

International Buoy Programme for the Indian Ocean  
~ an Action Group of the Data Buoy Cooperation Panel ~



IOC

# Report of the IBPIO

2008/09 Intersessional Period

Presented to DBCP-XXV

28 September – 1 October 2009, Paris, France

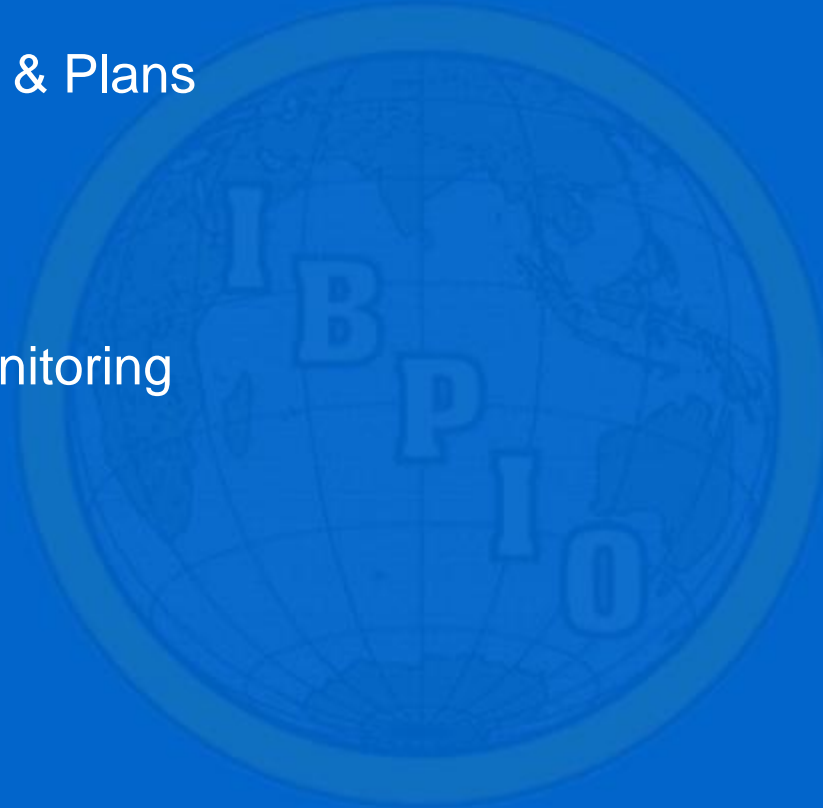
Graeme Ball  
Chairman IBPIO

with contributions from Jean Rolland



# Outline

- Members, Meetings & Committee
- Program Review & Plans
- Network Status
- Performance Monitoring





# Members, Meetings & Committee



# Members of the IBPIO

AGENCY		JOINED
Australian Bureau of Meteorology	(ABOM)	1997
Global Drifter Center, NOAA/AOML, USA	(GDC)	1997
Météo France	(MF)	1997
National Institute of Oceanography, India	(NIO)	1997
South African Weather Service	(SAWS)	1997
National Institute of Ocean Technology, India	(NIOT)	2001
Navoceano, USA	(NAVO)	2001
Eduardo Mondlane University, Mozambique	(EMU)	2007
Tropical Moored Buoy Implementation Panel	(TIP)	2007
Kenya Meteorological Department	(KMD)	2008
Indian National Centre for Ocean Information Services	(INCOIS)	2008
Malaysian Meteorological Department	(MMD)	EOI
Mauritius Meteorological Service	(MMS)	EOI

# IBPIO Programme Meetings

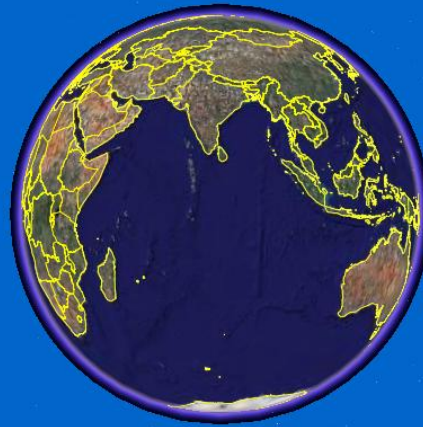
SESSION	DATE	LOCATION
IBPIO-1	Sept 1996	St Denis, La Reunion.
IBPIO-2	July 1997	Perth, Australia.
IBPIO-3	July 1998	Kuala Lumpur, Malaysia.
IBPIO-4	July 1999	Cape Town, South Africa.
IBPIO-5	Oct 2001	Perth, Australia (with DBCP-17).
IBPIO-6	July 2002	Cape Town, South Africa (with ISABP-IX).
IBPIO-7	Oct 2004	Chennai, India (with DBCP-20).
IBPIO-8	Oct 2005	Buenos Aires, Argentina (with DBCP-21).
IBPIO-9	Oct 2006	La Jolla, USA (with DBCP-22).
IBPIO-10	Oct 2007	Jeju, Republic of Korea (with DBCP-23).
IBPIO-11	Oct 2008	Cape Town, Republic of South Africa (with DBCP-24)
IBPIO-12	Sept 2009	Paris, France (with DBCP-25)

# IBPIO-XII (Paris, 2009)



# IBPIO Programme Committee

<b>Chairman</b>	Graeme Ball	Australian Bureau of Meteorology
<b>Vice Chairman</b>	Shaun Dolk	Global Drifter Center, NOAA/AOML, USA
<b>Programme Coordinator</b>	Jean Rolland	Météo France
<b>Members</b>	Johan Stander	South African Weather Service
	Mayra Pazos	Global Drifter Center, NOAA/AOML, USA
	V. Rajendran	National Institute of Ocean Technology, India
	Fialho Nehama	Eduardo Mondlane University, Mozambique
	Paul Freitag	Tropical Moored Buoy Implementation Panel
	Ali Mafimbo	Kenya Meteorological Department
	M. Ravichandran	Indian National Centre for Ocean Information Services
	James Duke	Naval Oceanographic Office, USA



