

Weather Forecast for Indian Ocean Region– February

1. Indian Ocean Region (IOR) is divided into four broad region as shown in **Figure 1** for providing a comprehensive weather forecast. Forecast for each region covers synoptic discussion, surface winds, wave height & direction and surface currents. The region wise forecast for the month of February is as follows:-

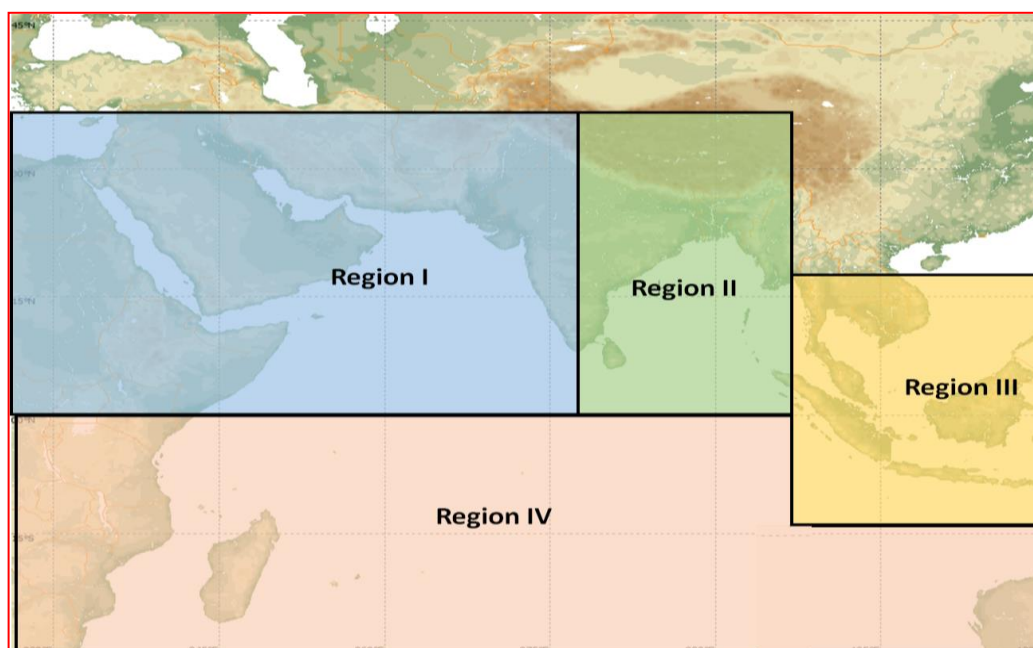


Fig 1. Forecast Regions

(a)	<u>Region I (Arabian Sea)</u>	
	<u>Synoptic Discussion.</u> North Arabian sea is characterized by the passage of Western disturbances and induced Lows across northern latitudes from West to East, which result in moderate winds and fall in temperature to North of 20°N. In this month, the average pressure in the SE Arabian sea is about 1011 hPa. Tropical disturbances do not occur in the Arabian Sea in this month.	
	<u>Region I</u>	<u>Weather Parameter</u>
	<u>Forecast</u>	
Arabian Sea	Surface winds	NNW-NNE/ 05-10 knots in northern Arabian sea N-NNE/ 05-10 knots in southern Arabian sea
	Wave height & direction	NNW-N/ 0.5 – 0.8 m in northern Arabian sea N-NNE/ 0.5 – 1.0 m in southern Arabian sea
	Surface Current	SW-WNW/ 0.4- 0.6 knots in northern Arabian sea W-WNW/ 0.5 -1.0 knots in southern Arabian sea
Gulf of Oman	Surface winds	NW/ 05-10 knots in western section of Gulf NW/ 05-10 knots in eastern section of Gulf
	Wave height & direction	NW/ 0.4 - 0.6 m in western section of Gulf NNW/ 0.5 m in eastern section of Gulf
	Surface Current	S-SSW/ 0.2 knots in western section of Gulf WSW/ 0.4 knots in eastern section of Gulf

