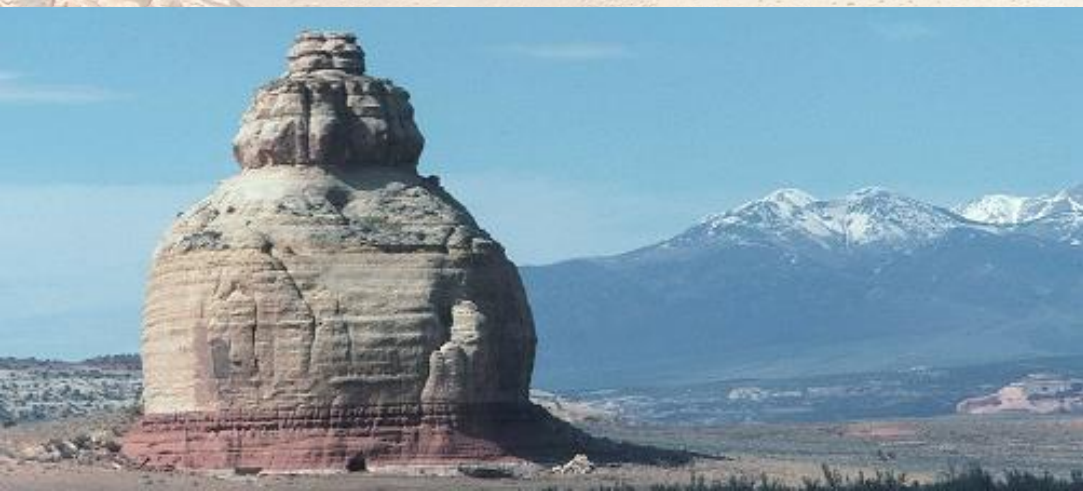
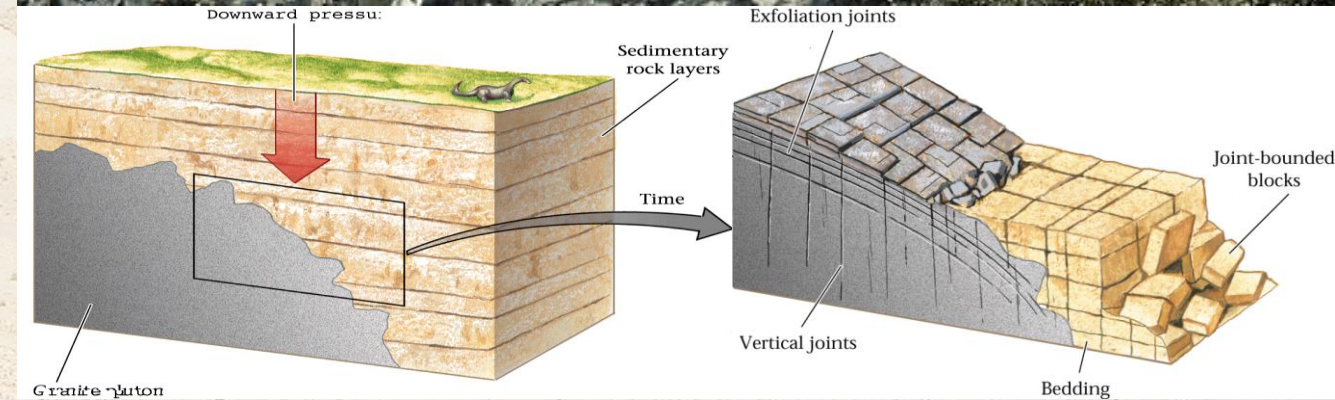
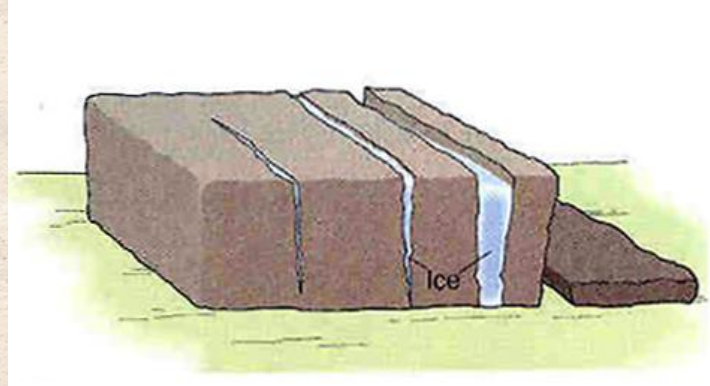
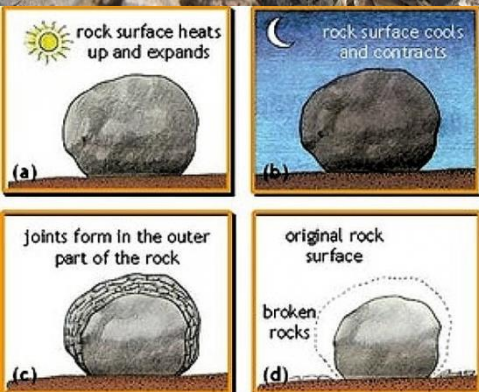




