



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

**To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23093750)
CONTROL ROOM NDMA (FAX.NO. 26701729)
CABINET SECRETARIAT (FAX.NO.23793144)
PS TO HON'BLE MINISTER FOR SCIENCE AND TECHNOLOGY AND EARTH
SCIENCES (FAX NO.23316745)
SECRETARY, MoES, (Fax No. 24629777)
SECRETARY, DST (Fax No. 26863847/-2418)
H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)
DIRECTOR GENERAL, DOORDARSHAN (23385843)
DIRECTOR GENERAL, AIR (25843825)
PIB MoES (FAX NO. 23389042)
UNI (FAX NO. 23355841)
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)
DIRECTOR OF PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)
CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)
CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)
CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)
CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)**

Time of issue: 0830 hours IST

Dated: 19-11-2013

Bulletin No.: BOB06/2013/01

Sub: Depression over westcentral Bay of Bengal.

Latest satellite imagery and observations indicate that a depression has formed over westcentral Bay of Bengal and lay centred at 0530 hrs IST of today, the 19th November 2013 near latitude 14.5⁰N and longitude 86.5⁰E, about 700 km east-northeast of Chennai, 600 km east-southeast of Machilipatnam and 500 km. southeast of Vishakhapatnam. The system would intensify into a deep depression and move west-northwestwards towards Andhra Pradesh Coast during next 72 hours.

Under its influence, rainfall at most places with isolated heavy to very heavy rainfall would occur over coastal Andhra Pradesh commencing from 21st November 2013 morning.

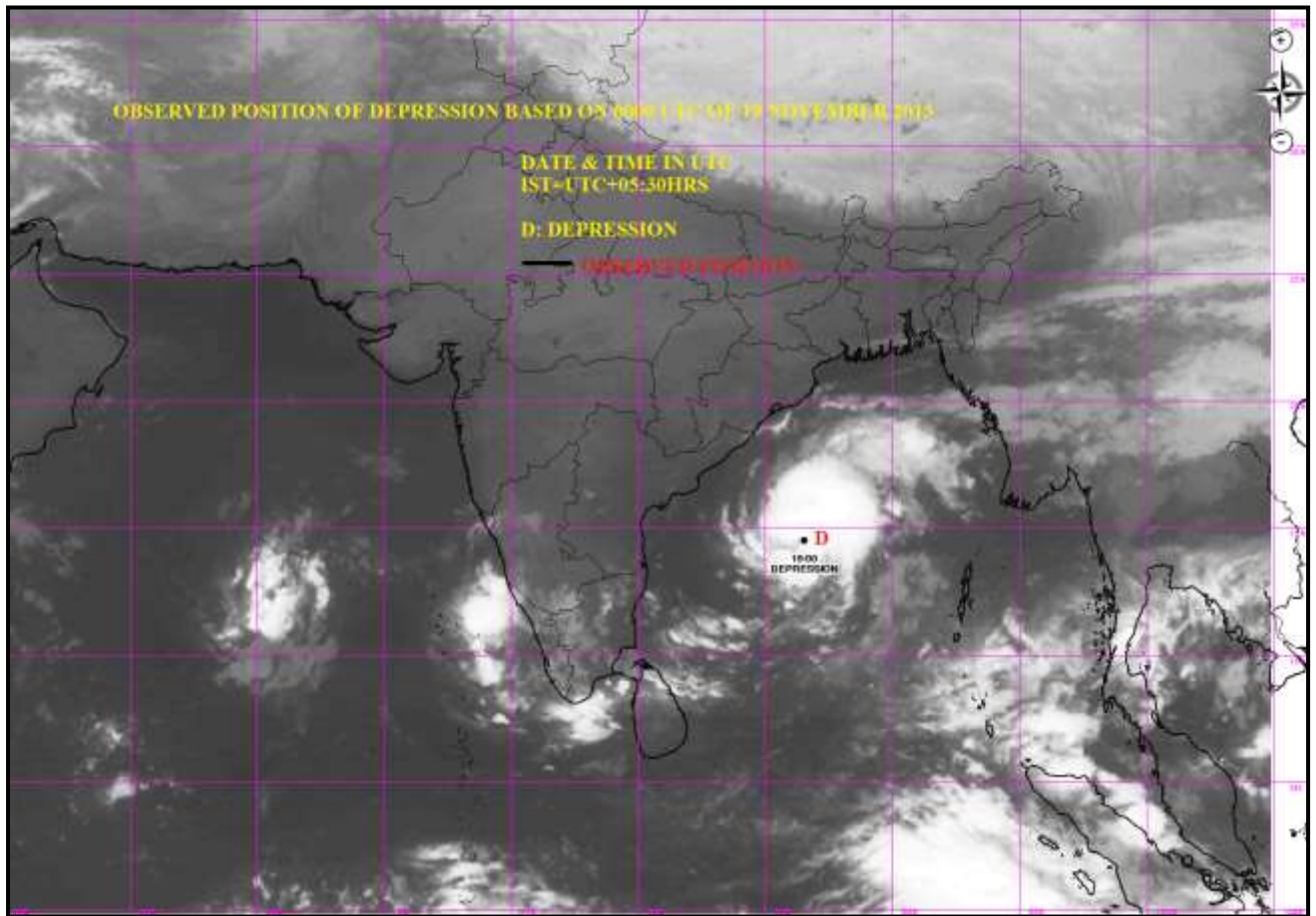
Squally winds speed reaching 45-55 kmph gusting to 65 kmph would prevail along and off Andhra Pradesh coast commencing from 21st November 2013 morning. Sea condition will be rough to very rough along and off Andhra Pradesh coasts from 21st November 2013 morning.

Fishermen are advised not to venture into Sea of off Andhra Pradesh coast. Fishermen out at sea off Andhra Pradesh coasts are advised to return to the coast.

The next bulletin will be issued at 1130 hrs IST of today, the 19th November, 2013.

(M Mohapatra)
Scientist-E
Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/ Mumbai, CWC Visakhapatnam/Bhubaneswar/Command MO Mumbai (022-22630084) / MC



Thiruvananthapuram.



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INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

**To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23093750)
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CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)
CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)**

Time of issue: 1100 hours IST

Dated: 19-11-2013

Bulletin No.: BOB06/2013/02

Sub: Depression over westcentral Bay of Bengal.

The depression over westcentral Bay of Bengal moved westwards and lay centred at 0830 hrs IST of today, the 19th November 2013 near latitude 14.5^oN and longitude 86.0^oE, about 650 km east-northeast of Chennai, 550 km east-southeast of Machilipatnam and 450 km. southeast of Vishakhapatnam. The system would intensify into a deep depression and move west-northwestwards towards Andhra Pradesh Coast during next 72 hours.

Under its influence, rainfall at most places with isolated heavy to very heavy rainfall would occur over coastal Andhra Pradesh and north coastal Tamil Nadu commencing from 20st November 2013 night.

Squally winds speed reaching 45-55 kmph gusting to 65 kmph would prevail along and off Andhra Pradesh coast commencing from 20th November 2013 night. Sea condition will be rough to very rough along and off Andhra Pradesh coasts from 20th November 2013 night.

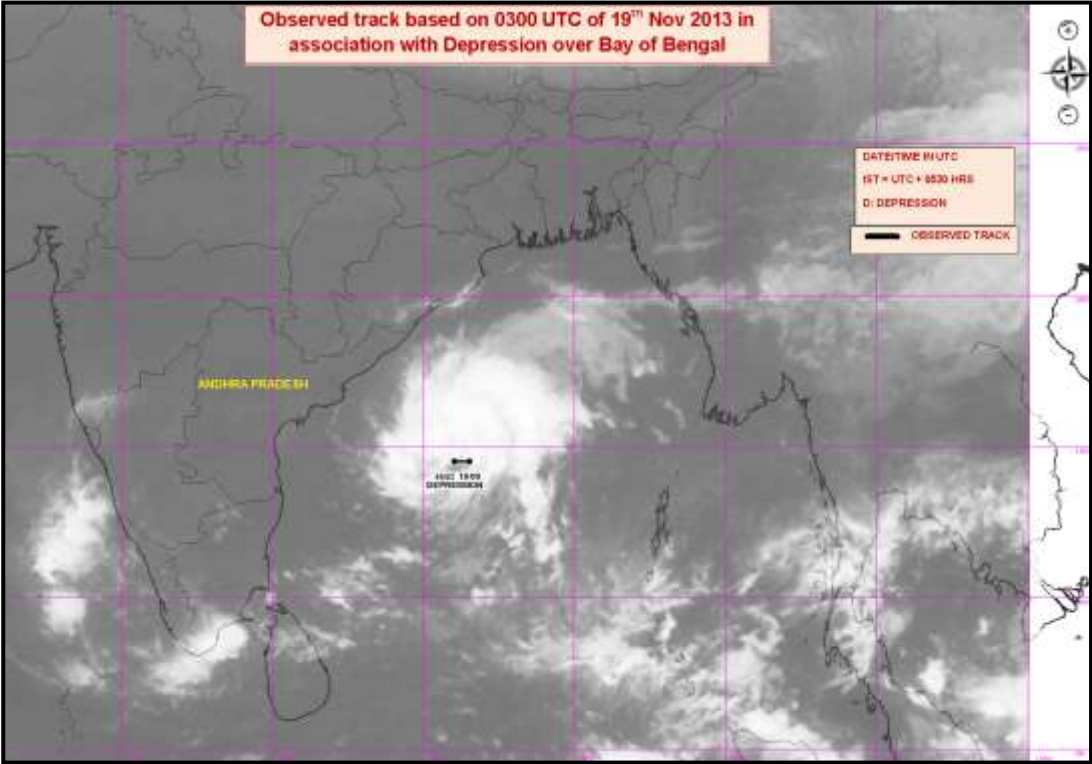
Fishermen are advised not to venture into Sea off Andhra Pradesh coast. Fishermen out at sea off Andhra Pradesh coasts are advised to return to the coast. Fishermen along and off north Tamil Nadu, Puducherry and south Odisha coast are advised to be cautious while going into sea.

The next bulletin will be issued at 1430 hrs IST of today, the 19th November, 2013.

(M Mohapatra)
Scientist-E

Ph:011-24631913 CC:

DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/
Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad





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CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)
CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 1400 hours IST

Dated: 19-11-2013

Bulletin No.: BOB06/2013/03

Sub: Depression over westcentral Bay of Bengal.

The depression over westcentral Bay of Bengal moved westwards and lay centred at 1130 hrs IST of today, the 19th November 2013 near latitude 14.5^oN and longitude 85.5^oE, about 600 km east-northeast of Chennai, 500 km east-southeast of Machilipatnam and 430 km southeast of Vishakhapatnam. The system would move west-northwestwards, intensify into a deep depression and cross south Andhra Pradesh and adjoining north Tamil Nadu coast between Chennai and Ongole around night of 21st November 2013.

Under its influence, rainfall at most places with isolated heavy to very heavy rainfall would occur over coastal Andhra Pradesh and north coastal Tamil Nadu commencing from 20st November 2013 night.

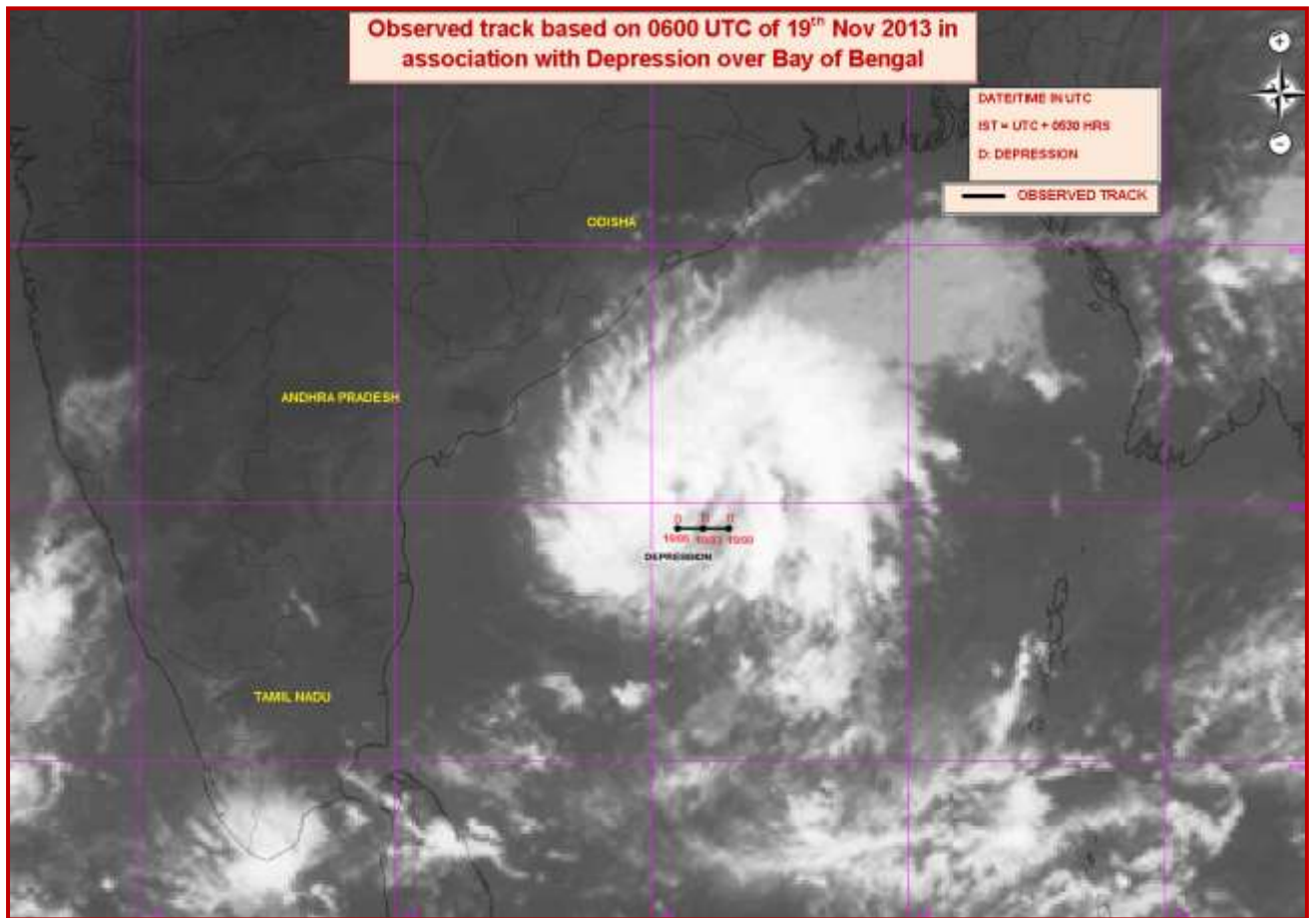
Squally winds speed reaching 45-55 kmph gusting to 65 kmph would prevail along and off Andhra Pradesh coast commencing from 20th November 2013 night. Sea condition will be rough to very rough along and off Andhra Pradesh coasts from 20th November 2013 night.

Fishermen are advised not to venture into Sea off Andhra Pradesh coast. Fishermen out at sea off Andhra Pradesh coasts are advised to return to the coast. Fishermen along and off north Tamil Nadu, Puducherry and south Odisha coast are advised to be cautious while going into sea.

The next bulletin will be issued at 2030 hrs IST of today, the 19th November, 2013.

(M Mohapatra)
Scientist-E
Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad.





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INDIA METEOROLOGICAL DEPARTMENT

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FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23093750)
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CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)
CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)
CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 2000 hours IST

Dated: 19-11-2013

Bulletin No.: BOB06/2013/04

Sub: Depression over westcentral Bay of Bengal.

The depression over westcentral Bay of Bengal moved northwestwards and lay centred at 1730 hrs IST of today, the 19th November 2013 near latitude 15.0^oN and longitude 85.0^oE, about 550 km east-northeast of Chennai, 430 km east-southeast of Machilipatnam and 350 km south-southeast of Vishakhapatnam. The system would intensify into a deep depression during next 12hrs. It would move west-northwestwards for some time, then west-southwestward and cross south Andhra Pradesh and adjoining north Tamil Nadu coast between Chennai and Ongole around night of 21st November 2013.

Under its influence, rainfall at most places with isolated heavy to very heavy rainfall would occur over coastal Andhra Pradesh and north coastal Tamil Nadu commencing from 20st November 2013 night.

