



GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCE
INDIA METEOROLOGICAL DEPARTMENT

**VERIFICATION OF RAINFALL
ASSOCIATED WITH
TROPICAL CYCLONES
OVER
NORTH INDIAN OCEAN**

Extremely Severe Cyclonic Storm “BIPARJOY” over Southeast Arabian Sea (6-19 June, 2023)

Date/Base Time of observation	24 hr Heavy rainfall warning ending at 0300 UTC of next day	Realised 24-hour heavy rainfall ending at 0300 UTC of date
11.06.2023/ 0300UTC	Light to moderate rainfall at most places with heavy to very heavy rainfall at isolated places very likely over Kutch, Devbhumi Dwarka, Porbandar, Jamnagar, Rajkot, Junagarh and Morbi districts of Saurashtra & Kutch on 14th June. The intensity of rainfall would increase with heavy to very heavy rainfall at a few places and extremely heavy falls at isolated places very likely over Kutch, Devbhumi Dwarka & Jamnagar and heavy to very heavy rainfall at a few places over Porbandar, Rajkot, Morbi & Junagarh districts of Gujarat on 15th June. Isolated heavy rainfall is very likely over remaining districts of Saurashtra and north Gujarat region on 15th June.	<p>13th June:</p> <p>Saurashtra & Kutch: Sutrapada 21, Veraval 20, Keshod 20, Mendarda 19, Malia 18, Mangrol 14, Talala 13, Vanthali 12, Manavadar 11, Junagarh 10, Junagadh 8, Porbandar 8, Upleta 8, Visavadar 7, Bhanvad 7, Kutiana 7.</p> <p>14th June:</p> <p>Saurashtra & Kutch Khambhalia 12, Okha 11; Kalyanpur, Dwarka, Upleta & Jamjodhpur 7,</p>
12.06.2023/ 0300UTC	Light to moderate rainfall at most places with heavy to very heavy rainfall at isolated places very likely over Kutch, Devbhumi Dwarka, Porbandar, Jamnagar, Rajkot, Junagarh and Morbi districts of Saurashtra & Kutch on 14th June. The intensity of rainfall would increase with heavy to very heavy rainfall at a few places and extremely heavy falls at isolated places very likely over Kutch, Devbhumi Dwarka & Jamnagar and heavy to very heavy rainfall at a few places over Porbandar, Rajkot, Morbi & Junagarh districts of Gujarat on	<p>15th June: Nil</p> <p>16th June:</p> <p>Gujarat Region: Wav 8, Saurashtra & Kutch: Gandhidham 20, Kandla Airport 16, Dwarka 15, Anjar, Bhuj & Mundra 13 each, Okha 11, Kandla New & Khambhalia 10 each, Jamjodhpur 9, Kalyanpur 8, Jamnagar Naliya & Kalavad 7 each.</p>

	<p>15th June. Isolated heavy rainfall is very likely over remaining districts of Saurashtra and north Gujarat region on 15th June. Light to moderate rainfall at most places with heavy to very heavy rainfall at isolated places very likely over north Gujarat and adjoining south Rajasthan on 16th June.</p>	<p>17th June:</p> <p>Saurashtra & Kutch:</p> <p>Okha 23, Anjar 22, Mandvi 22, Bhachau 21, Mundra 19, Rapar 19, Nakhatrana 17, Kandla New 17, Jamnagar 16, Gandhidham 15, Khambhalia 13, Bhuj 13, Kandla Airport 12, Lodhika 11, Lakhpat 10, Kalavad 10, Chuda 10, Wankaner 9, Jodia 9, Rajkot 9, Tankara 8, Morbi 8, Dhrol 7, Abdasa 7, Targhadia 7, Chotila 7, Halvad 7, Jamnagar 7.</p> <p>Gujarat Region:</p> <p>Vadgam-11, Dhanera-11, Dantiwada-10, Deodar-9, Radhanpur-9, Vadali-9, Harij-9, Santalpur-8, Poshina-8, Bhabhar-8, Visnagar-8, Deesa-8, Suigam-8, Khedbrahma-8, Sami-7, Satlasana-7, Dantewadaaws-7, Dharoi Colony-7, Palanpur-7,</p> <p>West Rajasthan:</p> <p>Mt. Abu 21, Sedwa 14, Mounntabu 13, Raniwada 11, Bidasra 8 and Reodar 7</p> <p>East Rajasthan:</p> <p>Mounntabu Tehsil -13, Reodar -7,</p> <p>18th June:</p>
<p>13.06.2023/ 0300UTC</p>	<p>Light to moderate rainfall at many places in Kutch, Devbhumi Dwarka, Porbandar, Jamnagar, Junagarh and Rajkot districts of Saurashtra & Kutch with isolated heavy to very heavy rainfall on 13th June. Light to moderate rainfall at most places with heavy to very heavy rainfall and extremely heavy falls at isolated places very likely over Kutch, Devbhumi Dwarka, Porbandar, Jamnagar, Rajkot, Junagarh and Morbi districts of Saurashtra & Kutch on 14th June. The intensity of rainfall would increase with heavy to very heavy rainfall at a few places and extremely heavy falls at isolated places very likely over Kutch, Devbhumi Dwarka & Jamnagar and heavy to very heavy rainfall at a few places over Porbandar, Rajkot, Morbi & Junagarh districts of Gujarat and Isolated heavy to very heavy rainfall is very likely over remaining districts of Saurashtra and north Gujarat region on 15th June. Light to moderate rainfall at most places with heavy to extremely heavy rainfall at isolated places very likely over north Gujarat and</p>	

	adjoining south Rajasthan on 16th June.	Gujarat Region: Amirgadh 21, Danta 17, Dhanera 16, Dantiwada 15, Poshina 15, Palanpur 14, Santalpur 13, Deesa 13
14.06.2023/ 0300UTC	Light to moderate rainfall at most places with heavy to extremely heavy rainfall at isolated places very likely over Kachchh, Devbhumi Dwarka, Porbandar, Jamnagar, Rajkot, Junagarh and Morbi districts of Saurashtra & Kutch on 14th June. The intensity of rainfall would increase with heavy to very heavy rainfall at a few places and extremely heavy falls at isolated places very likely over Kachchh, Devbhumi Dwarka & Jamnagar and heavy to very heavy rainfall at a few places over Porbandar, Rajkot, Morbi & Junagarh districts of Gujarat and Isolated heavy to very heavy rainfall is very likely over remaining districts of Saurashtra and north Gujarat region on 15th June. Light to moderate rainfall at most places with heavy to extremely heavy rainfall at isolated places very likely over north Gujarat and adjoining south Rajasthan on 16th and southeast Rajasthan & adjoining North Gujarat region on 17th June	Rajasthan: Mounntabu 36, Chitalwana 34, Raniwada 32, Jalore 32, Sheoganj 31, Sanchore 30, Jaswantpur 29, Sumerpur 27, Chotan 27, Dhorimanna 26, Rani 25, Reodar 24, Bali 24, Siwana 24, Bagoda 23, Jawai Dam 23, Abu Road 20, Pali 20, Samdari 20, Sedwa 19, Dhanau 18, Balotra 18, Desuri 18, Pindwara 18, Bhinmal 17, Deogarh 15, Guddamalan 14, Marwar 13, Junction Pachbhadra 13, Sirohi 13, Kubhalgarh 12, Gadhbor 12, Gogunda 12, Bhadrajun 11, Ahore 10, Kotda 10, Nokda 9, Jodhpur 9, Luni 9, Kalyanpur 9, Sindhari 9, Jodhpur 9, Rohat 9, Baitu 8, Sayla 8, Sojat 8, Amet 7, Ramsar 7, Todgarh 7
15.06.2023/ 0300UTC	Light to moderate rainfall at most places with heavy to very heavy rainfall at a few places and extremely heavy falls at isolated places very likely over Kachchh, Devbhumi Dwarka & Jamnagar and heavy to very heavy rainfall at a few places over Porbandar, Rajkot, Morbi & Junagarh districts of Gujarat and Isolated heavy to very heavy rainfall is very likely over	19th June: Gujarat Region: Danta 13, Amirgadh 9, Khedbrahma 8, Vijaynagar 7,

	remaining districts of Saurashtra and north Gujarat region on 15th June. Light to moderate rainfall at most places with heavy to extremely heavy rainfall at isolated places very likely over north Gujarat and adjoining south Rajasthan on 16th and southeast Rajasthan & adjoining North Gujarat region on 17th June.	East Rajasthan: Sheoganj 35, Nagrarfort 31, Deogarh 27, Kumbhalgarh 25, Amet 24, Rajsamand 22, Ajmer Tehsil 16, Reodar 15, Srinagar 15, Pushkar 15, Deoli 15, Nainwa 14, Mandal 13, Ajmer 13, Tonk Tehsil 13, Piplu 13, Kekri 12, Nasirabad 11, Railmagra 11, Pindwara 11, Abu Road 11, Gegal 11, Jawaja 11, Tatgarh 10, Bhinay 9, Bhim 9, Kishangarh 9, Niwai 9, Jahazpur 9, Nathdwara 9, Sahada 9, Raipur 9, Uniara / Aligarh 8, Asind 8, Gogunda 8, Arai 8, Todaraisingh 8, Sirohi 8, Geola 8, Sarwar 8, Mangliawas 7, Rashmi 7, Pisagan 7, Hurda 7, Kotda 7, Tonk Vanasthali 7, Malpura 7, Hindoli 7, Vijaynagar 7.
16.06.2023/ 0300UTC	Light to moderate rainfall at most places with heavy to very heavy rainfall at a few places and extremely heavy rainfall at isolated places is very likely over Saurashtra & Kutch, isolated heavy to extremely heavy rainfall is likely over north Gujarat region and south Rajasthan on 16th and over south Rajasthan & adjoining north Gujarat region on 17th June.	West Rajasthan: Desuri 38, Sumerpur 28, Erinpura/jawai Dam 24, Bali 19, Ahore Sr 17, Marwar Junction 14, Jalore 9, Jaswantpura 8, Merta City 8, Bilara 7, Pali 7.
17.06.2023/ 0300UTC	Light to moderate rainfall at most places with isolated heavy to extremely heavy rainfall is likely over south Rajasthan and isolated heavy to very heavy rainfall over adjoining north Gujarat region & Kutch on 17th June	West Madhya Pradesh: Ratlam-7
18.06.2023/ 0300UTC	Light to moderate rainfall at most places with isolated heavy to very heavy rainfall is very likely over Southwest Rajasthan on 18th June. Light to moderate rainfall at most places is very likely with isolated heavy to extremely heavy rainfall over Southeast Rajasthan on 18th June, isolated heavy to very heavy rainfall on 19th June and isolated heavy rainfall on 20th June. Light to moderate rainfall	20th June: East Rajasthan: Dholpur Tehsil 19, Ajmer 15, Banera 12,