# Programme Review & Plans





# Programme Review

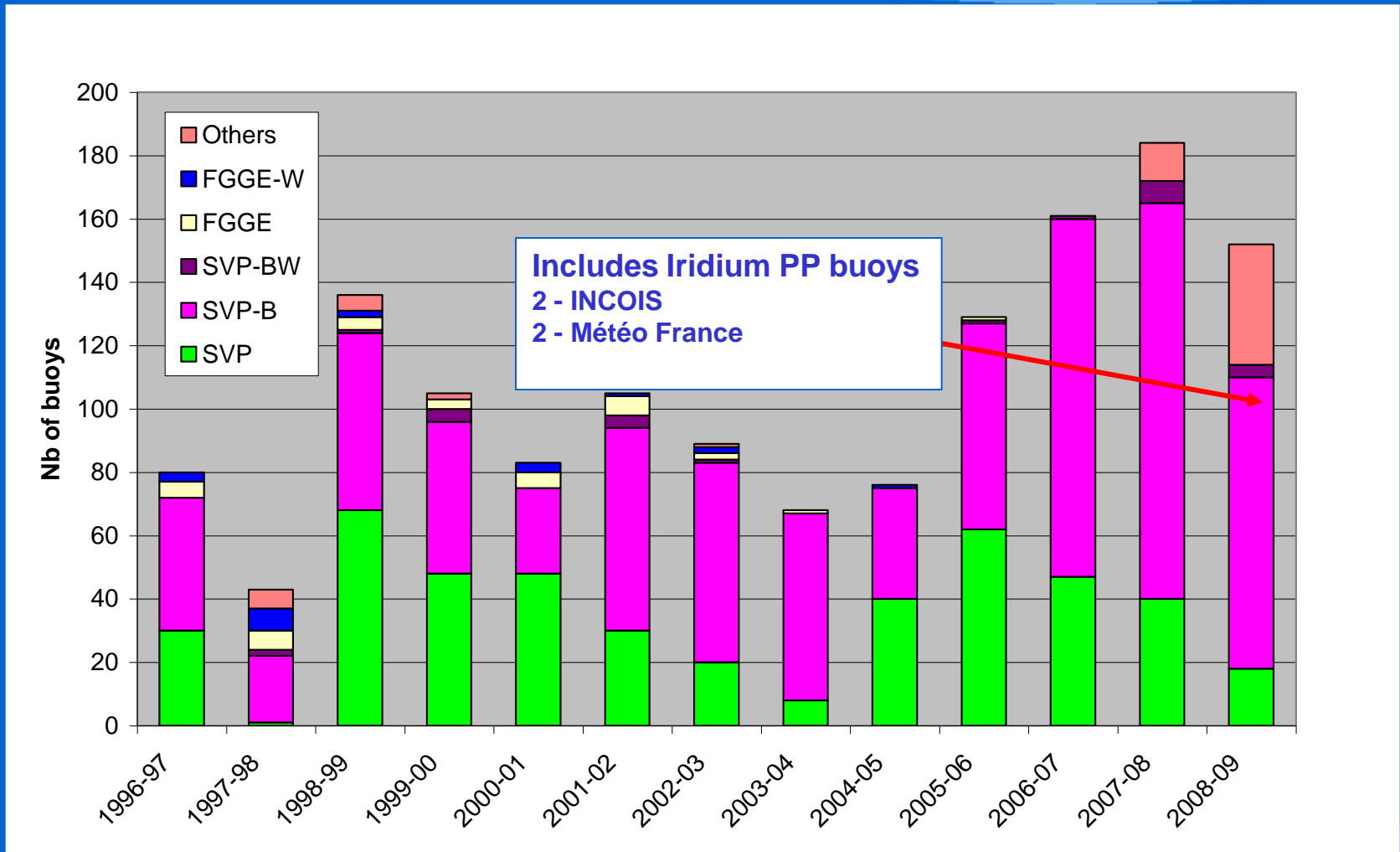
## IBPIO CONSOLIDATED BUOY DEPLOYMENT PLAN - 2008/09

AGENCY	AGENCY PROGRAMS					FOR GDP			TOTAL
	Moored	Other	SVP	SVP-B	SVP-BW	UPG	SVP	SVP-B	
GDC	0	0	55	26	0				81
ABOM	0	0	0	18	2	8	0	20	48
MF	0	0	0	2	0	30	0	0	32
NAVO	0	0	0	0	0	0	0	0	0
NIO	0	0	0	15	4	0	0	0	19
NIOT	40	0	0	0	0	0	0	0	40
SAWS	0	0	0	0	0	0	0	0	0
EMU	0	0	0	0	0	0	0	0	0
KMD	0	0	0	0	0	0	0	0	0
TIP	33	0	0	0	0	0	0	0	33
INCOIS	0	0	0	10	0	0	0	0	10
<b>TOTAL</b>	<b>73</b>	<b>0</b>	<b>55</b>	<b>71</b>	<b>6</b>	<b>38</b>	<b>0</b>	<b>20</b>	<b>263</b>

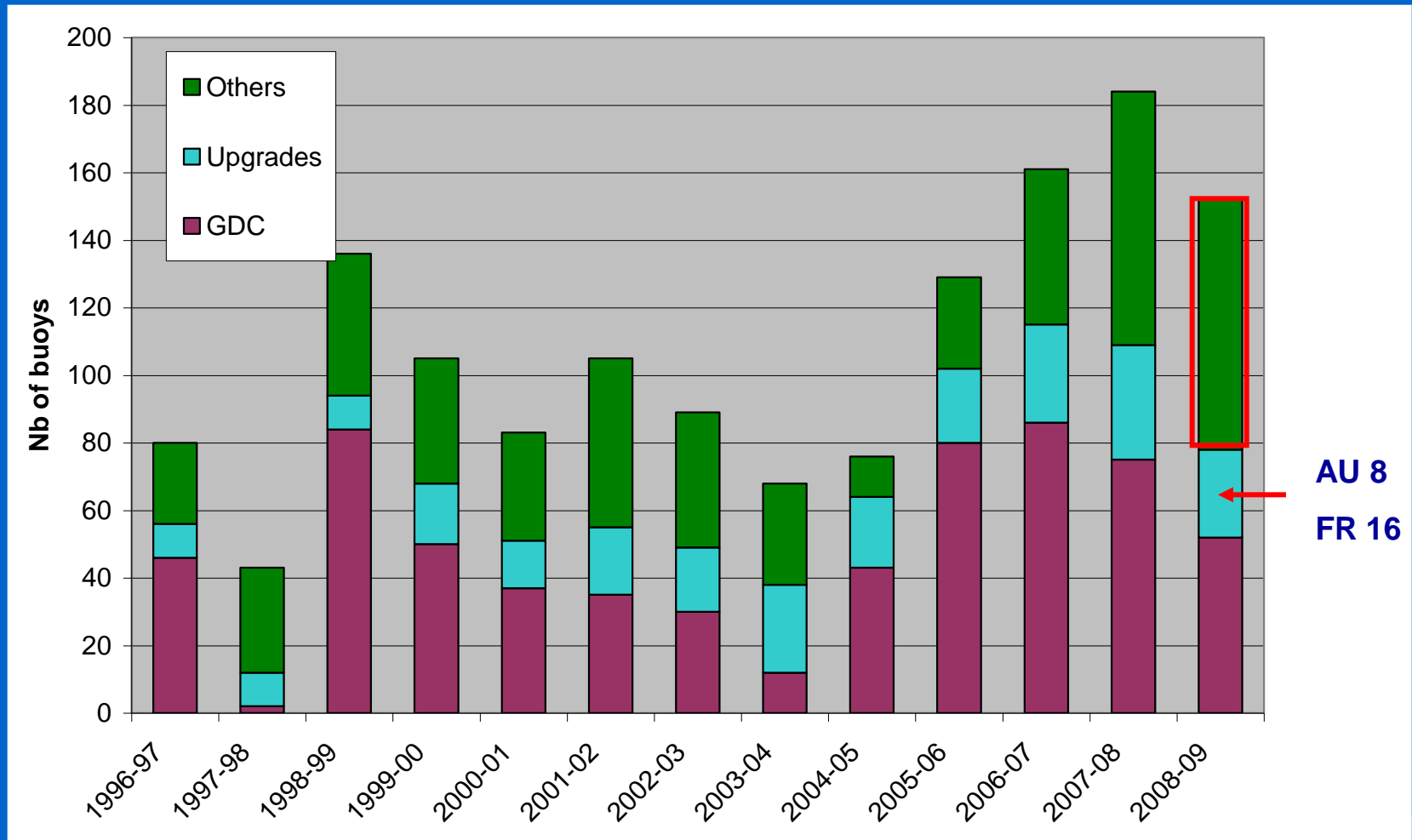
<u>SUMMARY</u>	
Moored	73
Other	0
SVP	55
SVP-B	129
SVP-BW	6