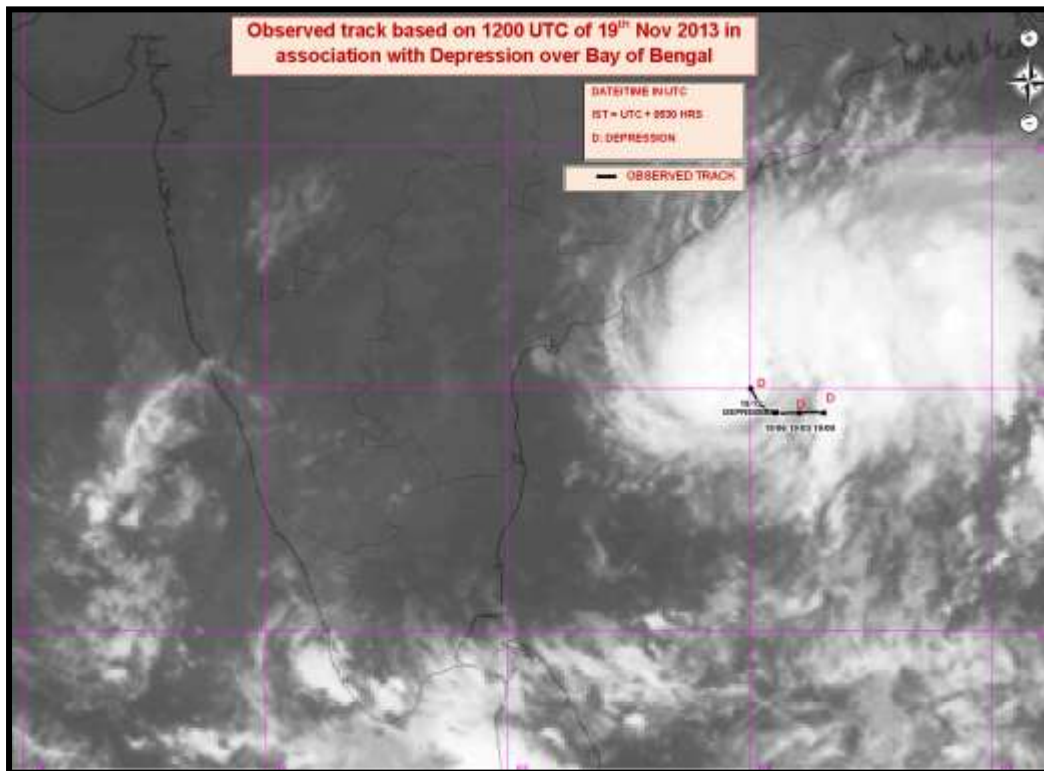
Squally winds speed reaching 45-55 kmph gusting to 65 kmph would prevail along and off Andhra Pradesh coast commencing from 20th November 2013 night. Sea condition will be rough to very rough along and off Andhra Pradesh coasts from 20th November 2013 night.

Fishermen are advised not to venture into Sea off Andhra Pradesh coast. Fishermen out at sea off Andhra Pradesh coasts are advised to return to the coast. Fishermen along and off north Tamil Nadu, Puducherry and south Odisha coast are advised to be cautious while going into sea.

The next bulletin will be issued at 0230 hrs IST of 20th November, 2013.

(M Mohapatra)
Scientist-E
Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad.





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To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

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SECRETARY, DST (Fax No. 26863847/-2418)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

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DIRECTOR GENERAL, AIR (25843825)

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UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)

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CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 2230 hours IST

Dated: 19-11-2013

Bulletin No.: BOB06/2013/05

Sub: Deep Depression over westcentral Bay of Bengal

Pre-Cyclone Watch for south Andhra Pradesh and adjoining north Tamilnadu coasts

The depression over westcentral Bay of Bengal remained practically stationary, intensified into a deep depression and lay centred at 2030 hrs IST of today, the 19th November 2013 near latitude 15.0°N and longitude 85.0°E, about 550 km east-northeast of Chennai, 430 km east-southeast of Machilipatnam and 350 km south-southeast of Vishakhapatnam. The system would further intensify into a cyclonic storm during next 24 hrs. It would move west-northwestwards for some time, then west-southwestward and cross south Andhra Pradesh and adjoining north Tamil Nadu coast between Chennai and Ongole, close to Kavali around night of 21st November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category
19-11-2013/2030	15.0/85.0	55-65GUSTING TO 75	DEEP DEPRESSION
19-11-2013/2330	15.2/84.8	55-65GUSTING TO 75	DEEP DEPRESSION
20-11-2013/0530	15.4/84.5	60-70 GUSTING TO 80	CYCLONIC STORM
20-11-2013/1130	15.4/84.0	70-80 GUSTING TO 90	CYCLONIC STORM
20-11-2013/1730	15.4/83.5	80-90 GUSTING TO 100	CYCLONIC STORM
21-11-2013/0530	15.2/82.5	80-90 GUSTING TO 100	CYCLONIC STORM
21-11-2013/1730	15.0/81.2	80-90 GUSTING TO 100	CYCLONIC STORM
22-11-2013/0530	14.8/79.9	60-70 GUSTING TO 80	CYCLONIC STORM
22-11-2013/1730	14.5/78.5	45-55 GUSTING TO 65	DEPRESSION

Warning for Andhra Pradesh, north Tamil Nadu and Puducherry coasts

(i) Rainfall

Under its influence, rainfall at most places with isolated heavy to very heavy rainfall would occur over coastal Andhra Pradesh and north coastal Tamil Nadu commencing from 20st November 2013 night.

(ii) Squally/Gale Winds

Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off Andhra Pradesh coast commencing from 20th November 2013 night. The wind speed would gradually increase upto gale wind speed of 80-90 kmph, gusting to 100 kmph at the time of landfall.

(iii) Sea condition

Sea condition will be rough to very rough along and off Andhra Pradesh coasts from 20th November 2013 night.

(iv) Damage expected due to a cyclonic storm

Damage to thatched huts. Breaking of tree branches causing minor damage to power and communication lines

(v) Action Suggested

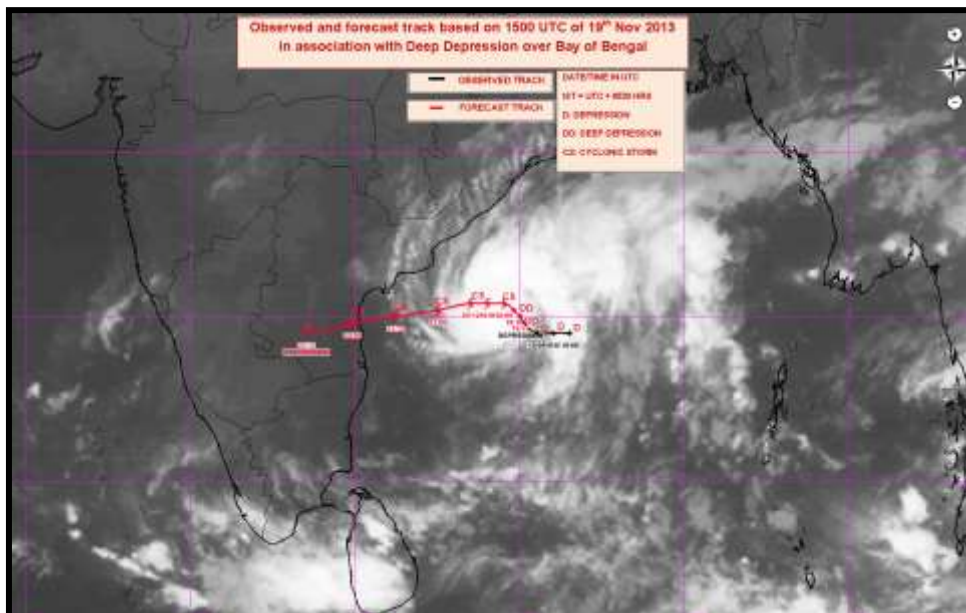
Fishermen are advised not to venture into Sea off Andhra Pradesh coast. Fishermen along and off north Tamil Nadu, Puducherry and south Odisha coast are advised to be cautious while going into sea.

The next bulletin will be issued at 0230 hrs IST of 20th November, 2013.

Duty Officer

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad/M.C.





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FAX MESSAGE

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To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

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CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)

CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 0215 hours IST

Dated: 20-11-2013

Bulletin No.: BOB06/2013/06

Sub: Deep Depression over westcentral Bay of Bengal

Pre-Cyclone Watch for south Andhra Pradesh and adjoining north Tamilnadu coasts

The deep depression over westcentral Bay of Bengal moved westward and lay centred at 2330 hrs IST of 19th November 2013 near latitude 15.0^oN and longitude 84.5^oE, about 500 km east-northeast of Chennai, 380 km east-southeast of Machilipatnam and 330 km south-southeast of Vishakhapatnam. The system would further intensify into a cyclonic storm during next 24 hrs. It would move west-northwestwards for some time, then west-southwestward and cross south Andhra Pradesh and adjoining north Tamil Nadu coast between Chennai and Ongole, close to Kavali around night of 21st November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. ^o N/ long. ^o E)	Maximum sustained surface wind speed (kmph)	Category
19-11-2013/2330	15.0/84.5	55-65 GUSTING TO 75	DEEP DEPRESSION
20-11-2013/0530	15.2/84.2	60-70 GUSTING TO 80	CYCLONIC STORM
20-11-2013/1130	15.4/84.0	70-80 GUSTING TO 90	CYCLONIC STORM
20-11-2013/1730	15.4/83.5	80-90 GUSTING TO 100	CYCLONIC STORM
21-11-2013/0530	15.2/82.5	80-90 GUSTING TO 100	CYCLONIC STORM
21-11-2013/1730	15.0/81.2	80-90 GUSTING TO 100	CYCLONIC STORM
22-11-2013/0530	14.8/79.9	60-70 GUSTING TO 80	CYCLONIC STORM
22-11-2013/1730	14.5/78.5	45-55 GUSTING TO 65	DEPRESSION

Warning for Andhra Pradesh, north Tamil Nadu and Puducherry coasts

(vi) Rainfall

Under its influence, rainfall at most places with isolated heavy to very heavy rainfall would occur over coastal Andhra Pradesh and north coastal Tamil Nadu commencing from 20st November 2013 night.

(vii) Squally/Gale Winds

Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off Andhra Pradesh coast commencing from 20th November 2013 night. The wind speed would gradually increase upto gale wind speed of 80-90 kmph, gusting to 100 kmph at the time of landfall.

(viii) Sea condition

Sea condition will be rough to very rough along and off Andhra Pradesh coasts from 20th November 2013 night.

(ix) Damage expected due to a cyclonic storm

Damage to thatched huts. Breaking of tree branches causing minor damage to power and communication lines

(x) Action Suggested

Fishermen are advised not to venture into Sea off Andhra Pradesh coast. Fishermen along and off north Tamil Nadu, Puducherry and south Odisha coast are advised to be cautious while going into sea.

The next bulletin will be issued at 0830 hrs IST of tomorrow, the 20th November, 2013.

Duty Officer
Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad/M.C.



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CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 0830 hours IST

Dated: 20-11-2013

Bulletin No.: BOB06/2013/07

Sub: Deep Depression over westcentral Bay of Bengal

Cyclone Alert for south Andhra Pradesh and adjoining north Tamilnadu coasts

The deep depression over westcentral Bay of Bengal moved further westward and lay centred at 0530 hrs IST of 20th November 2013 near latitude 15.0^oN and longitude 84.0^oE, about 460 km east-northeast of Chennai, 430 km east of Kavali, 330 km east-southeast of Machilipatnam and 310 km south-southeast of Vishakhapatnam. The system would further intensify into a cyclonic storm during next 6 hrs and further into a severe cyclonic storm during next 24 hrs. It would move west-northwestwards for some time, then west-southwestward and cross south Andhra Pradesh and adjoining north Tamil Nadu coast between Chennai and Ongole, close to Kavali around night of 21st November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. ^o N/ long. ^o E)	Maximum sustained surface wind speed (kmph)	Category
20-11-2013/0530	15.0/84.0	55-65 GUSTING TO 75	DEEP DEPRESSION
20-11-2013/1130	15.2/83.5	65-75 GUSTING TO 85	CYCLONIC STORM
20-11-2013/1730	15.2/83.0	75-85 GUSTING TO 95	CYCLONIC STORM
20-11-2013/2330	15.0/82.5	85-95 GUSTING TO 105	CYCLONIC STORM
21-11-2013/0530	15.0/82.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
21-11-2013/1730	14.8/80.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/0530	14.7/79.5	80-90 GUSTING TO 100	CYCLONIC STORM
22-11-2013/1730	14.6/78.2	55-65 GUSTING TO 75	DEEP DEPRESSION
23-11-2013/0530	14.5/77.0	40-50 GUSTING TO 60	DEPRESSION

Warning for south Andhra Pradesh, north Tamil Nadu and Puducherry coasts

(xi) Rainfall

Under its influence, rainfall at most places with heavy to very heavy rainfall at a few places with isolated extremely heavy falls (25cm or more) would occur over coastal Andhra Pradesh commencing from 20th November 2013 night. Rainfall at most places with isolated heavy to very heavy falls would occur over north coastal Tamil Nadu and Puducherry on 21st November 2013.

(xii) Squally/Gale Winds

Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off south Andhra Pradesh coast commencing from 20th November 2013 night. The wind speed would gradually increase upto gale wind speed of 100-110 kmph, gusting to 120 kmph at the time of landfall. Squally winds with speed reaching 55-65 kmph gusting to 75 kmph likely to prevail along and off north Andhra Pradesh, north Tamil Nadu and Puducherry coasts from 20th November night.

(xiii) Sea condition

Sea condition will be rough to very rough along and off Andhra Pradesh coasts from 20th November 2013 night, becoming very high from 21st November 2013 evening onwards.

(xiv) Damage expected due to a cyclonic storm

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(xv) Action Suggested

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

The next bulletin will be issued at 1130 hrs IST of today, the 20th November, 2013.

Duty Officer
Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad/M.C.



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23793144)

PS TO HON'BLE MINISTER FOR SCIENCE AND TECHNOLOGY AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MoES, (Fax No. 24629777)

SECRETARY, DST (Fax No. 26863847/-2418)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (25843825)

PIB MoES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)

DIRECTOR OF PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)

CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 1030 hours IST

Dated: 20-11-2013

Bulletin No.: BOB06/2013/08

Sub: Cyclonic Storm, HELEN over westcentral Bay of Bengal

**Cyclone Warning for south Andhra Pradesh and adjoining north
Tamilnadu coasts: Orange Message**

The deep depression over westcentral Bay of Bengal remained practically stationary during past 3 hrs, intensified into a cyclonic storm 'HELEN' and lay centred at 0830 hrs IST of today, the 20th November 2013 near latitude 15.0°N and longitude 84.0°E, about 460 km east-northeast of Chennai, 430 km east of Kavali, 330 km east-southeast of Machilipatnam and 310 km south-southeast of Vishakhapatnam. The system would further intensify into a severe cyclonic storm during next 24 hrs. It would move west-northwestwards for some time, then west-southwestward and cross south Andhra Pradesh coast between Sriharikota and Ongole, close to Kavali around night of 21st November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category
20-11-2013/0830	15.0/84.0	65-75GUSTING TO 85	CYCLONIC STORM
20-11-2013/1130	15.2/83.5	70-80 GUSTING TO 90	CYCLONIC STORM
20-11-2013/1730	15.2/83.0	75-85 GUSTING TO 95	CYCLONIC STORM
20-11-2013/2330	15.0/82.5	85-95 GUSTING TO 105	CYCLONIC STORM
21-11-2013/0530	15.0/82.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
21-11-2013/1730	14.8/80.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/0530	14.7/79.5	80-90 GUSTING TO 100	CYCLONIC STORM
22-11-2013/1730	14.6/78.2	55-65 GUSTING TO 75	DEEP DEPRESSION
23-11-2013/0530	14.5/77.0	40-50 GUSTING TO 60	DEPRESSION

Warning for south Andhra Pradesh, north Tamil Nadu and Puducherry coasts

(xvi) Rainfall

Under its influence, rainfall at most places with heavy to very heavy rainfall at a few places would occur over coastal Andhra Pradesh commencing from 20th November 2013 night. Isolated extremely heavy falls (25cm or more) would occur over south coastal Andhra Pradesh on 21st and 22nd November. Rainfall at most places with isolated heavy to very heavy falls would occur over Rayalseema and adjoining north Tamil Nadu on 22nd November. Moderate rainfall would occur at many places over south Odisha on 21st November.

