

Bridging awareness and action: Promoting pro-environmental behavior in the Himalayas

A. Bhushan* and P. Saryan

Saryan Vigyan Foundation, Himachal Pradesh, India

*Corresponding author email: ani.bhushan@gmail.com

Keywords: agroecology, biodiversity conservation, sustainable agriculture

The Himalayan region hosts over 30,000 faunal and 10,000 floral species. Despite its geological fragility and susceptibility to landslides, erosion, and climate change, it faces ongoing threats from impractical infrastructural development, land-use change, migration, and urbanisation. In Himachal Pradesh, India, a shift from traditional natural farming to cash crop monoculture jeopardises the region's biodiversity. For instance, traditional farming methods preserve *Ghasnis* (grasslands surrounding agricultural land) which are vital habitats for endemic and endangered flora like *Angelica glauca* and *Dolomiaea costus*. *Ghasnis* also preserve pollinator populations, manage pests, and nurture herbs integral to local culture. Clearing these grasslands to expand cash crop cultivation also threatens several endemic species and in my presentation, I highlight our efforts at Saryan Vatika, a high-altitude botanical garden, to tackle this issue. We surveyed 31 households and recorded their (1) awareness of sustainable agriculture and climate change impacts and (2) reasons for adopting unsustainable agricultural techniques. We found that while 93.6% of households claimed awareness of climate change, only 22.6% accurately identified recent worsening impacts of climate change and unsustainable agricultural practices in Northern India. While all households employed a combination of sustainable and unsustainable agricultural practices, unsustainable methods such as high use of pesticides (67.7%), fungicides (54.8%), chemical fertilisers (45.2%), and clearing of *Ghasnis* (25.8%) were considerably prominent. The primary reasons for using unsustainable methods were lower costs, better yields, a lack of robust supply chains, and advice from community members. To challenge these perceptions, we organised a workshop and educated participants on climate change and biodiversity. We discussed environment-friendly agricultural practices such as protecting *Ghasnis* and adopting diversified farming using examples from empirically validated research. Data-driven models were also employed to highlight the long-term social, ecological, and financial implications of both unsustainable and sustainable/traditional farming practices to help households make informed decisions.