TOPIC GUIDE :
Conflict, Climate and Environment

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November 2014

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About Topic Guides

Welcome to the Evidence on Demand series of Topic Guides. The guides are produced for Climate, Environment, Infrastructure and Livelihoods Advisers in the UK Department for International Development (DFID). There will be up to 30 Topic Guides produced 2013-2014.

The purpose of the Topic Guides is to provide resources to support professional development. Each Topic Guide is written by an expert. Topic Guides:

- Provide an overview of a topic;
- Present the issues and arguments relating to a topic;
- Are illustrated with examples and case studies;
- Stimulate thinking and questioning;
- Provide links to current best 'reads' in an annotated reading list;
- Provide signposts to detailed evidence and further information;
- Provide a glossary of terms for a topic.

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I would like to read items in the reading list. Where can I access them?

Most resources mentioned in the Topic Guides are readily available in the public domain. Where subscriptions to journals or permissions to access to specialist libraries are required, these are highlighted.

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- Send an email to the Evidence on Demand Editor at enquiries@evidenceondemand.org with your recommendations for other Topic Guides.

Acknowledgements

Acronyms

BSOS	Building Stability Overseas Strategy
CDG	Centre for Global Development
DFID	Department for International Development
FCAS	Fragile and Conflict-Affected States
HFA	Hyogo Framework for Action
HMG	Her Majesty's Government
IPCC	Intergovernmental Panel on Climate Change
IPCC AR5	IPCC Assessment Report 5
JACS	Joint Analysis of Conflict and Stability
MDG	Millennium Development Goals
MHDRA	Multi-Hazard Disaster Risk Assessment
NAPA	National Adaptation Programme of Action
NGO	Non-Governmental Organisations
NSC	National Security Council
NSS	National Security Strategy
ODA	Overseas Development Assistance
OPHI	Oxford Poverty and Human Development Initiative
SDG	Sustainable Development Goals
SDSR	Strategic Defence and Security Review
UNEP	UN Environment Programme
UNSC	UN Security Council
UNU-EHS	UN University Institute for Environment and Human Security

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Key Messages

1. **Climate change (natural and man-made) is already having an impact on conflict, security and fragility.** Climate related stressors have played a role in, for example, the ongoing political economy of conflict in Darfur and in food insecurity across the Sahel. Climate change has also been claimed to play a complicating role in more recent conflicts in the Arab Spring, though no conflict has a single motivating factor.

2. **Climate change will continue to be a 'risk multiplier' of conflict, insecurity and fragility unless it is effectively embedded into the management of risk and building of resilience.** The Intergovernmental Panel on Climate Change's Fifth Assessment Report affirms that the impact of climate change on human wellbeing, peace and security will worsen, especially for the poorest members of society. Many of the most affected live in fragile states where under-development is intractable and national capacity to manage climate risks is weak. In many countries, as climate change interacts with other features of the social, economic and political landscape, there is a high risk of political instability and violent conflict.

3. **What determines whether (or how) climate change will lead to conflict lies in the 'intermediary factors' which affect the relationship between climate and conflict.** The effects of climate change, such as more frequent natural disasters, long-term changes in precipitation and temperature and sea-level rise, could combine with other factors to increase the risk or prevalence of violent conflict. Increased vulnerability to conflict depends on a mix of factors: the context of poverty, effectiveness of governance and institutions, adaptive capacity, political inclusion and financial management. These factors affect the capacity of individuals and institutions to adapt to climate change and manage conflict in a peaceful manner.

4. **There is much that can be done to ensure that climate change does not lead to increased conflict, insecurity and fragility, even in the absence of downscaled climate forecasts at the sub-national level.** Addressing the root causes of vulnerability to climate change impacts – such as the lack of livelihood diversification, political marginalisation, unsustainable management of natural resources, weak or inflexible institutions and inequitable policy processes **–** can help ensure countries plan for uncertainty and peacefully manage a range of possible futures which climate change presents.

5. **Taking account of the links between conflict, climate and environment is central to building resilience in an ever uncertain world.** Better policy responses are required to ensure conflict prevention initiatives take account of climate changes, and to use climate change adaptation in support of peace and stability. Practical steps, such as ensuring that all climate change adaptation is conflict sensitive and that all conflict programming takes account of medium- to long-term climate change predictions, will help minimise the risk of interventions inadvertently doing harm. However, given the multiple levels of uncertainty – for example, how much average temperatures will rise, what the knock-on consequences will be on peace and security and how demographic changes will interact with these risks – a comprehensive risk management approach is required.

6.   **Gaps in the evidence exist on how to achieve multiple wins.** There is a lack of well documented examples, at scale, on how to achieve 'multiple wins' in order to support resilience building. For example, what are the policies and programmes that have positive outcomes on peace, adaptation and development progress? Building resilience and managing risk is becoming the new mantra of the post-2015 era, bringing with it opportunity to improve policy action on the intersection of conflict, climate and environment.

SECTION 1

Introduction to the Topic Guide

This Topic Guide will support Department for International Development (DFID) advisers in the Conflict, Security and Justice Cadres as well as the Humanitarian, Climate and Environment Cadres in gaining a greater understanding of the importance and complexity of the links between conflict, climate and environment. The Topic Guide focuses on violent conflict at the sub-national, national and trans-boundary level in relation to natural resources, climate variability, climate change and environmental change. The guide concentrates on longer-term development objectives to build resilience, support adaptation, create peace and address underlying causes of vulnerability. Complementary topics in the series include the Topic Guide on Resilience, Topic Guide on Water, Security and Economic Development, and the Topic Guide on Conflict Sensitivity.

A cross-Whitehall learning event, *Climate Change, Conflict and Security,* held at The Athenaeum Club on 27 June 2014, formed part of the guide's peer review process. Together, the guide and learning event contribute towards DFID's Continuing Professional Development strategy.

The issues dealt with in this guide (conflict, climate and environment) are central to the following: the Approach Paper *Defining Disaster Resilience* (DFID, 2011); the report *Saving Lives, Preventing Suffering and Building Resilience* (DFID, 2012); DFID's Future Fit ambition to integrate climate change across its portfolio; and cross-Whitehall initiatives related to conflict, including the Building Stability Overseas Strategy (BSOS) (DFID et al., 2011) and National Security Council.

1.1 Relevance to DFID and rationale

Climate change is framed as a 'risk multiplier' and security threat in UK cross-Government strategies to prevent conflict, including the National Security Strategy and BSOS (see Box 1). DFID recognises the need to consider and articulate how it will act on climate and conflict concurrently in the context of these broader UK policy commitments. As part of the BSOS, a new methodology was launched called the Joint Analysis of Conflict and Stability (JACS), owned by DFID, the Foreign and Commonwealth Office (FCO) and the Ministry of Defence (MoD). Greater inclusion of climate change in the JACS would help better capture the links between conflict, climate and environment in support of resilience programming (discussed further later).

DFID's environmental and climate screening processes and commitments, and initiatives such as Future Fit, mean that all departments – including Conflict, Humanitarian and Security (CHASE) – are required to consider climate and environment in their operations. Moreover, the DFID Operational Plan 2012 - 2015 for CHASE states: "*We will concentrate our efforts on supporting achievement of the Millennium Development Goals (MDGs), creating wealth in poor countries, strengthening their governance and security, and tackling climate change. The prize, in doing so, is huge: a better life for millions of people, and a safer, more prosperous world.*" (DFID, 2012: 1).

DFID's (2011) adoption of 'disaster resilience' as an overarching concept for its work reinforces the links between climate, conflict and environment and the need to understand the complexity between risk and vulnerability in policy solutions. This Topic Guide aims to support DFID advisers to better understand the interrelationship, so improvements can be made in policies and programming to reach more vulnerable people, save more lives and reduce poverty in a more effective and sustainable manner.

Under the rubric of 'resilience', DFID's current policy imperatives point towards greater integration of conflict, climate and environment, now and in the future. DFID's Climate and Environment Department Operational Plan 20112015 includes commitments to support international action on climate change (through COP17); champion climate resilient sustainable development; build an evidence base around how best to support national capacity to adapt to climate change; and support international climate finance architecture, as well as 'getting DFID's own house in order' by becoming climate and environment smart (DFID, 2012a). There are also clear policy commitments to work on climate and environment in fragile and conflict-affected states (FCAS), specifically protecting forests in Democratic Republic of Congo (DRC) and Nepal (DFID, 2012: 8). Clearer articulation of the need to adopt conflict sensitive approaches in this work would be of great added value.

Integrated approaches to address conflict, climate change and environmental risks are key in order to adhere to DFID's Results Framework (DFID, 2013) and DFID's approach to Value for Money (DFID, 2011), and to achieve a genuine impact on sustainable development. DFID's approach to Value for Money is about maximising the impact of each pound spent to improve poor people's lives (DFID, 2011). Value for money is compromised if, for example, a disaster response programme fails to ensure the food and water security of beneficiaries by unsustainably extracting and polluting scarce water reserves. Failure to consider conflict dynamics, such as the power relations connected to water management, could inadvertently fuel conflicts as a result of the intervention. There is a growing body of evidence from evaluations which show how lack of integrated approaches undermines the positive impacts of interventions and, in some cases, does not achieve maximum value for money because interventions are not sustainable over the long term (for examples of irreversible environmental degradation caused by the post-tsunami response in Aceh, see UNEP, 2007). Pronounced efforts to integrate conflict, climate change and environmental risks into programme design and implementation can enhance value for money and impact, if done with careful consideration through the application of high quality tools and approaches, and effective tailoring to the context.

Box 1 Cross-Government approach to climate and conflict

The FCO championed the first-ever (of two so far) UN Security Council (UNSC) debate on climate change, energy and security in 2007. The period following the debate marked the start of heightened discussion on climate change and security within Europe. The UK has been a key actor in this movement, as have Germany, Sweden and the European Council.

Within the UK, through the latter part of the 2000s, there was a dramatic shift in the weight given to, and inclusion of, climate change in national security strategies. For example, the MOD Strategic Defence Review of 1998 does not mention climate change or environmental security. The 2008 National Security Strategy (NSS) and its 2009 update, however, outline a range of climate security related 'threats' (meaning the security implications of climate change [Mabey, 2008]). This framing has continued to the present day, with the UK government's formation of the National Security Council (NSC), the 2010 NSS and its accompanying Strategic Defence and Security Review (SDSR). These mark a new assemblage of security actors dealing with international security threats who use the framing of climate change as a 'risk multiplier'. However, subsequent strategies, namely, the 2011 Building Stability Overseas Strategy (BSOS), do not articulate the mechanisms required for dealing with the 'security threat' of climate change.

Clearly articulated links between climate change and security are present in the most recent national security reports and voiced by representatives of the FCO and MOD, but this framing has not as yet translated into tangible mechanisms to take this agenda forward. The UK's commitment to a cross-departmental approach to addressing climate change means that attention to the climate and conflict linkage is long overdue. However, the UNSC debates (2007 and 2011), and the fact they have even taken place, have been the source of much controversy: a number of UN member states accused the UNSC of encroaching into areas covered by other UN bodies. This raises important questions about the extent to which a common understanding of the climate change–security links are accepted at the national and international level.

Source: Harris, 2012.

Future climate change trajectories in FCAS add weight to arguments to explore the interactions between climate, conflict and environmental risks in policy and practice (Peters and Mitchell, 2014). Increased evidence on the impacts of climate change and its links to human security have been detailed in the most recent IPCC report – with its first ever chapter dedicated to the topic (Adger et al., 2014) (see Box 2). The co-location of climate change vulnerability, conflict and fragility is expected to continue (Harris et al., 2013) (see Box 3). Moreover, the increased volume of literature receiving policy attention – which argues that climate change is a complicating factor in violent conflict (CAN, 2014) – means this topic warrants further attention.

Box 2 Climate change and human security

The IPCC Assessment Report 5 (IPCC AR5) Working Group II chapter 12 on Human Security explores the relationship between (natural and man-made) climate change and selected dimensions of human security, including culture, migration and mobility, armed conflict, state integrity and geopolitical rivalry. Two key extracts follow:

"Some of the factors that increase the risk of violent conflict within states are sensitive to climate change (medium agreement, medium evidence). The evidence on the effect of climate change and variability on violence is contested. Although there is little agreement about direct causality, low per capita incomes, economic contraction, and inconsistent state institutions are associated with the incidence of violence. These factors can be sensitive to climate change and variability. Poorly designed adaptation and mitigation strategies can increase the risk of violent conflict."

"People living in places affected by violent conflict are particularly vulnerable to climate change (high agreement, medium evidence). Evidence shows that large-scale violent conflict harms infrastructure, institutions, natural capital, social capital and livelihood opportunities. Since these assets facilitate adaptation to climate change, there are strong grounds to infer that conflict strongly influences vulnerability to climate change impacts."

Source: Adger et al., 2014.

With the post 2015 Development Agenda[1] fast approaching, the rationale for exploring the relationship between conflict, climate and environment has never been more urgent. 2015 is a catalyst year for development and will determine the new architecture for how development, climate change, conflict and environment are approached. There are expectations for a new climate agreement, Sustainable Development Goals (SDG), a successor to the Hyogo Framework for Action (HFA) and, in 2016, the World Humanitarian Summit (WHS). As experience from the Millennium Development Goals (MDGs) shows, without tackling the drivers of conflict, development progress will be stunted (World Bank, 2011). Moreover, in order to promote complementarity between humanitarian and development efforts, the 2016 WHS will need to consider how to achieve humanitarian objectives in light of the 2015 commitments.

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[1] For more information see: http://www.un.org/en/ecosoc/about/mdg.shtml

Box 3 Concurrence of fragility, disaster risk, poverty and climate change vulnerability

A number of high profile disasters in FCAS have increased the attention being paid to how natural disasters and conflict collide, though systematic analysis is limited and sometimes contested. Evidence points towards disasters and conflict coinciding more in the future; though climate change, urbanisation, food price fluctuations, financial shocks and other stresses may all shape and complicate future trends in the disaster–conflict interface. Harris et al. (2013) use a composite list to determine the top 20 countries most at-risk of combined high levels of fragility, disaster risk, poverty and climate change vulnerability. The ranking was produced combining data from the Failed States Index 2012, the UN University Institute for Environment and Human Security (UNU-EHS) World Risk Report 2011, the Oxford Poverty and Human Development Initiative (OPHI) Multidimensional Poverty Index 2011 and the Centre for Global Development (CDG) Climate Change Vulnerability Index 2011.

