

Newsletter

Issue 3, November 2004

Climate Change and extreme weather events, what is the message?

One of the main reasons for the Red Cross and Red Crescent to become interested in climate change was the projected increase of extreme weather events. More floods and more droughts would lead to more natural disasters and suffering by vulnerable people. This we felt was an important threat to mankind and to the work and activities of the Red Cross and Red Crescent.



For us that was the key message of the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), published in 2001. A message that was also in line with the observed increase of weather related disasters of around 200 in the beginning of the 1990 to never less than 300 since 2000. But for a number of scientists that connection was a step too far. What followed were many discussions on the nature of extreme weather events, that they have always been there and that you therefore can not link one event with climate change. In other words, the link between current extremes and climate change is scientifically seen too complicated so therefore it is better not to make that link.

More than anybody else scientists prefer to communicate what they know, rather than what they do NOT know. And in the scientific and political debate about climate change that has been the main

focus. Addressing climate change will require billions of euros, and as policymaker you want to be quite sure that the scientific base for decisions is sound.

So scientists mainly communicate what they feel confident about: the noted increase of global temperatures by already 0,6 °C and projected average increase of global temperatures by 1,5-6 °C and the sea level rise of 10-90 cm by the end of this century. Climate scenarios have years mentioned that are far in the future: 2050 and 2080.

But the recent weather extremes and the public and political reactions to them have underlined that it is not the average change that society is worried about. It is the abrupt change or incident that shakes. Who cares about a mean global temperature rise taking place over decades when you're dealing with the consequences of a heat wave today? The impact of sea level rise on a coastal region might be felt much earlier when combined with a heavy storm. The slow melting of glaciers becomes a disaster in combination with drought.

It would be helpful for the public awareness and action on climate change if scientists would emphasise more the risks of extreme weather events, despite the scientific uncertainty.

Madeleen Helmer

Head of the Red Cross Climate Centre

Awareness

Climate beach campaign successful

Sunbathing at the beach was turned into an educational exercise in the Netherlands this summer when some 70 Red Cross youth volunteers brought the first ever climate change awareness campaign right down to people's beach towels. The campaign took place during the warmest time in Europe, and was organized by the Red Cross/ Red Crescent Climate Centre in The Hague and local Red Cross branches. The Red Cross youth visited beaches in Northern Holland, challenging people to participate in open-air-quizzes and learn more about the impact of climate change and extreme weather events.

"We approached people by their beach towels, and started an interactive quiz with them there," says Fleur Engel, educational programme officer of the Climate Centre. "We then invited people to visit our presentation wall for more information. Our main goal was to make those who visit the beaches aware of how the climate is changing, how extreme weather events are on the rise, and especially how all this has real consequences for real people."

People's reaction was very positive, after having completed both quizzes and conversation with the volunteers, they could associate the Red Cross with the effects of climate change.

"We felt it was important to bring the impact of climate change closer to home, and make the link with what people hear on the news about global warming with their every day life," explains Fleur.



The children were especially enthusiastic to participate in the open-air-quiz, and through them it was easy to reach out to the parents by the beach. However, it proved more difficult to involve the teenagers, although the volunteers were all young people themselves. In order to reach out to the younger generation, there are plans to create a more interactive and playful game directly aimed at that age-group in the beach campaign for next summer.

For more information about the campaign or the quiz you can contact the Climate Centre on climatecentre@redcross.nl

More of Mitch due to climate change?

It is exactly six years ago since the devastating hurricane Mitch, which ravaged Central America, was formed in the Caribbean Sea. Monstrous Mitch turned out to be one of the most intense hurricanes, with amongst the highest sustained wind speeds ever measured in the region. It maintained its category 5¹ rank for 33 hours – a duration which had never been observed before in the Atlantic basin. Even as the gushing winds started to weaken, torrential rains followed the storm for days - in some cases exceeding amounts of 25 inches within six hours. This resulted in flooding and mudslides which were to blame for an extremely high death toll. There had not been a more deadly hurricane in the region for two centuries - since "The Great Hurricane" in 1780 --which killed approximately 22,000 people. Mitch is believed to have claimed the lives of some 10,000 people died during Mitch, and millions more were affected. Economically, Mitch caused billions of dollars. President Carlos Roberto Flores Facusse of Honduras claimed that the storm destroyed 50 years of progress.

