



**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES,
NEW DELHI SPECIAL TROPICAL WEATHER OUTLOOK**

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 16.09.2024

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 168 HOURS ISSUED AT 0900 UTC OF 16.09.2024 BASED ON 0600 UTC OF 16.09.2024.

SUB: DEEP DEPRESSION OVER GANGETIC WEST BENGAL AND ADJOINING JHARKHAND

THE DEEP DEPRESSION OVER GANGETIC WEST BENGAL AND ADJOINING JHARKHAND MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 12 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 0600 UTC OF TODAY, THE 16TH SEPTEMBER 2024, OVER THE SAME REGION NEAR LATITUDE 23.2° N AND LONGITUDE 86.4° E, ABOUT 10 KM SOUTH OF PURULIA (WEST BENGAL), 70KM WEST-SOUTHWEST OF BANKURA (WEST BENGAL), 50 KM NORTH-NORTHEAST OF JAMSHEDPUR (JHARKHAND) AND 110 KM EAST OF RANCHI (JHARKHAND).

IT IS LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS GANGETIC WEST BENGAL & JHARKHAND AND WEAKEN INTO A DEPRESSION DURING NEXT 12 HOURS. THEREAFTER, IT WILL CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS JHARKHAND AND NORTH CHHATTISGARH DURING SUBSEQUENT 24 HOURS.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
16.09.24/0600	23.2/86.4	50-60 GUSTING TO 70	DEEP DEPRESSION
16.09.24/1800	23.5/85.1	45-55 GUSTING TO 65	DEPRESSION
17.09.24/0600	24.0/83.5	40-50 GUSTING TO 60	DEPRESSION
17.09.24/1800	24.5/81.9	25-35 GUSTING TO 45	WELL MARKED LOW PRESSURE AREA

AT 0600 UTC, AS PER INSAT 3DR IMAGERY, SPIRAL BAND ORGANISATION OF CLOUDS CONTINUES. ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTH CHHATTISGARH, JHARKHAND, NORTH ODISHA, GANGETIC WEST

BENGAL, BANGALADESH (MINIMUM CLOUD TOP TEMPERATURE MINUS 70-90 DEG CELSIUS) AND MDERATE TO INTENSE CONVECTION LAY OVER EAST MADHAYAPRADESH, BIHAR, SUB-HIMALAYAN WESTBENGAL ND NORTHWEST BAY OF BENGAL (MINIMUM CLOUD TOP TEMPERATURE MINUS 50-70 DEG CELSIUS).

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED (MSW) IN ASSOCIATION WITH THE SYSTEM IS 30 KTS GUSTING TO 40 KTS. ESTIMATED CENTRAL PRESSURE IS 993HPA.

AT 0600 UTC, JAMSHEDPUR REPORTED LOWEST MEAN SEA LEVEL PRESSURE (MSLP) OF 994.6 HPA, PAST 24 HOUR PRESSURE CHANGE (P24) OF -0.9 HPA, AND MAXIMUM WIND SPEED (MSW) OF 230°/06KT. BANKURA REPORTED MSLP OF 997.2 HPA, AND MSW OF 230°/01KT. RANCHI REPORTED MSLP OF 995.4 HPA, P24 OF -3.2 HPA AND MSW OF 340°/08KT.

WIND WARNING:

SQUALLY WIND SPEED REACHING 50-60 KMPH GUSTING TO 70 KMPH IS LIKELY TO PREVAIL ALONG & OFF WEST BENGAL & NORTH ODISHA COASTS AND ADJOINING NORTH BAY OF BENGAL DURING NEXT 6 HOURS. THEREAFTER, IT IS LIKELY TO BECOME 40-50 KMPH GUSTING TO 60 KMPH TILL 1200 UTC 16TH SEPTEMBER AND DECREASE FURTHER.

SEA CONDITION:

ROUGH TO VERY ROUGH SEA CONDITION IS VERY LIKELY TO PREVAIL ALONG & OFF WEST BENGAL-ODISHA COASTS AND ADJOINING NORTH BAY OF BENGAL TILL 1200 UTC OF 16TH SEPTEMBER.

SUBSEQUENTLY, ROUGH SEA CONDITION IS LIKELY TO PREVAIL OVER NORTH BAY OF BENGAL AND ALONG & OFF WEST BENGAL-ODISHA COASTS AND IMPROVE THERAFTER.

FISHERMEN WARNING:

FISHERMEN ARE ADVISED NOT TO VENTURE INTO NORTH BAY OF BENGAL AND ALONG & OFF BANGLADESH, WEST BENGAL, AND ODISHA COASTS TILL 16TH SEPTEMBER.