(xvii) Squally/Gale Winds

Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off south Andhra Pradesh coast commencing from 20th November 2013 night. The wind speed would gradually increase upto gale wind speed of 100-110 kmph, gusting to 120 kmph at the time of landfall. Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off north Andhra Pradesh, north Tamil Nadu and Puducherry coasts from 20th November night.

(xviii) Storm Surge

Storm surge of about 1 to 1.5m height above astronomical tide would inundate the low lying areas of Nellore, Prakasham, Guntur and Krishna districts of Andhra Pradesh at the time of landfall.

(xix) Sea condition

Sea condition will be rough to very rough along and off Andhra Pradesh coasts from 20th November 2013 night, becoming very high from 21st November 2013 evening onwards.

(xx) Damage expected due to a cyclonic storm over south coastal Andhra Pradesh

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(xxi) Action Suggested

• South Andhra Pradesh coast

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

• North Andhra Pradesh and north Tamil Nadu coasts

Fishermen are advised not to venture into sea.

The next bulletin will be issued at 1430 hrs IST of today, the 20th November, 2013.

(M.MOHAPATRA)

Scientist-E

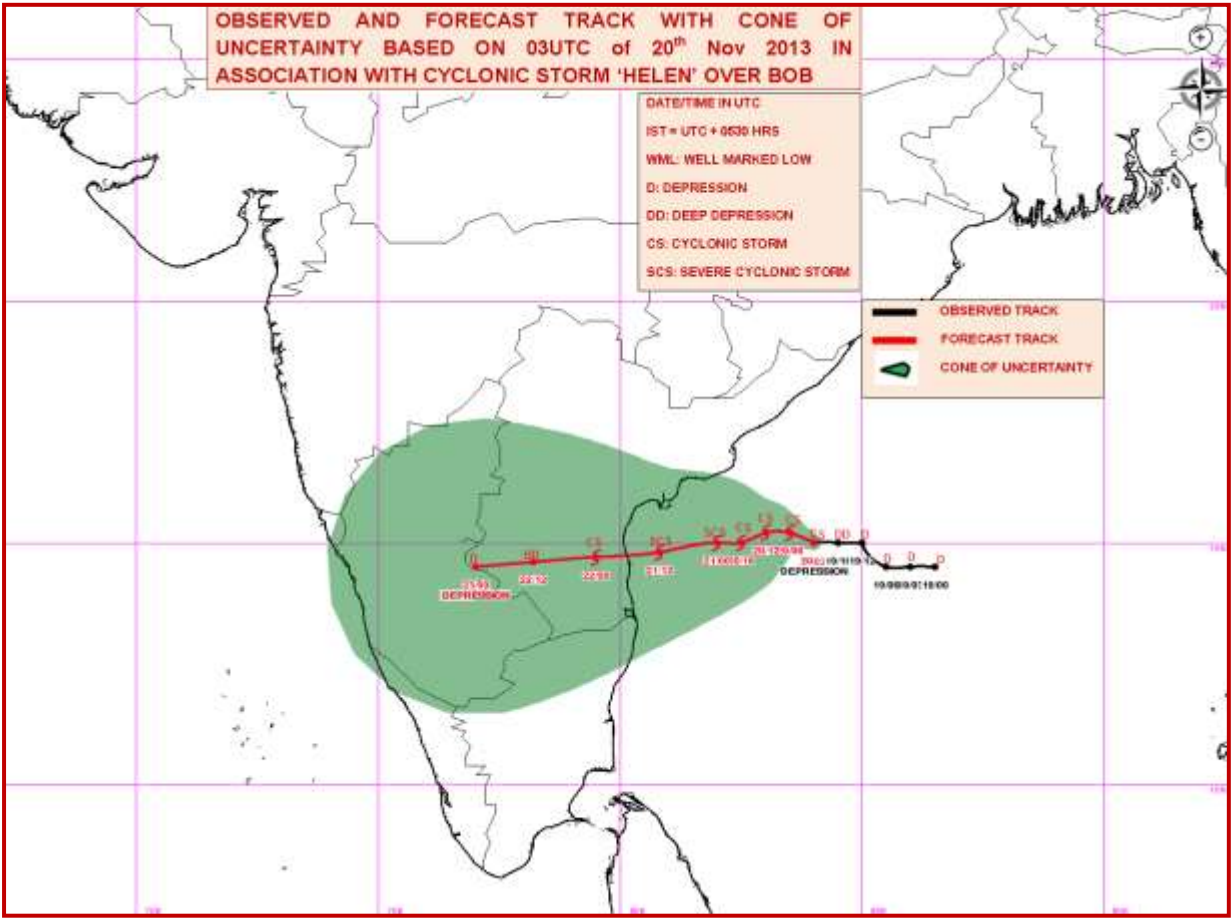
Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad/M.C.

OBSERVED AND FORECAST TRACK WITH CONE OF UNCERTAINTY BASED ON 03UTC of 20th Nov 2013 IN ASSOCIATION WITH CYCLONIC STORM 'HELEN' OVER BOB

DATE/TIME IN UTC
IST = UTC + 0530 HRS
WML: WELL MARKED LOW
D: DEPRESSION
DD: DEEP DEPRESSION
CS: CYCLONIC STORM
SCS: SEVERE CYCLONIC STORM

— OBSERVED TRACK
— FORECAST TRACK
CONE OF UNCERTAINTY





भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23793144)

PS TO HON'BLE MINISTER FOR SCIENCE AND TECHNOLOGY AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MoES, (Fax No. 24629777)

SECRETARY, DST (Fax No. 26863847/-2418)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (25843825)

PIB MoES (FAX NO. 23389042)

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D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)

DIRECTOR OF PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

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CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)

CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 1330 hours IST

Dated: 20-11-2013

Bulletin No.: BOB06/2013/09

Sub: Cyclonic Storm, HELEN over westcentral Bay of Bengal

**Cyclone Warning for south Andhra Pradesh and adjoining north
Tamilnadu coasts: Orange Message**

The cyclonic storm 'HELEN' over westcentral Bay of Bengal moved slightly west-northwestwards during past 6 hrs and lay centred at 1130 hrs IST of today, the 20th November 2013 near latitude 15.2°N and longitude 84.0°E, about 470 km east-northeast of Chennai, 430 km east of Kavali, 320 km east-southeast of Machilipatnam and 290 km south-southeast of Vishakhapatnam. The system would further intensify into a severe cyclonic storm during next 24 hrs. It would move west-northwestwards for some time, then west-southwestward and cross south Andhra Pradesh coast between Sriharikota and Ongole, close to Kavali around night of 21st November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category
20-11-2013/1130	15.2/84.0	70-80 GUSTING TO 90	CYCLONIC STORM
20-11-2013/1730	15.4/83.5	75-85 GUSTING TO 95	CYCLONIC STORM
20-11-2013/2330	15.4/83.0	85-95 GUSTING TO 105	CYCLONIC STORM
21-11-2013/0530	15.2/82.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
21-11-2013/1130	15.0/82.0	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
21-11-2013/2330	14.8/80.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1130	14.7/79.5	80-90 GUSTING TO 100	CYCLONIC STORM
22-11-2013/2330	14.6/78.2	55-65 GUSTING TO 75	DEEP DEPRESSION
23-11-2013/1130	14.5/77.0	40-50 GUSTING TO 60	DEPRESSION

Warning for south Andhra Pradesh, north Tamil Nadu and Puducherry coasts

(xxii) Rainfall

Under its influence, rainfall at most places with heavy to very heavy rainfall at a few places would occur over coastal Andhra Pradesh commencing from 20th November 2013 night. Isolated extremely heavy falls (25cm or more) would occur over south coastal Andhra Pradesh on 21st and 22nd November. Rainfall at most places with isolated heavy to very heavy falls would occur over Rayalseema and adjoining north Tamil Nadu on 22nd November. Moderate rainfall would occur at many places over south Odisha on 21st November.

(xxiii) Squally/Gale Winds

Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off south Andhra Pradesh coast commencing from 20th November 2013 night. The wind speed would gradually increase upto gale wind speed of 100-110 kmph, gusting to 120 kmph at the time of landfall. Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off north Andhra Pradesh, north Tamil Nadu and Puducherry coasts from 20th November night.

(xxiv) Storm Surge

Storm surge of about 1 to 1.5m height above astronomical tide would inundate the low lying areas of Nellore, Prakasham, Guntur and Krishna districts of Andhra Pradesh at the time of landfall.

(xxv) Sea condition

Sea condition will be rough to very rough along and off south Andhra Pradesh coasts from 20th November 2013 night, becoming very high from 21st November 2013 evening onwards. It will be rough to very rough along and off north Andhra Pradesh, north Tamil Nadu and Puducherry coasts during the same period.

(xxvi) Damage expected due to a cyclonic storm over south coastal Andhra Pradesh

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(xxvii) Action Suggested

• **South Andhra Pradesh coast**

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

• **North Andhra Pradesh and north Tamil Nadu coasts**

Fishermen are advised not to venture into sea.

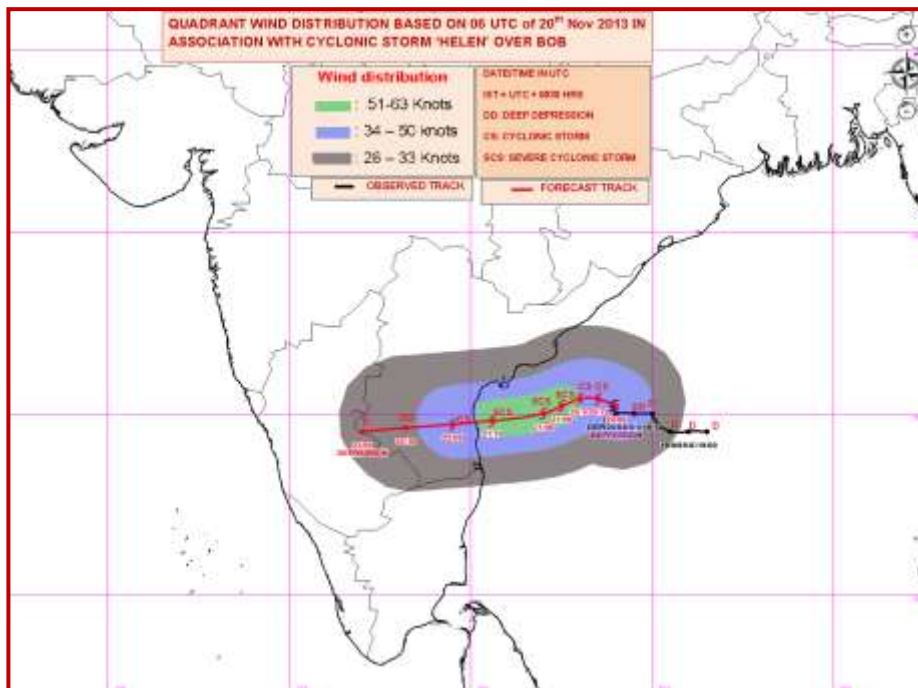
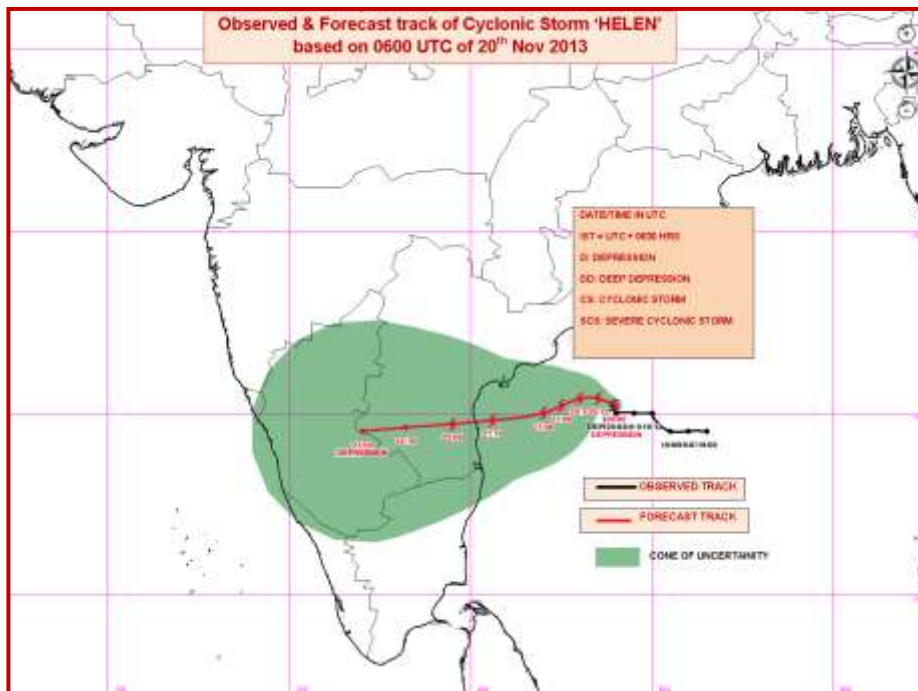
The next bulletin will be issued at 1730 hrs IST of today, the 20th November, 2013.

(M.MOHAPATRA)

Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad/M.C.





भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23793144)

PS TO HON'BLE MINISTER FOR SCIENCE AND TECHNOLOGY AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MoES, (Fax No. 24629777)

SECRETARY, DST (Fax No. 26863847/-2418)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (25843825)

PIB MoES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)

DIRECTOR OF PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)

CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 1630 hours IST

Dated: 20-11-2013

Bulletin No.: BOB06/2013/10

Sub: Cyclonic Storm, HELEN over westcentral Bay of Bengal

Cyclone Warning for south Andhra Pradesh and adjoining north Tamil Nadu coasts: Orange Message

The cyclonic storm 'HELEN' over westcentral Bay of Bengal remained practically stationary and lay centred at 1430 hrs IST of today, the 20th November 2013 near latitude 15.2°N and longitude 84.0°E, about 470 km east-northeast of Chennai, 430 km east of Kavali, 320 km east-southeast of Machillipatnam and 290 km south-southeast of Vishakhapatnam. The system would further intensify into a severe cyclonic storm during next 24 hrs. It would move west-northwestwards for some time, then west-southwestward and cross south Andhra Pradesh coast between Nellore and Machillipatnam, close to Ongole around morning of 22nd November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category
20-11-2013/1430	15.2/84.0	70-80 GUSTING TO 90	CYCLONIC STORM
20-11-2013/1730	15.4/83.5	75-85 GUSTING TO 95	CYCLONIC STORM
20-11-2013/2330	15.4/83.0	85-95 GUSTING TO 105	CYCLONIC STORM
21-11-2013/0530	15.6/82.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
21-11-2013/1130	15.6/82.0	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
21-11-2013/2330	15.5/80.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1130	15.3/79.5	80-90 GUSTING TO 100	CYCLONIC STORM
22-11-2013/2330	15.1/78.2	55-65 GUSTING TO 75	DEEP DEPRESSION
23-11-2013/1130	14.8/77.0	40-50 GUSTING TO 60	DEPRESSION

Warning for south Andhra Pradesh, north Tamil Nadu and Puducherry coasts

(xxviii) Rainfall

Under its influence, rainfall at most places with heavy to very heavy rainfall at a few places would occur over coastal Andhra Pradesh commencing from 20th November 2013 night. Isolated extremely heavy falls (25cm or more) would occur over south coastal Andhra Pradesh on 21st and 22nd November. Rainfall at most places with isolated heavy to very heavy falls would occur over Rayalseema and adjoining north Tamil Nadu on 22nd November. Moderate rainfall would occur at many places over south Odisha on 21st November.

(xxix) Squally/Gale Winds

Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off south Andhra Pradesh coast commencing from 20th November 2013 night. The wind speed would gradually increase upto gale wind speed of 100-110 kmph, gusting to 120 kmph at the time of landfall. Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off north Andhra Pradesh, north Tamil Nadu and Puducherry coasts from 20th November night.

(xxx) Storm Surge

Storm surge of about 1 to 1.5m height above astronomical tide would inundate the low lying areas of Nellore, Prakasham, Guntur and Krishna districts of Andhra Pradesh at the time of landfall.

(xxxi) Sea condition

Sea condition will be rough to very rough along and off south Andhra Pradesh coasts from 20th November 2013 night, becoming very high from 21st November 2013 evening onwards. It will be rough to very rough along and off north Andhra Pradesh, north Tamil Nadu and Puducherry coasts during the same period.