	<p>at most places is likely with isolated heavy rainfall over Northeast Rajasthan on 18th June, isolated heavy to very heavy rainfall on 19th June and isolated heavy rainfall on 20th June. Light to moderate rainfall at most places is likely with isolated heavy to very heavy rainfall over West Madhya Pradesh on 19th and 20th June and isolated heavy rainfall over southwest Uttar Pradesh on 20th June. Light to moderate rainfall at many places is likely with isolated heavy rainfall over North Gujarat Region on 18th June.</p>	<p>Kishangarh 11, Ajmer Tehsil 11, Nasirabad 11</p> <p>West Madhya Pradesh:</p> <p>Ater 14, Morena13, Gormi 12, Ambah 12, Badoda 10</p> <p>West Uttar Pradesh:-</p> <p>Khairagar-13,</p>
<p>19.06.2023/ 0300UTC</p>	<p>Light to moderate rainfall at most places with isolated heavy to extremely heavy rainfall is very likely over East Rajasthan on 19th June, isolated heavy to very heavy rainfall on 20th June and isolated heavy rainfall on 21st June. Light to moderate rainfall at most places is likely with isolated heavy to very heavy rainfall over Northwest Madhya Pradesh on 19th, 20th and 21st with extremely heavy rainfall at isolated places on 20th June. Light to moderate rainfall at most places is likely with isolated heavy rainfall over adjoining areas of Northeast Madhya Pradesh on 20th June. Light to moderate rainfall at most places is likely with isolated heavy rainfall over of Southwest Uttar Pradesh on 20th and 21st June</p>	

Severe Cyclonic Storm “MICHAUNG” over Southeast & adjoining southwest Bay of Bengal (1-6 December, 2023)

Date	Forecasts based on 0300 UTC of date	Realised Rainfall ending at 0830 hours IST of date
01.12.2023	<ul style="list-style-type: none"> • Isolated heavy rainfall over Andaman & Nicobar Islands on 1st December. • North Coastal Tamil Nadu & Puducherry: Isolated heavy rainfall on 2nd December. Heavy to very heavy rainfall at few places and isolated extremely heavy rainfall on 3rd December. Heavy to very heavy rainfall at isolated places on 4th December. • Coastal Andhra Pradesh: Heavy to very heavy rainfall at a few places and extremely heavy rainfall at isolated places on 3rd and 4th December. Isolated heavy to very heavy rainfall over south coastal Andhra Pradesh and heavy to very heavy rainfall at a few places and extremely heavy rainfall at isolated places over North coastal Andhra Pradesh on 5th December. • Rayalaseema: Isolated heavy to very heavy rainfall on 3rd & 4th December. • Odisha: Isolated heavy rainfall over south Coastal and adjoining south Interior Odisha on 4th and isolated heavy to very heavy rainfall over the same region on 5th December. 	<p>03.12.2023 Tamil Nadu & Puducherry: Pallipattu 15; Uthukottai 13; Thenkasi 11; Alandhur & Ponneri 10 each; Tiruttani, Avadi & Wallajah 9 each; Meenambakkam, Anna University, Meenambakkam, Alandur, Chennai(AP), Perungudi, Oothu, Shencottah, Tiruvallur, Anna University, Mugalivakkam & Thamaraipakkam 8 each; Valasaravakkam, Gundar Dam, Kodambakkam, Perungudi, Nalumukku, Cholavaram, Tambaram, Adyar, Ice House, Papanasam, VIT_Chennai, MGR Nagar, Teynampet & Kakkachi 7 each; Rayalaseema: Thottambedu 15, Srikalahasti 14, Tirupati Aero 13, Satyavedu 10, Nagari & Tada 9 each, Sullurpeta, Gudur 8 each; Coastal Andhra Pradesh: Nellore 7 04.12.2023 Raylaseema: Sullurpeta 20; Tada 19; Gudur 14; Srikalahasti, Thottambedu & Satyavedu 13 each; Nagari 12, Tirupati Aero 7; Coastal Andhra Pradesh : Nellore 19; Tamilnadu, Puducherry & Karaikal: Perungudi 29; Avadi 28; Alandur & Chennai (AP) 25 each; Adyar, Meenambakkam AWS, Meenambakkam, Chennai (N), Puzhal & Cholavaram 23 each; Mahabalipuram, MGR Nagar, Kodambakkam & CD Hospital Tondiarpet 22 each; Valasaravakkam, Sholinganallur, DGP Office,</p>
02.12.2023	<ul style="list-style-type: none"> • North Coastal Tamil Nadu & Puducherry: Isolated heavy rainfall on 2nd December, heavy to very heavy rainfall at a few places on 3rd Dec., isolated 	

	<p>heavy rainfall on 4th December.</p> <ul style="list-style-type: none"> • Coastal Andhra Pradesh: heavy to very heavy rainfall at a few places over south coastal Andhra Pradesh on 3rd and heavy to very heavy rainfall with extremely heavy falls at isolated places over coastal Andhra Pradesh & Yanam on 4th & 5th December. Isolated heavy rainfall over north coastal Andhra Pradesh on 6th December. • Royalaseema: Isolated heavy rainfall during 2nd-4th with very heavy rainfall at isolated places on 3rd December. • Odisha: Isolated heavy rainfall over south Coastal and adjoining south Interior Odisha during 4th -6th with isolated very heavy rainfall over the same region on 5th December. 	<p>Pallikaranai, Chennai (N), Anna University & Ponneri 21 each; Puzhal, Perambur, Ice House & Red Hills 20 each; Ayanavaram Taluk Office, Taramani, Satyabama Uty, Anna Nagar & VIT_Chennai 19 each, Chennai Collector Office, Sholinganallur), Teynampet, Malar Colony, Ambattur, Anna University, Valasaravakkam, Good Will School Villivakkam, YMCA Nandnam, KVK Kattukuppam, Thamaraipakkam & Kodambakkam 18 each; Gummidipoondi, Tambaram, Ambathur-2 & Kelambakkam 17 each; T.V.K Nagar, Tondiarpet, Chembarapakkam, Teynampet, Tiruvallur, Kathivakkam, ThiruViKa Nagar & Madhavaram 16 each & Uthukottai, Anna Nagar, Sholinganallur, Tirur KVK, Kolathur, Tondairpet, Perungudi & Ennore 15 each, Ambattur, Adyar Eco Park, GCC, Poonamallee, Thirukalukundram, Alandhur & Koratur 14 each; Sriperumbudur, Thirupporur, Manali, Adyar & Chembarabakkam 13 each; Mugalivakkam, Kundrathur, Chengalpattu, Uthandi, Royapuram & Vanagaram 12 each; Royapuram & Maduravoyal 11 each; Poondi & Tiruttani 10 each; Thiruvottiyur, Maduranthagam, Thiruvalangadu, Kancheepuram, Uthiramerur & Cheyyur 9 each; Walajabad, Minnal, Arakonam & Marakkanam 8 each; Thiruvottiyur 7</p>
03.12.2023	<ul style="list-style-type: none"> • North Coastal Tamil Nadu & Puducherry: heavy to very heavy rainfall at a few places with isolated extremely heavy falls on 3rd & 4th and isolated heavy rainfall on 5th December. • Coastal Andhra Pradesh: heavy to very heavy rainfall at a few places with extremely heavy falls at isolated places over south coastal Andhra Pradesh on 3rd and heavy to very heavy rainfall at a few places with extremely heavy falls at isolated places over coastal Andhra Pradesh & Yanam on 4th & 5th December. Isolated heavy rainfall over north coastal Andhra Pradesh on 6th December. 	<p>05.12.2023 Tamil Nadu: Poonamallee 34; Avadi 28; KVK Kattukuppam 27; Chennai (N), Chennai(N) AWS & Tambaram 24 each & Mahabalipuram & Ice House 22</p>