Landscape Evolution

Upland Landscapes





Residual minerals

e.g. grains of quartz: sand



New minerals

e.g. clays



Solutes

e.g. sea salt



Transport - agents

- Gravity



Transport - agents

- Gravity
- **Water**



Transport - agents

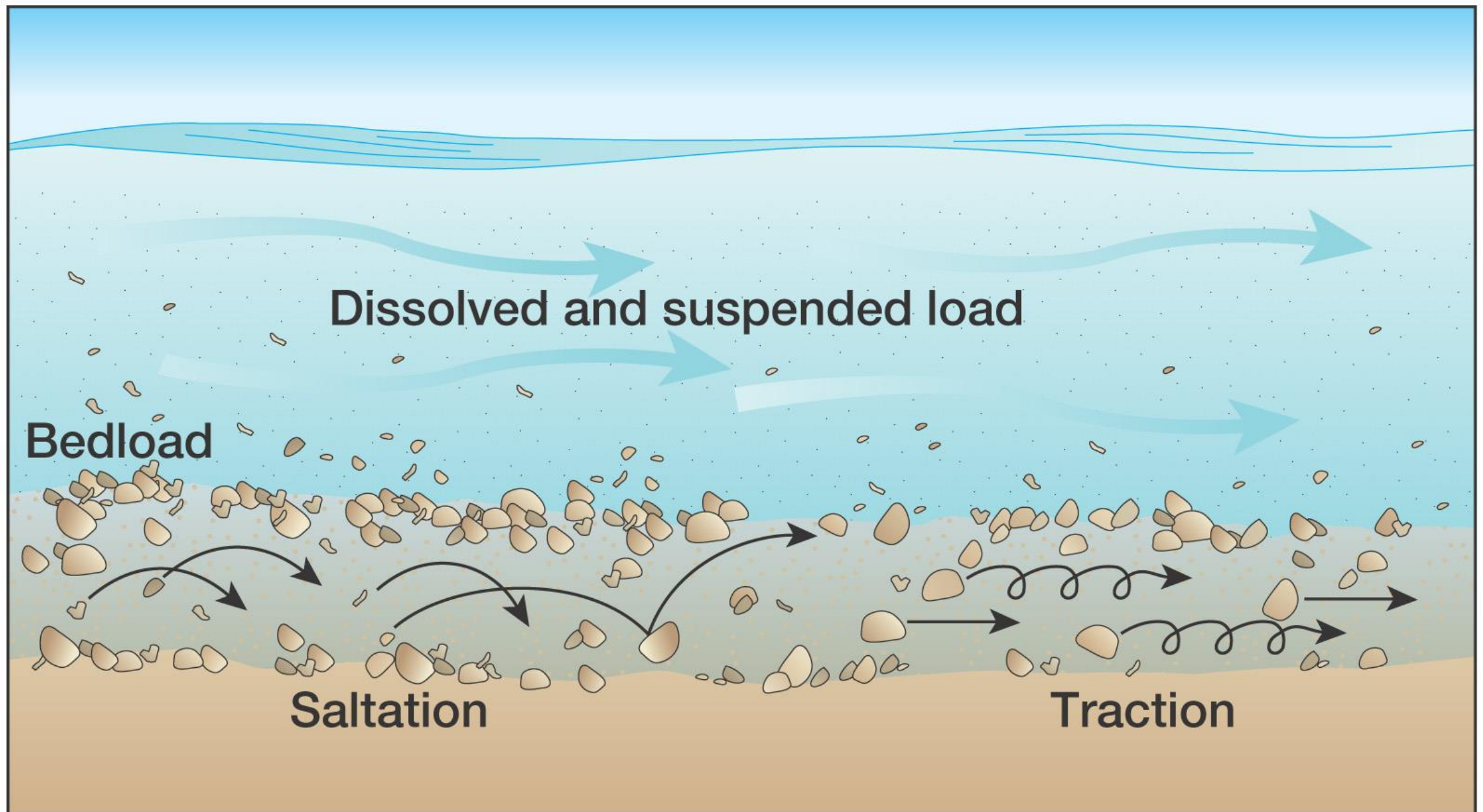
- Gravity
- Water
- Ice

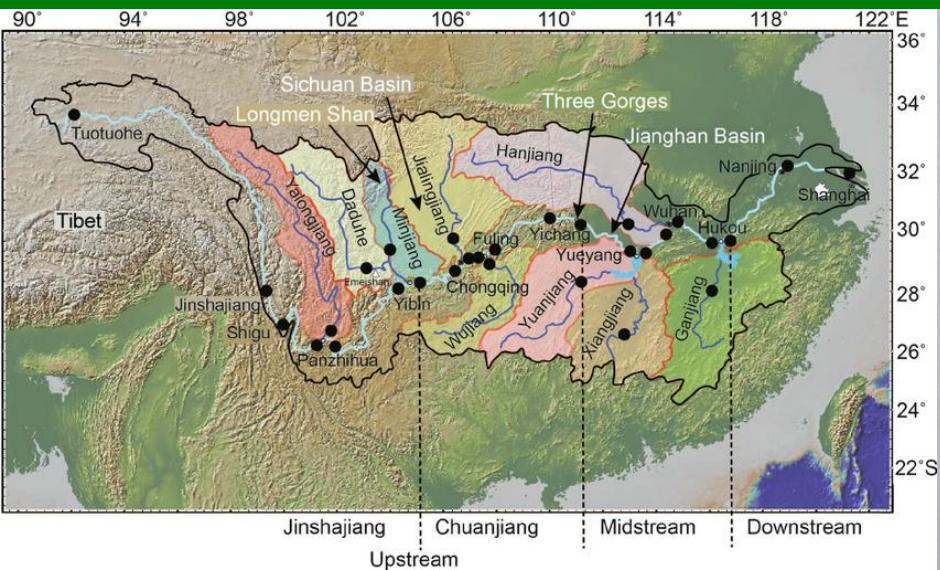


Transport - agents

- Gravity
- Water
- Ice
- **Air**



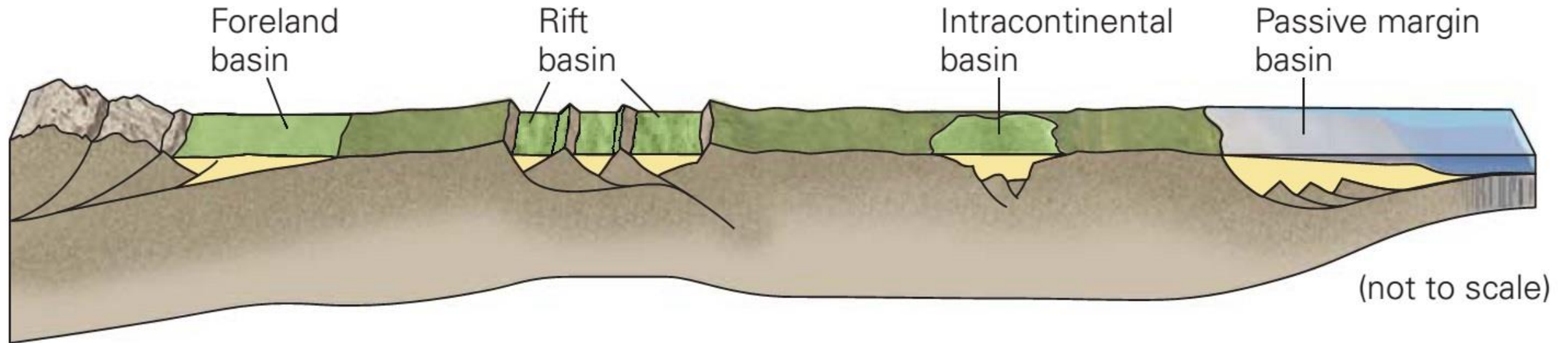




**Yangtze River
Nantong, China**



Accommodation space



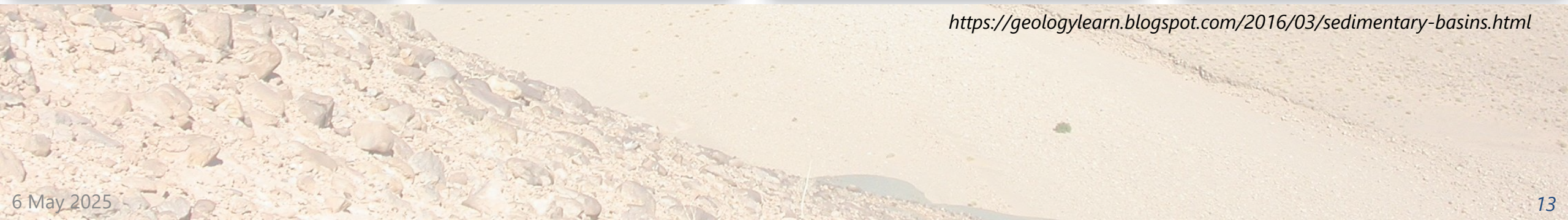
Weight of the mountain belt pushes down the crust's surface.

Downward slip on faults produces narrow troughs.

The basin forms in the interior of a continent, perhaps over an old rift.

Subsidence occurs over thinned crust at the edge of an ocean basin.

