

## **General Theme 3**

### **3.4**

Vegetation cover constitutes a crucial factor that controls on the earth surface the processes of sedimentation, erosion and pedogenesis. Most of our continental depositional models have their origin from an actualistic point of view of the sedimentary processes, where the terrestrial vegetation takes on an important role. But, how did the continental environments appear before the terrestrial vegetation during pre-Silurian time? What processes acted on barren planets? How will be the future Earth without vegetation? These interrogatives can be explored by studying the pre-Silurian continental depositional record.

Availability of sediment, nature of precipitation and resulting surface run off pattern, weathering and soil forming processes are expected to be significantly different from that we observe on the modern Earth. Excepting a few hyperarid or extremely cold climate regions on the earth surface, one of the closest analogues is the surface processes on Mars that is free of vegetation.

Overall, there is lack of comprehensive understanding on pre-Silurian depositional processes in the geological literature. A critical comprehension of the deposits depends on the imaginative extension of our understanding of the modern earth surface processes to the context of pre-vegetated Earth. This session is planned to bring into focus the carefully worked out case studies dealing with pre-Silurian deposits. We emphasis on the generalised process interpretation and the way these inferred processes differ from those operating on the vegetated modern Earth surface. These interpretations may eventually lead to improved generalization of the process-product relationship for the pre-Silurian earth surface.