



WORKING PAPER

Climate change and conflict

A framework for analysis and action

The idea that climate change will lead to greater conflict is gaining ground, reflected by the remarks of world leaders and book-titles such as 'Global Warring' and 'Climate Conflict'.¹ It is only in the last few years, however, that researchers have begun to analyse the relationship between these issues in any depth. Early findings suggest that climate change will not only fuel conflicts in the future, but that it is already adversely affecting the security of many communities, primarily in countries where poverty is the norm, governance is weak and insecurity is endemic. This implies an urgent need to integrate conflict dynamics into how we model projected impacts of climate change, and to ensure that local, national and international responses to climate change also address conflict where necessary. Indeed without this, climate change adaptation measures may actually exacerbate insecurity, by distributing resources in ways that aggravate conflict dynamics.

The question is *how* we build conflict into the picture. A major obstacle is that there is not a straightforward linear relationship between climate change and conflict: in any given place, it cannot simply be predicted that 'more climate change = more conflict'. The relationship between these issues is much more complex, and is influenced by a wide range of inter-related factors. Yet as climate change policy advocates know well, it can be difficult to make and explain policy on the basis of highly complex and uncertain arguments. There is always a risk that complexity becomes an excuse for inaction, even as those most vulnerable to climate change and conflict continue to suffer.

Simple (but not simplistic) models are required that help to analyse the relationship between climate change and conflict, and to inform more effective responses. This working paper presents a framework for analysis that may go some way towards meeting this demand, and discusses how it could be used as a basis for action. The framework is informed by Saferworld's own research as well as by the insights of others working at the interface of climate change and conflict; and is intended as a contribution to the wider debate on these issues. The paper is in four sections. It starts with reference to some key publications on the relationship between climate change and conflict. It then introduces the framework, illustrated with an example from Saferworld's work. The third section explores how the framework could be applied to research and analysis, while the final section discusses how it could guide policy and programming.

Conflict and insecurity – not just about the military

Terms like 'conflict' and 'security' have numerous meanings and can arouse strong feelings. It is thus important to clarify how they are used in this paper.

Conflict results when two or more parties have incompatible goals and interests, and act upon those differences. In this sense, conflict is a natural part of human existence, but it can be managed peacefully. In this paper, '*conflict*' is used as shorthand for '*violent conflict*', i.e. when conflicting parties resort to violence to achieve their objectives.

To many people, '**security**' is primarily about *state security* and military-led responses to insecurity. However, this paper is informed by the concept of *human security*, which takes the security of *individuals and communities* as its starting point. This goes beyond a narrow definition focused on crime and violence, and *looks more broadly at what makes people feel insecure*.

A precise way of referring to the topic of this paper would be: 'the relationship between the consequences of climate change and conflict and security dynamics'. For the sake of brevity, however, this paper talks more simply of '*climate change and conflict*'.

¹ Ban Ki-moon, *A Climate Culprit in Darfur*, The Washington Post (2007); Barack Obama, *Nobel Peace Prize speech* (2009); Paskal C., *Global Warring: How Environmental, Economic and Political Crises will Redraw the World Map*, Palgrave Macmillan (2010); Mazo J., *Climate Conflict: How Global Warming Threatens Security and What to Do About It*, International Institute for Strategic Studies (2010). See also: the Economist, *Climate wars*, Economist (2010)

Current understanding of the relationship between climate change and conflict

In recent years, policy researchers and academics have begun to analyse the relationship between climate change and conflict. For example, a report by the German Advisory Council on Global Change in 2007 brought together a wide range of studies on the impacts of climate change, the causes of conflict and the factors driving environmental insecurity. It concluded that “climate change will overstretch many societies’ adaptive capacities within the coming decades. This could result in destabilisation and violence, jeopardising national and international security to a new degree”.² This conclusion was based in part on a number of scenario-mapping exercises, which sought to predict the possible knock-on effects of the physical impacts of climate change.

A report by International Alert in the same year concluded that “there is a real risk climate change will compound the propensity for violent conflict”.³ It emphasised, however, that rather than looking for a direct relationship between climate change and conflict, we need to understand the ‘consequences of consequences’, i.e. the social, political and economic changes that occur as a result of the physical changes caused by climate change. A further report by International Alert in 2009 highlighted the connections between climate change and state fragility, and proposed integrated policy responses that address the “realities of systems of power”.⁴

Publications such as these have been important in drawing attention to the relationship between climate change and conflict, and the broad policy implications at a global level. They have focused less upon how this relationship plays out at a local (i.e. community and sub-national) level. Academic researchers are undertaking studies that aim to gather more rigorous scientific data on the relationship between climate change and conflict in specific contexts.⁵ These studies however tend to provide less insight into what policy-makers and programmers can actually do to address the conflict risks arising from climate change at a local level.