	<ul style="list-style-type: none"> • Rayalaseema: isolated heavy to extremely heavy falls is very likely on 3rd & 4th and isolated heavy rainfall on 5th December. • Telangana: isolated heavy rainfall is likely on 4th & 5th with isolated very heavy rainfall over the same region on 5th December. • Odisha: isolated heavy rainfall is likely over south Coastal and adjoining south Interior Odisha during 4th & 6th with isolated very heavy rainfall over the same region on 5th December. 	<p>each; Royapuram, Adyar, ThiruViKa Nagar, GCC, Kodambakkam & Chembarapakkam_Rev 21 each; Sholinganallur, Taramani, Meenambakkam, Chennai (AP), Kundrathur, Thamarapakkam, Kodambakkam & Tirur KVK 19 each, Teynampet, Valasaravakkam, Tiruvallur, Anna University & Valasaravakkam 18 each, Uthukottai, NIOT_Pallikaranai, Ponneri, Sriperumbudur & Koratur 17 each; Kelambakkam 16; Cholavaram 15; Thiruvallangadu, Poondi, Alandur & Thirupporur 14 each; Red Hills 13; Alandhur, Tiruttani, Gummidipoondi & Chembarabakkam_CMWSSB 12 each; Thirukalukundram, Pechiparai & Royapuram 11 each; Minnal & Tondiarpet 10 each; Chengalpattu, Mugalivakkam, Wallajah, Perunchani Dam & Tiruttani PTO 9 each; Puzhal, Puthan Dam, Panapakkam & Teynampet 8 each, R.K.Pet, Walajabad, Pallipattu, Vembakkam, Sholingur & Kuzhithurai 7 each;</p> <p>Coastal Andhra Pradesh: Bapatla 22; Nellore 22; Rapur 21; Atmakur 19; Amalapuram, Addanki & Karamchedu 17 each; Masulipatnam Cdr 16; Kavali 15; Avaniigada & Vinjamur 14 each, Udayagiri 13; Ongole 12; Repalle & Kandukur 11 each; Konakanamitla, Gudivada, Santhamaguluru 9 each; Tenali, Kakinada & Yanam 8 each, Marripudi, Veligandla, Mundlamuru, Guntur, Seetharamapuram, Tanuku, Vijayawada & Peddapuram 7 each;</p>
04.12.2023	<ul style="list-style-type: none"> • North Coastal Tamil Nadu & Puducherry: heavy to very heavy rainfall at a few places with isolated extremely heavy falls on 4th and isolated heavy rainfall on 5th December and decrease thereafter. • Coastal Andhra Pradesh: heavy to very heavy rainfall at a few places with extremely heavy falls at isolated places over coastal Andhra Pradesh & Yanam on 4th & 5th December. Exceptionally heavy rainfall at one or two places over south coastal Andhra Pradesh on 4th and over north coastal and adjoining south coastal Andhra Pradesh on 5th December. Isolated heavy rainfall over north coastal Andhra Pradesh on 6th December. • Rayalaseema: isolated heavy to extremely heavy falls on 4th and isolated heavy rainfall on 5th 	<p>each; Royapuram, Adyar, ThiruViKa Nagar, GCC, Kodambakkam & Chembarapakkam_Rev 21 each; Sholinganallur, Taramani, Meenambakkam, Chennai (AP), Kundrathur, Thamarapakkam, Kodambakkam & Tirur KVK 19 each, Teynampet, Valasaravakkam, Tiruvallur, Anna University & Valasaravakkam 18 each, Uthukottai, NIOT_Pallikaranai, Ponneri, Sriperumbudur & Koratur 17 each; Kelambakkam 16; Cholavaram 15; Thiruvallangadu, Poondi, Alandur & Thirupporur 14 each; Red Hills 13; Alandhur, Tiruttani, Gummidipoondi & Chembarabakkam_CMWSSB 12 each; Thirukalukundram, Pechiparai & Royapuram 11 each; Minnal & Tondiarpet 10 each; Chengalpattu, Mugalivakkam, Wallajah, Perunchani Dam & Tiruttani PTO 9 each; Puzhal, Puthan Dam, Panapakkam & Teynampet 8 each, R.K.Pet, Walajabad, Pallipattu, Vembakkam, Sholingur & Kuzhithurai 7 each;</p> <p>Coastal Andhra Pradesh: Bapatla 22; Nellore 22; Rapur 21; Atmakur 19; Amalapuram, Addanki & Karamchedu 17 each; Masulipatnam Cdr 16; Kavali 15; Avaniigada & Vinjamur 14 each, Udayagiri 13; Ongole 12; Repalle & Kandukur 11 each; Konakanamitla, Gudivada, Santhamaguluru 9 each; Tenali, Kakinada & Yanam 8 each, Marripudi, Veligandla, Mundlamuru, Guntur, Seetharamapuram, Tanuku, Vijayawada & Peddapuram 7 each;</p>

	<p>December and decrease thereafter.</p> <ul style="list-style-type: none"> • Telangana: isolated heavy rainfall is likely on 4th. Isolated heavy to extremely heavy rainfall over the same region on 5th December. • Odisha isolated heavy rainfall is likely over south Coastal and adjoining south Interior Odisha during 4th & 6th with isolated heavy to very heavy rainfall over the same region on 5th December. 	<p>Raylaseema: Gudur 28; Srikalahasti 24 & Kodur 24 each; Thottambedu, Sullurpeta & Penagaluru 23 each; Tadapati 20; Venkatagiri 18; Satyavedu 14; Nagari & Tirupati Aero 13 each; Rajampet 12; Atlur 9; Badvel 8; Gurramkonda, Kalakada, Sambepalle, Royachoti, Pakala, Pullampeta, Chinnamandem & Cuddapah 7 each</p> <p>06.12.2023</p> <p>Telangana: Aswaraopeta 34; Palawancha 25; Chandrugonda 23; Kothagudem 22; Julurpad & Mulakalapalle 20 each, Aswapuram 19; Burgampadu 18 & Bhadrachalam 18 each; Sathupalle 16; Tekulapalle 15; Madhira & Enkuru 14 each; Bonakal 13; Manuguru & Wyra Kvk 12 each; Pinapaka & Thollada 10 each; Konijerla 9; Gundala 8; Venkatapur, Chinthakam & Yellandu 7 each;</p> <p>Coastal Andhra Pradesh: Bhimadole 24; Kukunoor 22; Narsapuram 21 & Chintalapudi 21; Narsipatnam, Bheemavaram & Koyyalagudem 20 each; Amalapuram, Anakapalle, Kunavaram & Yelamanchili 19 each; Sattenapalle & Palakoderu 18 each; Tanuku 17; Kaikalur, Prathipadu, Santhamaguluru & Polavaram 16 each; Chodavaram, Visakhapatnam, Denkada & Chintur 15 each; Tadepalligudem, Darsi & Kakinada 14 each; Anakapalle, Velairpad, Srungavarapukota & Tiruvuru 13 each; Tuni, Chintapalle, Mentada, Paderu & Nuzvid 12 each; Nandigama, Eluru, Vararamachandrapur, Guntur, Bondapalle, Gajapathinagaram, Vepada & Amaravati 11 each; Vizianagaram,</p>
05.12.2023	<ul style="list-style-type: none"> • Coastal Andhra Pradesh: heavy to very heavy rainfall at a few places with extremely heavy falls at isolated places over coastal Andhra Pradesh & Yanam on 5th December. Exceptionally heavy rainfall at one or two places over central districts of coastal Andhra Pradesh on 5th December. Isolated heavy rainfall north coastal Andhra Pradesh on 6th December. • Telangana: heavy to extremely heavy rainfall on 5th December. • Odisha and Chhattisgarh: isolated heavy to very heavy rainfall over south Chhattisgarh, south Coastal and adjoining south Interior Odisha on 5th and isolated heavy rainfall over the same region on 6th December. • Rayalaseema: isolated heavy rainfall on 5th December and decrease thereafter. • North Coastal Tamil Nadu & Puducherry: isolated heavy rainfall on 5th 	<p>Coastal Andhra Pradesh: Bhimadole 24; Kukunoor 22; Narsapuram 21 & Chintalapudi 21; Narsipatnam, Bheemavaram & Koyyalagudem 20 each; Amalapuram, Anakapalle, Kunavaram & Yelamanchili 19 each; Sattenapalle & Palakoderu 18 each; Tanuku 17; Kaikalur, Prathipadu, Santhamaguluru & Polavaram 16 each; Chodavaram, Visakhapatnam, Denkada & Chintur 15 each; Tadepalligudem, Darsi & Kakinada 14 each; Anakapalle, Velairpad, Srungavarapukota & Tiruvuru 13 each; Tuni, Chintapalle, Mentada, Paderu & Nuzvid 12 each; Nandigama, Eluru, Vararamachandrapur, Guntur, Bondapalle, Gajapathinagaram, Vepada & Amaravati 11 each; Vizianagaram,</p>

	<p>December and decrease thereafter.</p>	<p>Bheemunipatnam, Mangalagiri, Piduguralla, Araku Valley & Yanam 10 each; Pusapatirega, Peddapuram, Addanki, Gantyada, Mundlamuru & Lam 9 each; Podili, Atchampet, Vijayawada, Garividi & Ranastalam 8 each; Nellimarla, Jangamaheswarapuram, Cheepurupalle, Visakhapatnam & Gudivada 7 each;</p> <p>Tamil Nadu: Virudunagar, Ponnamaravathi, Natham, Singampunari, Sathiar, Arimalam 7 each;</p> <p>Odisha: Pottangi 11; Similiguda 9; Koraput 7.</p> <p>07.12.2023</p> <p>Coastal Andhra Pradesh: Yelamanchili (dist Anakapalli) 7, Chodavaram (dist Anakapalli) 7, Araku Valley (dist Alluri Sitharamaraju)-7</p> <p>Gangetic west Bengal: Phulberia-7, Jharkhand: Kharsema-7</p> <p>08.12.2023</p> <p>Mizoram: Champhai-8, Lengpui-8, Serchip-7, Lenglui-7</p> <p>Gangetic West Bengal: Burdwan-7</p>
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Severe cyclonic storm Asani over Bay of Bengal (07-12 May, 2022)

Date/Base Time of observation	24 hr Heavy rainfall warning ending at 0300 UTC of next day	Realised 24-hour heavy rainfall ending at 0300 UTC of date
08.05.2022/0300UTC	<p>10th May: Light to moderate rainfall at a few places with heavy rainfall at isolated places is likely over coastal Odisha and adjoining areas of north coastal Andhra Pradesh from 10th evening.</p> <p>11th May: Light to moderate rainfall at a few places with heavy rainfall at isolated places is likely over coastal Odisha and adjoining coastal areas of north Andhra Pradesh and West Bengal.</p> <p>12th May: Light to moderate rainfall likely at a few places with heavy rainfall at isolated places is likely over coastal areas of Odisha and West Bengal.</p>	<p>11th May, 2022</p> <p>Coastal Andhra Pradesh & Yanam</p> <p>Narsipatnam (Vishakhapatnam), Kavali (Nellore), Visakhapatnam (Vishakhapatnam), Kandukur (Prakasam), Bapatla (Guntur), Mentada (Vizianagaram), Pusapatirega (Vizianagaram) & Gantyada (Vizianagaram) 7 each.</p> <p>Rayalaseema</p> <p>Duvvur (YSR) 11, Chapad (YSR) 8 and Cuddapah (YSR), Vallur (YSR), Proddutur (YSR) 7 each.</p> <p>Odisha</p> <p>Anandpur (Keonjargarh) and Ghasipura</p>
09.05.2022/0300UTC	<p>9th May: Rainfall at a few places is very likely over coastal Andhra Pradesh.</p> <p>10th May: Light to moderate rainfall at a few places with heavy to very heavy rainfall at isolated places is likely over coastal Andhra Pradesh and heavy rainfall at isolated places is likely over coastal Odisha from 10th evening.</p> <p>11th May: Light to moderate rainfall at a few places with heavy to very heavy rainfall at isolated places is likely over coastal areas of north Andhra Pradesh and heavy rainfall at isolated places is likely over coastal Odisha & adjoining coastal West Bengal.</p> <p>12th May: Light to moderate rainfall likely at a few places with heavy rainfall at isolated places is likely over coastal areas of Odisha and West Bengal.</p>	<p>Rayalaseema</p> <p>Duvvur (YSR) 11, Chapad (YSR) 8 and Cuddapah (YSR), Vallur (YSR), Proddutur (YSR) 7 each.</p> <p>Odisha</p> <p>Anandpur (Keonjargarh) and Ghasipura</p>
10.05.2022/0300UTC	<p>10th May: Light to moderate rainfall at many places with heavy to very heavy rainfall at isolated places is likely over</p>	<p>and Ghasipura</p>