(xxxii) Damage expected due to a cyclonic storm over south coastal Andhra Pradesh

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(xxxiii) Action Suggested

- **South Andhra Pradesh coast**

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

- **North Andhra Pradesh and north Tamil Nadu coasts**

Fishermen are advised not to venture into sea.

The next bulletin will be issued at 2030 hrs IST of today, the 20th November, 2013.

(M.MOHAPATRA)

Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad/M.C.



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

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CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 1930 hours IST

Dated: 20-11-2013

Bulletin No.: BOB06/2013/11

Sub: Cyclonic Storm, HELEN over westcentral Bay of Bengal

Cyclone Warning for south Andhra Pradesh and adjoining north Tamil Nadu coasts: Orange Message

The cyclonic storm 'HELEN' over westcentral Bay of Bengal moved slightly northwestwards and lay centred at 1730 hrs IST of today, the 20th November 2013 near latitude 15.3^oN and longitude 83.9^oE, about 470 km east-northeast of Chennai, 420 km east of Kavali, 310 km east-southeast of Machillipatnam and 280 km south-southeast of Vishakhapatnam. The system would further intensify into a severe cyclonic storm during next 24 hrs. It would move west-northwestwards slowly for some time, then west-southwestward and cross south Andhra Pradesh coast between Nellore and Machillipatnam, close to Ongole around morning of 22nd November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. ^o N/ long. ^o E)	Maximum sustained surface wind speed (kmph)	Category
20-11-2013/1730	15.3/83.9	75-85 GUSTING TO 85	CYCLONIC STORM
20-11-2013/2330	15.4/83.7	85-95 GUSTING TO 105	CYCLONIC STORM
21-11-2013/0530	15.6/83.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
21-11-2013/1130	15.6/82.8	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
21-11-2013/1730	15.6/82.2	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
22-11-2013/0530	15.5/80.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1730	15.3/79.3	55-65 GUSTING TO 75	DEEP DEPRESSION
23-11-2013/0530	15.1/78.0	40-50 GUSTING TO 60	DEPRESSION
23-11-2013/1730	14.8/76.6	30-40 GUSTING TO 50	LOW

Warning for Andhra Pradesh, north Tamil Nadu and Puducherry coasts

(xxxiv) Rainfall

Under its influence, rainfall at most places with heavy to very heavy rainfall at a few places would occur over coastal Andhra Pradesh commencing from 20th November 2013 night. Isolated extremely heavy falls (25cm or more) would occur over south coastal Andhra Pradesh on 21st and 22nd November. Rainfall at most places with isolated heavy to very heavy falls would occur over Rayalseema and adjoining north Tamil Nadu on 22nd November. Moderate rainfall would occur at many places over south Odisha on 21st November.

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Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off south Andhra Pradesh coast commencing from 20th November 2013 night. The wind speed would gradually increase upto gale wind speed of 100-110 kmph, gusting to 120 kmph at the time of landfall. Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off north Andhra Pradesh, north Tamil Nadu and Puducherry coasts from 20th November night.

(xxxvi) Storm Surge

Storm surge of about 1 to 1.5m height above astronomical tide would inundate the low lying areas of Nellore, Prakasham, Guntur and Krishna districts of Andhra Pradesh at the time of landfall.

(xxxvii) Sea condition

Sea condition will be rough to very rough along and off south Andhra Pradesh coasts from 20th November 2013 night, becoming very high from 21st November 2013 evening onwards. It will be rough to very rough along and off north Andhra Pradesh, north Tamil Nadu and Puducherry coasts during the same period.

(xxxviii) Damage expected due to a cyclonic storm over south coastal Andhra Pradesh

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(xxxix) Action Suggested

- **South Andhra Pradesh coast**

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

- **North Andhra Pradesh and north Tamil Nadu coasts**

Fishermen are advised not to venture into sea.

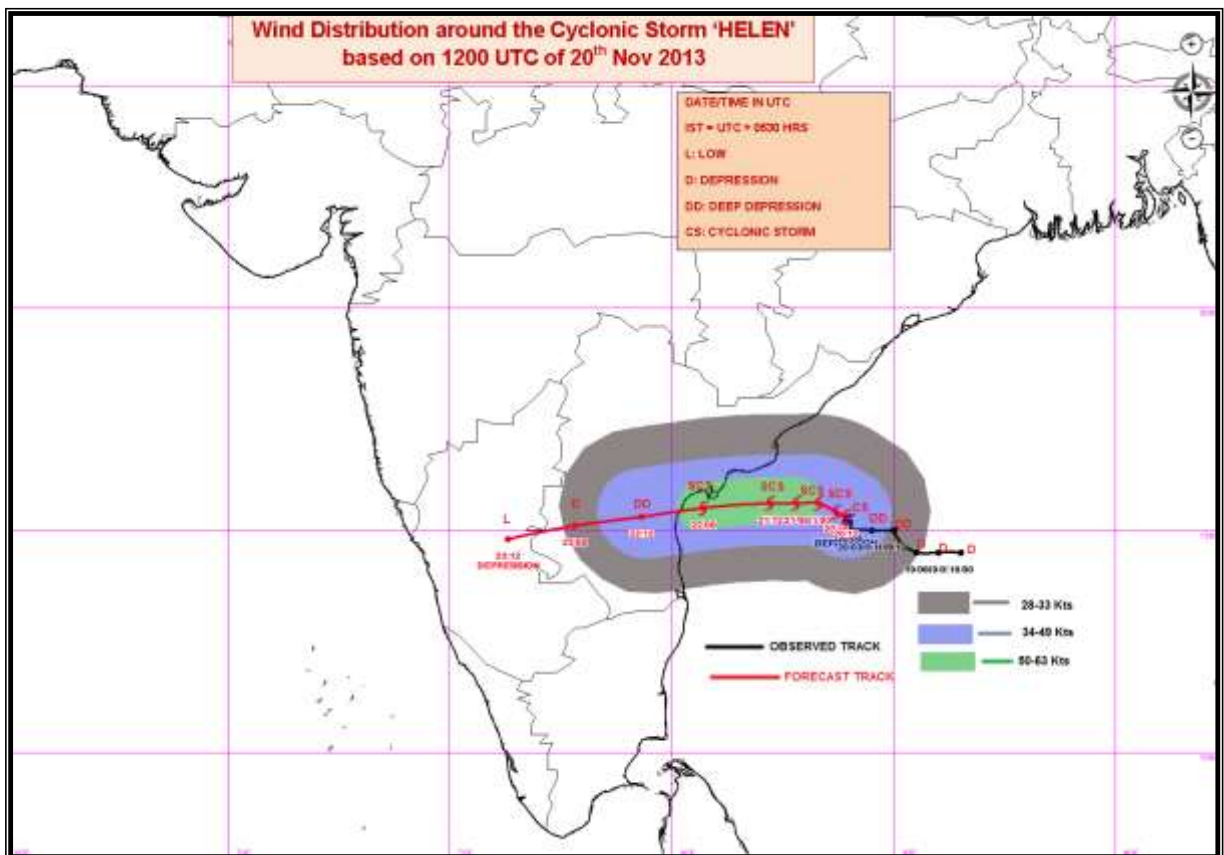
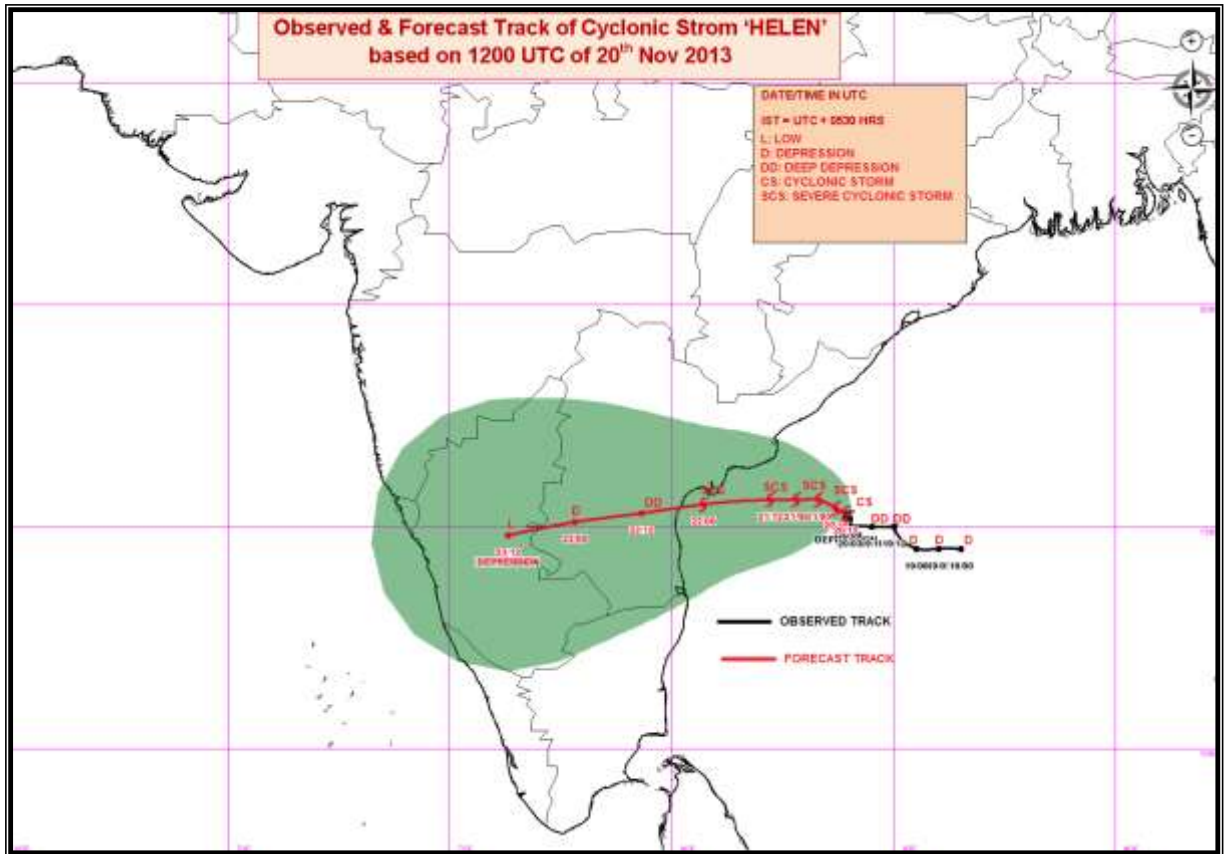
The next bulletin will be issued at 2330 hrs IST of today, the 20th November, 2013.

(M.MOHAPATRA)

Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad





भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

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SECRETARY, MoES, (Fax No. 24629777)

SECRETARY, DST (Fax No. 26863847/-2418)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (25843825)

PIB MoES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)

DIRECTOR OF PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)

CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 2330 hours IST

Dated: 20-11-2013

Bulletin No.: BOB06/2013/12

Sub: Cyclonic Storm, HELEN over westcentral Bay of Bengal

Cyclone Warning for south Andhra Pradesh and adjoining north Tamil Nadu coasts: Orange Message

The cyclonic storm 'HELEN' over westcentral Bay of Bengal remain practically stationary and lay centred at 2030 hrs IST of today, the 20th November 2013 near latitude 15.3°N and longitude 83.9°E, about 470 km east-northeast of Chennai, 420 km east of Kavali, 310 km east-southeast of Machillipatnam and 280 km south-southeast of Vishakhapatnam. The system would further intensify into a severe cyclonic storm during next 24 hrs. It would move west-northwestwards slowly for some time, then west-southwestward and cross south Andhra Pradesh coast between Nellore and Machillipatnam, close to Ongole around morning of 22nd November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category
20-11-2013/2030	15.3/83.9	75-85 GUSTING TO 85	CYCLONIC STORM
20-11-2013/2330	15.4/83.7	85-95 GUSTING TO 105	CYCLONIC STORM
21-11-2013/0530	15.6/83.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
21-11-2013/1130	15.6/82.8	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
21-11-2013/1730	15.6/82.2	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
22-11-2013/0530	15.5/80.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1730	15.3/79.3	55-65 GUSTING TO 75	DEEP DEPRESSION
23-11-2013/0530	15.1/78.0	40-50 GUSTING TO 60	DEPRESSION
23-11-2013/1730	14.8/76.6	30-40 GUSTING TO 50	LOW

Warning for Andhra Pradesh, north Tamil Nadu and Puducherry coasts

(xi) Rainfall

Under its influence, rainfall at most places with heavy to very heavy rainfall at a few places would occur over coastal Andhra Pradesh commencing from 20th November 2013 night. Isolated extremely heavy falls (25cm or more) would occur over south coastal Andhra Pradesh on 21st and 22nd November. Rainfall at most places with isolated heavy to very heavy falls would occur over Rayalseema and adjoining north Tamil Nadu on 22nd November. Moderate rainfall would occur at many places over south Odisha on 21st November.

(xli) Squally/Gale Winds

Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off south Andhra Pradesh coast commencing from 20th November 2013 night. The wind speed would gradually increase upto gale wind speed of 100-110 kmph, gusting to 120 kmph at the time of landfall. Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off north Andhra Pradesh, north Tamil Nadu and Puducherry coasts from 20th November night.

(xlii) Storm Surge

Storm surge of about 1 to 1.5m height above astronomical tide would inundate the low lying areas of Nellore, Prakasham, Guntur and Krishna districts of Andhra Pradesh at the time of landfall.

(xliii) Sea condition

Sea condition will be rough to very rough along and off south Andhra Pradesh coasts from 20th November 2013 night, becoming very high from 21st November 2013 evening onwards. It will be rough to very rough along and off north Andhra Pradesh, north Tamil Nadu and Puducherry coasts during the same period.

(xliv) Damage expected due to a cyclonic storm over south coastal Andhra Pradesh

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(xlv) Action Suggested

• South Andhra Pradesh coast

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

• North Andhra Pradesh and north Tamil Nadu coasts

Fishermen are advised not to venture into sea.

The next bulletin will be issued at 0230 hrs IST of 21st November, 2013.

(RANJEET SINGH)

Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23793144)

PS TO HON'BLE MINISTER FOR SCIENCE AND TECHNOLOGY AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MoES, (Fax No. 24629777)

SECRETARY, DST (Fax No. 26863847/-2418)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (25843825)

PIB MoES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)

DIRECTOR OF PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)

CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 0230 hours IST

Dated: 21-11-2013

Bulletin No.: BOB06/2013/13

Sub: Cyclonic Storm, HELEN over westcentral Bay of Bengal

Cyclone Warning for south Andhra Pradesh and adjoining north Tamil Nadu coasts: Orange Message

The cyclonic storm 'HELEN' over westcentral Bay of Bengal moved slightly west-northwestwards and lay centred at 2330 hrs IST of today, the 20th November 2013 near latitude 15.4^oN and longitude 83.7^oE, about 460 km east-northeast of Chennai, 400 km east of Kavali, 290 km east-southeast of Machillipatnam and 260 km south-southeast of Vishakhapatnam. The system would further intensify into a severe cyclonic storm during next 24 hrs. It would move west-northwestwards slowly for some time, then west-southwestward and cross south Andhra Pradesh coast between Nellore and Machillipatnam, close to Ongole around afternoon of 22nd November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. ^o N/ long. ^o E)	Maximum sustained surface wind speed (kmph)	Category
20-11-2013/2330	15.4/83.7	85-95 GUSTING TO 105	CYCLONIC STORM
21-11-2013/0530	15.6/83.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
21-11-2013/1130	15.6/83.1	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
21-11-2013/1730	15.6/82.6	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
21-11-2013/2330	15.6/82.0	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
22-11-2013/1130	15.5/81.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/2330	15.3/79.7	85-95 GUSTING TO 105	CYCLONIC STORM
23-11-2013/1130	15.1/78.2	55-65 GUSTING TO 75	DEEP DEPRESSION
23-11-2013/1730	14.8/76.6	30-40 GUSTING TO 50	LOW

Warning for Andhra Pradesh, north Tamil Nadu and Puducherry coasts

(xlvi) Rainfall

Under its influence, rainfall at most places with heavy to very heavy rainfall at a few places would occur over coastal Andhra Pradesh commencing from 21st November 2013 forenoon. Isolated extremely heavy falls (25cm or more) would occur over south coastal Andhra Pradesh on 21st and 22nd November. Rainfall at most places with isolated heavy to very heavy falls would occur over Rayalseema and adjoining north Tamil Nadu on 22nd November. Moderate rainfall would occur at many places over south Odisha on 21st November.