The top 20 countries (in order of most at risk first) are Somalia, Afghanistan, Niger, Guinea-Bissau, Burundi, Chad, Sudan, Democratic Republic of Congo, Guinea, Haiti, Zimbabwe, Ethiopia, Central African Republic, Bangladesh, Liberia, Sierra Leone, Timor-Leste, Burkina Faso, Myanmar/Burma and Rwanda.

This preliminary analysis of indices suggests a concurrence between drought mortality risk, state fragility and climate change vulnerability. However, the intersection between mortality risk from other natural hazards (such as earthquakes and cyclones) and state fragility appears to be much less pronounced, though still significant in certain locations.

Source: Harris et al., 2013.

SECTION 2

Understanding the interrelationship of conflict, climate and environment

The consequences of climate change are felt daily and affect all sectors of development, peacebuilding and humanitarian programming. The IPCC AR5 (IPCC, 2014) affirms that the impact of climate change on human wellbeing, peace and security will worsen, especially for the poorest members of society. Many of the most affected live in fragile states where under-development is intractable. Such communities are afflicted not only by persistent poverty, poor infrastructure, weak natural resource governance or unsustainable resource management, and lack of access to the world market, but also by the fragility of state institutions, political instability, and the effects of recent armed conflict or threat of looming violence. In many countries, as climate change interacts with other features of their social, economic and political landscape, there is a high risk of political instability and violent conflict.

A sizable amount of the literature on the relationship between climate change and conflict frames climate change as exacerbating resource scarcities and generating new conflicts and security challenges. A resurgence of Homer-Dixon's (1994) 'resource wars' thesis and an oversimplification of his arguments by others throughout the 2000s frames climate change as instigating or escalating violent conflict. This is a result of increasing resource scarcity, vulnerability and migration; new threats resulting from reduced crop yields; increased competition over scarce water resources; and increased likelihood of drought and disasters related to climate extremes (CNA, 2007; Parry, 2007; Brauch, 2008; Evans, 2010). Interpretations of his approach are often overly deterministic, reductionist and less useful for practitioners looking to undertake programming that deals with the links between climate change and conflict in complex environments.

A second school of literature suggests that the effectiveness of governance and institutions in responding to climate change and variability will determine the likelihood of violent conflict and/or collaboration around natural resources. This line of enquiry argues that understanding the likely impact of climate change on conditions of peace and security requires focusing on institutional structures, governance mechanisms and natural resource management, which mediates these relationships (Lind et al., 2010; Schoch, 2011). Proponents of this perspective do not deny the impact a changing climate may have on natural resource availability and the potential to add strain to existing conflict dynamics (or create new ones). However, they stress that "… *climate change factors do not cause violent conflict, but rather merely affect the parameters that are sometimes important in generating violent conflict*" (Barnett and Adger, 2007).

This Topic Guide leans towards the second approach, stressing the complexity of the relationship between these issues. This approach is more practicable and in line with DFID's long history in understanding the complexity of humanitarian and development issues in terms of sustainable livelihoods, vulnerability and, more recently, disaster resilience. Climate and environmental change are amongst a suite of variables in any given context which may or may not affect the incidence of violent conflict. Exploring the relationship between natural resources, environmental conditions, climate change and variability is challenging; contextualisation is key. Adopting holistic approaches

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to risk (drawing on concepts such as vulnerability and resilience) can offer much to inform and improve policy and practice. Things can be done: integrating conflict sensitive approaches into climate action; integrating climate science into hazard, risk and vulnerability assessments; and using climate change adaptation in support of peace and stability.

The current evidence base shows links between conflict, climate and environment, yet gaps in our knowledge exist, particularly in relation to what policy options to take to address the climate–conflict interrelationship. Moreover, explicit links between climate change and violent conflict are a new topic area, one where the evidence needs to be carefully considered and challenged (Bauhaug et al., 2010). The current literature can be characterised as follows: there is a growing number of peer-reviewed journal articles, an emerging body of grey literature (see Box 4), and increasingly influential reports emerging from agencies with a military or security background (see Box 5). Each body of work comes with its champions and also its critics. The peer-reviewed literature predominantly uses quantitative approaches that have been criticised for being reductionist, and would benefit from more detailed explanatory case studies. The grey literature often confuses climate change and climate variability, but provides more grounded evidence on the topic through documentation of individual cases. Literature originating from ex-military/security personnel comes with a high profile, but encourages a securitisation of climate change and those vulnerable to it [treating climate change as a security, rather than environmental or developmental, concern] (Harris 2012; Schoch, 2011). Such literature offers suggestions for action by security actors but has less relevance for the development community.

Box 4 An emerging body of grey literature

An emerging body of grey literature, primarily from non-governmental organisations (NGOs), provides case studies on specific locations – primarily considering the recipients of an intervention or project. This literature goes further in exploring the interactions of climate and security risks and the points of entry for addressing them (e.g. Smith and Vivekananda, 2009). It is here that proposals for practical suggestions are found on how to programme different dimensions of risk (climate and conflict) concurrently.

However, evidence is limited by a lack of practical experience and long-term monitoring and evaluation processes, with most studies being limited to a project funding period of 1–3 years and not including assessment of impact well after a project has ended. Moreover, while rich in local level detail, individual agency publications tend to be narrowly focused at the local or sub-national levels and are highly context specific with little scope for replication of lessons learned in other contexts. The data or analytical approaches used rarely undergo strict peer review processes and can be subject to organisational bias. More support is needed to help transform this evidence through the application of rigorous research methods, so it can be used to inform policy.

Box 5 Literature originating from military and security focused agencies

A growing body of literature on the links between climate change and conflict stems from agencies with a military and security background in the United States and Europe. This literature puts emphasis on the possible negative security implications of climate change, at the national and international scale. By focusing solely on the security dimensions, this work is largely responsible for 'securitising' climate change, (re)framing climate change from an environmental or developmental 'problem' to a security 'problem'. It is this literature which is most frequently taken-up by the media and often used to promote rhetoric associated with 'climate wars'.

This body of work receives little attention in this Topic Guide as it offers limited sound empirical evidence; concentrating on the inclusion of climate change in the UNSC agenda in 2007 and 2011, and of 'speech acts' by prominent leaders – particularly within the US e.g. former US President George Bush, US President Barack Obama and UN Secretary-General Ban Ki-moon. The securitisation literature has been criticised for underplaying the importance of local coping mechanisms, adaptive capacity, governance and institutions in managing both conflict, security and climatic changes; as a result it offers little practical guidance for policy makers or practitioners (Schoch, 2011).

Source: Harris, 2012.

Conflict sensitive and Do No Harm approaches could be applied to the spending on climate aid in order to promote peace and security, but there is no evidence of this happening in practice. No documented evidence was found of conflict sensitivity tools being applied to climate programming across the DFID climate change adaptation and REDD+ projects reviewed for this Topic Guide. Possible reasons include the lack of consideration of conflict dynamics as relevant within technical climate change programmes, lack of familiarity with conflict sensitivity concepts and tools within climate change teams within implementing agencies, and lack of an imperative from the donor to include conflict sensitivity. Whether climate aid does no harm requires further evaluation. At present, evaluations assess projects on whether they have achieved specific project goals for identified beneficiaries. As such they do not always adequately identify potential unintended harm done in areas outside the project's purview, such as entrenching inequitable power dynamics or ethnic relations between project beneficiaries and non-beneficiaries.

Interventions to promote conflict prevention and humanitarian goals are more likely to be sustainable and suitable if changes to the climate and environment are taken into account. Disasters and conflicts, as well as relief and recovery operations, impact the environment in ways that threaten human life, health, livelihoods and security. Failure to address these risks can undermine the post-conflict or relief process, causing additional loss of life, displacement, aid dependency and increased vulnerability (UNEP, 2007). Suggested ways to improve policy and practice on the climate–conflict linkages include: i) the integration of climate change considerations across humanitarian departments; ii) the inclusion of climate change risk into multi-hazard risk assessments and analysis of peace and stability; and iii) the application of conflict sensitivity and Do No Harm approaches to disasters and climate programming (Peters and Levine, 2014). Guidelines, standards and tools exist on how to address climate and environmental risks in humanitarian programming; however, a common hindrance to their application is the misperception that taking climate or environmental considerations into account comes at the expense of the humanitarian imperative to save a life. A UNEP assessment of post-tsunami aid to Aceh showed that the lack of environmental considerations in post-tsunami aid programming – for example through contamination of groundwater, use of unsustainable building materials and inadequate siting of housing – undermined the sustainability of interventions and the long-term resilience of

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communities (UNEP, 2007). Though conflict did not result in this case, in many fragile contexts there is a very real risk that inappropriate aid interventions, which negatively affect scarce resources such as clean water, can increase the risk of conflict or instability.

How do changes in the climate, environment and natural resource availability affect violent conflict?

In this section, we discuss how changes in the climate, environment and natural resource availability affect violent conflict in relation to livelihoods and food security; governance, equity and effective institutions; population growth and urbanisation; and migration. Examples are provided from Nigeria, Kenya and South Asia.

3.1 Livelihoods and food security

Here, a summary of selected literature explores changes in climate, environment and natural resources and violent conflict in relation to livelihoods and food security. Value is placed on approaches which recognise the roles of access, vulnerability, adaptive and coping capacity as determinants of livelihood security. Examples will be provided of local level livelihood strategies and their relationship to changes in climate and its effect on the prevalence of conflict.

Climate change impacts natural resource-dependent livelihoods most directly. For example, through a decrease in agricultural yields, the gradual unsuitability of traditional grazing grounds, or the drying up of important water bodies. As well as threatening jobs connected with climate-sensitive natural resources, this can contribute to serious declines in agricultural production, and erode food security (Stark et al., 2009).

Changes to the availability of natural resources essential to livelihoods and food security, in combination with pre-existing contextual challenges, affect the risk of conflict. The IPCC AR5 acknowledges that "… *material aspects of life and livelihood, such as food, water and shelter are closely coupled to weather and climate but also to multiple factors in the economy and society*" (IPCC, 2014). For example, UNEP found that in combination with other social, economic and political factors, drought in the Sahel can lead to disruptions and changes to livelihoods which can increase the risk of conflict between livelihood groups (UNEP, 2011). Case study evidence shows that this trend is observable across other contexts including in South Asia (Vivekananda et al., 2014a), Central Asia (Janes, 2010), Latin America (Stark et al., 2009) and Africa (Goulden and Few, 2011b).

In FCAS, climate change may have an impact on economic opportunities and present a risk to peace. High levels of unemployment, particularly amongst young men, and labour migration to urban areas, which have neither sufficient jobs nor infrastructure, are widely agreed to be specific conflict drivers (Collier et al., 2009; Smith, 2004). Climate change will increase these trends in regions where a significant proportion of jobs are dependent on labour intensive and climate-sensitive crops, such as coffee in Central America (IFAD, 2013), aquaculture (Vivekananda et al., 2014a), or pastoralism, such as in Kenya (Schilling et al., 2012). While there are few sound longitudinal studies on the relationship between climate change, livelihoods and conflict – and only limited research projecting forward to explore future potential conflict risks – a convincing evidence base is emerging (Foresight, 2011).

There is increasing evidence of the indirect impacts of climate change on global supply chains. While increased hunger or unemployment is most clearly evidenced at the local level, there is also increased research on the global nature of food production and value chains, and corresponding evidence that local or national declines in food production may have implications for many other parts of the world (Gregory et al., 2005). Urban areas are heavily reliant on food supplies from both rural domestic and international markets. In some contexts characterised by regional instability, such as Egypt, dependence on climate-sensitive food imports (e.g. wheat from China), have been shown to contribute to instability in the face of widespread crop failure owing to drought (Werrell and Femia, 2013).

Many markets for food imports have arisen through improved transportation networks and are affected by oil supplies and prices, which also will be subject to policy decisions made regarding climate change. Analysing the so-called food riots in countries as diverse as Bangladesh, Haiti, Pakistan, Burkina Faso and Mexico in 2008, a study by Chatham House found that the problem was not due to food prices alone. Rather, "*the combination of food and fuel inflation emerged as a highly contentious political issue*", which along with varied other political grievances and dissatisfaction with existing governance mechanisms "*led to violence or civil unrest*" (Evans, 2009). While most incidences of food related instability are documented in cities, there is a notable bias in the literature to focus on rural (rather than urban) livelihoods, food security and conflict.

Livelihood vulnerability is also linked to many non-climate factors, such as unequal land distribution, insecure land tenure, unsustainable resource management practices, poorly developed markets, existing trade barriers and inadequate infrastructure. Understanding the risk of conflict linked to climate necessitates grasping the role of governance in planning and regulating development, ensuring access to land, providing infrastructure support to mitigate risks from sudden-onset disasters, and promoting livelihood diversification (UNEP, 2011). It is not necessarily in the communities that face the most extreme environmental shocks where conflict may result. Greater risk lies with communities who lack the institutions, economic stability, civil voice and social capital to withstand increases in the frequency and severity of climate change who will be most at risk of political instability of conflict (UNEP, 2011).

Box 6 Climate variability impacts on livelihoods in Lokoja, Nigeria

Farming and, to some extent, fishing are primary sources of livelihoods for communities settled along the banks of the Niger River, close to Lokoja in Kogi State in central Nigeria. For these communities cultivating land on the flood plain, climate variability poses significant risks. Heavy rainfall, floods and river bank erosion can cause considerable damage to crops and houses. Farmers have observed that rains are arriving later, forcing them to plant later which leads to crop destruction by annual floods before they are ready to harvest. Despite these climate hazards, farmers continue to grow crops on the flood plain given the shortage of land and need to access water.

