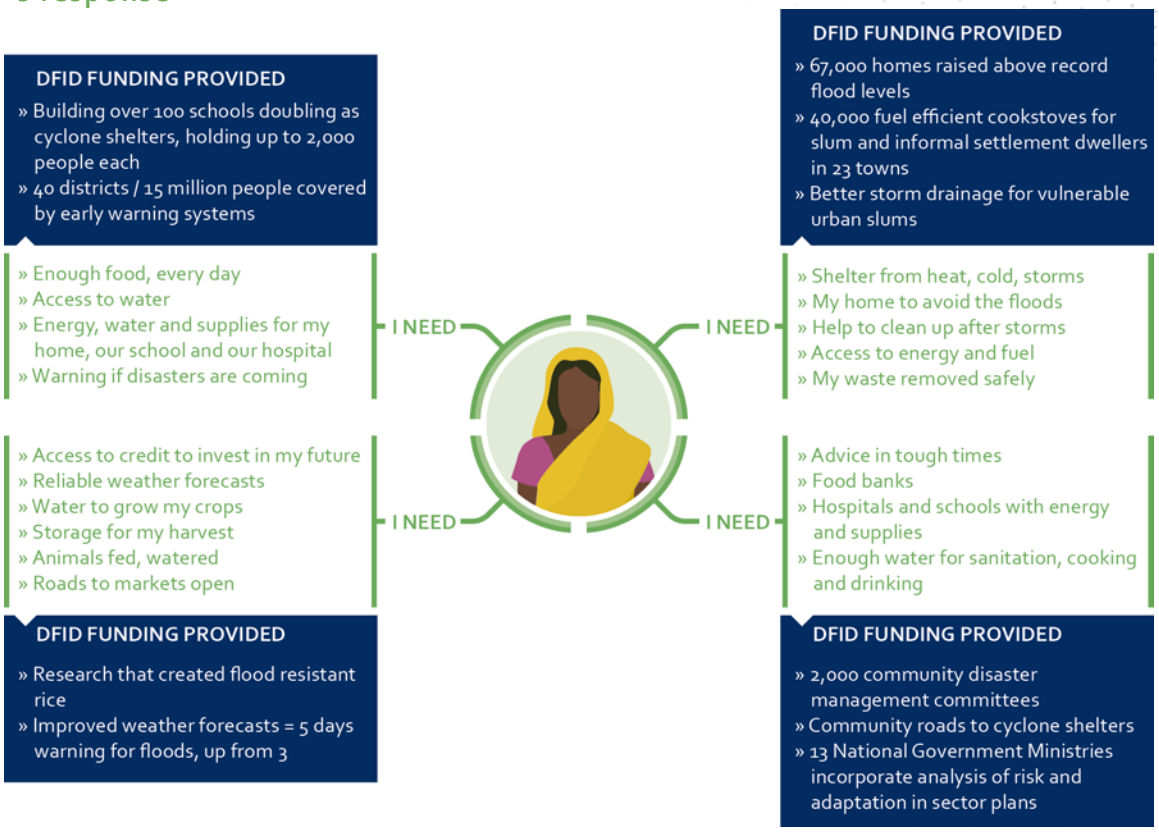
Disturbance: Rupban needs to be resilient to flooding, cyclones and climate change stresses.

Capacity to deal with disturbance:

- **Exposure**
  - Rupban is exposed to both idiosyncratic and covariate shocks.
    - **Idiosyncratic shocks:** illness or death of family member would have a significant impact on household income.
    - **Covariate shocks:** Rupban's village is prone to flooding (flooded 3 times in past 2 years) and was affected by the 2007 and 2009 cyclones.
  - Longer term climate stresses could reduce yields from rain-fed agriculture by 10% by 2020 in her village, affecting food security and income.
- **Sensitivity**
  - Rupban's household is above the national poverty line but could easily slip below it if affected by a disaster.
- **Adaptive Capacity**
  - Rupban's assets include: economic (remittances from son working abroad, livestock, land), human (labour from husband and family).

Reaction to disturbance – Previously, Rupban recovered from the impact of the 2009 cyclone but had to sell livestock, so is now worse off.

DFID's response



(Source: DFID, 2013, p.11)

N.B. DFID's conceptual framework underpins DFID's Multi-Hazard Disaster Risk Assessment (MHDRA) which enables DFID country offices to embed resilience across programmes (see DFID guidance and section on Risk Management). MHDRA has been used in Ethiopia, Kenya, Malawi, Bangladesh, Mozambique, Somalia, Nigeria and Uganda – the assessments are stored in country offices.

For practical examples of resilience strategies of households in Darfur in multiple livelihood systems, see this Feinstein International Center scoping study - The Road to Resilience.

RETURN TO TOP – CONCEPTUAL FRAMEWORKS

UN DISASTER RISK MANAGEMENT FRAMEWORK

OXFAM'S APPROACH

USAID'S CONCEPTUAL FRAMEWORK

FAO FRAMEWORK

OTHER CONCEPTUAL FRAMEWORKS

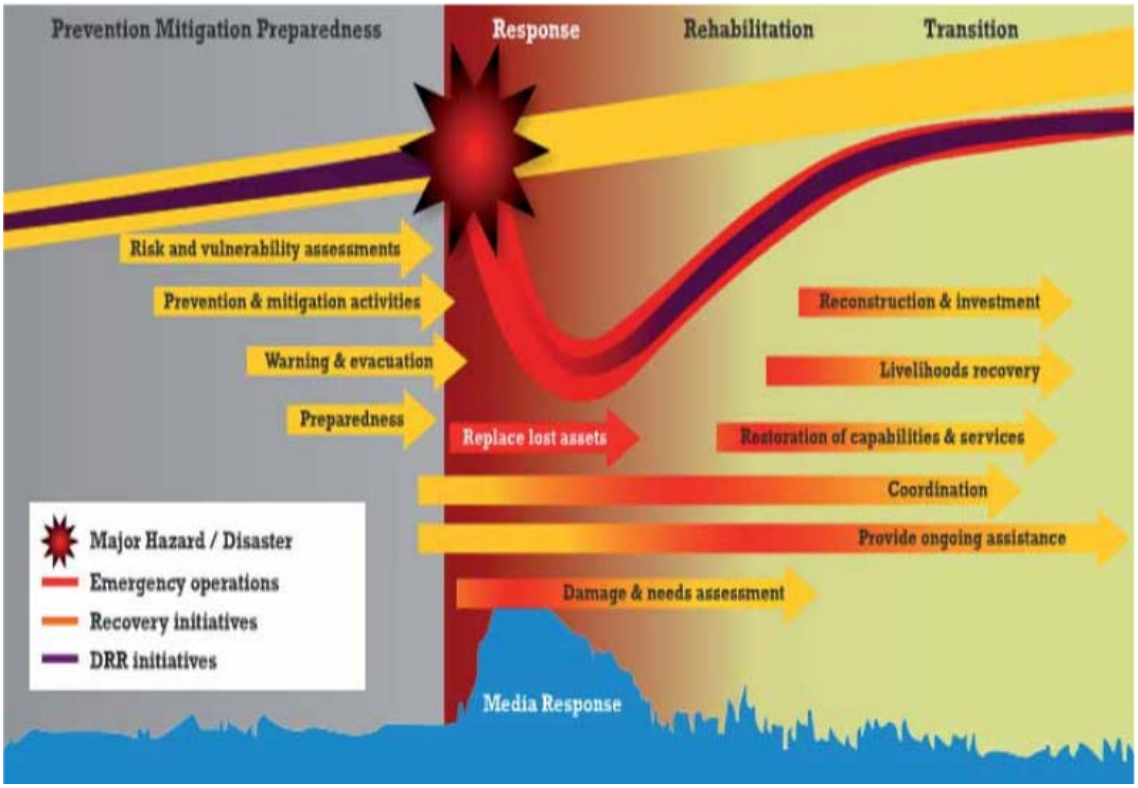
United Nations Disaster Risk Management Framework (DRMF)

This UN framework considers Disaster Risk Management (DRM) as a continuum - an ongoing process of interrelated actions, which are initiated before, during and after disaster situations.

DRM actions are aimed at strengthening the capacities and resilience of households and communities that are vulnerable to recurrent hazards to protect their livelihoods, through measures to prevent or mitigate effects of hazards.

This framework promotes a holistic approach to DRM and demonstrates the relationships between hazard risks/disasters and development.

FIGURE 7: UN DISASTER RISK MANAGEMENT FRAMEWORK



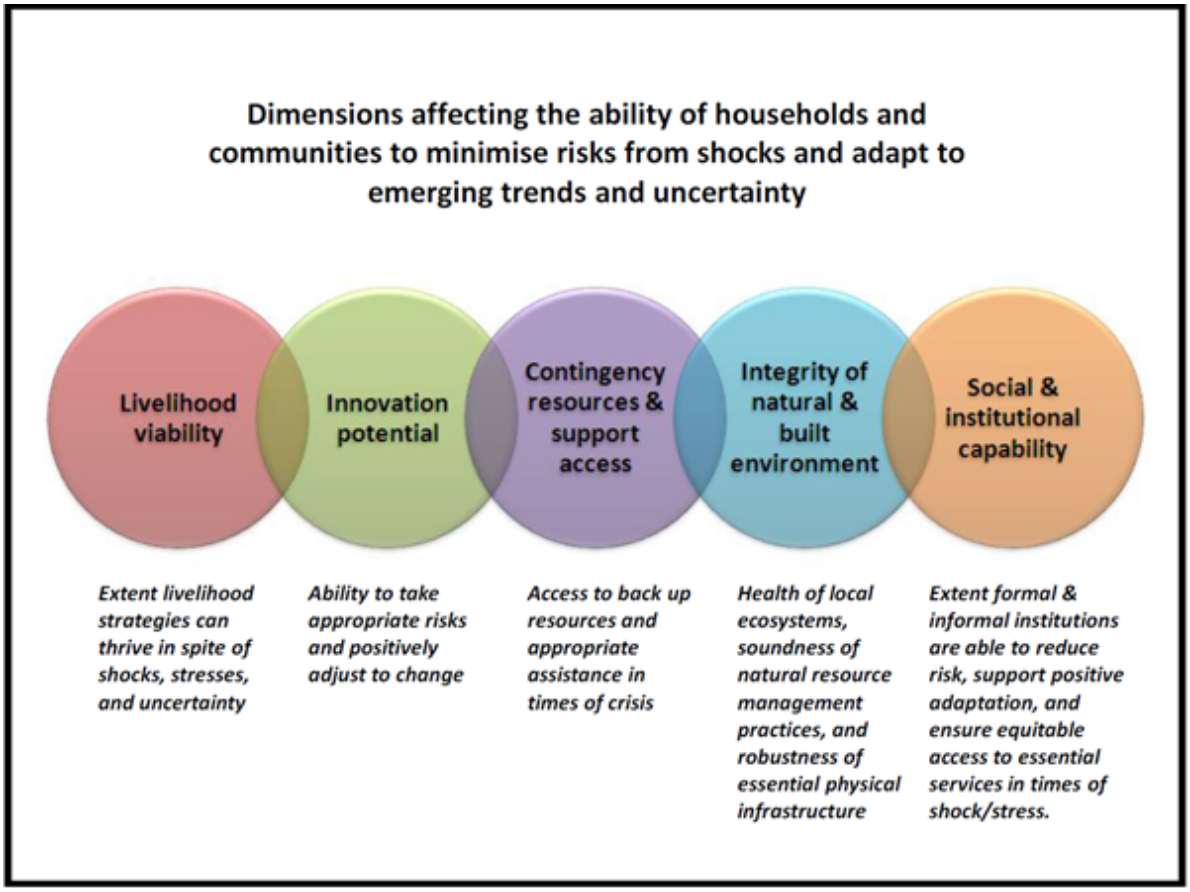
(Source: UN FAO, 2008, p.7)

Oxfam's People-Centred Resilience Approach and Dimensions of Resilience

Oxfam International has proposed "people-centred resilience" with five principles, including: 1) restoring and diversifying natural resources for sustainability; 2) responsive institutions, according to the local context; 3) expanded and improved sustainable livelihood options, largely through markets offering more diverse options and better terms; 4) gender equality; 5) farmer-driven decisions.