Over the last couple of years, Saferworld has begun to look at how the relationship between climate change and conflict plays out in local communities in two countries where we work – Bangladesh and Kenya – and the implications for national policy-makers. This was prompted by assessments of conflict and security issues carried out among local communities in these countries, where environmental insecurity and climate change were identified as major concerns and were linked to wider conflict and insecurity.

This resulted in two research studies that looked both at how conflict dynamics are affected by changes to the natural environment, and at how individuals and communities have responded to these changes (see box). Saferworld’s research largely supports the majority academic view that climate change will act as a ‘threat multiplier’, i.e. that it is not on its own a cause of conflict, but that the impacts of climate change can exacerbate existing tensions and divisions. It has also shown that the relationship between climate change and conflict is complex and multi-directional. Nonetheless, certain common themes and variables can be extrapolated from the two research studies, and these inform the development of the framework we present in the next section.

² German Advisory Council on Global Change, *World in Transition: Climate Change as a Security Risk*, (2007).

³ Smith D and Vivekananda J, *A Climate of Conflict: The Links between Climate Change, Peace and War*, International Alert (2007).

⁴ Smith D and Vivekananda J, *Climate Change, Conflict and Fragility*, International Alert (2009)

⁵ See for example the papers from a recent conference held by the Peace Research Institute Oslo on climate change and security, where a number of studies were presented (<http://climsec.prio.no/>)

Community-level research into climate change and security

In **Bangladesh**, a detailed study of human security by Saferworld in 2007 found that environmental insecurity ranked very highly among the public's list of security concerns, and noted a perception that climate change was aggravating environmental insecurity. This led to further research, together with the Bangladesh Institute of International and Strategic Studies, in areas vulnerable to climate change, such as sea-level rise or river-flooding. This highlighted the point that local people have a range of coping strategies to deal with such problems, including short-term and permanent migration. The research also looked at the impact of such internal migration in destination areas, and found some evidence that insecurity in such areas was more pronounced than in other similar areas, and that there were tensions, in some cases leading to violence, between older residents and 'climate migrants'.

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In **northern Kenya**, Saferworld's research began with conflict analyses in the arid and semi-arid lands of northern Kenya in 2006-7. These identified an increase in the frequency, length and unpredictability of droughts and floods as a key factor contributing to escalating conflict over natural resources. Saferworld undertook in-depth research to explore this further, which became especially pertinent given the severe drought that affected the region in 2008-9. Together with the International Institute for Sustainable Development and the Conservation Development Centre, Saferworld conducted field-research in two areas of northern Kenya. This study reinforced the point that there is no simple one-way connection between climate change and conflict: climate change is one of a range of factors causing natural resource scarcity; while natural resource scarcity is one of a range of factors causing conflict. It nevertheless highlighted that resource scarcity is already contributing to heightened insecurity and conflict in northern Kenya, substantiating the view that climate change will increase the risk of conflict.