	<p>coastal Andhra Pradesh and rainfall at a few places with heavy rainfall at isolated places over coastal Odisha from 10th night.</p> <p>11th May: Light to moderate rainfall at most places with heavy to very heavy rainfall at a few places with isolated extremely heavy falls is likely over north coastal Andhra Pradesh and heavy rainfall at isolated places is likely over coastal Odisha & adjoining coastal West Bengal.</p> <p>12th May: Light to moderate rainfall likely at a few places with heavy rainfall at isolated places is likely over coastal areas of Odisha and West Bengal.</p>	<p>(Keonjargarh) 7 each</p> <p>12th May:</p> <p>Coastal Andhra Pradesh & Yanam</p> <p>Kandukur (Prakasam) 26, Atmakur (Nellore) 20, Bestavaripeta (Prakasam) 13, Kavali (Nellore) & Ongole (Prakasam) 12 each, Racherla (Prakasam) & Cumbum (Prakasam) 11 each</p> <p>Rayalaseema</p> <p>Badvel (YSR) 8 and Atlur (YSR) 7</p>
11.05.2022/0300UTC	<p>11th May: Light to moderate rainfall at most places with heavy to very heavy rainfall at a few places with isolated extremely heavy falls is likely over coastal Andhra Pradesh and heavy rainfall at isolated places is likely over south coastal Odisha.</p> <p>12th May: Light to moderate rainfall likely at many places with heavy rainfall at isolated places is likely over north coastal Andhra Pradesh, coastal areas of Odisha and West Bengal.</p>	
12.05.2022/0300UTC	<p>12th May: Light to moderate rainfall at many places with heavy rainfall at isolated places is likely over coastal Andhra Pradesh and heavy to very heavy rainfall at isolated places over Rayalaseema.</p>	

Cyclonic Storm Sitrang over Bay of Bengal (22-25 October, 2022)

Date/Base Time of observation	24 hr Heavy rainfall warning ending at 0300 UTC of next day	Realised 24-hour heavy rainfall ending at 0300 UTC of date
22 Oct/ 0300 UTC	<p>Andaman and Nicobar Islands: Heavy rainfall at isolated places over Andaman & Nicobar Islands on 22nd & 23rd October.</p> <p>Odisha: Isolated heavy rainfall likely over the same region on 24th and isolated heavy rainfall over north coastal Odisha districts on 25th October</p> <p>West Bengal: Isolated heavy rainfall on 24th and heavy to very heavy rainfall at isolated places on 25th likely over coastal districts.</p> <p>Northeastern States: heavy to very heavy rainfall at isolated places over south Assam, East Meghalaya, Nagaland, Mizoram, Manipur & Tripura on 24th October. Isolated heavy to very heavy rainfall over the same region and isolated extremely heavy rainfall over Tripura & Mizoram likely over the same region on 25th and isolated heavy rainfall likely on 26th October.</p>	<p>25th Oct/0300 UTC Meghalaya: Mawphlang (Dist East Khasi Hills) 25, Pynursla (Dist East Khasi Hills) 25, Williamnagar (Dist East Garo Hills) 23, Shora (Dist East Garo Hills) 22, Secretariat_Hills(A RG) (Dist East Garo Hills) 21, Shillong (AWS) (Dist East Khasi Hills) 21, Shillong C.S.O. (Dist East Khasi Hills) 20, Mawkyrwat (ARG) (Dist South West Khasi Hills) 18, Barapani (Dist Ribhoi) 18, Nongstoin (Dist West Khasi Hills) 13, Khliehriat (Dist East Jaintia Hills) 12, Baghmara (Dist South Garo Hills) 10; Arunachal Pradesh: Bomdila (Dist West Kameng) 12, Kalaktang (Dist West Kameng) 10, Kibithu (Dist Anjaw) 9, Basar (Dist West</p>
23 Oct/ 0300 UTC	<p>Odisha: Isolated heavy rainfall over Vadrak and Balasore districts on 24th.</p> <p>West Bengal: Isolated heavy to very heavy rainfall over coastal districts of West Bengal (South & North Parganas, East Medinipur & adjoining areas of West Medinipur) on 24th October. Isolated heavy to very heavy rainfall over coastal districts (South & North Parganas and Nadia) of West Bengal on 25th October.</p>	<p>10; Arunachal Pradesh: Bomdila (Dist West Kameng) 12, Kalaktang (Dist West Kameng) 10, Kibithu (Dist Anjaw) 9, Basar (Dist West</p>

	<p>Northeastern States:</p> <p>Heavy to very heavy rainfall at isolated places over North Assam, Arunachal Pradesh, Nagaland & Manipur; heavy to Extremely heavy rainfall likely over South Assam, Meghalaya, Mizoram, & Tripura on 24th October.</p> <p>Isolated heavy to very heavy rainfall over Arunachal Pradesh, Assam, Meghalaya, Mizoram, & Tripura on 25th and isolated heavy rainfall is likely over Arunachal Pradesh, northeast Assam and Nagaland on 26th October.</p>	<p>Siang) 8, Ziro (Dist Lower Subansiri) 8, Koloriang (Dist Kurung Kumey) 7, Jung_ARG (Dist Tawang) 7, Kabu Basti (Dist West Siang) 7, Palin(ARG) (Dist Kra Daddi) 7;</p> <p>Assam: Khanapara (Dist Kamrup Metropolitan) 10, Dudhnoi Kvk(AWS) (Dist Goalpara) 9, Khetri (ARG) & Chandmari (Dist Kamrup Metropolitan) 9, Drf & GoibarGaon (Dist Baksa) 8, Pandu, Nongpoh (Dist Rhibhoi) 8, Goibergaon (Dist Baksa) 8, Udaipur (Dist Tinsukia) 8, Umrangshu (ARG) (Dist West Karbi Anglong) 7, Motunga (Dist Tamulpur) 7, Nalbari (Dist Nalbari) 7, Tamulpur (Dist Baksa) 7, Chandrapur ARG (Dist Kamrup (Rural)) 7, Kheronighat (Dist Karbi Anglong) 7,</p>
<p>24 Oct/ 0300 UTC</p>	<p>Odisha</p> <p>Isolated heavy rainfall over Vadrak and Balasore districts on 24th.</p> <p>West Bengal</p> <p>Isolated heavy to very heavy rainfall over coastal districts of West Bengal (South & North Parganas, East Medinipur & adjoining areas of West Medinipur) on 24th October. Light to moderate rainfall at many with isolated heavy to very heavy rainfall is likely over coastal districts (South & North Parganas and Nadia) of West Bengal on 25th October.</p> <p>Northeastern States:</p> <p>heavy to very heavy rainfall at isolated places over North Assam, Arunachal Pradesh, Nagaland & Manipur; heavy to Extremely heavy rainfall likely over South Assam, Meghalaya, Mizoram, & Tripura on 24th October.</p> <p>isolated heavy to very heavy rainfall over Arunachal Pradesh, Assam, Meghalaya, Mizoram, & Tripura on 25th and isolated heavy rainfall is likely over Arunachal Pradesh, northeast Assam and Nagaland on 26th October.</p>	

<p>25 Oct/ 0300 UTC</p>	<p>isolated heavy to very heavy rainfall over Arunachal Pradesh, northeast Assam and isolated heavy rainfall over remaining parts of Assam, Meghalaya and Nagaland today, the 25th October.</p>	<p>Guwahati (Dist Kamrup (M)) 7; Manipur: Ukhrul (Dist Ukhrul) 10, Ukhrul AWS (Dist Ukhrul) 9, Churachandpur (Dist Churachandpur) 7, Senapati (Dist Senapati) 7;</p>
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Severe Cyclonic Storm Mandous over Bay of Bengal (06-10 December, 2022)

Date/time (UTC)	Forecast heavy rainfall	Realized heavy rainfall
29-11-2022 /0300	Isolated heavy falls over Andaman & Nicobar (AN) Islands on 4 th & 5 th December, 2022.	Light to moderate rainfall at most places with isolated heavy to very heavy rainfall occurred over Andaman and Nicobar Islands on 5 th and 6 th December,
30-11-2022 /0300	Isolated heavy falls over A&N Islands from 05 th Dec., 2022.	
01-12-2022 /0300	Isolated heavy falls over Nicobar Islands on 04 th and over A&N Islands on 05 th Dec., 2022.	<ul style="list-style-type: none"> isolated heavy to very heavy rainfall occurred over north Tamil Nadu, Rayalaseema and south coastal Andhra Pradesh on 8th
02-12-2022 /0300	Isolated heavy falls over Nicobar Islands on 04 th and over A&N Islands on 05 th Dec., 2022. Enhanced rainfall activity to commence over north coastal Tamil Nadu, Puducherry & Karaikal and South coast Andhra Pradesh(AP) from 07 th Dec. mid-night.	
03-12-2022 /0300	Isolated heavy falls over Nicobar Islands on 04 th and over A&N Islands on 05 th December, 2022. Isolated heavy to very heavy rainfall over north Tamilnadu & Puducherry and adjoining south AP on 08 th December.	<ul style="list-style-type: none"> isolated extremely heavy rainfall occurred over north Tamil Nadu, Puducherry, Rayalaseema and south coastal Andhra Pradesh on 9th
04-12-2022 /0300	Isolated heavy falls over A&N Islands during 04 th -06 th December, 2022. Isolated heavy to very heavy rainfall over north Tamilnadu & Puducherry and isolated heavy rainfall over south AP on 08 th Dec.	

