Quick guide to climate change adaptation

Produced by members of the IASC Task Force on Climate Change[1]

Introduction

Climate change already directly affects human lives, development outcomes and the caseload of humanitarians, and will continue to do so. The scale of such impacts will depend in part on the ability of humanitarian and development actors to effectively prepare for disasters and reduce underlying risks and vulnerabilities.

Climate change increases the frequency, intensity and uncertainty of weather and climatic hazards such as floods, tropical cyclones, heat waves and droughts. It can also lead to ecosystem degradation, reduced availability of water and food, increase of insect plagues and health threats such as malnutrition and diseases like malaria, diarrhoea and dengue, impact on livelihoods[1,] and may provoke conflict and migration and displacement, Few people will be unaffected by climate change, with the poorest and most vulnerable populations most at risk.

Disaster risk reduction (DRR) and progress in implementing the Hyogo Framework for Action have, to date, provided some of the most practical actions that support the goals of climate change adaptation (CCA). Guidance on disaster risk reduction is widely available and widely applicable to national and local adaptation efforts[2].

This document aims to help Inter-Agency Standing Committee (IASC) agency field colleagues in their activities related to climate change risk management and adaptation. It identifies basic resources and answers questions frequently asked by field colleagues.

Part 1: Getting Oriented

1.1 As an IASC member, why should I care about the impacts of climate change?

Previously, climate change was understood primarily as an environmental issue. Impacts such as sea-level rise were understood to be far-off in the future. Now, it is clear that climate change impacts are already happening, in the form of less predictable, more frequent and/or more intense extreme weather events (storms, droughts, precipitation leading to floods).

Such events disproportionately affect the most vulnerable, the groups that humanitarians are primarily concerned with. It also recognized that sudden-onset disasters are principle causes of displacement. The scope and scale of displacement due to slow-onset disasters, such as drought, remains a guess at best[3].

Climate change also affects the basic requirements for health including clean air and water and sufficient food, and will lead to health risk factors including higher levels of some air pollutants, increased outbreaks and transmission of diseases through unclean water and contaminated food and reduced agricultural production in some of the poorest countries[4].

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Around 70 percent of disasters are climate-related, up from around 50 percent two decades ago. In the last decade, 2.4 billion people were affected by climate-related disasters, compared to 1.7 billion in the previous decade[5]. Destructive sudden rains, intense tropical storms, repeat flooding and droughts are increasing, as is the vulnerability of local communities. Fortunately, there is evidence to suggest that many impacts are avoidable through concerted efforts to reduce disaster risk.

Operationally, climate change means for many IASC members:

- Enhancing and scaling-up efforts to build the capacities of national governments (which bear primary responsibility for protecting their citizens), civil society and communities themselves to reduce disaster risk and to prepare for effective response to disasters.
- Increasing efforts to integrate climate risk information (e.g. forecasts) into programming.
- Forging closer partnerships between humanitarian and development actors, knowledge centres and governmental institutions to pursue common adaptation objectives.
- Advocating for greater disaster risk reduction (DRR) investments as a first line of defence in climate change adaptation.

1.2. What is climate change adaptation trying to achieve?

Climate change is happening today, and will continue into the future, because of the levels of greenhouse gas (GHG) emissions that are already built up in the atmosphere[6]. Unavoidable climate change means: i) extreme weather events ii) increased weather variability (like unseasonal rains or droughts) and iii) longer-term changes that affect ecosystems, sea-levels and food production.

While persistent greenhouse gas emissions have already changed climate, many losses from the associated extreme climate events are potentially avoidable. CCA helps humans cope with impacts that cannot be avoided or mitigated. The IPCC defines CCA as adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

The poorest and most vulnerable have contributed the least to climate change and have the least ability to adapt to or cope with its effects. CCA's objective from a humanitarian perspective is therefore to help these populations cope with climate change.

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1.3 How will our experience and capacities in DRR and preparedness support national and local efforts to adapt to climate change?

Humans have always been forced to adapt to changes in climate, but adaptation to anthropogenic, or human-made, climate change is a new and evolving field. One important difference between historical, naturally occurring changes in climate and the current human-induced climate change is the rate of change: the climate is changing much faster now than in the past.