The current hurricane season in the Atlantic region is the most active in over a decade. Already, the region has been devastated by one category 5, and three category 4 hurricanes - and the season is far from being over. According to the Haitian Secretary of State for the Environment, more than 3,000 people were killed and over 300,000 people affected when hurricane Jeanne struck the island on 18 September. Jeanne, a category 3 storm, proves that it is not necessarily the most intense hurricanes that lead to the highest death toll and damage of infrastructures. This depends primarily on the track the hurricane chooses to take. If a storm does not make a landfall, damage will be much less. If it does, casualties and destruction will highly depend on population density and the level of development in the area struck.

Tropical hurricane Ivan caused about 25 deaths in the U.S., after it blasted the Caribbean islands killing some 60 people -

¹ Hurricane intensity is categorized on the Saffir-Simpson scale, ranging from 1 to 5, within category 5 the most intense and destructive hurricanes are grouped.

not to mention the number of people affected. Back in August, hurricane Frances already caused death and destruction, killing 30 people. Furthermore, about 30 deaths have been blamed by hurricane Charley which swept the region in August, mainly in the U.S. The high activity during this Atlantic hurricane season raises the question (again) if these are signs of a changing climate. Scientists are very cautious making statements about this subject. One could ask 'why?' Is all the evidence poured over us by the media not enough to affirm the role of climate change in these extreme weather events? A simple yes or no would be a large underestimation of the complexity of the equation. In the first place; if we look at development in the frequency and magnitude of tropical storms from 1940 until present, there is nothing that points to a significant rising trend for formation of hurricanes in the Atlantic basin. The 50's and the 60's were also characterized to be very active hurricane seasons. The 70's and the 80's were far quieter, with a few exceptional years. Since the 90's, there has been an upward trend again in hurricane activity. The data ranges are simply too short to observe a significant trend in hurricane activity, if there is one.

Constant research is taking place on the subject, but scientists are not in agreement on whether global warming will lead to a more frequent occurrence of hurricanes. Most scientific studies indicate that there will be a small or no change in number of tropical storms as a result of climate change. However, there is more consensus about that there will be increase in the intensity of hurricanes, accompanied with higher amounts of precipitation. Previous scientific studies have confirmed these developments. In one of the latest scientific reports dealing with this subject it is concluded that due to a higher atmospheric CO₂ content - which leads to global warming - both storm intensity and near-storm precipitation rates will increase. Experiments with several General Circulation Models indicate a 14% drop in pressure fall, which means a higher intensity of the hurricane. Furthermore, maximum surface wind speed is bound to increase with 6% and average precipitation within 100 km of the storm can possibly increase with 18 %. These scientific results lead to the sad conclusion that we may expect in coming

centuries more frequency of highly destructive category 5 hurricanes like Mitch. There is no reason to sit still and wait for this to happen. There is too much at stake here. Adaptation to the negative results of climate change is an important issue - especially in the least developed countries, where people are much more vulnerable to the consequences. It is important to raise the awareness amongst local people of the negative impacts of climate change, to increase their resilience in coping better with the effects of weather related disasters.

Successful national seminar in Nicaragua

More than a hundred representatives from a diversity of local, national and international organisations on climate change and disaster risk reduction met for the first time in Nicaragua on 4 and 5 November. The meeting was organised at the initiative of the Nicaraguan Red Cross.

In his opening address the Nicaraguan Minister of the Environment underlined the importance of national action on climate change and new partnerships within the country to address the risks of climate change.

A broad range of presentations addressed the issue from different angles. Presentations included the work from the national meteorological institute, research programmes from universities and the Ministry of Environment, as well as UNDP, the municipal council of Puerto Cabezas and risk reduction programmer of the national disaster committee.

The participants discussed and recommended further exchange of information, increased awareness raising and concrete action and cooperation to strengthen the resilience of the Nicaraguan society against climate change.

For more information about the seminar, please contact Marjorie Soto at crholreptic@tutopia.com

ACTION

Progress in the two pilot countries

The Red Cross climate change and disaster preparedness programmes in Nicaragua and Vietnam are now in full swing. Within one year from setting up the programmes, with both technical and financial support of the Climate Centre in The Hague and the Netherlands Red Cross, the Nicaragua and Vietnam Red Cross societies have managed to forge important links and strengthen their relations with new partners – both at the national and international arena. More importantly, the Red Cross societies have managed to raise awareness of the impact of climate change and how to prepare for climatic variability at a community level, by working closely with the people living in the provinces targeted in the programmes as well as local authorities.

