

# **Social Consequences of Climate Change**

**Advocating Multi-sectoral Climate Change Education for Child Rights; Quality Education, Water and Sanitation, Health, Nutrition and Participation**

Stephanie Hodge, Education Section,  
UNICEF New York  
Dominican Republic  
April 27, 2010



# Why Focus on Children?

- **27% of the world's population – or 1.8 billion people** – are under the age of 15.
  - In many of the countries most exposed and most vulnerable to climate change, children (<18) form close to half the population. In Uganda, for instance, 57 per cent of the population is under 18
- **Children, especially the poor children in developing countries** are disproportionately vulnerable to the impacts of climate change and will have to live with the consequences of today's decisions on climate change.
- There is increasingly convincing evidence that many of the **main killers of children (malaria, diarrhea and under nutrition)**. These are expected to worsen as a result of climate change.
- The existing hardship of many of these children is already significant. Today:
  - **8.8 million children under 5 die each year mostly from preventable causes.**
  - **Over 101 million children are out of school.**
  - **1 billion children** are deprived of one or more services essential to survival and development.
- Children live in varying circumstances
  - **Gender:** In many regions boys and girls have different social and economic roles and responsibilities. Young girls, for example, often assist with domestic tasks like fetching water and cooking, whereas boys may assist with herding cattle or working in the market to supplement family income.
  - **Urban-Rural Divide.**

# The Normative Context

- Inaction on **mitigation and adaptation** will lead to further compromising their rights, as enshrined in the Convention on the Rights of the Child (CRC), which was ratified by nearly every country in the world in 1989 (20<sup>th</sup> Anniversary).
- The CRC makes it the bounden duty of decision makers to **take the best interests of the child as a guiding concern in all decisions** that may have an impact on children (article 3).
- **Further Rights guaranteed** under the CRC that are threatened by climate change include:
  - children’s right to life, survival and development (article 6) and their
  - right to adequate nutritious foods and clean drinking water (article 24, 2(c)).
- Children are also **powerful agents of change**, especially if States support children’s right to have their views respected and to be involved in decisions affecting their lives (**article 12**) and if they assure that parents and children are informed and have access to education (**article 24, 2(e)**), including education directed to the development of respect for the natural environment (**article 29(e)**).

# Environmental Health Risks and Malnutrition

- Today there are **3.5 million early deaths due to malnutrition, and 2.2 million due to diarrhoea** and dehydration. Both conditions are highly sensitive to changes in temperature and precipitation and all disproportionately affect children. Malnutrition leads to a vicious cycle where susceptibility to infections increase and in turn illnesses reduces uptake of nutrients.
- Physical afflictions have **secondary consequences that are lifelong**, reducing learning and earning potential and thus undermining poverty reduction efforts.
- A clear link has been established between **nutritional status and learning in school**. Research in Niger, for example, found that children born during drought years were 72% more likely to be stunted.