In contrast to CCA, DRR and preparedness are well-established, with recognized and accepted tools and approaches. This means that the humanitarians - particularly DRR and preparedness practitioners - can and do make vital contributions to the field of CCA, in particular, in helping to prepare for and prevent impacts of extreme weather events. Indeed, vulnerable communities will be best-served by collaboration and coordinated action in the pursuit of common DRR and CCA goals.

> ***Disaster risk reduction: The broad development and application of policies, strategies and practices to minimise vulnerabilities and disaster risks throughout society, through prevention, mitigation and preparedness[7].***

Part 2: Resources

2.1. How can we assist national and local counterparts to develop and finance good disaster reduction programmes that support of adaptation goals?

At the UN Climate Conference in Copenhagen (December 2009), developed countries committed to "fast start" funding of 30 billion US dollars over 2010-2012. This financing is to be split between mitigation and adaptation. It was also agreed that after 2012, up to 100 billion US dollars per year by 2020 will have to be mobilised for adaptation in developing countries.

Discussions are ongoing within developed countries, between developed countries and between developed and developing countries on how to identify the resources, how to programme them and who should implement these programmes.

- Information on major multi-lateral funding sources that can be used for preparedness: http://www.preventionweb.net/english/email/url.php?eid=14454 . This also contains messages that can help access funding.

Other sites that track emerging sources of funding include:

- http://www.climatefundsupdate.org
- http://www.climatefinanceoptions.org/cfo/
- http://www.project-catalyst.info/index.php?option=com_content&view=article&id=92&Itemid=74
- The World Resources Institute monitors funding pledges at http://pdf.wri.org/climate_finance_pledges_2010-06-05.pdf
- Advice on accessing funds can be provided by the climate change focal point of your organization, and, for the immediate term, by members of the IASC Climate Change Task Force and the OCHA Emergency Preparedness Section in Geneva.

2.2. Where can I find useful climate change information & tools, and how can I use them to adjust my programmes?

Extensive collections of professional resources for reducing disaster risk can be found on PreventionWeb (www.preventionweb.net).

Other tools and sites include:

- Vulnerability and capacity assessment tools are available at http://drop.io/iasc_TF_CC, password 'VCA' (case-sensitive)
- Guidance on integrating DRR into UN planning processes, which also discusses the link between climate change and DRR at http://www.undg.org/index.cfm?P=1093
- Information on humanitarian implications of climate change at http://www.climatecentre.org/ under 'Resources' and 'Films and Presentations' and at http://ochanet.unocha.org/CC/Community%20Content/Background%20Notes/OCHA%20Policy%20Brief%20Climate%20Change.pdf .
- Training is available at http://preventionweb.net/english/professional/trainings-events/events/?tid=33 and http://www.climatecentre.org/site/publications/85. More training materials will be added by September 2010.

Part 3: Frequently Asked Questions

3.1. Are humans responsible for climate change, and did it occur in the past?

- Climate variability has always occurred in the form of fluctuations in weather, seasonal phenomena like the monsoon, or multi-annual events like El Nino.
- Climate change, however, is a long-term shift in climate measured by changes in temperature, precipitation, winds, sea-level rise and other indicators. Climate change can involve both changes in average conditions and changes in variability, including, for example, changes in extreme conditions (e.g. areas that routinely experience category 3 storms may start experiencing category 4 storms). A key difference between climate variability and climate change is the persistence of abnormal conditions, or long-term changes in averages.
- Natural causes explain only a small part of current warming and change. The overwhelming majority of scientists agree that climate change is due to rising concentrations of heat-trapping greenhouse gases in the atmosphere caused by human activities[8].
- The 1990s and the first decade of the 21st century are the warmest decades on record and 2009 concluded the hottest decade on record[9].
- Current climate change is different from past changes because that change is now more rapid, giving natural and human systems less time to adapt.

3.2. What is the link between climate change, disaster risk reduction, sustainable development and the Millennium Development Goals?

- Both CCA and DRR build resilience, or the ability to cope with adverse conditions.
- CCA is an adjustment in natural or human systems that occur in response to actual or expected climate change related impacts. DRR is the development and application of policies and practices that minimise vulnerabilities and disaster risks throughout society, through prevention, mitigation and preparedness
- There is overlap between DRR and CCA, mainly in the management of hydro-meteorological hazards, and water and vector related health issues (see Figure 1). DRR can address climate variability and defend against the impacts of climate change, and is therefore an essential part of adaptation.
- For DRR to succeed, it must take account of changing risks associated with climate change and ensure that measures do not increase vulnerability to climate change in the medium- to long-term[10].

