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Additional Supporting Information (Files uploaded separately)

Captions for Tables S1 to S2

Introduction

Figure S1. a) – b) The Net primary productivity distribution in the Northern Indian Ocean during January and July, respectively. Maps based on MODIS chlorophyll-a, SST, PAR satellite data, using the standard vertically Generalized Production Model (VGPM) (Behrenfeld and Falkowski, 1997) as the standard algorithm.

Fig. S2. Down core variations of PC1 and 2 scores, together with the percentages of major species in: (a-c) benthic assemblages 1, 2 and 3, respectively. The color-shaded intervals and abbreviations are the same as in Figure 2.

Fig. S3. Compilation of benthic $\delta^{13}\text{C}$ records obtained from MD77-191 (1254 m) (Ma et al., 2020), MD77-176 (1325 m) (Ma et al., 2019), RC12-344 (2140 m, Naqvi et al., 1994), MD97-2120 (1210 m, Pahnke and Zahn, 2005), and Core 905 (1580 m, Jung et al., 2009). The color-shaded intervals and abbreviations are the same as in Figure 2.

Fig. S4. Compilation of benthic $\delta^{13}\text{C}$, PC 1 scores and Cd_w obtained from core MD77-176 (BoB). The color-shaded intervals and abbreviations are the same as in Figure 2.

Table S1. Sub-bottom depth, Cd/Ca values ($\mu\text{mol/mol}$) of benthic foraminifera species from core MD77-191 (*Hoeglundina elegans*, *Cibicidoides pachyderma* and *Uvigerina peregrina*, *Globobulimina* spp.) and core MD77-176 (*Hoeglundina elegans*).

Table S2. Down-core depth and quantities of the major benthic foraminiferal species at core MD77-191.

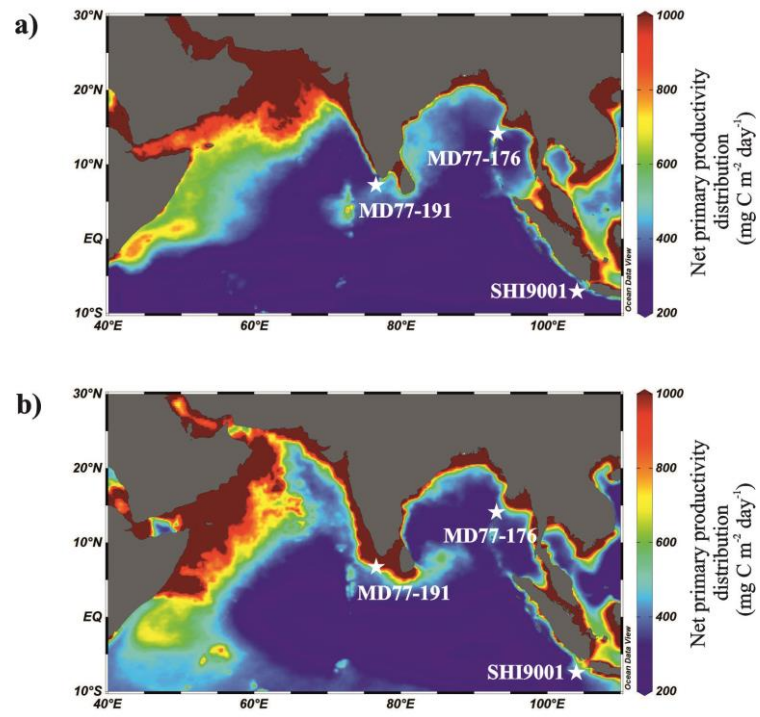


Fig. S1

(a)

