

Mayan village in Mexico impacted by climate change

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A farmer shows journalists how to grow corn in the Mayan community of Tabi, in the Yucatan peninsula, Mexico, Friday, Dec. 3, 2010. According to the UN weather agency, 2010 is "almost certain" to rank among the three hottest years on record, and the 2001-2010 decade is undoubtedly the warmest period since the beginning of weather records in 1850. (AP Photo/Eduardo Verdugo)

(AP) -- The first time Araceli Bastida Be heard the phrase "climate change" was on TV two years ago. Then she began to understand why strange things had been happening in her village.

Tabi was in its second year of drought, and the corn that sustains the village was left stunted on the stalks. Farmers couldn't bear the midday heat anymore, and were in their fields at dawn in order to finish before noon.

After a half-mile (1-kilometer) walk from school, Bastida Be's son would return home with headaches. Summer nights were too hot to sleep until after midnight. And winters were so cold the villagers had to buy blankets.

A year earlier, Hurricane Dean reached deep into Mexico's rain forest, destroying Tabi's beehives and blowing down several thatched-roof homes.

"We don't know what's going on. All we know is that something has changed," says Bastida Be, 31, who tends her own [corn crop](#) while her husband is away working in construction jobs on the coast.

In Cancun, a resort 155 miles (250 kilometers) to the north, world governments are grappling with Tabi's problems. A 193-nation [climate conference](#) is debating measures to restrain emissions of carbon and other gases that are causing the Earth's temperatures to rise. They also are discussing how to help people like Tabi's 400 residents adjust their lives to new conditions.

But the subsistence farmers of Tabi can't wait. Their traditional haphazard practices, rooted in 2,500 years of Mayan culture, can no longer produce enough to feed them.

The rainfall at the start of planting season, which once could be predicted almost to the day, is now unreliable. If the rain doesn't come within four days of planting, the farmers have to start all over, as they did last year, losing an entire season's worth of seed.

The [hot weather](#) has reduced yield by 50 to 60 percent over the past 15 years, according to Mexico's department of rural development, culminating in 2009 with the worst drought in 60 years.

Scientists say average global temperatures have been rising markedly, with each of the past three decades hotter than the previous. The villagers say they began to notice about 10 years ago that days were warmer and trees were not flowering as they used to.

This year, in a further sign of the erratic conditions, the spring rains returned to Tabi in a deluge: nearly 14 inches (350 millimeters) in the planting month of May, about 10 times more than last year.

At the same time, the Mexican government, concerned about deforestation, has tightened regulations on harvesting wood from virgin [rain forest](#), even though the villagers say they are already carefully managing the forest.

Normally, the villagers clear a field with a slash-and-burn method. They work a plot of a few dozen square yards (square meters) for two years until the soil grows tired, then move on, leaving the ground fallow for at least eight years to recover. As with most Mayan villages, the land belongs to everyone, and each family can have as much as it is willing to clear and farm.

"Thirty years ago my grandfather worked two hectares (5 acres). Now we need five for the same amount of food. That's how we measure the difference," Candelario De Pat, 64, told a small group of visiting reporters in a field with stalks reaching 12 feet (4 meters) high.

Four years ago Victoria Santos, of the nonprofit Organization of Mayan Forest Producers, began visiting Tabi and other villages to spread the news that the weather won't improve. Global warming will only worsen, she tells them, and they need to modernize their farming.

She showed them how to clear their fields of stones, uproot tree stumps and roots, dig furrows and plant in rows to trap and conserve water, and

to plant the most drought-resistant varieties. Today, side-by-side fields using the new and old methods show that even such basic methods produce a dramatic difference.

Tabi has made a small but significant move in what climate specialists call "adaptation," adjusting their lives to the changing conditions of a warming world.

"They've chosen to make changes and do things differently, and that's what's needed to confront the challenge of climate change," said Antonio Hill of the Oxfam charity group, which organized the trip to Tabi.

"Adaptation is about simple measures to handle the changes that are happening now and what's coming down the line."

During two decades of talks, climate negotiators have focused on how to stop carbon emissions from growing and feeding into the planet's warming cycle. Increasingly, though, more attention is being paid to adapting to changes that already have become evident.

Last year, industrial countries pledged \$30 billion in emergency funds through 2012 to help poor countries prepare for [climate change](#), and promised to raise \$100 billion a year starting in 2020. Developing countries say at least half of those funds should go to adaptation measures, and the other half toward helping their economies shift to low-carbon growth.

The people of Tabi are cash poor, but not impoverished. Their village, immaculately clean, has an elementary school, a cement basketball-volleyball court and a gazebo where public events are held. Their homes are simple, and most have gardens of vegetables, legumes and fruit trees with chickens running free. But the villagers' staple is corn. Tortillas are served at every meal. Without it, they are hungry.

They want more improvements to secure their crop. They soon will begin fertilizing with chicken manure and compost. But they say they need financing to dig wells or harvest rainwater for irrigation. So far, the government has ignored appeals for help, they say.

"The government doesn't support us," said villager Gerardo Bastida Tolentina. "It doesn't pay attention to the rural areas."

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