




An online forum  
to strengthen  
the voices of  
vulnerable  
communities in global  
climate change debates

# climate frontlines

[www.climatefrontlines.org](http://www.climatefrontlines.org)





**Local and indigenous communities have been largely sidelined from climate change debates...**

Many small island, rural and indigenous peoples' communities are on the frontlines of climate change. Arctic, high altitude, desert margin and small island communities suffer early impacts due to the particular vulnerability of their territories and their reliance upon resource-based livelihoods.

These communities have first-hand knowledge of climate change impacts and strategies for response, due to their long-term observation and engagement with their environments.

Despite broad recognition of their vulnerability, and unique knowledge and experiences, their voices have been largely unheard.

*Climate Frontlines* aims to bring the knowledge and concerns of vulnerable communities into global climate change debates.

**... yet they have first-hand knowledge of climate change impacts and strategies for adaptation.**

## Goals

- Build up a global network of community-level observations, experiences, practices and coping strategies related to climate change;
- Provide an opportunity for communities to share and exchange their experiences with other communities;
- Support community-based projects and activities related to climate change;
- Reinforce international awareness of the knowledge and concerns of small island, rural and indigenous peoples and promote their inclusion in climate change debates.

*Climate Frontlines* is a global online forum for community-based experiences with climate change. It provides a platform for sharing observations, concerns and adaptation strategies. It is also building a network of field projects.

## About *Climate Frontlines*

- *Climate Frontlines* is a global community that reaches out to over 46,000 people.
- The online forum facilitates discussions around key themes and the sharing of knowledge and experiences among communities.
- The forum operates in English, French and Spanish.
- *Climate Frontlines* supports a network of community-level projects and activities across the globe.

**Join the forum, email us: [peoples@climatefrontlines.org](mailto:peoples@climatefrontlines.org)**  
**See the discussions: [www.climatefrontlines.org](http://www.climatefrontlines.org)**

What are people on the frontlines saying?

# early impacts and adaptation

“ The situation is really now quite alarming for the pastoralist community, especially where I come from. 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

**the drought forced the  
community to migrate...  
thousands of our animals died**

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 large park at 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 our 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. ”

Jane Naini Meriwas, a Yaaku from Kenya

“ The village of Shishmaref is located on Sarichef Island, a barrier island in the Chukchi Sea. In the past, sea ice would form in the fall, creating a blockade of ice along the shore which acted as a protective barrier against sea storms. This protective sea ice, which used to be in place by October or November, no longer forms solidly. Its absence allows powerful waves to undercut the banks that are already weakened by an increased melting of permafrost.

In 1997, a severe storm eroded some 45 metres of the north shore, forcing the relocation of fourteen homes. Five additional homes were relocated in 2002. The teacher housing, sewage lagoon, roads, water supply, laundromat, community store, and fuel tanks are at risk of damage or loss. In July 2002, residents voted to relocate the community. Yet some people say they will never leave Sarichef Island. But how will they fare, as no services will be available once everyone relocates? ”

Sharon McClintock, an Inupiat Eskimo from Alaska, USA


protective sea ice no longer forms solidly. Its absence allows powerful waves to undercut the banks

“ One of the ingredients that made our forefathers more resilient to disasters was the fact that they were prepared. If you look at traditional houses in Pacific islands today, which no longer exist in many communities, you will notice that they were built with local materials and in some instances were specifically built so as not to withstand disasters. Why? This is so that houses could easily

the poles of traditional houses were collapsed before a cyclone, and reinstalled after the cyclone

be rebuilt after the disaster. In some communities, the poles of traditional houses were collapsed before a cyclone, and reinstalled after the cyclone. With regard to food, when planting food crops, there was always a patch reserved for emergencies. We still hear the words ‘hurricane food’ which are foods cooked and prepared in a certain way that makes them last longer. These foods were to sustain a family or community after a disaster. ”

Dawn Tuiloma-Palesoo from Fiji Islands



What are people on the frontlines saying?