Oxfam has also come up with dimensions of resilience (as a pre-cursor to measuring resilience), as shown in the figure below.

FIGURE 8: OXFAM'S RESILIENCE APPROACH



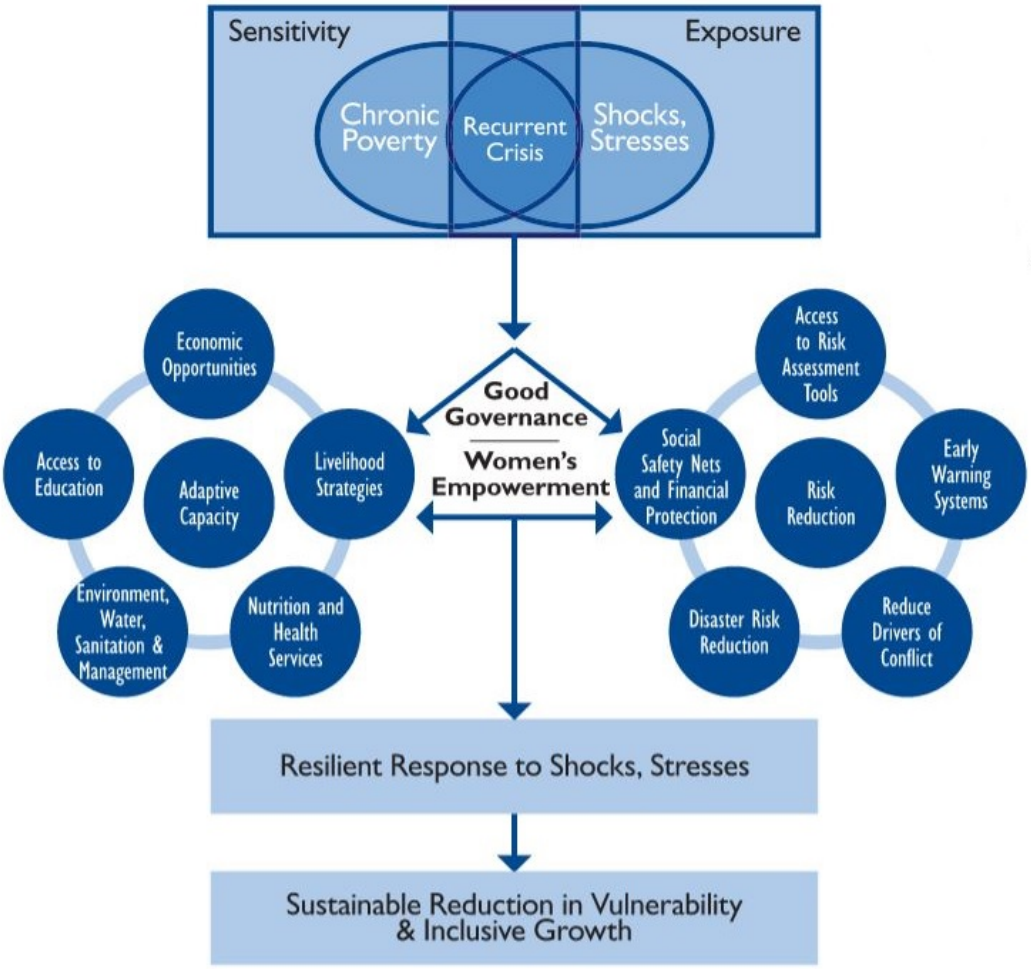
(Source: Oxfam, 2013, p. 5)[2]

[2] The figure, from A Multi-Dimensional Approach to Measuring Resilience, is reproduced with the permission of Oxfam GB, Oxfam House, John Smith Drive, Cowley, Oxford, OX4 2IY, UK, www.oxfam.org.uk. Oxfam GB does not necessarily endorse any text or activities that accompany the materials.

USAID's Conceptual Framework for Resilience

While recognising that the components of adaptive capacity are numerous and wide-ranging, USAID emphasises the five elements displayed on the left hand side of its conceptual framework. Equal importance is placed on ability to reduce risk through assessment, preparedness, mitigation, prevention, and social protection.

FIGURE 9: USAID'S CONCEPTUAL FRAMEWORK FOR RESILIENCE

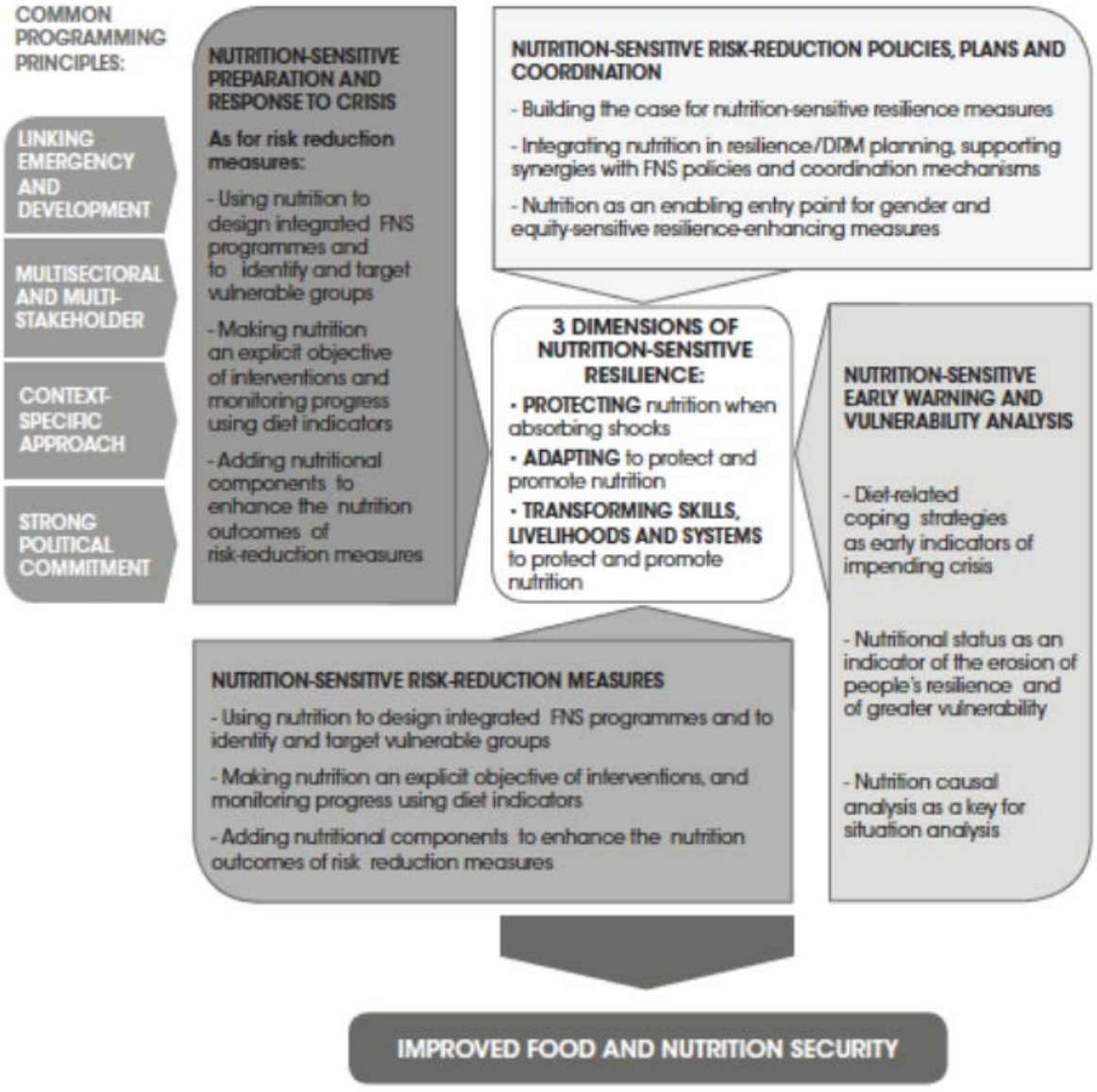


(Source: USAID, 2012, p.10)

FAO's Framework for maximising nutritional impact of resilience programmes

The mutual benefits and conceptual linkages between nutrition and resilience are now being acknowledged: resilience-building programmes can improve nutrition and nutrition programmes can strengthen resilience.[3] FAO has developed a resilience framework to apply the resilience concept to programming. The framework attempts to bring together nutrition, livelihoods and risk reduction concerns under a resilience lens.

FIGURE 10: FAO FRAMEWORK FOR MAXIMISING NUTRITIONAL IMPACT OF RESILIENCE PROGRAMMES



(Source: UN FAO, 2014, p.20)

[3] Gostelow et al. (2016) *Nutrition and Resilience: A Scoping Study Undertaken for the ENN*, available online at: http://files.ennonline.net/attachments/2441/Resilience-report-FINAL-14th-Jan-2016.pdf

BACK TO TOP - CONCEPTUAL FRAMEWORKS

DEFINITIONS
RISE OF RESILIENCE
WHY IS RESILIENCE IMPORTANT?
SCALES OF RESILIENCE
WHAT DONORS ARE DOING
RISK AND ADAPTATION
RISK LAYERING
RESILIENCE PROGRAMMING
TAKE HOME MESSAGES

CONTENTS
HOW TO USE THIS RESOURCE
GLOSSARY
RECOMMENDED RESOURCES
BIBLIOGRAPHY

5. WHAT OTHER DONORS ARE DOING ON RESILIENCE

A useful summary of what seven donors currently have in place for strengthening resilience (including DFID) is included here as a useful, quick and **current** reference to donor: Resilience definitions; Resilience metrics; Funding examples; Geographic focus; Interventions funded. It is adapted from Gostelow, et al., 2016.