(xlvii) Squally/Gale Winds

Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off south Andhra Pradesh coast commencing from 21st November 2013 forenoon. The wind speed would gradually increase upto gale wind speed of 100-110 kmph, gusting to 120 kmph at the time of landfall. Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off north Andhra Pradesh, north Tamil Nadu and Puducherry coasts at the time of landfall.

(xlviii) Storm Surge

Storm surge of about 1 to 1.5m height above astronomical tide would inundate the low lying areas of Nellore, Prakasham, Guntur and Krishna districts of Andhra Pradesh at the time of landfall.

(xlix) Sea condition

Sea condition will be rough to very rough along and off south Andhra Pradesh coasts from 21st November 2013 forenoon, becoming very high from 21st November 2013 morning onwards. It will be rough to very rough along and off north Andhra Pradesh, north Tamil Nadu and Puducherry coasts during the same period.

(I) Damage expected due to a cyclonic storm over south coastal Andhra Pradesh

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(li) Action Suggested**• South Andhra Pradesh coast**

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

• North Andhra Pradesh and north Tamil Nadu coasts

Fishermen are advised not to venture into sea.

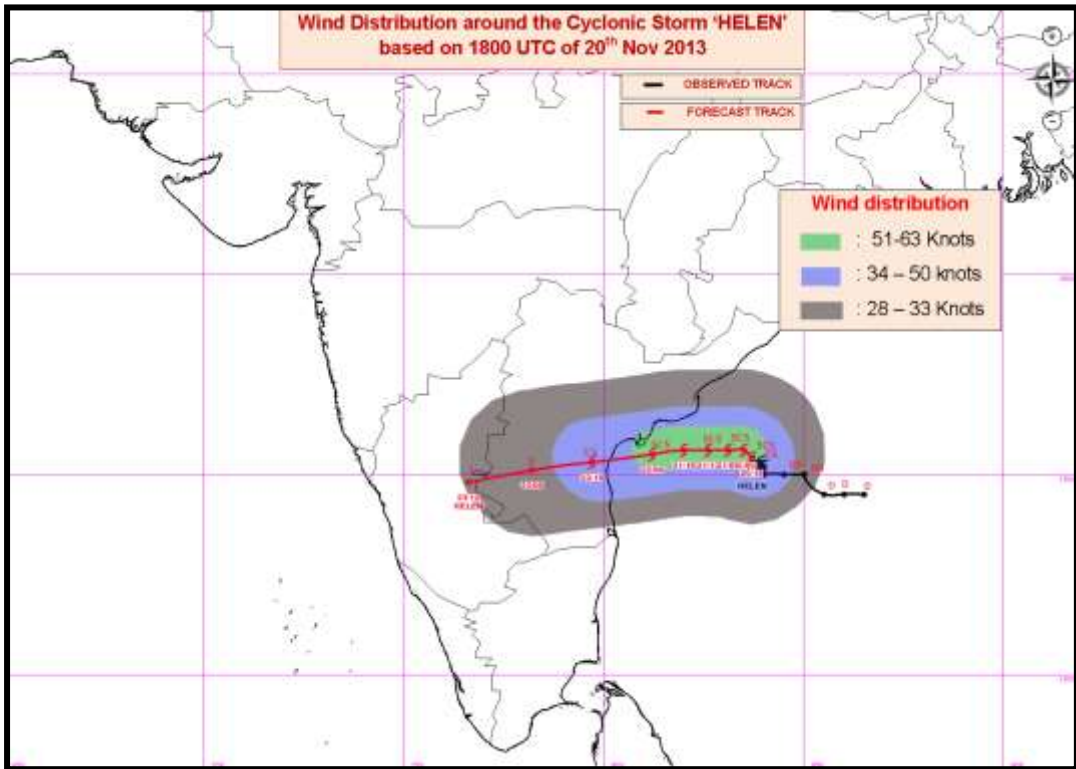
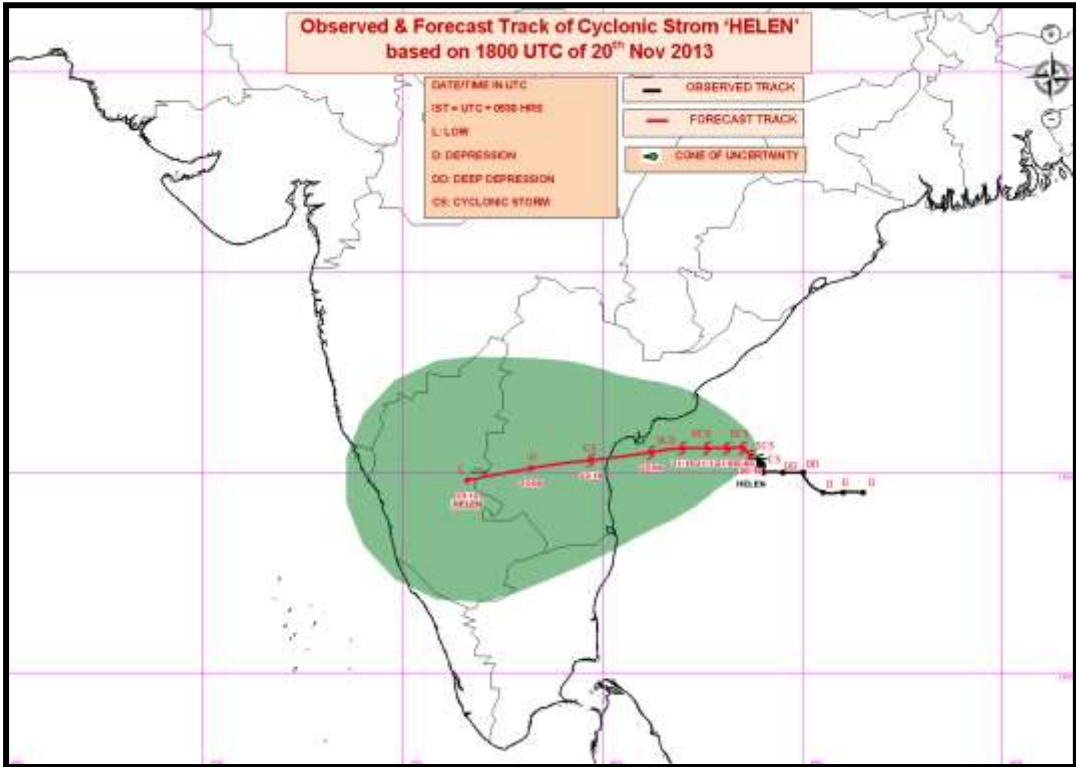
The next bulletin will be issued at 0530 hrs IST of 21st November, 2013.

(RANJEET SINGH)

Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad





भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23793144)

PS TO HON'BLE MINISTER FOR SCIENCE AND TECHNOLOGY AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MoES, (Fax No. 24629777)

SECRETARY, DST (Fax No. 26863847/-2418)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (25843825)

PIB MoES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)

DIRECTOR OF PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)

CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 0530 hours IST

Dated: 21-11-2013

Bulletin No.: BOB06/2013/14

Sub: Cyclonic Storm, HELEN over westcentral Bay of Bengal

Cyclone Warning for south Andhra Pradesh and adjoining north Tamil Nadu coasts: Orange Message

The cyclonic storm 'HELEN' over westcentral Bay of Bengal moved slightly west-northwestwards and lay centred at 0230 hrs IST of today, the 21st November 2013 near latitude 15.5^oN and longitude 83.6^oE, about 460 km east-northeast of Chennai, 390 km east of Kavali, 270 km east-southeast of Machillipatnam and 250 km south-southeast of Vishakhapatnam. The system would further intensify into a severe cyclonic storm during next 24 hrs. It would move west-northwestwards slowly for some time, then west-southwestward and cross south Andhra Pradesh coast between Nellore and Machillipatnam, close to Ongole around afternoon of 22nd November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. ^o N/ long. ^o E)	Maximum sustained surface wind speed (kmph)	Category
21-11-2013/0230	15.5/83.6	85-95 GUSTING TO 105	CYCLONIC STORM
21-11-2013/0530	15.6/83.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
21-11-2013/1130	15.6/83.1	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
21-11-2013/1730	15.6/82.6	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
21-11-2013/2330	15.6/82.0	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
22-11-2013/1130	15.5/81.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/2330	15.3/79.7	85-95 GUSTING TO 105	CYCLONIC STORM
23-11-2013/1130	15.1/78.2	55-65 GUSTING TO 75	DEEP DEPRESSION
23-11-2013/1730	14.8/76.6	30-40 GUSTING TO 50	LOW

Warning for Andhra Pradesh, north Tamil Nadu and Puducherry coasts

(lii) Rainfall

Under its influence, rainfall at most places with heavy to very heavy rainfall at a few places would occur over coastal Andhra Pradesh commencing from 21st November 2013 forenoon. Isolated extremely heavy falls (25cm or more) would occur over south coastal Andhra Pradesh on 21st and 22nd November. Rainfall at most places with isolated heavy to very heavy falls would occur over Rayalseema and adjoining north Tamil Nadu on 22nd November. Moderate rainfall would occur at many places over south Odisha on 21st November.

(liii) Squally/Gale Winds

Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off south Andhra Pradesh coast commencing from 21st November 2013 forenoon. The wind speed would gradually increase upto gale wind speed of 100-110 kmph, gusting to 120 kmph at the time of landfall. Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off north Andhra Pradesh, north Tamil Nadu and Puducherry coasts at the time of landfall.

(liv) Storm Surge

Storm surge of about 1 to 1.5m height above astronomical tide would inundate the low lying areas of Nellore, Prakasham, Guntur and Krishna districts of Andhra Pradesh at the time of landfall.

(lv) Sea condition

Sea condition will be rough to very rough along and off south Andhra Pradesh coasts from 21st November 2013 forenoon, becoming very high from 21st November 2013 morning onwards. It will be rough to very rough along and off north Andhra Pradesh, north Tamil Nadu and Puducherry coasts during the same period.

(lvi) Damage expected due to a cyclonic storm over south coastal Andhra Pradesh

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(lvii) Action Suggested

• South Andhra Pradesh coast

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

• North Andhra Pradesh and north Tamil Nadu coasts

Fishermen are advised not to venture into sea.

The next bulletin will be issued at 0830 hrs IST of today, the 21st November, 2013.

(RANJEET SINGH)

Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

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PS TO HON'BLE MINISTER FOR SCIENCE AND TECHNOLOGY AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MoES, (Fax No. 24629777)

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CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 0830 hours IST

Dated: 21-11-2013

Bulletin No.: BOB06/2013/15

Sub: Severe Cyclonic Storm, HELEN over westcentral Bay of Bengal

Cyclone Warning for south Andhra Pradesh and adjoining north Tamil Nadu coasts: Orange Message

The cyclonic storm 'HELEN' over westcentral Bay of Bengal moved slightly west-northwestwards and intensified into a severe cyclonic storm and lay centred at 0530 hrs IST of today, the 21st November 2013 near latitude 15.6°N and longitude 83.5°E, about 460 km east-northeast of Chennai, 360 km east of Ongole, 260 km east-southeast of Machillipatnam and 230 km south-southeast of Vishakhapatnam. It would move west-northwestwards slowly for some time, then west-southwestward and cross south Andhra Pradesh coast between Nellore and Machillipatnam, close to Ongole around afternoon of 22nd November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category
21-11-2013/0530	15.6/83.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
21-11-2013/1130	15.7/83.2	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
21-11-2013/1730	15.7/82.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
21-11-2013/2330	15.6/82.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/0530	15.6/82.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1730	15.5/81.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
23-11-2013/0530	15.3/79.7	85-95 GUSTING TO 105	CYCLONIC STORM
23-11-2013/1730	15.1/78.2	55-65 GUSTING TO 75	DEEP DEPRESSION
24-11-2013/0530	14.8/76.6	30-40 GUSTING TO 50	LOW

Warning for Andhra Pradesh, north Tamil Nadu and Puducherry coasts

(lviii) Rainfall

Under its influence, rainfall at most places with heavy to very heavy rainfall at a few places would occur over coastal Andhra Pradesh commencing from 21st November 2013 forenoon. Isolated extremely heavy falls (25cm or more) would occur over south coastal Andhra Pradesh on 21st and 22nd November. Rainfall at most places with isolated heavy to very heavy falls would occur over Rayalseema and adjoining north Tamil Nadu on 22nd November. Moderate rainfall would occur at many places over south Odisha on 21st November.

(lix) Squally/Gale Winds

Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off south Andhra Pradesh coast commencing from 21st November 2013 forenoon. The wind speed would gradually increase upto gale wind speed of 100-110 kmph, gusting to 120 kmph at the time of landfall. Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off north Andhra Pradesh, north Tamil Nadu and Puducherry coasts at the time of landfall.

(lx) Storm Surge

Storm surge of about 1 to 1.5m height above astronomical tide would inundate the low lying areas of Nellore, Prakasham, Guntur and Krishna districts of Andhra Pradesh at the time of landfall.

(lxi) Sea condition

Sea condition will be rough to very rough along and off south Andhra Pradesh coasts from 21st November 2013 forenoon, becoming very high from 22nd November 2013 morning onwards. It will be rough to very rough along and off north Andhra Pradesh, north Tamil Nadu and Puducherry coasts during the same period.

(lxii) Damage expected due to a cyclonic storm over south coastal Andhra Pradesh

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(lxiii) Action Suggested

• **South Andhra Pradesh coast**

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

• **North Andhra Pradesh and north Tamil Nadu coasts**

Fishermen are advised not to venture into sea.

The next bulletin will be issued at 1130 hrs IST of today, the 21st November, 2013.

(RANJEET SINGH)

Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

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CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 1130 hours IST

Dated: 21-11-2013

Bulletin No.: BOB06/2013/16

Sub: Severe Cyclonic Storm, HELEN over westcentral Bay of Bengal

Cyclone Warning for Andhra Pradesh coast: Orange Message

The severe cyclonic storm 'HELEN' over westcentral Bay of Bengal moved slightly northwestwards and lay centred at 0830 hrs IST of today, the 21st November 2013 near latitude 15.8^oN and longitude 83.4^oE about 240 km east-southeast of Machillipatnam, 350 km east-northeast of Ongole and 210 km south-southeast of Vishakhapatnam. It would move northwestwards slowly for some time, then westward and cross Andhra Pradesh coast near Machillipatnam around afternoon/evening of 22nd November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. ^o N/ long. ^o E)	Maximum sustained surface wind speed (kmph)	Category
21-11-2013/0830	15.8/83.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
21-11-2013/1130	15.9/83.2	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
21-11-2013/1730	16.1/82.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
21-11-2013/2330	16.2/82.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/0530	16.2/82.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1730	16.2/81.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
23-11-2013/0530	16.0/79.7	85-95 GUSTING TO 105	CYCLONIC STORM
23-11-2013/1730	15.8/78.2	55-65 GUSTING TO 75	DEEP DEPRESSION
24-11-2013/0530	15.6/76.6	30-40 GUSTING TO 50	LOW

Warning for Andhra Pradesh.

(Ixiv) Rainfall

Under its influence, rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall (25cm or more) would occur over coastal

Andhra Pradesh during next 48 hrs commencing from 21st November 2013 night. Rainfall at most places with isolated heavy to very heavy falls would occur over Rayalseema and Telangana on 22nd and 23rd November. Moderate rainfall would occur at many places over south Odisha during next 48 hrs.

(lxv) Squally/Gale Winds

Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off south Andhra Pradesh coast commencing from 21st November 2013 evening. The wind speed would gradually increase upto gale wind speed of 100-110 kmph, gusting to 120 kmph at the time of landfall over Guntur, Krishna, east and west Godavari districts. Squally winds speed reaching 45-55 kmph gusting to 65 kmph would prevail along and off remaining parts of Andhra Pradesh coasts commencing from 21st evening and reach upto 60-70 kmph at the time of landfall.

(lxvi) Storm Surge

Storm surge of about 1 to 1.5m height above astronomical tide would inundate the low lying areas of Guntur, Krishna, west and east Godavari districts of Andhra Pradesh at the time of landfall.

(lxvii) Sea condition

Sea condition will be rough to very rough along and off central parts of Andhra Pradesh coasts from 21st November 2013 evening, becoming very high from 22nd November 2013 morning onwards. It will be rough to very rough along and off remaining parts of north Andhra Pradesh coasts during the same period.

