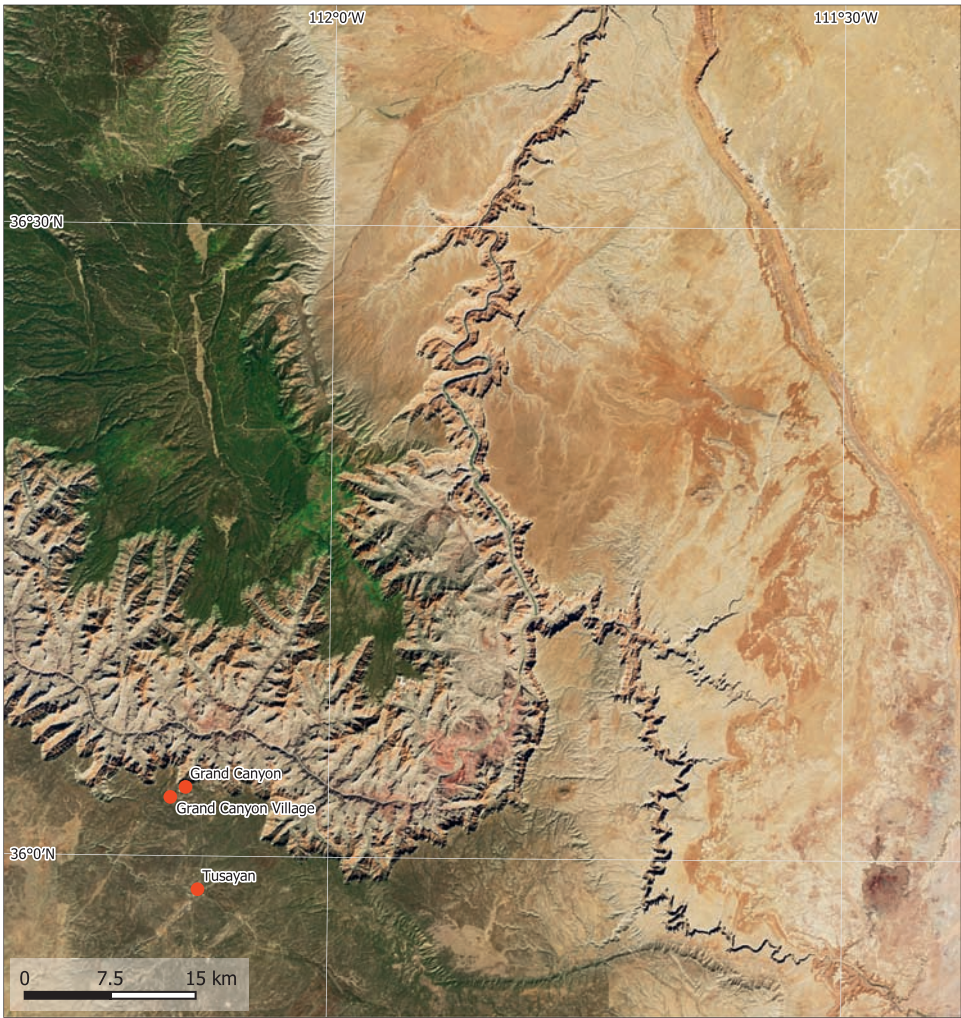
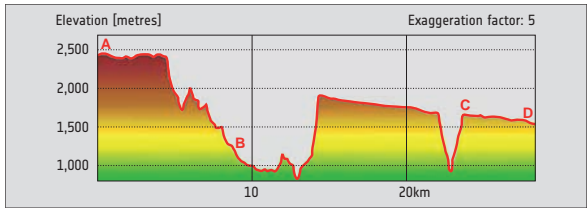


