

## Weather Forecast for Indian Ocean Region – Sep

1. The Indian Ocean Region (IOR) is divided into four broad sub-regions 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 September is as follows: -

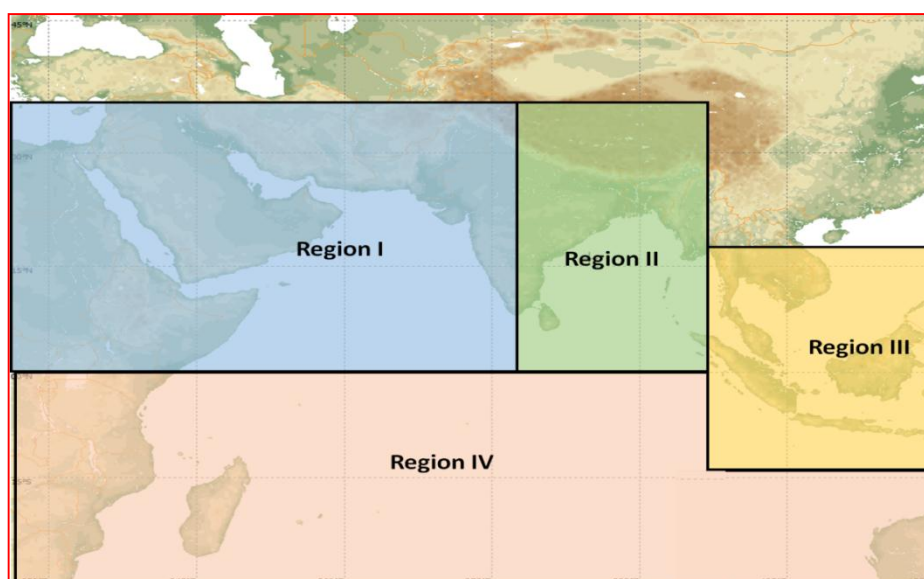


Fig 1. Forecast Regions

(a)	<b><u>Region I (Arabian Sea)</u></b>	
	<p><b><u>Synoptic Discussion.</u></b> The monsoon current weakens during this month as compared to the earlier months of the season. Further, the weakening of pressure gradient and light winds from NW-WNW are generally seen over the North Arabian Sea. During this month, the Southeast Arabian Sea is prone to formation of cyclonic disturbances, especially to the east of 70°E. The average Sea Surface Temperatures (SST) are about 24-26°C and 28-29°C over the West-central and South Arabian Sea respectively. Smooth to Slight sea conditions are seen over North Arabian Sea and moderate sea conditions are experienced over Equatorial Indian Ocean. Significant wave height is about 3.0 m over the East-central AS decreasing eastwards to about 1.5 m over the Equatorial Indian Ocean.</p>	
	<b><u>Region I</u></b>	<b><u>Weather Parameter</u></b>
	<b><u>Forecast</u></b>	
Arabian Sea	Surface winds	SW-W/ 10-15 knots in the Northern Arabian Sea WSW-WNW/ 15-20 knots in the Southern Arabian Sea
	Wave height & direction	SSW-SW/ 1.2-2.6 m in the Northern Arabian Sea WSW/ 1.2-2.8 m in the Southern Arabian sea
	Surface Current	E-SE/ 0.2-0.8 knots in the Northern Arabian Sea SE-S/ 0.2-1.0 knots in the Southern Arabian Sea
Gulf of Oman	Surface winds	NW-NNW / 03-08 knots in Western section of the Gulf S-SW / 05-10 knots in Eastern section of the Gulf