Pressures on land exacerbated by climate change are another risk to livelihoods. Decreasing fish catch is leading fisherman to explore livelihood opportunities in farming. But farming is not without its challenges. Land available to riverside communities is shrinking due to river bank erosion. Given the rainfall variability and subsequent failure of crops, farmers are being encouraged to diversify crop production. This is resulting in less available grazing land for pastoralists.

In the wet season, Fulani cattle herders head north, and return to the southern areas – including Kogi State – during the dry season. They arrive in the Lokoja area from December to January and stay for up to four to five months in the area, until May. Disputes arise between farmers and pastoralists when animals stray onto farmland and destroy crops. These conflicts are being kept in check by mediation processes and dispute resolution associations, though with continuing climatic change these tensions are expected to remain unless more viable livelihood solutions can be found.

Source: Goulden and Few, 2011b.

Box 7 Climate change, vulnerability and violent conflict in northern Kenya

Pastoralism is a major economic activity for the Turkana and Pokot people in north western Kenya. Part of Kenya's Rift Valley, this region is characterized by highly variable and erratic rainfall, which manifests itself in the form of extreme drought and floods. In north western Kenya, pastoral communities have a long history of conflicts closely related to livestock raiding.

There are a variety of factors that explain livestock raiding, including climate change, poverty, dowry payments, general accumulation of wealth, tribal based politics and retaliation, the availability of small arms and resource degradation. Droughts and floods frequently reduce livestock numbers in pastoral societies. Competition for and scarcity of resources in the form of water, pasture, land resources and livestock assets also play a key role in the conflicts between pastoral groups.

Conflicts and livestock raiding affect the wellbeing of pastoral communities in various direct and indirect ways. In 2011, the anticipated long rains between March and May failed to arrive in Turkana resulting in the loss of the majority of livestock as well as famine. Hunger and drought are named by the majority of raiders to be the primary and secondary motives for engaging in livestock raiding.

While the motives for raiding differ from group to group, the effects of the conflicts on livelihoods were similar across all groups. Among the direct effects of raiding are loss of human lives and loss of livestock, water, pasture and even homes. In addition, the conflicts lead to distrust in other communities and a strong omnipresent perception of insecurity which entails several and partly interconnected subsequent effects. These effects include ineffective resource use, closing of markets and schools, and obstacles for investments. These impacts will make it even harder for pastoralist communities to cope with future changes in the climate. Beyond the physical effects, insecurity negatively affects inter-communal relations. Community members of the Pokot and Turkana groups have strong negative feelings and distrust towards each other, which poses a significant threat for pastoral livelihoods and also makes it harder for them to adapt.

Source: Schilling, 2012.

3.2 Governance, equity and effective institutions

Good governance, equitable resource access and effective institutions (formal and informal) mediate – or not – the conditions of violent conflict in the presence of changes to climate, environment and natural resource availability. Key to this is the extent to which institutions in FCAS are able to resolve resource disputes and provide equitable access to and management of natural resources in the face of a changing climate. We also note the need for policymakers to recognise that the severity of a change or impact from climate change will be determined by the risk governance and fragility of a country (rather than the extent of that change itself). As the IPCC AR5 states: "*A growing body of research examines the connections between climate variability and non-state conflicts. There is some agreement that either increased rainfall and decreased rainfall in resource-dependent economies enhances the risk of localized violent conflict, particularly in pastoral societies in Africa[2]. In all such cases, the presence of institutions that are able to peacefully*

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[2] Benjaminsen and Ba, 2009; Benjaminsen et al., 2009; Adano et al., 2012; Butler and Gates, 2012; Fjelde and von Uexkull, 2012; Hendrix and Salehyan, 2012; Raleigh and Kniveton, 2012; Theisen, 2012.

manage conflict are highlighted as the critical factors in mediating such risks[3]" (Adger et al., 2014).

Climate change is best understood as an aggravating factor or trigger in places where some drivers of conflict already exist, putting additional strain on already stressed governments (Stark et al., 2009). Many of the countries predicted to be affected by climate change face pre-existing challenges of poor governance and social and political instability (Smith and Vivekananda, 2007). Climate change can aggravate problems associated with growing populations, inadequate supplies of fresh water, strained agricultural resources, weak land tenure security, poor health services, economic decline, and weak political institutions (Saha, 2012). However, there is broad consensus amongst peacebuilding practitioners and conflict experts that, while environmental and climate change can be contributing factors to conflict, the underlying contextual factors play a more prominent role.

The inability to address climate change risks can thus erode the social contract in FCAS. A pre-requisite of stability is understood to be a strong social contract whereby citizens adhere to the rule of law and pay taxes in return for the state providing for their basic needs, such as security and infrastructure (Smith and Vivekananda, 2009). A characteristic of FCAS is that the state cannot guarantee core functions, such as law and public order, welfare, participation, and basic public services (e.g. infrastructure, health, and education), or the monopoly on the use of force; therefore, the additional challenge of climate change can increase the risk of instability or conflict (Schilling, 2012). Rapid or slow-onset climate change may further undermine the ability of governments to fulfil their role. As the risks faced by citizens get more complex, the demands on governments get more difficult and the likelihood that they will fail in their basic functions increases. When the state is perceived to be failing to fulfil its duties, the social contract is eroded and the risk of civil unrest increases (Kaplan, 2009). Examples of failures in governance – where the state has been perceived to inadequately deal with climate change shocks alongside other problems, such as growing populations and political cleavages – are increasingly documented in the qualitative, case study literature (Saha, 2012; Werrell and Femia, 2013).

Literature exploring the links between climate change and security often fails to include the role of governance and power (Hsiang and Burke, 2014). Conflict and peacebuilding literature, however, emphasises the importance of government legitimacy and effectiveness – as measured by public perceptions – as factors in the outbreak of violence. These factors are therefore vital components in understanding the links between climate change, peace and war. Some climate change literature excludes perceptional data and therefore does not adequately capture this important determinant of legitimacy. Legitimacy can be eroded in various ways, including a government's incapacity to remedy serious problems or a complete absence of government response, for example, to the impacts of a changing climate. Unmet expectations can lead to frustration and aggression against a society's ruling authorities. Tremblay et al. (2003) argue that when parties engage in violence, "*it is frequently due to the lack of residual support or political legitimacy that the state experiences and to the breakdown of the normative ordering.*" The erosion of a society's basic needs and social trust can be caused by the interactions of unstable institutions and rapid population growth with the kinds of problems of livelihood insecurity and resource scarcity that are made more acute by climate change.

Failures of governance can lead to failures in adaptation to climate change, from which the poor and the marginalised suffer most. State fragility means that there is little or no social safety net to ease the effects of failing to adapt to climate change. It is well established that there is a greater risk of violent conflict in poor countries (Collier et al., 2003) or those where

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[3]   Gausset, 2005; Hidalgo et al., 2010; Adano et al., 2012; Benjaminsen et al., 2012, Butler and Gates, 2012, O'Loughlin et al., 2012, Theisen, 2012.

there is high inequality (Cramer, 2003). A key reason is the lack of equity: the marginalisation of the poor, their lack of voice and lack of an accessible institutional framework for handling and settling conflicts and disputes. According to International Alert, poverty, state fragility and a propensity to violent conflict make a vicious circle, full of negative feedback: each feeds on the other (Smith and Vivekananda, 2009).

Climate change will affect socio-economic, ethnic and cultural groups differently, affecting the poor and marginalised worst. This is in part because, in FCAS, political and economic elites are often organised in such a way as to give themselves privileged access and control over resources and opportunities. Climate change impacts could compel elite groups to further tighten their grip on resources and/or manipulate climate change funding to their own benefit (patronage and clientelism where contracts provide both licit and illicit money-making opportunities) (Smith and Vivekananda, 2009). The key challenge then is not that climate change will increase resource scarcity, it is that climate change will alter the way in which resources are distributed and will potentially entrench pre-existing inequitable power structures relating to resource access (Hamza et al., 2012). Equitable resource management systems are a critical component of managing natural resource related grievances without violent conflict (Smith, 2004).

The literature covering climate change and resource governance addresses issues of inequitable access to resources predominantly from a human/indigenous rights perspective (Slade, 2007; Humphreys, 2010; Caney, 2010). The IPCC AR5 (2014) sets out the pragmatic position that "*climate change puts both human security and human rights at risk*". Arguments made in political and legal scholarship suggest that human rights to life, health, shelter and food are fundamentally breached by the impacts of climate change (Sacher and Windfuhr, 2008). However, the rights based framing of the issue sets a benchmark that is not practicable in FCAS where these rights are often already overlooked, regardless of climate change. While it is not prominent in the climate change and security literature, there is some acknowledgement (with area studies, especially from Africa), of the need to accept and work with the inequitable *status quos* (Chabal and Daloz, 1999).

There are a number of commonalities between the conditions needed to deal with the challenges presented by climate change and dealing constructively with conflict and enabling peace. Both require effective, transparent and accountable governance systems, flexible mechanisms to deal with complex and changeable contexts, and an adequate balance of top-down and bottom-up approaches (Smith and Vivekananda, 2007). Moreover, many of the skills employed by those engaged in violence prevention and conflict transformation are appropriate for developing a better understanding of the role of climate change in conflict dynamics (ibid.). Such skills include understanding the complex multidimensional nature of contexts; having an ability to connect short- to long-term conditions; and being cognisant of the way socio-cultural, political and economic factors interlink.

A key question is what degree of climate change can existing institutions in FCAS cope with peacefully – without disruption and disorder which results in violence? Some commentators have identified effective responses by the state or informal governance providers as an opportunity to build the social contract and, concomitantly, build peace and stability (Dabelko, 2009). UNEP (2009) argues that the natural environment is an effective vehicle for promoting dialogue and consensus-building: "… *cooperative efforts to plan and manage shared natural resources can promote communication and interaction between adversaries or potential adversaries, thereby transforming insecurities and establishing mutually recognised rights and expectations*". While there is a deductive conceptual coherence to this line of argument, there is very limited empirical grounding for this, and certainly not over long timeframes.

Box 8 Role of governance in natural resource management and climate change adaptation in South Asia

A study conducted by International Alert looks at the role of natural resource governance and non-adaptation in fragile contexts, with the objective of identifying opportunities to strengthen local resilience to the combined risks of climate change and conflict in South Asia. The research carried out in nine sub-national locations across Bangladesh, India, Nepal and Pakistan aims to present evidence of the interactions between environmental, social, political and economic risks at the local level and how external adaptation interventions (by the state or international institutions) address combined risks.

The study led to the following observation:
- Risk to stability in contexts vulnerable to climate change involves multiple drivers, many of which are pre-existing social, economic and political stresses with which climate and environmental change may interact and amplify. Hence, local resilience needs to be understood in context, taking into consideration the politics and power around access to natural resources, credit and jobs and built upon in a conflict sensitive way.

The policy implications for strengthening local resilience to the combined risks of climate change and conflict are that:
- Supporting adaptation cannot be targeted by specific actions responding to specific threats and limited to technical fixes. Adaptation needs to address the root causes of vulnerability to climate and conflict, including failures of governance and income insecurity.
- In a fragile state, building the capacity of local communities to take on key governance roles around resource management and service delivery can effectively absolve the government of responsibility and undermine the already fragile state-society relationship, which needs to be rebuilt and fostered as part of a state-building process.

Responses to climate change that address local impacts will be the most effective. Nonetheless, local adaptation cannot be effective without a national policy framework to provide adequate resources, regulation and technical support. Hence, peace positive strategies to climate change and building local resilience should take the context as the starting point. At the same time, these strategies need to work at the national and international levels to address top-down governance obstacles to resilience, in order to ensure that local responses are backed up by an enabling national and international policy environment.

Source: Vivekananda, 2011.

3.3 Population growth and urbanisation

A summary is given here of evidence that suggests that changes in population size and distribution play a critical role in the incidences (past, current or future) of violent conflict resulting from changes in climate, environment and natural resources. Both population size and urbanisation will be affected by climate change and will themselves affect the ability of FCAS to peacefully adapt to climate change (Black et al., 2008).

Population growth and climate change will affect conflict risks through the additional pressure they put on key resources, particularly food, water and land. Global population growth by 2050 is expected to add 3 billion people to the world's population (Black et al., 2008). Over 98% of population growth between 2000 and 2050 will be in the

less-developed regions of the world (Black et al., 2008). Over the same period, climate change is projected to affect the availability of natural resources, such as water and land, restricting rural livelihoods and decreasing global food production (Evans, 2010). Decreased supply, along with increased demand from a growing population, is likely to lead to high food prices, which in certain contexts can contribute to an increased risk of violent conflict (Brinkman and Hendrix, 2011; Evans, 2010). Traditional Malthusian literature posits that the resulting increase in competition over resources can lead to violent conflict. However, although environmental scarcities rarely cause wars amongst countries, they do generate severe social, economic, and political stresses inside countries (Martin, 2005; Homer-Dixon, 1999). When combined with existing tensions, these stresses, in turn, increase the likelihood of sub-national insurgencies, ethnic clashes and urban unrest. Similar risk trajectories can be extrapolated to water and habitable, grazing or agriculturally viable land (Evans, 2010).

Demographic and environmental stress can threaten the capacity, legitimacy and cohesion of the states in developing countries by simultaneously increasing demands for government expenditures, exacerbating intra-elite competition and decreasing government revenues (Kahl, 2006). This can only exacerbate existing social cleavages, especially amongst contending elites. Conflict or instability is only likely to occur when social grievances emanating from demographic changes, such as rapid population growth, combine with environmental factors, such as natural resource scarcity, climate change and existing conflict drivers, such as eroding state authority and escalating intra-elite competition (Homer-Dixon and Deligiannis, 2009). The grievances that may result from this convergence of pressures on already weak governance structures may increase the risk of conflict. Resource availability must then be seen not as a stand-alone issue, but rather in the context of the overall political economic landscape (Evans and Steven, 2009).

In FCAS, increased urban populations will be a particular challenge in the face of climate change (Foresight, 2011). The share of the population living in urban areas is predicted to reach 60% by 2030, being particularly high in East and South-East Asia and sub-Saharan Africa (Black et al., 2008). Climate change hinders the ability of governments to provide infrastructure, basic services and social safety nets, weakening the social contract, which leads to greater insecurity and unrest, especially in weak governance environments. However, there is no established evidence that rapid urbanisation itself is a source of conflict, though there are a number of conflict drivers specific to urban centres that are likely to be compounded in the face of both climate change and rapid urban growth. These factors include limited infrastructure, provision of basic services such as water and sanitation, security and shelter, and insufficient jobs (Dodman and Satterthwaite, 2008).