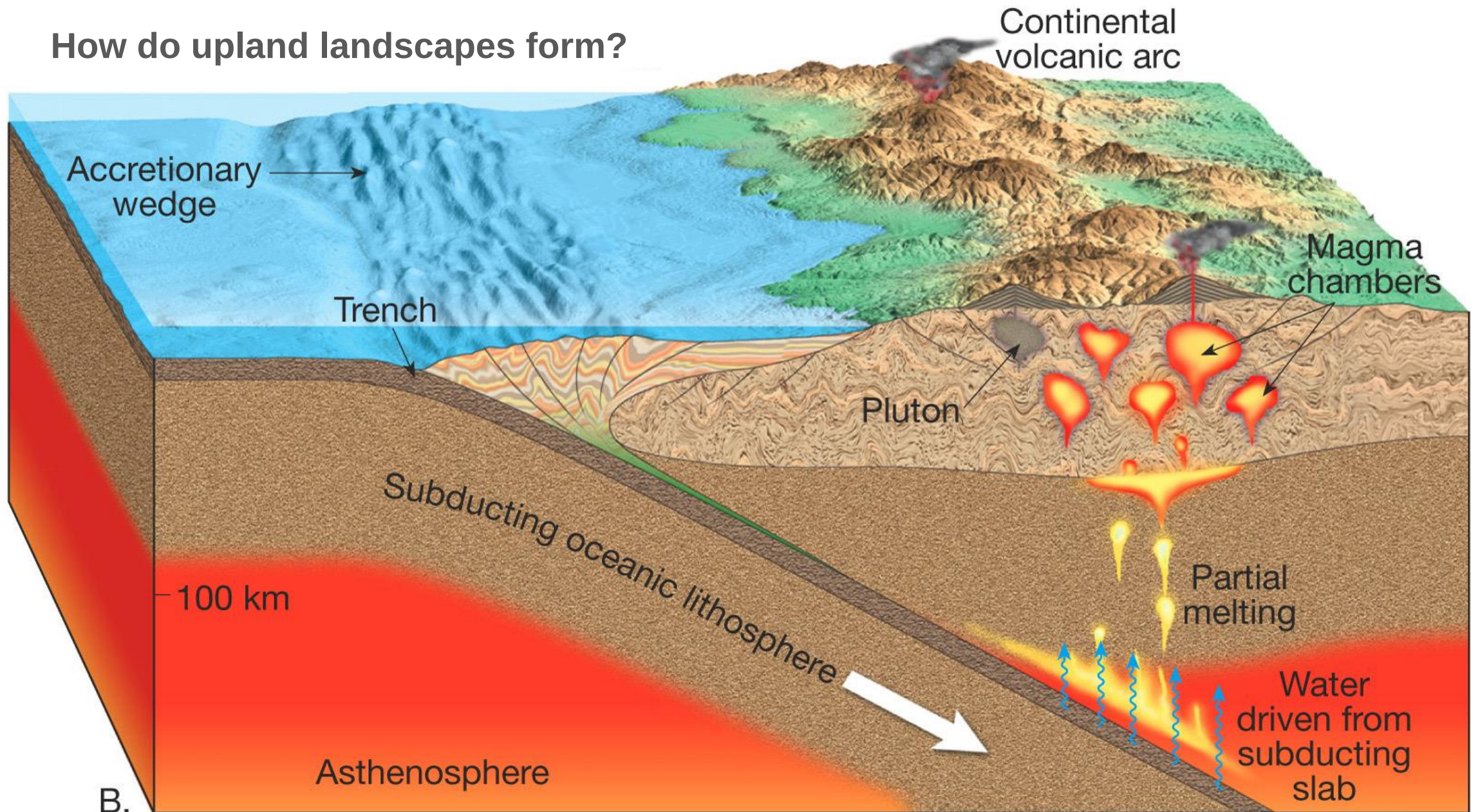
<https://geologylearn.blogspot.com/2016/03/sedimentary-basins.html>



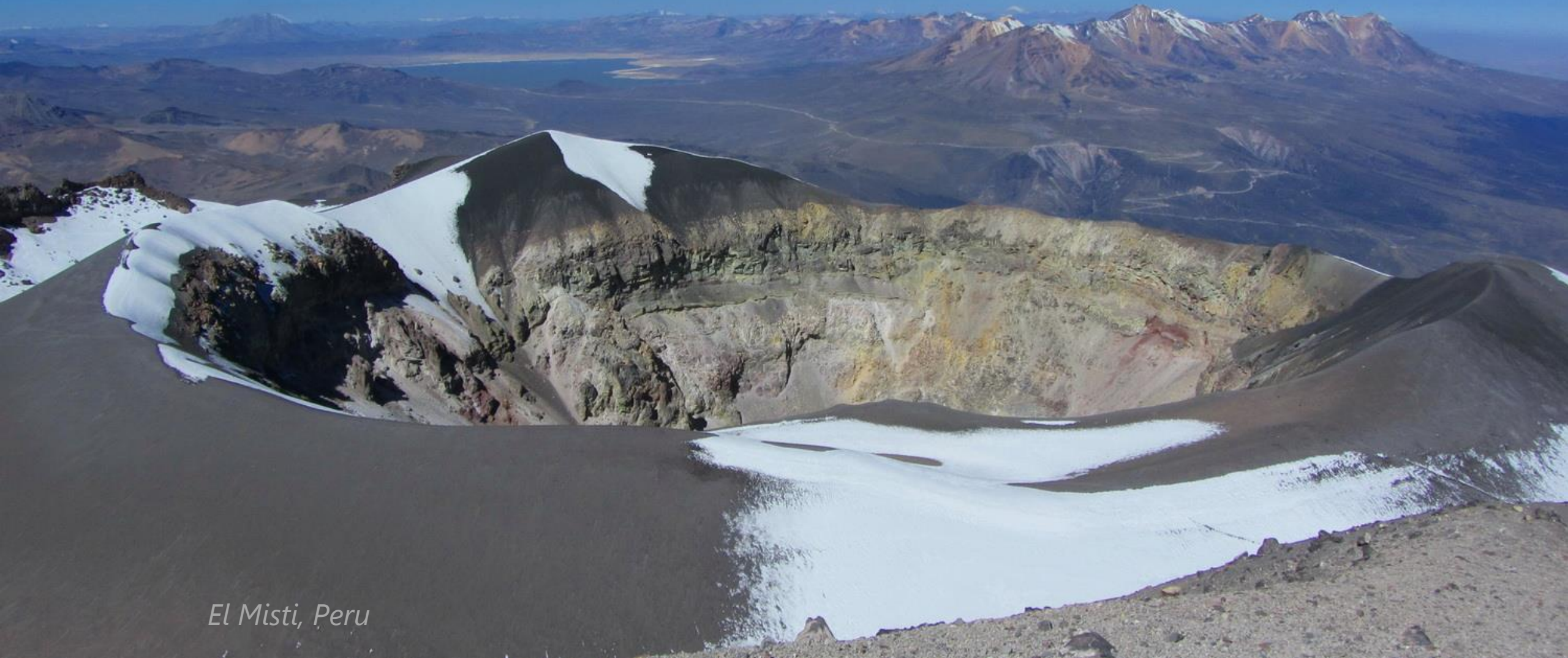
Accommodation space
– The Alps foreland
basins



How do upland landscapes form?