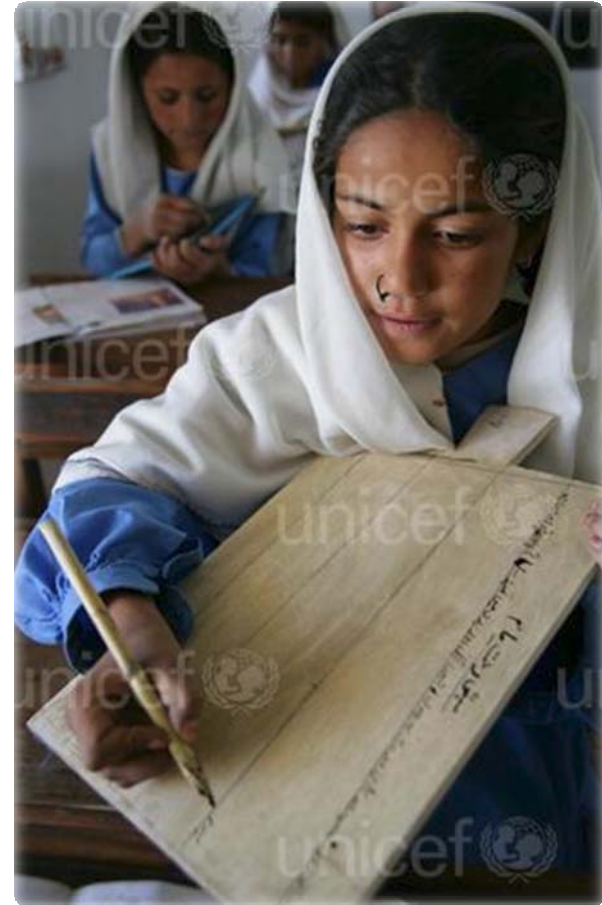
# Water and Sanitation

- The current state of water-supply and sanitation services worldwide is already a source of concern:
  - Globally, 884 million people are currently without access to improved water supply
  - 2.5 billion have no form of improved sanitation services. Most of these people live in Asia and Africa.
- As precipitation patterns change, drought and or flood occur. In either scenario, communities are more vulnerable.
  - In droughts – people are forced to ration water for drinking, leaving less for washing
  - In floods – sanitation infrastructure break down increasing the risks of outbreaks of water-borne diseases (diarrhoea, cholera, etc)



# The Impact of Natural Disasters

- **Floods and storms have already risen dramatically.**
  - During the past 20 years, the number of recorded disasters has doubled from approximately 200 to more than 400 per year.
- See serious impacts **on human security and development:**
  - Over 20 million were displaced by climate-related disasters in 2008 compared to the 4.6 million newly internally displaced by conflict in the same period
  - In the **Philippines in 2006, 7000 schools** were destroyed following four consecutive storms.
  - During severe flooding in the Sarlahi District of Nepal flood-related fatality rates were **13.3 per 1,000 for girls** and **9.4 per 1,000 for boys**, 6.1 per 1,000 for women and 4.1 per 1,000 for men.
  - In the 2004 Indian Ocean Tsunami, the largest numbers of fatalities were women and those under the age of fifteen.



# The International Response

- Between 2005 and 2007, UNICEF responded to some 276 emergencies annually in 92 countries; more than half of these were caused by disasters.
- The UNICEF response to humanitarian crises is guided by its **Core Commitments for Children in Emergencies (CCC)** whose 1<sup>st</sup> principle state that:
  - *“Children in the midst of armed conflict and natural disasters such as drought, floods and earthquakes have the same needs and rights as children in stable countries.”*
- **Key elements of the fulfillment of these rights** include:
  - provision of essential, life-saving and sustaining services
  - temporary learning spaces and, later, support the reopening of schools and reintegration of students and teachers
  - Ensure that family-tracing systems are implemented with appropriate care and protection facilities.
  - Prevent sexual abuse and exploitation of children and women



# Climate Change and Education

- Climate change can **impact on education** and **child protection** by arresting children's learning opportunities including through damages incurred to schools and education infrastructure during disaster and crisis events.
- With decline in community resilience, **coping mechanisms are eroded** leading to high school drop out rates.
  - **Storms in the Philippines in 2006 damaged 700 schools.**
  - **Rising sea level of the Caspian Sea** resulted in a very significant drop in school attendance. Focus groups with residents indicated that relocation of the schools due to the sea level rise, together with deteriorating health of the children, **departure of the teachers due to economic reasons, and financial problems of the families, were the primary reasons for the drop in school attendance.**
  - **Research in Kenya shows that children who spend more time in resource collection are less likely to attend school** – climate change is exacerbating resource scarcity and forcing households, especially women and girls, to spend more time in resource collection work.





