

List of Tables

Tables	Page
1.1 New or export production ($\text{mmol Nm}^{-2}\text{d}^{-1}$) and f -ratio in different regions	7
1.2 Annual balance of carbon (Tg C yr^{-1}) for the Indian Ocean and sub-regions.....	12
2.1 Details of the cruises undertaken for this study	19
2.2 Sampling location along with dates of sampling during the Arabian Sea cruise in late winter (Feb-March 2004).....	24
2.3 Sampling depths during Feb-March 2004.....	25
2.4 Sampling location along with dates of sampling during the Arabian Sea cruise in early winter (Dec-2004)	26
2.5 Sampling depths during Dec-2004.....	26
2.6 Sampling location along with dates of sampling during the equatorial Indian Ocean cruise in pre-monsoon season (May-June 2005).....	27
2.7 Sampling depths during SK-220 (May-June 2005).....	28
2.8 Sampling Location along with dates of sampling during the Southern Indian Ocean cruise (Jan-April 2006).....	28
2.9 Sampling depths during the Southern Indian Ocean cruise (Jan-April 2006).....	29
2.10 Table showing overall precision, based on the standard measurements, during the analysis of the samples	40
2.11 Difference between duplicates	40
2.12 The locations of the stations for Iron enrichment experiments along with the date of sampling. IEE stands for Iron Enrichment Experiment.....	43
3.1 ^{15}N based productivity and f -ratios during Feb.-March 2004 (late winter monsoon) in the eastern Arabian Sea.....	72

Tables		Page
3.2	¹⁵ N based productivity and <i>f</i> -ratios during December 2004 (early winter monsoon) in the eastern Arabian Sea.....	83
3.3	Sea Surface Temperature (SST) and salinity a) during Feb.-March 2004 (late winter monsoon) b) during Dec-2004 (early winter monsoon) in the eastern Arabian Sea. PP1 to PP 11 represent stations during the late winter monsoon and PP'1 to PP'11 represent station during the early winter monsoon. PP is different from PP'	84
4.1	Nitrate, ammonium and urea uptake and the <i>f</i> -ratios at station IEE 1 under controlled and enriched iron conditions	124
4.2	Nitrate, ammonium and urea uptake and the <i>f</i> -ratios at station IEE 2 under controlled and enriched iron conditions	124