Nicaragua

The Nicaragua Red Cross has come a long way since the climate change and disaster preparedness programme was established in the first half of 2003. It has been an enriching challenge, where both Red Cross volunteers and authorities alike have come to know and understand the topic. The programme has made it possible to raise awareness among municipal authorities as well as within communities. It has enabled people to identify clear signs related to climate change and to implement actions to reduce the impacts of weather related disasters.

Coordination with other agencies and institutions has been a fundamental component of the programme. Strategic alliances have been formed between the Nicaragua Red Cross and various institutions, where the Red Cross has attained a leadership position in training and preparing communities and other actors in the field of disaster preparedness. This has resulted in strengthening the municipal committees within the targeted provinces in both preparing for and responding to disasters.

At the national level, the Nicaragua Red Cross has forged important partnerships with the Ministry of Education, the Nicaraguan Institute of Territory Studies (INETER, the national meteorology office), and the Ministry of Environment (MARENA). The Red Cross

has been at the forefront of raising awareness of climate change in relation to disasters, and has assumed a lead role in driving the subject - once the other partners have understood this important link and what impact it can have on vulnerable communities in the country, as Nicaragua is prone to various weather related disasters.

The National Committees for Preparedness, Mitigation, and Response to Disasters, which are embodied within the local municipalities, have proven to be another important entry point to involve the communities in preparedness for climate change. Direct relationship with the local authorities has prompted communication and coordination with other actors in disaster preparedness, and has helped the Red Cross to better map out the immediate needs of municipalities and their communities. By doing so, the Red Cross has ensured the sustainability of the programme, as the authorities have provided an important link to involve communities directly in intervention activities.



Another key element in the Red Cross approach has been through education by including climate change as a subject within the natural science curricula in elementary and secondary school, and as well at the university level in departments such as Marine Biology, Ecology, and Forestry Engineering. This partnership has been established through continuous dialogue, workshops, competitions and quiz games on climate change and its relation to disasters. In order to further stimulate the cooperation with teachers and students, the Red Cross has hosted drawing contests – providing prizes for the best mural promoting the

subject on climate change. The Red Cross has furthermore, in close cooperation with several universities, initiated series of seminars, forums, and workshops with students and teachers. Students have also been encouraged to incorporate climate change into their final thesis. Currently, the Red Cross is, technically and financially, supporting four such research proposals. These will with no doubt be a valuable contribution to further regional studies on climate change.

Through the climate change and disaster preparedness programme, the Red Cross has enhanced its public image in Nicaragua, and is not only seen as a disaster response organisation, but perceived to have a more comprehensive role in supporting and improving people's basic living conditions. The Red Cross volunteer network has furthermore been strengthened through training sessions and the promotion of community leaders.

The main challenge that the Red Cross faces now in Nicaragua is to ensure that actions and achievements obtained through the programme are sustained within the communities through further education on the impact of climate change and disasters.

For more information on the Climate Change and Disaster Preparedness Project in Nicaragua, please contact Marjorie Soto at crholreptic@tutopia.com

Vietnam

The Vietnamese Red Cross Society has finalized training of staff and volunteers who are carrying out the society's new Red Cross climate change and disaster preparedness programme. The programme was established one year ago with the technical and financial support of the Climate Centre in The Hague and the Netherlands Red Cross. The training for participants from Nghe An, Ha Tinh, Quang Binh provinces took place in July in Vinh city, and in August in Phan Rang for Red Cross staff in Ninh Thuan and Binh Thuan provinces

Fly on a wall in the Nghe An workshop

"Be on time, pay attention, contribute, and help each other." These were the instructions

that Mr. Huong, trainer of the Red Cross chapter of Nghe An province, gave the eager participants at the beginning of their four-day training in Disaster Preparedness and Climate Change (DP/CC), and Hazards, Vulnerability and Capacity Assessment (HVCA) last August. The morning sessions were to start at 7:30am to allow for a long break at noon - so that everyone would have plenty of time for lunch and a short nap in keeping with good Vietnamese habits. After laying out the ground rules for housekeeping, the actual training could start. Over the next days, the 25 participants from Vietnam's coastal provinces of Nghe An, Ha Tinh and Quang Binh, were to learn about the meaning of all characters in the abbreviations of DP/CC and HVCA.



The D of DISASTER, and P for PREPAREDNESS

What is a disaster? What is the difference between a hazard and a disaster? Which hazards threaten Vietnam? These were just some of the questions that Madam Mai, the always smiling and enthusiastic trainer, posed to the participants. After Madam Ha, from Vietnam Red Cross headquarters, explained everything about disaster management and relief, and the whiteboard was filled with drawings named "Expand" or

“Crunch” model, the P of preparedness was completed this first morning dedicated to DP.