(lxviii) Damage expected due to a cyclonic storm over coastal Andhra Pradesh

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(lxix) Action Suggested for Andhra Pradesh coast

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

The next bulletin will be issued at 1430 hrs IST of today, the 21st November, 2013.

(M.MOHAPATRA)

Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23793144)

PS TO HON'BLE MINISTER FOR SCIENCE AND TECHNOLOGY AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MoES, (Fax No. 24629777)

SECRETARY, DST (Fax No. 26863847/-2418)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (25843825)

PIB MoES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)

DIRECTOR OF PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)

CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 1400 hours IST

Dated: 21-11-2013

Bulletin No.: BOB06/2013/17

Sub: Severe Cyclonic Storm, HELEN over westcentral Bay of Bengal

Cyclone Warning for Andhra Pradesh coast: Orange Message

The severe cyclonic storm 'HELEN' over westcentral Bay of Bengal moved slightly northwestwards and lay centred at 1130 hrs IST of today, the 21st November 2013 near latitude 15.9^oN and longitude 83.3^oE about 230 km east-southeast of Machillipatnam, 340 km east-northeast of Ongole and 200 km south-southeast of Vishakhapatnam. It would move northwestwards slowly for some time, then westward and cross Andhra Pradesh coast near Machillipatnam around afternoon/evening of 22nd November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. ^o N/ long. ^o E)	Maximum sustained surface wind speed (kmph)	Category
21-11-2013/1130	15.9/83.3	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
21-11-2013/1730	16.1/82.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
21-11-2013/2330	16.2/82.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/0530	16.2/82.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1730	16.2/81.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
23-11-2013/0530	16.0/79.7	85-95 GUSTING TO 105	CYCLONIC STORM
23-11-2013/1730	15.8/78.2	55-65 GUSTING TO 75	DEEP DEPRESSION
24-11-2013/0530	15.6/76.6	30-40 GUSTING TO 50	LOW

Warning for Andhra Pradesh.

(lxx) Rainfall

Under its influence, rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall (25cm or more) would occur over coastal Andhra Pradesh during next 48 hrs commencing from 21st November 2013 night. Rainfall at

most places with isolated heavy to very heavy falls would occur over Rayalseema and Telangana on 22nd and 23rd November. Moderate rainfall would occur at many places over south Odisha during next 48 hrs.

(Ixxi) Squally/Gale Winds

Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off south Andhra Pradesh coast commencing from 21st November 2013 evening. The wind speed would gradually increase upto gale wind speed of 100-110 kmph, gusting to 120 kmph at the time of landfall over Guntur, Krishna, east and west Godavari districts. Squally winds speed reaching 45-55 kmph gusting to 65 kmph would prevail along and off remaining parts of Andhra Pradesh coasts commencing from 21st evening and reach upto 60-70 kmph at the time of landfall.

(Ixxii) Storm Surge

Storm surge of about 1 to 1.5m height above astronomical tide would inundate the low lying areas of Guntur, Krishna, west and east Godavari districts of Andhra Pradesh at the time of landfall.

(Ixxiii) Sea condition

Sea condition will be rough to very rough along and off central parts of Andhra Pradesh coasts from 21st November 2013 evening, becoming very high from 22nd November 2013 morning onwards. It will be rough to very rough along and off remaining parts of north Andhra Pradesh coasts during the same period.

(Ixxiv) Damage expected due to a cyclonic storm over coastal Andhra Pradesh

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(Ixxv) Action Suggested for Andhra Pradesh coast

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

The next bulletin will be issued at 1730 hrs IST of today, the 21st November, 2013.

(M.MOHAPATRA)

Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatanam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23793144)

PS TO HON'BLE MINISTER FOR SCIENCE AND TECHNOLOGY AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MoES, (Fax No. 24629777)

SECRETARY, DST (Fax No. 26863847/-2418)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (25843825)

PIB MoES (FAX NO. 23389042)

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D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)

DIRECTOR OF PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)

CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 1600 hours IST

Dated: 21-11-2013

Bulletin No.: BOB06/2013/18

Sub: Severe Cyclonic Storm, HELEN over westcentral Bay of Bengal

Cyclone Warning for Andhra Pradesh coast: Orange Message

The severe cyclonic storm 'HELEN' over westcentral Bay of Bengal moved slightly west-northwestwards and lay centred at 1430 hrs IST of today, the 21st November 2013 near latitude 16.0^oN and longitude 83.1^oE about 210 km east-southeast of Machillipatnam, 320 km east-northeast of Ongole and 190 km south-southeast of Vishakhapatnam. It would move westnorthwestwards slowly for some time, then westward and cross Andhra Pradesh coast near Machillipatnam around afternoon/evening of 22nd November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. ^o N/ long. ^o E)	Maximum sustained surface wind speed (kmph)	Category
21-11-2013/1430	16.0/83.1	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
21-11-2013/1730	16.1/82.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
21-11-2013/2330	16.2/82.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/0530	16.2/82.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1730	16.2/81.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
23-11-2013/0530	16.0/79.7	85-95 GUSTING TO 105	CYCLONIC STORM
23-11-2013/1730	15.8/78.2	55-65 GUSTING TO 75	DEEP DEPRESSION
24-11-2013/0530	15.6/76.6	30-40 GUSTING TO 50	LOW

Warning for Andhra Pradesh.

(lxxvi) Rainfall

Under its influence, rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall (25cm or more) would occur over coastal Andhra Pradesh during next 48 hrs. Rainfall at most places with isolated heavy to very

heavy falls would occur over Rayalseema and Telangana on 22nd and 23rd November. Moderate rainfall would occur at many places over south Odisha during next 48 hrs.

(lxxvii) Squally/Gale Winds

Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off south Andhra Pradesh coast commencing from 21st November 2013 evening. The wind speed would gradually increase upto gale wind speed of 100-110 kmph, gusting to 120 kmph at the time of landfall over Guntur, Krishna, east and west Godavari districts. Squally winds speed reaching 45-55 kmph gusting to 65 kmph would prevail along and off remaining parts of Andhra Pradesh coasts commencing from 21st evening and reach upto 60-70 kmph at the time of landfall.

(lxxviii) Storm Surge

Storm surge of about 1 to 1.5m height above astronomical tide would inundate the low lying areas of Guntur, Krishna, west and east Godavari districts of Andhra Pradesh at the time of landfall.

(lxxix) Sea condition

Sea condition will be rough to very rough along and off central parts of Andhra Pradesh coasts from 21st November 2013 evening, becoming very high from 22nd November 2013 morning onwards. It will be rough to very rough along and off remaining parts of north Andhra Pradesh coasts during the same period.

(lxxx) Damage expected due to a cyclonic storm over coastal Andhra Pradesh

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(lxxxi) Action Suggested for Andhra Pradesh coast

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

The next bulletin will be issued at 2030 hrs IST of today, the 21st November, 2013.

(M.MOHAPATRA)

Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23793144)

PS TO HON'BLE MINISTER FOR SCIENCE AND TECHNOLOGY AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MoES, (Fax No. 24629777)

SECRETARY, DST (Fax No. 26863847/-2418)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (25843825)

PIB MoES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)

DIRECTOR OF PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)

CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 1930 hours IST

Dated: 21-11-2013

Bulletin No.: BOB06/2013/19

Sub: Severe Cyclonic Storm, HELEN over westcentral Bay of Bengal

Cyclone Warning for Andhra Pradesh coast: Orange Message

The severe cyclonic storm 'HELEN' over westcentral Bay of Bengal moved slightly west-northwestwards and lay centred at 1730 hrs IST of today, the 21st November 2013 near latitude 16.1^oN and longitude 82.9^oE about 180 km east-southeast of Machillipatnam, 300 km east-northeast of Ongole and 180 km south-southwest of Vishakhapatnam. It would move westnorthwestwards slowly for some time, then westward and cross Andhra Pradesh coast near Machillipatnam around afternoon/evening of 22nd November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. ^o N/ long. ^o E)	Maximum sustained surface wind speed (kmph)	Category
21-11-2013/1730	16.1/82.9	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
21-11-2013/2330	16.2/82.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/0530	16.2/82.1	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1130	16.2/81.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1730	16.2/81.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
23-11-2013/0530	16.0/79.7	70-80 GUSTING TO 90	CYCLONIC STORM
23-11-2013/1730	15.8/78.2	55-65 GUSTING TO 75	DEEP DEPRESSION
24-11-2013/0530	15.6/76.6	30-40 GUSTING TO 50	LOW

Warning for Andhra Pradesh.

(lxxxii) Rainfall

Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall (25cm or more) would occur over north coastal Andhra Pradesh and adjoining Guntur, Krishna, West Godavari districts of south coastal Andhra

Pradesh during next 48 hrs. Rainfall at most places with isolated heavy to very heavy falls would occur over remaining districts of south coastal Andhra Pradesh Rayalseema and Telangana on 22nd and 23rd November. Moderate rainfall would occur at many places over south Odisha during next 48 hrs.

(lxxxiii) Squally/Gale Winds

Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off south Andhra Pradesh coast. The wind speed would gradually increase upto gale wind speed of 100-110 kmph, gusting to 120 kmph at the time of landfall over Prakasham, Guntur, Krishna, east & west Godavari and Vishakhapatnam districts. Squally winds speed reaching 45-55 kmph gusting to 65 kmph would prevail along and off remaining parts of Andhra Pradesh coasts and reach upto 60-70 kmph at the time of landfall.

(lxxxiv) Storm Surge

Storm surge of about 1 to 1.5 metre height above astronomical tide would inundate the low lying areas of west and east Godavari Krishna, Guntur and adjoining areas of Prakasham districts of Andhra Pradesh at the time of landfall.

(lxxxv) Sea condition

Sea condition will be rough to very rough along and off central parts of Andhra Pradesh coasts becoming very high from 22nd November 2013 morning onwards. It will be rough to very rough along and off remaining parts of north Andhra Pradesh coasts during the same period.

(lxxxvi) Damage expected due to a cyclonic storm over coastal Andhra Pradesh

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(lxxxvii) Action Suggested for Andhra Pradesh coast

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

The next bulletin will be issued at 2330 hrs IST of today, the 21st November, 2013.

(M.MOHAPATRA)
Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

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PS TO HON'BLE MINISTER FOR SCIENCE AND TECHNOLOGY AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MoES, (Fax No. 24629777)

SECRETARY, DST (Fax No. 26863847/-2418)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

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D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)

DIRECTOR OF PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)

CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 2330 hours IST

Dated: 21-11-2013

Bulletin No.: BOB06/2013/20

Sub: Severe Cyclonic Storm, HELEN over westcentral Bay of Bengal

Cyclone Warning for Andhra Pradesh coast: Orange Message

The severe cyclonic storm 'HELEN' over westcentral Bay of Bengal moved slightly westwards and lay centred at 2030 hrs IST of today, the 21st November 2013 near latitude 16.1°N and longitude 82.7°E about 160 km east of Machilipatnam, 290 km east-northeast of Ongole and 180 km south-southwest of Vishakhapatnam. It would move westnorthwestwards slowly for some time, then westward and cross Andhra Pradesh coast near Machilipatnam around afternoon/evening of 22nd November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category
21-11-2013/2030	16.1/82.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
21-11-2013/2330	16.2/82.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/0530	16.2/82.1	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1130	16.2/81.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1730	16.2/81.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
23-11-2013/0530	16.0/79.7	70-80 GUSTING TO 90	CYCLONIC STORM
23-11-2013/1730	15.8/78.2	55-65 GUSTING TO 75	DEEP DEPRESSION
24-11-2013/0530	15.6/76.6	30-40 GUSTING TO 50	LOW

Warning for Andhra Pradesh.

(lxxxviii) Rainfall

Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall (25cm or more) would occur over north coastal Andhra Pradesh and adjoining Guntur, Krishna, West Godavari districts of south coastal Andhra

Pradesh during next 48 hrs. Rainfall at most places with isolated heavy to very heavy falls would occur over remaining districts of south coastal Andhra Pradesh, Rayalseema and Telangana on 22nd and 23rd November. Moderate rainfall would occur at many places over south Odisha during next 48 hrs.

(lxxxix) Squally/Gale Winds

Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off south Andhra Pradesh coast. The wind speed would gradually increase upto gale wind speed of 100-110 kmph, gusting to 120 kmph at the time of landfall over Prakasham, Guntur, Krishna, east & west Godavari and Vishakhapatnam districts. Squally winds speed reaching 45-55 kmph gusting to 65 kmph would prevail along and off remaining parts of Andhra Pradesh coasts and reach upto 60-70 kmph at the time of landfall.

(xc) Storm Surge

Storm surge of about 1 to 1.5 metre height above astronomical tide would inundate the low lying areas of west and east Godavari Krishna, Guntur and adjoining areas of Prakasham districts of Andhra Pradesh at the time of landfall.

(xci) Sea condition

Sea condition will be rough to very rough along and off central parts of Andhra Pradesh coasts becoming very high from 22nd November 2013 morning onwards. It will be rough to very rough along and off remaining parts of north Andhra Pradesh coasts during the same period.

(xcii) Damage expected due to a cyclonic storm over coastal Andhra Pradesh

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(xciii) Action Suggested for Andhra Pradesh coast

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

The next bulletin will be issued at 0230 hrs IST of 22nd November, 2013.

(T.N.JHA)
Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

**To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)
CONTROL ROOM NDMA (FAX.NO. 26701729)
CABINET SECRETARIAT (FAX.NO.23793144)
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SECRETARY, MoES, (Fax No. 24629777)
SECRETARY, DST (Fax No. 26863847/-2418)
H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)
DIRECTOR GENERAL, DOORDARSHAN (23385843)
DIRECTOR GENERAL, AIR (25843825)
PIB MoES (FAX NO. 23389042)
UNI (FAX NO. 23355841)
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)
DIRECTOR OF PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)
CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)
CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)
CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)
CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)**

Time of issue: 0230 hours IST

Dated: 22-11-2013

Bulletin No.: BOB06/2013/21

Sub: Severe Cyclonic Storm, HELEN over westcentral Bay of Bengal

Cyclone Warning for Andhra Pradesh coast: Orange Message

The severe cyclonic storm 'HELEN' over westcentral Bay of Bengal moved slightly west-northwestwards and lay centred at 2330 hrs IST the 21st November 2013 near latitude 16.2°N and longitude 82.5°E about 140 km east of Machillipatnam, 270 km east-northeast of Ongole and 180 km south-southwest of Vishakhapatnam. It would move westnorthwestwards slowly for some time, then westward and cross Andhra Pradesh coast near Machillipatnam around afternoon of 22nd November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category
21-11-2013/2330	16.2/82.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/0530	16.2/82.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1130	16.2/81.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1730	16.2/80.7	80-90 GUSTING TO 100	CYCLONIC STORM
22-11-2013/2330	16.2/80.0	40-50 GUSTING TO 60	DEPRESSION
23-11-2013/1130	16.0/78.8	20-30 GUSTING TO 40	LOW

Warning for Andhra Pradesh.

(xciv) Rainfall

Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall (25cm or more) would occur over north coastal Andhra Pradesh and adjoining Guntur, Krishna, West Godavari districts of south coastal Andhra Pradesh during next 48 hrs. Rainfall at most places with isolated heavy to very heavy falls would occur over remaining districts of south coastal Andhra Pradesh, Rayalseema and

Telangana on 22nd and 23rd November. Moderate rainfall would occur at many places over south Odisha during next 48 hrs.

(xcv) Squally/Gale Winds

Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off south Andhra Pradesh coast. The wind speed would gradually increase upto gale wind speed of 100-110 kmph, gusting to 120 kmph at the time of landfall over Prakasham, Guntur, Krishna, east & west Godavari and Vishakhapatnam districts. Squally winds speed reaching 45-55 kmph gusting to 65 kmph would prevail along and off remaining parts of Andhra Pradesh coasts and reach upto 60-70 kmph at the time of landfall.

(xcvi) Storm Surge

Storm surge of about 1 to 1.5 metre height above astronomical tide would inundate the low lying areas of west and east Godavari Krishna, Guntur and adjoining areas of Prakasham districts of Andhra Pradesh at the time of landfall.

(xcvii) Sea condition

Sea condition will be rough to very rough along and off central parts of Andhra Pradesh coasts becoming very high from 22nd November 2013 morning onwards. It will be rough to very rough along and off remaining parts of north Andhra Pradesh coasts during the same period.

