

Weather Forecast for Indian Ocean Region– Aug

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

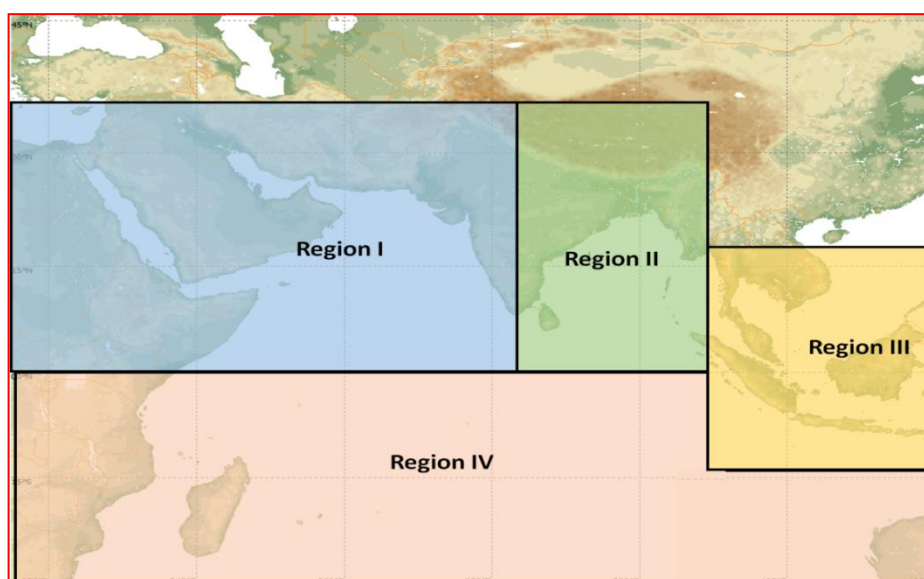


Fig 1. Forecast Regions

(a)	<u>Region I (Arabian Sea)</u>	
	<p><u>Synoptic Discussion.</u> Surface pressure ranging between 1008 -1010 hPa is seen over South Arabian Sea which gradually decreases to about 1000 -1002 hPa towards Northern Arabian Sea. The average Sea Surface Temperatures (SST) of about 27 - 28°C prevail over most parts of Arabian Sea. No cyclonic storms have ever formed over this region during this month. Moderate to Rough Seas (Sea State 4-5) prevail over most parts of Arabian Sea, reducing to Sea State 2-3 over Equatorial Indian Ocean.</p>	
	<u>Region I</u>	<u>Weather Parameter</u>
		<u>Forecast</u>
Arabian Sea	Surface Winds	SW-WSW/ 12-17 knots in Northern Arabian Sea SSW-WSW/ 15-20 knots in Southern Arabian Sea
	Wave Height & Direction	SSW-SW/ 2.8-3.4 m in Northern Arabian Sea SW-WSW/ 2.4-3.6 m in Southern Arabian Sea
	Surface Current	E-SE/ 0.4-0.8 knots in Northern Arabian Sea SE-SSE/ 0.4-2.0 knots in Southern Arabian Sea
Gulf of Oman	Surface Winds	WNW-NW/ 03-08 knots in Western section of the Gulf S-SSW/ 05-10 knots in Eastern section of the Gulf
	Wave Height & Direction	W-NW/ 0.1-0.4 m in Western section of the Gulf SSW/ 0.4-0.8 m in Eastern section of the Gulf
	Surface Current	NW/ 0.2-0.6 knots in Western section of the Gulf W-NW/ 0.4-0.8 knots in Eastern section of the Gulf