<p>05.12.2022 /0300</p>	<p>Isolated heavy to very heavy falls over A&N Islands on 05th and isolated heavy falls on 06th Dec, 2022.</p> <p>Isolated heavy rainfall over north coastal Tamilnadu, Puducherry & Karaikal from 07th Dec. mid-night. Heavy to very heavy rainfall at isolated places and extremely heavy rainfall at isolated places over north Tamilnadu & Puducherry on 08th Dec. and isolated heavy to very heavy rainfall over Tamilnadu on 9th Dec.</p> <p>Isolated heavy rainfall to commence over south AP from 07th Dec. mid-night. Isolated heavy to very heavy rainfall on 08th Dec. and isolated heavy rainfall on 9th Dec. over south AP.</p>	<p>coastal Andhra Pradesh and isolated heavy rainfall over north Tamil Nadu, Rayalaseema, south Interior Karnataka and Kerala on 10th.</p>
<p>06.12.2022 /0300</p>	<p>Isolated heavy falls over A&N Islands on 06th Dec., 2022.</p> <p>Heavy to very heavy falls at isolated places over coastal Tamilnadu, Puducherry & Karaikal and adjoining areas off south coastal AP on 8th Dec.</p> <p>Heavy to very heavy rainfall at a few places and extremely heavy rainfall at isolated places over north coastal Tamilnadu, Puducherry and adjoining south Coastal AP and isolated heavy to very heavy rainfall over north interior Tamilnadu and adjoining Rayalaseema on 9th Dec.</p> <p>Heavy to very heavy rainfall at isolated places over north Tamilnadu and Rayalaseema and south AP on 10th Dec.</p>	
<p>07.12.2022 /0300</p>	<p>08th Dec:- Heavy to very heavy falls at isolated places over coastal Tamilnadu, Puducherry & Karaikal and isolated heavy rainfall over adjoining areas of south coastal AP and Rayalaseema.</p> <p>09th Dec:- Heavy to very heavy rainfall at a few places and extremely heavy rainfall at isolated places over north coastal</p>	

	<p>Tamilnadu, Puducherry and adjoining south Coastal AP and isolated heavy to very heavy rainfall over north interior Tamilnadu and adjoining Rayalaseema on 09th Dec.</p> <p>10th Dec:- Heavy to very heavy rainfall at isolated places over north Tamilnadu and Rayalaseema and south AP.</p>	
08.12.2022 /0300	<p>08th Dec:- Heavy to very heavy falls at isolated places very likely over coastal Tamil Nadu, Puducherry & Karaikal and isolated heavy rainfall over adjoining areas of south coastal AP & Rayalaseema.</p> <p>09th Dec:- Heavy to very heavy rainfall at a few places and extremely heavy rainfall at isolated places over north coastal Tamil Nadu, Puducherry and isolated heavy to very heavy rainfall over adjoining south Coastal AP and north interior Tamilnadu and Rayalaseema.</p> <p>10th Dec:- Heavy to very heavy rainfall at isolated places over north Tamil Nadu and Rayalaseema and south AP.</p>	
09.12.2022 /0300	<p>09th Dec: - Heavy to very heavy rainfall at a few places and extremely heavy rainfall at isolated places very likely over north coastal Tamil Nadu, Puducherry and isolated heavy to very heavy rainfall over adjoining south Coastal AP and north interior Tamilnadu and Rayalaseema.</p> <p>10th Dec:- Heavy to very heavy rainfall at isolated places over north interior Tamil Nadu and Rayalaseema and adjoining south AP.</p>	
10.12.2022 /0300	<p>10th Dec:- Heavy to very heavy rainfall at isolated places over Rayalaseema, north Tamil Nadu and south interior Karnataka</p>	

Extremely Severe Cyclonic storm (ESCS) TAUKTAE (14-19 May 2021)

Date/Base Time of observation	24 hr Heavy rainfall warning ending at 0300 UTC of next day	Realised 24-hour heavy rainfall ending at 0300 UTC of date
14.05.2021/0300	<p>Lakshadweep Islands: Heavy to very heavy falls at a few places with extremely heavy falls (≥ 20 cm) at isolated places very likely on 14th May, heavy to very heavy falls at isolated places on 15th May and heavy falls at isolated places on 16th May.</p> <p>Kerala: Heavy to very heavy falls at a few places and extremely heavy falls (≥ 20 cm) at isolated places on 14th, heavy to very heavy falls at a few places 15th and heavy to very heavy falls at isolated places on 16th & 17th May. Tamil Nadu (Ghat districts): Heavy to very heavy falls & extremely heavy falls at isolated places very likely on 14th and heavy to very heavy falls at isolated places on 15th May. Karnataka (coastal & adjoining Ghat districts): Heavy to very heavy falls at a few places with extremely heavy falls at isolated places on 14th & 15th and heavy falls at isolated places on 16th. Konkan & Goa: Heavy falls at isolated places very likely over Goa on 14th, at most places with heavy to very heavy falls at a few places over south Konkan & Goa and heavy to very heavy falls at isolated places over north Konkan on 15th and heavy falls at isolated places on 16th. Gujarat: Heavy to very heavy falls at a few places on 17th and with heavy to very heavy falls at a few places extremely heavy falls (≥ 20 cm) at isolated places over Saurashtra & Kutch on 18th.</p>	<p>KERALA & MAHE: Mavelikara-15, Konni-14, Kayamkulam-14, Kayamkulam Agri-13, Neyyattinkara-11, Nedumangad- 11, Kottayam-11, Kurudamannil-10, Varkala-10, Mancompu-9, Kozha-9, Vaikom-9, Haripad-9, Kumarakam-9, Chalakudi-8, Aluva- 8, Thritala-7, Kochi C.I.A.L.-7, Ernakulam South-7</p> <p>LAKSHADWEEP: Agathi-12. SOUTH INTERIOR</p> <p>KARNATAKA: Balehonnur-7 Heavy to extremely heavy rainfall activity, over Lakshadweep on 13-14th, Kerala on 14-15th, Karnataka on 15th, Goa and south coastal Maharashtra on 15-16th north Maharashtra on 16-17th, Gujarat, Daman & Diu, Dadra Nagar and Haveli on 17th and 18th and West Rajasthan on 18th & 19th</p>

<p>15.05.2021/030 0</p>	<p>Lakshadweep Islands: Heavy to very heavy falls at isolated places over northern Islands on 15th May and heavy falls at isolated places on 16th May.</p> <p>Kerala: Heavy to very heavy falls at a few places and extremely heavy falls at isolated places on 15th, heavy to very heavy falls at isolated places on 16th and heavy falls at isolated places on 17th May.</p> <p>Tamil Nadu (Ghat districts): Heavy to very heavy falls at isolated places on 15th May.</p> <p>Karnataka (coastal & adjoining Ghat districts): Heavy to very heavy falls at a few paces and extremely heavy falls at isolated places on 15th and heavy to very heavy falls at isolated places on 16th.</p> <p>Konkan & Goa: Heavy to very heavy falls at a few places over south Konkan & Goa and heavy to very heavy falls at isolated places over north Konkan on 15th and heavy to very heavy falls at a few places over Konkan & Goa & adjoining Ghat areas on 16th and heavy falls at isolated places on 17th May over north Konkan.</p> <p>Gujarat: Heavy to very heavy falls at isolated places over Saurashtra & Kutch and extremely heavy falls at isolated places (in Junagarh & Gir Somnath Districts) on 17th and</p>	<p>COASTAL KARNATAKA: Mangaluru AP - 8, Panambur - 7, Mangaluru-7, KERALA & MAHE: Kochi-21, Peermade-21, Kodungallur-20, Enamakal-19, Ernakulam South-17, Kumarakam- 16, Kannur- 16, Kollam- 16, Alapuzha-16, Chalakudi-15, Irinjalakuda-15, Ponnani- 14, Pattambi-14, Vaikom- 14, Cherthala- 13, Kozhikode-13, Varkala-13, Mancompu-13, Thritala- 13, Mavelikara-12, Aluva-12, Kayamkulam- 12, Kurudamannil-11, Konni-11, Quilandi-11, Perumpavur-11, Taliparamba-11, Vellanikkara-11, Kochi C.I.A.L.-11, Kottayam- 11, Haripad-11, Vadakkancherry-11, Kozha-11, Kanjirappally- 10, Munnar KSEB-10, Manjeri-10, Mahe-9, Perinthalmanna-9, Vadakara-9, Ottapalam- 9, Punalur-9, Talassery-9, Hosdurg-9, Piravam-8, Nilambur-8, Angadipuram-8, Vyttili- 8, Karipur -7,</p>
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	<p>with heavy to very heavy falls at a few places over Saurashtra & Kutch with extremely heavy falls (≥ 20 cm) at isolated places (Porbandar, Devbhoomi Dwarka, Jamnagar & Kutch districts) on 18th.</p> <p>West Rajasthan: Heavy to very heavy falls at isolated places very likely on 18th & 19th May.</p>	<p>Thodupuzha-7, Kudulu-7, Neyyattinkara-7 LAKSHADWEEP: Agathi-10, Amini-8</p>
16.05.2021/0300	<p>Kerala: Heavy to very to very heavy falls at isolated places on 16th and heavy falls at isolated places on 17th May.</p>	<p>KONKAN & GOA: Canacona-7, Pernem-7 COASTAL KARNATAKA: Kollur-</p>