<u>Region I</u>	<u>Weather Parameter</u>	<u>Forecast</u>
Gulf of Aden	Surface winds	E-SE/ 05-10 knots in western section of Gulf ENE-E/ 05-10 knots in eastern section of Gulf
	Wave height & direction	SE/ 1.0 m in western section of Gulf ENE/ 0.5 m in eastern section of Gulf
	Surface Current	WNW/ 0.5 knots in western section of Gulf WSW/ 0.5 knots in eastern section of Gulf
Equatorial Indian Ocean	Surface winds	NNE/05-10 knots between 45 °E -77°E N-NNE/ 05-10 knots between 77 °E -100 °E
	Wave height & direction	NW-N/ 0.5 -1.0 m between 45 °E - 77°E N-NE/ 0.5 – 1.0 m between 77 °E -100 °E
	Surface Current	E / 0.5 knots between 45 °E - 77°E WNW-WSW/ 0.3-0.5 knots between 77 °E -100 °E
(b)	<u>Region II (Bay of Bengal)</u>	
<p><u>Synoptic Discussion.</u> Fair weather generally prevails over North Bay, Central Bay and adjoining coastal areas. The weather over South Bay sometimes deteriorate due to passage of lower tropospheric easterly waves which move from east to west over the lower latitudes, giving rise to rainfall activity between 0 – 10°N. Tropical cyclones may occur at any time of the year, but are least frequent in the month of February over this region . The mean sea surface temperature in Bay of Bengal reaches a minimum of 24 to 25°C in February. Throughout the region, deviations from the mean temperature are small and seldom exceed 2° or 3°C.</p>		
<u>Region II</u>	<u>Weather Parameter</u>	<u>Forecast</u>
Andaman Sea	Surface winds	N-NE / 05-10 knots in northern section NE / 05-10 knots in southern section
	Wave height & direction	NNE / 0.5 m in northern section ENE / 0.5-1.0 m in southern section
	Surface Current	W-WSW /0.5-1.0 knots in northern section WNW/ 0.5-1.0 knots in southern section
Bay of Bengal	Surface winds	N-ENE/ 05-10 knots in northern Bay of Bengal NE/ 05-10 knots in southern Bay of Bengal
	Wave height & direction	N-NNE/ 05 – 10 knots in northern Bay of Bengal NNE/ 1 – 1.5 m in southern Bay of Bengal
	Surface Current	NE-E/ 0.4 - 0.6 knots in northern Bay of Bengal SSW-WSW/ 0.5 -1.0 knots in southern Bay of Bengal

(c)	<u>Region III (Southeast Asia)</u>		
	<p><u>Synoptic Discussion.</u> During February, the mean sea level pressure values continue to be high over the northern parts (island territories) and weak pressure gradient of the order of 4-6 hpa is observed during this month. In general, isolated localised thunderstorms/showers due to convective activity are seen over Sumatra island and Straits of Malacca. Occurrence of low visibility conditions with fog is rare over the open sea area, although visibility may fall to during thunderstorms. The swell waves of 1.0 – 2.0 m height from N and NE direction are a common phenomenon over the region. The mean air temperature over open waters lies between 26.5°C and 28.5°C throughout the year.</p>		
	<u>Region III</u>	<u>Weather Parameter</u>	<u>Forecast</u>
	Southern parts of South China Sea	Surface winds	NE/ 12- 17 knots
		Wave height & direction	NE/ 1-1.5 m
		Surface Current	S-SSW/ 0.4-0.7 knots
	Malacca Strait	Surface winds	NE/5-10 knots in northern strait NW-N/ 5-10 knots in southern strait
		Wave height & direction	ENE-NNE/0.5-1.0 m in northern strait N/ 0.5-1.0 m in southern strait
		Surface Current	WNW / 0.5-1.0 m in northern strait SSE / 0.5-1.0 m in southern strait
	Southern Sulu Sea - Northern Celebes Sea	Surface winds	NE / 10-15 knots
Wave height & direction		NE /0.5 – 1.0 m	
Surface Current		W / 0.4-0.6 knots	
(d)	<u>Region IV (South Indian Ocean)</u>		
	<p><u>Synoptic Discussion.</u> In the month of February, the high pressure area is seen between 35 - 40°S. Pleasant weather is generally witnessed in this belt, but isolated showers may occur, especially during the passage of any system. Below the sub-tropical high pressure belt, there is a zone of strong westerly winds associated with precipitation over the region.</p> <p>Tropical disturbances are common occurrence during these months. They originate around 15°S and 95°E and move in a westerly direction. Some of them recurve southerly/ south-westerly and further south-easterly direction beyond 15°- 20°S and have a tendency to weaken and dissipate over the sea.</p>		
	<u>Region IV</u>	<u>Weather Parameter</u>	<u>Forecast</u>
	South Indian Ocean	Surface winds	E-ESE/12-17 knots
		Wave height & direction	E-ESE/1.8-2.3 m
Surface Current		W-WSW/0.5 knots	

