

Proposed Ocean Surface Vector Wind Virtual Constellation

Stan Wilson, NOAA

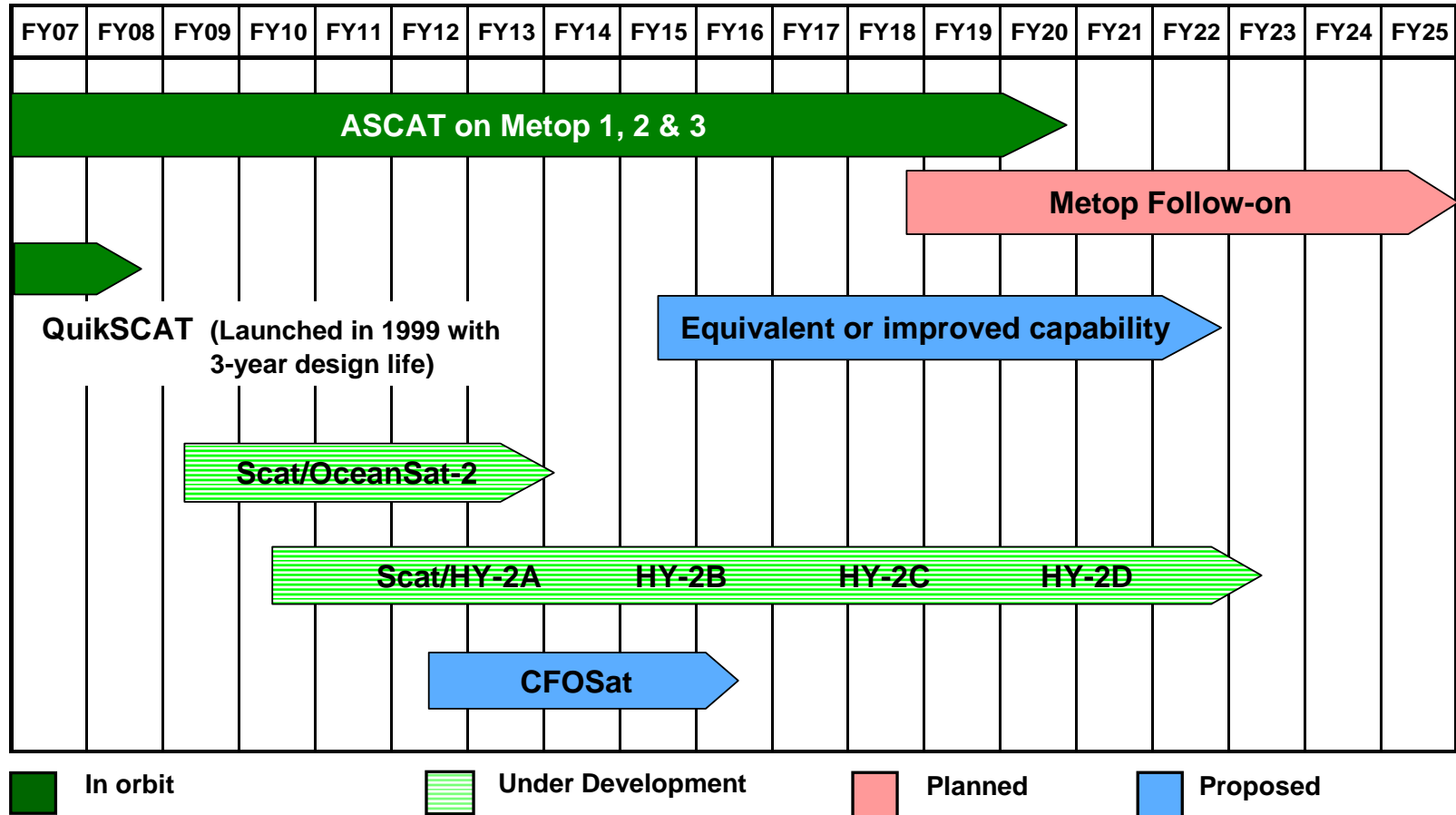
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Ocean Surface Vector Wind Constellation

- ***Goal***
 - ***Improve operational marine warnings and forecasts through the use of ocean surface vector winds (OSVW) from satellite scatterometry – together with significant wave height (SWH) from the OST Constellation***
 - ***Characterize the OSVW field for use in climate-quality data records***
 - ***Facilitate research related to the influence of wind forcing on the circulation of the oceans***
- ***Benefits***
 - ***Common products and formats***
 - ***Available in time for operational use***
 - ***Share experience in using those products***
 - ***Optimize global coverage in space and time***