	<p>Karnataka (coastal & adjoining Ghat districts): Heavy to very heavy falls at isolated places on 16th.</p> <p>South Konkan & Goa: Heavy to very heavy falls at a few places and extremely heavy falls at isolated places over south Konkan & Goa and adjoining Ghat areas on 16th and heavy to very heavy falls at isolated places on 17th May.</p> <p>North Konkan: Heavy to very heavy falls at isolated places on 16th and 17th May.</p> <p>Gujarat: Heavy to very heavy falls at isolated places over Saurashtra & Kutch, Diu and southern most Gujarat region with extremely heavy falls at isolated places on 17th and with heavy to very heavy falls at a few places over Saurashtra & Kutch and Diu & south Gujarat region with extremely heavy falls (≥ 20 cm) at isolated places on 18th.</p> <p>Rajasthan: Heavy to very heavy falls & extremely heavy falls at isolated places very likely over south Rajasthan on 18th & heavy to very heavy falls at isolated</p>	<p>24, Manki-19, Kota-19, Puttur -19, Kundapur-17, Bhatkal-16, Udupi-15, Dharmasthala-14, Mani-13, Mulki-12, Karkala-11, Shirali -11, Mangaluru -11, Kadra-11, Panambur -10, Karwar -10, Mudubidre-10, Belthangadi-9, Honavar -9, Gokarna-9, Vitla ARG-9, Sulya-8, Siddapura-8</p> <p>NORTH INTERIOR KARNATAKA: Vijayapura-8</p> <p>SOUTH INTERIOR KARNATAKA: Hosanagara-19, Bhagamandala-17, Kalasa-13, Virajpet-13, Linganamakki -9, Thalaguppa-7, Sagar-7</p> <p>KERALA & MAHE: Mahe-24, Vadakara-23, Vyttili-21, Taliparamba-17, Talassery-17, Quilandi-16, Ernakulam South-14, Kochi I.A.F.-14, Kochi C.I.A.L.-13, Aluva -13, Manantoddy-13, Irikkur-13, Kannur-12, Piravam-11, Perumpavur-11, Enamakkal-11, Kudulu-10, Thodupuzha-10, Karipur.-10, Munnar KSEB-10, Varkala-10,</p>
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	places over Rajasthan on 19th May.	Kozha-9, Vaikom-9, Nilambur-9, Neyyattinkara-9, Idukki-9, Vadakkancherry-8, Nedumangad-8, Parambikulam-8, Irinjalakuda8, Perinthalamanna-8, Pattambi-8, Angadipuram-8, Kozhikode-8, Ottapalam-8, Peerumade -8, Chalakudi-7, Ponnani-7, Thiruvananthapuram-7, Ambalavayal-7, Mannarkkad-7, Myladumpara Agri-7, Thritala-7
17.05.2021/0300	<p>Konkan & adjoining Madhya Maharashtra: Heavy to very heavy falls and extremely heavy falls at isolated places on 17th May and isolated heavy rainfall over north Konkan on 18th May.</p> <p>Gujarat: Heavy to very heavy falls at a few places and extremely heavy falls at isolated places very likely over Saurashtra, Diu and adjoining Gujarat region on 17th & heavy to very heavy falls at a few places over Gujarat region and heavy to very heavy falls at isolated places over Saurashtra on 18th May. Isolated heavy to very heavy rainfall also likely over Kutch during the same period. Rajasthan: Heavy to very heavy falls & extremely heavy falls at isolated places very likely over south Rajasthan on 18th & heavy to very heavy falls at isolated places over Rajasthan on 19th May.</p>	<p>KONKAN & GOA: Sawantwadi-37, Ratnagiri -36, Dodamarg-25, Panjim -23, Malvan-21, Kudal-20, Devgad-20, Kankavli-19, Vengurla -18, Mapusa-17, Lanja-16, Dabolim- Navy-15, Vaibhavwadi-15, Sangameshwar Devrukh-14, Guhagarh-12, Margao-12, Dapoli Agri-8, Harnai -8, Sanguem-7</p> <p>COASTAL KARNATAKA: Kadra-11, Honavar -7, Kollur-7</p>

18.05.2021/0300	<p>Gujarat: Heavy to very heavy falls isolated places very likely over Gujarat region and Saurashtra on 18th May.</p> <p>Rajasthan: Heavy to very heavy falls at isolated places very likely over south Rajasthan on 18th & heavy falls at isolated places over north Rajasthan on 19th May</p>	<p>GUJARAT REGION: Umerngam-18, Daman-15, Daman FMO-13, Surat City-9, Khanvel-8, Valsad-8, Silvassa-7</p> <p>SAURASHTRA & KUTCH: Bagasra-21, Gir Gadhada-19, Una-17, Savarkundla-17, Palitana-16, Amreli-13, Mahuva-13, Rajula-13, Khambha-13, Babra-13, Gadhda-11, Visavadar-10, Diu-9, Umralla-9, Bhavnagar-8, Dhari-7, Jesar-7</p> <p>KONKAN & GOA: Palghar Agri-30, Dahanu-28, Santacruz-23, Devgad-23, Sawantwadi-21, Colaba-21, Talasari-17, Canacona-9, Tbia-9, Kankavli-9, Murud-8, Wada-8</p>
19.05.2021/0300	<p>Heavy to very heavy falls at isolated places very likely over East Rajasthan on 19th May. Heavy to very heavy falls and extremely heavy falls at isolated places over Uttarakhand, heavy to very heavy rainfall at isolated places over Himachal Pradesh, Haryana, West Uttar Pradesh and Heavy rainfall at isolated places over Punjab, East Uttar Pradesh, north Madhya Pradesh and West Rajasthan during next 24 hours.</p>	<p>GUJARAT REGION: Nadiad-23, Mahudha-16, Anand-16, Daman FMO-15, Umerngam-15, Matar-15, Pardi-14, Daman-14, Khambhat-13, Kheda-13, Tarapur-13, Vaso-13, Olpad-12, Khergam-12, Mahemdavad-12, Dhansura-11, Ahmedabad City-11, Jalalpor-11, Sojitra-11, Kathalal-11, Prantij-10, Wanakbori-10, Borsad-10, Navsari-10, Kapadvanj-10, Virpur-10, Modasa-10, Balasinor-9, Dahegam-9, Bayad-9, Bardoli-9, Talod-9, Madhban-9, Valsad-9,</p>

		<p>Hansot-9, Vadodara-9, Vagra-9, Meghraj-9, Bhiloda-8, Himatanagar-8, Kamrej-8, Anklav-</p>
		<p>8, Silvassa-8, Padra-8, Palsana-7, Gandevi-7, Thasra-7, Galteshwar- 7, Idar-7, Vapi-7, Poshina7, Chikhli-7, Sanand-7, Vijapur-7, Khanpur-7, Kaprada- 7, Kalol-7, Dascroi-7, Mahuva-7, Lunawada-7, Danta-7, Malpur-7, Petlad-7, SAURASHTRA & KUTCH: Gir Gadhada-19, Una-18, Bhavnagar- 11, Rajula-10, Botad-9, Shihor-9, Visavadar-8, Palitana- 8, Vallabhipur-8, Umralla-7, EAST RAJASTHAN: Veja- 23, Kanva-14, Devel-14, Dungarpur Tehsil-14, Dhambola-13, Sarara-13, Girva-11, Aspur-11, Gogunda-10, Ganeshpur-10, Ajmer Tehsil-9, Railmagra-9, Dungla-9, Sagwara-8, Jhadol-8, Udaipur/D-Aero-8, Ajmer- 7, Tatgarh-7, Salumber-7, Nithuwa-7, Bari-Sadri-7, Loharia- 7, Dhariabad-7, Badesar-7</p>

Very Severe Cyclonic storm (VSCS) YAAS (23-27 May 2021)

Forecast Rainfall	Realised 24 hr cumulative heavy rainfall ending at 0830 IST of date
<ul style="list-style-type: none"> ❖ Heavy to very heavy rainfall over Andaman & Nicobar Islands on 23rd & 24th May. ❖ Heavy to extremely heavy rainfall activity at isolated places over coastal Odisha on 25th May and heavy to very heavy rainfall at a few places and extremely heavy rains at isolated places on 26th May over North Odisha. ❖ Heavy to very heavy rainfall activity at isolated places over Gangetic West Bengal on 26th May and heavy to extremely heavy rainfall over Sub- Himalayan West Bengal on 27th. ❖ Heavy to extremely heavy rainfall over Jharkhand on 26th and 27th, over Bihar and east UP on 27th and 28th May. 	<ul style="list-style-type: none"> ❖ Heavy to very heavy rainfall over Andaman & Nicobar Islands on 23rd & 24th May. Long Island-10, Maya Bandar-9, Port Blair-7 ❖ Heavy to extremely heavy rainfall at isolated places over coastal Odisha on 25th May and heavy to very heavy rainfall at a few places and extremely heavy rains at isolated places on 26th May over North Odisha. Andaman & Nicobar Islands: Hut Bay-11, Carnicobar- 8, ❖ Gangetic West Bengal: Contai-9 ❖ Heavy to very heavy rainfall at isolated places over Gangetic West Bengal on 26th May and heavy to extremely heavy rainfall over Sub-Himalayan West Bengal on 27th. ❖ 26 May 2021: Odisha: Chandbali-29, Rajkanika & Garadapur-25 each, Marsaghai & Kujanga-23 each, Nawana & Tirtol-21 each, Paradip -20, Pattamundai, Balikuda & Derabis-19 each, Astaranga-18, Bhadrak-17, Kendrapara, Dhamnagar & Soro-16 each, Jagatsinghpur-15, Tihidi, Bari & Alipingal-14 each, Jajpur, Nilgiri, Akhuapada & Basudevapur-13 each, Chandikhol & Bonth-12 each, Korei & Kakatpur-11 each, Danagadi-10, Jenapur, Nischintakoili & Bhograi-9 each, Niali & Anandpur & Kaptipada-8 each, Joshipur, Jaleswar, Salepur, Mahanga, Chandanpur, Rairangpur, NH5 Gobindpur, Balimundali, Betanati, Balasore & Jhumpura-7 each. Heavy to extremely heavy rainfall over Jharkhand on 26th and 27th, over Bihar and east UP on 27th and 28th May. (May see realised rainfall data)