**263**

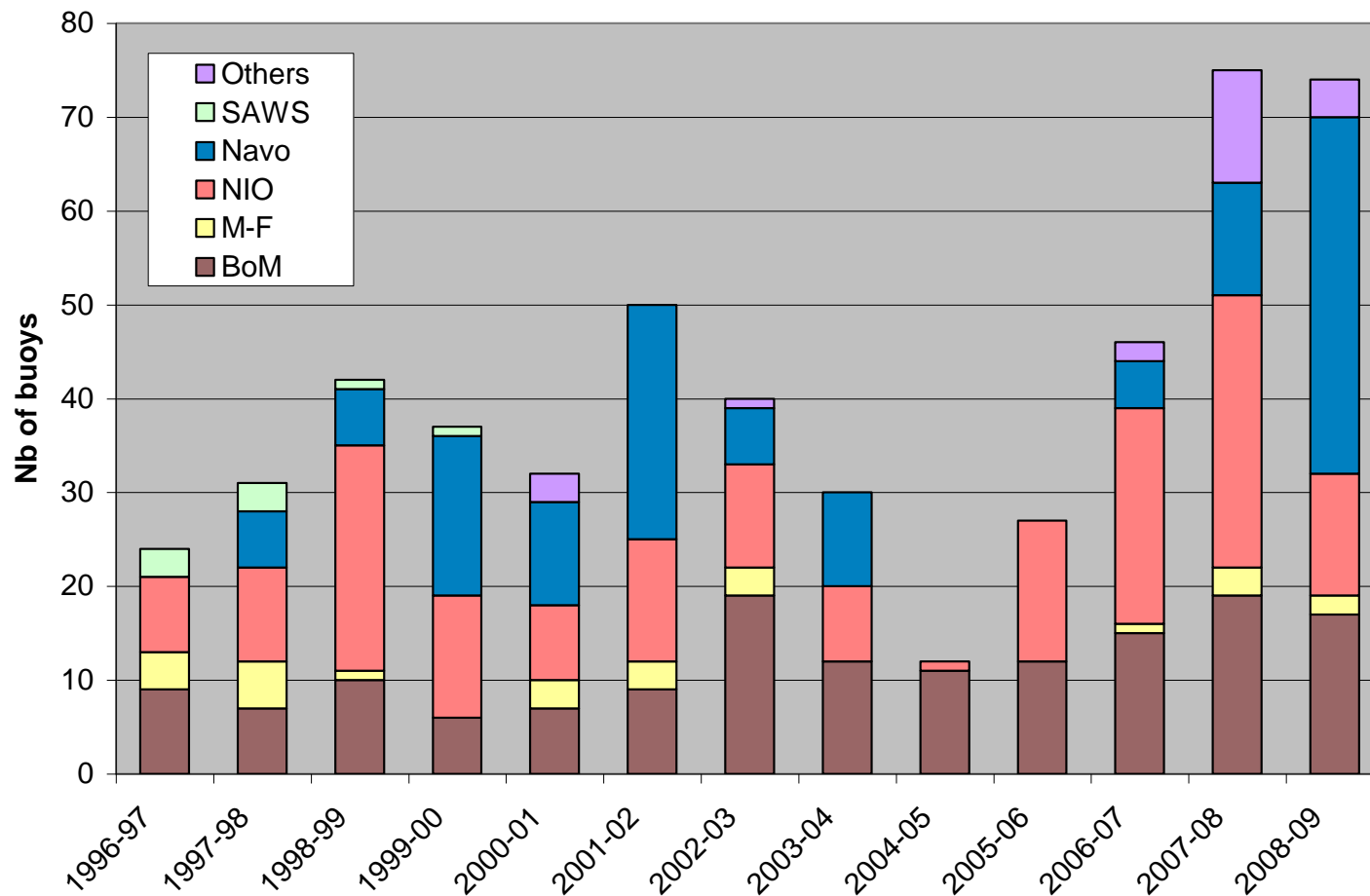
# Drifting Buoy Deployments by Type



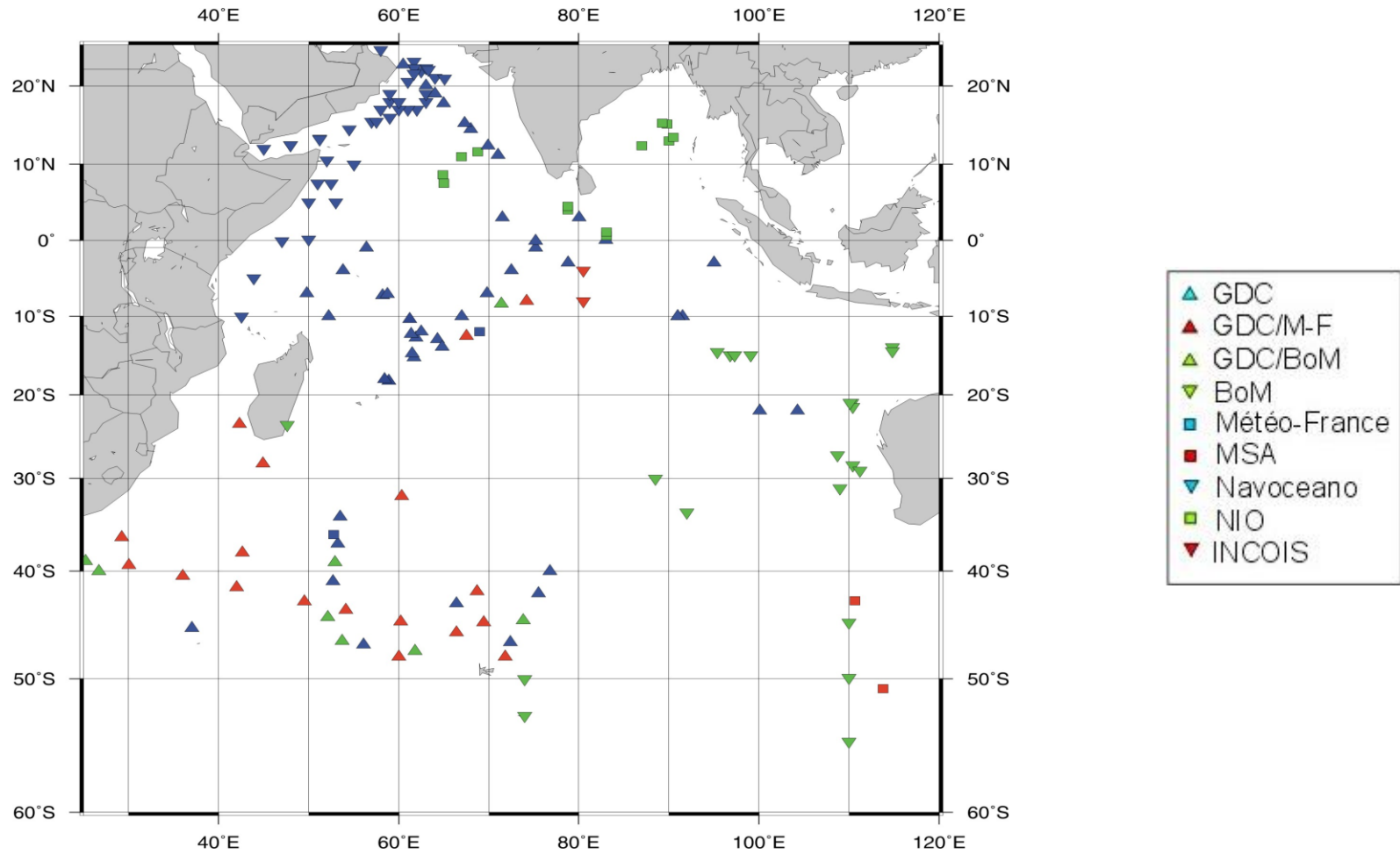
# Drifting Buoy Contributions to IBPIO



# Drifting Buoy Contributions by Others



# 2008/2009 Drifting Buoy Deployment Locations



# Programme Plans

## IBPIO CONSOLIDATED BUOY DEPLOYMENT PLAN - 2009/10

AGENCY	AGENCY PROGRAMS					FOR GDP			TOTAL
	Moored	Other	SVP	SVP-B	SVP-BW	UPG	SVP	SVP-B	
GDC	0	0	55	30	0				85
ABOM	0	0	0	18	2	8	0	20	48
MF	0	0	0	0	0	36	0	3	39
NAVO	0	0	0	0	0	0	0	0	0
NIO	0	0	0	0	15	0	0	0	15
NIOT	8	0	0	0	0	0	0	0	8
SAWS	0	0	0	0	0	0	0	10	10
EMU	0	0	0	0	0	0	0	0	0
KMD	0	0	0	0	0	0	0	0	0
TIP	8	0	0	0	0	0	0	0	8
INCOIS	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>16</b>	<b>0</b>	<b>55</b>	<b>48</b>	<b>17</b>	<b>44</b>	<b>0</b>	<b>33</b>	<b>213</b>