<u>Region I</u>	<u>Weather Parameter</u>	<u>Forecast</u>
Gulf of Aden	Surface Winds	WNW-NNW/ 07-12 knots in Western section of the Gulf SW/ 15-20 knots in Eastern section of the Gulf
	Wave Height & Direction	NW-NNW/ 0.4-0.8 m in Western section of the Gulf SW/ 0.8-1.4 m in Eastern section of the Gulf
	Surface Current	SE-S/ 0.2-0.6 knots in Western section of the Gulf E-ESE/ 0.4-1.2 knots in Eastern section of the Gulf
Equatorial Indian Ocean	Surface Winds	SSE-S/05-10 knots between 45°E - 77°E SSW-SW/ 05-10 knots between 77°E -100°E
	Wave Height & Direction	SSW-S/ 1.2-2.2 m between 45°E - 77°E SSW-SW/ 2.0-2.6 m between 77°E -100°E
	Surface Current	E-SE / 0.4-0.8 knots between 45°E - 77°E E- SE / 0.4-1.0 knots between 77°E -100°E
(b)	<u>Region II (Bay of Bengal)</u>	
<p><u>Synoptic Discussion.</u> The weather systems over Bay of Bengal (BOB) originate South of latitude 18⁰N and west of longitude 92⁰ E, gradually tracking WNW ward. The systems forming to the West of long 80⁰E, tend to curve towards the north. A total of 14 cyclonic disturbances have formed in the Bay during past 30 years. The probability for intensification of these systems into Severe Cyclonic Storms during is very less in this month due to high vertical wind shear. The Average Minimum Surface (Air) Temperature of 28 - 32⁰C is seen over Bay of Bengal.</p>		
<u>Region II</u>	<u>Weather Parameter</u>	<u>Forecast</u>
Andaman Sea	Surface Winds	SW/ 15-20 knots in Northern Section SW/ 10-15 knots in Southern Section
	Wave Height & Direction	SW/ 0.6-1.4 m in Northern Section SW/ 0.6-1.8 m in Southern Section
	Surface Current	E-ESE/ 0.4-0.8 knots in Northern Section E- SE/ 0.4- 0.8 knots in Southern Section
Bay of Bengal	Surface Winds	SW/ 10-15 knots in Northern Bay of Bengal SW/ 15-20 knots in Southern Bay of Bengal
	Wave Height & Direction	SW/ 1.2-2.2 m in Northern Bay of Bengal SSW-SW/ 1.2-2.4 m in Southern Bay of Bengal
	Surface Current	ESE-SE/ 0.4-1.2 knots in Northern Bay of Bengal ENE-E / 0.4-1.4 knots in Southern Bay of Bengal

(c)	<u>Region III (Southeast Asia)</u>		
<u>Synoptic Discussion.</u> The Mean Sea Level Pressure over the region varies from 1004-1010 hPa. During this month there is a reduction in swell with a mean height of 0.2 – 1.0 m over most parts of the region. Average Min Surface (Air) Temperatures of 28-32°C are seen over South China Sea and 20-24°C over the Malacca Strait. The Sea State is around 2 - 5 over most parts of the region.			
<u>Region III</u>		<u>Weather Parameter</u>	<u>Forecast</u>
Southern parts of South China Sea		Surface Winds	SW/ 10-15 knots
		Wave Height & Direction	WSW/ 0.6-1.2 m
		Surface Current	ENE-ESE/ 0.4-1.2 knots
Malacca Strait		Surface Winds	S- SW/ 03-08 knots in Northern Strait SE-S/ 05-10 knots in Southern Strait
		Wave Height & Direction	W-WNW/ 0.4-0.8 m in Northern Strait E-ESE/ 0.4-1.4 m in Southern Strait
		Surface Current	SE/ 0.4-2.0 knots in Northern Strait W-NW/ 0.6-1.4 knots in Southern Strait
Southern Sulu Sea - Northern Celebes Sea		Surface Winds	S-SE/ 05-10 knots
		Wave Height & Direction	SSE-S/ 0.2-1.0 m
		Surface Current	SE/ 1.0-1.6 knots
(d)	<u>Region IV (South Indian Ocean)</u>		
<u>Synoptic Discussion.</u> During this month, a maximum Sea Level Pressure of the order of 1024 hPa is seen over Central parts of Southern Indian Ocean. High pressure is seen between 25 ⁰ -35 ⁰ S and 40 ⁰ -80 ⁰ E. The Tropical Disturbances are almost absent in this month. Dry winds are predominant over South Indian Ocean Region and adjoining land masses. Average Minimum Surface (Air) Temperature vary between 20-27°C in Southern IOR. Surface current is maximum off Somalia coast and is of the order of 0.6-3.1 knots.			
<u>Region IV</u>		<u>Weather Parameter</u>	<u>Forecast</u>
South Indian Ocean		Surface Winds	SE/17-22 knots
		Wave Height & Direction	SSE/ 2.6-3.4 m
		Surface Current	WSW-W/ 0.4-0.8 knots
West Australian coast		Surface Winds	SE-SSE/ 10-15 knots in West Coast ESE-SE/ 10-15 knots in Northwest Coast
		Wave Height & Direction	SW/ 3.2-4.0 m in West Coast SSW-SW/ 1.4-2.6m in Northwest Coast
		Surface Current	SE-S/ 0.4-1.2 knots in West Coast ESE-SE/ 0.2-0.5 knots in Northwest Coast