# Disaster Risk Reduction (DRR)

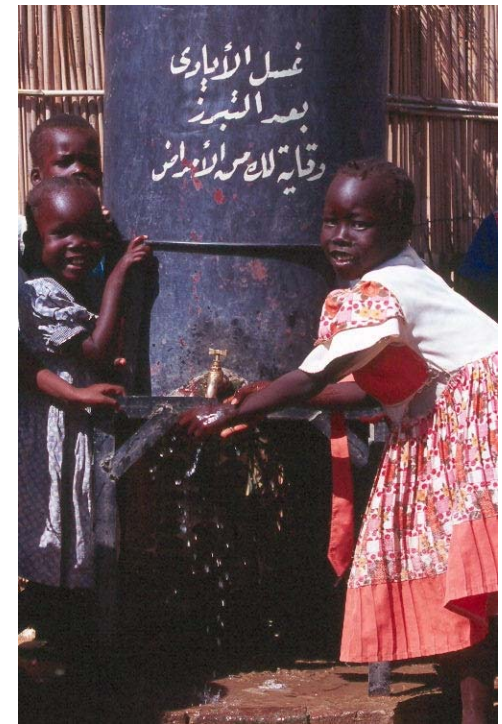
- Paradigm shift required: **The international community needs to significantly step up humanitarian action in the face of climate change and a concerted shift is needed from emergency response towards disaster risk reduction.**
- **Disaster risk reduction** is a systematic approach to identifying, assessing and reducing those risks. It targets the national, sub-national, and, in particular, the community level—where people face risk and often know best the ways to prevent or reduce it. Similarly, disaster risk reduction requires governments, civil society, the private sector, and other actors to partner with the most vulnerable people to:
  - prevent disasters (the clinic or school that does not collapse, the population re-located to a safe area);
  - mitigate the impact of hazards (the cholera awareness campaign and child protection network ahead of the flood season);
  - prepare--including early warning--for the worst (the school children who practice an evacuation drill, the stocks pre-positioned ahead of the hurricane season).
- Resources invested in disaster risk reduction save relief and rehabilitation costs in the future. For example, WFP estimates that US\$1 spent on early livelihood protection Ethiopia generates about US\$4 in future cost savings and benefits.

# Disaster Risk Reduction (DRR)

- Paradigm shift required: **The international community needs to significantly step up humanitarian action in the face of climate change and a concerted shift is needed from emergency response towards disaster risk reduction.**
- **Disaster risk reduction** is a systematic approach to identifying, assessing and reducing those risks. It targets the national, sub-national, and, in particular, the community level—where people face risk and often know best the ways to prevent or reduce it. Similarly, disaster risk reduction requires governments, civil society, the private sector, and other actors to partner with the most vulnerable people to:
  - prevent disasters (the clinic or school that does not collapse, the population re-located to a safe area);
  - mitigate the impact of hazards (the cholera awareness campaign and child protection network ahead of the flood season);
  - prepare--including early warning--for the worst (the school children who learn about and practice an evacuation drill, the stocks pre-positioned ahead of the hurricane season).
- Resources invested in disaster risk reduction save relief and rehabilitation costs in the future. For example, WFP estimates that US\$1 spent on early livelihood protection Ethiopia generates about US\$4 in future cost savings and benefits.

# Priority: Climate-Proofing Communities

- Determine action via rights-based analysis which includes attention to the control and distribution of natural resources; the socio-cultural organization and institutional arrangements
- Target the poorest and marginalized
- Focus on low cost, high impact, demand-driven interventions in health, nutrition and water to build resilience
- Disseminate decentralized technologies with attention to operation and maintenance for poverty alleviation and GHG reduction
- Build capacities at local and national level for leadership and responsibility (decentralization without local elite capture)
- Strengthen social protection and conflict resolution mechanisms
- Promote participatory approaches to community development include forest, water and energy stewardship, environmental education, disaster risk reduction and preparedness



# CFS- Pathway to Climate Change Adaptation

- Education is a key instrument for bringing about changes in values and attitudes, skills, behaviours and lifestyles that are necessary to achieve Climate Change Adaptation within and among countries.
- For climate change and environmental education planning; Inter Sectoral Linkages – Health, DRR, Child protection, Water and Sanitation, Nutrition and Food Security

# Child Friendly Schools - CFS

- A principled education framework for achieving quality in education and includes multi-sectoral Climate Change and Environmental Education. CFS principles include:
  - Protective
  - Inclusive
  - Child Centered
  - Democratic participation

# POLICY TOOLKIT FOR MULTI-SECTORAL CLIMATE CHANGE AND ENVIRONMENT EDUCATION

- Focus on Mainstreaming in key sectors - food security, health, child protection, water and sanitation, DRR
- Modular and userfriendly resources including fact sheets, case studies and steps for mainstreaming CCEE across sectors
- Needs assessment and process oriented
- Addresses the politics of development