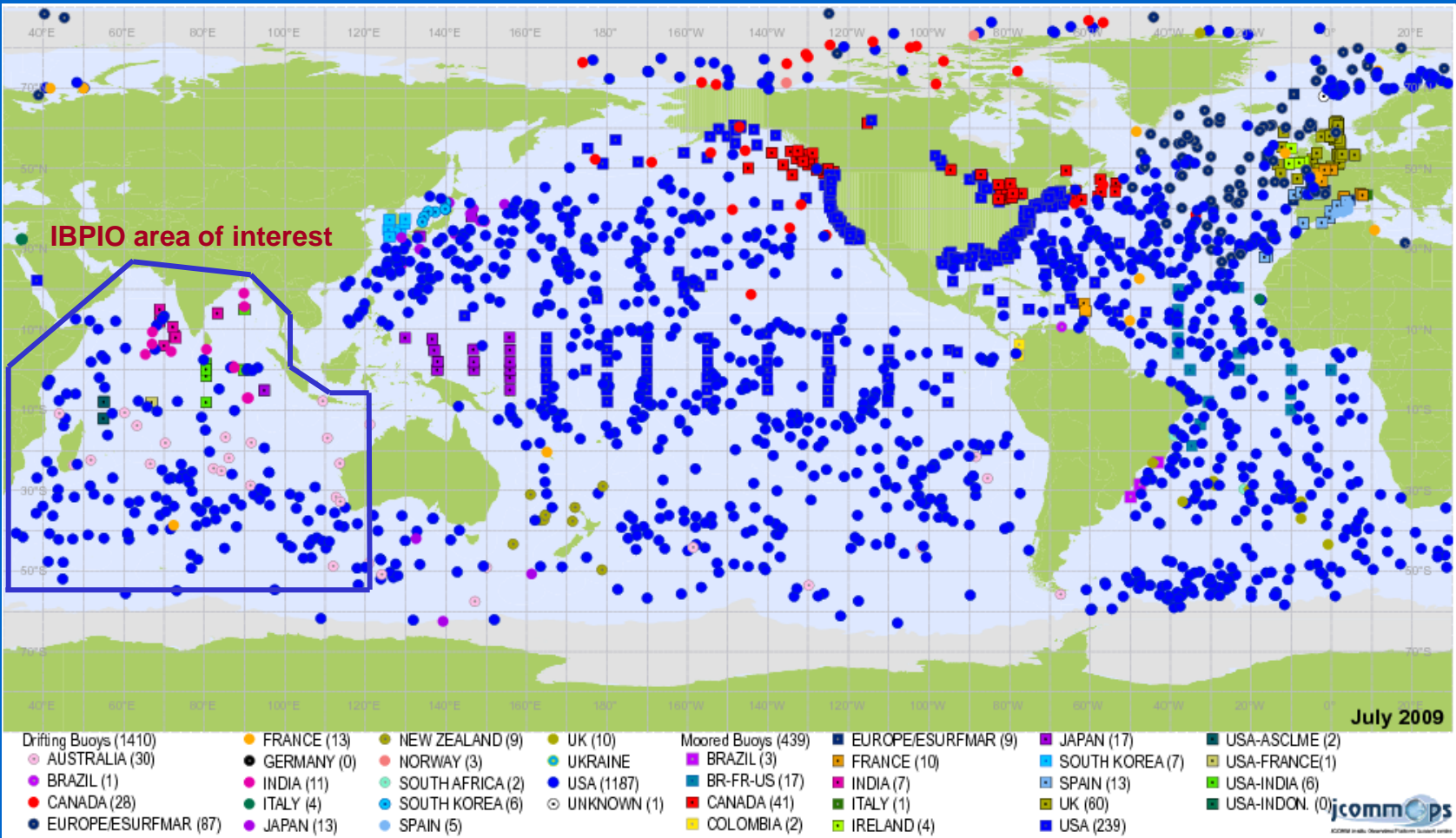
<u>SUMMARY</u>	
Moored	16
Other	0
SVP	55
SVP-B	125
SVP-BW	17



# Network Status



# Global Buoy Network





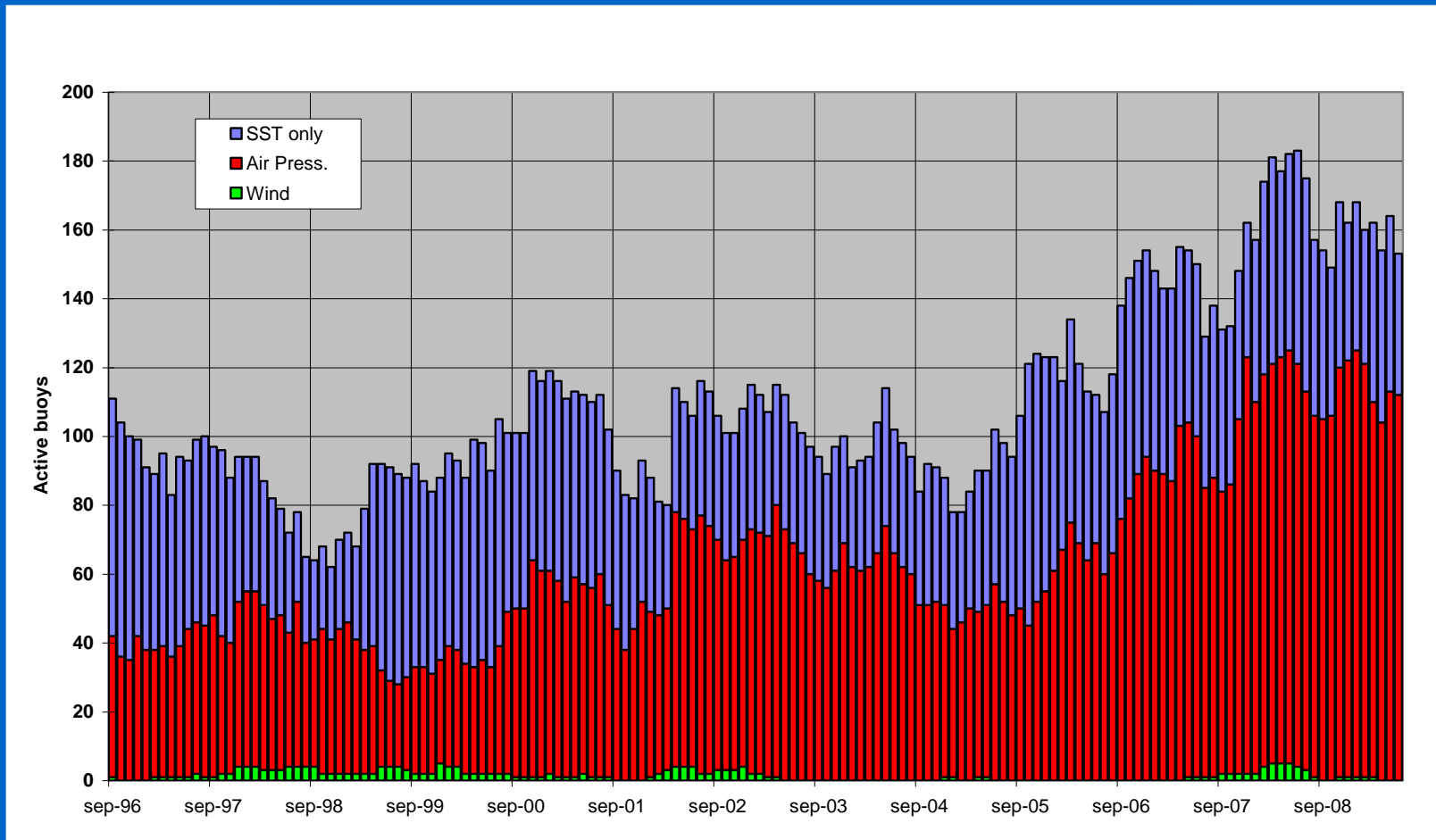
# Operational Drifting Buoys

Agency	SST	AP	Wind
ABOM	1	21	-
GDC	40	84*	-
SAWS	-	-	-
MF	-	-	-
NIO	-	7	-
INCOIS	-	-	-
<b>Total</b>	<b>41</b>	<b>112</b>	<b>0</b>