	Somali Coast	Surface Winds	SSE-S/ 10-15 knots
		Wave Height & Direction	SE-SSE/ 1.8-2.6 m
		Surface Current	ENE-NE/ 0.6-3.1 knots
	Central African Coast/ Indian Ocean	Surface Winds	SE/ 15-20 knots
		Wave Height & Direction	SSE-SE/ 2.2-3.0 m
		Surface Current	WSW-W/ 0.4-0.8 knots
	Mozambique Channel	Surface Winds	SE/ 05-10 knots
		Wave Height & Direction	S-SSW/ 0.4-2.2 m
		Surface Current	NE-E/ 0.6-2.0 knots

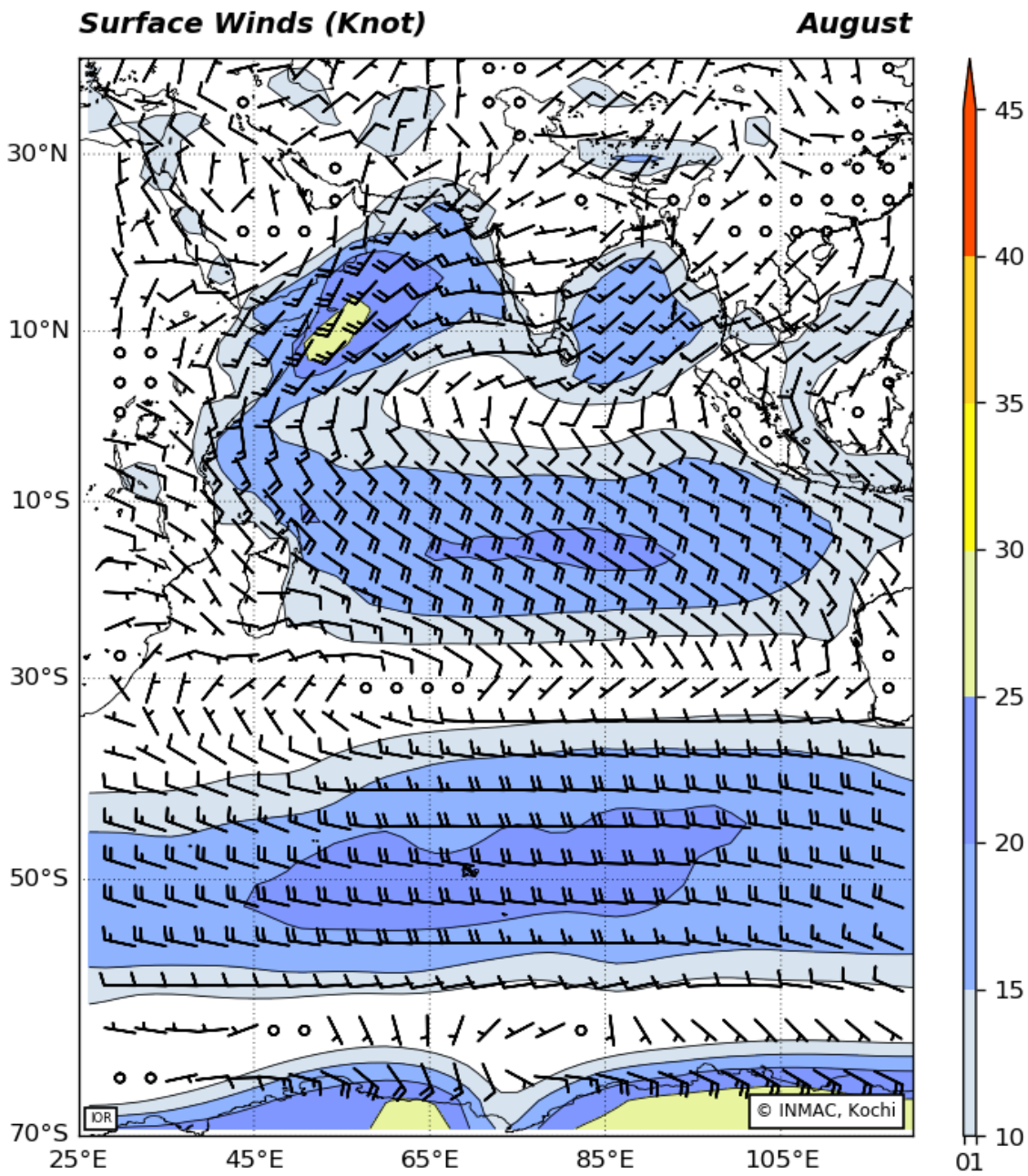