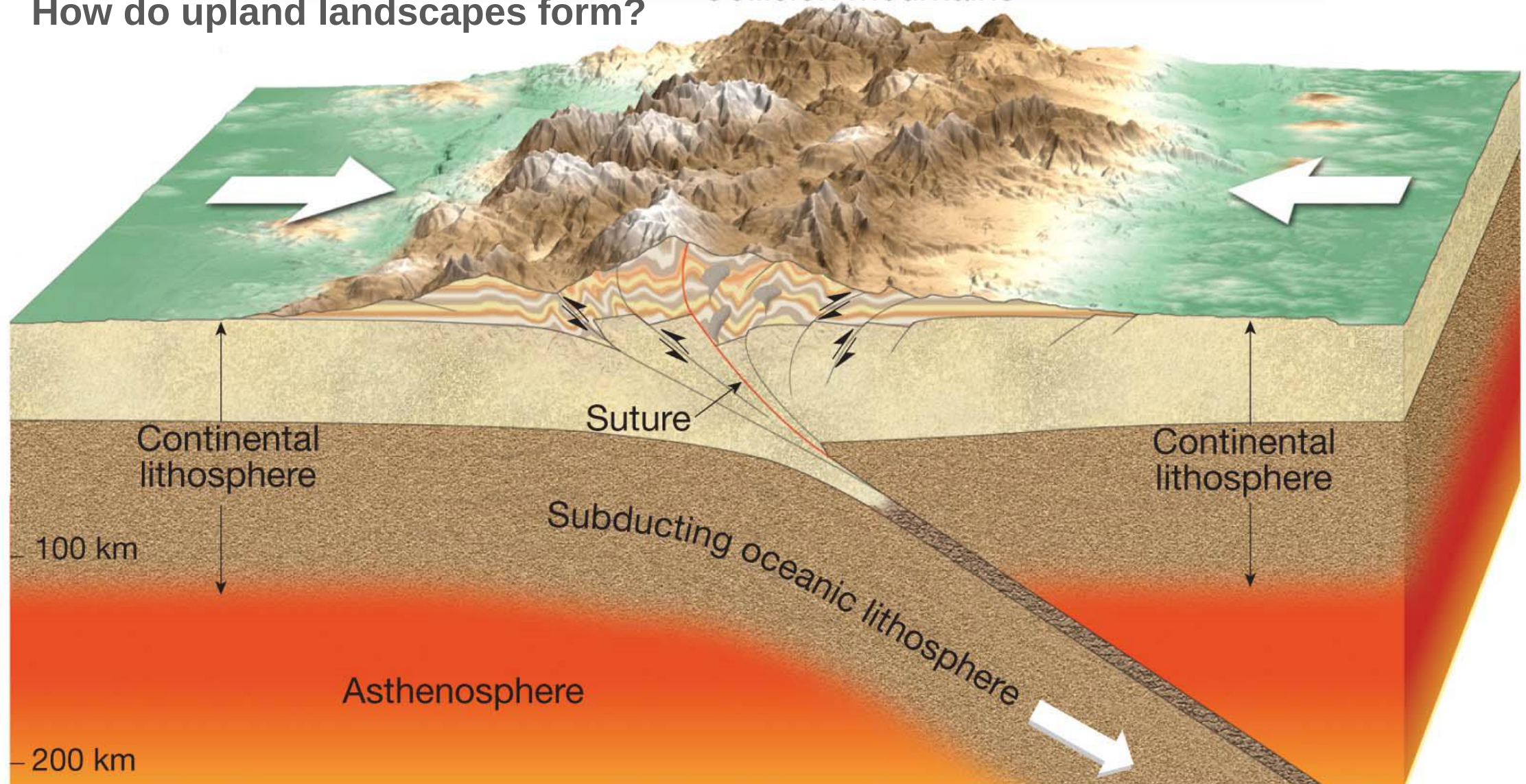
What rocks form upland landscapes?



El Misti, Peru

How do upland landscapes form?

Collision mountains



C.

How do upland landscapes form?



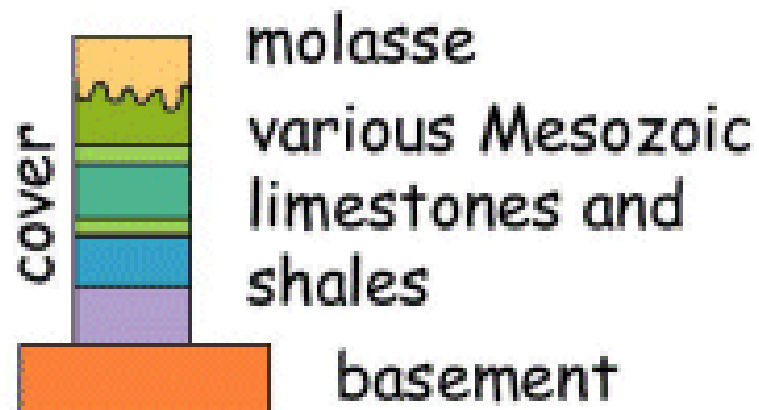
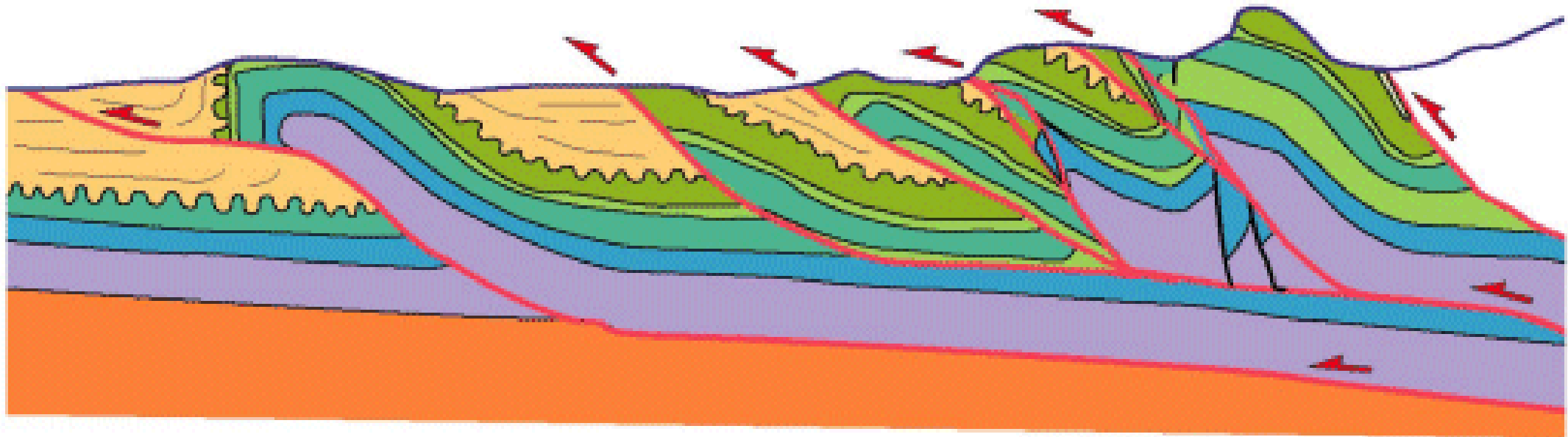
How do upland landscapes form?