An additional dynamic which requires attention is the current and continued 'youth bulge' which arises from population growth. Youth are a high risk demographic in terms of conflict, particularly in recent post-conflict contexts and where there is high unemployment (Arowosegbe, 2009; Urdal, 2008). For example, Urdal (2008) finds that youth bulges correlate with higher levels of armed conflict and political violent events. Young people will also be differentially affected by climate change. Young men and women in FCAS will find their livelihood options and assets affected by climate change. Case study evidence shows that across all regions, young men are most likely to migrate in search of work – especially when natural resource based livelihoods, such as fishing or farming, become less viable (Deheza and Mora, 2013; Schilling et al, 2013). Pre-existing grievances or inequalities, such as youth marginalisation and lack of voice, can be compounded by climate change (International Alert, forthcoming). However, while there is ample literature on the specific challenges of youth and conflict, there is a research and evidence gap in relation to youth, climate change and conflict.

3.4 Migration

Despite the wide media coverage of reports warning about the potential flows of 'climate change refugees', there remains a lack of empirical evidence to support these claims (Salehyan, 2005). The logic often put forward is that greater resource scarcity and an increase in the frequency and intensity of extreme events leads resource-dependent people to migrate, exacerbating competition for resources, destabilising neighbouring areas and increasing the risk of conflict (Brown, 2010). There is, in fact, no conclusive evidence linking climate change-induced migration with conflict. There is a broad array of literature on climate change and migration offering projections for migration as a result of climate change from 150-200 million (Stern, 2007) to as many as one billion by 2050 (Christian Aid, 2007). However, the methodologies for such estimates are widely criticised and, as such, these estimates should be treated with caution. The IPCC 4th Assessment Report describes the estimates of numbers of environmental migrants as '*at best, guesswork'*, because of a host of intervening factors that influence both climate change impacts and migration patterns.

Despite the lack of evidence, the linkage between climate change and migration has been uncritically adopted by several high profile individuals looking to illustrate potential pathways between climate change and conflict. For example, Ban Ki-moon put a focus on environmentally induced migration as a pathway for conflict during the July 2011 debate on climate change and security in the UN Security Council. The UN Secretary-General stated that: *"Competition between communities and countries for scarce resources, especially water, is increasing, exacerbating old security dilemmas and creating new ones, while environmental refugees are reshaping the human geography of the planet, a trend that will only increase as deserts advance, forests are felled and sea levels rise"* (United Nations, 2011). This does not reflect the evidence and makes an unwarranted connection between security and migration in the policy realm (Black et al., 2011).

Migration is often seen as a major public policy challenge for industrialised nations, as this is where climate or environmental refugees are expected to seek asylum. Yet empirical research does not support the claim that climate change will trigger waves of South–North interregional migration (GSDRC, 2014). Furthermore, predictions of the number of people likely to be displaced are often based on crude population estimates, as reliable population statistics do not exist in many affected areas (Foresight, 2011). There is broad theoretical consensus that it is generally not the poorest people who migrate overseas because international migration is a high cost option that demands resources for the journey and to cross national borders (Tacoli, 2009).

Definitional issues limit the validity of the existing work on migration related to climate. Much climate and migration literature seeks to define and estimate the number of climate or environmental refugees or migrants that can be distinguished from other kinds of migrants. The Foresight Report (2011) notes that such definitions and forecasts of environmental or climate change related migration, and arguments for public policy action in response, can be challenged for a variety of reasons. Methodologically, it is very difficult, if not impossible, to isolate the different drivers and triggers of migration. Migration is a multi-causal phenomenon in which a range of factors are interrelated. It is therefore unclear how far climate change will emerge as a significant or predominant factor in influencing human migration, distinct from other economic, social or political factors. Based on a comprehensive exploration of the interactions between climate change and migration, "*environmental change is equally likely to make migration less possible as more probable*" (Foresight, 2011). Thus a useful approach for future research might be to develop locally-specific case studies that examine how the drivers of existing migration streams might be affected by or sensitive to climate change, rather than seeking to produce crude global estimates based on the delineation of affected areas (Black et al., 2011).

The potential impact of future demographic and climate changes on migration patterns in developing countries suggests migration itself can have both positive and negative effects. In some contexts, ongoing conflict will mean populations are trapped in environmentally vulnerable situations, where deterioration in environmental conditions may lead to humanitarian emergencies and unplanned displacement (Foresight, 2011). Migration however can also be an adaptive strategy. There is growing evidence to suggest that mobility, together with income diversification, is important in reducing vulnerability to both environmental and non-environmental risks (Tacoli, 2009). Short-term urban migration is already often used as a means of broadening income in times of agricultural shortage. Supporting migration to small, intermediate urban centres is likely to become increasingly important in adapting to climate change (Tacoli, 2009).

Local and national institutions need to foster a positive narrative around migration. Despite the emerging consensus within the literature that migration can be an adaptive strategy, there is little evidence of this being reflected in national policies. For example, Bangladesh's National Adaptation Programme of Action (NAPA) and National Development strategy acknowledge the significant national challenge of migration, but contain no policy measures to address this trend peacefully. Evidence suggests that policies are needed to support: a) pro-poor adaptation; and b) people who will migrate, at least partly, as a result of climate change (Black et al., 2008). Rather than seeking to influence the volume, direction and types of population movement, migration policies might consider providing more positive support to proactively accommodate changes in migration patterns (Foresight, 2011).

Box 9 Climate change and migration

Climate change may influence the factors that drive migration, affecting both migration patterns, and the volume of people likely to move. For example:

- In Bangladesh, lack of access to land is a key driver of migration. Climate change is likely to detrimentally impact almost all rural production systems, which, combined with a growing population, may dramatically reduce both the productivity of and access to natural resources.
- In Ghana, rapid economic growth in major cities is underpinned by the need for energy. However, the hydroelectric power stations that generate 80% of national power could be affected by decreasing rainfall.
- Migration in Ethiopia has been related to conflict or a lack of resources. With the growing season in Ethiopia projected to be reduced in length by 5% to 20% by 2050, there could be a further reduction in agricultural productivity, leading to increased political and economic tensions.
- In Sudan, seasonal migration patterns will be affected by climate change. A trend of decreasing annual rainfall and rainfall variability is already contributing to drought conditions in many parts of the country.

Policymakers can respond to climate change through climate-sensitive development policies – pro-poor adaptation that builds local resilience and adaptive capacity, reducing the need for the poor to migrate. These measures should include: a) new policies to build adaptive capacity amongst some of the most affected populations (in areas such as the Sahel); and b) the integration of climate change concerns into existing policies. In addition, policies aimed at migrants and migrations linked to climate change might include:

- Incorporating peaceful management of migration into National Adaptation Programmes of Action and national development plans.
- Ensuring the social protection of the more vulnerable or poorer migrants. This could include improving the portability of social benefits across international borders, to protect poorer migrations from exploitation and abuse.
- Targeting support to informal settlements within large cities, particularly to improve service delivery.

Source: Black et al., 2008.

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Box 10 Cross cutting issue: gender

There is a long history of policy and practice addressing issues related to gender and climate change versus environment and conflict, as discrete challenges (i.e. gender and one other issue). Much less is known about how to address the interrelationship between conflict, climate change, environment *and* gender, and even less specifically on gender relations (as opposed to women). UNEP catalysed a broad inter-agency effort in 2012 (involving UNDP, the Peacebuilding Support Office and UN-WOMEN) to understand many of these linkages and published a report in 2013 entitled "Women and Natural Resources: Unlocking the Peacebuilding Potential".

"*Although climate change affects everyone regardless of race, caste, ethnicity, sex and level of income, its impacts are more heavily felt by poor nations and communities, and climate change magnifies existing inequalities*" (Dankelman et al., 2008). With women accounting for 70% of those living below the poverty line, it is not surprising, therefore, that policy, practice and research on gender equality focuses on women (ibid.).

Evidence suggests that women are more vulnerable to climate related disasters, both as victims of disasters and in the aftermath (with increases in domestic and sexual violence) (Neumayer and Plumper, 2007). They are vulnerable to climate change, both in terms of lacking opportunities to fulfil their adaptive capacity and by being more reliant on natural resources likely to be affected by climate change (Skinner, 2011; WEDO, 2007). They are vulnerable to conflict through lack of voice, exploitation and increased responsibility as breadwinners. There are also well documented gender differences in displacement caused by extreme events, such as women losing their social networks or social capital, and being adversely affected by mental health outcomes in situations of displacement (Tunstall et al., 2006; Oswald-Spring, 2008; Hunter and David, 2011). What we can know from lessons from Bangladesh, Ghana and Senegal is that policy options exist. Recommendations from learnt experience suggest the value of (Dankelman et al., 2008; UNEP 2013):

- promoting a human and environmental security approach within climate change adaptation and adaptation measures;
- incorporating climate change in discussions on women's rights and related interventions;
- recognising women's abilities and incorporating them into climate and disaster efforts with the goal of changing gendered roles and perceptions of rights;
- integrating human security for women into climate change funding mechanisms to help ensure poor women get their fair share of funds;
- promoting women's participation in formal and informal decision-making structures and governance processes related to natural resource management;
- removing barriers and creating enabling conditions to build women's capacity for the productive and sustainable use of natural resources; these conditions include land tenure security.

The evidence base on the gender dimension is growing: the international research network 'Gendering a Sustainable Future: Gender, Conflict and Climate Change (GCCN)' plans to edit a special issue, published by Peace Review, on Gender, Conflict and Climate Change in June 2015.

SECTION 4

State of the evidence

Policy responses must be based on a thorough understanding of the current and future levels of the risk of conflict, climate and environmental change, and not succumb to common misconceptions about the interrelationship between these issues (see Box 11). Effects of climate change, such as more frequent natural disasters, long-term water shortages and food insecurity, *could* combine with other factors and lead to increased risks of violent conflict (CNA, 2007). The reason *why* this can happen lies in the context of poverty, weak governance, political marginalisation and corruption (Vivekananda et al., 2014b forthcoming). These factors limit the capacity of individuals and societies to adapt to climate change, and simultaneously drive conflict. Policy responses must take into consideration the immediate risks of conflict, climate and environmental impacts and the broader context of failures of governance.

For this reason, a number of concerns are outlined below which policy makers should be aware of when considering the relevance and validity of literature on the relationship between conflict, climate and the environment. It is also important to note the significant regional bias, with the majority of work to date focusing on Africa.

Box 11 Common misconceptions

Common misconceptions about the interrelationship between climate, conflict and environment:

- *Climate change vs climate variability*: there is a lack of understanding and 'loose' use of terminology, particularly in relation to climate change, which does little to further the conflict-climate discourse.
- *Climate induced migration:* there is a lack of evidence for the proposition that climate-induced migration is a cause of increased conflict, despite widespread uptake of this claim (see earlier in the report).
- *Climate change action is apolitical*: the study of climate change has traditionally been dominated by scientific and technical disciplines, which have translated into the proposed approaches for dealing with climate change; this is not sufficient for complex socio-economic-political systems (Levine et al., 2014). Action on climate change is a political endeavour, as is spending climate aid (ibid.) (see later in the report).
- *Conflict is dysfunctional*: the literature on conflict and climate primarily views conflict as dysfunctional, rather than considering its role as part of a process of societal change (Cramer, 2006; Harris et al., 2013).
- *Climate change adaptation is reactive*: climate change adaptation is primarily described as a reaction to a negative change in external conditions, rather as something proactive that can be harnessed to pursue opportunities towards sustainable development and resilience.
- *Climate change does not mean business as usual*: climate *change* means the future will not be the same as the past, yet a large proportion of the literature relies on historical climate and conflict data. This poses questions about the usefulness of climate conflict correlations for informing future policy directives, and raises questions about the value of the logistical positivist basis of some methods being applied.

4.1 The limitations of focusing on causality

The policy relevance of the current academic literature on climate change and conflict is limited because research questions focus on establishing causality: whether or not climate change contributes to conflict (Scheffran et al. 2012b provide an overview). Some studies have identified a correlation between countries facing exposure to natural disasters and the incidence of armed conflict (Scheffran et al., 2012c), while others attempt to show (Burke et al., 2009; Hsiang et al., 2013) or reject (Buhaug, 2010; Slettebak, 2012) causal trends between climatic change and incidence of conflict. So far, the academic field is dominated by quantitative approaches analysing temperature and precipitation data in conjunction with large-scale conflict records (Scheffran et al., 2012a; Scheffran et al., 2012c; Theisen et al., 2013, provide overviews). This approach however offers no diagnostics or potential entry points that could influence or disrupt potential links between climate change and conflict.

Without long-term multi-year research that seeks to unpack the role of climate, environment and natural resources in violent conflict, the evidence base which informs policy responses can only be considered partial. Most high impact studies are quantitative, global or regional in nature and retrospective, attempting to make causal relationships between selected variables. Some recent examples of this work focus on short-term rainfall and temperature variability (e.g., Adano et al., 2012; Raleigh and Kniveton, 2012; Theisen, 2012) whilst for others, security is defined narrowly as the absence or presence of civil war or armed conflict (e.g., Gleditsch, 2012; Slettebak, 2012; Theisen, 2012). There is also a tendency to compile 'hotspot' mappings (maps showing colours depicting different levels of vulnerability and threat of climate-induced conflict), using a composite index of at-risk countries. While useful on a generalised level, these fail to represent the role of borders in conflicts, generalise entire regions with the same category or level of 'threat risk', and often fail to take into account the full suite of intermediary factors which affect the likelihood of armed or violent conflict. For an assessment of their relative strengths and weaknesses, see Sherbinin (2014).