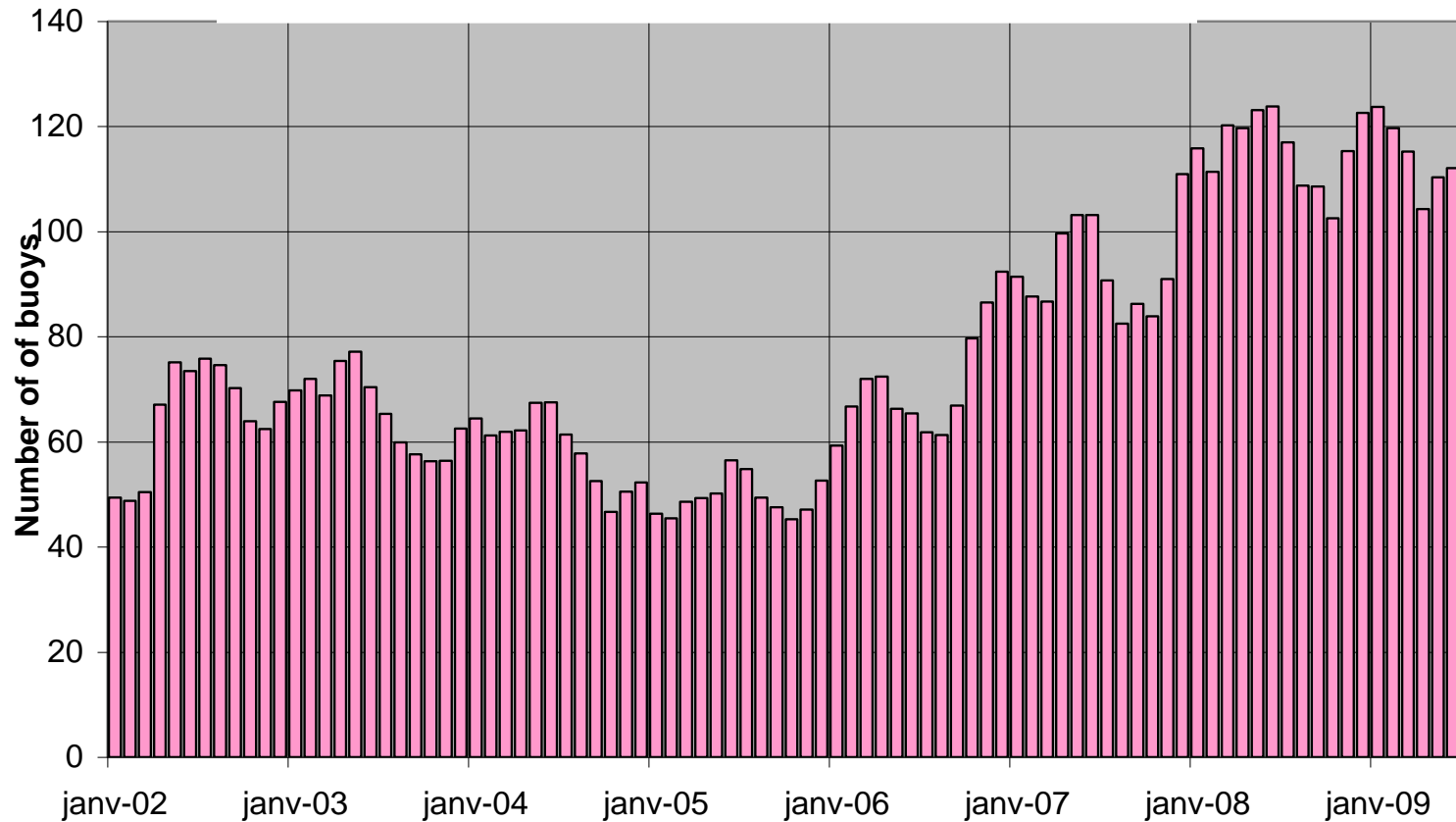
\* Includes upgrades from MF and ABOM

(as at 30 June 2009)