- DRR and CCA share similar objectives, tools and approaches, beginning with risk and vulnerability assessments and multi-sectoral approaches to developing national strategies.
- However, adaptation and disaster risk reduction are not identical. For example, geophysical hazards (like earthquakes) are not addressed by CCA
- Disasters and climate change can both have negative impacts on development outcomes such as health and food security, and therefore on the MDGs. Conversely, effective CCA and DRR can contribute to the achievement of the MDGs and minimizing of multiple health threats. Sustainable development, poverty reduction, good governance and disaster risk reduction are mutually supportive objectives, according to the Hyogo Framework for Action, which calls for integrating "existing climate variability and future climate change into strategies for the reduction of disaster risk and adaptation to climate change." [11]

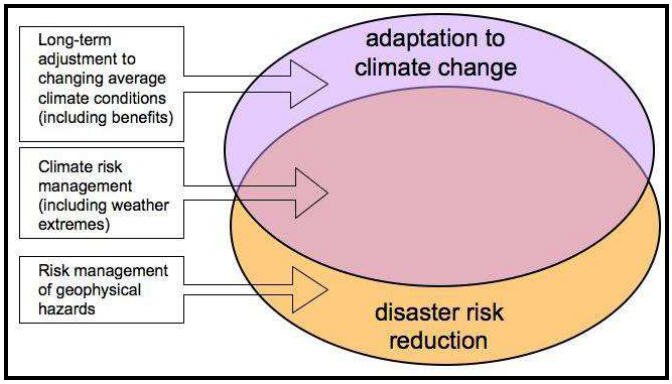

Figure 1 from Mitchell and Van Aalst (2008)

3.3. What is the link between adaptation and mitigation, and are they complementary?

- Mitigation involves curtailing greenhouse gas emissions and adaptation involves lessening the harm of climate change. Mitigation can reduce all types of climate change impacts, and thus diminish the adaptation challenge.
- International texts such as the Copenhagen Accord recognize that adaptation is clearly needed alongside mitigation, given the potential effects of climate change in particular on the most vulnerable[12.]
- The IPPC explores the question on inter-linkages between mitigation and adaptation in more detail at http://www.ipcc-wg2.gov/AR4/website/18.pdf.

3.4. How can links between development and humanitarian actors be strengthened?

- Humanitarian and development approaches are broad concepts and not always clearly delimited. Generally, humanitarians are concerned with immediate response to emergencies and life-saving, and development actors are more concerned with longer-term poverty reduction and more broadly defined human well-being.
- There are clear linkages between humanitarian and development work – for example, an effective humanitarian response will contribute to development outcomes.
- Roughly 70% of IASC members have dual mandates – they are both development and humanitarian actors although internal divisions persist and each generally derives funding from separate donor channels, either humanitarian or development.
- What is most important is that humanitarians and development actors find effective means to collaborate, with each contributing based on their competencies and expertise, as their objectives are essentially the

same – namely assisting those most vulnerable. Preparedness and response to situations of acute vulnerability must be seen as and planned within the context of chronic vulnerability.

- For the UN system, the Resident Coordinator (RC) has responsibility for coordinating the disaster risk reduction work of UN Country teams. The RC's coordination function does not discriminate between humanitarian and development actors. Joint planning and programming present opportunities for strengthening partnerships.
- National focal points for implementation of the Hyogo Framework for Action are also identified in all countries and many countries have national coordinating mechanism that bridge both humanitarian and development partners in an effort to develop and implement national disaster reduction plans (increasingly these action plans are being developed in coordination with adaptation plans; ISDR regional offices will have further information (www.unisdr.org).

3.5. What are the main challenges posed by climate change to vulnerable populations, and how will they cope?

- Climate change multiplies existing threats. For example, it is predicted to increase the burden of disease by increasing the areas that can host malaria vectors; may increase the potential for conflict through increased competition for scarce resources; may reduce many livelihoods, increase displacement/migration, set back development gains, such as preventing and managing HIV/AIDS; may increase incidence of diarrhoeal disease, which is already the second-leading infectious cause of childhood mortality and kills approximately 1.8 million people each year; expected to increase malnutrition, which already kills 3.5 million people annually , due to intensified food insecurity, and so on.