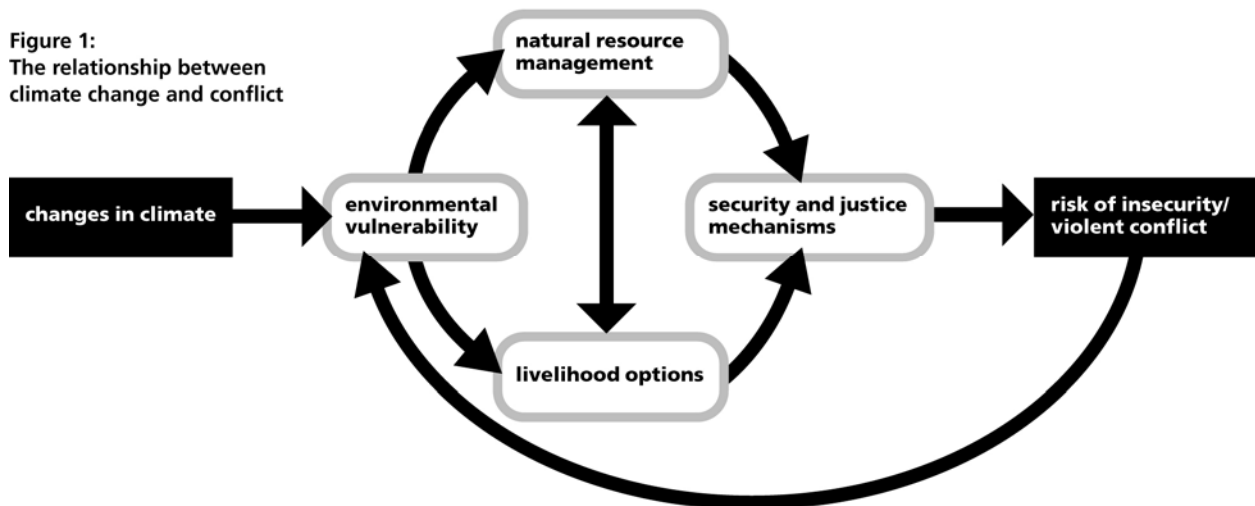
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A framework for analysis and action

Although policy-makers are increasingly recognising the linkages between climate change and conflict, they face a double challenge: how can they analyse these linkages and explain them in a way that is easy to understand and therefore to act upon, without glossing over the complexity? And how can they decide which aspects of adaptation and related policy are most likely to have a positive impact on conflict dynamics?

The answer to the latter question obviously depends in large part on the answer to the former. Yet analysing the relationship between climate change and conflict is difficult because of the number of variables and the amount of uncertainty involved. The science of climate change is still relatively young, and analysis of the current and potential effects of climate change on the natural environment is highly politicised and contested. Equally, the analysis and prediction of conflict is a complex area of study. So it is not surprising that when we consider the interaction between these two sets of issues, the possibilities and uncertainties multiply. In order to move forwards, the relationship between climate change and conflict needs to be presented in an accessible manner, without over-simplifying the issues or the interactions between them.

Over the past six months, Saferworld has reviewed and compared the findings of the field research described above. From this comparative analysis, and despite the very different contexts, a common pattern started to emerge regarding that combination of factors that is most likely to lead to increased insecurity and violence at the community level. Drawing on this, we have formulated a framework that we have found helpful to understand the relationship between climate change and conflict, while accommodating the variability and complexity of the issues. This working paper presents the framework to a wider audience with a view to testing this model among a community of experts.

