

The Taming of a Killer Lake

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Science in action



(footage 2013)

How french scientists prevent the deadly explosion of Lake Nyos in Cameroon with the help of simple pipes and a salad bowl - and finally achieve their goal after more than 20 years of hard work in the african wilderness.

On the morning of august 22, 1986 a fountain of water and foam rises to a height of more than 100 meters above the surface of Lake Nyos. The blast isn't triggered by a volcanic eruption, it is caused by a sudden burst of carbon dioxide. The gas originates from volcanic activity below the lake seeping through the fractured rocks and accumulating over the years in the waters of the lake. An enormous cloud of asphyxiating gas is released in some seconds and kills more than 1700 people up to 26 km away from the lake.

Right after this catastrophe french scientist Michael Halbwachs from the University of Savoy tries to figure out a way to safely release the gas before disaster strikes again. The volcanic activity below the lake refills the lake in dangerous carbon dioxide, making a new explosion of Lake Nyos likely every 30 years.

His idea for degassing the lake is startlingly simple: pipes mounted on floating platforms would draw up water from the ground. As water pressure lowers near the surface the water would liberate bubbles of carbon dioxide and the water-gas mixture then exits the pipes in a fountain about 30 meters high. The effect is similar to rapidly uncapping an agitated bottle of Champaign.

It took more than 20 years to put this simple idea into practice. Since the beginning the expeditions of the scientists and engineers were filmed by professional cameramen. The more than 100 hours of well-filmed footage is exceptional archive material showing the french-cameroon team living and working in the african wilderness. In footage still to film the participants of the expeditions will comment which problems they had to overcome devising their low-tech solutions with the help of the local people, constantly short of money and learning from every failure.

They recall their feelings when they first learn about old african myths of lakes bringing death and destruction and speak of their own fear of destabilizing the fragile gas equilibrium of the lake. They recall how they constantly lived with the fear of triggering an explosion and how a salad bowl was their ingeniously conceived safety mechanism. It's a story packed with adventure and human touch showing a real problem and its real solution achieved through ingenuity and perseverance.



(footage 1995)

Michel Halbwachs and army officers prepare the evacuation of the lake area for the first big scale degassing experiment in 1995.



(footage 2011)

The working pipes can finally start degassing Lake Nyos

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Trailer and more videos and informations on the non-public page:

<http://www.ingoknopf.eu/nyos>