## What can we do?

### Politicians

- Allocate additional funding in targeted manner to reach communities and address children's issues
- Listen to children and young people, develop new norms and standards that are child focussed
- Take action short term, think long term
- Insist that those who have the biggest responsibility understand the harsh realities for **our** children
- Insist that **our** children's education includes climate change; impacts and mitigation

### Technicians

- Work with communities to limit environmental damage
- Develop projects that use and promote sustainable livelihoods and renewable energy
- Increase the coverage of social protection strategies for the most vulnerable
- **Educate children and their communities on managing and mitigating the health, development and protection risks and realities of climate change –UNICEF CFS AS A PATHWAY TO ADAPTATION**

# Empowered young people: protagonists for change

**“Young people are well placed to contribute to the fight even now. They are adept at spreading new habits and technologies. They are adaptable and can quickly make low-carbon lifestyles and career choices a part of their daily lives. Youth should therefore be given a chance to take an active part in the decision-making of local, national and global levels. And they can actively support initiatives that will lead to the passage of far-reaching legislation.”**

**~ Ban Ki-Moon**  
World Youth Day 2008





# References

- [\[1\]](http://www.aaas.org/news/releases/2009/0513stpf_climate.shtml) AAAS News, 13 May 2009. S & T Forum Panel: Addressing Climate Change will Benefit Global Health” ([http://www.aaas.org/news/releases/2009/0513stpf\\_climate.shtml](http://www.aaas.org/news/releases/2009/0513stpf_climate.shtml))
- IPCC, Fourth Assessment Report, 2007.
- IFPRI (2009). *Impact on Agriculture and Costs of Adaptation* (<http://www.ifpri.org/publication/climate-change-impact-agriculture-and-costs-adaptation>).
- Cited in Bartlett, S. (2009). *Children – A Large and Vulnerable Population in the Context of Climate Change*. Prepared for Expert Meeting on Population Dynamics and Climate Change, UNFPA and IIED, 24-25 June 2009. (<http://www.unfpa.org/webdav/site/global/users/schensul/public/CCPD/papers/Bartlett%20Paper.pdf>)
- ‘Millions of Children Could Be Saved With Better Nutrition’, *Nutrition Today*, vol. 39, no. 4, 2004, p. 152-153.
- UNDP, Human Development Report 2007/2008, pp. 79, 89
- WaterAid (2008). *Tackling the silent killer: The case for sanitation*. ([http://www.wateraid.org/documents/tacking\\_the\\_silent\\_killer\\_the\\_case\\_for\\_sanitation.pdf](http://www.wateraid.org/documents/tacking_the_silent_killer_the_case_for_sanitation.pdf))
- UNICEF (2009). *The State of the World’s Children, Special Addition*. ([http://www.unicef.org/rightsite/sowc/pdfs/SOWC\\_Spec%20Ed\\_CRC\\_Main%20Report\\_EN\\_090409.pdf](http://www.unicef.org/rightsite/sowc/pdfs/SOWC_Spec%20Ed_CRC_Main%20Report_EN_090409.pdf))
- UNICEF/WHO (2009). *Diarrhoea – Why Children are Still Dying and what can be Done*. ([http://www.unicef.org/media/files/Final\\_Diarrhoea\\_Report\\_October\\_2009\\_final.pdf](http://www.unicef.org/media/files/Final_Diarrhoea_Report_October_2009_final.pdf))
- Koelle, K, Rodo, X, Pascual, M, Yunus, M and Mostafa, G, 2008. *Refractory periods and climate forcing in cholera dynamics*. Paper in Nature Magazine. Vol 436|4 August 2005|doi:10.1038/nature03820
- Checkley, W., Epstein L.D., Gilman R.H., Figueroa D., Cama R.I., Patz J.A. and Black R.E., 2000. *Effects of El Nino and ambient temperature on hospital admissions for diarrhoeal diseases in Peruvian children*. *Lancet*, 355, 442-450.
- IPCC (2008). Technical Paper VI: *Climate Change and Water* (<http://www.ipcc.ch/pdf/technical-papers/climate-change-water-en.pdf>);
- UNICEF progress for children: A world fit for children statistical review, p.36.
- Alsop, Z. ‘Malaria returns to Kenya Highlands as temperature rise’. *The Lancet*, VOL.370, NO 9591, 2007pp 925-926
- Kim, J. J., American Academy of Pediatrics, Committee on Environmental Health, ‘Ambient Air Pollution: Health hazards to children’, *Pediatrics*, vol. 114, 2004, pp. 1699-1707.
- Tager. Air pollution and lung function growth: is it ozone? *Am J Respir Crit Care Med*, 1999, 160:387.; Gauderman, Association between Air Pollution and Lung Function Growth in Southern California Children. *Am J Respir Crit Care Med*, 2000, 162:1383.