REMARKS:

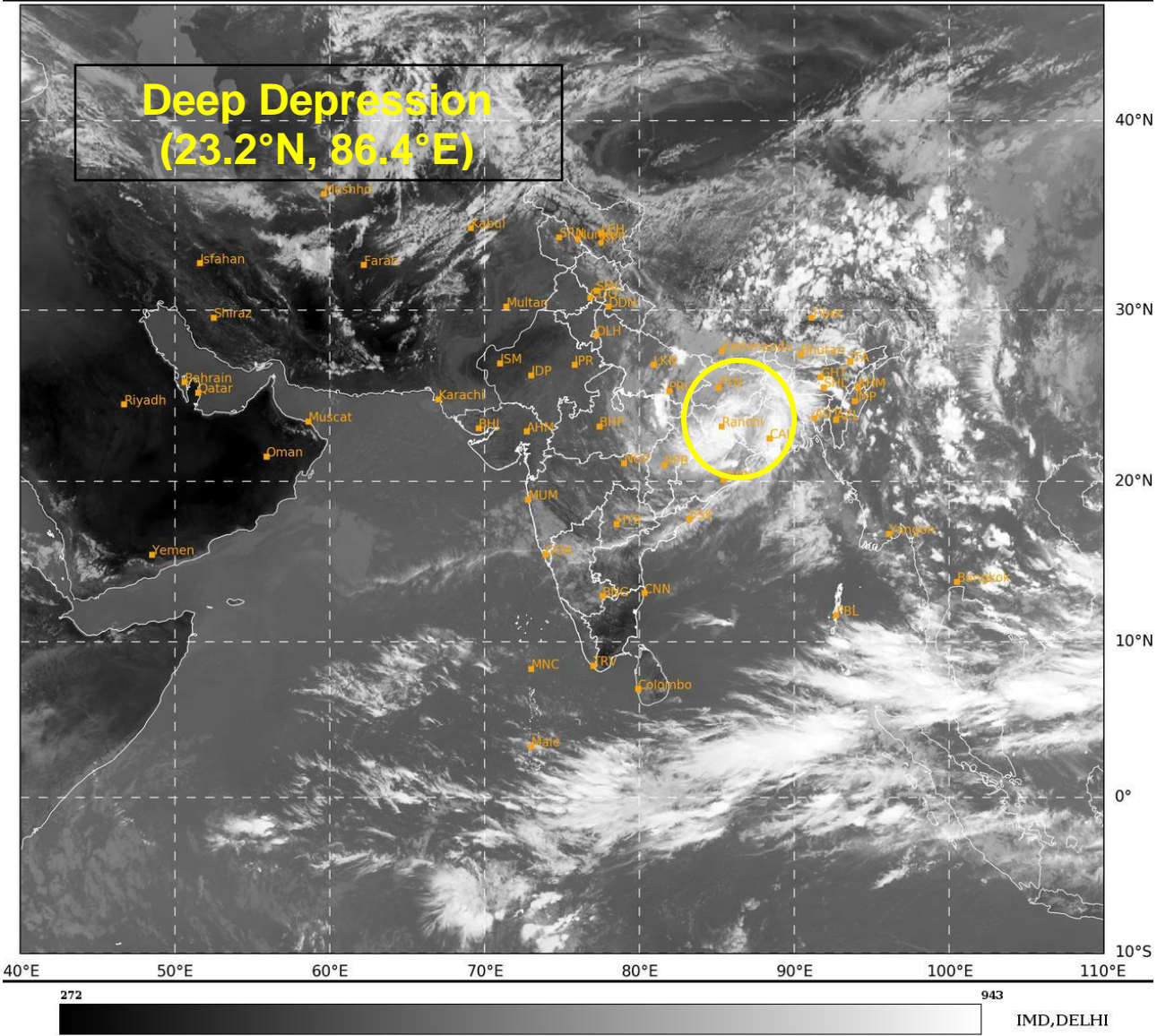
MADDEN JULIAN OSCILLATION (MJO) INDEX IS CURRENTLY IN PHASE 5 WITH AMPLITUDE GREATER THAN 1. IT IS LIKELY TO MOVE TO PHASE 6 FROM TOMORROW, THE 17TH SEPTEMBER, 2024. THE NCICS BASED FORECAST INDICATES PERSISTENCE OF STRONG WESTERLY WINDS (5-7 MPS) OVER CENTRAL PARTS OF INDIA WITH STRONG EASTERLY WINDS (5-7 MPS) OVER NORTHEASTERN PARTS OF INDIA, PRESENCE OF EQUATORIAL ROSSBY WAVES OVER CENTRAL INDIA, KELVIN WAVES OVER NORTHEASTERN AND MJO WAVES OVER SOUTH BOB. GRADUALLY, THE EQUATORIAL WAVES ARE DRIFTING AWAY. FROM TOMORROW ONWARDS, THEY MAY NOT SUPPORT THE CONVECTION OVER CENTRAL PARTS OF INDIA.