WNW

Subalpine chains

Chartreuse Hills

ESE



2 km

$v = h$

2 km

[return to map](#)

[return to menu](#)

What rocks form upland landscapes?

fossiliferous marine limestones

Schists

fossiliferous marine limestones



fossiliferous marine limestones



metamorphic



sandstones



sandstones



sandstones



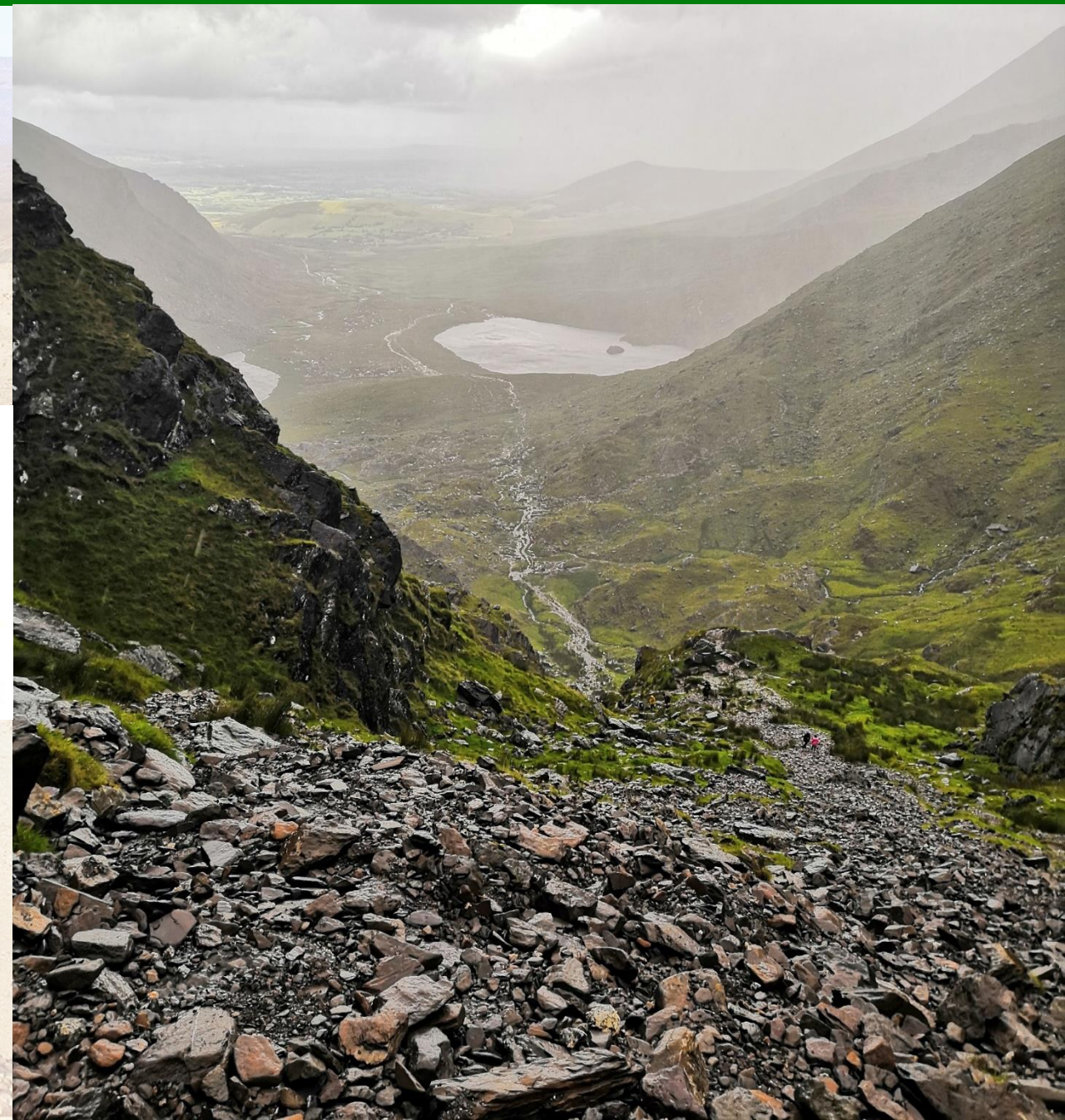
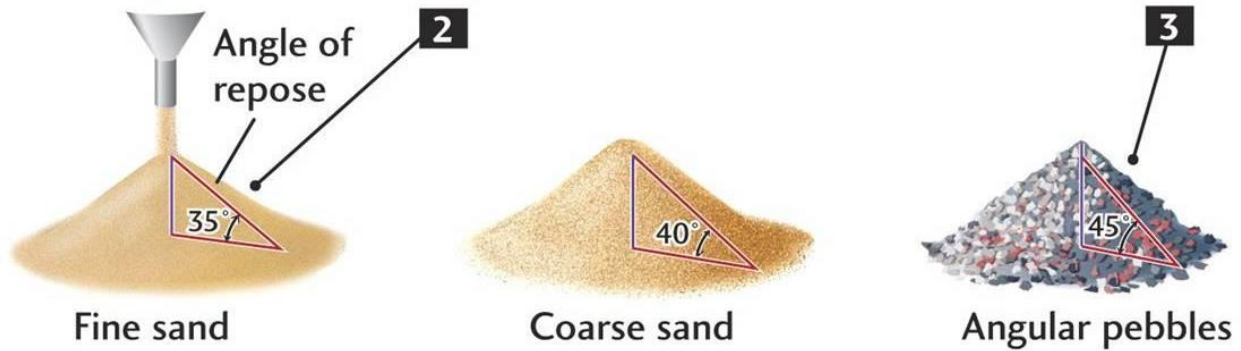
Weathering

