

DISCUSSION

The detailed bathymetry investigations in the polygons have provided new bathymetry and geomorphology maps of the hitherto poorly studied or unknown features. They could also lead to detailing of some of the rises, seamounts, and turbidite channels of the CIB.

The study shows both similarity and variability of the morphology of the rises. In general, all of them are characterized by hummocky seafloor with E-W trending elongated hills and valleys. However, some parts of the rises are characterized by individual features. Hills are recorded over the central rise in the S22-II area, both in the transverse and longitudinal bathymetry profiles. No clear regular presence of steep and gentle slopes of large elongated hills are observed in the northeastern swell in the area, although steep southern slopes and gentle northern slopes are common among majority of the rises. These morphologic peculiarities suggest a complicated tectonic evolution of the features. The SW-NE trend of the rises and the two new seamounts at the S22-II area indicate presence of some deep fracture. The compressional stress direction might have changed during development of these features, and affected the present day morphology. Thus, tectonics seems to be an important factor in the generation and evolution of these hummocky rises.

The rises act as sediment barriers and stand in the way of distribution of turbidites southward. It is possible to suggest that the turbidite channels could have changed their direction as a result of evolution of the rises.