Alternative approaches have sought to find associations between changes in climate and the factors known to increase the risk of civil war, such as a recent history of civil violence, low levels of per capita income, low rates of economic growth, economic shocks, weak political institutions and the existence of conflict in neighbouring countries (Miguel et al., 2004; Weede, 2004; Hegre and Sambanis, 2006; Dixon, 2009; Blattman and Miguel, 2010; Brückner and Ciccone, 2010; all cited in Adger et al., 2014)[4]. Such approaches are of limited forward looking relevance as they use historical climate data. This seems an oxymoron for a problem like climate change, where the future will not look like the past and the emphasis should be on planning for uncertainty rather than finding historical trends. What is more, these studies fail to capture lower levels of violence, such as inter-group violence or increased violent crime, which could escalate into greater instability under certain circumstances, and are, therefore, important dimensions of conflict to include. This stands in contrast to the security and development literature which has moved on considerably from focusing on state security (which might be measured in number of armed conflicts) to a broader and more nuanced understandings of human security (Dalby, 2009; Matthew et al., 2010).

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[4]   Much of this literature can be found in the IPCC AR5 Chapter 12 on Human Security (Adger et al., 2014) and the Journal of Peace Research Special Issue on Climate Change.

Findings can be contradictory and confusing from a policy making perspective. As the IPCC AR5 (Adger et al., 2014: 16) states: "*Some of these* [quantitative studies] *find a weak relationship, some find no relationship, and collectively the research does not conclude that there is a strong positive relationship between warming and armed conflict (Theisen et al., 2013)."* Existing studies have been criticised for not adequately considering contextual specificity. Their failure to situate climateconflict correlations into a broader context limits the explanatory value of the findings and undermines the appropriateness of making comparisons across cases (Harris et al., 2013).

4.2 What is needed

In order to provide better support to policy makers, the evidence needs convincing theories to explain the interrelationship between conflict, climate and environment; clarity on the intermediary concept; and innovative research methods to better capture lessons from climate change adaptation in FCAS.

What is significantly lacking across the literature are convincing theories that explain the associations between climate change and the incidence of violent conflict (Adger et al., 2014). This severely limits the usability of study findings for policy makers. For example, studies fail to explain how changes in climate affect the prevalence of violence and what kinds of mechanisms, institutions or governance arrangements help avoid violent outcomes (see Barnett and Adger, 2007; Scheffran and Battaglini, 2011; Buhaug and Theisen, 2012; Gleditsch, 2012; Murtinho and Hayes, 2012; also see Gemenne et al., 2014). As a result, "*Confident statements about the effects of future changes in climate on armed conflict are not possible given the absence of generally supported theories and evidence about causality*" (Adger et al., 2014). Amongst the key questions requiring better evidencing is *why* FCAS are more vulnerable to the effects of climate change than peaceful and stable societies. That cannot be answered by a narrow concept of security and, thus far, it does not seem as if quantitative studies are getting to the heart of the matter. For that, more in-depth analysis is required.

Effective strategies to mitigate conflict risks induced by climate change impacts need to take account of how climate change affects the livelihoods and resource allocations of different stakeholders in a conflict context. This requires inductive or case study exploration of specific settings and locations (countries, regions, trans-boundary areas) of interest to policymakers and development agencies. More detail and nuance in understanding the climate–conflict relationship in specific countries or regions will not only help development agencies determine *where* they should focus their efforts, but contribute to a better understanding of *how* resources for conflict prevention or conflict mitigation might be distributed. One area for research is to gather lessons learned from ongoing efforts to adapt to climate change and climate variability in FCAS and apply them to future planning.

Improving our understanding of the relationship between climate and conflict is challenging because of the complexity of the intermediary concepts that mediate the relationship between climate and conflict. The concepts of fragility, vulnerability, adaptation, resilience and human security have been discussed in other studies (e.g. Adger, 2006; Brinkerhoff, 2011; Duit et al., 2010) but rarely in conjunction (Scheffran et al., 2012a; Smith and Vivekananda, 2009 are exceptions). The challenges of unpacking the relationship between conflict, climate and environment are further complicated by definitional challenges. Often, different communities of practice use the same terminology to describe different things ('mitigation' is a classic example here). In addition, confusion or lack of clarity is commonly found with use of the following terms: climate change and climate variability; resource scarcity and poor resource management; governance and management; environment and natural resources; violence and conflict (there is often a lack of

disaggregation between different types).[5] This needs to be overcome so that common ground can be found between the different communities of practice and effective policy dialogue can take place.

There are knowledge gaps in our understanding of how the climate–conflict–environment nexus relates to vulnerabilities. Understanding vulnerability is critical in fragile situations characterised by uncertainty and a constant state of flux; and beyond evaluating current vulnerability, what does future vulnerability look like? Research is needed to fill current knowledge gaps, including analyses of climate and conflict risk which take account of contextual changes in land use, economic shocks and disaster trends. Additionally research is needed on vulnerabilities at multiple scales and how they relate to each other, as well as on the ways these vulnerabilities might change over time, as both social relations and spatial configurations change.

Constraints involved in conducting research on the climate changeconflict links in FCAS significantly limit the ability of researchers to collect and assess data. This relates to the history or legacy of conflict hindering research processes, lack of data or destruction of vital records, inaccessibility of certain areas or sustained access to a population to record the long-term impacts of climate and environmental change (Shilling et al., 2013). This undermines the ability of policy makers to combine local historical data (and coping strategies) and scientific models. As a result of the challenge that conflict presents to research, Harris et al. (2013) argues that *"analysis is often conducted with a small sample size, in regions less severely affected, or within short timeframes for events that have long-term effects… such research risks under-representing the poorest and worst-affected populations, failing to consider how local conditions have impacts beyond the local level, or failing to assess how natural hazards may impact on longer-term disaster resilience".* Innovative research methods are required to overcome this limitation and help collate material which will have more policy relevance for decision-makers.

Further research could include delineating the main areas and investments that can mitigate conflict linked to climate change, such as:

- Institutions and natural resource management governance: clarification of land rights and tenure, dispute resolution processes and harmonization of laws;
- Sustainable livelihoods: diversification, insurance, support for mitigation and mobility, early warning, etc.;
- Rehabilitation of degraded ecosystems and improved management: to improve/increase the supply of natural resources through management, more efficient use of natural resources and rehabilitation of degraded areas;
- Disaster risk reduction: mitigate the impact of disasters in order to further protect the availability of key resources.

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[5] For example, 'conflict' can include a range of violence (physical, psychological, sexual, structural) through to armed conflict and civil war (Harris et al., 2013).

SECTION 5

Entry points for improving policy and practice

Multiple entry points exist for improving policy and practice to deal with the nexus of climate, conflict and environment. These include recognition of the interrelationship in joint risk assessments and in policy and programme design.

In complex and fragile situations, climate change adaptation must Do No Harm, and ideally help prevent conflict. Those responsible for climate change adaptation policy or practice – whether under the UN climate change framework, international financial institutions or development agencies – need to ensure that their internal systems and structures promote resilience even where there is state fragility or conflict risk. For this to be possible, institutions must restructure in such a way as to maximise the participation of ordinary people and build accountable and transparent public institutions (Vivekananda et al., 2014a).

There is a lack of clear and tested policy prescriptions to guide what an effective response would look like that adequately accounts for climate, conflict and environment (together). Programming uncertainty (in relation to both conflict dynamics and climate change) is thus to a large extent unknown. It is in this challenging context that the next steps on an uncertain road need to be designed.

5.1 Understanding the complexity of a context: holistic risk assessments

Evidence points towards the need to adopt approaches that capture the interrelationship between risks, vulnerabilities and resilience. Toolkits and guidance exist in this regard, such as those which look at renewable resources and conflict, and include consideration of climate change (see UN, 2012). Some tools and approaches are expanding their remit, though most tend to focus within the comfort of their disciplinary boundaries. For example, disaster risk reduction and climate change adaptation are expanding to look at a range of risks, i.e. disaster and climate related, but rarely expand to include conflict.

Joint risk assessment tools are widespread, but of the 66 pertaining to climate change, natural resources and conflict, only two tools explicitly addressed the three linked risks together (AU and WWF, 2014). Climate risk assessment tools tend to be rooted in scenario based approaches that follow a fairly linear progression from climate predictions, to an impact, to a set of consequences. This vector serves well in narrowly defined, model based studies, but does little to help in understanding climate impact in difficult environments, let alone inform policy on adaptation. A shift has already occurred in the adaptation policy world towards a framing based on real-world pathways. Often this is under a rubric of Act-Learn-then-Act again, or similar concepts of social learning and actor-institutional change. This poses a great challenge in FCAS where the conditions are not conducive to an 'act-learn-act' pathway under current development approaches – which do not take into account the complex political economy of such fragile contexts (Hamza et al., 2012).

EVIDENCE
ON DEMAND
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Organisation	Name of tool	Conflict sensitivity and/or peacebuilding	Humanitarian action	Environmental management
CARE international	Humanitarian Implications of Climate Change		x	x
Conflict Sensitivity Consortium	Conflict Sensitivity Practitioners' Training Manual	x		
Conflict Sensitivity Consortium	Conflict Sensitive Approaches to Development, Humanitarian Assistance and Peacebuilding: A Resource Pack	x	x	
Conflict Sensitivity Consortium	How-to Guide to Conflict Sensitivity	x		
Environmental Emergencies Centre	Integrating Environmental Considerations into Humanitarian Action		x	x
HELVETAS Swiss Intercooperation	Manual: 3 Steps for Working in Fragile and Conflict-Affected Situations	x		
HELVETAS Swiss Intercooperation	Field Guide: 3 Steps for Working in Fragile and Conflict-Affected Situations	x		
HELVETAS Swiss Intercooperation	Guidelines on Natural Resources and Conflict	x		x
Inter-agency Standing Committee (IASC)	IASC Operational Guidelines on Human Rights and Natural Disasters		x	
Inter-agency Standing Committee (IASC), Taskforce on Safe Access to Firewood	SAFE Tools for Ensuring a Coordinated, Multi-Sectoral Fuel Strategy in Humanitarian Settings		x	x
International Federation of Red Cross and Red Crescent Societies (IFRC)	Vulnerability and Capacity Assessment (VCA) Toolbox and Training Guide		x	
International Institute for Sustainable Development (IISD)	Conflict sensitive Conservation: Practitioners' Manual	x		x
International Institute for Sustainable Development (IISD) and Center for International Forestry Research (CIFOR)	Community-Based Risk Screening Tool: Adaptation and Livelihoods (CRISTAL)		x	
International Union for the Conservation of Nature (IUCN)	Ecosystems, Livelihoods and Disasters: An		x	x

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Organisation	Name of tool	Conflict sensitivity and/or peacebuilding	Humanitarian action	Environmental management
	Integrated Approach to Disaster Management			
Joint UNEP/OCHA Environment Unit	FLASH Environmental Assessment Tool		x	x
KOFF Centre for Peacebuilding	Preventing Natural Resource Conflicts	x		x
Sphere Project	The Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response		x	x
United Nations Economic Commission for Latin America and the Caribbean (ECLAC)	Handbook for Estimating the Socio-economic and Environment Effects of Disasters		x	x
United Nations Environment Programme	UNEP, Environmental Needs Assessment in Post-Disaster Situations: A Practical Guide for Implementation		x	x
United Nations Environment Programme (UNEP)	Environmental Needs Assessment in Post-Disaster Situations		x	x
United Nations Environment Programme (UNEP) and Groupe URD	Training Toolkit: Integrating the Environment into Humanitarian Action and Early Recovery		x	x
United Nations Environment Programme (UNEP), UN Department of Field Support (DFS), and UN Department of Peacekeeping Operations (DPKO)	Greening the Blue Helmets: Environment, Natural Resources and UN Peacekeeping Operations	x	x	x
United Nations High Commissioner for Refugees (UNHCR)	UNHCR Environmental Guidelines		x	x
United Nations High Commissioner for Refugees (UNHCR) and CARE International	FRAME Toolkit: Framework for Assessing, Monitoring and Evaluating the environment in refugee related operations		x	x
United Nations Institute for Training and Research (UNITAR)	Peacekeeper Training Programme Advanced Course: Natural Resource Management in Post-Conflict Countries	x	x	x
United States Agency for	USAID Conflict	x		x

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Organisation	Name of tool	Conflict sensitivity and/or peacebuilding	Humanitarian action	Environmental management
International Development (USAID), Office of Conflict Management and Mitigation	Toolkits for Natural Resources			
United States Institute of Peace (USIP) and United Nations Mediation Support Unit	Peacemaker's Toolkit Series	x		
United States Institute of Peace (USIP) and US Army Peacekeeping and Stability Operations Institute	Guiding Principles for Stabilization and Reconstruction		x	

Source: American University and World Wildlife Fund, Tools for a Sustainable Recovery (unpublished).

Table 1 Summary of joint risk assessment tools (see Annex 1 for full list)[6]

Rather than trying to identify a toolkit or approach which covers all issues, the cross-Whitehall Joint Analysis of Conflict and Security (JACS) is an example of an effective process of bringing together experts on a range of issues. JACS (see Box 11) demonstrates a means to achieve fuller understanding of the risk factors affecting a context, one where complementarity between government approaches within a country can be identified and pursued. That said there are clear areas for improvement. The most recent JACS Guidance Notes do not explicitly mention climate change, but do take into account the need to consider 'change to the physical environment which may increase tensions' (FCO et al., undated): "*It is useful to draw a distinction between structural factors (underlying features of a society), proximate factors (more recent changes in the political, physical, social or economic environment which may increase tensions), and triggers (flashpoints leading to the emergence of violence).*"

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[6] Many other toolkits exist which were not included in the AU and WWF review, for example: Natural Resource Management in Transition Settings. UNDG-ECHA 2013. Available: http://www.un.org/en/land-natural-resources-conflict/pdfs/UNDG-ECHA_NRM_guidance_Jan2013.pdf
EU-UN Partnership on Land, Natural Resources and Conflict Prevention toolkits. Available: http://www.un.org/en/land-natural-resources-conflict/index.shtml

Box 12 JACS in Mali and the Sahel

In October 2012, the FCO commissioned a cross-Whitehall Joint Analysis of Conflict and Stability (JACS) in order to develop a shared Her Majesty's Government (HMG) understanding of the nature and causes of conflict and instability in Mali, and examine its resilience to these challenges. The analysis sought to inform HMG policy thinking and contribute to the formulation of policy and programmes.

