

## **The promotion of geosites along a major trail of the Nepal Himalayas: the middle Kali Gandaki Valley.**

Narayan Adhikari (1), Monique Fort (2), and Somanath Sapkota (1)

(1) Department of Mines and Geology, Lainchaur, Kathmandu (Nepal), (2) Université Paris Diderot, UMR 8586 PRODIG CNRS, GHSS, Case 7001, Paris Cedex 13, France (fort@univ-paris-diderot.fr)

The Himalayas mountains, the highest in the world, offer exceptional landscapes, characterized by a large bio- and geo-diversity that should be preserved. Besides World Heritage Sites, recognized by UNESCO and inscribed for their outstanding universal value, a series of National Parks (Khumbu, Langtang, etc.) and Conservation areas (e.g. ACAP. . .) have been created by the Nepal Government, with the aim of integrating protection, education and sustainable development, in order to protect environmental heritages (flora, fauna, geosites), together with local culture and history, hence encouraging better knowledge and perception of the landscape elements by the visitors in connection with local people.

The Himalayas, the result of the India-Asia plates collision, may also be considered both as real outdoor laboratory and museum, where geodynamic activity can be directly tackled and interpreted at different spatial and time scales by scientists. Their findings should be « translated » in simple words and sketches, in such a way that travelers, both local visitors and foreign trekkers, may learn along their itinerary. The conception of posters to be set in specific sites (outcrops and rock types, geological and geomorphological processes, such as major faults, landslides, relicts of glaciation etc.) is certainly the best way to promote geosciences and bring an additional value to travels across the Nepal Himalayas.

The Department of Mines and Geology has taken the initiative of such a project. We present here a few examples of such geosites that would worth being illustrated along the famous trail, recently transformed as a motorable road, across the Kali Gandaki valley (Myadi and Mustang districts).

On the basis of their geomorphic activity and their significance for local population, we have selected a few scenic places of significant scientific and educational interest (not exhaustive list). (1) Tatopani, famous for its hot-springs, was recently flooded by a landslide which dammed during a few hours the valley. (2) Dana is close to the Main Central Thrust zone (transition from the Lesser to Higher Himalayas units), and is regularly affected by active debris flows, a threat to the recent road. (3) North of Kabre, the large Holocene PahiroThaplo landslide dammed the Kali Gandaki river, which then cut a dramatic epigenetic gorge; (4) Marpha village is characterized by white lacustrine deposits contrasting with the surrounding dark Tethysian sedimentary rocks: it represents the remnants of a large lake, as the result of a giant, most probably prehistoric mountain collapse derived from the Dhaulagiri Peak (8167 m) and its adjacent mountain ridges.

On the basis of this first experience and feedback from locals and trekkers, the geosites network will be further extended to other major and touristic trails of Nepal.