ECCAP: Ecological Calendars and Climate Adaptation in the Pamirs

Call: Mountains as Sentinels of Change
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Sponsored by: CNR-DTA, DFG, NSFC, NSF

Mountain communities, which contribute least to rising greenhouse gas concentrations, are facing the harshest impacts of increasing climate variability. Adapting to a "new normal" is a necessity, and these communities must prepare for a broader range of possible conditions. According to the IPCC 5th Assessment Report, the ability to anticipate the impacts of climate change at the local scale is an urgent need. Communities must strengthen anticipatory capacity to synchronize their food production with increasingly inconsistent weather patterns. Ecological calendars based on indigenous knowledge of seasonal biometeorological events may be used to anticipate and respond to climate variability. Historically in the Pamir Mountains, agro-pastoral communities developed "calendars of the human body" to synchronize their diverse agricultural activities with highly variable weather systems. In the 20th century, ecological calendars were suppressed by some governments and fell out of use. Now, these culturally and ecologically grounded calendars offer new hope as a way to adapt to climate change. The Pamir Mountains extend from Badakhshan Afghanistan and Tajikistan, east to China's Kongur Shan, and north into the Trans Alai of Kyrgyzstan. The Pamir Mountains are rich in biological and cultural diversity. These mountain societies are experiencing dramatic climate impacts on their food systems. Our research will contribute to the anticipatory capacity of Pamiri communities by revitalizing calendars. Using participatory research, we will recalibrate historical and existing ecological calendars by integrating indigenous knowledge with scientific analyses of climate and phenological data. The project will provide a proof-of-concept to be applied in mountain societies across the globe, culminating in an international conference on ecological calendars for building community resilience to climate change. The conference will include social and biophysical scientists, policy makers, and civil society leaders in respectful engagement with indigenous mountain communities.