# threats to food security

“ Before the sea level finally surpasses the ground level or shorelines of the atolls, the people must leave behind their home country in search of a completely new home. The grave concern is the shrinking of the freshwater table underneath the islands that supports all life forms. As the sea level rises, the salt water is expanding inland under the islands thereby shrinking the supply of freshwater. As the brackish water extends and freshwater shrinks, edible crops that have been the source of life for these people will die out thereby making these islands uninhabitable. This process happens before one actually sees the waves - whether small or big - pour over the islands, and before they are declared to be inundated and before their inhabitants are declared the first victims of sea level rise. ”

as the brackish  
water extends  
and freshwater  
shrinks, edible  
crops will die out

Faustino Yarofaisug from **the Federated States**  
of Micronesia

“ We are experiencing a dangerous rise in sediments along the river. We suspect that this is due to climate change, because no logging is taking place in the water catchment area, and some pig hunters have seen erosion and mud slides in some sections of the forest, in particular along the streams that feed the big river. This is affecting over 500 people from five villages. Four of these communities are located along the upper banks of the river. For the past five years, they can no longer fish beside their village or along the river as sediment has covered the fishing spots. Now they have to walk five kilometres to the sea to fish and that means leaving home in the morning and returning at dusk. The rise in sediment has also pushed gravel materials into a section of my village’s mangrove swamp. Now we are not able to harvest crabs as our fingers get hurt and bruised. ”

Isao Koroiwaqa from **Suva, Fiji Islands**

**we are not able to harvest crabs as our fingers get hurt and bruised**

“ The rains that once fell between March and September have now been reduced to only three or four times a year. 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 hydro-power schemes have reduced the flows of the Omo and Turkwell rivers and contrib-

**animals are dying from the severe drought**

uted 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. ”

Nataan Lomorukai from western **Kenya**

“ In the spring we used to hunt walrus and bowhead whale along leads in the ice, 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. ”

Merlin Koonooka from the native village of **Gambell, Alaska, USA**


**we used to hunt walrus and bowhead whale... but the ice we have now is of a different behaviour**



The continued melting of glaciers from Rwenzori Mountain due to high temperatures is causing the river to carry more water downstream as it dries up. During the morning, one can hardly see water in the river. In the middle of the hot day when the ice has melted, the water comes in large quantities with the potential to sweep away bridges and crops and even flood people's houses downstream.

when the snow  
disappears  
completely,  
the people will  
disappear as well

Current climatic changes and the behaviour of the river are believed to be controlled by gods who live in the mountain. When the gods become unhappy they release a lot of water to punish the community for its wrong-doing. For Kule Musinguzi, a resident of Kasese, the snow on top of Rwenzori Mountain is key to the survival of his tribesmen. Their name 'Abanyarwenzururu' means 'people from the land of snow'. Musinguzi and his tribesmen worry about the melting glaciers that supply River Nyamwamba. In

their view, when the snow disappears completely the people will disappear as well. 

Twebaze Paul from **Uganda**

What are people on the frontlines saying?

rituals and  
spiritual  
responses



“ In 2008, unusually heavy rain fell during the period needed to dry the land before burning. New weeds grew quickly over the farms, making it impossible to burn and threatened to ruin the year’s harvest. In response, a Bidayuh-Krokong village held *Gawae Pinganga*, an almost-forgotten ritual to ask the ‘*Pinyanga*’, the village’s spirit guardians, for a dry season. The last time such assistance had been asked of ‘*Pinyanga*’ was during World War II and the elders were uncertain as to the exact composition of the offering.

