IAG Webinar South and West Asia
01 March 2023 at 09:00–11:15 UTC

Welcome Address
Prof. Sunil Kumar De (IAG President)

Topographic configuration, dynamic slope and paraglacial process leave very little older event records in the higher Himalaya. To understand spatial and temporal antiquity of the remnant fragmentary landforms, we have tried to piece together the extent and timings of the glacial events, and have built a strong chronology in the major river basins of the Himalachal Himalaya, NW India. Since no single technique is possible to zig-saw-fit these events, we have relied heavily on the multiple age determining methods of Optical, Radionuclide and ¹⁴C dating in the Upper Chenab, Upper Beas river basins, and the Dhauddhar range foothills. These landforms reveal that the maximum extent of Mega Glacier in this part are many 10s of kilo years older than the Last Glacial Maximum elsewhere, indicating a strong sub-continental and regional control on these events over time and space.

Framing conceptual models for mechanism of sediment bypassing at the tidal inlets along the coastal tracts of Maharashtra, India
Prof. Anargha A. Dhorde, Nowrosjee Wadia College, Pune, India

This work attempts at framing mechanisms by which sand is transferred to the downshore shoreline at the tidal inlets along the coastal tracts of Maharashtra, India. Four conceptual models are presented based on available literature and field details. The models considered only natural, unstructured inlets. The first model proposes the process of spit elongation, ebb channel extension, and natural reclamation of the bay area. The attributing factors being sea level regression and excessive sedimentation based on past processes. The second model tries to stress mechanism behind the spit extension and inlet migration in the past. The third model is related to the ongoing processes and proposes the mechanism of ebb tidal delta breaching and ebb channel shifts. The last model relates to flood delta formation and bay filling.

The Sundarban Lowlands: A Century of Change in the Abandoned Ganga—Brahmaputra—Meghna Delta, India and Bangladesh
Prof. Sunando Bandyopadhyay, University of Calcutta, Kolkata, India

Governed by dominance of wave, tidal, and fluvial processes, deltas are intrinsically dynamic. The 251 tidal islands of the Sundarban (11,455 km²) occupy the fluvially abandoned Ganga-Brahmaputra-Meghna Delta, a large part of which is reclaimed from mangroves since 1770. 100-year comparison of maps and images of the Sundarban shows that while erosion of the estuary margins and the sea facing coastline—up to 40 m/yr—continue for decades in its sea-proximal southern islands, intervening channels between its northern islands are degenerating, resulting in land gain. Erosion of the southern Sundarban can be ascribed to deltaic abandonment and shelf bypassing of sediments through a submarine canyon. Accretion of the northern areas in the west, is related to sediment reworking in a floodtide dominated environment, intervened by reclamation efforts. Considering the current trends, planning for the region must integrate the transformations into management and development initiatives.

Loess geodiversity: a geomorphological perspective
Mohsen Hosseinalizadeh, Gorgan University of Agricultural Sciences and Natural Resources, Gorgan, Iran

The geomorphological component of geodiversity is of great importance in the loess areas, mainly in north-east of Iran. In this regard, geodiversity is considered from geomorphological point of view (landform and process). To study this, densely pipe collapsing area at loessial hillslopes (area ~ 500 hac) of Iranian Loess Plateau was selected and then, aerial photograph (1966) and two UAV images (2018 and 2020) were taken. Regarding land use changes in studied time (1966-2020), the spatial and temporal behavior of pipe collapse were studied. Meanwhile, train effects on pipe collapse response were studied as well. The quantitative and qualitative changes of pipe collapse confirmed high geodiversity of geohazard (landforms and process) in loess deposits.

INTERNATIONAL GEOMORPHOLOGY WEEK 2023
Coordinators:
Prof. Cengiz YILDIRIM (Istanbul Technical University, Türkiye)
Dr. Nurul ISLAM (Jahangirnagar University, Bangladesh)
Dr. Narges KARIMINEJAD (Shiraz University, Iran)
Dr. Sayantan DAS (Dum Dum Motijheel College, India)
Dr. Kapil GHOSH (Diamond Harbour Women’s University, India)