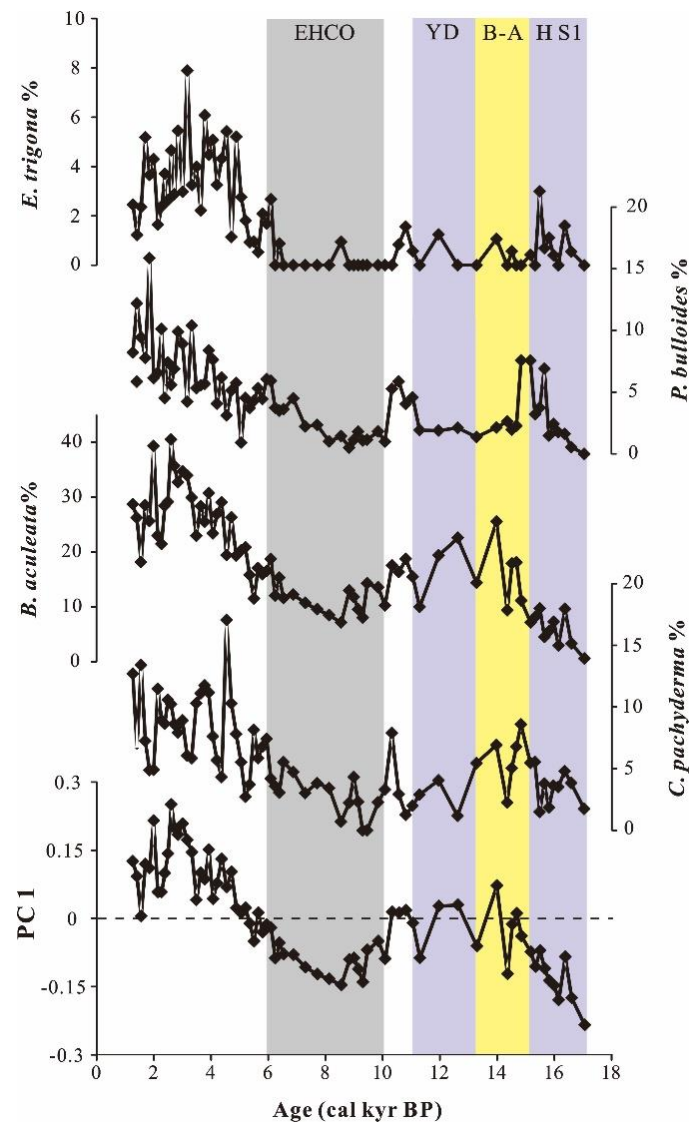


Fig. S2

(b)

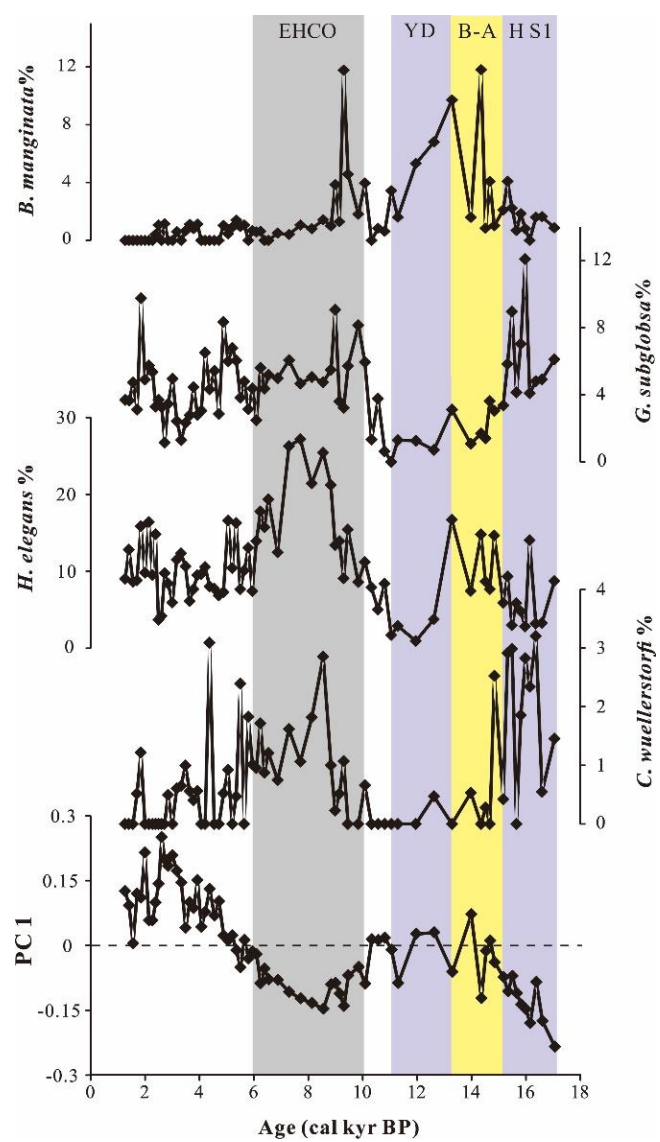


Fig. S2

(c)