## a bidayuh-krokong village held an almost-forgotten ritual to ask for a dry season

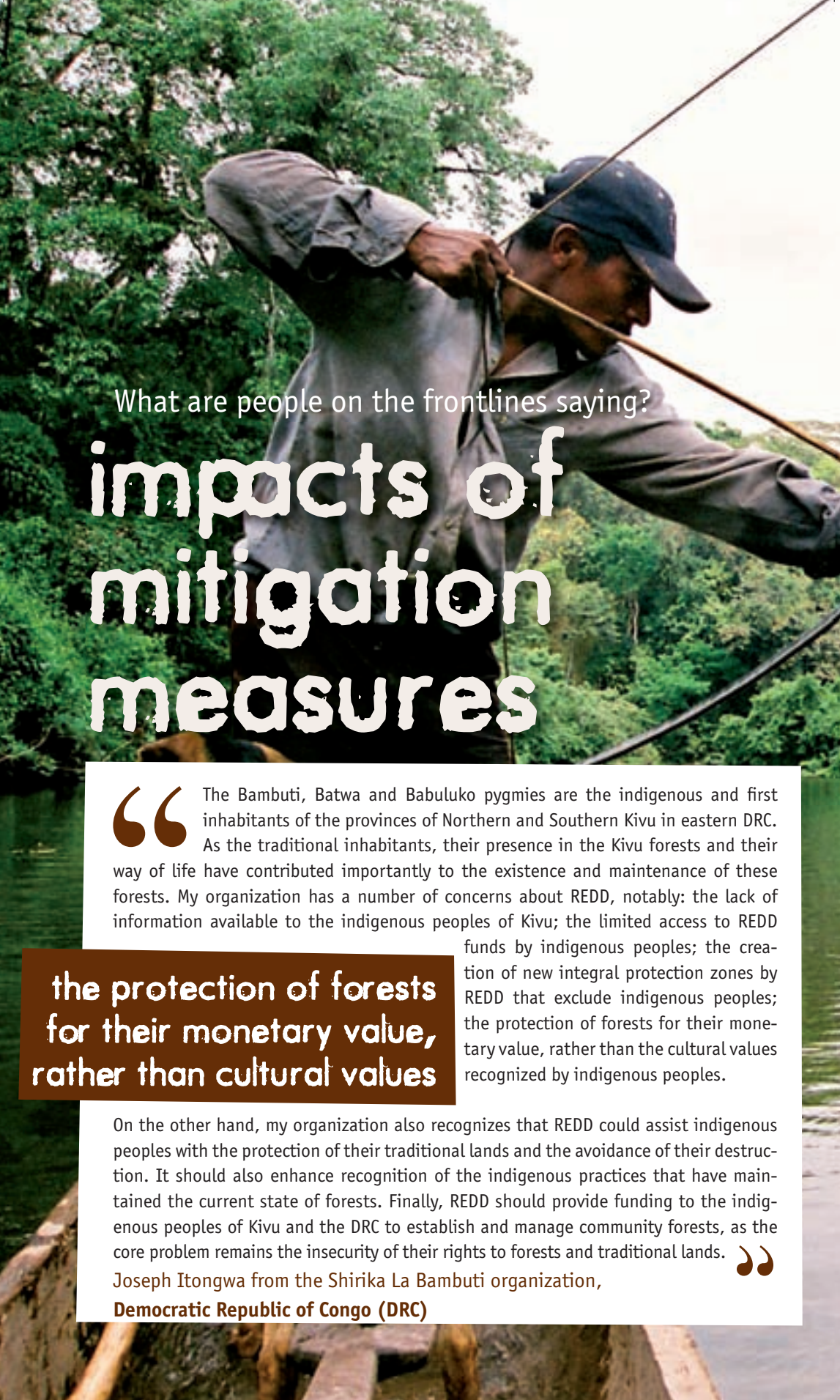
in a flash and told us exactly what the altar and offerings should look like. The ceremony was then held. After the Head Shaman finished, we sat and waited for the response. Within a minute, there was a sound from the east like an old man crying. It was a bird circling the small altar and then above the main altar three times. It is supposed to be a night bird but now it was in broad daylight. It was simply amazing!!! The omen is interpreted as saying ‘We thought that you have forgotten us... but now you come... we are happy. How nice for you to come.’ The rains stopped for seven days within the week after the ceremony. ”

Patau Rubis, a Bidayuh from **Sarawak, Malaysia**

“ In the past the Nyando River basin experienced long rains from March to June with very short rain spells in November. This trend has been rather irregular in recent years with floods occurring in August instead of April. Dry periods have increased in length and farm harvests are dwindling. The Wakesi community traditionally offers sacrifices to the gods for rain. As they associate trees with rains, these offerings are made under trees. The Baobab is one tree under which offerings are often made. During the development of a recent participatory action plan carried out by the Uhai Lake Forum in collaboration with the African Center for Technology Studies, the community revealed that they are increasingly offering sacrifices to the gods for rain. It appears climate change is catalysing these practices. ”

Dan Ong’or, of the Uhai Lake Forum, **Kenya**

they are increasingly offering sacrifices to the gods for rain



What are people on the frontlines saying?

# impacts of mitigation measures

“

The Bambuti, Batwa and Babuluko pygmies are the indigenous and first inhabitants of the provinces of Northern and Southern Kivu in eastern DRC. As the traditional inhabitants, their presence in the Kivu forests and their way of life have contributed importantly to the existence and maintenance of these forests. My organization has a number of concerns about REDD, notably: the lack of information available to the indigenous peoples of Kivu; the limited access to REDD

funds by indigenous peoples; the creation of new integral protection zones by REDD that exclude indigenous peoples; the protection of forests for their monetary value, rather than the cultural values recognized by indigenous peoples.