# References

- Kim, J.J., American Academy of Pediatrics, Committee on Environmental Health, Ambient Air Pollution: Health hazards to children, Pediatrics, vol 114, 2004, pp1699-1707
- UNICEF progress for children No 6, UNICEF, New York, p.22
- Penrose A, Takaki M. Children's rights in emergencies and disasters. *The Lancet*. 2006; 367: 698-699; Save the Children UK. 2007. *Legacy of Disasters: The impact of climate change on children*; Save the Children UK. 2009. *Feeling the Heat: Child Survival in a Changing Climate*.
- ADB (2009). *The Economics of Climate Change in SouthEast Asia: A Regional Review*. (<http://www.adb.org/documents/books/economics-climate-change-sea/Front.pdf>)
- Pradhan, E. K. et al., 'Risk of flood-related mortality in Nepal', Disasters, vol. 31, no. 1, 2007, pp. 57-70.
- Telford J, Cosgrave J, Houghton R. 2006. *Joint Evaluation of the international response to the Indian Ocean tsunami: Synthesis Report*. London: Tsunami Evaluation Coalition;; McMichael A, Friel S, Nyong A, Corvalan C. 2008. Global environmental change and health: impacts, inequalities and the health sector, *BMJ*, 336: 191–194.
- UNICEF News, 7 October 2008. "Disaster preparedness for schools in the Philippines" ([http://www.unicef.org/infobycountry/philippines\\_45857.html](http://www.unicef.org/infobycountry/philippines_45857.html))
- UNU, CARE International and CEISIN/Earth Institute (2009). *In Search of Shelter – Mapping the Effects of Climate Change on Human Migration and Displacement*. ([http://www.ciesin.columbia.edu/documents/clim-migr-report-june09\\_final.pdf](http://www.ciesin.columbia.edu/documents/clim-migr-report-june09_final.pdf))
- Save the Children, *Delivering Education for Children in Emergencies: A key building block for the future*, International Save the Children Alliance, 2008, [www.savethechildren.org/publications/rewritethe-future/delivering\\_education\\_emergencies.pdf](http://www.savethechildren.org/publications/rewritethe-future/delivering_education_emergencies.pdf) accessed 26 September 2009
- UNDESA. (2004). Issues Paper for the Session on Natural Resource Governance and Conflict Prevention prepared for Expert Group Meeting on Conflict Prevention, Peace Building and Development, UNDESA, 29 October 2004. ([http://www.un.org/esa/peacebuilding/Action/DesaTaskForce/papers\\_egm20041115/egm\\_session1b\\_issues\\_paper.pdf](http://www.un.org/esa/peacebuilding/Action/DesaTaskForce/papers_egm20041115/egm_session1b_issues_paper.pdf))
- Smith, D. and J. Vivekananda, A Climate of Conflict: The links between climate change, peace and war, November 2007, p. 3.
- Office of the Special Representative for Children and Armed Conflict, <[www.un.org/children/conflict/english/issues.html](http://www.un.org/children/conflict/english/issues.html)>.
- Stern, N. (ed.), *The Economics of Climate Change: The Stern Review*, Part II, 2007, pp. 54-56.
- [\[1\]](http://www.unicef.org/media/media_51997.html) Children's Climate Forum Declaration 2009. ([http://www.unicef.org/media/media\\_51997.html](http://www.unicef.org/media/media_51997.html))