The analysis involved the FCO, DFID, MoD and Cabinet Office. The process provided opportunity to draw together HMG tools and approaches of relevance to Mali and the Sahel. The crisis in Mali is of concern to the UK for its real and potential security, political and humanitarian impacts. The FCO, DFID and the MoD have all increased their engagement in the country, making it more feasible to work out a joint vision for the UK and some principles of engagement to prioritise a political track alongside support for any military intervention. A thorough consideration of the humanitarian impact of any intervention has also been a central concern.

Mali is a perfect test case of where conflict, climate and environmental (amongst other) issues interconnect. Mali has experienced conflict on several occasions since its independence in 1960. In 2012 the level of insecurity was unprecedented. Root causes range from historical tensions and prejudice between societal groups, and inequitable governance through formal institutions, through to geography and differences in the terrain between the north and south of the country. Attempts to support state building and peacebuilding need to prioritise the issues identified in the JACS, but also include consideration of climate change – and its role in food security and migration. Though climate change was not a feature of the 2012 JACS, its inclusion would help ensure proposals for support to Mali are based on a thorough understanding of what the future may look like and what the viable livelihood and food security options might be.

Source: DFID (personal communication)

The Multi-Hazard Disaster Risk Assessment (MHDRA) conducted by DFID Tanzania in March 2014[7] provides another example of an assessment which takes a holistic approach to risk and vulnerability. The MHDRA actively encompasses a wide range of issues, including conflict and security, climate change and environmental change. The risk profile developed for Tanzania was developed in line with the minimum standards for embedding resilience in DFID's country programmes, with the objective of guiding DFID's preparedness and resilience work in Tanzania. The assessment captured issues relating to Tanzania's susceptibility to natural hazards and both current and future climate variability; extreme events, such as flash floods as well as regionalised drought risk; rising tensions between political parties and religious groups; conflict over land and land invasions; and food insecurity.

5.2 Factoring-in climate change, environment and conflict in policy

Traditionally, the national and international institutional architecture for dealing with conflict, climate and environment run in parallel. This has inhibited joined-up policy on the interconnection between vulnerabilities, risks and opportunities associated with the climate, conflict and environment nexus. Concepts such as resilience have helped bring the idea of 'interconnectivity' to the fore. An increasing number of donors are integrating or mainstreaming individual issues across their policy, programmes and funding decision-making processes. Of the three issues considered here, environment has been considered a

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7   Personal communication with Razi Latif

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cross-cutting issue for several decades, largely because of the well established and evidenced links between biodiversity, land use, water quality and poverty (UNDP and UNEP, 2007). Climate change has increased in prominence over the past decade in line with growing confidence and public awareness of climate science. Conflict remains a relatively discrete policy area – in part because of the complicating links with politics and foreign policy.

Policy architecture at the national level remains relatively 'siloed', though calls are being made for greater connectivity between issues of conflict, climate and environment in policy, programming and funding. For example, there have been increased calls for consideration of climate change impacts on resource availability to feed into conflict resolution or peacebuilding measures, and for the inclusion of climate in conflict policy and vice versa (see Box 12) (UNEP 2009). For example, the summary statement of the 5th Africa Regional Platform for Disaster Risk Reduction argues[8]:

- *'Violent conflict is closely associated with disaster risk and related efforts to prevent conflict need to be considered as part of overall efforts to build resilience to disasters' [including climate related disasters].*
- *'Integrated and coordinated approaches to disaster risk reduction, climate change adaptation and related aspects of conflict prevention can reduce the fragmentation of resources and improve the impact of investments'.*

Within the array of existing tools, decision support gaps for policy makers arise around questions of impact. There is little work done on the impact on climate change and peacebuilding of various policy options. For example, an assessment of how measures to improve natural resource management through climate adaptation is reducing conflict risks could identify areas for programming focus, which could yield a double dividend of climate and conflict resilience, and may have a positive impact on value for money. Specific analytical gaps include the lack of systematic baseline monitoring of instability and its links to structural factors, especially at the sub-national level. A lack of baseline data on instability and conflict makes the impacts of interventions hard to measure, especially in FCAS. Investing in this would help fill the decision support gap and enable better investments.

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[8]   For more information, see: http://www.unisdr.org/we/inform/events/35308

Box 13 Climate and conflict in policy considerations from northern Kenya community conservancies

Recommendations for conflict prevention have been identified from lessons on conflict and security in relation to the role of natural resource scarcity and competition in northern Kenya's arid and semi-arid lands. In 2009 the region witnessed severe drought, rising armament and increasing outbreaks of violent inter-community conflict. The region is also vulnerable to the impacts of climate change and has experienced an increase in mean annual temperatures of 1°C and an increasing frequency of drought. A number of other changes in the region have occurred, including destruction of water catchments and deforestation, environmental degradation, entrenched ethnic divisions – as witnessed in the 2007 election violence and continued poor leadership and governance, particularly over land and natural resource management.

The Kenyan *National Climate Change Response Strategy* fails to consider the role of conflict and security in addressing climate change. Similarly, *Kenya's National Policy on Peacebuilding and Conflict Management* does not include climate change. The failure to recognise these links in the policy realm may result in an incomplete response to the relationship between natural resources, the environment and conflict dynamics. That said, the existing commitments to mainstream conflict sensitivity provide a basis for action. Specific recommendations for conflict prevention include the following:

* *Traditional conflict management mechanisms* need to be strengthened to deal with new challenges arising from a changing natural resource base due to climate change.
* *District Peace Committees* (which are state-supported structures) should be complemented with traditional community-level mechanisms. This would reduce the potential for duplication and make sure neither structure is undermined by the other.
* *The National Action Plan* on small arms and light weapons needs to be fully implemented to ensure other efforts are not undermined.
* *Security provision* needs to become community-centred and more responsive to make certain the impact of climate change on natural resource availability does not undermine security.
* *The decentralisation process* needs to ensure coordination between dispute resolution processes at the local level.
* *Auxiliary and privatised security agents* need to be regulated to ensure they do not continue to fill the security vacuum created by inadequate state security provision. This will be particularly important if groups try to gain or maintain control over certain natural resources.
* *International aid policy* needs to be conflict- and climate-sensitive to make sure it does not exacerbate existing tensions or create new ones. And, where possible, such policy needs to contribute to building peace.

Kenya is currently undergoing an extensive decentralisation process. Moving forward it will be important to see if local authorities have a mandate to address climate change, natural resource management conflicts and natural resource distribution, and how local level governance structures will coordinate between them.

Source: Campbell et al., 2009.

5.3 Integrated approaches in programme design: operationalising resilience

Throughout this Topic Guide examples of attempts to operationalise different aspects of resilience have been provided – see text boxes.

Operationalising resilience into programming on-the-ground requires deep understanding of the context and integrated approaches to programme design (OECD, 2011). This necessitates understanding the risk landscape that individuals and institutions face, the different layers of risks and the interaction of risk factors across these layers. Stark et al. (2009) suggest that "*more granularity in the understanding of the climate-conflict relationship*" is required in specific locales, and across scales. A multitude of toolkits and guidance notes exist that explain how to integrate different issues into programme design[9] – though these focus on the integration of one issue (such as climate change) into another area of humanitarian and development work; none exist that explicitly bring together conflict, climate and environment. What all the approaches stress is that integrating climate change is not about 'adding on' a new issue area, but – if done correctly – may fundamentally alter the nature of policies and programmes being proposed.

Resilience is determined by decisions made at a range of interconnecting scales: household, national, regional and international level. Local level context analysis alone is not sufficient. Community climate resilience in fragile contexts can be compromised where national or geopolitical risks are not taken into account. For example, efforts to build resilience to chronic food insecurity through food aid in Nepal inadvertently undermined long-term community resilience by creating a non-indigenous cultural dependency on rice in mountainous regions that lacked sufficient water to cultivate the paddy (Schilling et al., 2013). Further, building resilience locally is important, but will be inadequate without sustained support from national policies to bolster local capacities to adapt. A similar finding on the need to take account of the cross-scalar dimension of conflict and climate variability can be found in Benjaminsen et al. (2012). Risks are ever changing, affected not only by climatic changes and by external forces, such as economic trends or government decisions, but also by decisions taken by those most closely involved.

Community-based adaptation is an attractive approach, but it needs to be nuanced. Community-based adaptation is strongly promoted by many development actors as an effective means of ensuring context-specific actions, but it needs to go alongside work with governance providers (UNEP 2014). On the one hand, local communities in conflict-prone or conflict-affected contexts often lack the capacity, authority, budget and security to take on the responsibility for providing basic needs and services for themselves. On the other hand, even if they could, such action by the community may risk usurping the legitimate role of the state in some contexts. There is a strong correlation between the perception that a state is not upholding its side of the bargain, i.e. spending taxes on provision of basic needs and services, such as security and roads, and the incidence of political instability. It follows then, that if communities take over roles which ought to be played by the government in return for the tax revenue it receives from citizens, the social contract is further weakened and efforts to build resilience actually undermine governance and political stability. That said, in some contexts it may be that community service delivery can be compatible with the state – under certain co-management arrangements (UNEP, 2014). As always, this depends on the context.

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[9]   For a full list, see Bahadur et al. (2014) A how-to handbook. Australian Government and Overseas Development Institute: Canberra and London. Section 4 Further Information, pp.58-70. Available: http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8930.pdf
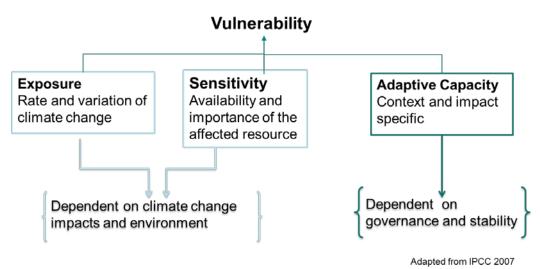
5.4 Conflict sensitive adaptation

Current approaches to adaptation tend to take one of two tracks: one focuses on creating response mechanisms to specific impacts, and the other on reducing vulnerability by building capacities to deal with a range of impacts (McGray et al., 2008). Both approaches understand adaptation as a long-term planned process, as opposed to being spontaneous, unplanned responses (see IPCC, 2007, see Figure 1). Adaptation in FCAS needs to be primarily shaped around the specific needs, challenges and existing capacities of the context in question and situated in the demands of organisations and state–society relations. Thus, efforts for policy and practice should focus on action to promote the management of risk, effective risk governance, peace and stability.

Figure 1 Elements of vulnerability[10]

Adapted from IPCC 2007

Efforts to promote climate change adaptation in FCAS will invariably centre on water, land, energy and food. All of these issues are not only highly affected by climate change and variability, but are also highly political, and come with their own complex political economy. Donors must equip themselves to respond better to the complex tensions that arise in difficult environments between multiple political demands. This will enable them to work in partnership with government and elites, which may only have partial political legitimacy; to support actions that improve stability and security; and to proactively foster the emergence of a relationship between the citizen and the state that is characterised by responsibility and responsiveness. This does not require a new toolkit, but rather a commitment by policy makers to adopt existing political economy and conflict sensitive approaches. Conflict sensitivity, if adopted effectively, can help to ensure that the context is the starting point for an intervention, that interventions are informed by political economy analysis and that actions strengthen (rather than undermine) mechanisms for the peaceful resolution of conflict.

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[10] Exposure can also be defined as: The nature and degree to which a system is exposed to significant climatic variations. See: IPCC Glossary of Terms, available: https://www.ipcc.ch/pdf/glossary/tar-ipcc-terms-en.pdf
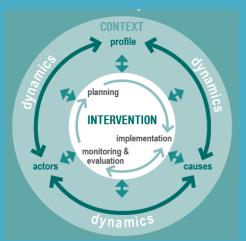
Box 14 Conflict sensitive approaches

Over the last decade there has been a growing realisation that humanitarian assistance sometimes feeds conflict rather than alleviates it, and that development aid sometimes exacerbates tensions. This has led to the development of tools to understand the relationship between programming and conflict. The seminal Conflict Sensitive Resource Pack (2004) documents current practice, available frameworks and lessons learned. At its heart is the concept of conflict sensitivity – the notion of systematically taking into account both the positive and negative impact of interventions in the contexts in which they are undertaken (in terms of conflict or peace dynamics), and conversely, the impact of the broader context on an intervention.

Operationalising Conflict Sensitivity

Continuous learning about the application of conflict sensitivity can be found on the website http://www.conflictsensitivity.org/

Source: Resource Pack (2004). More information can be found in the forthcoming Topic Guide on Conflict Sensitivity produced by the GSDHRC.

Climate change adaptation in support of peace and stability is a new idea gaining traction. Tanzler et al. (2013) suggest that – providing conflict sensitive approaches are adopted – climate change adaptation measures have the potential to contribute to reducing the security risks posed by climate change, and making a positive contribution towards peace and security. The proposition put forward is that climate change adaptation measures "… *can play a significant role in preventing crises and conflict. They can have a stabilizing influence on weak or fragile states"* (Tanzler et al., 2013). By understanding the impact of climatic change on conflict dynamics, and the potential for adaptation to contribute to resource sharing and managing changing conditions, climate change adaptation can be seen as a viable contributor towards strategies for peace and stability. While more evidence (and time) is required to better understand how such ideas may play out in practice, learning from natural resource management – including specifically water management – suggests that positive outcomes are feasible.

The IPCC AR5 (2014: 3) states that "*Poorly designed adaptation and mitigation strategies can increase the risk of violent conflict."* Practical examples from East Africa, Ache and Darfur are provided by Levine et al. (2014) who argue that techno-centric approaches to complex challenges, such as the climate and conflict nexus, fail the resilience challenge. The authors convey how thinking and acting on climate or conflict as a technical

challenges implies that technical solutions are required, such as drought resistant seeds, disaster proofed buildings or better irrigation (Levine, et al., 2014). Yet techno-centric 'solutions' will fail the resilience challenge if power and politics are not adequately factored in. Policies, programmes and funding in support of climate change adaptation are subject to the same political interference as development and humanitarian aid. The long history on the politics of aid is thus equally relevant for the contemporary aid architecture. While climate change is a predominantly scientific discipline, the solutions to address climate change are inherently political, as are the reasons that some people are more vulnerable to climate change than others (related to a combination of exposure, vulnerability and capacity, see Figure 1).