3.6. How can we make authorities and organisations aware of the negative effects of climate change on communities? Are there good practices available for humanitarians?

The OCHA climate change campaign to raise awareness of the humanitarian implications of climate can be helpful:
http://ochaonline.un.org/ochahome/InFocus/ClimateChangeHumanitarianImpact/tabid/5930/language/en-US/Default.aspx

http://ochaonline.un.org/vmu/ClimateChangeToolkit.pdf

This inter-agency project helps pastoralists cope with the rising impacts of climate in the Horn and East Africa:
http://www.reliefweb.int/rw/rwb.nsf/db900SID/EGUA-86VMS7?OpenDocument

> ***Climate change and disasters are integrally linked. Climate change affects physical hazards and the coping capacity of communities to deal with disasters. It is important that national level efforts to adapt to climate change and reduce disaster risk are effectively harmonized. This is of particular importance in LDCs where government capacity is especially strained, and SIDS, which are extremely vulnerable to climate-related disasters (UNDG 2009).***[13]

3.7. How can CCA programming strengthen existing early warning systems or support the establishment of a reliable early warning system?

Early warning systems help preparations for extreme weather events and changing climatic patterns and should be reinforced through CCA programmes. This can be done by evaluating early warning capacities at local, national and regional levels and consulting key stakeholders during programme design. There are specific early warning systems for hazards such as floods, cyclones, droughts, famine, and diseases that cover different spatial scales. Effective systems generally include:

- Strong commitment from government, supported by DRR plans, legislation and coordination mechanisms.
- Coordination among national services for information sharing, data, and warnings that take vulnerabilities and exposure of elements into account.
- Communication systems that ensure warnings are received by communities through procedures that are tested, evaluated and maintained.
- Emergency preparedness, including training on appropriate use of weather-, water- and climate-related information and early warnings.
- Feedback mechanisms between national to local governments, national services and the community to facilitate evaluation and improvement of the warning system.
- The ability to reach those that must take action to protect themselves (end-users).

More information is available at:

Red Cross Red Crescent Climate Centre Early Warning page
http://www.climatecentre.org/site/early-warning-early-action

Prevention Web Early Warning page
http://preventionweb.net/english/themes/early-warning/

HEWSWEB
http://www.hewsweb.org/

Capacity Assessment of National Meteorological and Hydrometeorological Services
http://www.wmo.int/pages/prog/hwrp/nhs.html

ISDR Global Survey of Early Warning Systems
http://www.unisdr.org/ppew/info-resources/ewc3/Global-Survey-of-Early-Warning-Systems.pdf

3.8. How do we programme CCA effectively for the long-term, in particular given constraints such as shorter-term funding and programming cycles?

Key elements of effective programming include:

- Integration: CCA activities should focus on reducing risk to livelihoods as well as lives. The integration of CCA into existing structures should be encouraged
- Partnerships: CCA should focus on creating stronger partnerships with knowledge institutes, NGOs and IOs that work on CCA, and foster direct engagement with vulnerable communities. This strengthens coherence of efforts.

- Sustainability: To ensure sustainability, the primary target of CCA capacity development activities should be those national stakeholders that can help communities prepare and adapt.

CADRI[14] is an example of a programme that supports mainstreaming capacity development into DRR-related programmes. Information is available at: http://www.unisdr.org/cadri/

3.9. What are the entry points for CCA programming, or do we have to create separate activities?

It is important to integrate CCA into on-going programmes by focusing efforts on reducing risk to livelihoods and lives and to promote the integration of CCA into existing institutions rather than create new ones. In most countries, there are already institutions responsible for DRR: these can be an excellent entry point for CCA programming.

Depending on the national context, integration of DRR and CCA can happen through leadership by strong central agencies and by inclusion in national development planning. It can also benefit from sectoral implementation, or a more location-specific perspective with a strong focus on communities and individuals.

References

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[8] http://ec.europa.eu/environment/climat/campaign/what/climatechange_en.htm
[9] See for example http://www.reuters.com/article/idUSTRE4BF31120081216 and NASA at http://www.nasa.gov/topics/earth/features/temp-analysis-2009.html
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[11] http://www.unisdr.org/eng/hfa/docs/Hyogo-framework-for-action-english.pdf at page 11
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[13] UNDG. Integrating disaster risk reduction into the CCA and UNDAF. A guide for UN country teams.
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