

Supplement

Table 1: Existing observing platforms monitoring the ITF over the past decade.

Platform	Sensors	Temporal Sampling	Location	Period of deployment	Program/Nation	References
Mooring	Full-depth V	hourly	Makassar Strait (2°51.9' S, 118°27.3' E)	1997-1998 2003 – 2011 2013 - present	NOAA MITF (USA, Indonesia)	Gordon et al. (2012; 2018); Susanto and Gordon (2005)
Moorings (3)	0-1400 m V, T and S	V- hourly T, S – 10 minute	Ombai Strait (8° 31.62'S, 125° 5.24' E) Timor Passage (8° 51,58'S, 127° 11.58'E; 9° 16.31 S 127° 21.64' E)	2011-2015	IMOS/CSIRO (Australia)	
Mooring	Full-depth V, T, S	V- hourly T, S – 10 minute	Australia continental shelf	2011-current	IMOS/AIMS (Australia)	
Mooring	Upper ocean V	V	Muluku Channel	2013-current	IOCAS China/LIPI Indonesia	Yuan et al., 2018
Mooring	Full depth v	hourly	Karimata Strait	2007-2015 (some gaps)	SITE: Indonesia, USA, China	Fang et al., 2010; Susanto et al., 2010; 2013; Wei et al., 2016; Wang et al., 2019; Wei et al., 2019
Mooring	Full depth v	hourly	Sunda Strait	2008-2015 (some gaps)	SITE: Indonesia, USA, China	Susanto et al., 2016; Li et al., 2018. Xu et al., 2018
Mooring	Upper v	hourly	Lombok Strait	2013-2015	Indonesia, USA, China	Wei et al., 2019.
XBT Frequently Repeated IX1	T(z=0-700 m)	Monthly /biweekly	Fremantle Australia to Sunda Strait	Occupied since 1983 to present	CSIRO/BOM Australia	Liu et al., 2015; Feng et al., 2018
XBT Frequently Repeated PX02	T(z=0-700 m)	Monthly /biweekly	Makassar Strait through Banda Sea to NW Australian shelf	Occupied since 1983 to present	CSIRO/BOM Australia	Wijffels et al., 2008
XBT Frequently	T(z=0-700 m)	Monthly /biweekly	Japan to NW Australia via	Occupied since 1986 to present	CSIRO/BOM Australia	Wijffels et al., 2008

Repeated IX22			Banda Sea and Savu Sea			
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