# Abstract

The end of the Cretaceous is characterized by one of the five major extinction in Earth's history with a major crash in the biodiversity associated with a carbon isotope negative shift. Studied sections are located in the Goynuk-Mudurnu basin which includes sediments from Jurassic to Paleogene. This basin corresponds to a fore-arc basin located in the northern part of the Tethys ocean. We used planktic foraminifera to determine the biozones of the latest Maastrichtian. Using biostratigraphical, mineralogical (bulk and clays) and geochemical analysis (stable isotopes, mercury, TOC, major and trace elements and magnetic succeptibility) the aim of the present study is to reconstruct the paleoenvironmental changes associated with the KPg events, which are thought to have been triggered by both meteorite impact and Deccan traps activity. 2-3 oxidyzed layers (with one containing zircons identified as a bentonite) have been detected in both sections close to the KPB and some questions remain about their origin. Biostratigraphic analysis indicate that the whole section (below KPB) reccorded CF1 zone. $\delta^{18}O$ and $\delta^{13}C$ data shifts highlight significant changes in temperature and productivity through the KPg transition. These shifts associated with a strong decrease in carbonate content and strong increase in detrital content (illite, chlorite, kaolinite, quartz and detrital elements) across the KPg section highlights a crash in productivity and an intense runoff. Ocean acidification is highlited by the strong decrease in magnetic succeptibility wich is not correlated with the mineralogy in the last 30 cm before KPB. The Hg content is characterized by a gradual increase (starting 6.30 m under the KPB in Goynuk section and 1.80 m in the Okçular section) in the uppermost Maastrichtian (CF1 biozone) culmanating at the KPB. Hg content stay high in the Danian samples. It suggests an incresead volcanic activity linked to Deccan Traps.