- Mechanical weathering
- Chemical weathering
- Biological weathering



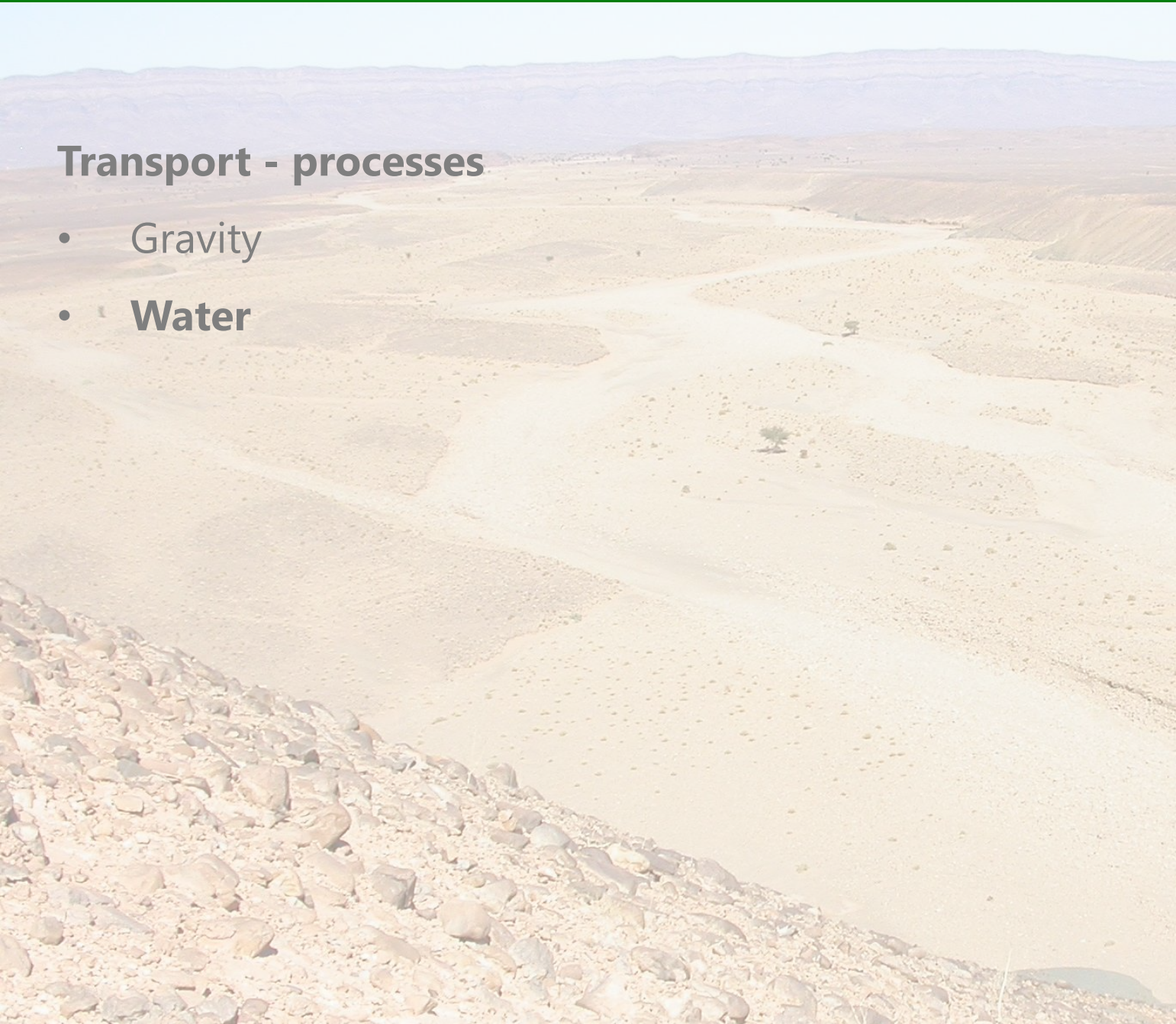
Transport - processes

- Gravity



Transport - processes

- Gravity
- **Water**



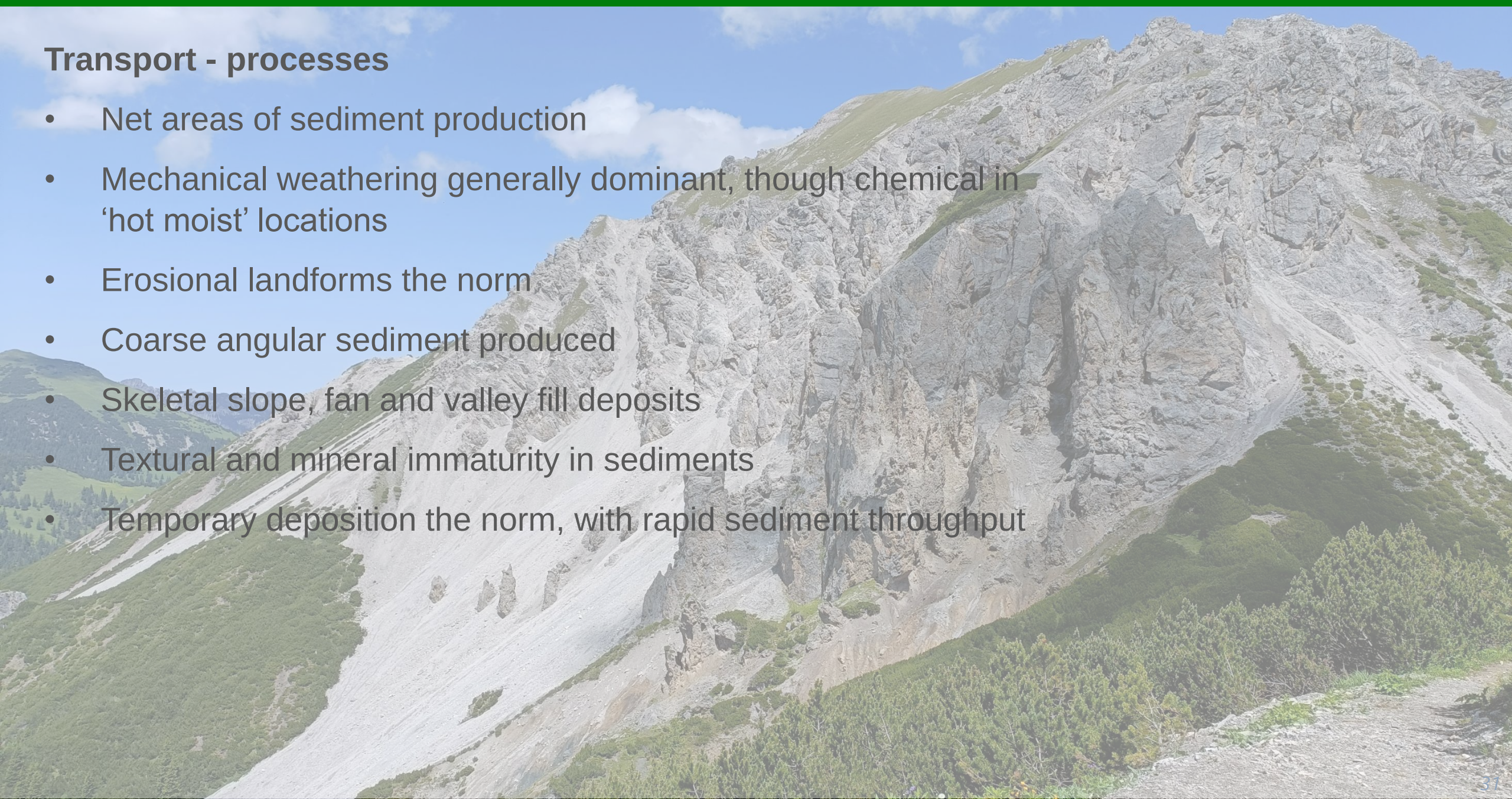
Transport - processes

- Gravity
- Water
- Ice



Transport - processes

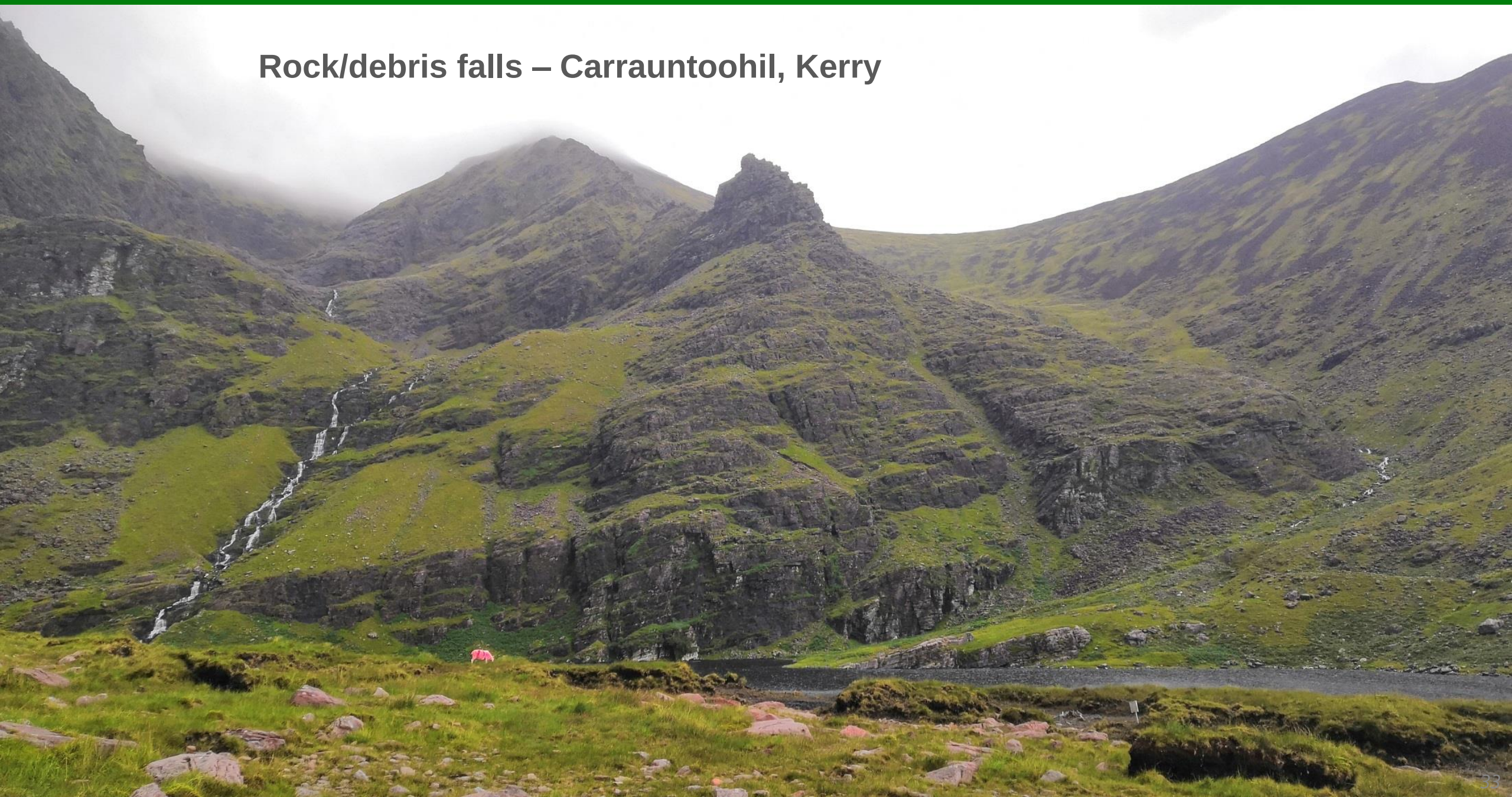
- Net areas of sediment production
- Mechanical weathering generally dominant, though chemical in 'hot moist' locations