Region IV	Weather Parameter	Forecast
West Australian coast	Surface winds	SSE/ 12-17 knots in western coast S-SSW/10-15 knots in north western coast
	Wave height & direction	SSE/ 1.8-2.3 m in western coast S-SW/ 1.5 – 2.0 m in north western coast
	Surface Current	SSE/ 0.5 knots in western coast WSW-SSW/ 0.8-1.0 knots in north western coast
Somali Coast	Surface winds	NE-E/ 10-15 knots
	Wave height & direction	E/1.0-1.5 m
	Surface Current	SSW/ 0.5 – 1.0 knots
Central African Coast/ Indian Ocean	Surface winds	ENE - E/ 10-15 knots
	Wave height & direction	NE-E/ 0.5-1.0 m
	Surface Current	S-SSW/ 0.8-1.5 knots
Mozambique Channel	Surface winds	NNW-NNE/ 05-10 knots
	Wave height & direction	S-SSE/ 2.0 – 2.5 m
	Surface Current	S-SSE/ 0.5-1.0 knots

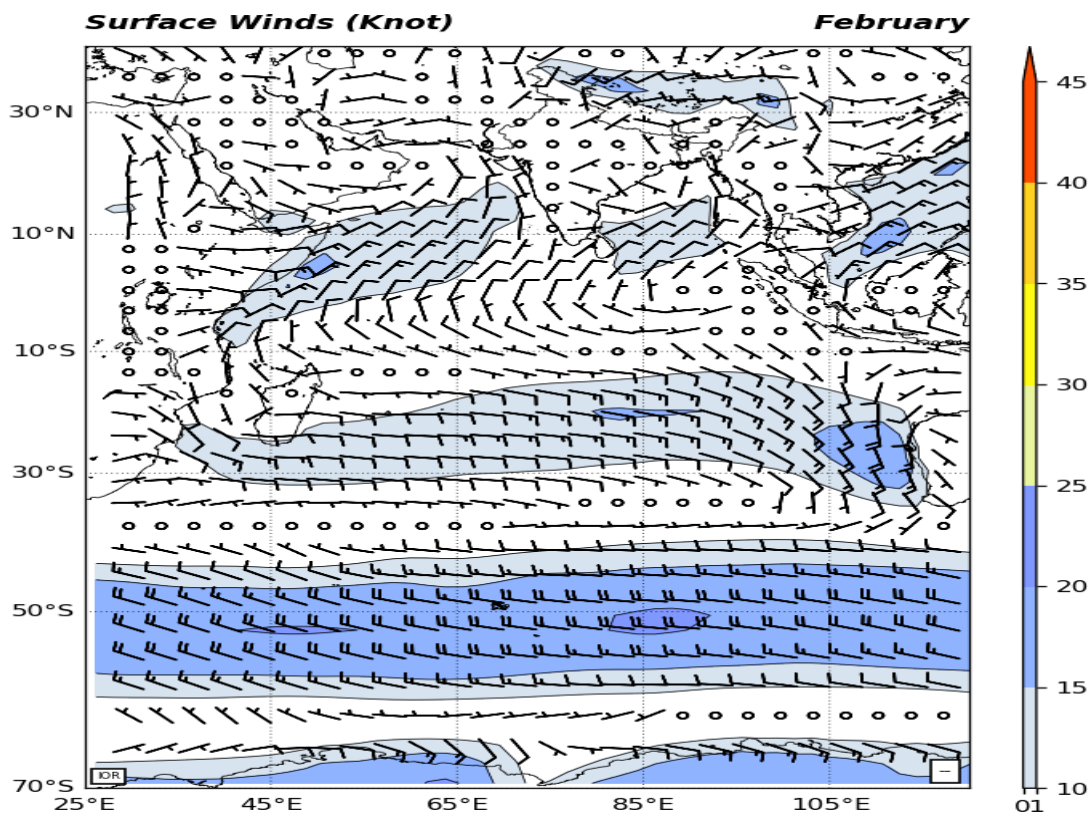


Fig 2. Surface Wind and Direction (m) over IOR - Feb

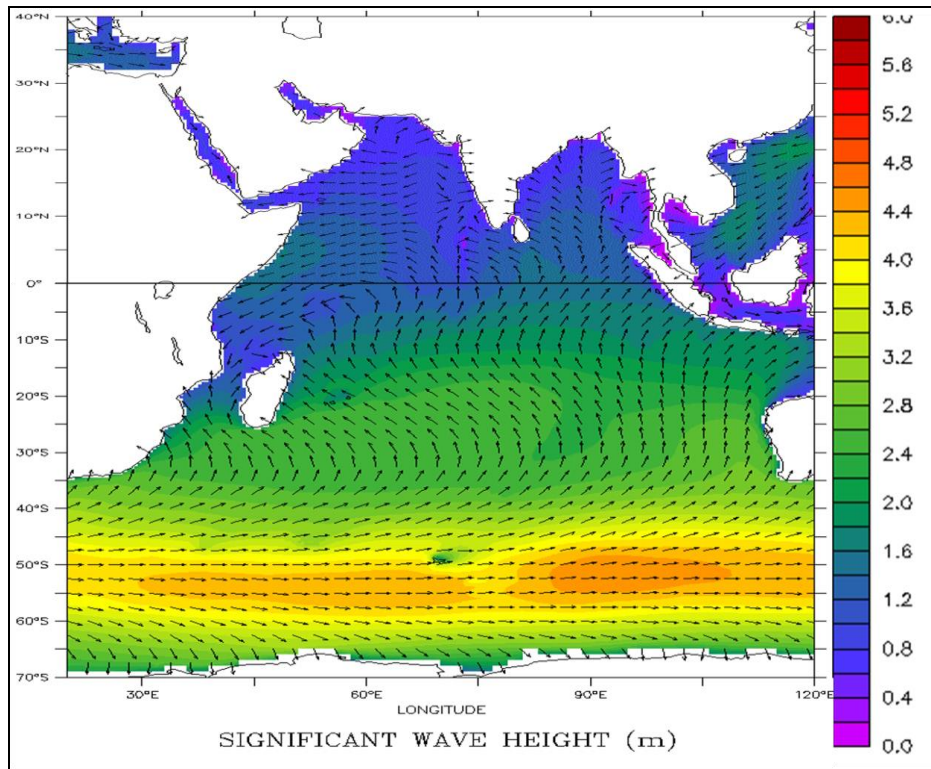


Fig 3. Significant Wave Height and Direction (m) over IOR - Feb

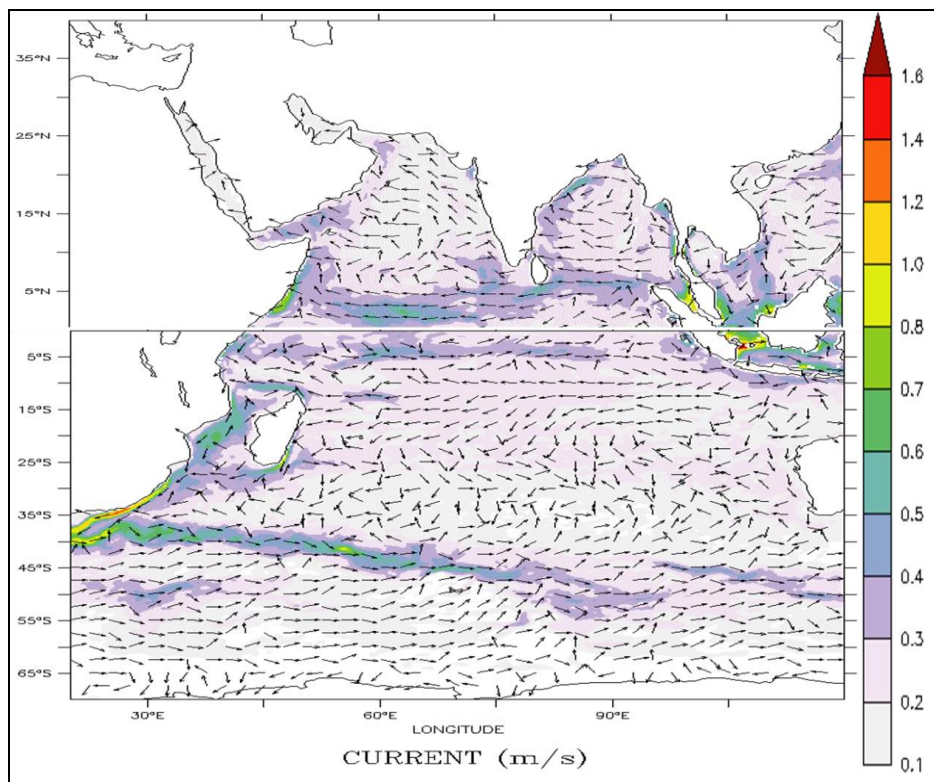


Fig 4. Surface Current (m/s) over IOR - Feb