

## WELCOME CHANGE IN POLICY – AVAILABILITY OF GEOLOGICAL MAPS

The British Geological Survey (BGS) in keeping with the changing times has decided to make available geological maps free of charge. The following news extracts from 'Geoscientist', (v 18, no 6, p 6) will be read with interest.

'Since July 2007, BGS's GB bedrock and superficial deposits digital map data at 1:625 K scale have been available entirely free of charge for non-commercial use (and not even the need to sign a license agreement) through the BGS website ([http://www.bgs.ac.uk/products/digitalmaps/data\\_625k.html](http://www.bgs.ac.uk/products/digitalmaps/data_625k.html)). These attributed vector data (available in both ESRI and MapInfo

GIS formats) are proving very popular, and we encourage customer feedback through using [bgsdata@bgs.ac.uk](mailto:bgsdata@bgs.ac.uk). DiGMap-GB625 data-sets can also be used free of charge for commercial innovation purposes and mash-ups (on condition that we are informed should a commercial opportunity arise)'.

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'In June 2007 we completely overhauled our policies to allow entirely free of charge re-use of BGS materials (including photographic images) for teaching, academic, personal and not-for-profit uses, subject to appropriate acknowledgement

(see <http://www.bgs.ac.uk/about/copyright/published.html> for details). Many Higher Education Institutions (HEIs) are jumping at this new opportunity to use BGS materials in their teaching and research programmes'.

'Finally, if your needs and interests lie in secondary and primary education, there is a wide range of free resources available from the award-winning education and popular geology section of the BGS website at <http://www.bgs.ac.uk/education/home.html>'.

*Geoscientist*, v 18, no 6, June 2008, p 6

## ACTIVITIES OF THE NORTH INDIA CHAPTER OF THE GEOLOGICAL SOCIETY OF INDIA: POPULARIZING GEOLOGY

The North India Chapter of Geological Society of India, time to time, organized invited lectures to emphasize the role of Geology and fascinating career offered by the subject for those who want to experience adventure in life by exploring the mother earth and its immense treasures buried inside the rocks. As a part of lecture series, one such lecture was organized in the Department of Geology, Banaras Hindu University, Varanasi on 11<sup>th</sup> July 2008. Dr K. R. Gupta highlighted the sustained efforts and leading role of the Geological Society of India in bringing Earth Science closer to people, particularly the students aspiring for better career.

An invited lecturer on "*Sedimentological Evolution of the Stuttgart Formation of Carnian age, Central Germany, and its comparison with the modern Ganga Plain of India*" was delivered by Dr U. K. Shukla of Geology Department of Banaras Hindu University, Varanasi. The Stuttgart Formation of the Middle Keuper (Upper Triassic), also referred to as Schilfsandstein, is one of the most discussed litho-stratigraphic units of the Germanic Triassic. Biostratigraphically the Stuttgart Formation is Carnian (Julian) in age. The formation is widespread throughout the intracontinental Central European Basin and is 20 m to

more than 50 m thick, elongate and anastomosing, sandstone-rich bodies that are generally arranged in a NNE-SSW direction. Between the sand bodies there are areas of several kilometre width, having thicknesses from a few meters up to some 20 m that are dominated by shales. Facies and thickness distribution seem to be largely controlled by the syn-sedimentary subsidence pattern. The sandstones of both facies are mostly fine to medium grained and relatively well sorted throughout the basin. The direction of cross-bedding is generally SSW, indicating a source area to the north of the Central European Basin. The formation is under- and overlain by highly evaporitic successions and seems to represent a more arid period.

Outcrops and boreholes of the Stuttgart Formation have been studied in Central Germany (Thuringia) and South Germany (Franconia). In Thuringia, the succession is 30 to 50 m thick and characterized by sandstone to silt-mudstone alternations that can be divided as number of lithological associations comprising varied lithofacies. This sequence is product of sedimentation in channels and interchannel areas under pronounced influence of syndepositional climate and tectonics. These allogenic forces influenced the base level and

autocyclic processes of the channels inducing channel metamorphosis, abandonment and conversion into shallow lakes. Occasionally, channels were meeting with shallow lakes producing wave modified lake delta deposits. Some of the channels were incised and tectonically controlled. Three climatic phases starting from humid monsoonal in the beginning to dry in the middle part and humid with pronounced draughts in the final stages of Schilfsandstein sedimentation have been identified.

The Stuttgart Formation is compared with modern Ganga Plain, a part of Indo-Gangetic Foreland Basin System of India, located in monsoonal belt to explain the intricacies of sedimentation and incision of channels. Ganga Plain shows similar geomorphic setting where channels are incised in to interfluvial areas evolving independently from contemporary channel processes. Near Varanasi, River Ganga is draining through fault plain and flowing to NE. Incision of Ganga seems to have taken place at about 40 Ka ago.

In contrast, the Stuttgart Formation in South Germany is some 15 to 30 m thick and consists of fluvial and estuarine sediments, which are unconformably entrenched in underlying shales. Sand