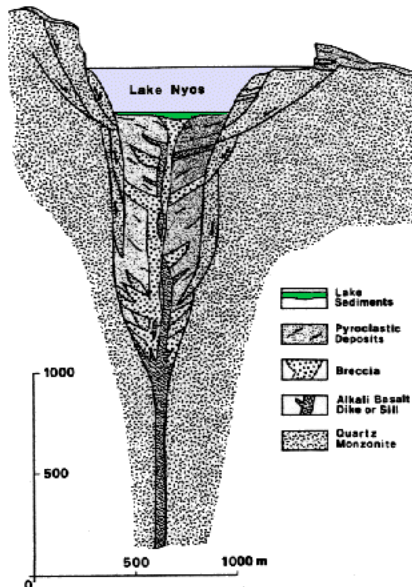


## Remembering Lake Nyos

As, apparently, we Victorians move towards the storage of CO<sub>2</sub> in unused wells and aquifers, it would be opportune to recollect some of the facts surrounding the CO<sub>2</sub> blowout at Lake Nyos in Western Cameroon on 21 August 1986.

That evening, villagers heard a strange and loud rumbling they had never heard before, but only on the following morning was the disaster associated with the noise revealed. As a Dutch priest who was one of the first to reach the area reported it, more than 1,700 people and their animals lay dead, some in bed, some in their huts, others on the tracks where they had been walking. Only 10% of the villagers from the 3 villages involved survived, shocked and suffering burning pains in the chest.

Upon scientific investigation the disaster was found to have been caused when approximately 2 million tonnes of CO<sub>2</sub> lying at the bottom of the lake and impregnating the water, was somehow released and rose to the surface at an estimated speed of 320 kilometres per hour. This exodus resulted in a massive fountain of water and gas that spread out from the lake asphyxiating almost all living things within a radius of 25 kilometres.



The 'pocket' of CO<sub>2</sub> at the bottom of Lake Nyos was, of course, a natural phenomenon, probably the accumulation of leaking CO<sub>2</sub> from an underground volcano. Many such natural pockets occur worldwide not least in Western Cameroon where a similar occurrence killed 37 people at Lake Monoun on 15 August 1984.



In Victoria, the plan is to bury about 60 million tonnes of CO<sub>2</sub> each year in underground wells and aquifers at pressure and to leave the liquid gas there for hundreds of years in the hope it will eventually permeate into the surrounding rock. By this means it is theoretically possible for us to continue using brown coal for the production of electricity although, at a vastly increased cost. The cost increase will be caused by the fact that burying CO<sub>2</sub> underground is a very expensive process. Whether the cost involved will justify the geosequestration of CO<sub>2</sub> is something we have yet to discover and in any event geosequestration of this order is some way off as yet.

The lesson to be learned from Lake Nyos, however, is that 2 million tonnes of CO<sub>2</sub> erupting from underground can spread a long way and kill a lot of people in the process. In doing so, it will move at a surprisingly rapid pace. Unlike other gases, it will return to earth and until finally dispersed, congregate at lower levels. This is the exact opposite of what occurred in the Longford disaster where the LNG involved, being lighter than air, rose quickly without further endangering people in the vicinity.

Because of the dangers involved, the plans to geosequester Victoria's CO<sub>2</sub> need to be discussed openly and very soon.

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