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## Social Risk Management of Vulnerable Livelihoods — The Example of Surviving Households of the Lake Nyos Natural Disaster in Cameroon

BALGAH ROLAND AZIBO, GERTRUD BUCHENRIEDER

*Leibniz Institute of Agricultural Development in Central and Eastern Europe (IAMO), Agricultural Development Theory and Policy, Germany*

### Abstract

The globe witnessed an escalation of natural disasters in the later part of the 20<sup>th</sup> century and the early 21<sup>st</sup> century with the period between 1990 and 2005 alone accounting for more than half of the total recorded natural disasters, leaving behind strong negative impacts especially in developing countries. Cameroon's geological setting and tectonic history makes her one of the worst countries affected by rapid onset natural disasters in Africa.

A natural gas explosion from Lake Nyos in the northwest of Cameroon in 1986, killed over 1,700 inhabitants and almost all livestock in a diameter of over 25 kilometers around the lake. Investigations on lake Nyos after the disaster discovered huge amounts of carbon dioxide (300 million cubic meters) that is being added in such a rate that saturation could be reached within years in the deeper layers of the lake. Since it is impossible to guarantee the perennial stability of the lake, survivors were resettled in seven camps and the Government of Cameroon, with foreign partners, embarked on a degassing project in 2001. Scientific evidence on Lake Nyos concludes that another disaster is possible within the next five to ten years. This would inflict severe damage on the livelihoods of an estimated population of over 10,000 in the villages around Lake Nyos and in neighbouring Nigeria.

This research aims at (1) analysing the livelihoods of households around Lake Nyos, (2) assessing social risk management strategies and vulnerability to natural disasters, and (3) understanding and making policy recommendations on the role of social networks as one possible social risk management instrument.

A standardised questionnaire will be used to randomly collect cross sectional data for 400 households from five camps and three villages, supplemented with qualitative methods. Data will be compared with a matching sample of 150 households. The Principal Component Analysis will be used to analyse household poverty and vulnerability indices, while network analysis will facilitate a quantification of social networks and possible implications in a comprehensive social risk management strategy. This will contribute scientific knowledge on social risk management of disasters and valuable instruments for policy implementation

**Keywords:** Cameroon, risk, natural disaster, poverty, vulnerability