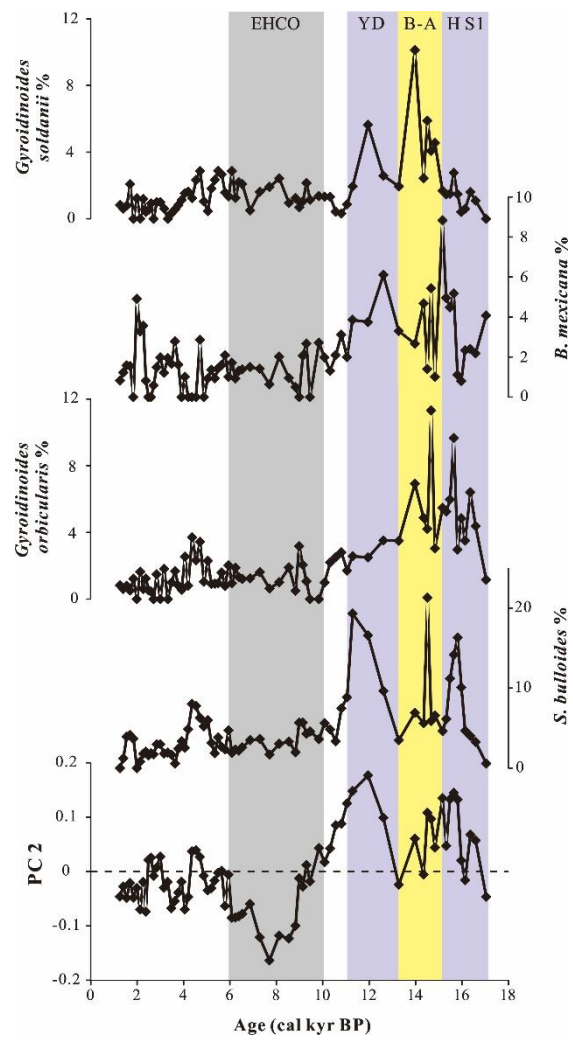


Fig. S2

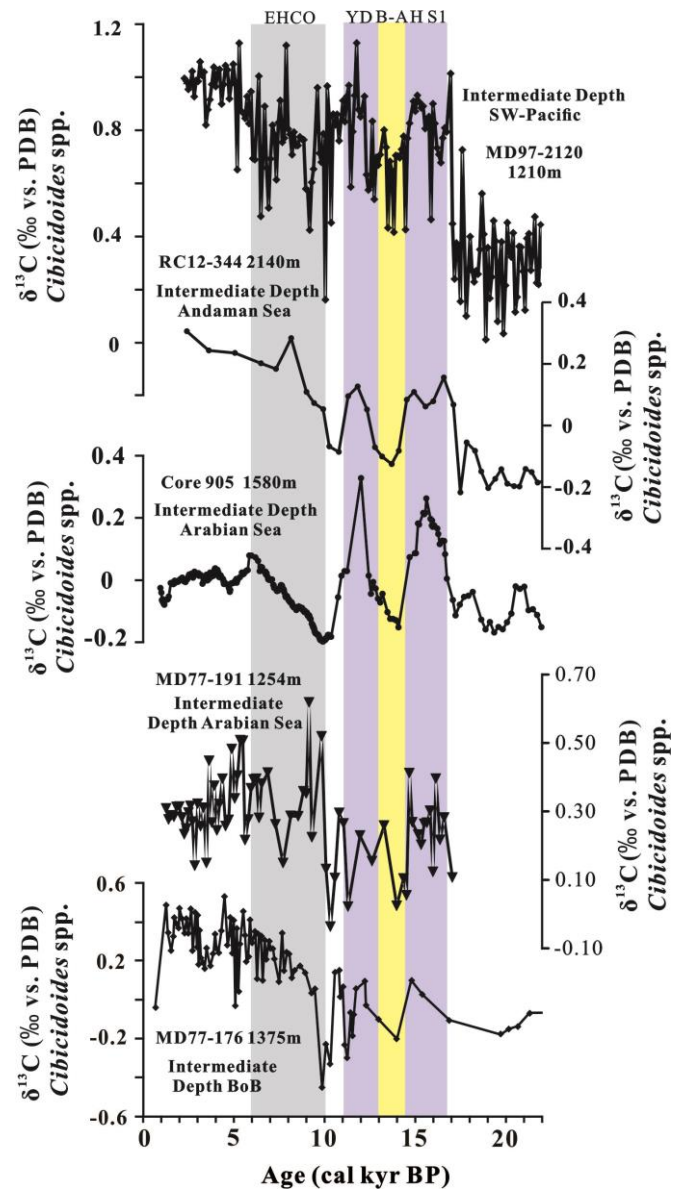


Fig. S3

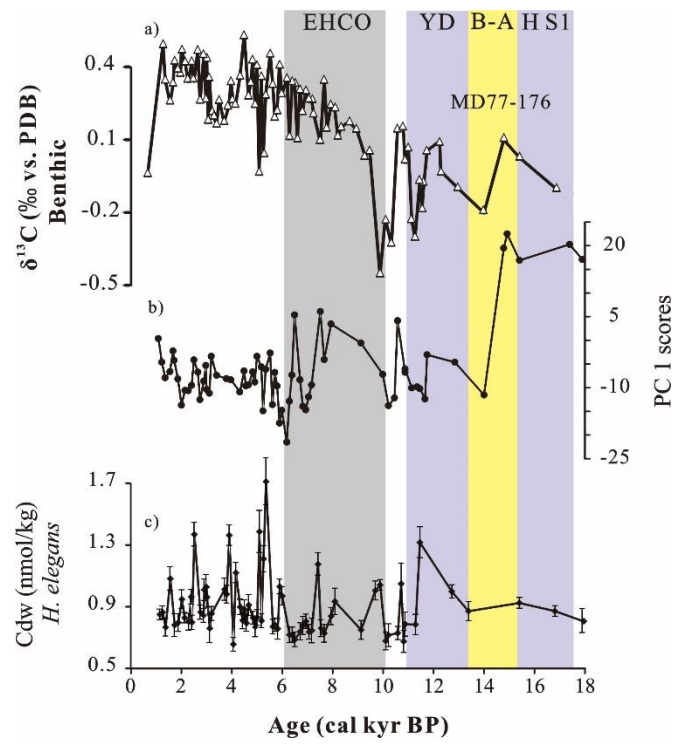


Fig. S4