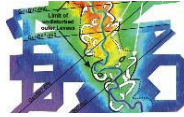
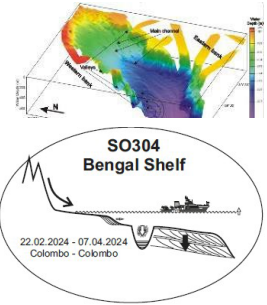


FS Sonne Cruise **SO304**
Bengal Schelf & Fan
Colombo - Colombo



Weekly Report No. **5**
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An important part of our work program is the investigation of the shelf area off Bangladesh. At the end of last week, we had already gained an overview of the possible, but limited, sampling points. Some of these were actually sampled more or less successfully (4), but others were excluded because they were geologically or operationally unsuitable. Therefore, on Tuesday we submitted a request to the authorities in an attempt to realize at least a few sampling points that we knew from previous expeditions and could therefore hope to obtain suitable and longer sediment cores.

In the meantime, we resumed the seismic surveys. Due to the dimensions of the shelf area, we carried out few but very long profiles (up to 270 km), mainly in E-W direction. The aim is to connect the seismic lines of the SO 188 survey of 2006 to get a seismic grid in which the characteristic interfaces of sea level fluctuations can be recorded over a wide area, e.g. the erosional surfaces of the last lowstands (glacials). If we succeed in tracing these back to about one million years, we can reconstruct a relatively detailed subsidence history. This is influenced by several factors: sedimentation, compaction, the nature of continental and oceanic crust, and tectonics caused by the collision of India with Eurasia to the north, but also the buildup of an accretionary wedge to the east. These factors taken together are difficult to predict, so our measurements should provide a more reliable baseline information, because the progressive subsidence in Bangladesh, a natural process, is compensated by sediment input, but only as long as human intervention does not lead to a disturbance of this balance in the delta.

Our data are of exceptionally good quality, reflecting the technical progress of the last 20 years, but also our experience with multi-channel seismics in shallow water. When reviewing the data, we are therefore somewhat optimistic that we can achieve one of our primary goals. However, this requires a sufficiently dense profile network, which we do not yet have.

But, on March 22, we had to interrupt our work due to a medical emergency on board in order to hand over the sick person to medical care in Chittagong, the port of Bangladesh. We therefore set off in the morning, in the middle of a survey profile, and reached the vicinity of Chittagong in the evening. However, we had to wait for very long time, until around noon on March 23 at least the patient could be disembarked and taken to a hospital. However, this had a number of administrative consequences that lasted until the late afternoon of March 24. Only then were we able to leave and return to our working area. One positive fact, apart from the news that the patient was in good hands and receiving good medical care, was that our application for a few new sampling points was granted after 5 days of waiting. As a result, we were able to head straight to two geological stations, which were to be sampled on Sunday night.

Volkhard Spieß, Tilmann Schwenk