

# ARE YOU ON THE FRONTLINES OF CLIMATE CHANGE?

The Frontlines Forum seeks community-based experiences with climate change: impacts, opportunities and adaptation strategies. It provides a platform for sharing observations, concerns and innovations. We invite contributions from indigenous or rural communities in small islands, high altitudes, the Arctic, desert margins and other vulnerable environments. *Listen to what some people on the frontlines are saying:*

In the spring we used to hunt walrus and bowhead whale along leads in the ice, **said Merlin Koonooka**, from Gambell, **Alaska** (at a Convention on Biological Diversity meeting on Climate Change in Helsinki, Finland, 26 March 2008). But the ice we have now is of a different behaviour. It tends to move in one big mass compressed together near the shore. This is 'warm water ice': it is not a good solid freeze. **This is bad ice**. Game does not like to stay on this ice. It also interferes with hunting because it is difficult and dangerous to get across it to get to the open water. It also breaks up very easily; storms just break it up. The larger floes (floating ice islands) that crack open in the middle forming large leads of open water ideal for whaling and other hunting do not occur much with this kind of ice anymore. **Changing Climate – Shifting Seasons**. I am very concerned about climate change, since I live on a small island in the middle of the Indian Ocean called Praslin, **reports Michael Jean-Louis** of the **Seychelles**. With the current climate change, what we have suffered from the most is the El Nino phenomenon. It has **destroyed a large percentage of reef structures** due to coral bleaching, which in turn affects tourism and the fish population. The reef structure acts as a barrier whereby waves crash on it and dissipate most of their energy. After the great El Nino of 1998, this coral barrier has been structurally weakened and in some instances has collapsed. The barrier is lower and less effective at wave breaking. So now more water with more energy is coming into the lagoon and this is creating, to a certain degree, coastal erosion. **Climate change has had adverse affects on water availability in parts of India**, **notes S.K. Sharma**. Famed as the world's wettest point because of its abundant rainfall, Cheerapunji remained **unusually dry** during 2006. The glaciers in Ladakh, which account for 13% of Kashmir's land area, are now fast receding. The impacts of these changes, including on agriculture, are already visible in India. During the last few decades, the hurricane season has become more extreme, **writes Solangel Gonzalez** from the **Dominican Republic (Caribbean)**. Last year, the Dominican Republic was struck by two tropical storms during October and November, with precipitation in some parts of the country

exceeding regular monthly levels by as much as 300%. The storm Olga happened **out of season** - during December. Precipitation patterns are changing. During a normal year, the highest rainfall occurs in May, but this year May was dry. **The rains that once fell between March and September have now been reduced to only thrice or four times a year, writes Nataan Lomorukai from Western**

**Kenya.** Subject to drought and famine for the last two decades, the vast and arid Turkana District - once a savannah - is now a no-go zone. The water table is sinking and pastoralists have to trek up to 70 kms in search of water. Climate change is worsening problems already created by human activity. Irrigation and hydropower schemes have reduced the flows of the Omo and Turkwell rivers and contributed to the decline of Lake Turkana. This has resulted in the dying of indigenous trees and plants along the river where the Turkana people live. Even tree pods which enabled the livestock to live are no more. Animals are dying from the **severe drought**. Furthermore, the famous Ferguson Gulf in Lake Turkana - once a breeding ground for tilapia fish - has disappeared. The fisherfolk in the area now have nothing to eat. The area once occupied by the Gulf has been invaded by foreign plants called acacia prosopis. When local donkeys eat them, they become toothless after some months and die. Inhabitants have opted to move to urban areas to work as labourers, while others have resorted to making charcoal from the dying trees to supply refugee camps in Kakuma and urban areas. Turkanas are now dependant on emergency relief aid from the international community through the World Food Programme as a result of this catastrophe. **Early Flowers, new fish – late berries, few**

**whales.** This year our berries and fish are later than usual - at least one month behind the time when they usually are ready to eat, **writes Kii'iljuus from the Queen Charlotte Islands in Canada** (North America). The coastline has **suffered erosion** along the eastern shores of our islands. This year the herring and whales did not show up in our inlet as they usually do. A few gray whales came into the inlet but left shortly after - in the past we could count on enjoying their visit for anywhere up to a couple of months. Referring to the contribution from the Dominican Republic in the previous posting to the Forum, **Basil Fernandez from Jamaica** (Caribbean) cautions: We must be careful not to take cyclic weather patterns as climate change. Between 2001 and 2007 the Caribbean has been having above average rainfall with increased groundwater storage and stream flow. This is a cyclic pattern observed for over 100 years. If you speak to the older farmers in the country they will tell you that every 5 to 7 years the springs 'burst out'. The emergence of these springs can be correlated to the above rainfall periods. In 2008 we may be starting another dry season cycle. The analysis of rainfall for the past 100 years indicates that Jamaica has been experiencing below average rainfall and since 1970 we are now above the 100 year average. One dry season and two storms is **insufficient evidence** to state that **this is a result of climate change**. While climate change is occurring, I do not think that the data exist in the Caribbean to emphatically state that climate change is the cause of our storms and dry season. The mean annual air temperature in our island has been increasing steadily over the past 50 years, with every one of the past 16 years being warmer than the average of the past 30 years, **writes Andrew Casebow from the Belliwick of Guernsey**, an island in the English Channel (Europe). This has resulted in very marked changes in the flowering dates of Guernsey's spring flowering wild flowers and changes in the behaviour of migrating birds. Many birds are nesting more than a week earlier and **birds that used to be rare are thriving**. For instance, the White Egret was a very rare visitor until recently but we now have two colonies of 54 birds which bred here for the first time in 2004. The sea is warming and surface temperatures are more than 1 degree Centigrade higher than they were 20 years ago. Plankton in the sea is moving northwards and with it sand eels and other species such as spider crabs. We are benefitting from a large increase in the abundance of some fish - sea bass and black bream