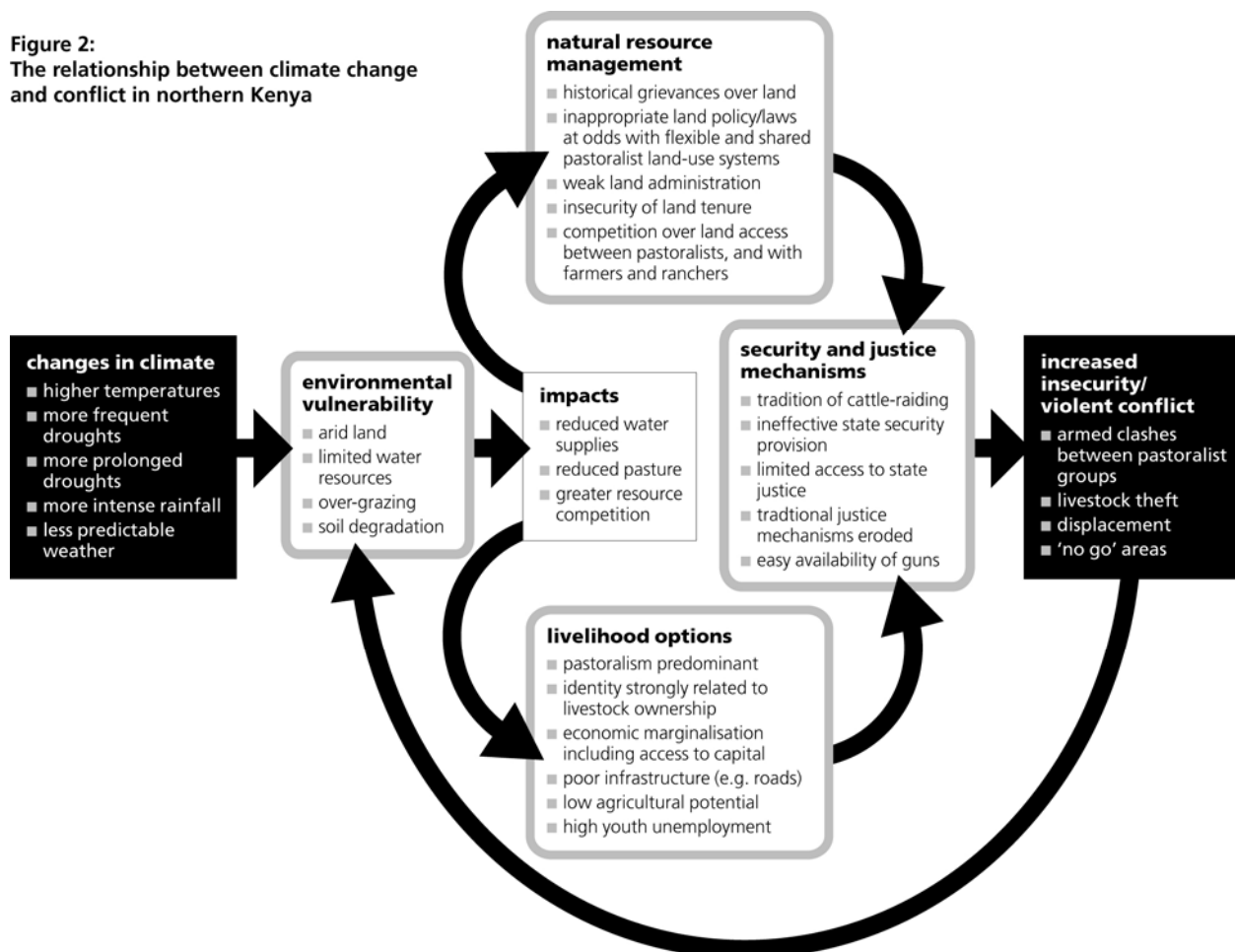


The framework takes as its starting point the understanding that the risk of insecurity or conflict is a function of the interaction between the natural consequences of climate change (e.g. drought or flooding) and the context in which people live, including its political, economic and environmental characteristics. It is based upon a number of context variables that have been identified through Saferworld's research as key determinants of climate change induced conflict at the community level. These are: environmental vulnerability, natural resource management, livelihood options, and security and justice mechanisms.

The framework illustrates how changes in climate act upon these key determinants (Figure 1). In simple terms, it posits that if there are high levels of environmental vulnerability in combination with poor natural resource management, limited livelihood options, and weak security and justice mechanisms, there is an increased risk of conflict arising from climate change. To elaborate further: the impacts of climate change upon vulnerable environments will lead to increased pressures on natural resources which are mediated first through natural resource management capacity and livelihood options, and then through the relevant security and justice mechanisms. These are effectively the safeguards which, depending upon their responsiveness and effectiveness, will – or will not – prevent the additional pressures on resources from translating into insecurity or violence.

Figure 2 illustrates how this framework can help to understand the relationship between climate change and conflict in northern Kenya's pastoralist areas. In brief, these areas are characterised by high levels of environmental vulnerability, and natural resource policies and administration that are ill-suited to the pastoralist style of resource management. This is in a context where there are few alternative livelihoods, where state provision of security and justice is largely absent or ineffective, and where traditional mechanisms have been largely eroded. The impact of climate change upon this natural environment and configuration of other factors points to a heightened risk of insecurity and conflict – as was borne out by the escalation of violent inter-community conflicts during the prolonged drought of 2009.⁶

Figure 2:
The relationship between climate change and conflict in northern Kenya



The Kenya example also illustrates the negative synergy of the relationship between conflict and climate change, represented by the underlying arrow. Greater insecurity will limit pastoralist migration, restricting communities to safer but smaller and resource-exhausted areas. Thus insecurity undermines pastoralist adaptive strategies and increases pressure on resources, which in turn may fuel further conflict. In a more extreme scenario, the impact of climate change upon the natural resource base threatens the foundations of pastoralist livelihoods. Without alternative economic opportunities, young men may be drawn into cattle-rustling gangs and other forms of armed violence. Without adequate state security provision, communities may arm themselves due to the threat from such groups, leading to a self-perpetuating escalation of armed violence.