TABLE 2: SUMMARY OF DONOR POSITIONS ON RESILIENCE

	RESILIENCE DEFINITION	RESILIENCE METRICS	FUNDING (EXAMPLES)	GEOGRAPHIC FOCUS	INTERVENTIONS FUNDED	COMMENTS
Canada Department of Foreign Affairs, Trade and Development	The ability of individuals, households, governments, regions, and systems to mitigate, resist, absorb, and recover from the effects of shocks and disasters in a timely, sustainable, and efficient manner. http://www.acdi-cida.gc.ca/INET/IMAGES.NSF/vLUImages/Evaluations2/$file/CIDA-learns-eng.pdf		Canada Fund for African Climate Resilience (launched 2012). Can$23 million.	Eight African countries	Ten projects through nine partners http://www.international.gc.ca/development-developpement/partners-partenaires/calls-appels/climate-resilience-climatique.aspx?lang=eng	The evaluation of CIDA's humanitarian assistance recommended that CIDA develop a systematic, integrated approach to supporting prevention and risk reduction, as well as recovery and transition to development. The 2012 OECD DAC Peer Review of Canada echoed this finding, suggesting improvements to Canadian efforts in building resilience and supporting post-crisis recovery.
European Union DEVCO and ECHO	The ability of an individual, a household, a community, a country or a region to withstand, to adapt, and to quickly recover from stresses and shocks. http://ec.europa.eu/echo/files/policies/resilience/com_2012_586_resilience_en.pdf	ECHO introduced a Resilience Marker in Jan 2015. The aim is to ensure that each project systematically considers risks and vulnerabilities, builds local capacity and takes opportunities to reduce humanitarian need in the long-term.	Sep 2015: New €1.8 billion EU Trust Fund for Africa to improve stability and address irregular migration. Resilience integrated. Apr 2015: New €80m EU/AU fund: Building Disaster Resilience in Sub-Saharan Africa. Supports implementation of the African Disaster Risk Reduction Strategy. Resilience integrated.	Sahel, Lake Chad area, the Horn of Africa and North Africa. SHARE (phase II) will be funded through this.		OECD also discussing the potential merits of introducing a resilience marker like ECHO.

	RESILIENCE DEFINITION	RESILIENCE METRICS	FUNDING (EXAMPLES)	GEOGRAPHIC FOCUS	INTERVENTIONS FUNDED	COMMENTS
			DIPECHO not seen as conducive to building resilience: short time-frames; not predictable; poor continuity (of staff and community links).			
Germany Federal Ministry for Economic Cooperation and Development and GIZ	The ability of people and institutions – be they individuals, households, communities or nations – to deal with acute shocks or chronic burdens (stress) caused by fragility, crises, violent conflicts and extreme natural events, adapting and recovering quickly without jeopardising their medium and long-term future. http://www.bmz.de/en/what_we_do/issues/transitional-development-assistance/index.html	Launched 'Resilience Learning Initiative' in 2014. Capturing lessons from Madagascar, Haiti and Bangladesh from 5 projects funded by the TDA. Findings due Nov 2015.	Transitional Development Assistance (TDA) is a special budget line to bridge humanitarian and development aid. It is the only mention of resilience in German policy. Aim: *To increase the resilience of people and institutions to withstand the impact and consequences of crises, violent conflict and extreme natural events while improving the prospects for sustainable development.*	Fragile states; Protracted crises; vulnerable countries at high risk of natural hazard and climate change	Infrastructure; DRM; (re)integration of refugees; food and nutrition security	GIZ Capacity Works manual predates resilience discussions in Germany; it is about effective management of Germany's international cooperation. Resilience is implicit within that cooperation, but is rarely labelled that. Resilience discourse is stronger in BMZ than in Federal Foreign Office (which provides emergency aid, transitional humanitarian aid and emergency preparedness). BMZ decision regarding resilience pends outcomes from learning initiative (and possibly influence from international agenda).
Ireland Irish Aid	Resilience is the ability of people and communities, as well as countries, to withstand setbacks such as extreme weather events like flooding, an outbreak of violence, or an unexpected dip in income. Being resilient means you are better prepared, better able to cope, and better placed to recover.			Resilience is one of three goals in Irish Aid's policy for international development, 'One World One Future'.		Irish Aid has positioned resilience centrally in its international development policy and is in the process of developing guidance for country offices. Seeks to learn from experience of other actors, including OECD.

	RESILIENCE DEFINITION	RESILIENCE METRICS	FUNDING (EXAMPLES)	GEOGRAPHIC FOCUS	INTERVENTIONS FUNDED	COMMENTS
	https://www.irishaid.ie/media/irishaid/allwebsitemedia/20newsandpublications/publicationpdfsenglish/one-world-one-future-irelands-new-policy.pdf					
OECD Organisation for Economic Cooperation and Development	The ability of individuals, communities and states and their institutions to absorb and recover from shocks, while positively adapting and transforming their structures and means for living in the face of long-term changes and uncertainty. http://www.oecd.org/dac/May%2010%202013%20FINAL%20resilience%20PDF.pdf					Established Experts Group on Risk and Resilience and produced several papers to support donors. Resilience Systems Analysis tool – allows joint analysis and prioritisation of resilience options by step by step approach to holding a multi-stakeholder workshop, designing a roadmap to boost resilience and integrating the results of the analysis into humanitarian and development planning.
UK Department for International Development	Disaster Resilience is the ability of countries, communities and households to manage change, by maintaining or transforming living standards in the face of shocks or stresses – such as earthquakes, drought or violent conflict – without compromising their long-term prospects. 2011. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/186874/defining-disaster-	Minimum progress indicators were developed by countries to embed resilience in all country programmes by 2015.	£5m catalytic fund managed by CHASE supported embedding process. Trying to increase development funding for resilience and move away from humanitarian. (Multi-year humanitarian funding coincided with embedding process and found helpful).	Embedded resilience in 25 countries in 2 regions.	Strengthened harmonisation of different kinds of programmes, especially between DRR, social protection and climate change adaptation. Requires focus on strengthening institutions.	DFID partners established Inter-Agency Resilience Learning Group to share learning. One DFID paper mentions: "A coalition of interested donors, working through the Good Humanitarian Donorship initiative, might be able to work towards better, more consistent and more predictable funding for disaster resilience. This could have both a global dimension (e.g. pooled funds) and an operational dimension (to ensure effective resilience leadership in different disasters)" – but no evidence found of this.

	RESILIENCE DEFINITION	RESILIENCE METRICS	FUNDING (EXAMPLES)	GEOGRAPHIC FOCUS	INTERVENTIONS FUNDED	COMMENTS
	resilience-approach-paper.pdf					
United States USAID	Resilience is the ability of people, households, communities, countries and systems to mitigate, adapt to, and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth. http://www.usaid.gov/sites/default/files/documents/1870/USAIDResiliencePolicyGuidanceDocument.pdf New USAID Mission Statement: to end extreme poverty and to promote resilient, democratic societies while advancing our security and prosperity. http://www.usaid.gov/who-we-are/mission-vision-values Key Resilience principles: » Build resilience as a common objective; » Create and foster linkages » Enable host country/regional ownership » Focus on the long-term	Results: » Increased adaptive capacity » Improved ability to address and reduce risk » Improved social and economic conditions of vulnerable populations. Indicators to measure progress in building resilience = reduction in humanitarian assistance needs; depth of poverty; moderate to severe hunger; and global acute malnutrition.	No specific resilience funding mechanism, use existing streams, e.g. USAID's RISE initiative (Resilience in the Sahel Enhanced) commenced in 2014. This includes a specific funding commitment in Burkina Faso and Niger (of $130 million for the first two years) to address the root causes of persistent vulnerability. In four other countries (Senegal, Mali, Mauritania and Chad), RISE leverages existing humanitarian and development assistance to support the AGIR process.	Horn, Sahel, South and SE Asia. Horn and Sahel countries selected based on several criteria, including 'persistently high acute malnutrition'	Priority components to build adaptive capacity are: livelihood strategies; health & nutrition services; environment, water, sanitation & management; education; and economic opportunities. SPRING is part of RISE.	Integrated humanitarian/development efforts: » Joint problem analysis and objective setting; » Intensified, coordinated strategic planning around resilience; » Mutually informed project designs and procurements to enable the layering, integrating, and sequencing of humanitarian and development assistance; » Robust learning. Have used Joint Planning Cells (JPCs) in the Horn and Sahel

The Global Resilience Partnership – convened by Rockefeller Foundation, USAID and SIDA is in its early stages but could produce future outputs of relevance.

↑	BACK TO TOP - WHAT DONORS ARE DOING

→	DEFINITIONS
→	RISE OF RESILIENCE
→	WHY IS RESILIENCE IMPORTANT?
→	SCALES OF RESILIENCE
→	CONCEPTUAL FRAMEWORKS
→	RISK AND ADAPTATION
→	RISK LAYERING
→	RESILIENCE PROGRAMMING
→	TAKE HOME MESSAGES

☰	CONTENTS
💡	HOW TO USE THIS RESOURCE
🔖	GLOSSARY
★	RECOMMENDED RESOURCES
📖	BIBLIOGRAPHY

6. LINKING RESILIENCE TO RISK AND ADAPTATION

RESILIENCE AS AN ADAPTED RISK MANAGEMENT APPROACH

An alternative approach to thinking about resilience is to recognise the similarities between risk management and resilience as organising frames.

Risk and resilience approaches are both context-specific and share several characteristics:

- They provide a holistic framework for assessing systems and their interaction, from the household and communities through to the sub-national and national level
- They emphasise capacities to manage hazards or disturbances
- They help to explore options for dealing with uncertainty and change
- They are proactive.