- that are coming to our shores, whilst **other species are in decline**. Guernsey is famous for its Ormers (European Abalone - *Haliotis tuberculata*) as the island is at the northern end of their range, but they have now reached Alderney, an island some 23 miles (43 km) to the north of Guernsey and they are being successfully farmed off the coast of Cornwall in the UK, some 60 miles (110 km) to the north. Sea levels are also rising. On 10th March 2008 exceptionally low air pressure caused a much higher spring tide than had been forecast. This caused flooding on the sea front in St Peter Port and the tide overwhelmed sea defences and damaged large sections of sea wall in the west of the island. This is a foretaste of what climate change could bring as a normal occurrence in 50 years time. **Weathering**

**Winds of Change**. The situation is really now quite alarming for the pastoralist community,

especially where I come from, **explains Jane Naini Meriwas**, a Yaaku from **Kenya (Africa)**.

Traditionally, we say that in this season it is rain, in this other season it is dry. So the community makes plans. As my community is nomadic, we move with the livestock. If it will be a very long dry spell, then we use a traditional set-up where we select places where animals can graze, and other places that we will protect. And then other times, we will move. So when it is dry, people migrate. However, if you cross from your own district to this other district, there are already people there. We border with the Samburu, Borana and Bantu. The people here do agriculture. Also we border with other settlers. The lands that are actually left to graze have become really limited. In 2000, we really experienced a lot of drought. For a whole year there was no rain. It was terrible. **The drought forced the community to migrate**. It was so alarming that the government had to open the very big Park Mount Kenya where they gave the pastoralists permission to take their animals. But to move to Mount Kenya, you have to walk 100 km along a fenced road. The animals are weak and because it's fenced, they don't have water or grass. So thousands of animals died along the road. You can find many carcasses when you go to Mount Kenya. Since 2001 the rain pattern has now changed completely. When the rain pattern changes, there is no way to prepare the community. In my own part of the country, the winters are clearly not as cold as they

used to be. Nor is there as much snow, **reports Doug Kiel**, an Oneida Indian from Wisconsin, **USA (North America)**. Wisconsin's 15,000 lakes are a tremendously important natural resource and we usually fish them year-round, even after they freeze over in the winter. But the winters are getting warmer, and in recent years this has not always been possible. When I was a child, the lakes froze over in December and did not thaw until nearly April. Now, **the lakes do not freeze** until much later into the winter - if at all - and the ice is often dangerously thin. And now when the lakes do freeze, they don't stay frozen. The water is getting warmer during the summer months as well, and this threatens the walleye and trout, two of our most important cold-water fish species. **Before the fifties, we used to**

depend on the knowledge of our old folks, **observes Iteli Tiatia** from **Samoa (South Pacific)**.

These old people know what wind is blowing just by feeling the wind or looking up at the tree tops. They have names for winds from any direction, like the TO'ELAU, LA'I, LA'ILUA, TUA'OLOA and many others. But **wind patterns have dramatically changed**, the direction but also the timing. For example, the old folks know in which months hurricanes are possible: Late January, February and March were the worst months; November and December used to be the best. But Hurricane Valerie, one of the most destructive in Samoa, was in December 1991. Moreover, in the past, a hurricane used to come in one direction and eventually fade out once you hear strong lightning and loud thunder. That's when these old folks would say in Samoan "Ua taliligia le matagi - the hurricane is being shaken". However for Hurricane Valerie in 1991, it did not end till it covered the four directions and it did not end despite strong lightning and heavy thunder while at its most destructive power.

# FRONTLINES FORUM: WHAT'S IT ALL ABOUT?

Many small island, rural and indigenous communities are already facing the first impacts of climate change. Their high vulnerability relates to their reliance upon resource-based livelihoods and the locations and configurations of their lands and territories.

Ironically, despite broad recognition that small island, Arctic, high altitude and other vulnerable communities are on the frontlines of climate change, their voices have remained largely on the sidelines of climate change debates. Indeed, this exclusion has generated discord and protests by indigenous peoples and community representatives at recent international conferences and meetings on climate change.

In response to this outcry, the grassroots Internet forum On the Frontlines of Climate Change was launched by UNESCO, in partnership with the Secretariat of the Convention on Biological Diversity (SCBD), the Secretariat of the UN Permanent Forum on Indigenous Issue (SPFII) and the Office of the High Commissioner on Human Rights (OHCHR).

The goals of the Frontlines forum are to:

- Draw international attention to the knowledge and experiences of indigenous communities and peoples living in small islands, the Arctic and other vulnerable environments;
- Seek community-level observations on climate change impacts, as well as local efforts to cope with and adapt to these changes;
- Provide an opportunity for communities to voice their observations, experiences and concerns, and to share and exchange them with other communities;
- Build up a global database of local observations, experiences, practices and coping strategies;
- Support community-based research and educational activities related to climate change;
- Heighten the profile and impact of indigenous peoples and their knowledge in international climate change debates.

## Join the forum

email: [peoples@climatefrontlines.org](mailto:peoples@climatefrontlines.org)

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