OSVW Satellite Missions Present and Proposed



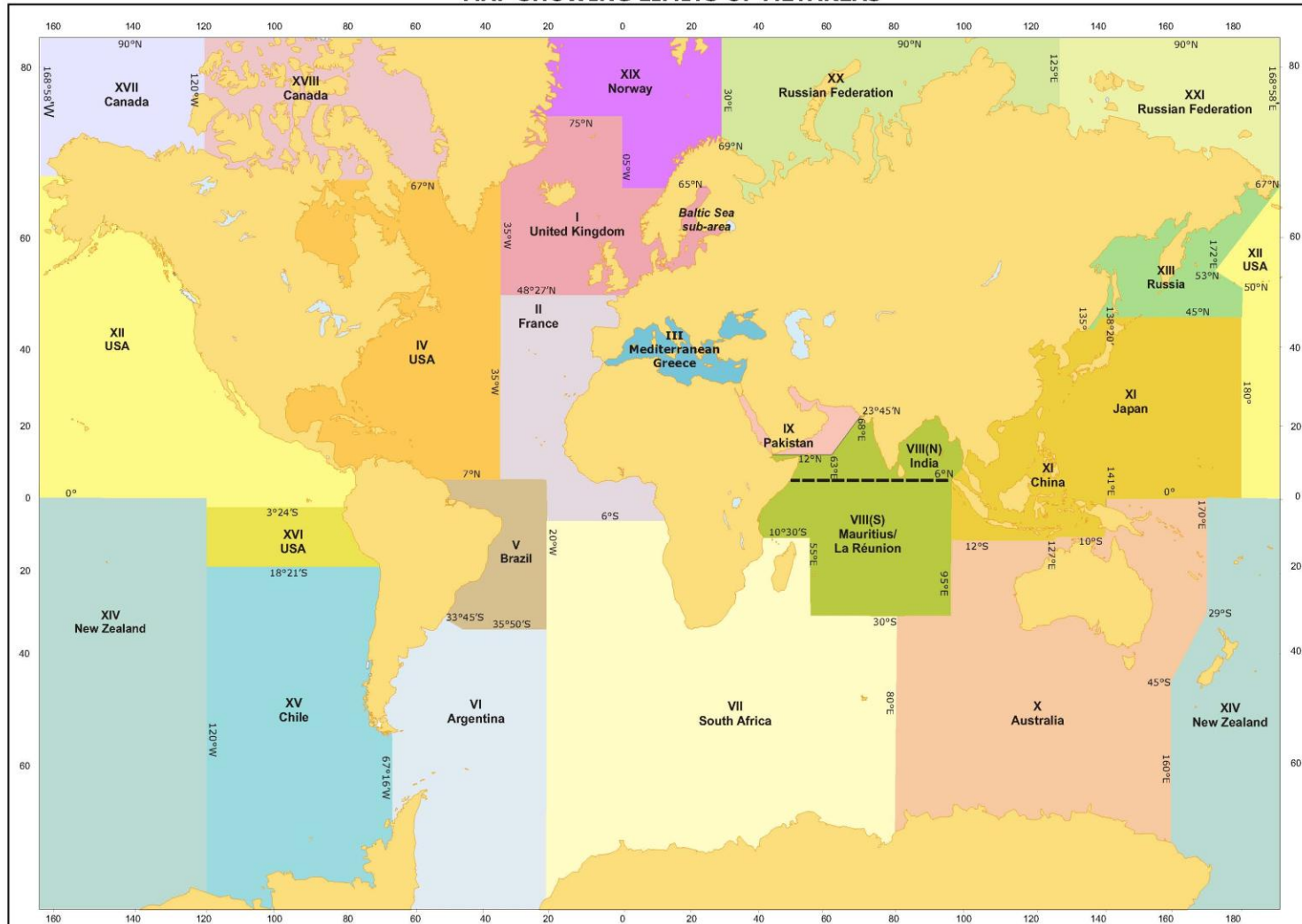
User Community Engagement

***Researchers have mechanisms to engage,
but it is challenging for operational users***

- 1. Focus initially on operational forecasting for Southern Hemisphere via provision of OSVW & SWH*
- 2. Assess whether GMDSS high-seas forecast centers have timely access to, and capability to use, products*
- 3. Existing GMDSS links will deliver forecasts to end users*
- 4. Resolve issues encountered in point 2 before proceeding further*
- 5. Extend to Northern Hemisphere & resolve issues*
- 6. Extend to WMO tropical cyclone forecast centers & ...*
- 7. Consider additional products...*
- 8. Consider other applications...*