⁶ For a more detailed analysis of these variables and the interactions between them see *Climate change and conflict: lessons from community conservancies in northern Kenya*, Saferworld, Conservation Development Centre, International Institute for Sustainable Development (Nov 2009) www.saferworld.org.uk/smartweb/resources/view-resource/422

Applying the framework for research and analysis

This framework is intended to help analysts and policy-makers focus and prioritise when confronted with the multiplicity of variables associated with climate change and conflict. The key determinants identified are broad terms and each can be deconstructed into sub-variables, depending on the depth and detail of analysis required. For example, environmental vulnerability refers to the degree to which a system is susceptible to the effects of climate change, including climate variability and extremes of weather. It includes the extent to which an area is exposed to the effects of climate change by virtue of its geographic location as well as by its topography. Similarly, the other three determinants can all be deconstructed into multiple sub-variables.

Each of the key determinants represents one area to examine, but within each area there is scope for nuanced analysis and flexibility to look at the factors that are most relevant locally. For instance, in many parts of the developing world, state institutions for providing security and justice are less relevant, trusted and/or effective than local informal mechanisms. The framework can accommodate different levels and types of security and justice provision that operate within a given context, and the same applies to natural resource management and livelihoods.

The framework can also include positive as well as negative variables, e.g. low levels of state security and justice provision may co-exist with effective local security and justice mechanisms. Likewise, with regards to natural resource management, the structures and institutions for managing resources at the national level (e.g. land policies) may be inappropriate or ineffective; but there may be bottom-up institutions, such as forest-user community groups, that function appropriately and effectively at the local level. Thus the framework helps not just to identify negative characteristics that increase the risk of climate change induced conflict, but also to identify positive structures and processes that can be consolidated and built upon.

As the Kenyan example illustrates, the negative synergy between conflict and climate change also needs to be factored in. Insecurity may undermine the adaptive strategies that sustain livelihoods, such as migration by pastoralists, and thus make communities more vulnerable to climate change. Increased conflict will weaken capacities to cope with future climate change at the level of the state as well as the community. Climate change can both exacerbate conflict and limit the ability to respond to it in the future. This suggests a vicious circle, or downward spiral, whereby climate change increases the risk of conflict, in turn further limiting the capacity to adapt. This is a particular concern in conflict-prone states where, despite massive resources going into climate change responses, adaptation programmes may be derailed by, or even instrumentalised in, local conflicts.

The framework may suggest that research should initially focus upon the four key determinants separately and then synthesise and analyse the findings. In reality, these determinants cannot be neatly dissociated from each other: livelihood options are closely related to the natural environment and its management; while natural resource management mechanisms, such as joint grazing committees, may also serve to resolve disputes; and so forth. Few organisations are likely to have the breadth of expertise and methodologies necessary to undertake research in all four areas. Saferworld's experience has shown the value of a multi-disciplinary approach involving national and international partners that together bring the necessary expertise in climate change science, in natural resource management and livelihoods, and in conflict, security and justice issues.

Applying the framework to policy and programming

As stated at the outset, the challenge for policy-makers and programmers is how practically to address the connection between climate change and conflict. How can we move beyond research towards effective policy and programming in those regions most vulnerable to climate change induced conflict – where this is not a question of intellectual debate but of urgent practical consequence. Already policy-makers and programmers are developing and implementing national adaptation programmes and other strategies to respond to climate change. This means that the window of opportunity to incorporate a conflict and security perspective into adaptation policy and programming is narrowing.

Much of current adaptation policy is concerned with identifying ‘no regrets’ solutions, which reflects the uncertainties of climate change modelling. Solutions are sought that are robust under as broad a range of scenarios as possible – and which are unlikely to have negative consequences in any of those scenarios. The framework Saferworld has developed responds to the uncertainties in modelling by recognising that very tightly defined solutions, founded on an understanding of the impacts of climate change in a particular place, are likely to be flawed precisely because of the complexity of the issues. The underlying model of different drivers and their relationships remains important, but we do not attempt to quantify the relative effects too tightly. Programming then becomes focused on options that are effective under a wide variety of different relationships among the drivers.

The framework helps to direct and prioritise responses to the conflict risks of climate change. It highlights the need for a multi-track approach that targets each of the four determinants. Firstly, it is important to ensure that relevant policies and programmes are informed by an understanding of the existing and projected impacts of climate change and are compatible with them. This is increasingly happening with regards to natural resource management and livelihoods. However, strategies relating to security provision, conflict management and access to justice also need to take account of the ramifications of climate change. Thus far, little attention has been given to ensuring that these areas are informed by an understanding of climate change impacts. This is not to suggest that security or conflict policy should be dominated by considerations of climate change, or vice-versa; however, sharing information and analysis on these issues, and where appropriate designing integrated responses, would help to mitigate the risks.

