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Mountain Stewardship is Key to Global Water Security

There is great potential for cooperation in responding to climate change and other factors related to water supplies and management. But I am concerned about how effective this cooperation will be under current trends. **Policy makers and practitioners are not adequately taking into account the interlinked roles of mountain environments and mountain people in water security.** This is markedly absent from the majority of global water challenge discussions which has been dominated by the important focus on taps and toilets, but neglected the sources.

Basic facts are rarely cited: **some 60-80% of the freshwater supplies upon which human society depends come from mountain regions.** The worsening state of many lowland aquifers will likely increase dependence on mountain sources of water. But, many mountain environments are now degraded, reducing their ability to provide ecosystem services such as water storage and purification, and increasing risks of natural disasters such as floods and landslides. And, **climate change is aggravating this situation.**

Let's not forget that mountain regions are often zones of political instability. As remote borderlands, they frequently harbor ethnic minorities outside political mainstreams and are neglected by the development community. Stark evidence of this neglect is that **a third of mountain people in developing countries are vulnerable to food insecurity.** This trend is worsening. Consider the sharp contrast to many lowland areas where hunger statistics have been improving markedly. Hungry people are unlikely to be able to effectively manage and protect upland water sources. We ignore these mountain stewards at our peril.

I've just returned from COP22 in Marrakech where several side events focused on ecosystem-based adaptation (EbA) to climate change. Such **"green" approaches can put local people at the heart of environmental management in ways that also improve livelihoods.** They provide both an addition and alternatives to the gray infrastructure of large dams and river course management that so often proves problematic. If up-scaled and supported by investment and policy, the application of EbA in mountains could increase water storage while reducing landslide risks, floods, and sediment flows. There are options for development in mountains that could bolster water security while reducing a human tragedy—the millions of mountain people that face hunger every day.

Fortunately, Sustainable Development Goal #6 provides a platform for highlands in the global water agenda through its target (6.6) of protecting and restoring water-related ecosystems, including mountains. Water policy makers should take note. However, **those of us concerned about global water supplies also need to advocate for mountain communities—key stewards for globally important water sources.**

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