A system that is effective in managing risk through a range of options is likely to become more resilient to shocks and stresses. Managing risk in this context means reducing, transferring and sharing risk, preparing for recurrent, infrequent or unexpected events and responding or recovering efficiently (Mitchell, T. and Harris, K, 2012). While risk management has traditionally focused on quantifiable elements, e.g. physical or financial assets or quantitative data on hazards, resilience approaches aim to capture broader human vulnerabilities and capacities. *(See 'Risk Management' resource for further information.)*

The resilience concept also has implications for approaches to risk management in infrastructure developments. Traditionally, infrastructure planning considered the risks in the later stages of a project, but the need to consider resilience of people necessitates a multi-sector planning approach that looks at risks to livelihoods and wellbeing at the start. *(See 'Resilience in Infrastructure' resource – and specifically the section on Risk Assessment and Overall Strategy Development and Joint Planning.)*

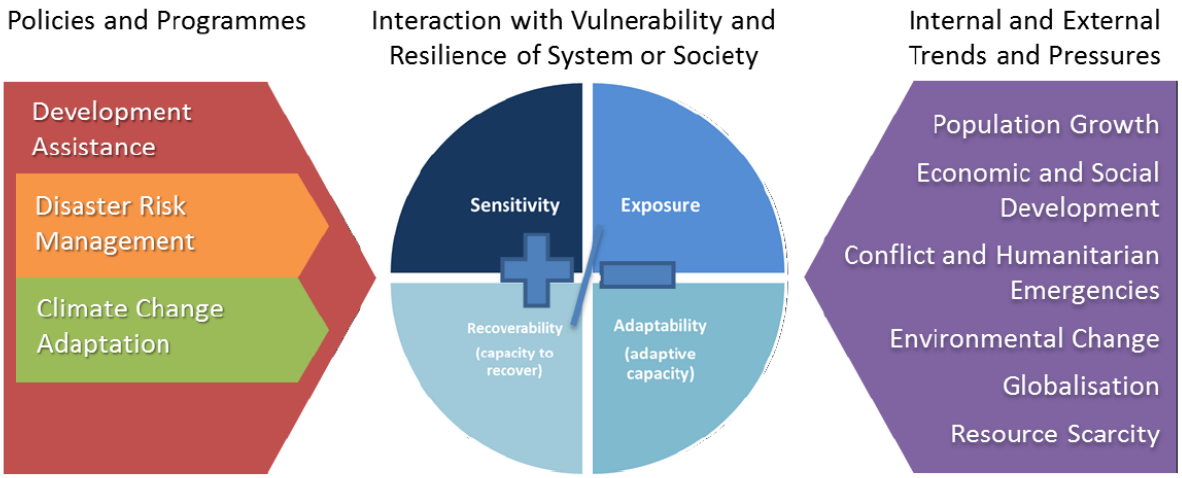
Resilience and adaptation

Adaptation is a sub-category of resilience, usually applied to climate change. Climate change will have an impact on climate 'shocks', e.g. storms, but will also lead to more gradual climatic changes (climate 'stress'). Adaptation activities aim to lessen the impacts of stresses and shocks through reducing the vulnerability of human and natural systems and enhancing resilience.

The diagram below shows the interaction between development, adaptation and disaster risk management, and external and internal change factors, on the vulnerability and resilience of a system or society.

BACK TO TOP OF PAGE

FIGURE 11: INTERACTION BETWEEN DEVELOPMENT, ADAPTATION AND DISASTER RISK MANAGEMENT

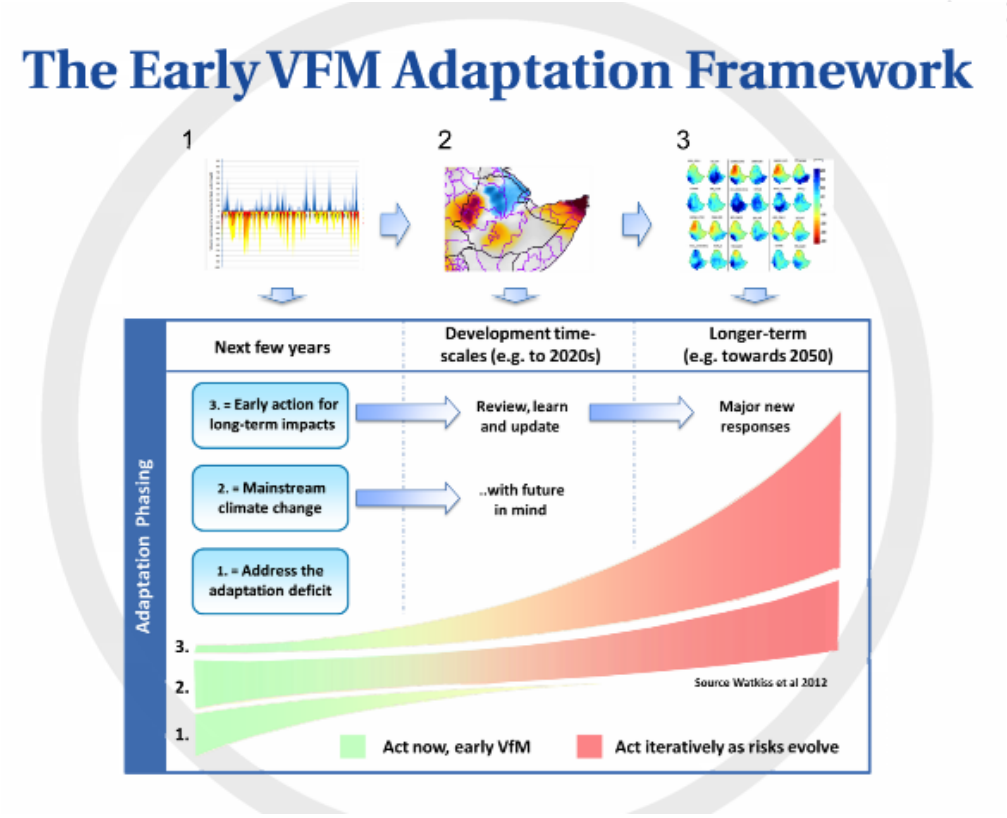


(Source: Ranger, 2013, p.6)

While DRM, development and climate change adaptation can be seen as three interdependent and reinforcing policy goals, all contributing to **climate-resilient development**, there may be trade-offs. A key challenge of implementing adaptation is around decision-making and cost-benefit analysis in the face of climate uncertainty (see Topic Guide – Adaptation: Decision Making Under Uncertainty) and how to build resilience to both current and future climate risk. Not all resilience investments will represent Value for Money (VfM).

DFID has developed a Value for Money (VfM) Adaptation Framework to support the framing, sequencing and prioritisation of early adaptation planning at a number of intervention levels. A core idea is that in order to assess VfM options it is necessary to map out climate risks in different time contexts (current, near future and long-term) – see figure that follows below.

FIGURE 12 THE EARLY VFM ADAPTATION FRAMEWORK



(Source: Olsson, 2015)

BACK TO TOP - RISK AND ADAPTATION

DEFINITIONS
RISE OF RESILIENCE
WHY IS RESILIENCE IMPORTANT?
SCALES OF RESILIENCE
CONCEPTUAL FRAMEWORKS
WHAT DONORS ARE DOING
RISK LAYERING
RESILIENCE PROGRAMMING
TAKE HOME MESSAGES

CONTENTS
HOW TO USE THIS RESOURCE
GLOSSARY
RECOMMENDED RESOURCES
BIBLIOGRAPHY

7. RISK LAYERING

[For a more detailed analysis of risk management and risk financing, including risk layering, see '**Risk Management**' resource.]

DFID definition of risk: Risk is defined as uncertainty, whether positive or negative, that will affect the outcome of an activity or intervention. (DFID risk management guidance)

"Risk is determined through the investigation of hazards (e.g., probabilities, expected intensities), exposures (elements at risk), and vulnerability (potential damage given intensities), and can be expressed as a function of probability and likely impacts within a given time horizon." (OECD, 2012, p.37)

What is risk layering?

For OECD, risk layering is a risk management strategy. It involves segmenting risks into different layers according to the probability of occurrence of risk and potential magnitude of the losses. This segmentation may help with matching risks to the most appropriate **management mechanisms** or **financial instruments** (OECD, 2009).

Layers:

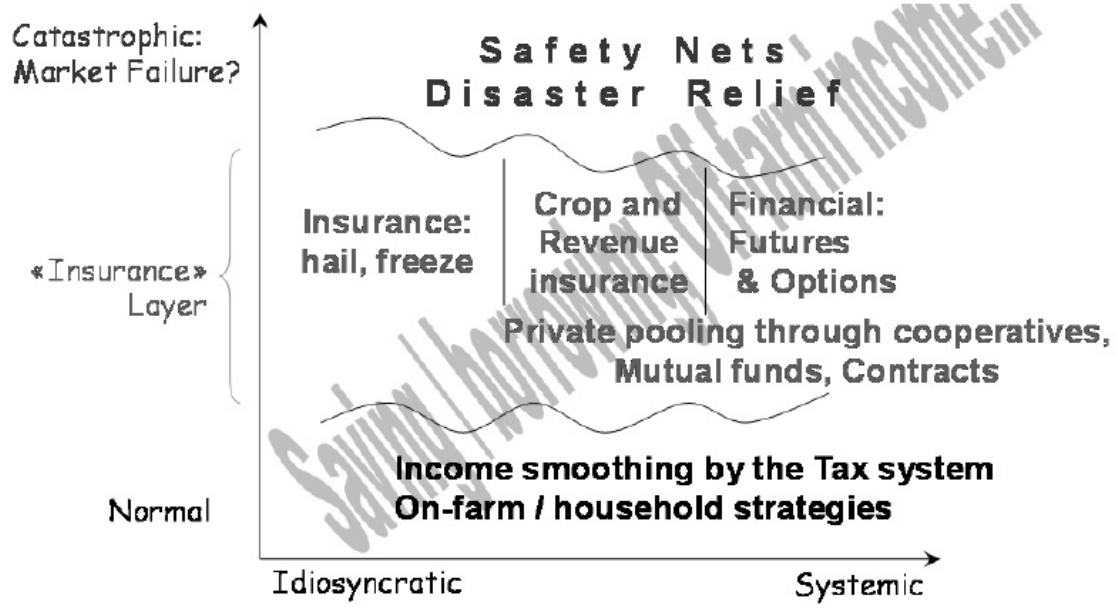
Risks that are frequent but do not imply large losses– managed through normal instruments. ('*normal' risk/risk retention layer*)

More significant but less frequent, intermediate risks - some specific insurance or market solutions can be developed for these, though the solutions may need to be subsidised by governments (*market insurance layer*)

Risks that are infrequent but generate a large amount of damage to income - market failure is more likely (*catastrophic risk layer/market failure layer*).

See figure that follows.