- Erosional landforms the norm
- Coarse angular sediment produced
- Skeletal slope, fan and valley fill deposits
- Textural and mineral immaturity in sediments
- Temporary deposition the norm, with rapid sediment throughput



Coarse angular sediment

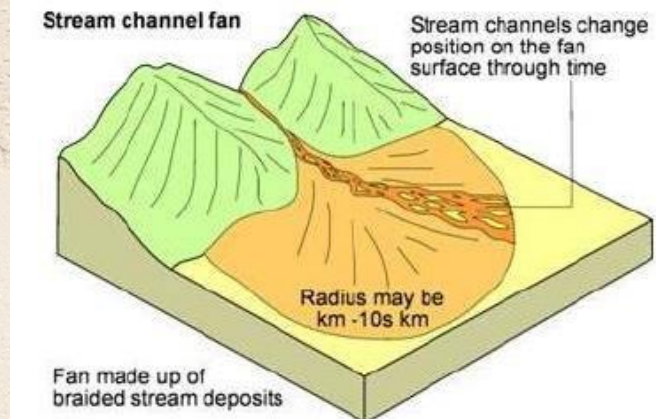
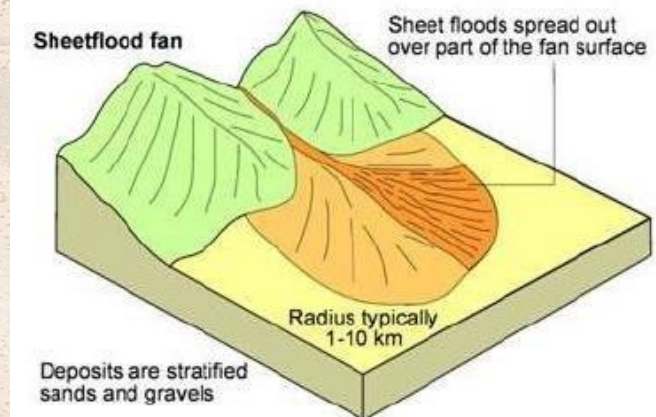
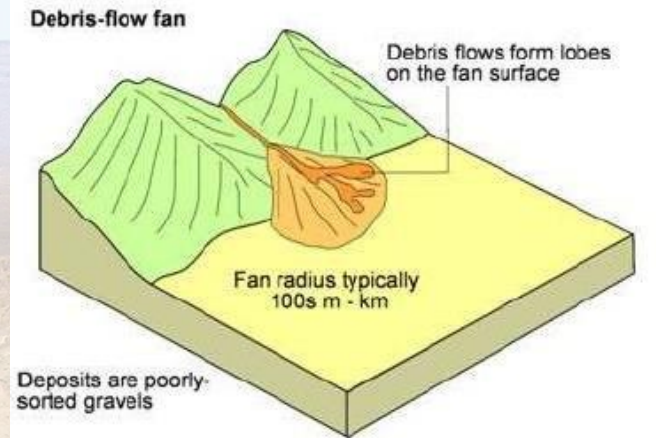
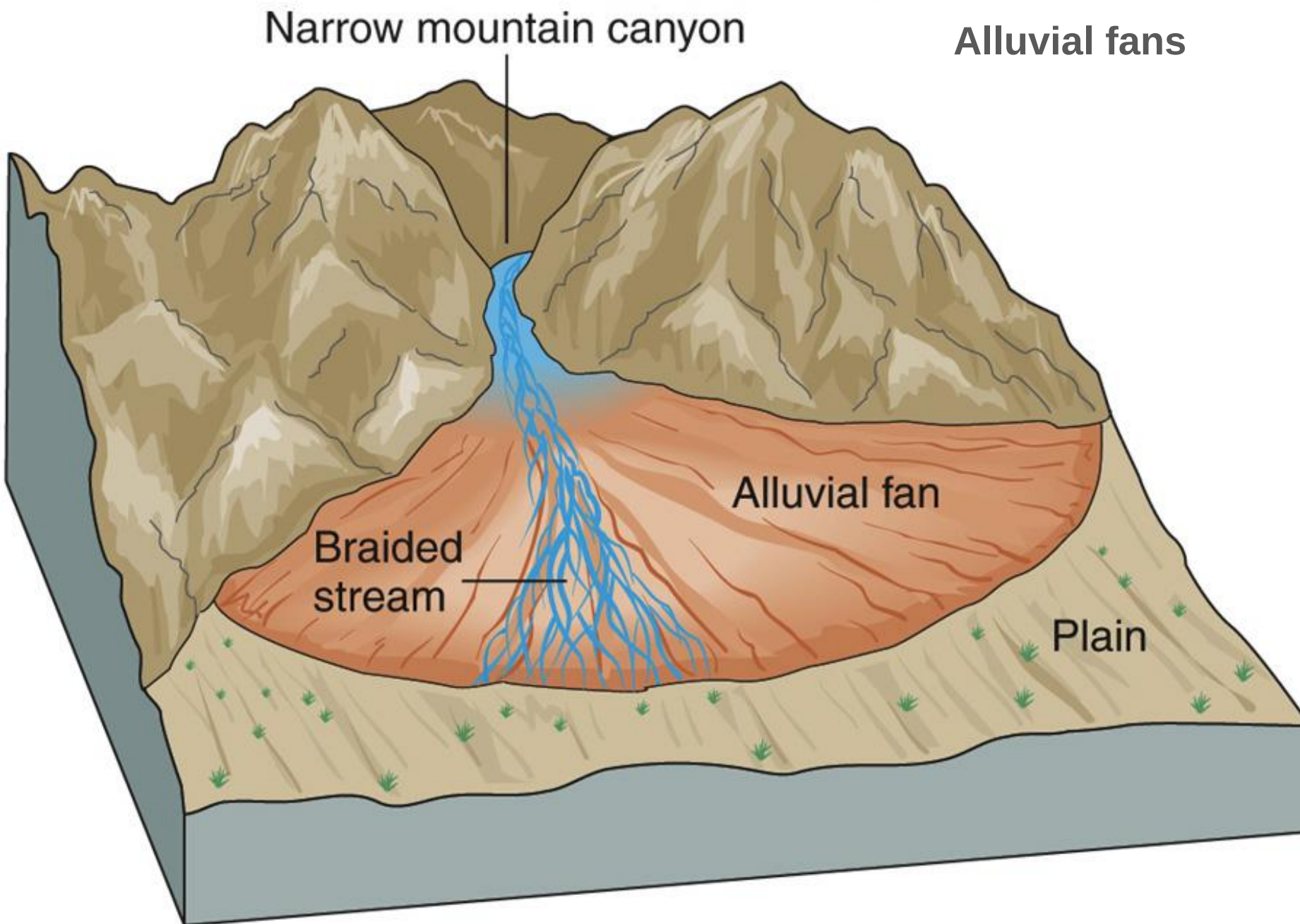