At the same time, measures to strengthen resilience to climate change, including those concerned with natural resource management and livelihoods, should take into account the conflict and security situation in the context concerned. Otherwise, the risk is that intervention strategies could inadvertently aggravate tensions and actually increase the prospect of insecurity and violent conflict. In other words, climate change adaptation policy and programmes should be designed and implemented in a ‘conflict-sensitive’ manner.⁷ The basis for ensuring that interventions are conflict-sensitive is conflict analysis. By understanding local conflict dynamics, in particular the issues that divide and connect people within and between communities, the potential impact of interventions can at least to some extent be foreseen. It is then possible to adapt interventions to ensure that they do not aggravate conflict tensions, and where possible that they contribute to peacebuilding.

In addition to making policy and programmes compatible with climate change *and* more sensitive to the risks of conflict and insecurity, the inter-connection between the various key determinants highlights the need for co-ordination and coherence across all related policy areas. These include water, land, agriculture, health, disaster risk management and early warning. It is therefore important to promote and support the development of more joined-up policy design and programming as part of a broader strengthening of capacity to adapt

⁷ Saferworld is recognised as one of the leading organisations working on conflict-sensitive development, and over the past 10 years we have supported conflict-sensitive approaches in a variety of contexts, developing a range of relevant resources and tools, as well as a cadre of trainers. We are now adapting this methodology to address the challenges of climate change.

peacefully to climate change. This could include incorporating climate change forecasts and impacts into relevant planning processes, and setting-up inter-departmental monitoring processes.

Beyond such practical steps, the linking of climate change and conflict has refocused attention on some of the more fundamental challenges of development as it relates to power relations and the political economy. Even so, it is important to bear in mind that the challenges of “how do we reduce tensions between incoming migrants and long-term residents” and “how do we mitigate violence over access to grazing” have been live issues for many years, if not centuries. Climate change is a threat-multiplier where conflict is concerned, but it need not radically change the kind of solutions we should be pursuing anyway. Better governance and more effective security and justice provision are increasingly recognised as preconditions for development, and they are achieved using the same sort of methods – there’s nothing specific about climate change that means that the best practice solutions identified over decades of development research and generations of lived experience no longer apply. It just makes them more important and more urgent.

About Saferworld

Saferworld, an international non-governmental organisation, works to prevent violent conflict and promote co-operative approaches to security. We do this through research and analysis, piloting innovative approaches, policy development and support for in-country partners. We collaborate with a range of stakeholders, including governments, civil society and international policy-makers, and at a variety of levels. Saferworld has 20 years experience and a strong record of supporting the development of policy and institutional frameworks at national, regional and international levels.

Much of what we do is at the interface of different policy areas, enhancing coherence and co-ordination, which is especially relevant when addressing cross-cutting issues like climate change and conflict. Our approach is based on making policy more people-centred and accountable. This entails enabling local voices to participate in policy debates and bringing local perspectives to bear on the process of policy formulation.

Saferworld and climate change

Saferworld aims to support people in conflict-affected states to adapt peacefully to climate change. Our focus is primarily on how these issues play out at a community level because it is here that the impacts are most keenly felt, and it is here that the interaction between different variables can best be understood. Local communities are also best placed to identify conflict risks and potential solutions, as well as to identify the impact of interventions on conflict dynamics. Drawing upon our field-research and programming, we seek to help bridge the gap between local experience and international policy, thus contributing to the wider debate about the implications of climate change and how to address the conflict and security risks.

Putting the framework into practice

Saferworld will continue to work on peaceful adaptation to climate change, by extending our research and through support for practical programming and policy development. Saferworld plans to apply the framework in other contexts where there is a high risk of climate change induced conflict. In Nepal for instance, high levels of exposure to climate change, combined with environmental vulnerability and the fragility of governance and security systems, put people at great risk of insecurity and violent conflict. The framework will help focus Saferworld’s research and analysis, as well as target support for programming and policy development. Applying it in practice will also provide a means of refining the model.

The framework presented in this paper is a hypothesis to be tested. Like work on climate change and conflict more generally, it remains a work in progress, so we would welcome comments and feedback from readers on the content of this paper.

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