(xcviii) Damage expected due to a cyclonic storm over coastal Andhra Pradesh

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(xcix) Action Suggested for Andhra Pradesh coast

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

The next bulletin will be issued at 0530 hrs IST of 22nd November, 2013.

(T.N.JHA)

Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23793144)

PS TO HON'BLE MINISTER FOR SCIENCE AND TECHNOLOGY AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MoES, (Fax No. 24629777)

SECRETARY, DST (Fax No. 26863847/-2418)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (25843825)

PIB MoES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)

DIRECTOR OF PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)

CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 0500 hours IST

Dated: 22-11-2013

Bulletin No.: BOB06/2013/22

Sub: Severe Cyclonic Storm, HELEN over westcentral Bay of Bengal

Cyclone Warning for Andhra Pradesh coast: Orange Message

The severe cyclonic storm 'HELEN' over westcentral Bay of Bengal moved slightly west-northwestwards and lay centred at 0230 hrs IST the 22nd November 2013 near latitude 16.2^oN and longitude 82.3^oE about 120 km east of Machilipatnam, 250 km northeast of Ongole and 200 km south-southwest of Vishakhapatnam. It would move westnorthwestwards slowly for some time, then westward and cross Andhra Pradesh coast near Machilipatnam around afternoon of 22nd November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. ^o N/ long. ^o E)	Maximum sustained surface wind speed (kmph)	Category
22-11-2013/0230	16.2/82.3	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/0530	16.2/82.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1130	16.2/81.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1730	16.2/80.7	80-90 GUSTING TO 100	CYCLONIC STORM
22-11-2013/2330	16.2/80.0	40-50 GUSTING TO 60	DEPRESSION
23-11-2013/1130	16.0/78.8	20-30 GUSTING TO 40	LOW

Warning for Andhra Pradesh.

(c) Rainfall

Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall (25cm or more) would occur over north coastal Andhra Pradesh and adjoining Guntur, Krishna, West Godavari districts of south coastal Andhra Pradesh during next 48 hrs. Rainfall at most places with isolated heavy to very heavy falls would occur over remaining districts of south coastal Andhra Pradesh, Rayalseema and

Telangana on 22nd and 23rd November. Moderate rainfall would occur at many places over south Odisha during next 48 hrs.

(ci) Squally/Gale Winds

Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off south Andhra Pradesh coast. The wind speed would gradually increase upto gale wind speed of 100-110 kmph, gusting to 120 kmph at the time of landfall over Prakasham, Guntur, Krishna, east & west Godavari and Vishakhapatnam districts. Squally winds speed reaching 45-55 kmph gusting to 65 kmph would prevail along and off remaining parts of Andhra Pradesh coasts and reach upto 60-70 kmph at the time of landfall.

(cii) Storm Surge

Storm surge of about 1 to 1.5 metre height above astronomical tide would inundate the low lying areas of west and east Godavari Krishna, Guntur and adjoining areas of Prakasham districts of Andhra Pradesh at the time of landfall.

(ciii) Sea condition

Sea condition will be rough to very rough along and off central parts of Andhra Pradesh coasts becoming very high from 22nd November 2013 morning onwards. It will be rough to very rough along and off remaining parts of north Andhra Pradesh coasts during the same period.

(civ) Damage expected due to a cyclonic storm over coastal Andhra Pradesh

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(cv) Action Suggested for Andhra Pradesh coast

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

The next bulletin will be issued at 0830 hrs IST of 22nd November, 2013.

(T.N.JHA)

Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23793144)

PS TO HON'BLE MINISTER FOR SCIENCE AND TECHNOLOGY AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MoES, (Fax No. 24629777)

SECRETARY, DST (Fax No. 26863847/-2418)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (25843825)

PIB MoES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)

DIRECTOR OF PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)

CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 0830 hours IST

Dated: 22-11-2013

Bulletin No.: BOB06/2013/23

Sub: Severe Cyclonic Storm, HELEN over westcentral Bay of Bengal

Cyclone Warning for Andhra Pradesh coast: Orange Message

The severe cyclonic storm 'HELEN' over westcentral Bay of Bengal moved slightly westwards and lay centred at 0530 hrs IST the 22nd November 2013 near latitude 16.2^oN and longitude 81.9^oE about 035 km southeast of Narsapur and 085 km east-northeast of Machillipatnam. It would move nearly westward and cross Andhra Pradesh coast near Machillipatnam by afternoon of 22nd November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. ^o N/ long. ^o E)	Maximum sustained surface wind speed (kmph)	Category
22-11-2013/0530	16.2/81.9	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1130	16.2/81.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
22-11-2013/1730	16.3/80.8	70-80 GUSTING TO 90	CYCLONIC STORM
22-11-2013/2330	16.4/79.5	50-60 GUSTING TO 70	DEEP DEPRESSION
23-11-2013/0530	16.5/78.5	40-50 GUSTING TO 60	DEPRESSION
23-11-2013/1730	16.6/77.0	20-30 GUSTING TO 40	LOW

Warning for Andhra Pradesh.

(cvi) Rainfall

Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall (25cm or more) would occur over north coastal Andhra Pradesh and adjoining Guntur, Krishna, West Godavari districts of south coastal Andhra Pradesh during next 36 hrs. Rainfall at most places with isolated heavy to very heavy falls would occur over remaining districts of south coastal Andhra Pradesh, Rayalseema and

Telangana on 22nd and 23rd November. Moderate rainfall would occur at many places over south Odisha during next 24 hrs.

(cvii) Squally/Gale Winds

Gale winds speed reaching 100-110 kmph, gusting to 120 kmph would prevail over Prakasham, Guntur, Krishna, east & west Godavari and Vishakhapatnam districts during next 12 hours. Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off remaining parts of Andhra Pradesh coasts during the same period.

Storm Surge

Storm surge of about 1 to 1.5 metre height above astronomical tide would inundate the low lying areas of west and east Godavari Krishna, Guntur and adjoining areas of Prakasham districts of Andhra Pradesh at the time of landfall.

(cviii) Sea condition

Sea condition will be very high along and off central parts of Andhra Pradesh coasts. It will be very rough to high along and off remaining parts of north Andhra Pradesh coasts during next 24 hours.

(cix) Damage expected due to a cyclonic storm over coastal Andhra Pradesh

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(cx) Action Suggested for Andhra Pradesh coast

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

The next bulletin will be issued at 1130 hrs IST of 22nd November, 2013.

(T.N.JHA)

Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad/ Visakhapatnam Navy Met Office(0891-2709086).



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23793144)

PS TO HON'BLE MINISTER FOR SCIENCE AND TECHNOLOGY AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MoES, (Fax No. 24629777)

SECRETARY, DST (Fax No. 26863847/-2418)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (25843825)

PIB MoES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)

DIRECTOR OF PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)

CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 1020 hours IST

Dated: 22-11-2013

Bulletin No.: BOB06/2013/24

Sub: Severe Cyclonic Storm, HELEN over westcentral Bay of Bengal

**Cyclone Warning for Andhra Pradesh coast and Post-landfall Outlook :
Red Message**

The severe cyclonic storm 'HELEN' over westcentral Bay of Bengal moved slightly westwards and lay centred at 0830 hrs IST the 22nd November 2013 near latitude 16.2^oN and longitude 81.7^oE about 025 km south of Narsapur and 060 km east of Machillipatnam. It would move nearly westward and cross Andhra Pradesh coast near Machillipatnam by afternoon of 22nd November 2013.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. ^o N/ long. ^o E)	Maximum sustained surface wind speed (kmph)	Category
22-11-2013/0830	16.2/81.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1130	16.2/81.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1730	16.3/80.8	70-80 GUSTING TO 90	CYCLONIC STORM
22-11-2013/2330	16.4/79.5	50-60 GUSTING TO 70	DEEP DEPRESSION
23-11-2013/0530	16.5/78.5	40-50 GUSTING TO 60	DEPRESSION
23-11-2013/1730	16.6/77.0	20-30 GUSTING TO 40	LOW

Warning for Andhra Pradesh.

(cxi) Rainfall

Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall (25cm or more) would occur over north coastal Andhra Pradesh and adjoining Guntur, Krishna, West Godavari districts of south coastal Andhra Pradesh during next 36 hrs. Rainfall at most places with isolated heavy to very heavy falls

would occur over remaining districts of south coastal Andhra Pradesh, Rayalseema and isolated heavy to very heavy falls over Telangana during next 48 hrs. Moderate rainfall would occur at many places over south Odisha during next 24 hrs.

(cxii) Squally/Gale Winds

Gale winds speed reaching 100-110 kmph, gusting to 120 kmph would prevail over Prakasham, Guntur, Krishna, east & west Godavari and Vishakhapatnam districts during next 12 hours. Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off remaining parts of Andhra Pradesh coasts during the same period.

(cxiii) Storm Surge

Storm surge of about 1 to 1.5 metre height above astronomical tide would inundate the low lying areas of west and east Godavari Krishna, Guntur and adjoining areas of Prakasham districts of Andhra Pradesh at the time of landfall.

(cxiv) Sea condition

Sea condition will be very high along and off central parts of Andhra Pradesh coasts. It will be very rough to high along and off remaining parts of north Andhra Pradesh coasts during next 24 hours.

(cxv) Damage expected due to a cyclonic storm over coastal Andhra Pradesh

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(cxvi) Action Suggested for Andhra Pradesh coast

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

Post landfall outlook:

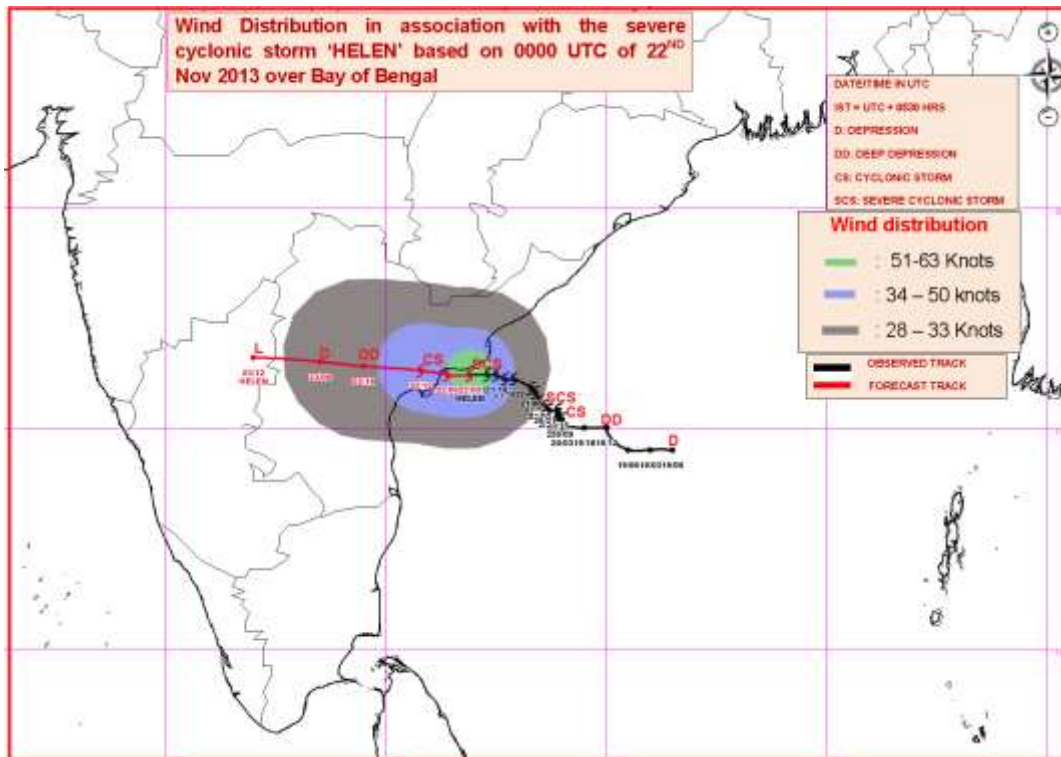
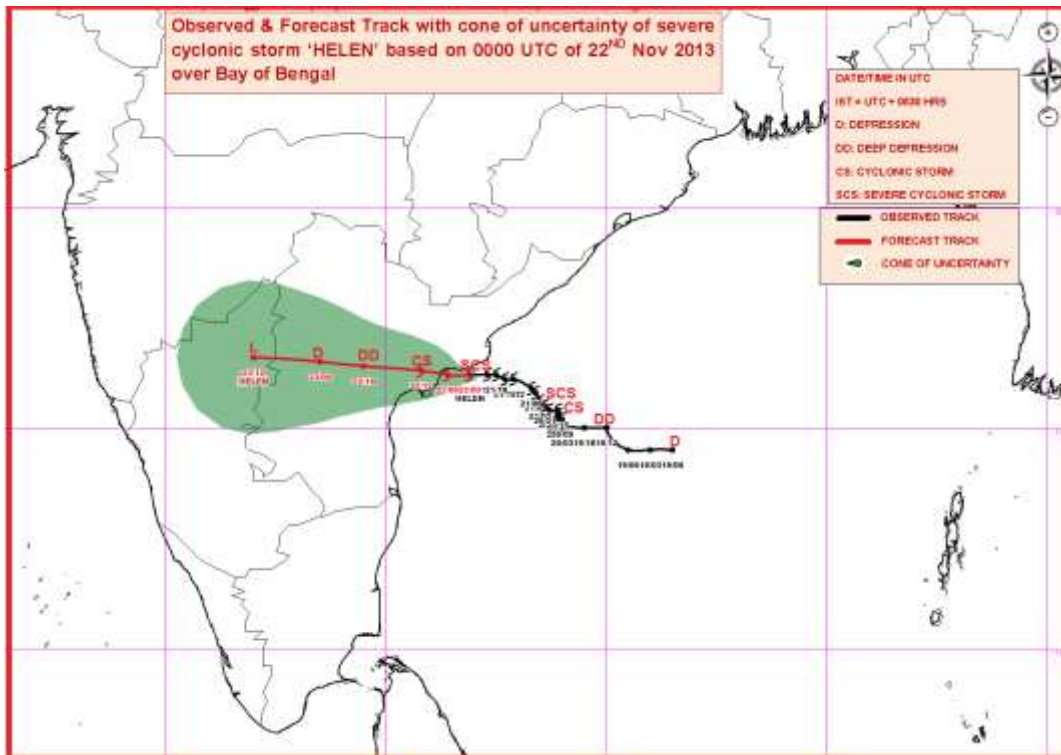
Even after landfall the system is likely to maintain the intensity of cyclonic storm for 6 hours and gradually weaken into a deep depression in subsequent 6 hours while moving westwards across coastal Andhra Pradesh and Telangana. Under its influence rainfall at most places with heavy to very heavy falls at isolated places would occur over Telangana during next 48 hrs. Gale wind speed reaching 70-80 kmph would also prevail for 6 hours after landfall and squally wind speed reaching 50-60 kmph for subsequent 6 hours over coastal Andhra Pradesh and adjoining Telangana around 100 km from the system centre.

The next bulletin will be issued at 1430 hrs IST of 22nd November, 2013.

(M.MOHAPATRA)
Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad/ Visakhapatnam Navy Met Office(0891-2709086).





भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23793144)

PS TO HON'BLE MINISTER FOR SCIENCE AND TECHNOLOGY AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MoES, (Fax No. 24629777)

SECRETARY, DST (Fax No. 26863847/-2418)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (25843825)

PIB MoES (FAX NO. 23389042)

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D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)

DIRECTOR OF PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)

CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 1220 hours IST

Dated: 22-11-2013

Bulletin No.: BOB06/2013/25

Sub: Severe Cyclonic Storm, HELEN over westcentral Bay of Bengal

**Cyclone Warning for Andhra Pradesh coast and Post-landfall Outlook :
Red Message**

The severe cyclonic storm 'HELEN' over westcentral Bay of Bengal moved slightly westwards and lay centred at 1130 hrs IST the 22nd November 2013 near latitude 16.2^oN and longitude 81.3^oE very close to Andhra Pradesh coast (about 15 km east of Machillipatnam). It would move nearly westward and cross Andhra Pradesh coast near Machillipatnam within a few hours.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. ^o N/ long. ^o E)	Maximum sustained surface wind speed (kmph)	Category
22-11-2013/1130	16.2/81.3	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
22-11-2013/1730	16.3/80.6	70-80 GUSTING TO 90	CYCLONIC STORM
22-11-2013/2330	16.4/79.8	50-60 GUSTING TO 70	DEEP DEPRESSION
23-11-2013/0530	16.5/78.0	40-50 GUSTING TO 60	DEPRESSION
23-11-2013/1730	16.6/77.2	20-30 GUSTING TO 40	LOW

Warning for Andhra Pradesh.