4.1.1 Cyclonic storm (CS) GULAB (24-28 September 2021)

Date/ Base Time of observation	24 hr Heavy rainfall warning ending at 0300 UTC of next day	Realised 24-hour heavy rainfall ending at 0300 UTC
25.09.2021 /0300UTC	<ul style="list-style-type: none"> Heavy to very heavy falls at a few places & extremely heavy falls at isolated places very likely over south Odisha and north coastal Andhra Pradesh; heavy to very heavy falls at isolated places over Telangana and heavy falls at isolated places over north interior Odisha & Chhattisgarh 	<p><u>26.09.2021</u> Odisha: Khariar-7 Coastal Andhra Pradesh & Yanam: Avanigada-14, Bapatla-7 Telangana: Golkonda-10, Sangareddy-10, Domakonda-8, Chandur-8, TamilNadu, Puducherry and Karaikal: Marakkanam-13, Neyveli AWS-8, Kurinjipadi-7, Cuddalore-7, <u>27.09.2021</u> Coastal Andhra Pradesh & Yanam : Visakhapatnam, Gajapathinagaram and Nellimarla - 28 each, Visakhapatnam - 27, Mentada - 25, Pusapatirega - 24, Garividi, Denkada and Gantiyada - 19 each, Anakapalle and Salur - 18 each, Bondapalle 17, Cheepurupalle 16, Ranastalam and Therlam - 15 each, Chodavaram - 14, Vizianagaram, Vepada, Bheemunipatnam and Kalingapatnam 13 each, Bobbili, Araku Valley and Amalapuram - 12 each, Kakinada , Merakamudidam and Vijayawada - 11 each, Polavaram, Palakoderu, Chintalapudi and Koyyalagudem - 10 each, Chintapalle , Srungavarapukota, Palakonda, Tadepalligudem, Narsipatnam, Yanam, Bhimadole, Tanuku and Yelamanchili - 9 each, Palasa, Nuzvid, Seethanagaram and Parvathipuram - 8 each, Vararamachandrapur, Paderu, Balajipeta, Chintur, Eluru, Mandasa, Garugubilli, Tekkali, Kaikalur and Velairpad - 7 each.</p>
26.09.2021 /0300UTC	<ul style="list-style-type: none"> Heavy to very heavy & extremely heavy falls at isolated places very likely over south Chhattisgarh; heavy to very heavy falls at isolated places over Odisha, Telangana & Vidarbha and heavy rainfall at isolated places over coastal West Bengal & North Chattisgarh 	<p>Odisha: Pottangi - 15, Mahendragarh - 9, Mohana and Nandapur - 8, Lamataput , Semiliguda and R.Udayagiri - 7 each <u>28.09.2021</u> Odisha: Cuttack-13, Gajapati-8, Jajpur-7; Chhattisgarh: Dantewada-18;</p>
27.09.2021 /0300UTC	<ul style="list-style-type: none"> heavy to very heavy & extremely heavy falls at isolated places very likely over Konkan, Madhya Maharashtra and Gujarat region. 	<p>Odisha: Pottangi - 15, Mahendragarh - 9, Mohana and Nandapur - 8, Lamataput , Semiliguda and R.Udayagiri - 7 each <u>28.09.2021</u> Odisha: Cuttack-13, Gajapati-8, Jajpur-7; Chhattisgarh: Dantewada-18;</p>

<p>28.09.2021 /0300UTC</p>	<ul style="list-style-type: none"> heavy to very heavy & extremely heavy falls at isolated places very likely over south Gujarat, heavy to very heavy falls at isolated places over north Madhya Maharashtra and Konkan and heavy rainfall at isolated places over Marathwada 	<p>Coastal Andhra Pradesh & Yanam: Vishakhapatnam and West Godavari-13 each; Krishna and Vijaywada-8 each;</p> <p>Telangana: Jakranpalle 23, Navipet 21, Dhar Palle 21, Ranjal , Dich Palle & Armur 18 each, Nandipet, Chandurthi & Sirsilla 17 each, Jammikunta & Bheemgal 16 each, Yeda Palle, Makloor , Ellanthukunta, Jukkal, Sarangapurrl & Velpur 15 each, Nizamabad, Bodhan, Nirmal, Shriramsag pocha & Dilawarpur 14 each, Mudhole, Mogullapalle, Mallapur, Balkonda & Laxmanchanda 13 each, Srirampur, Nizam Sagar & Domakonda 12 each, Mortad, Venkatapur, Gundala, Elagaid, Tadwai Mlg & Peddapalle 11 each, Kusumanchi, Naga Reddipet, Konaraopeta, Kammar Palle, Metpalle, Madhira, Manthani, Machareddy & Bhiknur – 10 each, Sultanabad, Parkal, Kamareddy, Burgampadu, Pinapaka, Chegunta, Khanpur, Gambhiraopet, Thimmapur, Banswada, Madnur, Mulug, Boath, Ibrahimpatnam & Julapalle 9 each, Mustabad, Shadnagar, Choppadandi, Shayampet, Shamirpet, Papannapet, Karimnagar, Pitlam, Tupran, Govindaraopet, Dharmaram, Aswapuram & Dummugudem – 8 each and Yellareddypeta, Varni, Hakimpet, Kotgiri, Ramgundam, Bhupalpalle, Manuguru, Karimnagar, Venkatapuram, Manchal, Tekmal, Chigurumamidy, Lingampet, Birkoor, Bomraspeta, Ramayampet, Kothaguda, Bejjanki, Narayankhed, Tadwai, Kondurg, Bhadrachalam, Medak, Sadasivanagar – 7 each</p> <p>Marathwada: Nanded-15, Aurangabad-13, Beed-11; Osmanabad and Latur-10 each; Jalna 8, Hingoli and Parbhani-7 each;</p> <p>Vidarbha: Chandrapur-10; Buldana-9;</p> <p>Madhya Maharashtra: Jalgaon-11, Kolhapur-7;</p> <p>West Madhya Pradesh: Dewas-7;</p>
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Gujarat Region: Mehsana-9; Saurashtra & Kutch: Amreli-12, Gir Somnath-8. Jamnagar, Junagarh, Morbi and Porbandar-7 each

29.09.2021

Gujarat Region: Khanvel-37, Silvassa-22 & Umerpada-22 each, Palsana-19, Bharuch-18, Maktampur & Madhbun-17 each, Dang, Nanipalson & Garudeshwar-16, Kaprada, Dholera, Tilakwada & Dediapada-15 each, Khambhat & Nizer-14 each, Hansot, Narmadakvkaws & Dangkvkaws-13 each, Waghai-12, Rajpipala, Kukarmunda, Uchchhal & Dholka-11 each, Subir, Dhandhuka, Choryasi, Nandod, Ukai, Valsad & Naswadi-10 each, Vagra, Surat City, Gandevi, Valia, Ankleshwer, Vansda, Sagbara, Kamrej, Surat kvk AWS, Khergam, Surat AWS, Tarapur, Borsad & Pardi-9 each, Vadodara, Songadh, Daman FMO, Daman, Netrang & Jhagadia-8 each, Navasari AWS, Vapi, Dharampur, Sojitra, Mahuva, Nadiad, Bardoli, Karjan, Arnej AWS, Dabhoi, Umergam & Valod-7 each

Saurashtra & Kutch: Jamnagar kvk AWS-14, Targhadia-11, Lodhika, Gondal & Barvala-10 each, Rajkot, Kotdasangani & Botad-9 each, Chuda, Junagadh & Babra-8 each, Chotila, Jamkandorna, Vadia, Chotila ARG, Jetpur & Dhoraji-7 each

Madhya Maharashtra: Shahada-18, Harsul FMO-15, Akkalkuwa & Shrirampur-14 each, Peth-13, Surgana, Taloda & Jamner-12 each, Nandurbar, Igatpuri & Yeola-11 each, Ozharkheda FMO-10, Dhadgaon/Akrani-Hydro, Trimbakshwar & Lonavala Agri-9 each, Nandgaon & Girnadam FMO-8, Shirpur, Savlivahir Agri, Parola, Pachora & Bhadgaon-7 each

Marathwada: Khultabad-14, Vaijapur-11, Paithan-10, Gangapur-9, Kannad-7,

Cyclonic storm (CS) JAWAD (02nd – 5th December 2021)

<p>Date/Base Time of observation (UTC)</p>	<p>24 hr Heavy rainfall warning ending at 0830 hrs IST of next day</p>	<p>Realised 24-hour heavy rainfall ending at 0300 UTC of date</p>
<p>30/11/2021 0300 UTC</p>	<p>30th Nov.: Heavy to very heavy rainfall falls at isolated places very likely over Andaman & Nicobar Islands.</p> <p>1st Dec.: Heavy to very heavy rainfall at a few places & extremely heavy falls at isolated places very likely over Andaman & Nicobar Islands.</p> <p>2nd Dec.: Heavy rainfall at isolated places very likely over Andaman & Nicobar Islands.</p> <p>3rd Dec.: Heavy rainfall at isolated places very likely to commence over north coastal Andhra Pradesh and south coastal Odisha from evening / night.</p> <p>4th Dec.: Heavy to very heavy rainfall & extremely heavy falls at isolated places very likely over coastal Odisha and heavy to very heavy rainfall at isolated places over adjoining interior districts of Odisha, coastal districts of West Bengal and north coastal Andhra Pradesh.</p> <p>5th Dec.: Heavy to very heavy rainfall at isolated places likely over West Bengal and adjoining north coastal Odisha.</p> <p>It is likely that the north eastern states would also experience enhanced rainfall activity on 5th & 6th December, with isolated heavy to very heavy rainfall owing to the likely northeastward</p>	<p>5th December 2021:</p> <p>Odisha: Ganjam district: Chhattarpur-9, Purushottampur-8, Behrampur, Digapahandi, Gopalpur-6 each; Khurda district: Banpur-8; Jagatsinghpur district: Paradip CWR-6, Balikuda-5; Nayagarh district: Nayagarh-6; Puri district: Astaranga-5; Kendrapada district: Garadapur-5; Cuttack district: Kantapada-5; Jajpur district: Chandikhol-5</p> <p>6th December 2021:</p> <p>Odisha: Jagatsinghpur district: Erasama-23,</p>