Concerns over inappropriate use of climate and disaster aid – which may be detrimental to peace – have called for the application of conflict sensitive approaches to climate aid expenditure (Peters and Levine, 2014). Levine et al. (2014) show how:

- In Aceh, Indonesia, a failure to understand post-conflict political dynamics undermined a climate related initiative and may have inadvertently exacerbated underlying political tensions.
- In the dryland areas of Uganda and Ethiopia, national climate change adaptation policies can be presented in ways which ignore the low-level conflict in these areas, where political marginalisation has led to longstanding tensions and widespread insecurity. Broader political interests can drive particular adaptation policies, and a climate change agenda can be a useful vehicle for mobilising international support that can strengthen or undermine local resilience. In such cases, this agenda may undermine resilience or increase conflict if political interests are not placed at the centre of the analysis.
- Darfur, Sudan, serves as an example of the kinds of conflict which many believe will become more common as climate change intensifies resource scarcity. However, the authors warn that too narrow an analytical frame risks making correlations that undermine the complexity of the context; partial understanding of a context could result in inappropriate policies or interventions.

Box 15 What not to do with climate aid

1: Spending aid in places with conflicts without doing a thorough analysis of the conflict first.
2: Reducing complex situations to a simple equation of 'more climate change equals more conflict'.
3: Presuming that choices about how to adapt to climate change are politically neutral or immune from political manipulation.
4: Establishing programmes which presume that the countries function well, when they do not.
5: Failing to join the dots: trying to understand complex issues in isolation.
6: Working in isolation.
7: Allowing people from the same agency to work on the same issue or area without talking to one another.
8: Making your work fit yesterday's world.
9: Assuming that 'building resilience' will help the poorest without a concerted effort to ensure it will.

Source: Peters and Levine (2014) (see Annex 2 for full explanation)

6.1 Sequencing of interventions

In contexts mired by destructive conflict where the pursuit of non-violent conflict resolution is sought, the need to proactively take climate change into account within policies and practice can be a difficult case to make. Contexts severely affected by ongoing violent conflict may not be considered appropriate targets for interventions aimed at addressing the long-term impacts of climate change. The argument often presented is that institution building (in other key sectors) is more important. Yet building the right institutions to deal with future risks will be partial at best if climate change is not included. Positive examples are available (a) of attempts to understand climate and disaster risk management in FCAS, such as Tearfund's pursuit of disaster risk reduction in Kandahar, Afghanistan (see Harris et al., 2013), and (b) of the need to consider climate change adaptation and peacebuilding as related agendas (Matthew and Hammill, 2012).

Managing the impacts of climate change, therefore, requires establishing new, or strengthening existing, conflict resolution mechanisms in ways which take account of individuals' different priorities of risk. In the Sahel, "… *a lack of legitimate and functioning conflict resolution tools and mechanisms contribute to human insecurity, by affecting the ability of communities to deal with their own vulnerabilities and the threat of environmental stressors and conflict*" (Bronkhorst, 2011). A constructive starting point would be to increase the capacity of communities to prioritise risk, engage with conflict resolution mechanisms, clarify and secure land tenure, and reinforce customary mediation to create opportunities for resolution and reconciliation (ibid.).

At the local level, climate change is just one of a myriad of factors affecting the dynamics of peace and security of a given context. The drivers of conflict related to climate change and natural resources are complex and multidimensional. In order to effectively pursue adaptation and conflict prevention a suite of issues will likely need to be addressed. These would include resource degradation, access and control of natural resources, enforcement of land and resource tenure, rights and laws, engagement and participation of communities in decision-making processes, and trans-boundary collaboration (UNIFTPA, 2012). Take the Southern Sahel of Sudan as an example. Affecting the viability of livelihoods of communities is a range of socio-economic, political and cultural factors. Entwined with the impacts of climate variability and change are non-climatic factors, many of which are arguably more significant as short to near term priorities of risk – entrenched poverty, lack of economic diversity, poor extension services and community displacement (GEF 2007, in Bronkhorst, 2011).

6.2 Overcoming silos

There is emerging recognition that disjointed approaches have been adopted for managing the impacts of climate change and those aimed at conflict resolution and/or peacebuilding - in contexts affected by violence and armed conflict; this has undermined opportunities for greater policy coherence. NAPAs – the national policy frameworks for dealing with climate change adaptation – are largely devoid of issues of conflict prevention or peacebuilding. Take Mali as an example. Mali's NAPA does not incorporate issues of violence or conflict (related to changing patterns of resource availability and use) and thus fails to advance conflict sensitive approaches to adaptation, approaches which are arguably essential. In part, this is a result of the sectoral divisions of different line ministries. As with most NAPAs, Mali's is led by the Ministry of Environment whose departmental remit focuses on environmental issues, despite the interconnectedness with tensions over natural resource and land use. However, across the Sahel, a number of NAPAs are starting to reflect the security implications of climate change. For example (see UNEP 2009: 65):

- Burkina Faso's programme proposes a regional approach to securing pastoral zones and mitigating farmer and herder conflicts over land;
- The Gambia's programme mentions conflict as a 'side effect' of climate change;
- Mauritania's programme notes 'massive' migration of farmers to urban areas because of declining rainfall and proposes an 18-month monitoring and assessment of water-related conflicts;
- Guinea-Bissau's programme considers population displacement to be a consequence of climate change and highlights the need to resolve conflicts between cattle raisers and farmers; and
- Cape Verde's programme points out the need to address increasingly frequent water-related conflicts.

The failure to effectively link across scales can inhibit the feasibility of addressing the impacts of a changing climate in ways that help reduce or prevent violence. Continuing with the Mali example, many local government officials are not aware of the NAPAs. This limits the opportunities for integrating local efforts to adapt to and cope with climate variability in more coherent ways across scale (Djoidi et al., 2011). A further impediment is the lack of implementation of the NAPA due to low capacity and financial resources (Goulden et al., 2011).

Sectoral divisions not only limit the possibilities for proactive, coordinated co-benefits, but create a false compartmentalisation between issues, which can result in action being taken to advance one agenda at the expense of another. "*The real danger is when different strands of policy start undermining each other and when policies and strategies for development, peacebuilding and climate change adaptation are disconnected or divergent"* (Smith and Vivekananda, 2007, in Hamza et al. 2012). A comprehensive understanding of policies is, therefore, essential for avoiding potentially contradictory policy action at the local level.

Compartmentalisation goes against the notion of building resilience, yet current practice is heavily segregated, with different policy directives, institutional structures, funding streams and expertise. For example, silos exist between communities of practice dealing with humanitarian, development, conflict, climate, environment and disasters. This compartmentalisation is mirrored in the post 2015 Development Agenda, with a separate climate agreement, Sustainable Development Goals, successor to the Hyogo Framework for Action and World Humanitarian Summit 2016. Policy makers will need to consider how to

overcome these, as silos are replicated at the national and sub-national level, undermining efforts towards holistic 'resilient' approaches.

Institutional flexibility is key to supporting effective responses to changing circumstances in FCAS (Batmanglich and Stephen, 2011a). Development partners, such as DFID, will play a major role in disbursing climate change funds and implementing climate change adaptation projects, so need to evolve to better cope with the complexity, uncertainty and variability posed by climate change across all sectors, not just those which explicitly deal with climate change. This requires a move away from inflexible structures grounded in sectoral silos, counterproductive incentive systems which advance large-scale fund disbursements, patchy knowledge bases and inadequate consideration of governance in any meaningful sense (Bell, 2008).

Climate financing must be adapted to ensure that it does not contribute to the disconnect between institutional plans and local peace and development priorities (Levine et al., 2014). Project financing arrangements, narrow results agendas and siloed programmatic funding that separates climate change investments from development and peacebuilding investments, amongst other external factors, can have a detrimental effect on the degree to which local context and local voices shape the direction of international support. For example, under DFID's 2013 flagship funding call for resilience programming, efforts to integrate conflict into projects were impeded by the call's stipulation to target at least 200,000 direct beneficiaries. Much peacebuilding focuses on addressing governance, dialogue or advocacy, which does not lend itself to large-scale, tangible beneficiary support in the way that disaster risk reduction or humanitarian programmes do. Nor was there an explicit requirement for climate change adaptation to adopt conflict sensitive or Do No Harm approaches, despite the target countries being primarily fragile or post conflict. Without addressing governance issues or fostering better relations between hostile groups through trust building measures, community resilience in FCAS will remain chimerical.

6.3 Managing differing timeframes

There is a dearth of analysis exploring how different climate models interact with policy imperatives. While significant efforts are being made to improve the resolution of downscaled climate data, and to better link climate scientists and policymakers (such as the DFID funded Humanitarian Future work)[1], climate science continues to be difficult to decipher and variations in models leave no clear policy direction. There is no clear consensus across different climate models and, in certain regions, different models offer divergent climate predictions. Moreover, the literature exploring the links between climate change and conflict often is not designed to be policy relevant so often lacks recommendations or practical application. Increasingly downscaled data is available for most regions (IPCC, 2014). However, this can only be usefully applied when combined with contextual specificities – micro-level vulnerabilities, social and political dynamics, state–society relations, and power structures – which strongly determine the ultimate impacts of climate change. To overcome this, a more general risk management approach is required, one that seeks to compile the best available data and use this to inform policy directives which take a broad view of the risks likely to affect a given context.

Conflict resolution, peacebuilding and natural resource management emphasise thinking and acting over long-term timeframes, seeking sustainable change, whatever that may look like in a particular context (Kriesberg, 2011; Levine et al., 2011). Yet climate variability and climate change may fundamentally undermine existing agreements for the peaceful management of conflict. One example is where agreements are based on an assumption of natural resource assets being present. If the availability and distribution of

resources changes, new terms of agreements will be required, and processes for renegotiation will become crucial to ensuring the sustainability of peace.

There is a dearth of evidence on what the possible trade-offs or incompatibilities are between action that can be deemed 'in the best interest of' climate change adaptation, violence prevention and conflict resolution. Taking a long-term trajectory (of decades or more), agreements over the use of natural resources need to consider the possibility that resources may vary or diminish below the threshold of being able to support livelihoods reliant on those resources. And, there may be limits to climate change adaptation as a result of irreversible slow-onset events (Kreft and Warner, 2012). More research is needed to fill the void in understanding the impacts of slow-onset events for different communities, across a range of contexts, and in understanding the relationship with processes of violence prevention, peacebuilding and conflict resolution.

There is also much we do not know about how different timeframes intersect. As Harris et al. (2013) state, "*…there remains a significant evidence gap in understanding the tensions and trade-offs arising from the different timeframes associated with humanitarian responses, the long-term investment required for disaster resilience, cycles of peace and conflict, and donor funding and political cycles. Exploring the way these timeframes intersect could yield a better understanding of the costs and opportunities of building disaster resilience.*"

SECTION 7
Concluding discussion

In order to create the right conditions for sustainable conflict prevention the impacts of a changing climate must be taken into consideration. Failure to do so may result in unsustainable peace trajectories or inadequate recognition of the structural reforms required to address the root causes of conflict associated with a changing climate or limited natural resources. Although our understanding of climate change is relatively new, tools, skills and experience already exist which can help vulnerable communities manage the effects, if appropriately contextualised. This is not to suggest that climate change is 'business as usual' – it is not. Climate change will bring with it new conditions beyond our learned experience; it will require new ways of working and new practices. It is necessary, therefore, to ensure that climate change is adequately factored into conflict sensitivity, conflict prevention and peacebuilding efforts, to ensure changing climatic conditions do not become a trigger for instability or violent conflict.

The role of institutions in this endeavour will become increasingly important. It will be necessary to ensure that top-down and bottom-up approaches find complementarity and are equally valued. This can be a challenge where formal institutions are seen as destructive or detrimental to potentially more sustainable local initiatives. Only through a combination of actions (at various scales) will it be possible to enable equitable access to limited resources and the sustainable use of the environment in a peaceful manner. The adaptive capacity of institutions (as well as individuals) is important in this regard. Dynamic, flexible institutions will be required to ensure capacity is maintained to manage the impacts of climate change and conflict in a continuously changing context.

Research needs to focus more on what can be achieved. There is a "*Tendency in the literature to focus on risk factors as opposed to 'protective' factors. Researchers tend to gravitate toward studying problem areas so evidence of the factors or characteristics that enable disaster resilience is much scarcer than that of fragility or vulnerability*" (Harris et al., 2013). More theory and evidence is needed to help identify conditions under which conflict or peace are likely to emerge in areas where climate change impacts will be felt most.

In order to be successful, analysing problems and proposing solutions for the conflict–climate–environment nexus requires focus on inter-linkages. It is not sufficient to address climate change alone, or conflict, or resource governance, or issues of poverty and livelihoods alone, but each in combination with all. A measure that is aimed at a specific physical vulnerability related to climate change – improved water management, for example – must be shaped by the understanding that water can be managed equitably, and that water access will shape and be shaped by broader livelihood dynamics. Thus a scheme for improving water management could, depending on its details, exacerbate conflict in a poor country. Recognising this, those who are planning water management should be drawing everybody who stands to lose or gain, including marginalised groups, into a discussion about the best way forward. Taking a conflict resolution entry point, access to water must be informed by a longer term trajectory which takes into account potential climate changes on that water source. This is necessary to ensure that resource distribution mechanisms or agreements are not predicated on a false assumption of future water availability.

The political interest and financial support backing climate change adaptation has the potential to substantially affect existing conditions of peace and security, positively and negatively. There is an urgent need to take heed of lessons in overseas development assistance in relation to the use of new climate funds in conflict and insecure areas, to avoid the negative unintended consequences of ill-informed programming. Recognising that climate change and variability are just one component of any complex conflict situation is critical to identifying appropriate adaptation strategies. In addition, there are challenges that need to be overcome. These include the lack of integration of conflict prevention ambitions into development programmes (UNEP, 2009, 2013), and the dearth of violence prevention and conflict sensitivity measures integrated into climate change adaptation. Greater consideration and application of existing approaches, specifically conflict sensitivity, in climate change adaptation programming can help in this regard.