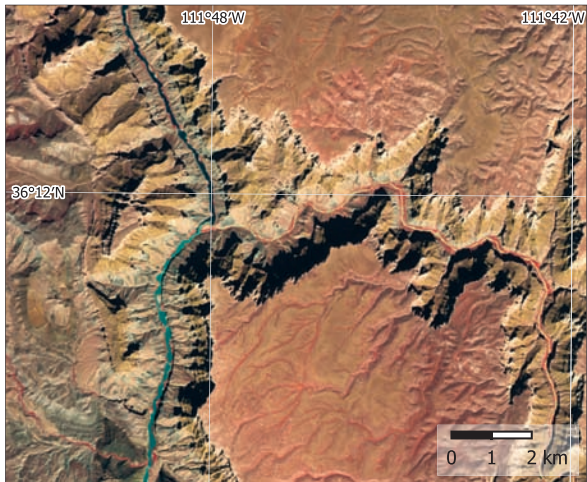


Carved into Sediment Layers

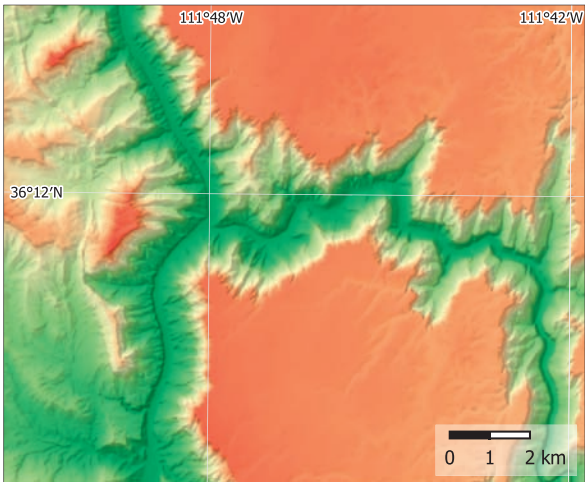
The Colorado Plateau in the south-west of the United States is intersected by the Colorado River. The Kaibab Plateau in the west appears in a green colour as it is vegetated with aspens, spruce-firs and juniper woodlands. The Painted Desert in the east consists of bands of petrified sand dunes parallel to the surface. The Colorado flows from its headwaters in the Rocky Mountain National Park to the south-west, passing the Marble Canyon. At the southern end of the canyon, the river is joined by the Little Colorado River. Over millions of years the erosive force of the water has cut the Grand Canyon through the layers of sediments as the Colorado Plateau has been uplifted. The detail maps highlight the specific geological and geomorphologic situation of the region, resulting from the fluvial erosion of the otherwise mostly undisturbed sediment layers. The terrain map and the profile illustrate the gorge character of the canyon carved into the surface of the Colorado Plateau.



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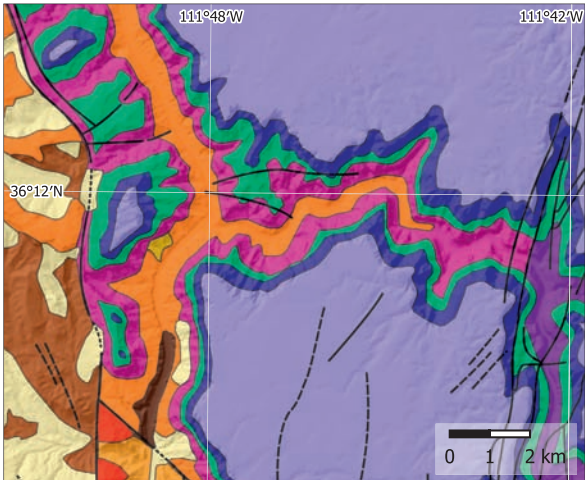
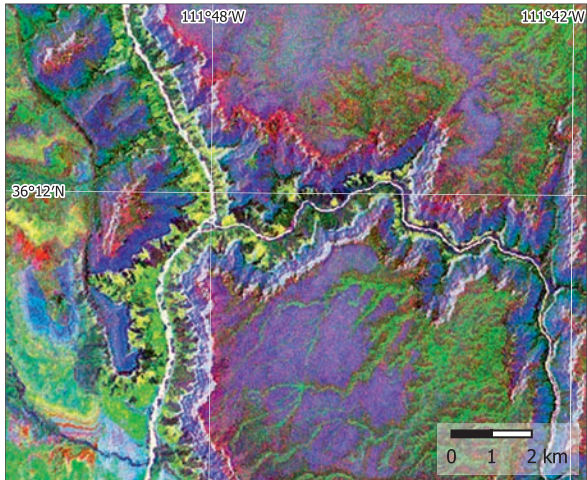
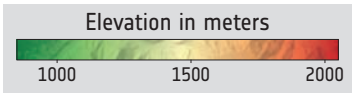


6. Junction of Little Colorado River and Colorado River in false-colour infrared. Data: Sentinel-2, 2023-09-24.



7. Terrain map of the region around the river junction, showing the rugged canyon cut into the smooth Colorado Plateau.

5. The Colorado River has carved the Grand Canyon up to 1500 metres deep into the layers of sediment rock forming the Colorado Plateau. Data: Sentinel-2, 2023-09-24.



8. A principle component analysis of the satellite data allows to separate the geological layers (left).



9. Geological map.