CC FOR CLIMATE CHANGE

With Disaster Preparedness being a rather familiar theme to most of the participants, the afternoon session on CLIMATE CHANGE brought on a new subject for most of the Red Cross workers. The group was eager to learn about this new concept - after having their spirits vitalized by a little exercise in the hall. Before long, the room filled with people clapping hands, shaking legs, and following instructions from Madam Mai. Any mistake in following her orders resulted in a burst of laughter and a punishment of having to sing a song for the others.

After this invigorating activity, it was up to Mr. Hung, from Vietnam Red Cross headquarters, to explain the rather complex concepts of greenhouse effects and climate variability. However, by keeping to simple definitions and showing many clarifying photos and graphs, he got through to all the participants. Further understanding of the impact climate change could have on Vietnam, and the strong relations between climate change and disasters, was gained through group discussions. The participants were extremely interested in the subject, but were at the same time concerned about how the Red Cross should address this issue at a community level. The answer was to follow the next day, through a practical exercise.

The Grand Plan

On the second day of the training, all participants were given one chopstick. Without further explanation they were asked to come forward, and use their chopsticks to build a house together. After accomplishing the task, discussions followed on the progress of constructing the house of chopsticks. Everyone agreed that it did not look save enough to live in. “There was no consensus between the builders”, said one of the participants. “People were not involved” added somebody else. “There was no PLAN,” was the general conclusion. And that conclusion perfectly illustrated the necessity of the topic for the coming two days: the importance of having a plan in order to prepare for disasters.

The participants gathered in a role play for the Hazards, Vulnerability and Capacity Assessment session. They were divided into one group representing communities, another for local authorities, and the third representing the Red Cross assessment team. They had to ask themselves how to assess the hazards that their community faces, what makes a community vulnerable, and what was their capacity to prepare for, and respond to disasters. The floor was soon covered by felt-tips, abandoned shoes, large sheets of paper and people sitting all around the room. White paper was transformed into beautiful community maps, calendars that showed the timing of the most important hazards and colorful organization diagrams. Only interrupted by breaks for coffee and fruits to fill the stomach, and songs to keep up the spirit, all data on the sheets were then analyzed and more papers were filled with problem trees and ranking tables to set priorities.

Putting into practice

During the last day of training, the future responsibility of the participants was laid out. Within months to come, they are all expected to train people within their own communities in understanding the concepts of Disaster Preparedness and Climate Change, and assessing the hazards and vulnerability of their own environment, in order to make a risk reduction plan. During this last day, the Red Cross chapter staff shared their own experiences, and assisted each other in planning for the actual field work. It was not until 5 in the afternoon, that the chairman of Nghe An Red Cross Chapter could officially close the workshop and people went home - back to their families. Four days of hard work and a lot of new information were behind. But ahead there are plenty of days for putting what they learned into practice.

For more information on the Vietnamese Red Cross *Climate Change and Disaster Preparedness Programme*, please contact Hung at dpccpo@gmail.vnn.vn or Wouter Doevenspeck at wouter.doevenspeck@hn.vnn.vn

Advocacy

European Red Cross societies heating up for climate change

Climate predictions indicate that the frequency and severity of extreme weather events will increase in years to come – but reality shows that climate change, once considered a threat of the future, is happening here and now. Scientists have been taken by surprise by the short intervals in between the variability of weather events, as floods and heat waves throughout Europe in consequent years have shown. In 2003, south of France experienced within few months one-in-100-year heat wave, and one-in-100-year floods – both events very unlikely to happen by chance.

This has prompted the European Red Cross societies to gear up now in order to prepare for the imminent risk that people throughout the continent are facing as a result of this trend. On 21 October the Red Cross/Red Crescent Climate Centre and the Netherlands Red Cross organized a seminar for European Red Cross societies on the heat waves of the summer 2003. The purpose was twofold – to find out what Red Cross societies around the European continent had done in order to respond to this tragedy, labelled by insurance companies as one of the deadliest and costliest disasters of last year, as well as to identify what role the Red Cross/Red Crescent could play in preparing for and responding to the expected increase of disasters related to extreme weather events. According to a study recently released by the European Environmental Agency (EEA), the rise in temperatures in the is higher in Europe than globally – the average is 0.7°C worldwide but more than 1°C in Europe. Europe is warming up faster than other parts of the world, but what is even more worrying is that weather variability will increase as well. Most scientists agree that more extremes and more variability in weather will result in more severe disasters which have impact on large numbers of people living in Europe - as they will experience more floods, heat waves, droughts, forest fires and other weather related disasters in years to come. Southern and Central Europe will be most affected in the coming years, but long term effects will not spare countries in Northern Europe.