		Wave height & direction	NW/ 0.4 m in Western section of the Gulf SSW/ 0.6 m in Eastern section of the Gulf
		Surface Current	NW/ 0.2-0.4 knots in Western section of the Gulf WSW/ 0.2-0.6 knots in Eastern section of the Gulf
	<b><u>Region I</u></b>	<b><u>Weather Parameter</u></b>	<b><u>Forecast</u></b>
	Gulf of Aden	Surface winds	W-NW/ 05 knots in Western section of the Gulf S-SW/ 05-10 knots in Eastern section of the Gulf
		Wave height & direction	NW/ 0.4 m in Western section of the Gulf SW/ 0.6 m in Eastern section of the Gulf
		Surface Current	SE-S/ 0.2-0.6 knots in Western section of the Gulf E-SE/ 0.3-0.6 knots in Eastern section of the Gulf
	Equatorial Indian Ocean	Surface winds	S-SW/ 05 - 10 knots between 45°E - 77°E S - SE/ 05-10 knots between 77°E - 100°E
		Wave height & direction	SSE/ 0.8-1.2 m between 45°E - 77°E S - SSW/ 1.2 – 1.6 m between 77°E - 100°E
		Surface Current	E-SE / 0.2-0.8 knots between 45°E - 77°E E- SE / 0.3-0.7 knots between 77°E - 100°E
(b)	<b><u>Region II (Bay of Bengal)</u></b>		
	<p><b><u>Synoptic Discussion.</u></b> The pressure gradient over Bay of Bengal (BoB) starts weakening during this month. The average wind speeds are 10 -15 knots over the North BoB and 15-20 knots over South Bay. The Low Pressure systems over BOB mostly form to the North of latitudes 15°N, west of longitude 95° E and gradually move in W-NW'ward. A total of eleven cyclonic disturbances have formed in Bay of Bengal during the past 30 years. The Sea State is of the order of 3 to 4 over most parts of Bay. However, closer to the coast it is around 2. The swell over most parts of the Bay is generally S - SW'ly of the order 2.0 - 2.5 m, whereas closer to coast it is 1.5 m.</p>		
	<b><u>Region II</u></b>	<b><u>Weather Parameter</u></b>	<b><u>Forecast</u></b>
	Andaman Sea	Surface winds	SW / 05-10 knots in northern section SW / 08-13 knots in southern section
		Wave height & direction	SW / 0.6 m in northern section SW / 0.8 m in southern section
		Surface Current	E-SE /0.2-0.6 knots in northern section E-SE /0.2- 0.6 knots in southern section
	Bay of Bengal	Surface winds	SW/ 05-10 knots in northern Bay of Bengal SW/ 15-20 knots in southern Bay of Bengal
		Wave height &	SSW/ 1.2-1.8 m in northern Bay of Bengal

		direction	SSW/ 1.6-2.4 m in southern Bay of Bengal
		Surface Current	E-SE/ 0.2-0.6 knots in northern Bay of Bengal E / 0.4-1.0 knots in southern Bay of Bengal
(c)	<b><u>Region III (Southeast Asia)</u></b>		
	<p><b><u>Synoptic Discussion.</u></b> The Mean Sea Level Pressure over the region varies from 1006-1010 hpa. Most weather systems occurring over Gulf of Thailand and South China Sea are remnants of systems in the West Pacific, between latitudes 135° – 150°E. An increase in the swell is observed over South China Sea with a mean height of 1.0 - 1.5 m. During the month, the Sea State is of the order of 3 - 4 but is close to 2 along the coast. A current of the order 0.8 – 1.2 knots is experienced over the South China sea for most duration of the month.</p>		
	<b><u>Region III</u></b>	<b><u>Weather Parameter</u></b>	<b><u>Forecast</u></b>
	Southern parts of South China Sea	Surface winds	S-SW/ 03 – 08 knots
		Wave height & direction	W - SW/ 0.6-1.2 m
		Surface Current	ENE - ESE/ 0.2-0.8 knots
	Malacca Strait	Surface winds	WSW /05 knots in Northern strait SE-SSE/07-12 knots in Southern strait
		Wave height & direction	NW/ 0.4 m in Northern strait ESE/ 0.6-1.0 m in Southern strait
		Surface Current	SE / 0.4-1.4 knots in Northern strait E / 0.6-1.4 knots in Southern strait
	Southern Sulu Sea - Northern Celebes Sea	Surface winds	SE-S / 05-10 knots
		Wave height & direction	SW-W /0.2-0.6 m
		Surface Current	W - NE/ 0.2-0.8 knots
(d)	<b><u>Region IV (South Indian Ocean)</u></b>		
	<p><b><u>Synoptic Discussion.</u></b> The Mean Sea Level Pressure across the Bay of Bengal ranges between 1025 hPa and 1014 hPa. The formation of Tropical Disturbance is rare during the month due to low SSTs. The Swell waves are from SE'ly direction over the Northern parts, becoming E'ly in the higher latitudes. Significant wave height is about 2.5 m over most part of South IOR increasing to 3.0 - 3.5 m near the West coast of Australia. Strongest Surface Currents are seen off Somalia coast with an average speed of 2.0-2.3 knots.</p>		
	<b><u>Region IV</u></b>	<b><u>Weather Parameter</u></b>	<b><u>Forecast</u></b>
	South Indian Ocean	Surface winds	E - SE/15-20 knots
		Wave height & direction	SSE/ 1.2-2.4 m
		Surface Current	SW - W/0.4-0.8 knots