Rock/debris falls – Carrauntoohil, Kerry



Alluvial fans

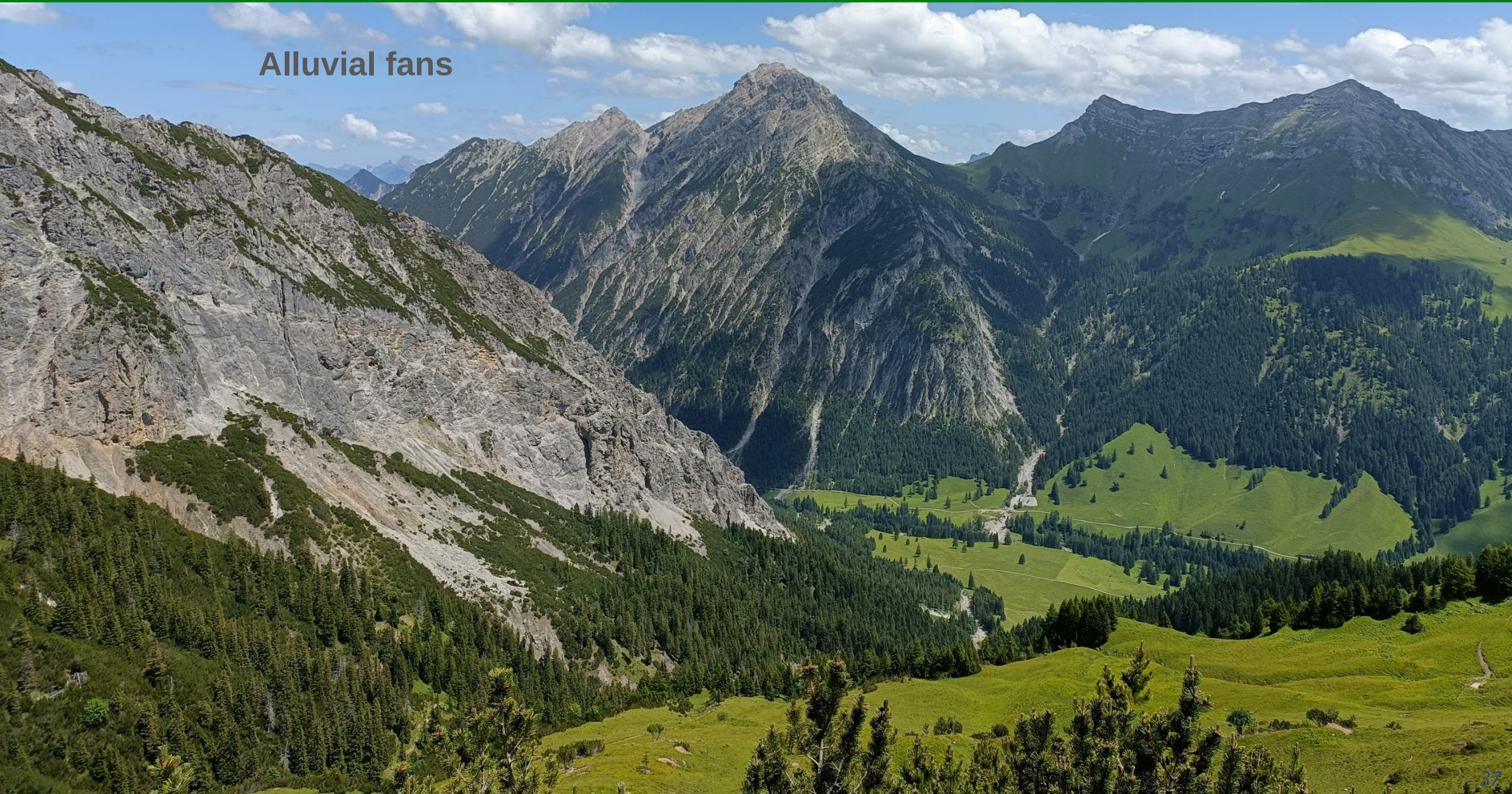




Alluvial fans



Alluvial fans



Alluvial fans



Young Landscape

- Sharp peaks
- Steep slopes



Old (mature) Landscape

- Broad peaks
- Moderate slopes