Fig 2. Surface Wind and Direction (Knots) over IOR - Aug

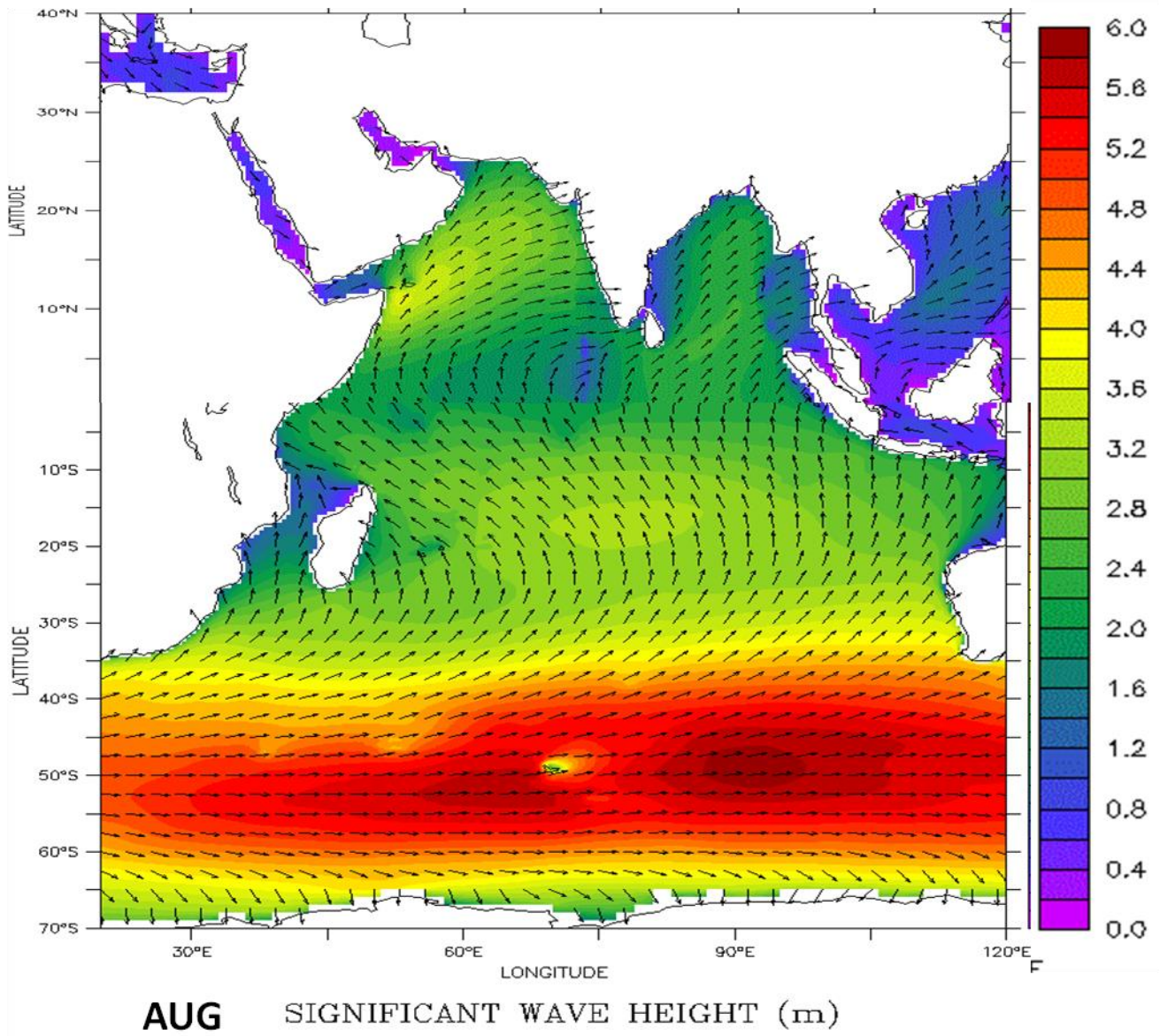


Fig 3. Significant Wave Height and Direction (m) over IOR

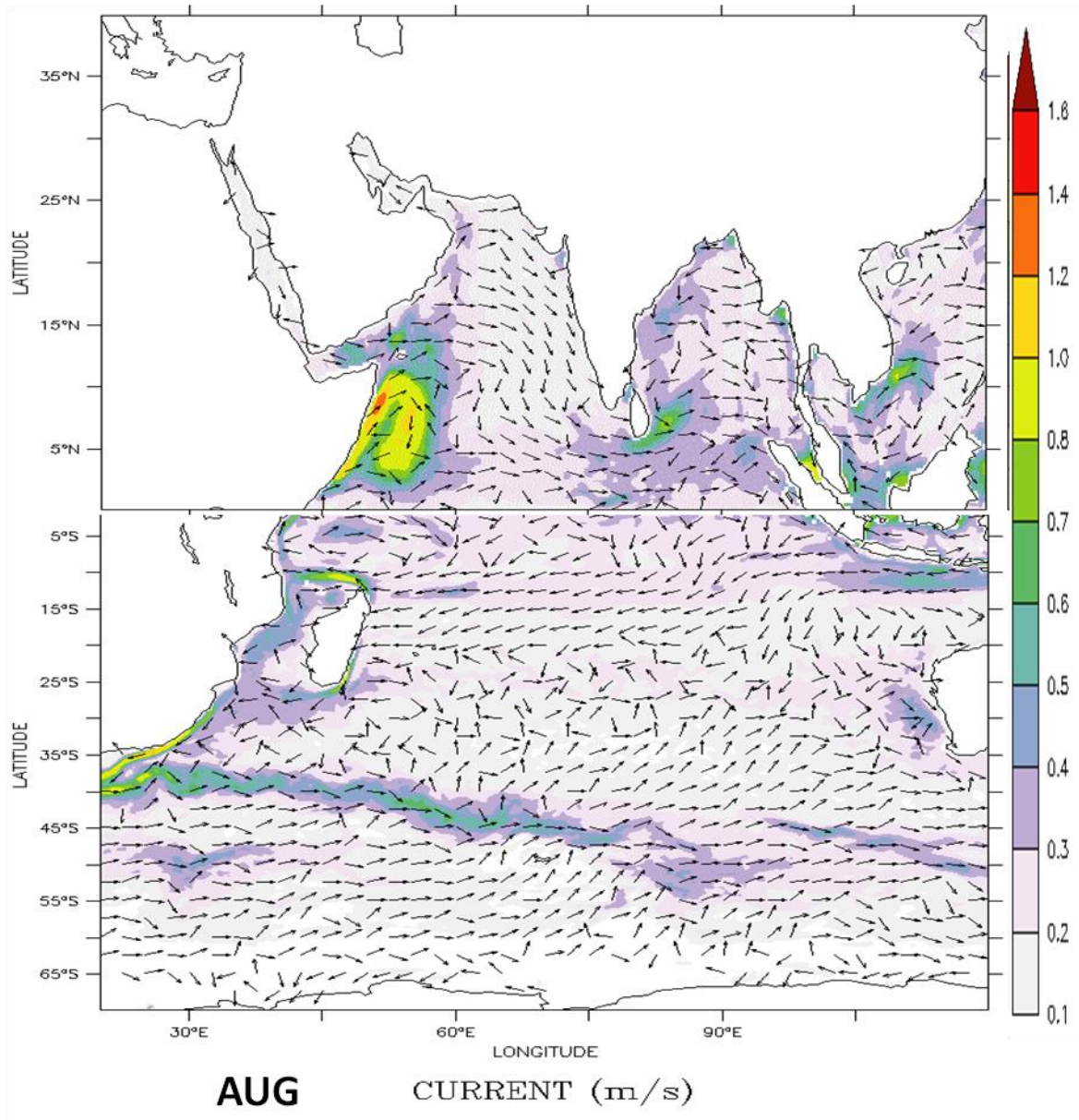


Fig 4. Surface Current (m/s) over IOR - Aug