Achievements of high altitude research:

- Ten Long Term Ecological Research Plots for monitoring vegetation in treeline zone
- Spatio temporal vegetation and biomass maps using RS-GIS
- Impact of altitude and temperature on picroside metabolism in *Picrorhiza kurrooa*
- Propounded a novel carbon sequestering pathway and nitrogen utilization mechanisms
- Key genes responsible for imparting biotic and abiotic stress tolerance in plants
- Commercial floriculture in Lahaul valley
- Germplasm resource centre of sea buckthorn (*Hippophae rhamnoides)*
- Demonstration plots of *Picrorhiza kurrooa, Aconitum heterophyllum* and *Crocus sativus (*saffron*),* Ginseng etc.

Societal activities at high altitude


Lilium cultivation


Hippophae rhamnoides germplasm


Picrorhiza kurrooa cultivation


Saffron cultivation

Folder design by Pabitra Gain, CSIR-IHBT, Palampur.

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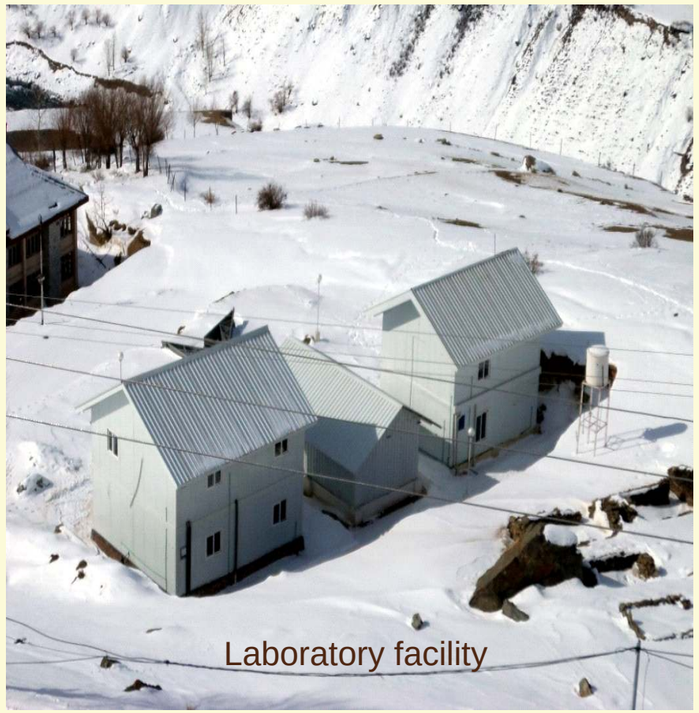
Research in the higher Himalaya

CeHAB CeHAB
Est. 2011

Center for High Altitude Biology

Ribling, P.O. Tandi, Lahaul & Spiti - 175 132 (H.P.)
Site Office & Laboratory: Near Diet, Tandi (Lahaul & Spiti)
A Unit of CSIR - Institute of Himalayan Bioresource Technology, Palampur (H.P.)
www.ihbt.res.in

The National Action Plan on Climate Change by the Prime Minister's Council on Climate Change has a National Mission for sustaining the Himalayan ecosystem. Appreciating the strategic national requirement in global context, it is envisaged to establish a world class centre on adaptation biology and bioprospection research on plants, microbes, insects and ecosystems in the wake of climate change.


Laboratory facility

Objectives:

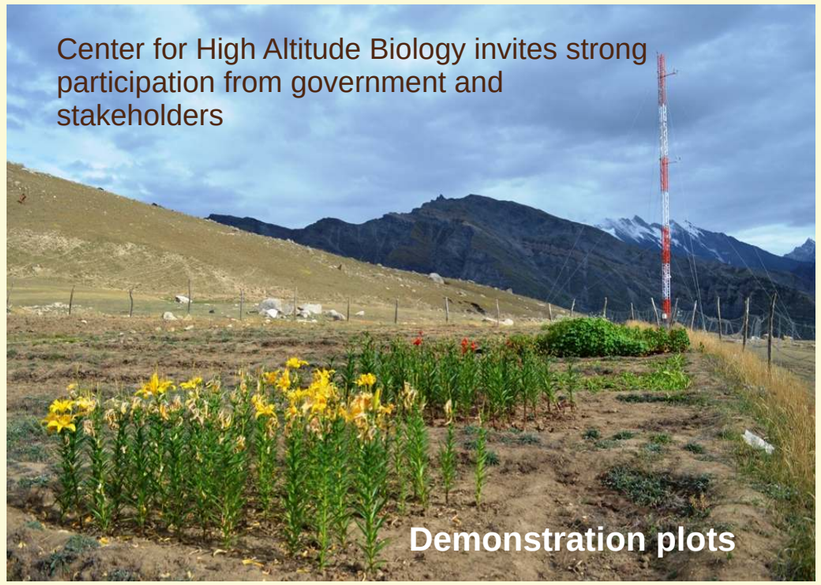
- To study and predict the impact of climate change in high altitude ecosystems in Himalaya
- Conservation and characterization of genetic resources of high altitude and their bioprospection for value addition
- Study into high altitude biology

Infrastructure:

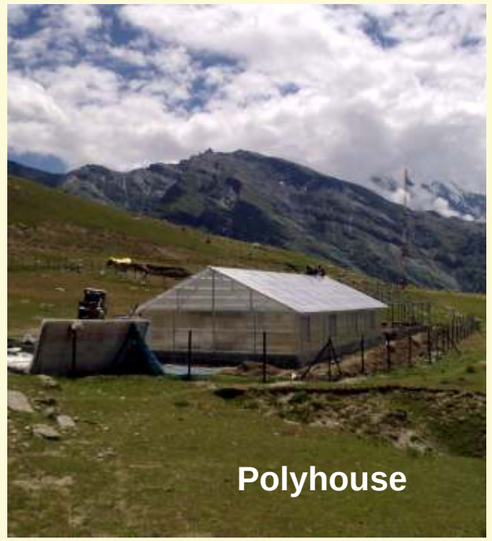
- Environmental data towers
- Farm and polyhouse facilities
- Plant and microbial labs
- Pilot plants for post harvest management
- Cold conservation facility
- Food processing facility unit
- Essential oil extraction unit
- Plant tissue culture laboratory
- Training center

Functions:

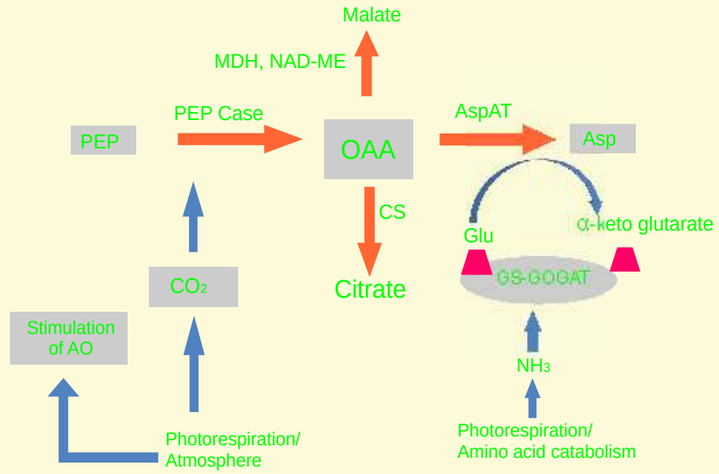
- Conservatory of high altitude plants of importance (*in situ* and *ex situ*)
- Bioprospection
- Climate change impact studies
- Evolving models for high altitude ecology
- Reproductive biology and bioresource generation
- Extension and trainings



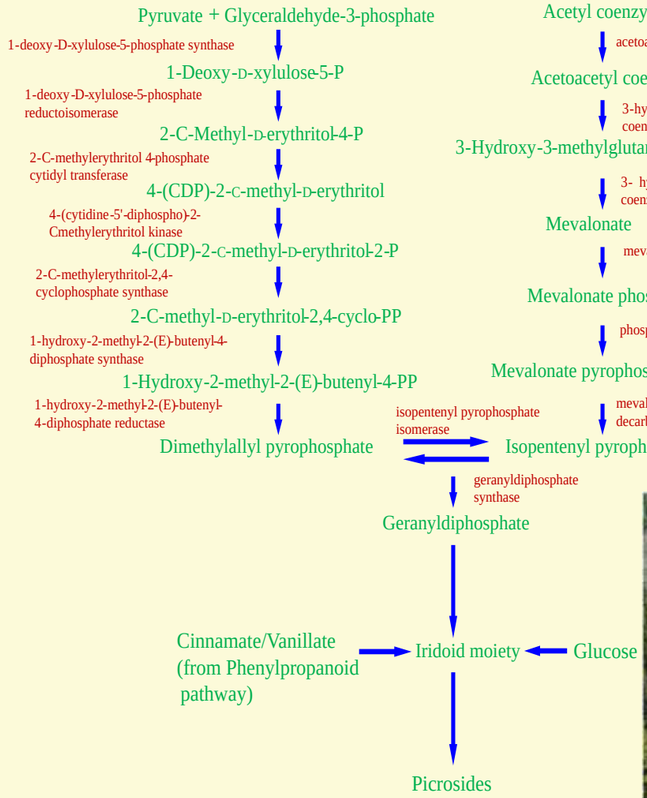
Demonstration plots


Polyhouse

A novel mechanism of CO_2 fixation at high altitude



Picrosides biosynthesis pathway




Ginseng cultivation


Long term ecological research plots in tree line zone