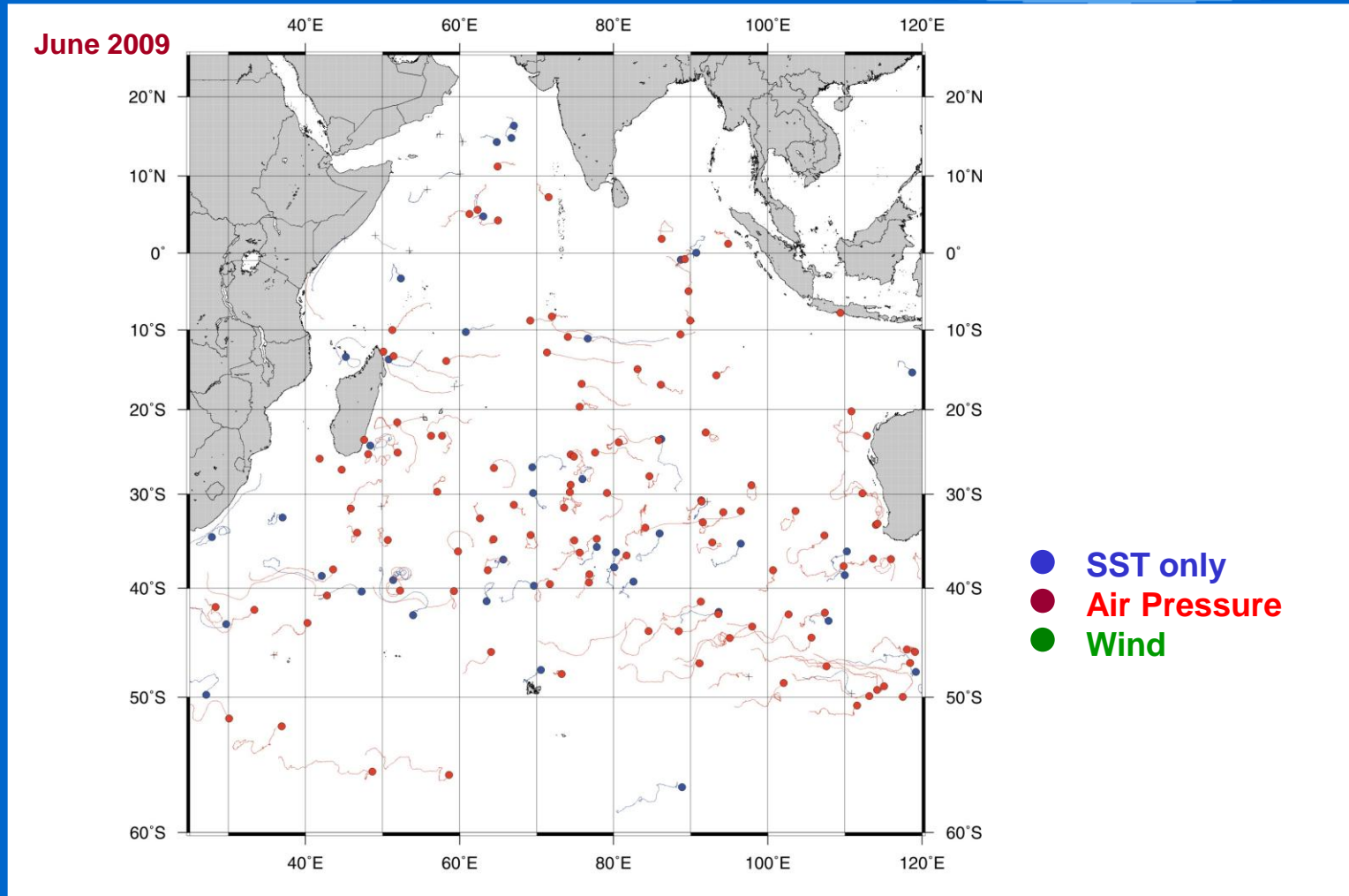
# Drifting Buoy Network



# Number of Operational MSLP Buoys



# Drifting Buoy Trajectories

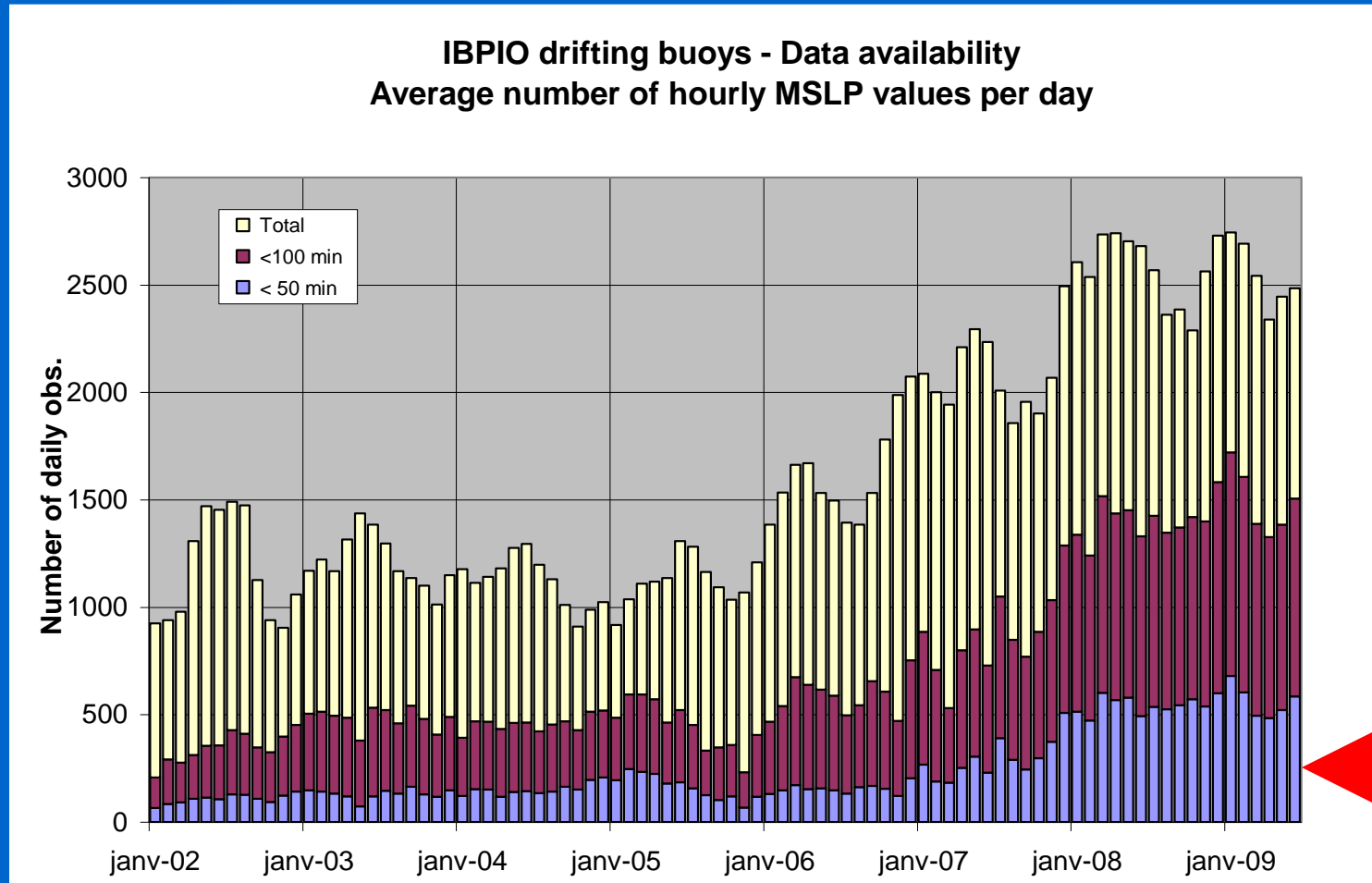




# Performance Monitoring

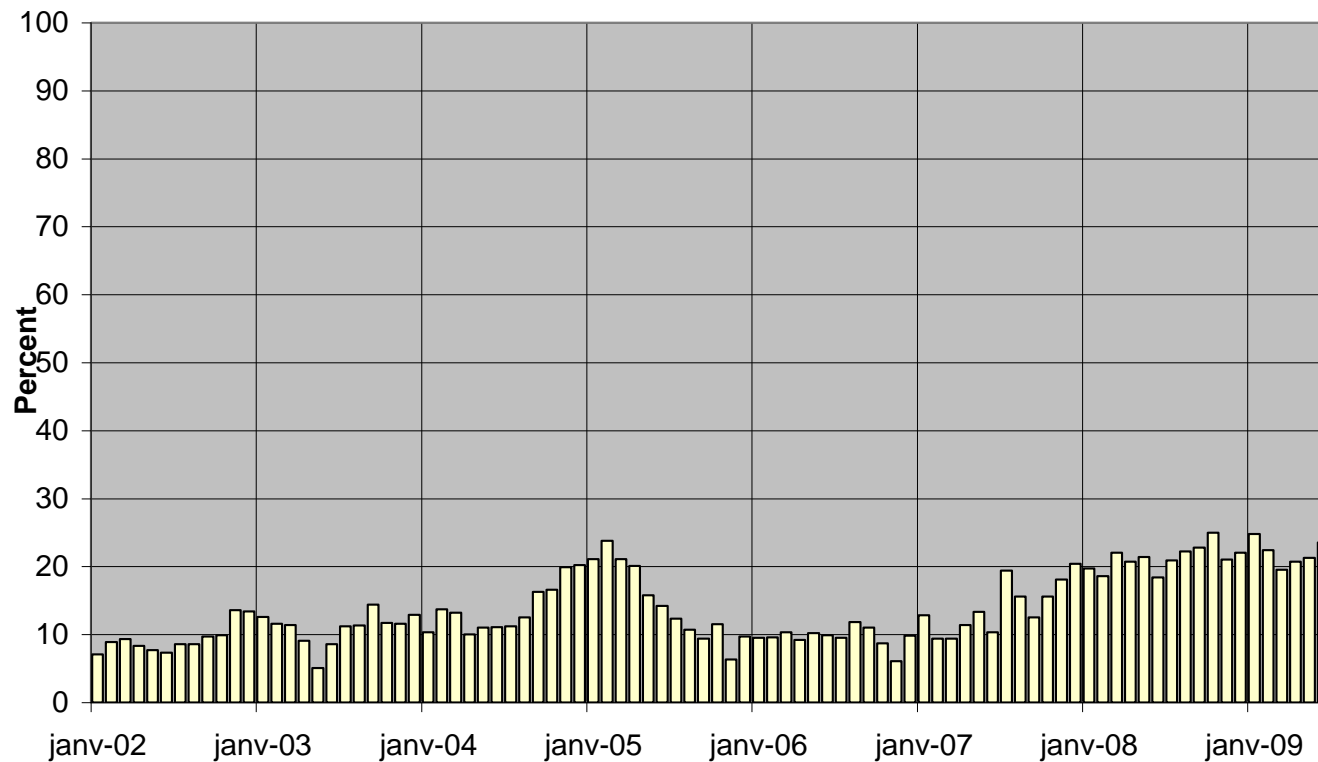


# Data Availability – Drifting Buoys



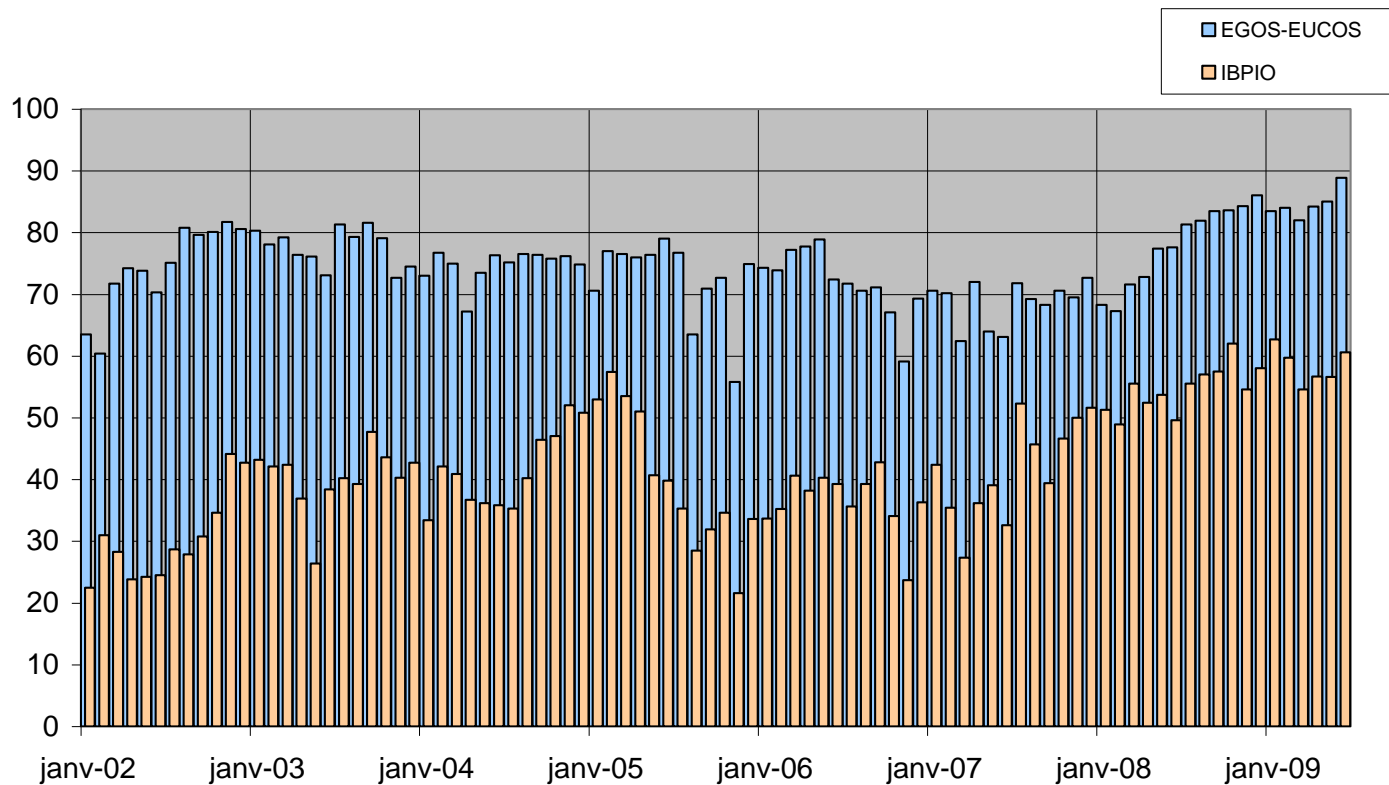