	West Australian coast	Surface winds	SE-S/10-20 knots in West coast SE/10-15 knots in Northwest coast
		Wave height & direction	SW/ 3.0-4.0 m in West coast SSW-SW/ 2.0-2.6 m in Northwest coast
		Surface Current	N-NE/ 0.2-0.7 knots in West coast ESE-SE/ 0.2-0.5 knots in Northwest coast
	Somali Coast	Surface winds	E - SE/05-10 knots
		Wave height & direction	SE-SSE/ 1.2-2.4 m
		Surface Current	NE/ 1.0-1.6 knots
	Central African Coast/ Indian Ocean	Surface winds	E - SE/10-15 knots
		Wave height & direction	SE-E/ 2.2-3.2 m
		Surface Current	SW-W/ 0.2-0.6 knots
Mozambique Channel	Surface winds	SE/ 05 knots	
	Wave height & direction	S /0.4-1.2 m	
	Surface Current	NE-E/0.3-0.8 knots	

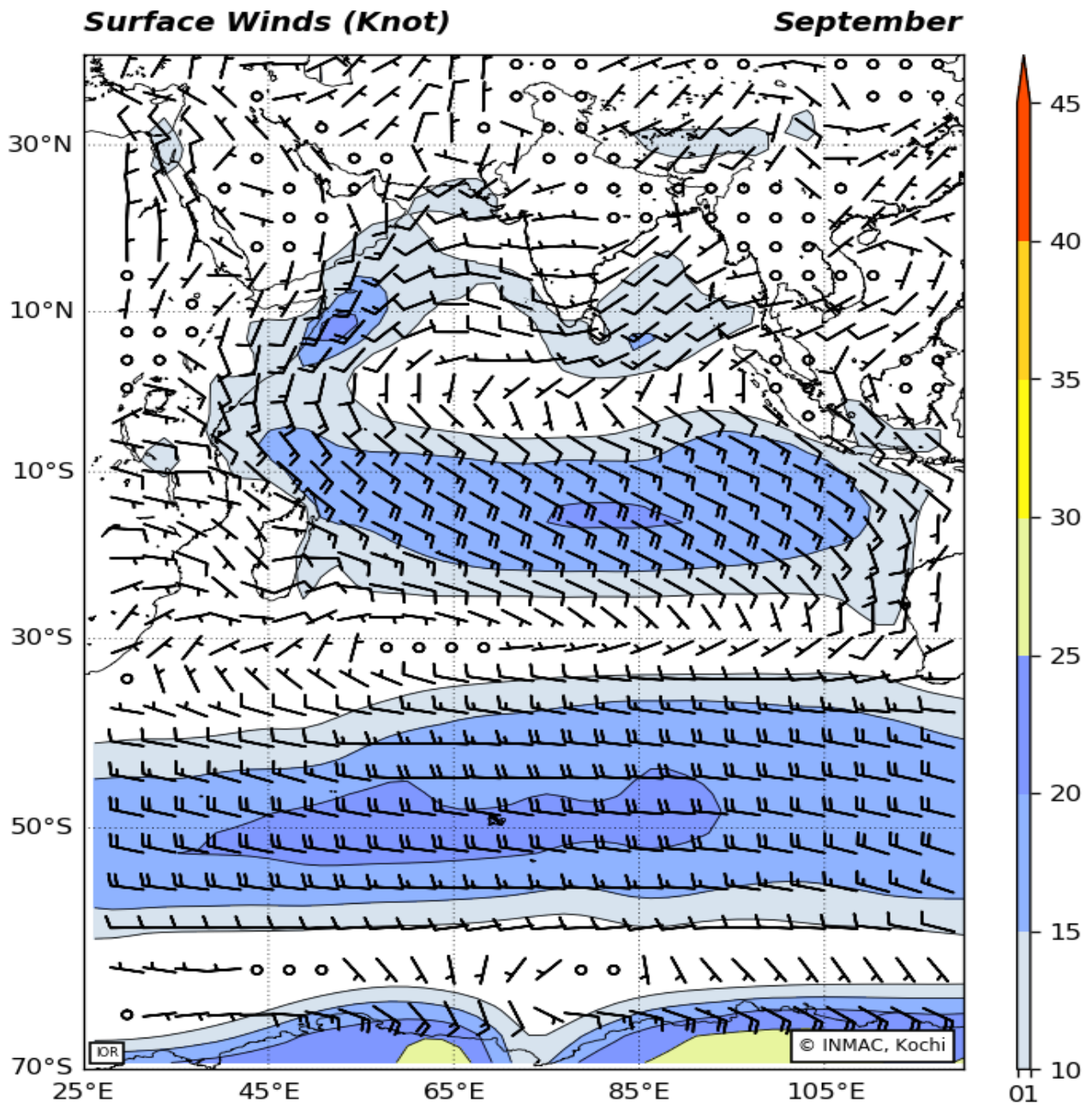


Fig 2. Surface Wind and Direction (Kt) over IOR - Sep

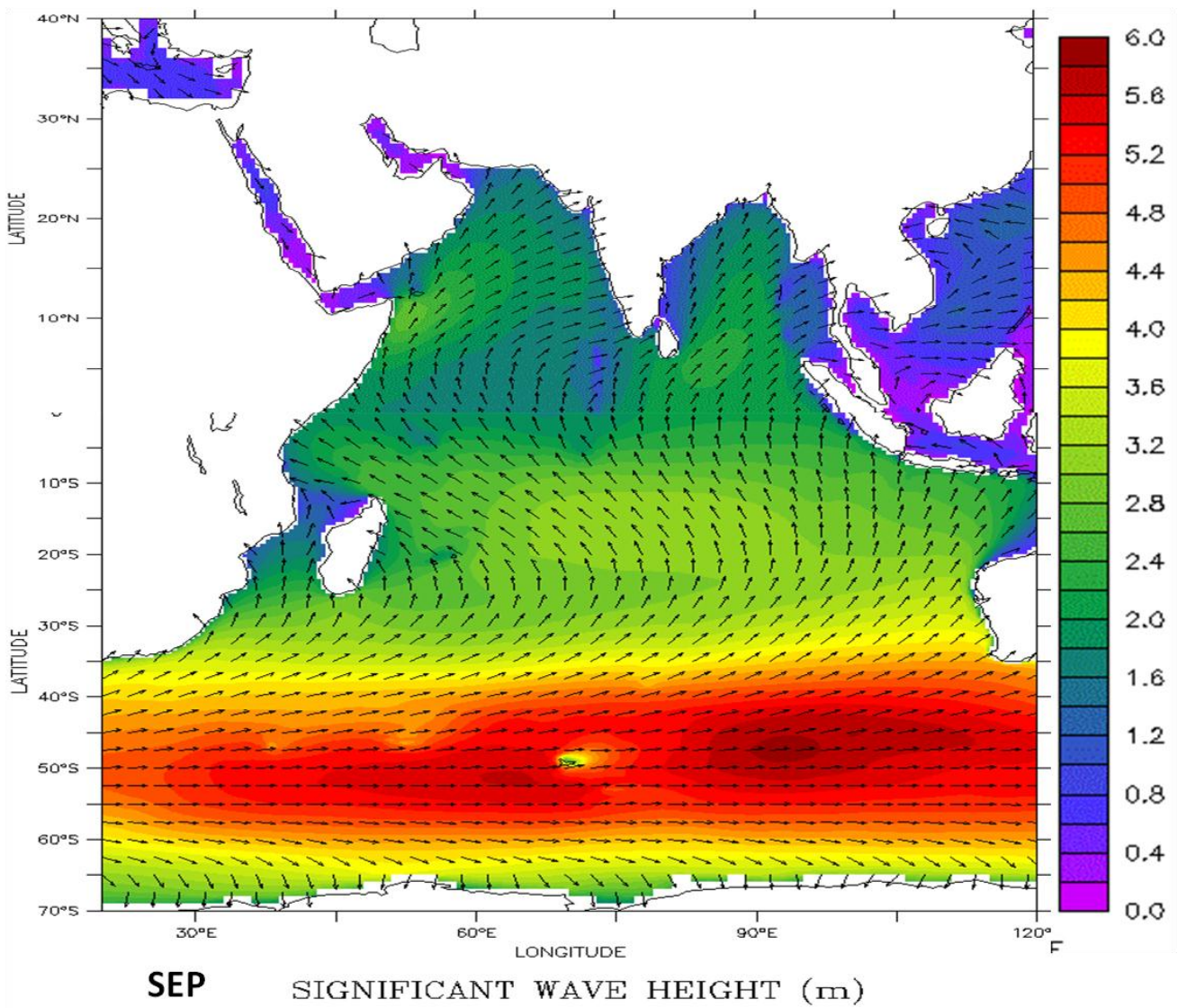


Fig 3. Significant Wave Height and Direction (m) over IOR

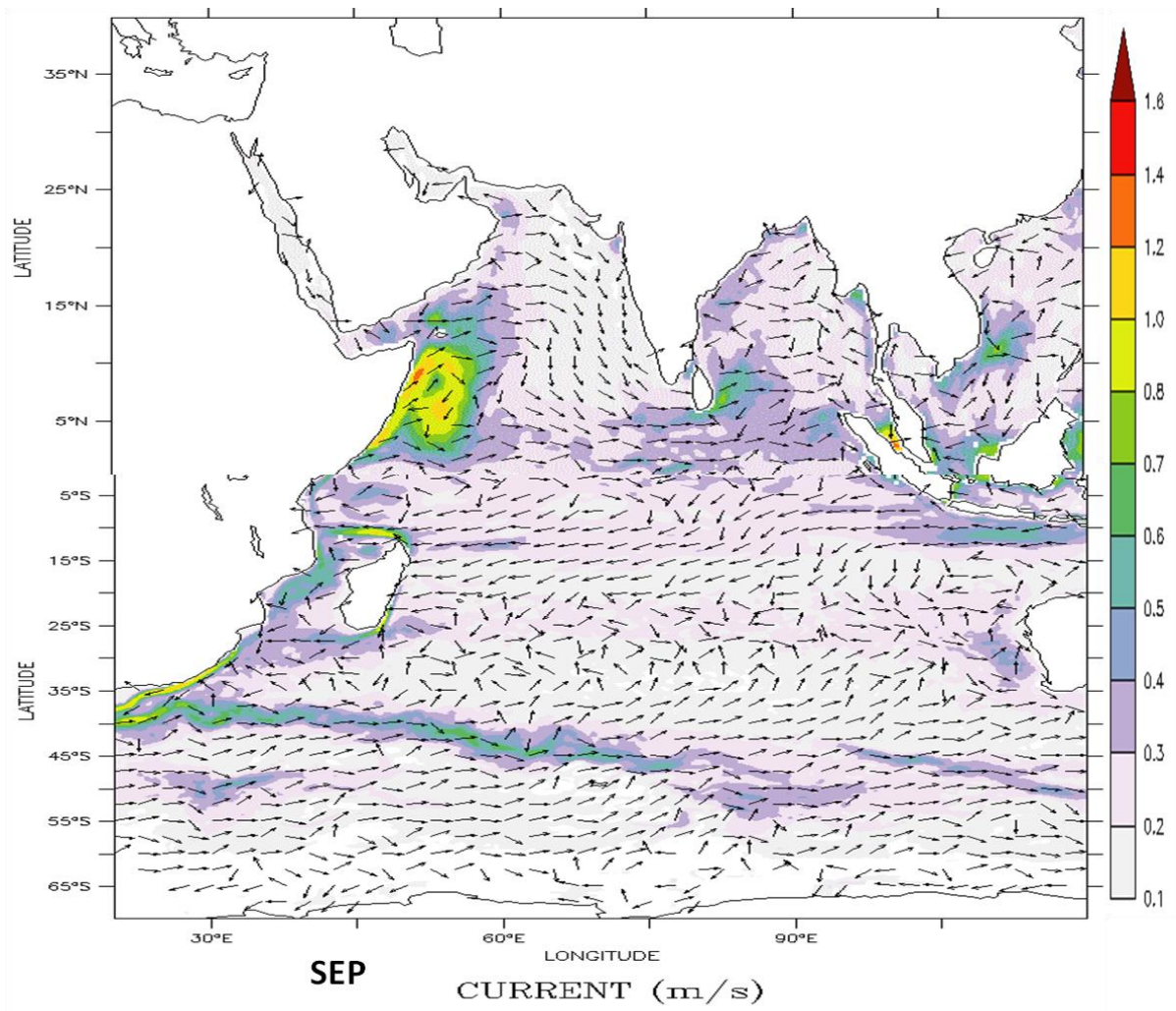


Fig 4. Surface Current (m/s) over IOR - Sep