Global Maritime Distress and Safety System

MAP SHOWING LIMITS OF METAREAS



Southern Hemisphere Major GMDSS Metareas	National Meteorological Service Responsible for Operational High-Seas Forecasting in the Metarea	Designated Contact for Metarea (contact not yet responded, or name of initial contact)	Are the following products are being used operationally; if so, how are they being received?							
			Surface Vector Winds				Significant Wave Height			
			QuikSCAT		ASCAT		Jason		ENIVSAT	
			GTS	FTP	GTS	FTP	GTS	FTP	GTS	FTP
V	<i>Brazilian Navy, Marine Meteorological Service</i>	<i>CDR Antonio Claudio</i>	N/A	---	---	---	---	---	N/A	---
VI	<i>Servicio Meteorológico Nacional, Argentina</i>	<i>Paula Etala, Navy</i>	N/A	<i>some</i>	<i>no</i>	<i>no</i>	<i>yes</i>	<i>no</i>	N/A	<i>no</i>
VII	<i>South African Weather Service</i>	<i>Mnikeli Ndabambi</i>	N/A	---	---	---	---	---	N/A	---
VIII South	<i>Mauritius Meteorological Services</i>	<i>Mohamudally Beebeejaun</i>	N/A	---	---	---	---	---	N/A	---
X	<i>Australian Bureau of Meteorology</i>	<i>Graham Warren</i>	N/A	<i>yes</i>	<i>no</i>	<i>yes</i>	<i>yes</i>	<i>no</i>	N/A	<i>yes</i>
XIV North	<i>Fiji Met Service</i>	<i>Alipate Waqaicelua</i>	N/A	---	---	---	---	---	N/A	---
XIV South	<i>Met Service of New Zealand</i>	<i>Steve Ready</i>	N/A	<i>yes</i>	<i>no</i>	<i>yes</i>	<i>no</i>	<i>no</i>	N/A	<i>no</i>
XV	<i>Chilean Navy, Hydrographic & Oceanographic Service</i>	<i>LCDR Andrés Enríquez</i>	N/A	---	---	---	---	---	N/A	---

Measures of Success

- *Timely data access*
 - *ISRO/EUM/NOAA discussions re: Oceansat-2 SVW*
 - *SOA not yet discussing HY-2 SVW and SWH*
- *One-stop shopping*
 - *NOAA to consider putting QuikSCAT SVW onto GTS*
 - *ESA to consider putting ENVISAT SWH onto GTS*
- *Operational utilization*
 - *NOAA/EUM/ISRO to consider organizing operational workshop*
- *Improved on-orbit capabilities*
 - *NOAA and EUM considering follow-ons to QuikSCAT and ASCAT*

Recommended Actions

- *CEOS/SIT – encourage establishment of OSVW Constellation*
- *CEOS/SIT – invite SOA to participate in CEOS and engage in discussions regarding timely data access*
- *ISRO/EUM/NOAA/SOA – consider joint discussions on common products and formats*
- *NOAA – consider putting QuikSCAT SVW onto GTS just as EUM has done for ASCAT*
- *ESA – consider putting ENVISAT SWH onto GTS just as MétéoFrance has done for Jason*
- *NOAA/EUM/ISRO – consider organizing joint workshop for operational users*
- *NOAA and EUM – consider follow-on options to improve performance and maximize coverage*



SIT-22

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Backup Slides

Statements of Support

- **WMO Executive Council (June 2008)**
 - *...requested that...ocean surface met...obs...be routinely collected and disseminated via the GTS...to further improve wave models.....requested...participation of space agencies in that scheme*
 - *...recognized that severe coastal inundation...from extreme sea state conditions occurred in many parts of the world...where coastal and ocean surface met...observations were still limited or absent.....requested JCOMM...to address this...as a matter of priority*
- **Peter Dexter, Australian BoM, Co-President, JCOMM**
 - *...scatterometer and altimeter products should be available on the GTS*
- **Jean-Michel Lefèvre, Météo-France, JCOMM & GLOBWAVE**
 - *Interest in...satellite data for wave application is growing...very few in situ data are available in open oceans*

Timely sharing of data enables a significant reduction in revisit time