The most serious result caused by extreme weather events is the unnecessary loss of lives of people affected, but countries also experience great economic losses as infrastructures, buildings and land are destroyed, crops wither away, and ecosystems get damaged due to, for instance, forest fires and melting of glaciers. During August 2003, between 22,000 and 35,000 people died in Europe as a result of the scorching heat, and billions of euros were lost according to insurance companies.

Are European Red Cross societies prepared to respond to these disasters, and what role should they play in preparing and advocating for climate change? Is it within the mandate of the Red Cross to make climate change part of their preparedness, response and early warning systems? These questions were asked during the one day seminar, and the answer was clear: yes – the Red Cross must make it part of its core business in disaster preparedness and response. It was felt to be important that the Red Cross understands the trends caused by climate change, informs the public of the risks involved, and prepares itself and the public to be better prepared to respond to the increased frequency of weather induced disasters through its community based network.

In places like Greece and Portugal, where heat waves are more common than in other European countries, the value of coping mechanisms within communities themselves is obvious. The Hellenic and Portuguese Red Cross societies have been responding to yearly heat waves together with their governments by providing assistance to the most vulnerable groups within the society – the elderly and the disabled. These nations do not experience much fluctuation in deaths during the summer, despite having spells of extreme heat.

French and Spanish Red Cross societies were prepared to respond to the crisis of 2003 and provided crucial services by distributing water, fans, paying home visits and assisting in hospitals. But the magnitude of the heat wave still came as a surprise and since both Red Cross societies have

improved their plans to deal with the risks of heat waves. In particular a better information system to the public has since been set up. The services and local networks of the Red Cross were further recognized by the French and Spanish governments through making them a crucial partner in setting up response plans to extreme weather events in their respective countries. The Spanish and French Red Cross participate in a national heat wave plan, which is activated on first alert in June, and kept on different levels of alert as the occasion rises throughout the summer. Both national societies have been asked by their governments to assist in identifying vulnerable groups due to their broad presence within the communities, and to provide services to those in need. The French and Spanish Red Cross furthermore operate call centres/hotlines to provide information on how people can protect themselves, as well as keeping track of people who are socially isolated and have no one else to take care of them.

The effects of climate change are evident, and they are already felt throughout Europe. The Red Cross / Red Crescent needs to be aware of the urgency of preparing for and responding to more frequent and more severe weather related disasters – and to reduce the risk of people threatened by this trend worldwide.

Information about the seminar can be found at www.climatecentre.org

Kobe coming up

The International Federation is in full swing preparing for the second World Conference on Disaster Reduction, to be held in Kobe, Japan, 18-22 January 2005. The Federation has been asked by UN leading agencies to play an important role in the process of making the conference as successful as possible, based on its long experience in disaster response and disaster preparedness together with national Red Cross Red Crescent societies worldwide. In a task force and preparatory committee meetings held 8-12 October, Jan Egeland, United Nations' Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator, opened the meetings by

referring to the monsoon floods in South Asia this summer and the hurricanes in the Caribbean in September as a stern reminder of how disaster preparedness prevents the loss of lives and livelihoods. In the case of Bangladesh and Cuba, years of appropriate preparedness spared the countries unnecessary loss of lives, whereas hurricanes in Grenada and Haiti brought on mind-boggling destruction and deaths. Climate change was a recurrent theme during the meetings, and will be addressed in Kobe under various thematic sessions, such as urban development, health, risk identification, early warning systems, and environmental management. It was stressed that the link between 'global warming' and natural disasters could not be overlooked – resulting in increasing frequency of climate variability and extreme weather events which puts millions of people around the globe at risk. The commitment of the Red Cross/Red Crescent in terms of climate change in its disaster preparedness and risk reduction efforts was further underlined by Eva von Oelreich, Head of the Federation's Disaster Preparedness and Response Department, when she addressed the preparatory committee meeting.

The Red Cross/Red Crescent Climate Centre in The Hague is furthermore part of an inter-agency task-force group, the Vulnerability and Adaptation Resources Group (VARG), an initiative in the context of the Climate change convention, which aims at drafting a concept/policy paper on a common stand on climate change and disaster risk reduction to be presented and discussed at Kobe.

