

# swissuniversities

## SUDAC Programme

### swissuniversities

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## COFER SAS4D: Science Action in Schools for Sustainable Development

### Summary

The COFER “Science Action in Schools for Sustainable Development (SAS4SD)” brings together expertise from PH Luzern, ETH Zurich, University of Zurich, and BFH-HAFL Zollikofen, and in partnership with education institutions from the South, to collectively develop and implement teaching programs for science curricula that will, through interactive engagement, enhance students’ knowledge and understanding of scientific theory, data and applications, and at the same time raise awareness about sustainable development goals and ways to achieve these goals. The COFER’s main objective is to develop educational material that is based on on-site observed climatic data in Africa, creating a link between measurements and actions, i.e. scientific and practical questions related to climate change, natural hazards, deforestation, and sustainable agriculture. The four pillars of the SAS4SD are data collection, development of teaching materials, research activities, and community initiatives.

In the SAS4SD project, action-based learning approaches will be widely promoted. These approaches focus on issues of sustainable development using concrete projects, actions and practices in schools and communities. One such practice will be to introduce and/or strengthen “vegetable bowl gardens” in the schools, giving students the opportunity to grow their own vegetables and diversify their diets. Through this and other such actions and practices, SAS4SD will bring science and research into schools and communities. As experience shows, populations in rural areas may be hesitant to accept science as a source of knowledge that can contribute to sustainable development if practical implementation and tangible benefits are not clearly visible. Therefore the project’s innovation is about enhancing the acceptance of science by communities through integration into the secondary school context – imparting the skills among future actors at an early age. In schools, the use of data is more accepted and in linking school activities based on data collection with community projects of sustainable development, the recognition of scientific data should be enhanced. Case studies will be established in Cameroon and Ghana. The Cameroon case study will build on the ongoing project of PH Luzern that is part of the Swiss North-South/East partnership program education21 in association with the University of Yaoundé I, Ecole Normale Supérieure (ENS). In Ghana, case studies from the ETHZ World Food System flagship project “Enhancing Resilience in Food Systems” will be used, and synergies will be established with the Swiss Research Institute of Organic Agriculture (FiBL)’s project “The ProEcoOrganicAfrica” that has the goal to “contribute to improved rural livelihoods, including food, nutrition and income security in Sub-Saharan Africa (SSA) through climatesmart intensification of agricultural systems.”

The COFER brings together very different disciplines and "cultures", including engineering (ETHZ), natural sciences (UZH), applied sciences (BFH-HAFL), and a teaching school (PH Luzern). This unique mix of disciplines and approaches is an added value to the project because the resulting teaching material and research activities will be of a high and unique quality that blends the many disciplines and perspectives. This approach will be valuable to development and cooperation both in Switzerland and in the Global South. Furthermore, the co-training workshops that will take place in Cameroon and Ghana will involve synchronous testing of concepts in both Switzerland and Africa, with a mutual evaluation and experience exchange between Swiss and African partners.