**the protection of forests for their monetary value, rather than cultural values**

On the other hand, my organization also recognizes that REDD could assist indigenous peoples with the protection of their traditional lands and the avoidance of their destruction. It should also enhance recognition of the indigenous practices that have maintained the current state of forests. Finally, REDD should provide funding to the indigenous peoples of Kivu and the DRC to establish and manage community forests, as the core problem remains the insecurity of their rights to forests and traditional lands. ”

Joseph Itongwa from the Shirika La Bambuti organization,  
**Democratic Republic of Congo (DRC)**

“ REDD is a topic that is confusing many of our people. The government is not following the right avenues to educate and implement REDD processes in our country. It was not at all surprising to me to discover that the PNG Government's Readiness Plan Idea Note (R-PIN), a submission for REDD funding to the World Bank's Forest Carbon Partnership Facility (FCPF), had been written without consulting PNG landowners, even though they own 97% of PNG's rainforests. Despite this, PNG's proposal has already been approved by the World Bank, thus undermining the Bank's claim that all plans for the FCPF would be subject to wide consultation. PNG is not the only country that has fast-tracked the application of its R-PIN at the expense of NGO and indigenous landowner participation, simply so that it can qualify for the 'Readiness Fund' - one of the FCPF's new financial mechanisms. ”

Tavurvur from **Papua New Guinea (PNG)**

**fast-tracked at the expense  
of ngo and indigenous  
landowner participation**

“ My people still live mostly in the traditional way: from the river, fishing and hunting, and from the natural resources, plants and trees. When organizations come with funding to supposedly help us to protect our resources, we always say that it is a plan to get us out of our territory, as these projects are always implemented with concepts and models that are totally external to our worldview. From such projects, people living in the communities would become accustomed

**as long as traditional  
knowledge is not  
taken into account, all  
these efforts will fail**

to a new way of life, and tomorrow they will forget what their own people have done for many thousands of years. When the policies of the big institutions such as the World Bank and others make plans with our resources, but only taking them into account as carbon sequestration, an external concept to indigenous languages,

the indigenous communities are forced to change their own vision of their resources. So I do not know if REDD will fulfil our expectations or not, but I am able to say that, as long as traditional knowledge is not taken into account, all these efforts will fail. ”

Alí García Segura, a Bribri from **Costa Rica**

# climate frontlines

an online global forum for  
indigenous peoples, small islands  
and vulnerable communities

Join the forum, email us: [peoples@climatefrontlines.org](mailto:peoples@climatefrontlines.org)

See the discussions: [www.climatefrontlines.org](http://www.climatefrontlines.org)

*Climate Frontlines* is run by UNESCO

In partnership with:

Secretariat of the Convention on Biological Diversity (SCBD)

Secretariat of the UN Permanent Forum on Indigenous Issues (SPFII)

Office of the High Commissioner on Human Rights (OHCHR)

Financial support for the further development of *Climate Frontlines* is provided by the Government of Denmark.

Published in 2009 by the United Nations Educational, Scientific and Cultural Organization (UNESCO).  
UNESCO, 7 Place de Fontenoy, 73752 Paris 07 SP, France

The designations employed and the presentation of material throughout this publication do not imply the expression of any opinion whatsoever on the part of UNESCO concerning the legal status of any country, territory, city or area or its authorities, or concerning the delineation of its frontiers or boundaries. The authors are responsible for the choice and the presentation of the facts contained in this text and for the opinions expressed therein, which are not necessarily those of UNESCO and do not commit the Organization.

© UNESCO 2009  
SC-2009/WS/38

**Art and design:** Stéphane Rébillon

**Images:** Peter Bates, Claudia Benavides, Paule Gros, Edvard Hviding, Douglas Nakashima and Menuka Scetbon-Didi

**For further information, please contact:**

Douglas Nakashima,

Chief, Small Islands and Indigenous Knowledge Section

UNESCO – 1, rue Miollis, 75732 Paris Cedex 15, France

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

Printed using soya-based ink on recycled paper.



United Nations  
Educational, Scientific and  
Cultural Organization

MINISTRY OF FOREIGN  
AFFAIRS OF DENMARK