THE LOW LEVEL CONVERGENCE IS CIRCULAR AND AROUND $10 \times 10^{-5} \text{ S}^{-1}$ OVER SOUTHWEST OF THE SYSTEM AREA. UPPER LEVEL DIVERGENCE ALSO CIRCULAR AND IS AROUND $10 \times 10^{-5} \text{ S}^{-1}$ OVER THE NORTHEAST OF THE SAME AREA. THE WIND SHEAR IS LOW TO MODERATE (10-15 KT) OVER SYSTEM AREA AND ALONG THE FORECAST TRACK. VORTICITY AT 850 HPA LEVEL IS AROUND $200 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTH OF SYSTEM CENTRE AND EXTENDS UP TO 200 HPA ($50-60 \times 10^{-5} \text{ S}^{-1}$), INDICATING DEEP CONVECTION PERSISTING OVER THE AREA. ANTICYCLONIC MID SHEAR IS PREVAILING OVER THE SYSTEM AREA. THESE FEATURES INDICATE THAT THE SYSTEM IS STILL LYING IN A FAVOURABLE ENVIRONMENT AND THUS IT IS EXPECTED TO MAINTAIN ITS INTENSITY DURING NEXT 12 HOURS OVER THE LAND. SYSTEM IS EMBEDDED IN SOUTHWEST MONSOON WESTERLIES. DEEP LAYER MEAN WIND SUGGEST WEST-NORTHWESTWARD MOVEMENT UPTO 80°E . APPROACHING TROUGH IN WESTERLY IS SLOWING DOWN THE SYSTEM SPEED AND MAY LEAD TO NEAR NORTH-NORTHWESTWARDS MOVEMENT OF SYSTEM FROM 17TH MORNING ONWARDS.

MOST OF THE NWP MODELS INDICATE THAT THE SYSTEM IS LIKELY TO MOVE SLOWLY NEARLY WEST-NORTHWESTWARDS INITIALLY TILL 0000 UTC OF 17TH SEPTEMBER AND NORTHWESTWARDS THEREAFTER. MOST OF THE MODELS ARE INDICATING THE EXISTING INTENSITY AS THAT OF DEPRESSION WITH WEAKENING INTO WELL MARKED LOW PRESSURE AREA AROUND 1200 UTC OF 17TH SEPTEMBER. HOWEVER, NCUM IS INDICATING SLIGHTLY HIGHER INTENSITY AND VERY SLOW WEAKENING OF SYSTEM. IMD MME IS INDICATING INITIAL WEST-NORTHWESTWARDS MOVEMENT FOLLOWED BY NORTHWESTWARDS MOVEMENT AND WEAKENING AROUND 0000 UTC OF 17TH.

IN VIEW OF ALL THE ABOVE, THE DEEP DEPRESSION OVER GANGETIC WEST BENGAL AND ADJOINING JHARKHAND IS LIKELY TO MOVE WEST-NORTHWESTWARDS ACROSS GANGETIC WEST BENGAL & JHARKHAND AND WEAKEN INTO A DEPRESSION DURING NEXT 12 HOURS. THEREAFTER, IT WILL CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS JHARKHAND AND NORTH CHHATTISGARH DURING SUBSEQUENT 24 HOURS.

M. T. BUSHAIR
SC.-C, RSMC NEW DELHI



Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins



OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION OVER GANGETIC WEST BENGAL AND ADJOINING JHARKHAND BASED ON 0600 UTC (1130 IST) OF 16TH SEPTEMBER, 2024.



DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
 SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

● LESS THAN 34 KT
 ○ 34-47 KT
 ⊗ ≥ 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 ▲ CONE OF UNCERTAINTY

Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
 PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
 This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins



OBSERVED AND FORECAST TRACK ALONG WITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION OVER GANGETIC WEST BENGAL AND ADJOINING JHARKHAND BASED ON 0600 UTC (1130 IST) OF 16TH SEPTEMBER, 2024.