Improved policy and action on the conflict–climate–environment inter-linkages could provide a useful step forward in promoting resilience building. This is exemplified by facilitating climate change adaptation as a positively compounding factor for peacebuilding and conflict prevention, or peacebuilding interventions which promote collaboration in order to manage the impacts of a changing climate. From experience we know that positive examples exist where competition for scarce resources, particularly within the water sector, have been managed effectively and resulted in increased cooperation between previously conflicting groups (see Box 15). Realising the potential for climate change adaptation to be used as an opportunity for facilitating constructive conflict work, or peacebuilding as a contribution towards resilience building, will become essential as the humanitarian and development community seeks sustainable ways of dealing with conflict in a changing climate.

Box 16 Peacebuilding promotes resilient water management amongst pastoralists in Ethiopia

In mid-2011, Mercy Corps received anecdotal evidence from local officials that drought-affected communities that had benefited from Mercy Corps-supported peace processes were better able to cope in the face of these harsh conditions than other pastoralist groups in the Somali-Oromiya areas of Ethiopia. While recognising that peacebuilding initiatives are only part of broader efforts needed to address pastoralists' vulnerability and resilience, Mercy Corps found that peacebuilding programmes have positively affected key factors associated with drought resilience (Mercy Corps, 2012). Such examples may be common, but evidence is thin on the ground as many positive climate change co-benefits of peacebuilding programmes may go unregistered in peacebuilding focused evaluations. More evidence is needed on the extent to which peacebuilding efforts, which rely on skills building and sustained dialogue amongst conflicting parties, can serve as an effective form of disaster risk reduction. This should be promoted through post-project evaluations that specifically assess the impacts of peacebuilding projects on broader dimensions of community resilience.

Source: original data by Vivekananda, 2014.

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Annex 1 Analysis of joint risk assessment tools

Organisation	Name of tool	Conflict sensitivity and/or peacebuilding	Humanitarian action	Environmental management
American Red Cross and World Wildlife Fund (WWF)	Green Recovery and Reconstruction Toolkit and Training for Humanitarian Aid		x	x
Benfield Hazard Research Centre and CARE International	Guidelines for Rapid Environmental Impact Assessment in Disasters		x	x
CARE International	Humanitarian Implications of Climate Change		x	x
Channel Research	Advanced training in M&E for Unstable Environments and Complex Interventions	x		
Conflict Sensitivity Consortium	Conflict Sensitivity Practitioners' Training Manual	x		
Conflict Sensitivity Consortium	Conflict sensitive Approaches to Development, Humanitarian Assistance and Peacebuilding: A Resource Pack	x	x	
Conflict Sensitivity Consortium	How-to Guide to Conflict Sensitivity	x		
Durham Global Security Institute	Conflict Sensitive Project Design	x		
ENTRi and International Alert	Conflict Analysis and Conflict Sensitivity training course	x		
Environmental Emergencies Centre	Integrating Environmental Considerations into Humanitarian Action		x	x
European External Action Service	EU Environmental Concept for Military Operations			x
Global Camp Coordination and Camp Management Cluster (CCCM)	Camp Closure Guidelines		x	
HELVETAS Swiss Intercooperation	Manual: 3 Steps for Working in Fragile and Conflict-Affected Situations	x		
HELVETAS Swiss Intercooperation	Field Guide: 3 Steps for Working in Fragile and Conflict-Affected Situations	x		
HELVETAS Swiss Intercooperation	Guidelines on Natural Resources and Conflict	x		x
Inter-agency	IASC Operational		x	

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Organisation	Name of tool	Conflict sensitivity and/or peacebuilding	Humanitarian action	Environmental management
Standing Committee (IASC)	Guidelines on Human Rights and Natural Disasters			
Inter-agency Standing Committee (IASC), Taskforce on Safe Access to Firewood	SAFE Tools for Ensuring a Coordinated, Multi-Sectoral Fuel Strategy in Humanitarian Settings		x	x
International Federation of Red Cross and Red Crescent Societies (IFRC)	Vulnerability and Capacity Assessment (VCA) Toolbox and Training Guide		x	
International Institute for Sustainable Development (IISD)	Conflict Sensitive Conservation: Practitioners' Manual	x		x
International Institute for Sustainable Development (IISD) and Center for International Forestry Research (CIFOR)	Community-Based Risk Screening Tool: Adaptation and Livelihoods (CRISTAL)		x	
International Rescue Committee (IRC)	GBV Emergency Toolkit	x		
International Union for the Conservation of Nature (IUCN)	Ecosystems, Livelihoods and Disasters: An Integrated Approach to Disaster Management		x	x
Joint UNEP/OCHA Environment Unit	FLASH Environmental Assessment Tool		x	x
Joint UNEP/OCHA Environmental Unit	Training on Environmental Emergencies		x	x
Joint UNEP/OCHA Environmental Unit	FLASH Environmental Assessment Tool		x	x
Joint UNEP/OCHA Environmental Unit	Humanitarian Action and the Environment: Essential Guidance for Humanitarian Actors		x	x
KOFF Centre for Peacebuilding	Preventing Natural Resource Conflicts	x		x
KOFF Centre for	Managing Programs in	x		

Organisation	Name of tool	Conflict sensitivity and/or peacebuilding	Humanitarian action	Environmental management
Peacebuilding	Fragile and Conflict-Affected Situations			
North Atlantic Treaty Organization (NATO)	Allied Joint Environmental Protection Publications			x
Norwegian Refugee Council	Camp Management Toolkit		x	x
Oxfam	Gender and Disaster Risk Reduction: A Training Pack		x	
RedR UK	Conflict Sensitivity Programming course	x		
Shelter Cluster	Environmental Adviser of the Shelter Coordination Team (SCT) and Related Guidance		x	x
Shelter Cluster	Shelter Cluster reference documents		x	x
Shelter Cluster	Emergency Shelter Environmental Impact Assessment and Action Checklist		x	x
Sphere Project	The Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response		x	x
Trocaire	Conflict Sensitivity Toolkit	x		
United Nations Economic Commission for Latin America and the Caribbean (ECLAC)	Handbook for Estimating the Socio-economic and Environment Effects of Disasters		x	x
United Nations Environment Programme	UNEP, Environmental Needs Assessment in Post-Disaster Situations: A Practical Guide for Implementation		x	x
United Nations Environment Programme (UNEP)	Integration of Environmental Issues in Humanitarian Programming: The Environment Marker			x
United Nations Environment Programme (UNEP)	Policy brief: Natural Resource Programming in Post-conflict Situations	x		x
United Nations Environment Programme (UNEP)	Policy brief: Water and Post-conflict Peacebuilding	x		x
United Nations Environment Programme (UNEP)	Policy brief: Land and Post-conflict Peacebuilding	x		x

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Organisation	Name of tool	Conflict sensitivity and/or peacebuilding	Humanitarian action	Environmental management
United Nations Environment Programme (UNEP)	Policy brief: Assessing and Restoring Natural Resources in Post-conflict Peacebuilding	x		x
United Nations Environment Programme (UNEP)	Policy brief: High-value Natural Resources and Post-conflict Peacebuilding	x		x
United Nations Environment Programme (UNEP)	Environmental Needs Assessment in Post-Disaster Situations		x	x
United Nations Environment Programme (UNEP) and Groupe URD	Training Toolkit: Integrating the Environment into Humanitarian Action and Early Recovery		x	x
United Nations Environment Programme (UNEP), UN Department of Field Support (DFS), and UN Department of Peacekeeping Operations (DPKO)	Greening the Blue Helmets: Environment, Natural Resources and UN Peacekeeping Operations	x	x	x
United Nations High Commissioner for Refugees (UNHCR)	UNHCR Environmental Guidelines		x	x
United Nations High Commissioner for Refugees (UNHCR)	Cooking Options in Refugee Settings		x	x
United Nations High Commissioner for Refugees (UNHCR) and CARE International	FRAME Toolkit: Framework for Assessing, Monitoring and Evaluating the environment in refugee related operations		x	x
United Nations Institute for Training and Research (UNITAR)	Peacekeeper Training Programme Advanced Course: Natural Resource Management in Post-Conflict Countries	x	x	x
United Nations Inter-agency Framework Team for Preventive	Online Training Course on Conflict Sensitive Approaches	x		

Organisation	Name of tool	Conflict sensitivity and/or peacebuilding	Humanitarian action	Environmental management
Action (UNIFTPA)				
United States Agency for International Development (USAID)	Environmental Budgeting Toolkit for USAID Development Food Assistance Programs		x	x
United States Agency for International Development (USAID)	Webinar: The Dirty Dynamics of Natural Resource Conflict	x		x
United States Agency for International Development (USAID)	ENCAP toolbox			x
United States Agency for International Development (USAID), Africa Bureau, Office of Sustainable Development	Environmental Guidelines for Small Scale Activities in Africa			x
United States Agency for International Development (USAID), Agency Environmental Coordinator	USAID Searchable Database with Country-Strategy and Project-Specific Environmental Impact Assessments			x
United States Agency for International Development (USAID), Office of Conflict Management and Mitigation	USAID Conflict Toolkits for Natural Resources	x		x
United States Department of Defence, Finnish Ministry of Defence and Swedish Armed Forces	Environmental Guidebook for Military Operations			x
United States Institute of Peace (USIP) and United Nations Mediation Support Unit	Peacemaker's Toolkit Series	x		
United States	Guiding Principles for		x	

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Organisation	Name of tool	Conflict sensitivity and/or peacebuilding	Humanitarian action	Environmental management
Institute of Peace (USIP) and US Army Peacekeeping and Stability Operations Institute	Stabilization and Reconstruction			
Women's Refugee Commission	How to Use the Safe Tools: A Holistic Approach to Cooking in Humanitarian Settings		x	x
World Wildlife Fund and American Red Cross	Environmental Stewardship Review for Humanitarian Aid		x	x

Source: American University and World Wildlife Fund, Tools for a Sustainable Recovery (unpublished).

Annex 2 What not to do with climate aid

The following 'Comment' article was first published online, here:
http://www.odi.org/comment/8230-climate-change-aid-resilience-conflict-mistakes

10 things not to do with climate aid

It's clear by now that we need to do something about climate change. John Kerry, the US Secretary of State (speaking in Indonesia) and UK opposition leader Ed Miliband (speaking about floods in the UK) are just some of the most recent champions for urgent action on climate change. It's true that doing nothing would end up costing an awful lot more than global action on the scale required – but we can't measure our progress on climate change merely by counting how much we're spending rather than how well we're spending it.

Mistake 1: Spending aid in places with conflicts without doing a thorough analysis of the conflict first. Sounds obvious? Both Kerry and Miliband linked climate change to world security, but we found that decisions about climate funding too often forgot to think about insecurity and conflict in the actual countries receiving climate aid. Many of the countries that are (deservedly) attracting the most attention on the climate adaptation agenda are not exactly bastions of political stability, but how often is a proper analysis of the political tensions and drivers of conflict really done properly? (That's a rhetorical question.)

Mistake 2: Reducing complex situations to a simple equation of 'more climate change equals more conflict'. Over-simplistic portrayals can be a shortcoming of the media, but when policy or aid experts fall into this, it can lead to decisions that can make things worse.

Mistake 3: Presuming that choices about how to adapt to climate change are politically neutral or immune from political manipulation. We want to think that our solutions are the correct ones, and that means that they're 'objective' and don't depend on politics. Everything is political, though. All change brings winners and losers, and when you're pouring in huge volumes of resources, anyone with power will try to make sure that the solutions favour them as much as possible.

Mistake 4: Establishing programmes which presume that the countries function well, when they don't. It's amazing how often our aid solutions depend on good transparent governments and a competent, efficient and benign civil service. Since these are often among the causes of the problems we're trying to help with, that means that the solutions would only work in places where they wouldn't be needed! Countries that don't function well do also need help – but the right kind of help.

Mistake 5: Failing to join the dots. Forgive the metaphor, but climate change doesn't happen in a vacuum. It's part of the set of challenges facing societies, and climate aid is part of the flow of aid going on. Everyone sees the issue they are working on as the key challenge. That's fine if everyone's paying attention to what's going on around them and understanding how that will affect their own work. You can't understand the challenges of climate change or how aid might affect people's lives if you look at things in isolation.

Mistake 6: Working in isolation. There is no way that one expert can understand everything. That's pretty obvious within the world of climate change, since it's clear that meteorologists and adaptation experts can't do each other's jobs. Likewise climate aid experts can't be expected to understand conflict, poverty and vulnerability on their own (and vice versa). Unless experts from all the fields get together, they're all going to be missing a few vital pieces of the puzzle.

Mistake 7: Allowing people from the same agency to work without talking to one another. Far-fetched? It's common to find that in the same country, an irrigation adviser (for example) is supporting projects in places where the conflict adviser is warning against large investments in such infrastructure, or the climate experts are warning of dwindling ground water resources. Aid bureaucracies keep people focused on their own bit of the problem. It would be nice if we could talk to people outside our organisations, but let's at least get our own houses in order and talk to our colleagues from other sectors.

Mistake 8: Making your work fit yesterday's world. Too often initiatives are designed for the world we were analysing yesterday, forgetting that they have to work in the world that will exist in five, ten or even twenty years' time. We can't know for sure what the world economy, the country's demographics, the local political situation or underlying social conflict will look like as our work unfolds – but if we haven't thought about it, we're relying on luck that we'll do more good than harm.

Mistake 9: Assuming that 'building resilience' will help the poorest. 'Resilience' is the current jargon for stressing that aid should focus on improving the lives of the poorest. Yet the poorest are often poor because of uneven power structures that are usually very 'resilient' themselves and resistant to change. International aid of all kinds often channels resources to rich people who live in poor countries. Unless unequal power structures are changed, even if aid is intended to help the poorest, some people will continue to flourish – and others won't.

Mistake 10. We know that lists usually have ten things. So, help us complete the set – what's the mistake that you think we've missed?