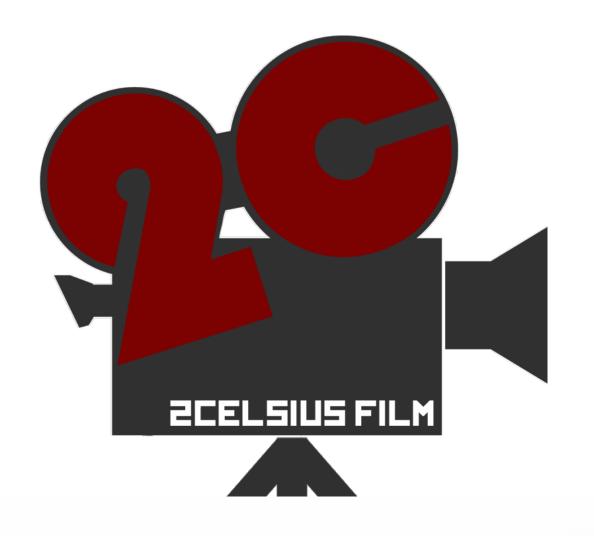
ESR & LULUCF Mountain Views

Raul Cazan, 2Celsius Brussels, June 2017



« Opération Climat » / « Nos chers paradis »



The upward shift: "It rained on Jungfrau!" (2014)



"We already have stone pine trees on the peak of Clocher d'Arpette in the massif of Mont Blanc at 2800 meters (9200 ft.) altitude. They are taller than 1.5 meters (5 ft.), that is a significant height, so they could be considered trees."

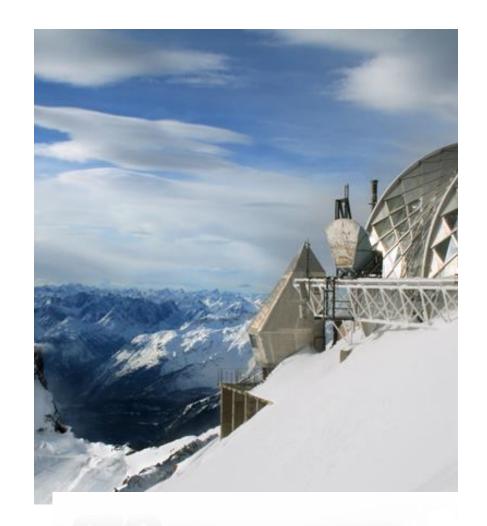
Cristophe Randin, research associate at the Center for High Altitude
Research (CREA) in Chamonix,
France



Bavarian Alps: seasons change

There is a 0.6 centigrade increase per decade warming of the average alpine temperature at least in the Swiss, Austrian and German Alps. - Ecoclimatology Professor **Annette Menzel** from Technische Universität München while summarizing her decade long research at the <u>Schneefernerhaus research facility</u>

"For forest vegetation, the growing season is lengthening: one degree increase in average temperature translates into two more weeks of growing season." Species react differently, "beech might profit from this longer growing season, while spruce does not."



Rockies, Niwot Ridge

"We are finding that plants are moving uphill into talus areas." Professor **Katharine Suding** from the Institute of Arctic and Alpine Research at the University of Colorado Boulder.

It is not just a temperature effect, "but the lengthening of the growing season. Microbes that live in the unvegetated talus are important helpers to the plants able to move into these stressful areas."

Differently than in the European mountains, "it looks like the plants lower down are not being affected, in fact diversity has been quite stable. Trees are not moving up much here as colonization is limited by the increasing dry hot summers."



Timmur as adaptation in Nepal

UNDP experts from the **Ecosystems**-**Based Adaptation in Mountain Program**, have observed that some of the non-timber forest products that were promoted, such as Timmur are plants that do better in cooler temperatures. "Due to rising temperatures, especially in the lower altitudes in the Panchase region where we work in Nepal, we are promoting cultivation of Timmur to communities located in over 2,000 meters above sea level."

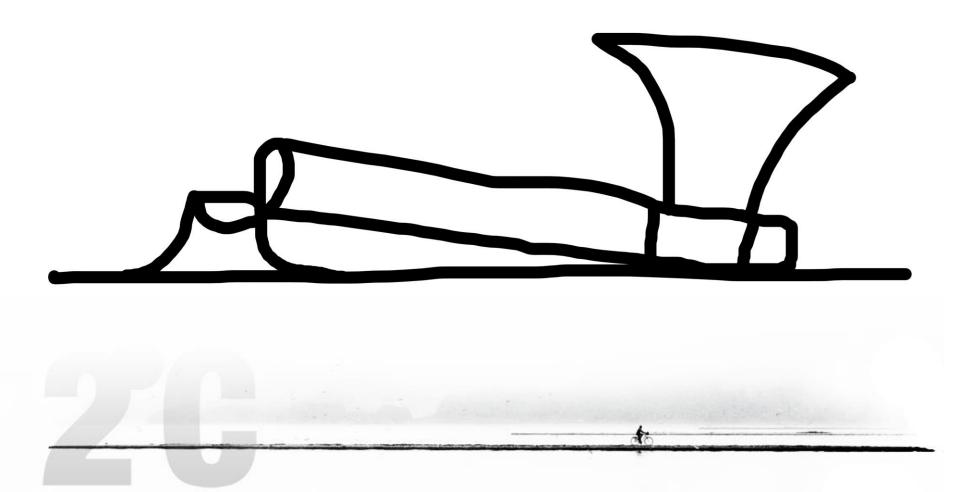
Tine Rossing, Knowledge Manager at the UNDP.



Shepherds, experts in phenology



Cutting Trees For Climate



LULUCF

- The hottest Romanian issue:
 FORESTS and deforestation

 – overwhelmingly related to
 mountain areas
- In a decade the country lost around 3% of its forested land
- Forestry offsets are appealing to market players and the government



ESR

The current loopholes in the law put the delivery of the EU's 2030 climate target at risk. We call for the rejection of the use of forestry offsets that undermine climate actions in other sectors, as carbon removals from forests should be promoted in addition to, not instead of, the efforts to cut emissions, especially since they are not permanent.

Spindle, a method



THUS, on paper Romania might harvest half than it projects.

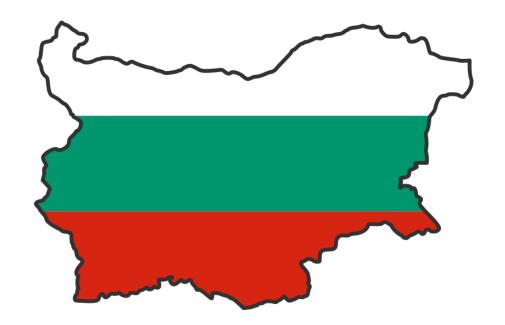


Wood sourcing in protected areas

Solution: Moratorium

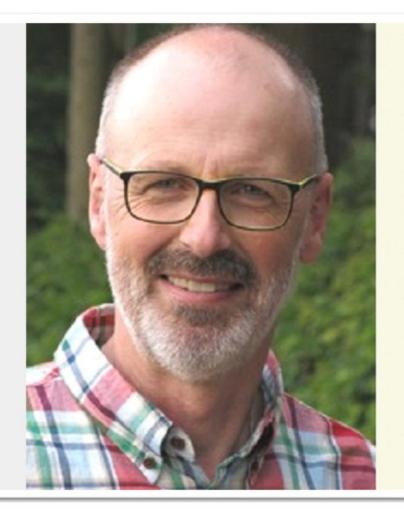


Solution: Moratorium on exports (?)



Forestry offsets: a panacea for loggers

• do not take pressure away from the need to decarbonize the energy sectors and significantly reduce emissions from **fertilisers**, **meat production and industry processes**.



foreword by TIM FLANNERY

PETER WOHLLEBEN

The Hidden Life of TREES



What They Feel, How They Communicate

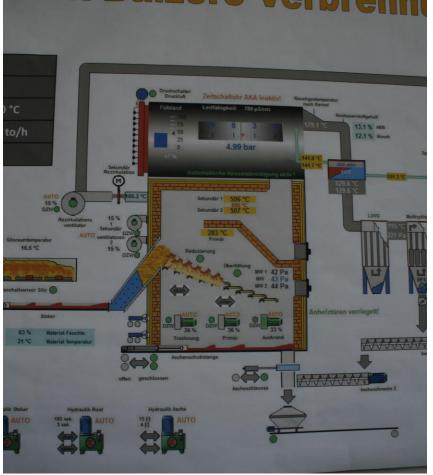
Discoveries from a Secret World

Complexity of carbon sinks

Peter Wohlleben

• "The forest is really a gigantic carbon dioxide vacuum that constantly filters out and **stores** this component of the air."









Thank you!