DATE/TIME IN UTC
IST=UTC + 0530

L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

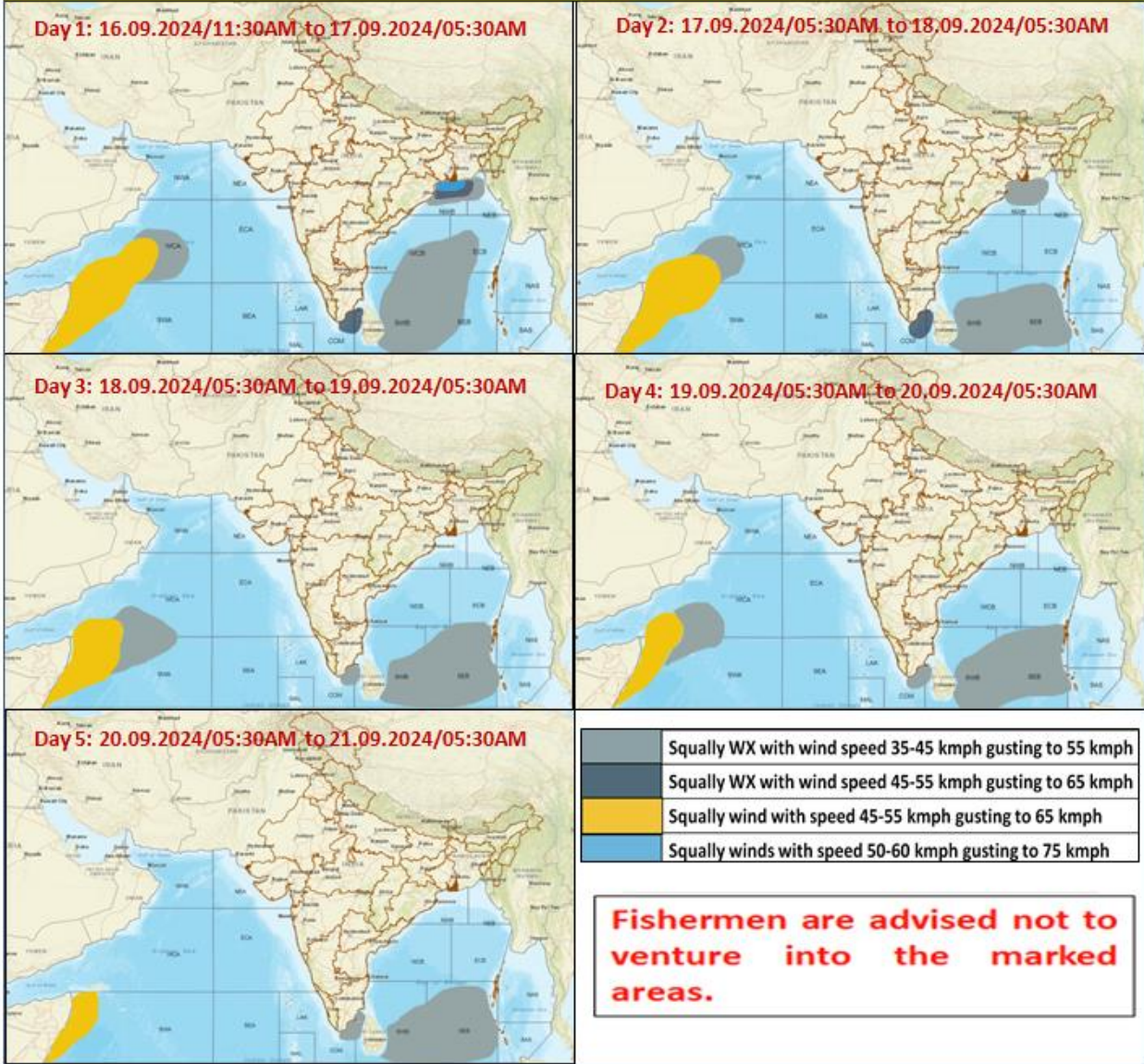
● LESS THAN 34 KT
○ 34-47 KT
● ≥ 48 KT
— OBSERVED TRACK
— FORECAST TRACK
— CONE OF UNCERTAINTY
AREA OF MAXIMUM SUSTAINED WIND SPEED:
■ 28-33 KT (52-61 KMPH)
■ 34-49 KT (62-91 KMPH)
■ 50-63 KT (92-117 KMPH)
■ ≥ 64 KT (≥118 KMPH)

IMPACT OVER THE SEA

MSW (knot/kmph)	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-49 (62-91)	High to very high seas	Total suspension of fishing operations
50-63 (92-117)	Very high seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins

Fishermen Warning Graphics



Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
 PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
 This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins