Fig. 1. CO_2 overtime at Lakes Monoun (a) and Nyos (b).

Lakes Nyos and Monoun -Past, Present & Future-

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Sudden gas release from crater lakes, called "limnic eruption", took place at Lakes Nyos and Monoun (Cameroon) in mid-1980s, which claimed ~1800 lives. Before the catastrophes, magmatic CO_2 must have accumulated steadily in deep water of these lakes. Gas input to the lakes was found to continue even after the catastrophes, indicating the possibility of similar events in the future if no preventive measures (e.g. artificial degassing) were taken. Figures 1a and 1b show the change in the CO_2 content of the lakes over the last 30 years during the pre- and syn-degassing. Artificial degassing was effective, but the gas accumulation resumed at Lake Monoun after 2010 when P_{CO2} of deep water became too low to sustain degassing. A similar situation is foreseen at Lake Nyos in 5~6 years from now. Continuous monitoring of the lakes is indispensable.