Informing national RC societies about climate change

Over the recent months, the Climate Centre has taken the opportunity to present itself in more depth to various Red Cross societies around the world. Delegations from the Red Cross societies of China, Vietnam, Dominican Republic and the Ukraine have recently visited the national office of the Netherlands Red Cross. The Climate Centre has used these occasions to advocate the phenomenon of climate change and impact on vulnerable populations, especially in relations to disasters. The representatives of

the Societies could all relate the indicated increase in extreme weather events and the consequent risk for disasters to their own environment, and discuss the consequences. The role of the Red Cross in the debate regarding climate change and climate adaptation or preparedness was explained and illustrated to them. The Red Cross Society of Vietnam has already integrated climate change adaptation in several of its nation-wide disaster preparedness programmes. All national societies expressed a great interest in the subject, and an intention of further exploring this field.

News items November 2004

(source www.climateark.org)

Report spells out climate change effects

(SA News, November 12, 2004) Hotter summers, a water crisis and the loss of up to half of the state's plant and animal species would be the consequences of climate change for South Australia outlined in a new report. The report, from the Premier's Round Table on Sustainability, identified climate change as the biggest single threat to the state's environmental sustainability and called for a significant reduction in greenhouse gas emissions.

<http://news.ninemsn.com.au/article.aspx?id=15267>

China in for Extreme Weather as Climate Change Felt

(Reuters, November 11, 2004) China can expect more droughts, floods and other extreme weather as it struggles to balance rapid development with environmental concerns, a report on climate change released this week said. The report, part of China's commitment to the U.N. Framework Convention on Climate Change, comes as parts of south China suffer their worst drought in 50 years, withering crops, drying up reservoirs and cuts to power supplies.

<http://www.planetark.com/dailynewsstory.cfm/newsid/28091/story.htm>

Antarctic warming killing off fish food

(Reuters, November 4, 2004) Climate change and disappearing sea ice in the Southern Ocean are causing food shortages that could threaten Antarctic whales, seals and penguins, scientists say.

The vanishing ice in the winter has resulted in an 80% drop in the number of Antarctic krill, a shrimp-like crustacean that is a major source of food for animals in the region.

<http://abc.net.au/science/news/stories/s1234914.htm>

Kyoto Too Little to Fix Warming - UN

Climate Chief (Reuters, October 26, 2004)

Although saved last week with Russian help, the Kyoto pact on global warming offers too little to arrest climate change and governments should adopt more radical solutions, the top U.N. climate expert said. "My feeling is that we will probably need to do more than most people are talking about" to combat climate change, Rajendra Pachauri, chairman of the United Nations'

Intergovernmental Panel on Climate Change (IPCC), told Reuters.

<http://www.climateark.org/articles/reader.asp?linkid=35894>

Global Warming Effects Faster Than

Feared (Reuters, October 25, 2004) Recent storms, droughts and heat waves are probably being caused by global warming, which means the effects of climate change are coming faster than anyone had feared, climate experts said.

The four hurricanes that bashed Florida and the Caribbean within a five-week period over the summer, intense storms over the western Pacific, heat waves that killed tens of thousands of Europeans last year and a continued drought across the U.S. southwest are only the beginning, the experts said. Ice is melting faster than anyone predicted in the Antarctic and Greenland, ocean currents are changing and the seas are warming, the experts said.

<http://www.climateark.org/articles/reader.asp?linkid=35832>

Links

www.ifrc.org

International Federation of Red Cross and Red Crescent Societies

www.ipcc.org

Intergovernmental Panel on Climate Change (IPCC)

www.unfccc.int

United Nations Framework Convention on
Climate Change (UNFCCC)

www.climateark.org

portal on climate change with more web links

www.wmo.ch/index-en.html

United Nations World Meteorological
Organisation based in Switzerland

[//iri.columbia.edu/](http://iri.columbia.edu/)

International Research Institute for Climate
Prediction (IRI) based in the United States

www.cpc.noaa.gov

Climate Prediction Centre of the United
States government (information on El Niño)

Contact us

At climatecentre@redcross.nl or at

Red Cross/Red Crescent Centre on Climate
Change and Disaster Preparedness

Netherlands Red Cross

PO Box 28120

2502 KC The Hague

Netherlands

Phone: +31 (0)70 4455666

Fax: +31 (0)70 4455712

www.climatecentre.org