# Data Timeliness – Drifting Buoys

**IBPIO drifting buoys - Data timeliness**  
**Percentage of data arrived within 50 minutes**



# Data Timeliness Comparison – Drifting Buoys

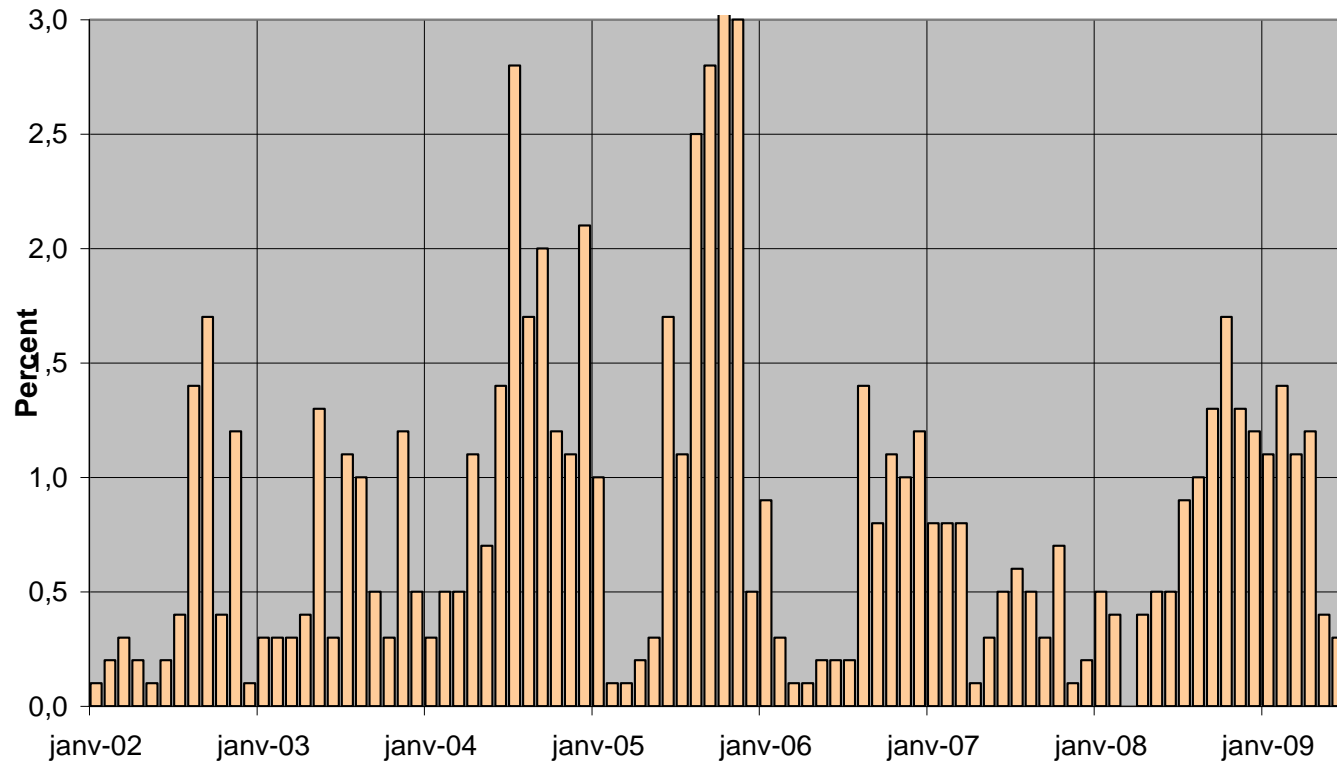
Data timeliness - Percentage of drifting buoys data arrived within 100 minutes