(cxvii) Rainfall

Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall (25cm or more) would occur over north coastal Andhra Pradesh and adjoining Guntur, Krishna, West Godavari districts of south coastal Andhra Pradesh during next 36 hrs. Rainfall at most places with isolated heavy to very heavy falls would occur over remaining districts of south coastal Andhra Pradesh, Rayalseema and

isolated heavy to very heavy falls over Telangana during next 48 hrs. Moderate rainfall would occur at many places over south Odisha during next 24 hrs.

(cxviii) Squally/Gale Winds

Gale winds speed reaching 100-110 kmph, gusting to 120 kmph would prevail over Prakasham, Guntur, Krishna, east & west Godavari and Vishakhapatnam districts during next 12 hours. Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off remaining parts of Andhra Pradesh coasts during the same period.

(cxix) Storm Surge

Storm surge of about 1 to 1.5 metre height above astronomical tide would inundate the low lying areas of west and east Godavari Krishna, Guntur and adjoining areas of Prakasham districts of Andhra Pradesh at the time of landfall.

(cxx) Sea condition

Sea condition will be very high along and off central parts of Andhra Pradesh coasts. It will be very rough to high along and off remaining parts of north Andhra Pradesh coasts during next 12 hours.

(cxxi) Damage expected due to a cyclonic storm over coastal Andhra Pradesh

Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape roots.

(cxxii) Action Suggested for Andhra Pradesh coast

Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer place. People in affected areas to remain indoors.

Post landfall outlook:

Even after landfall the system is likely to maintain the intensity of cyclonic storm for 6 hours and gradually weaken into a deep depression in subsequent 6 hours while moving westwards across coastal Andhra Pradesh and Telangana. Under its influence rainfall at most places with heavy to very heavy falls at isolated places would occur over Telangana during next 48 hrs. Gale wind speed reaching 70-80 kmph would also prevail for 6 hours after landfall and squally wind speed reaching 50-60 kmph for subsequent 6 hours over coastal Andhra Pradesh and adjoining Telangana around 100 km from the system centre.

The next bulletin will be issued at 1730 hrs IST of 22nd November, 2013.

(M.MOHAPATRA)

Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad/ Visakhapatnam Navy Met Office(0891-2709086).



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

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CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)

CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 1630 hours IST

Dated: 22-11-2013

Bulletin No.: BOB06/2013/26

Sub: Severe Cyclonic Storm, HELEN crossed Andhra Pradesh coast near Machillipatnam

The severe cyclonic storm 'HELEN' over westcentral Bay of Bengal moved slightly westwards, crossed Andhra Pradesh coast close to south of Machillipatnam (near latitude 16.1°N and longitude 81.2°E between 1330 and 1430 hrs IST of today, the 22nd Nov.2013 as a cyclonic storm with a wind speed of 80-90 kmph. It moved westward and lay centred at 1430 hrs IST of today, the 22nd Nov.2013 over coastal Andhra Pradesh near latitude 16.1°N and longitude 81.0°E, close to southwest of Machillipatnam. It would move west-southwestwards and weaken into a deep depression during next six hours.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category
22-11-2013/1430	16.1/81.0	60-70 GUSTING TO 80	CYCLONIC STORM
22-11-2013/1730	15.9/80.7	50-60 GUSTING TO 70	DEEP DEPRESSION
22-11-2013/2330	15.8/80.3	40-50 GUSTING TO 60	DEPRESSION
23-11-2013/0530	15.7/79.7	20-30 GUSTING TO 40	LOW

Warning for Andhra Pradesh.

(cxxxiii) Rainfall

Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall (25cm or more) would occur over north coastal Andhra Pradesh and adjoining Guntur, Krishna, West Godavari districts of south coastal Andhra Pradesh during next 24 hrs. Rainfall at many places with isolated heavy to very heavy falls over would occur over Telangana during next 24 hrs. Moderate rainfall would occur at many places over south Odisha during next 12 hrs.

(cxxiv) Squally/Gale Winds

Gale winds speed reaching 60-70 kmph, gusting to 80 kmph would prevail along and off coastal districts of Prakasham, Guntur, Krishna, east & west Godavari and Vishakhapatnam during next 6 hours and wind speed of 45-55 kmph would prevail thereafter for subsequent six hours. Squally winds speed reaching 50-60 kmph gusting to 70 kmph would prevail along and off Andhra Pradesh coasts during next 12 hrs.

(cxxv) Sea condition

Sea condition will be very rough to very rough along and off Andhra Pradesh coasts during next 12 hours.

(cxxvi) Action Suggested for Andhra Pradesh coast

Fishermen along and off Andhra Pradesh coast are advised not to venture into sea during next 12 hours.

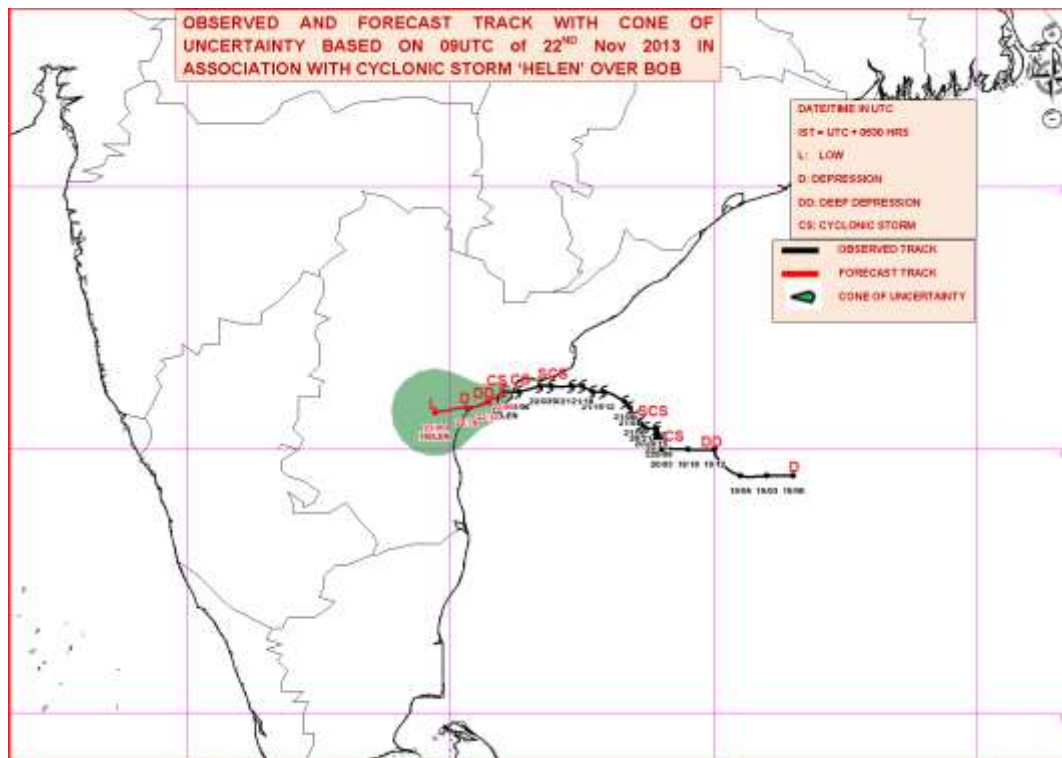
The next bulletin will be issued at 2030 hrs IST of 22nd November, 2013.

(M.MOHAPATRA)

Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad/ Visakhapatnam Navy Met Office (0891-2709086).





भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23793144)

PS TO HON'BLE MINISTER FOR SCIENCE AND TECHNOLOGY AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MoES, (Fax No. 24629777)

SECRETARY, DST (Fax No. 26863847/-2418)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (25843825)

PIB MoES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)

DIRECTOR OF PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, PUDUCHERRY (FAX.NO.0413-2337575)

CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)

CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 1900 hours IST

Dated: 22-11-2013

Bulletin No.: BOB06/2013/27

Sub: Cyclonic Storm, HELEN weakened into a deep depression.

The cyclonic storm 'HELEN' over coastal Andhra Pradesh moved west-southwestward, weakened into a deep depression and lay centred at 1730 hrs IST of today, the 22nd Nov. 2013 over coastal Andhra Pradesh near latitude 15.9°N and longitude 80.7°E, around 60km southwest of Machilipatnam. It would move west-southwestwards and weaken into a depression during next six hours.

Track and intensity forecasts of the system are given in the table below:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category
22-11-2013/1730	15.9/80.7	50-60 GUSTING TO 70	DEEP DEPRESSION
22-11-2013/2330	15.8/80.3	40-50 GUSTING TO 60	DEPRESSION
23-11-2013/0530	15.7/79.7	20-30 GUSTING TO 40	LOW

Warning for Andhra Pradesh.

(cxxvii) Rainfall

Rainfall at most places with isolated heavy to very heavy rainfall would occur over north coastal Andhra Pradesh and adjoining Guntur, Krishna, West Godavari districts of south coastal Andhra Pradesh during next 24 hrs. Rainfall at many places with isolated heavy falls over would occur over Telangana during next 24 hrs. Moderate rainfall would occur at many places over south Odisha during next 12 hrs.

(cxxviii) Squally/Gale Winds

Squally winds speed reaching 50-60 kmph, gusting to 70 kmph would prevail along and off coastal districts of Prakasham, Guntur, Krishna, east & west Godavari and Vishakhapatnam during next 6 hours and wind speed of 30-40 kmph would prevail thereafter for subsequent 06 hours. Squally winds speed reaching 40-50 kmph gusting to 60 kmph

would prevail along and off remaining parts of Andhra Pradesh coasts during next six hrs and 30-40 kmph during subsequent 06 hrs.

(cxxxix) Sea condition

Sea condition will be very rough to very rough along and off Andhra Pradesh coasts during next 12 hours.

(cxxx) Action Suggested for Andhra Pradesh coast

Fishermen along and off Andhra Pradesh coast are advised not to venture into sea during next 12 hours.

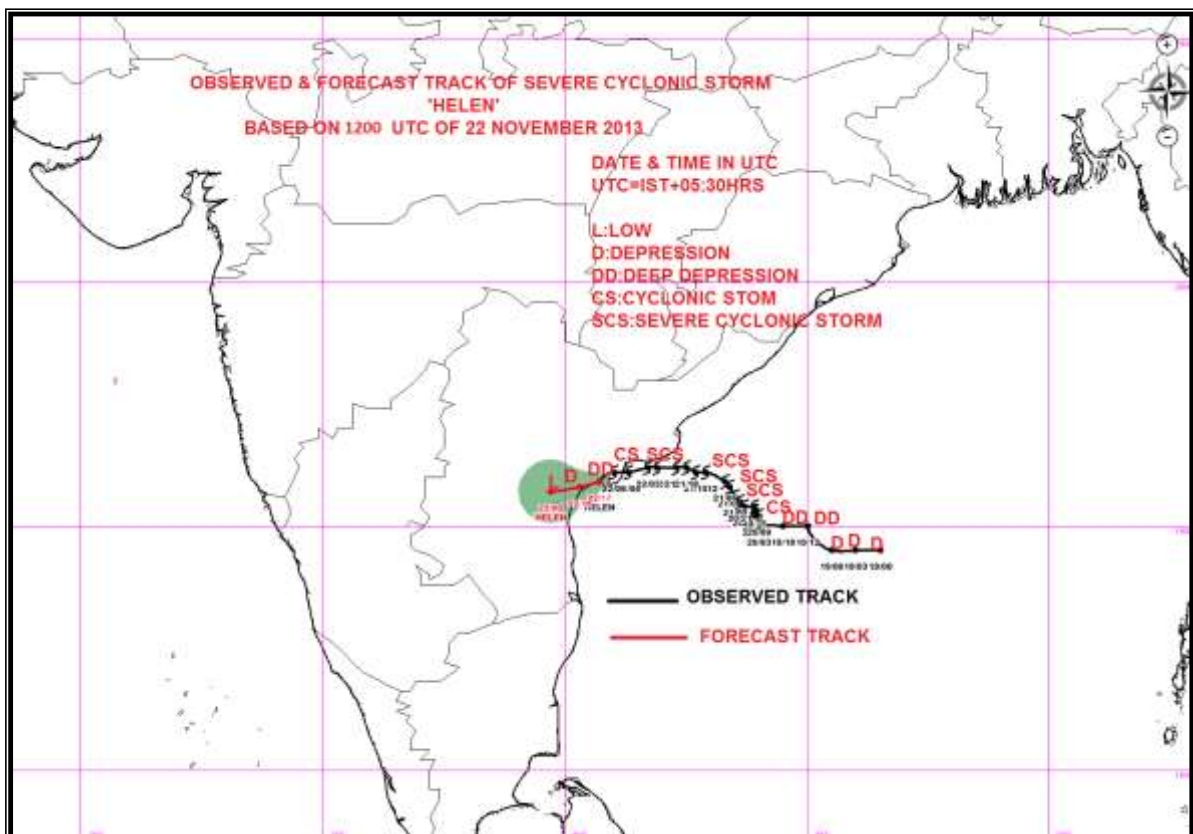
The next bulletin will be issued at 0230 hrs IST of 23rd November, 2013.

(M.MOHAPATRA)

Scientist-E

Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad/ Visakhapatnam Navy Met Office (0891-2709086).





भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)
CONTROL ROOM NDMA (FAX.NO. 26701729)
CABINET SECRETARIAT (FAX.NO.23793144)
PS TO HON'BLE MINISTER FOR SCIENCE AND TECHNOLOGY AND EARTH SCIENCES (FAX NO.23316745)
SECRETARY, MoES, (Fax No. 24629777)
SECRETARY, DST (Fax No. 26863847/-2418)
H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)
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DIRECTOR GENERAL, AIR (25843825)
PIB MoES (FAX NO. 23389042)
UNI (FAX NO. 23355841)
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX No. 26105912)
DIRECTOR OF PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)
CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)
CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 0100 hours IST

Dated: 23-11-2013

Bulletin No.: BOB06/2013/28

Sub: Deep depression over coastal Andhra Pradesh weakened into a depression

The deep depression over coastal Andhra Pradesh slightly moved westwards, weakened into a depression and lay centred at 2330 hrs IST of yesterday, the 22nd Nov. 2013 over coastal Andhra Pradesh near latitude 15.9^oN and longitude 80.4^oE close to Bapatla. It would move west-southwestwards and weaken into a low pressure area during next six hours.

Rainfall would occur at most places with isolated heavy to very heavy rainfall over north coastal Andhra Pradesh and adjoining Guntur, Krishna, West Godavari districts of south coastal Andhra Pradesh during next 24 hrs. Rainfall at many places with isolated heavy falls over would occur over Telangana during next 24 hrs. Moderate rainfall would occur at many places over south Odisha during next 12 hrs.

The next bulletin will be issued at 0830 hrs IST of 23rd November, 2013.

(Naresh Kumar)
Scientist-C
Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatnam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad/ Visakhapatnam Navy Met Office (0891-2709086).



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FAX MESSAGE

FROM: INDIA METEOROLOGICAL DEPARTMENT (Fax No. 24699216/24623220)

To: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)
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CHIEF SECRETARY, ANDHRA PRADESH (FAX.NO.040-23453700)
CHIEF SECRETARY, ODISHA (FAX.NO.0674-2536660)

Time of issue: 0730 hours IST

Dated: 23-11-2013

Bulletin No.: BOB06/2013/29

Sub: Depression over coastal Andhra Pradesh weakened into a low pressure area

The depression over coastal Andhra Pradesh slightly moved west-southwestwards and weakened into a low pressure area over coastal Andhra Pradesh & neighbourhood at 0530 hours IST of today, the 23rd November, 2013.

Rainfall would occur at many places over coastal Andhra Pradesh and Telengana during next 12 hrs.

This is the last bulletin related to this system. However, regular bulletins will be issued by the MC Hyderabad/Bhubaneswar and RMC Chennai.

(Naresh Kumar)
Scientist-C
Ph:011-24631913

CC: DDGM (WF) Pune/ ACWC Kolkata/ACWC Chennai/Mumbai, CWC Visakhapatanam/ Bhubaneswar/ Command MO Mumbai (022-22630084)/MC Hyderabad/ Visakhapatanam Navy Met Office (0891-2709086).