FIGURE 13: EXAMPLE OF RISK LAYERING APPLIED TO AGRICULTURE (RISK MANAGEMENT MECHANISMS)



[Idiosyncratic risk - risk affecting an individual or household

Systemic risk - risks affecting regions or nations]

(*Source:* OECD, 2009, *p.27, adapted from Cordier and Debar, 2004)*

Risk layering and financing

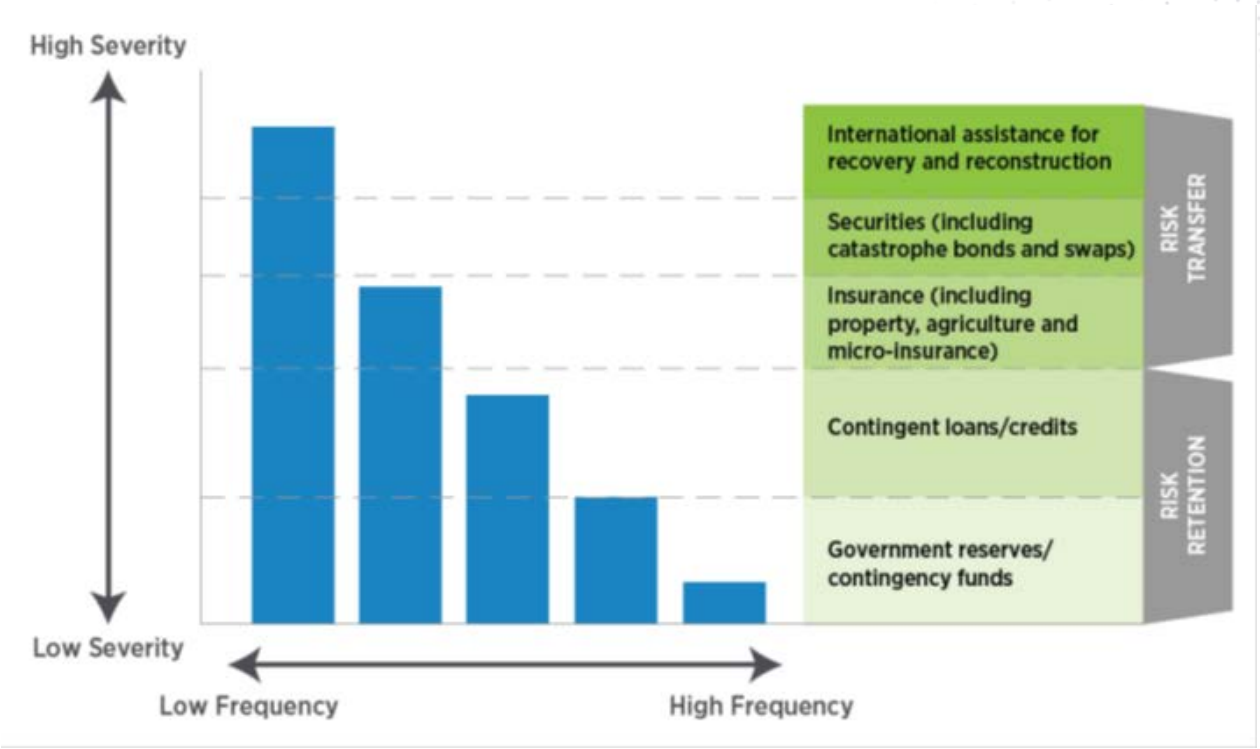
Stefan Dercon, the OECD and the World Bank also discuss risk layering in terms of disaster risk finance e.g. using a layering strategy to match post-disaster short- and long-term financing needs, that combines financial tools including government reserves/savings, contingent loans, and sovereign market-based risk transfer solutions (see Glossary for explanation of terms).

Logically, cheaper sources of financing should be used first, with more expensive instruments used only in particular circumstances. **Such an approach is called "layering,"** and is used to design a risk financing strategy (Dercon, 2016).

See figure that follows.

BACK TO TOP

FIGURE 14: LAYERING OF FINANCIAL PROTECTION INSTRUMENTS FOR GOVERNMENTS



(Source: Dercon, 2016, adapted from World Bank and GFDRR, 2013)

The diagram shows a layering example for government recovery and reconstruction, with a bottom-up approach.

- Contingency funds and government reserves are the cheapest source of financing and will generally be used to cover recurrent losses.
- Contingent credit, emergency loans and possibly insurance should enter into play only once reserves and budget contingencies are exhausted. This strategy means securing funds for recurrent disaster events first, followed by post-disaster capacity to finance less frequent but more severe events.
- An optimal overall strategy has to ensure funding for the most extreme rare events. It should work with those who can bear some of the risk (e.g. Governments, firms and households) and let markets insure the right risks internationally (such as via cat-bonds and swaps – see Glossary) so that the size of the contingent liability of the global system becomes manageable and therefore more credible.

OECD has a similar diagram on risk layering and the application of financial instruments – see page 5 of Poole, L. (2014) A Calculated Risk: How Donors Should Engage with Risk Financing and Transfer Mechanisms, OECD DAC

BACK TO TOP - RISK LAYERING

DEFINITIONS
RISE OF RESILIENCE
WHY IS RESILIENCE IMPORTANT?
SCALES OF RESILIENCE
CONCEPTUAL FRAMEWORKS
WHAT DONORS ARE DOING

8. WHAT DOES RESILIENCE PROGRAMMING LOOK LIKE?

This section includes:

- An example of resilience programming in Nepal
- An example of resilience programming in Ethiopia and related case study details
- World Vision's experience of integrating resilience into programmes
- Latest evidence on conflict and climate change, which may be pertinent for building resilience in fragile and conflicted affected states.

[Also see the material from programme case studies in the **'Social Protection and Climate Resilience'** resource.]

Note that these examples may not adequately reflect the need to integrate or coordinate infrastructure planning for a truly holistic approach to programming. Infrastructure investments may compete with other development interventions and may not necessarily improve the longer term resilience of communities. Improving livelihoods and wellbeing may entail relocation of infrastructure. For more information, see the Infrastructure Opinion Piece.

FIGURE 15: EXAMPLE OF A RESILIENCE PORTFOLIO: NEPAL

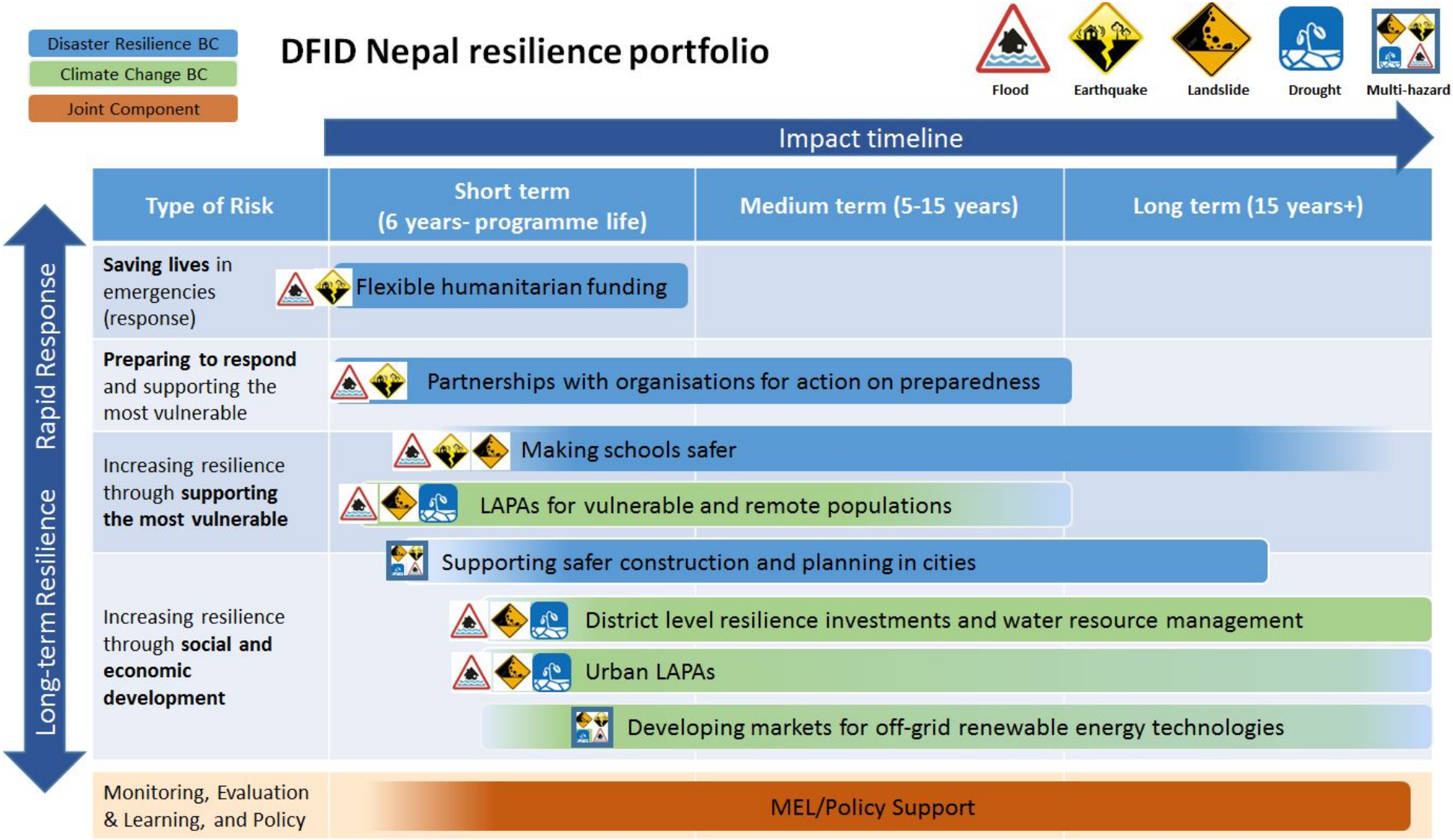
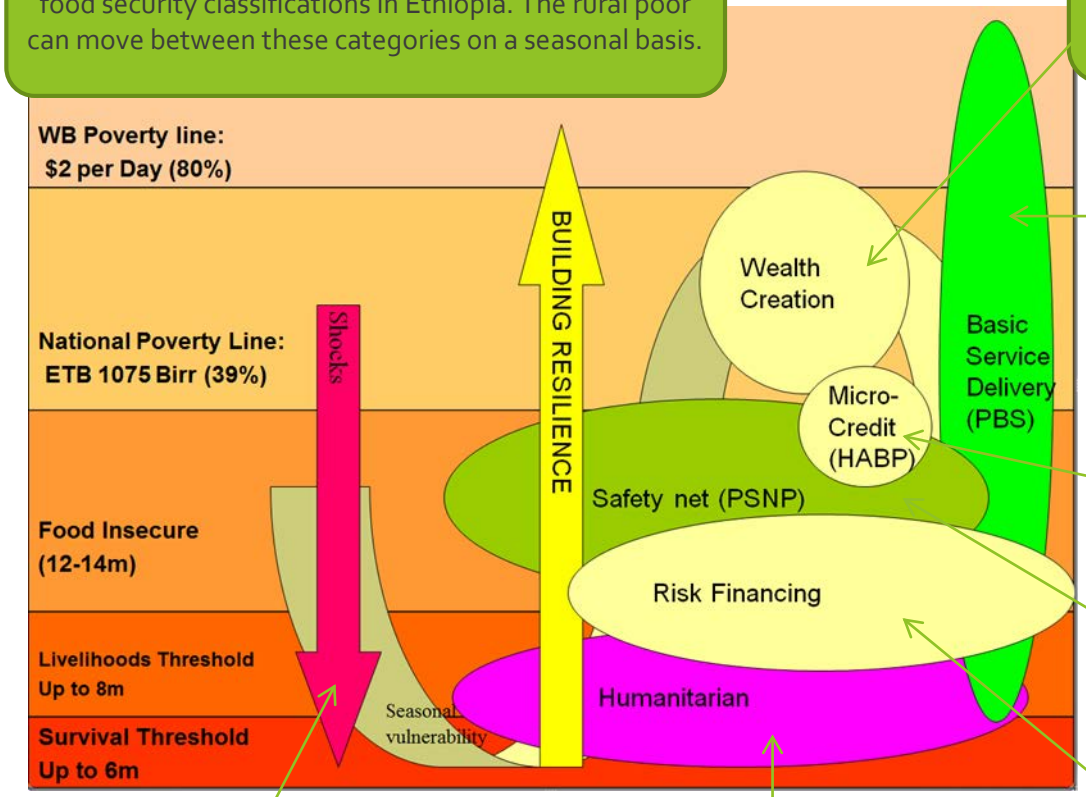


FIGURE 16: EXAMPLE OF HOLISTIC PROGRAMMING FOR RESILIENCE IN ETHIOPIA: THE 'LAVA LAMP' FRAMEWORK

The 'Lava Lamp' diagram below maps out DFID programmes in Ethiopia against the sections of society that they support - resilience can be promoted across all wealth categories by fostering links between these programmes.

The horizontal backdrop shows the different wealth and food security classifications in Ethiopia. The rural poor can move between these categories on a seasonal basis.



Wealth creation (e.g. Private Enterprise Programme Ethiopia) and climate adaptation (e.g. BRACED) programmes are focusing on more productive populations or systemic changes required to create economic diversification and more resilient economy and society.

Protection of Basic Services (PBS) covers education, health, water and sanitation, agriculture and roads, aiming to reach all sections of society, though many of the poorest are out of reach.

The Household Asset Building Programme (HABP) is attached to PSNP (since 2010) and promotes opportunities for people to access loans and credit. It seeks to diversify income source and increase productive assets in the long term, with mixed results.

The Productive Safety Net Programme (PSNP) is targeted at the bulk of chronic food insecure people, predominantly in the highlands. Since 2006, PSNP has given cash or food transfers to vulnerable households, often in exchange for work restoring local environment.

Shocks at climatic, conflict-related, economic or household (e.g. death, illness) level can push households deeper into vulnerability.

Humanitarian responses (through the pooled Humanitarian Response Fund and WFP Emergency Response) are aimed at the bottom 2-8m that experience acute and transitory needs.

The Risk Financing Mechanism (RFM) has the potential to allow PSNP to scale up (more people or prolonged receipt of transfers) and cover additional needs in times of shock.

Also see LTS (2013) Coping with change: How Ethiopia's PSNP and HABP are building resilience to climate change **and** DFID approach paper to building resilience in Ethiopia

Note that infrastructure planning or programming seems to be 'missing' from the lava lamp diagram above, which suggests further work could be done on integrating livelihoods and infrastructure concerns.

Case study: a holistic approach to resilience in Ethiopia

Context

More than 30 million Ethiopians live in extreme poverty. Each year, between 10 and 15 million people (13-19% of the population) are unable to meet their basic food needs. Of these, 7.8 million chronically food-insecure people receive assistance through the national safety net programme. The remainder are dependent on relief food assistance. Population growth and fluctuating commodity prices are putting pressure on a vulnerable population.

Objectives/coverage

DFID has developed integrated instruments targeted to meet the different needs of different sections of the population. This includes investment in delivery of basic services, addressing future and current impacts of climate change, supporting economic diversification and the Productive Safety Net Programme (PSNP) for those under the national poverty line (7.8m). There are two supplementary programmes attached to PSNP – the Household Asset Building Programme (providing access to credit to 400,000 households) and the Risk Financing Mechanism (to allow expansion of PSNP). However, DFID is also supporting humanitarian response - each year 2-7m people outside of PSNP still require emergency food.

Achievements

The PSNP has had success in keeping children in school, preventing the sale of assets, such as animals, and improving household food security, even in periods of acute need. There is good evidence of programme achievements (see World Bank (2011) 'Leaving No-one Behind: Ethiopia's Productive Safety Net and Household Asset Building Programmes').

BACK TO TOP OF PAGE

World Vision's experience of integrating resilience into programmes

Over a ten year period World Vision's risk reduction approach evolved to include a range of risks - including climate change but this was not systematised across all its programming.

To ensure sustainability and resilience, World Vision developed a strategy called Drivers of Sustainability (see Annex 1 of this ODI review). National Offices must demonstrate how they incorporate the 5 pillars of Sustainability from strategy down to monitoring and evaluation. The Drivers of Sustainability include resilience.

World Vision's National Offices, in test pilot countries, are developing their technical approaches and programmes for the next 5 years that should demonstrate how they are achieving sustainability according to their context and strategy. This will provide evidence of change from baselines.

World Vision's Global Programme on Resilience and Livelihoods includes cross-sectoral approaches to help people graduate out of poverty while maintaining their environmental landscapes (but infrastructure concerns might be missing).

For further details, see ODI's 2014 review – Institutionalising resilience: the World Vision Story

Key programming recommendations from ODI's review:

- Build multi-hazard risk assessment and resilience approaches for all sectors into programme management systems
- Develop a theory of change to establish how resilience will be built and for whom
- Combine sector programmes to address root causes of vulnerability, with regular context monitoring
- Maximise the participation of children and young people, including those outside formal groups.

CLIMATE CHANGE AND CONFLICT

While there are a large number of studies[4] that seek to demonstrate a direct link between climate change and increased conflict, it is not possible to draw firm conclusions (Selby, 2014). Selby (2014) critiqued 33 quantitative studies and found divergent views on the relationship between rainfall variability and conflict or temperature rises and conflict. While Selby found some agreement that rainfall variability enhances the risk of localised, small-scale conflicts, the presence of institutions that can manage conflicts are a critical factor in mediating risks.

Nevertheless, the peer-reviewed 2014 Topic Guide: Conflict, Climate and Environment (Peters and Vivekananda, 2014) argues that climate change is already having an impact on conflict, security and fragility e.g. in Darfur and the Sahel and will continue to be a risk multiplier.

This reflects the position of the Intergovernmental Panel on Climate Change (Adger et al. 2014, see Chapter 12 of 5th Assessment Report), which states that climate change will be an increasingly important driver of human insecurity in the future. Investments in institutions that can manage adaptation can minimise negative impacts of climate change on human security. Adaptation and mitigation can exacerbate conflict if not 'conflict-sensitive'.

(For further information, see DFID's internal presentation on Climate Change and Conflict by Andrew Clayton from January 2016).

In some fragile and conflicted affected states, infrastructure (particularly critical infrastructure) may need to be conflict resilient as well as disaster resilient.

The Zimbabwe Resilience Building Fund is the first large-scale multi-donor fund specifically targeting resilience building in a fragile and conflict affected state. (See 'Social Protection and Climate Resilience' resource.)

Also see: Pathways to Resilience: Evidence From Africa on Links Between Conflict Management and Resilience to Food Security Shocks. This is a webcast from March 2016. It presents a series of new research studies conducted by Mercy Corps in the Horn of Africa, the Democratic Republic of Congo, and Nigeria. It argues that strengthening conflict management systems helps build resilience to economic and climate-related shocks.

BACK TO TOP - RESILIENCE IN PROGRAMMING

DEFINITIONS
RISE OF RESILIENCE
WHY IS RESILIENCE IMPORTANT?
SCALES OF RESILIENCE
CONCEPTUAL FRAMEWORKS
WHAT DONORS ARE DOING
RISK AND ADAPTATION
RISK LAYERING
TAKE HOME MESSAGES

[4] For example, see Raleigh and Kniveton, 2012 for an analysis of conflict and climate variability in East Africa.

9. TAKE HOME MESSAGES

1	Resilience as a concept has a long and multi-disciplinary history but has come to prominence in the international development sphere amid concerns over inadequate responses to recurrent humanitarian crises. [further details]
2	There is no standard definition of resilience but it is providing a common agenda across multiple sectors - humanitarian, livelihoods, social protection, climate change adaptation, and infrastructure - and is set to remain as a central concept for the next decade. The definitions reflect the conceptual frameworks in which they operate. [further details]
3	Conceptual frameworks vary between agencies according to area of focus (e.g. livelihoods, infrastructure), but there is much overlap in practice. They appreciate the multi-dimensional and multi-stakeholder nature of resilience and the need to improve capacities and manage risk. [further details]
4	Resilience can be seen as a new approach to risk management. It provides a holistic and proactive framework to deal with uncertainty and to assess risks in terms of hazards, vulnerabilities and capacities in the early stages of planning interventions (including infrastructure). [further details]
5	Part of DFID's current approach includes applying insurance and risk finance solutions, so that disaster management and resilience become 'business as usual'. [further details]

BACK TO TOP - TAKE HOME MESSAGES

DEFINITIONS
RISE OF RESILIENCE
WHY IS RESILIENCE IMPORTANT?
SCALES OF RESILIENCE
CONCEPTUAL FRAMEWORKS
WHAT DONORS ARE DOING
RISK AND ADAPTATION
RISK LAYERING
RESILIENCE IN PROGRAMMING

CONTENTS
HOW TO USE THIS RESOURCE
GLOSSARY
RECOMMENDED RESOURCES
BIBLIOGRAPHY

GLOSSARY

Absorptive capacity - the ability of a system to prepare for, mitigate or prevent negative impacts, using predetermined coping responses in order to preserve and restore essential basic structures and functions. This includes coping mechanisms used during periods of shock. Climate change adaptation - reducing vulnerability and building resilience to climate-related shocks and stresses (Ranger, 2013)

Adaptive capacity - ability of actors (individuals, communities, governments) to adjust to a disturbance, moderate potential damage, take advantage of opportunities and cope with the consequences of a change.

Catastrophe bonds/CAT bonds - A high-yielding, insurance-linked security providing for payment of interest and/or principal to be suspended or cancelled in the event of a specified catastrophe, such as an earthquake of a certain magnitude within a predefined geographical area. (GFDRR/World Bank, 2012)

Climate change adaptation - reducing vulnerability and building resilience to climate-related shocks and stresses (Ranger, 2013)

Climate resilience – incorporates disaster resilience + ability to cope with longer term climate changes (including transformative change/tipping points) (DFID, 2013)

Contingent loans – loans provided by multilateral finance institutions such as the World Bank, that are specially designed to manage developing country disaster risk

Covariate shock – relates to shocks that affect whole communities and countries and can trigger other shocks

Disaster resilience – the ability of countries, communities and households to manage change, by maintaining or transforming living standards in the face of shocks or stresses – such as earthquakes, droughts or violent conflict – without compromising their long-term prospects (DFID, HERR)

Disaster risk management - The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster. (UNISDR, 2007)

Disaster risk reduction - The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events. (UNISDR, 2007)

Exposure - assessment of the magnitude and frequency of shocks or the degree of stress.

Hazard - the likelihood, probability, or chance of a potentially destructive phenomenon.

Idiosyncratic shock – relates to household or individual level vulnerabilities

Reserves – national-level funds that governments set aside as a contingency for responding to unexpected events such as natural disasters.

Reinsurance – insurance taken out by an insurance company

Sensitivity - the degree to which a system will be affected by, or respond to, a given shock or stress.

Shocks, stresses – an element or event that causes adverse effects. Shocks tend to be more sudden, while stresses are slower on-set e.g. a natural disaster such as a flood or earthquake would be categorised as a shock while gradual climate change may produce climate stress over time e.g. reduced freshwater supply

Sovereign disaster risk financing instruments – National-level mechanisms for responding to disasters either before they occur (ex-ante) or after they occur (ex-post). Ex-ante instruments include market-based

mechanisms such as insurance and bonds. Ex-post instruments include new government loans, extra taxation, budget re-allocation, requesting donor funds.

SWAPS – A financing product whereby catastrophe risk is 'swapped' between two reinsurers with exposure to different types of catastrophe risk.

Transformative capacity - the ability to create a fundamentally new system so that the shock will no longer have any impact. This can be necessary when ecological, economic or social structures make the existing system untenable.

BACK TO TOP - GLOSSARY

DEFINITIONS
RISE OF RESILIENCE
WHY IS RESILIENCE IMPORTANT?
SCALES OF RESILIENCE
CONCEPTUAL FRAMEWORKS
WHAT DONORS ARE DOING
RISK AND ADAPTATION
RISK LAYERING
RESILIENCE IN PROGRAMMING
TAKE HOME MESSAGES

CONTENTS
HOW TO USE THIS RESOURCE
RECOMMENDED RESOURCES
BIBLIOGRAPHY

RECOMMENDED RESOURCES

OVERVIEW OF RESOURCES

Where can I find a quick and simple introduction to disaster resilience?

Where can I find the DFID strategy that underpins resilience programming?

Where can I read a detailed rationale for a disaster risk financing strategy?

Where can I read about the World Bank's experience of building disaster risk into development?

How do I put the VfM Adaptation Framework into practice?

Where can I find a detailed guide on climate resilience, adaptation and decision-making?

The six resources that follow have been chosen on the basis of accessibility in terms of presentation and content, their relevance to understanding resilience and recommendations from DFID staff. For each resource we also include links to further reading/resources. Click on the links below to go directly to the resource or read our overviews first.

To jump straight to a relevant resource, hover the cursor over a question box without clicking. When you see the instruction "CTRL + Click to follow link" hold down the CTRL key, and then click. To return to the list hold ALT + Left Arrow key together.

- Topic Guide on Disaster Resilience [overview]
- Dull Disasters [overview]
- DFID's Strategy paper on building resilience [overview]
- World Bank's Building Resilience: integrating climate and disaster risk into development [overview]
- Value for Money Adaptation Framework website [overview]
- Topic Guide – Adaptation: Decision making under uncertainty [overview]

↑	BACK TO TOP -RECOMMENDED RESOURCES

→	DEFINITIONS
→	RISE OF RESILIENCE
→	WHY IS RESILIENCE IMPORTANT?
→	SCALES OF RESILIENCE
→	CONCEPTUAL FRAMEWORKS
→	WHAT DONORS ARE DOING
→	RISK AND ADAPTATION
→	RISK LAYERING
→	RESILIENCE IN PROGRAMMING
→	TAKE HOME MESSAGES

☰	CONTENTS
💡	HOW TO USE THIS RESOURCE
🔖	GLOSSARY
📖	BIBLIOGRAPHY

GSDRC Topic Guide on Disaster Resilience

How the material could be used
Easy to read summary of literature on: analysing and measuring disaster resilience, supporting the enabling environment/governments, supporting adaptive capacities and financing resilience. Also contains an evidence guide on factors enabling or hindering disaster resilience.

Why this is a good resource
This online/PDF Topic Guide from 2014 gives an introductory and neutral overview of disaster resilience (history, concepts, benefits, constraints and approaches) and synthesises evidence, approaches and lessons from academic and grey literature.

Length and level of detail
Split into sections online so is easy to navigate. Alternatively, the PDF format is 41 pages. This is an introductory overview with clear references to further evidence.

How to reference
Combaz, E. 2014. *Disaster resilience: Topic guide.* Birmingham, UK: GSDRC, University of Birmingham.

Links to further material
» Humanitarian Policy Group video 10 things you should know about disaster risk reduction

Was this resource useful?
Please contact us with comments on how you have used this resource or if you have further suggestions/questions.

Keywords [tags]
disaster resilience, overview, introduction, synthesis, literature review, evidence, concepts

Dull Disasters

How the material could be used

This resource could help with applying the concepts of insurance from the private sector and risk financing to programming.

RECOMMENDED BY:

TIM CONWAY

SENIOR SOCIAL DEVELOPMENT ADVISER, DFID ETHIOPIA, DFID CLIMATE & ENVIRONMENT DEPARTMENT, AND MANY OTHERS!

Why this is a good resource

This paper (book to be published in May 2016) is basically about how DFID can use the **principles of insurance** to improve resilience programming in the face of increasing disasters and an inadequate global humanitarian system. The message is that our response to disasters needs to be pre-emptive and business-as-usual; indeed something rather dull and boring. But we must first acknowledge collective action problems and coordination failures that affect decision making around humanitarian responses. This can be done through clear risk ownership and defined triggers that lead to action (for example, insurance companies use defined triggers, in the form of index based insurance products). Also, careful contingency planning and default early action is required through a credible and diverse risk financing strategy.

Length and level of detail

This paper is 20 pages long but accessible to non-experts. It does provide a high level of detail on risk financing.

How to reference

Dercon, S. 2015. *Dull Disasters: What political science, economics, finance and behavioural science teach us about how to manage natural disasters better in the developing world*, DFID.

Links to further material

- DFID presentation on insurance and risk finance solutions [this is only available to DFID]
- Disaster Risk Financing and Insurance – GFDRR/World Bank programme
- Disaster Risk Assessment and Risk Financing: A G20/OECD Methodological Framework (see Section 2 in this document)

Was this resource useful?

Please contact us with comments on how you have used this resource or if you have further suggestions/questions. Please rate this material.

Keywords [tags]

risk management, insurance, risk financing, disaster preparedness

Promoting innovation and evidence-based approaches to building resilience and responding to humanitarian crises: A DFID Strategy Paper

How the material could be used

Useful for understanding the rationale behind DFID resilience policy and programming. To be read in conjunction with Defining Disaster Resilience: A DFID Approach Paper.

Why this is a good resource

Cornerstone DFID strategy paper. Proposes solutions to address four problems: i) Decision- makers do not have routine access to good information about risk; ii) lack of information on which interventions are most effective; iii)stretched capacity to design and deliver humanitarian response; and iv) right systems and incentives are not in place to ensure that evidence is available and used to inform decision-making. Proposed solutions include adoption of risk models in decision making, building the evidence base and investing in initiatives that improve availability and access to risk information.

Length and level of detail

This document is 44 pages long, however the executive summary is only 3 pages long and can be read in isolation. It is suitable for non-experts.

How to reference

DFID, 2012. *Promoting innovation and evidence-based approaches to building resilience and responding to humanitarian crises: A DFID strategy paper*, Crown Copyright.

Links to further material

- Defining Disaster Resilience: A DFID Approach Paper
- Minimum Standards for Embedding Disaster Resilience
- Humanitarian Emergency Response Review

Was this resource useful?

Please contact us with comments on how you have used this resource or if you have further suggestions/questions. Please rate this material. 👍

Keywords [tags]

DFID resilience strategy, evidence, innovation, humanitarian response, capacity

Building resilience: integrating climate and disaster risk into development

How the material could be used

Useful sections on risk management and associated costs – see chapter VI.

RECOMMENDED BY:
MALCOLM RIDOUT
DFID SENIOR ADVISER, RESILIENCE

Why this is a good resource

Good general introduction by the World Bank into the changing disasters landscape, how climate change affects the poor and how resilience fits into the climate, adaptation and disaster risk nexus. Also outlines relevant World Bank experience in resilience mainstreaming, risk identification, risk reduction, preparedness, financial and social protection and resilient reconstruction.

Length and level of detail

This is a long (58 pages) comprehensive resource with detailed chapters on several aspects of risk and resilience - a reference guide rather than a paper to read in one sitting.

How to reference

World Bank, 2013. *Building Resilience: Integrating climate and disaster risk into development.* Lessons from World Bank Group experience. The World Bank, Washington DC

Links to further material

» Social protection, climate change adaptation and disaster risk reduction – a GSDRC rapid literature review

Was this resource useful?

Please contact us with comments on how you have used this resource or if you have further suggestions/questions. Please rate this material.

Keywords [tags]

Risk management, mainstreaming resilience, climate and disaster resilient development

VfM Adaptation Framework Website

RECOMMENDED BY:
ANNIKA OLSSON
ECONOMIC ADVISER, CLIMATE CHANGE AND NRM, DFID NEPAL

How the material could be used

This framework can help with scoping and design work – it enables programmers to sequence and prioritise climate risks. It is also about early Value for Money (VfM) adaptation to respond to risks, using an iterative framework. It can be used in preparing economic appraisals of adaptation e.g. for DFID business cases.

Why this is a good resource

Contains a simple and clear Prezi presentation setting out the VfM Adaptation Framework. Also presents tools explaining how to use it and case studies showing practical application of the framework.

Length and level of detail

Website format framed around topics of interest makes this resource highly accessible and easy to navigate. Suitable for both experienced practitioners and people that are new to the subject.

How to reference

Links to further material

- Assessing the impact of ICF programmes on household and community resilience to climate variability and climate change
- Review of economics of adaptation and climate-resilient development
- Evidence paper on VFM of investments in climate resilient development
- Understanding patterns of climate resilient development

Was this resource useful?

Please contact us with comments on how you have used this resource or if you have further suggestions/questions. Please rate this material.

Keywords [tags]

VfM, value for money, adaptation, framework, adaptation appraisal, climate-resilient development, low-regret options, adaptation planning, risk management

Topic Guide - Adaptation: Decision making under Uncertainty

How the material could be used

Guidance on how we can better design interventions from the start to encourage climate resilient outcomes and programmes that are adaptable to long-term climate stresses. The final chapter includes a set of methods for those that are interested in quantitative options appraisal.

RECOMMENDED BY:
ALEX HARVEY
TEAM LEADER, CLIMATE & ENVIRONMENT DEPT, DFID CARIBBEAN

Why this is a good resource

The Topic Guide sets out the rationale for investing in specific adaptation measures now, given the uncertainty of future climate change. This has real implications for DFID. If uncertainty is not addressed throughout the project cycle, there is a significant risk of taking too many, too few or the wrong types of interventions. This could mean wasted investments or poor outcomes. New capacities, both human and institutional, will be needed. The concepts of climate change adaptation and climate-resilient development from a DFID perspective are also explained clearly in the first section. The central message is that accounting for the changing and uncertain climate need not be complicated and should not preclude action.

Length and level of detail

This is a detailed and comprehensive guide (86 pages) that is targeted at practitioners who may have prior knowledge, but it also includes easy to understand explanations of basic concepts.

How to reference

Ranger, N. 2013 *Topic Guide. Adaptation: Decision making under uncertainty*. Evidence on Demand, UK. [DOI:http://dx.doi.org/10.12774/eod_tg02.june2013.ranger]

Links to further material

- Adaptation Learning Mechanism
- Co Benefits of adaptation, mitigation and development: ICF background paper prepared for DfID

Was this resource useful?

Please contact us with comments on how you have used this resource or if you have further suggestions/questions. Please rate this material.

Keywords [tags]

adaptation, decision making, uncertainty, climate, climate resilient development, options appraisal

BACK TO TOP - RECOMMENDED RESOURCES

DEFINITIONS
RISE OF RESILIENCE
WHY IS RESILIENCE IMPORTANT?
SCALES OF RESILIENCE
WHAT DONORS ARE DOING
CONCEPTUAL FRAMEWORKS
RISK AND ADAPTATION
RISK LAYERING

→	RESILIENCE PROGRAMMING
→	TAKE HOME MESSAGES

☰	CONTENTS
💡	HOW TO USE THIS RESOURCE
🔖	GLOSSARY
★	RECOMMENDED RESOURCES
📖	BIBLIOGRAPHY

BIBLIOGRAPHY

Adger, W.N., J.M. Pulhin, J. Barnett, G.D. Dabelko, G.K. Hovelsrud, M. Levy, Ú. Oswald Spring, and C.H. Vogel, 2014. Human security. In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects*. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change

Cabot Venton, C. et al., 2013. The Economics of Early Response and Resilience: Approach and Methodology, s.l.: DFID.

Carabine, E., Ibrahim, M. and Rumsey, R. 2014. *Institutionalising resilience: The World Vision Story*, Overseas Development Institute, London:ODI. Available at: http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9372.pdf [Accessed March 2016]

CIDA, 2012. CIDA Learns: Lessons from Evaluations Annual Report 2011-2012. [Online]

Available at: http://www.acdi-cida.gc.ca/INET/IMAGES.NSF/vLUImages/Evaluations2/$file/CIDA-learns-eng.pdf

[Accessed January 2016].

Combaz, E., 2014. Disaster resilience: Topic guide, UK: Birmingham.

DAI, 2013. Resilience: Learning from practice across the development spectrum, *Developing Alternatives*, Winter 2013. Available at:

http://dai-global-developments.com/developing-alternatives/winter-2013/

DFID, 2011. Defining Disaster Resilience: A DFID Approach Paper. [Online]

Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/186874/defining-disaster-resilience-approach-paper.pdf

[Accessed January 2016].

DFID, 2013. Embedding Disaster Resilience Lessons Review, CHASE, Crown Copyright. Internal doc.

European Commission, 2012. Communication from the Commission to the European Parliament and the Council: The EU Approach to Resilience: Learning from Food Security Crises. [Online]

Available at: http://ec.europa.eu/echo/files/policies/resilience/com_2012_586_resilience_en.pdf

[Accessed January 2016].

FAO, 2008. *Disaster risk management systems analysis: A guide book*, Rome: UN FAO. Available at: http://www.fao.org/3/a-i0304e.pdf [Accessed April 2016.]

FAO. 2014. *Strengthening the links between resilience and nutrition in food and agriculture: A discussion paper*, Rome: United Nations FAO. Available online at: http://www.fao.org/3/a-i3777e.pdf [Accessed April 2016.]

Federal Ministry for Coperation and Development (BMZ), n.d. *Enhancing Resilence and Building Connectedness.* [Online]

available at: http://www.bmz.de/en/what_we_do/issues/transitional-development-assistance/index.html

[Accessed January 2016].

Fitzpatrick, M. and Young, H. 2015 *The road to resilience: A scoping study for the Taadoud Transition to Development Project*, Feinstein International Center, Tufts University. Available online at:

http://fic.tufts.edu/assets/The-Road-to-Resilience.pdf [Accessed March 2016]

Global Affairs Canada, n.d. Canada Fund for African Resilence Partners. [Online]

Available at: http://www.international.gc.ca/development-developpement/partners-partenaires/calls-appels/climate-resilience-climatique.aspx?lang=eng

[Accessed January 2016].

Gostelow, L. et al., 2016. *Nutrition and Resilience: A Scoping Study.* [Online]

Available at: http://files.ennonline.net/attachments/2441/Resilience-report-FINAL-14th-Jan-2016.pdf

[Accessed January 2016].

IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp.

Irish Aid, 2013. *One World, One Future: Ireland's Policy for International Development.* [Online]

Available at:
https://www.irishaid.ie/media/irishaid/allwebsitemedia/20newsandpublications/publicationpdfsenglish/one-world-one-future-irelands-new-policy.pdf

[Accessed January 2016].

Levine, S., Pain, A., Bailey, S. & Fan, L., 2012. *The relevance of 'resilience'*, s.l.: ODI.

Mitchell, T. & Harris, K., 2012. *Resilience: A risk management approach.* [Online]

Available at: http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/7552.pdf

[Accessed February 2016].

O'Brien, C. 2015. *Working paper 1: Conceptualising Shock-Responsive Social Protection,* Shock Responsive Social Protection Systems: A research programme for DFID, Oxford Policy Management. Available at:

http://www.opml.co.uk/publications/working-paper-1-conceptualising-shock-responsive-social-protection

OECD, 2013. *What does "Resilience" Mean for Donors?: An OECD factsheet.* [Online]

Available at: http://www.oecd.org/dac/May%2010%202013%20FINAL%20resilience%20PDF.pdf

[Accessed January 2016].

OECD, 2009. *Managing risk in agriculture: a holistic approach* [Online] Available at: http://www.oecd.org/agriculture/agricultural-policies/45558582.pdf [Accessed February 2016].

Olsson, 2015. DFID VfM Adaptation Framework (Prezi) available online at https://prezi.com/vnhkn3_nmsba/dfid-vfm-adaptation-framework/

Peters, K.; Vivekananda, J. **Topic Guide: Conflict, climate and environment.** Evidence on Demand, UK (2014) viii + 59 pp. [DOI: http://dx.doi.org/10.12774/eod_tg.november2014.peterskandvivekanandaj]

Poole, L. (2014) *A Calculated Risk: How Donors Should Engage with Risk Financing and Transfer Mechanisms*, OECD DAC. Available online at: http://www.oecd.org/dac/A%20calculated%20risk.pdf [Accessed March 2016]

Raleigh, C. and Kniveton, D., 2012. Come rain or shine: An analysis of conflict and climate variability in East Africa. *Journal of Peace Research*, 49(1), pp.51-64.

Ranger, N., 2013. *Topic Guide. Adaptation: Decision making under uncertainty.* Evidence on Demand, UK (2013) 86 pp. [DOI: http://dx.doi.org/10.12774/eod_tg02.june2013.ranger]

Rockefeller Foundation, n.d. *100 Resilient Cities.* [Online]

Available at: http://www.100resilientcities.org/#/-_/

[Accessed February 2016].

Savage, M., 2015. *Evidence paper on VFM of investments in climate resilient development,* UK: Evidence on Demand.

Selby, J., 2014. Positivist climate conflict research: a critique. *Geopolitics*, 19(4), pp.829-856.

UK Government, Chaired by Lord (Paddy) Ashdown, 2011. *Humanitarian Emergency Response Review (HERR),* s.l.: s.n.

UNISDR, 2005. *Summary of the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters (Hyogo Framework).* [Online]

Available at: http://www.unisdr.org/files/8720_summaryHFP20052015.pdf

[Accessed January 2016].

UNISDR, n.d. *Terminology: The United Nations Office for Disaster Risk Reduction.* [Online]

Available at: http://www.unisdr.org/we/inform/terminology

[Accessed February 2016].

United Nations, Department of Economic and Social Affairs, Population Division, 2014. *World Urbanization Prospects: The 2014 Revision, Highlights (ST/ESA/SER.A/352),* s.l.: s.n.

United Nations Development Programme (2011) *Paving the way for Climate-Resilient Infrastructure.* Available from http://www.uncclearn.org/sites/default/files/inventory/undp_paving_the_way.pdf

USAID, 2012. *Building Resilience to Recurrent Crisis: USAID Policy and Program Guidance.* [Online]

Available at: https://www.usaid.gov/sites/default/files/documents/1870/USAIDResiliencePolicyGuidanceDocument.pdf

[Accessed January 2016].

BACK TO TOP - BIBLIOGRAPHY

DEFINITIONS
RISE OF RESILIENCE
WHY IS RESILIENCE IMPORTANT?
SCALES OF RESILIENCE
CONCEPTUAL FRAMEWORKS
WHAT DONORS ARE DOING
RISK AND ADAPTATION
RISK LAYERING
RESILIENCE IN PROGRAMMING
TAKE HOME MESSAGES

CONTENTS