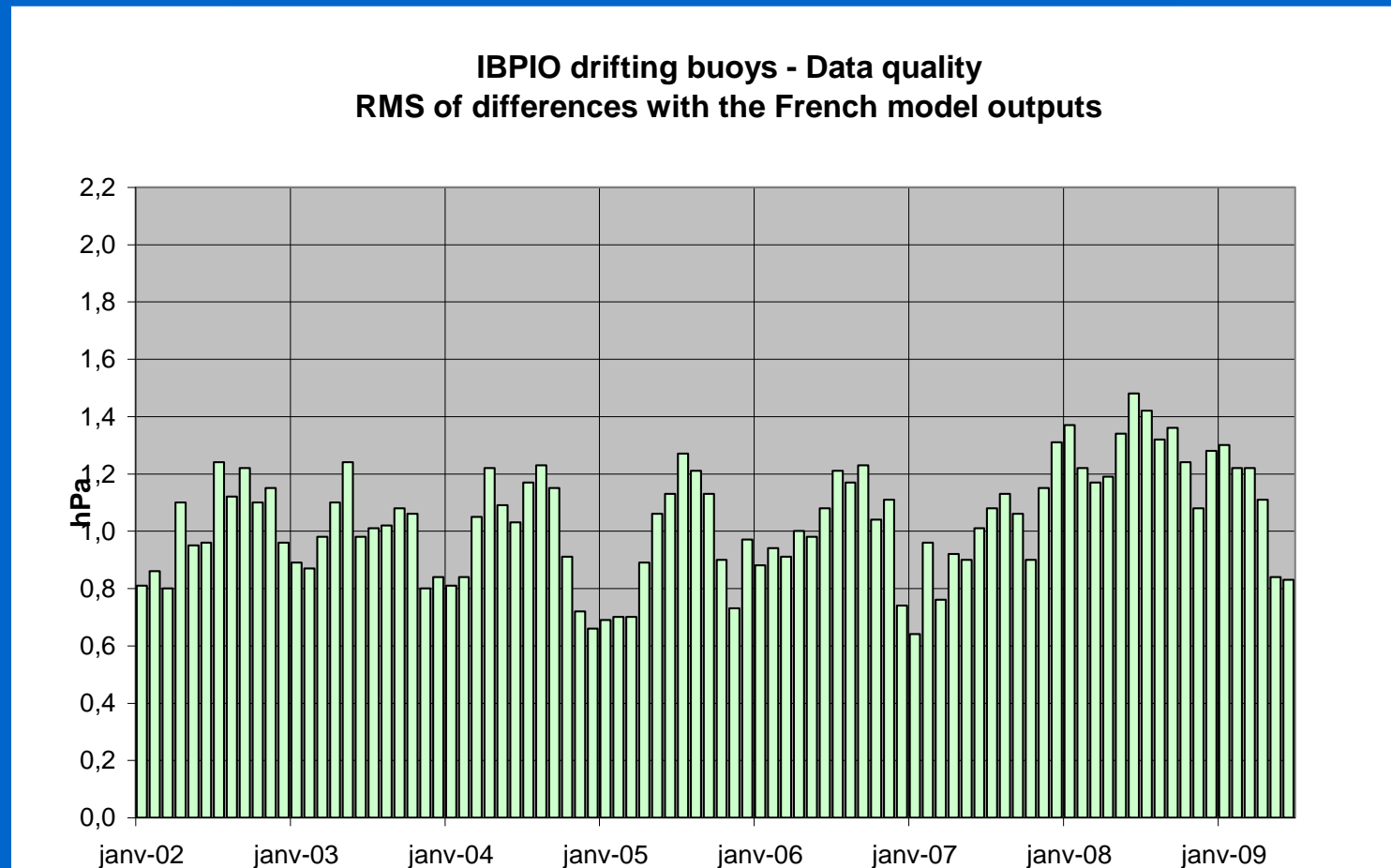


# Gross Errors – Drifting Buoys

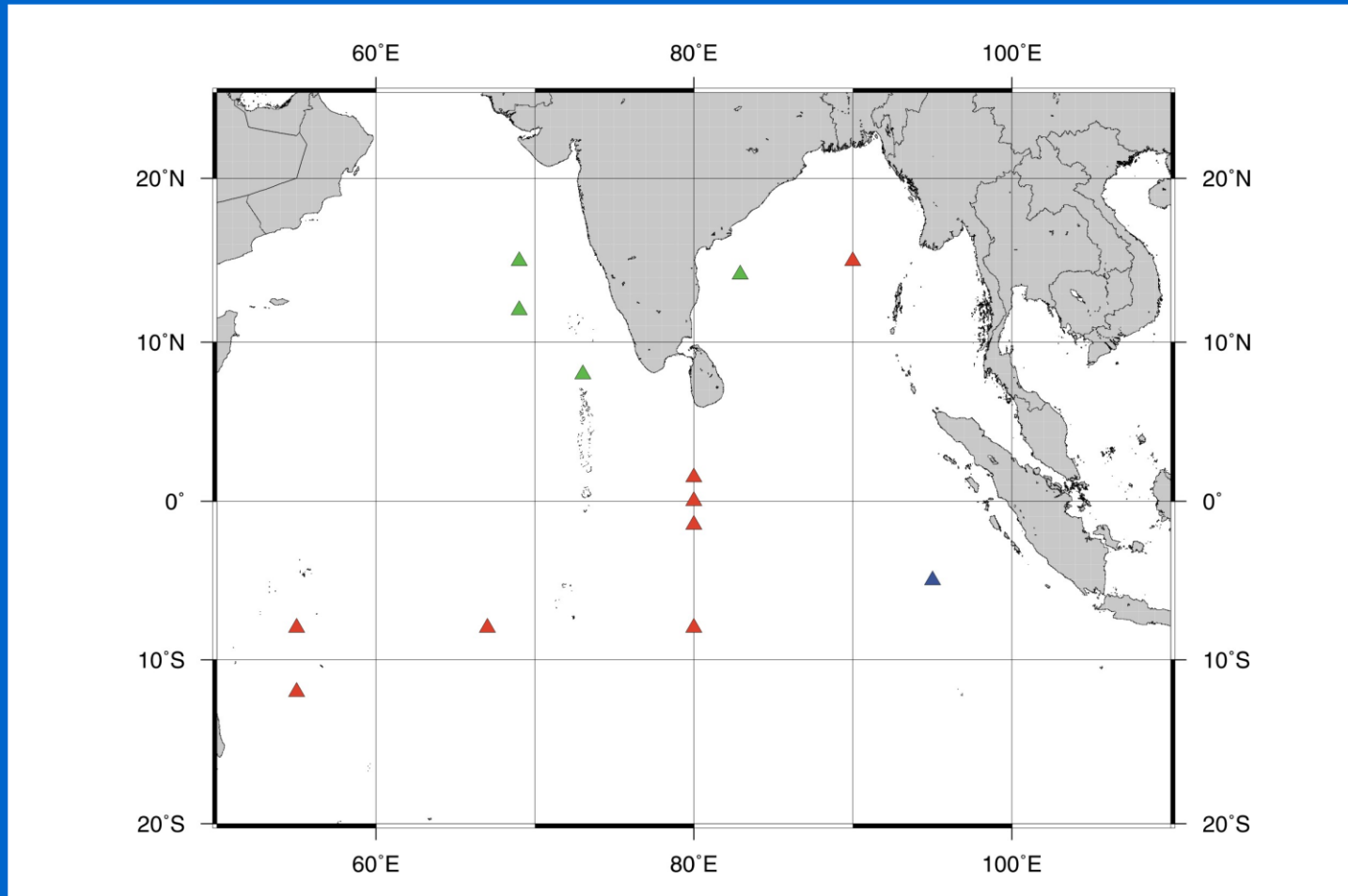
**IBPIO drifting buoys - Data quality**  
**Gross Errors of differences with the French model outputs**



# MSLP RMS Errors – Drifting Buoys



# Moored Buoys (on GTS – June 2009)



# Data Availability (NIOT)

NIOT moored buoys - Data availability  
Average number of hourly MSLP values per day