	<p>movement of the remnant of the system during the same period.</p>	
<p>01/12/2021 0300 UTC</p>	<p>1st Dec.: Light to moderate rainfall at most places with heavy to very heavy rainfall at isolated places very likely over Andaman & Nicobar Islands.</p> <p>2nd Dec.: Light to moderate rainfall at most places with heavy rainfall at isolated places very likely over Andaman & Nicobar Islands.</p> <p>3rd Dec.: Light to moderate rainfall at many places with heavy rainfall at isolated places very likely to commence over north coastal Andhra Pradesh and south coastal Odisha from evening.</p> <p>4th Dec.: Light to moderate rainfall at most places with heavy to very heavy rainfall at a few places & extremely</p>	<p>Paradip-20, Balikuda- 15, Kujanga-14, Nuagaon-13, Tirtol-12,</p> <p>Raghunathpur-9, Jagatsinghpur-7; Kendrapara district:</p> <p>Marshaghai, Garadpur13 each, Rajnagar-12, Mohakalpara-10,</p> <p>Derabis-9, Kendrapara,</p>

	<p>heavy falls at isolated places very likely over north coastal Andhra Pradesh and coastal Odisha, heavy to very heavy rainfall at isolated places over adjoining interior districts of Odisha and heavy falls at isolated places over Gangetic west Bengal.</p> <p>5th Dec.: Light to moderate rainfall at most places with heavy to very heavy rainfall at isolated places likely over West Bengal and adjoining north coastal Odisha and heavy rainfall at isolated places over Assam & Meghalaya and Tripura.</p>	<p>Patamundai-8 each; Puri district: Kakatpur-12, Astaranga-11, Delang, Kanas-8 each, Nimapara-7; Cuttack district: Niali-10, Tangi-Choudwar-7.</p>
02/12/2021 0300 UTC	<p>2nd Dec.: Heavy rainfall at isolated places likely over Andaman & Nicobar Islands.</p> <p>3rd Dec.: Heavy to very heavy rainfall at isolated places over south coastal Odisha and heavy rainfall at isolated places over north coastal Andhra Pradesh.</p> <p>4th Dec.: Heavy to very heavy rainfall&extremely heavy falls at isolated places very likely over south Odisha and north coastal Andhra Pradesh and heavy to very heavy rainfall at isolated places over north coastal Andhra Pradesh, north & interior districts of Odisha and also over Gangetic west Bengal.</p> <p>5th Dec.: Heavy to very heavy rainfall at isolated places likely over West Bengal & Odisha and heavy rainfall at isolated places over Assam & Meghalaya and Tripura.</p> <p>6th Dec.: Heavy to very heavy rainfall at isolated places likely over Assam & Meghalaya, Mizoram and Tripura.</p>	<p>Gangetic West Bengal: Hooghly district: Tarakeshwar-18, Bagati- 13, Harink hola-8; Burdwan district: Burdwan 13, Manteswar-7; Nadia district: Kalyani -12; North 24 Parganas district: Barrackpur-12, Dum dum-10, Salt lake- 9; West Midnapore district: Moh anpur, Kharagpur-11 each, Midnapore, Kalaikunda - 9 each, Jhargram, Lalgah-7 each; Howrah district:</p>
03/12/2021 0300 UTC	<p>3rd Dec.:Heavy to very heavy rainfall at isolated places over north coastal Andhra Pradesh and south coastal Odisha.</p> <p>4th Dec.:Heavy to very heavy rainfall & extremely heavy falls at isolated places very likely over south coastal Odisha and north coastal Andhra Pradesh and heavy to very heavy rainfall at isolated places over north coastal Odisha & adjoining interior districts and also over coastal districts of Gangetic west Bengal.</p> <p>5th Dec.:Heavy to very heavy rainfall at isolated places likely over Gangetic West Bengal & north</p>	<p>each, Midnapore, Kalaikunda - 9 each, Jhargram, Lalgah-7 each; Howrah district:</p>

	<p>Odisha and heavy rainfall at isolated places over Assam & Meghalaya, Mizoram and Tripura.</p> <p>6th Dec.:Heavy to very heavy rainfall at isolated places likely over Assam & Meghalaya, Mizoram and Tripura and heavy rainfall at isolated places over west Bengal.</p>	<p>Uluberia -9; Kolkata district: Alipore- 7; South 24 Parganas district: Canning-7.</p>
04/12/2021 0300 UTC	<p>4th Dec.:Heavy to very heavy rainfall & extremely heavy falls at isolated places very likely over coastal Odisha;</p> <p>heavy to very heavy rainfall at isolated places over north Coastal Andhra Pradesh, interior Odisha and coastal</p>	

	<p>districts of Gangetic West Bengal.</p> <p>5th Dec.:Heavy to very heavy rainfall at isolated places likely over Gangetic West Bengal & north Odisha and heavy rainfall at isolated places over south Assam & Meghalaya, Mizoram and Tripura.</p> <p>6th Dec.:Heavy rainfall at isolated places likely over Assam & Meghalaya, Mizoram and Tripura.</p>	
05/12/2021 0300 UTC	<p>5th Dec.:Heavy to very heavy rainfall at isolated places likely over north coastal & adjoining areas of Odisha & Gangetic West Bengal. Heavy rainfall at isolated places is also likely over south coastal Odisha during next 12 hours.</p> <p>6th Dec.:Heavy to very heavy rainfall at isolated places likely over south Assam & Meghalaya, Mizoram and Tripura and heavy rainfall at isolated places over eastern districts of Gangetic West Bengal.</p>	

Super Cyclonic Storm “AMPHAN” over the Bay of Bengal (16-21 May-2020)

Date/Base Time of forecast (UTC)	24 hr Heavy rainfall warning ending at 0300 UTC of next day	Realised 24-hour heavy rainfall ending at 0300 UTC of date
16.05.2020/0300	<p>Andaman & Nicobar Islands</p> <p>Heavy falls at isolated places is very likely over Andaman & Nicobar Islands on 16th May.</p> <p>Odisha & Gangetic West Bengal</p> <p>Heavy falls at isolated places from 18th May evening, heavy to very heavy rainfalls at a few places on 19th May and isolated heavy rainfall over northeast Odisha on 20th May 2020. Coastal districts of Gangetic West Bengal are likely to experience heavy falls at a few places on 19th May, heavy to very heavy falls at a few places with extremely heavy falls at isolated places over Gangetic West Bengal on 20th May.</p>	<p>17 May 2020</p> <p>A & N Island: Nancowary-2 and IAF Carnicobar & Car</p> <p>Nicobar-1 each 18 May 2020</p> <p>A & N Island: Car Nicobar-5, IAF Carnicobar-4 and Nancowary-1, Odisha: Jhumpura-10 and Gurundia -8 19 May 2020 SHWB & Sikkim:</p>
17.05.2020/0300	<p>(i) Rainfall (over Andaman & Nicobar Islands):</p> <ul style="list-style-type: none"> •Light to moderate rainfall at most places is very likely over Andaman & Nicobar Islands during next 24 hours. •Rainfall (over Odisha & Gangetic West Bengal) heavy falls at isolated places from 18th May evening. Rainfall at most places with heavy to very heavy rainfall at a few places on 19th May and isolated heavy rainfall over north coastal Odisha on 20th May 2020. <p>Coastal districts of Gangetic West Bengal are likely to experience heavy falls at isolated places on 19th May.</p> <p>Heavy to very heavy falls at a few places & extremely heavy falls at isolated places likely over coastal districts of West Bengal on 20th May.</p>	<p>Mangan-7 20 May 2020</p> <p>Gangetic West Bengal: Contai-11, Digha-9, Odisha: Paradeep-21, Balikuda-18, Kakatpur & Kujanga-16 each, Astaranga & Alipingal-14 each, Niali-12, Raghunathpur, Puri, Marsaghai, Nilgiri, Kantapada & Garadapur-9 each, Gop,</p>

<p>18.05.2020/0300</p>	<p>Odisha Coastal Odisha is likely to experience heavy falls at isolated places over coastal Odisha (Gajapati, Ganjam, Puri, Jagatsinghpur & Kendrapara Districts) on 18th May, 2020. Heavy to very heavy rainfall at a few places over north coastal Odisha (Jagatsinghpur, Kendrapara, Jajpur, Balasore, Bhadrak & Mayurbhanj Districts) and isolated heavy falls over Khordha & Puri districts on 19th May and isolated heavy rainfall over north Odisha (Bhadrak, Balasore, Mayurbhanj, Jajpur, Kendrapara and Keonjhar Districts) on 20th May 2020.</p> <p>West Bengal Coastal districts of Gangetic West Bengal (East Medinipur, South & North 24 Parganas) are likely to experience heavy falls at isolated places on 19th May. Rainfall at most places with heavy to very heavy falls at a few places & extremely heavy falls at isolated places likely over Gangetic West Bengal (east & west Medinipur, south & north 24 Parganas, Howrah, Hoogli, Kolkata and adjoining districts) on 20th May and isolated heavy rain over interior districts on 21st May, 2020.</p> <p>Sub-Himalayan West Bengal and Sikkim Heavy to very heavy falls at a few places over Malda & Dinajpur districts on 20th May and over most of the districts of Sub-Himalayan West Bengal & Sikkim on 21st May, 2020.</p> <p>Assam & Meghalaya Heavy to very heavy falls at a few places over the western districts of Assam & Meghalaya on 21st May.</p>	<p>Chandanpur, Betanati, Rajkanika, Jagatsinghpur, Tirtol & Baripada-8 each and Binjharpur, Satyabadi, Nischintakoili, Chandbali, Bhograi, Jajpur, Dhamnagar, Soro, Tihidi, Bari & Basudevpur-7 each, 21 May 2020</p> <p>Assam & Meghalaya: Williamnagar-23, Mawsynram-15, Sohra (RKM)-13, Bhaghmara-11 and Sohra & Shillong-9 each SHWB & Sikkim: Sevoke-7, Gangetic West Bengal: Alipore-24, Dum Dum-20, Harinkhola & Debagram-13 each, Burdwan-10, Manteswar & Digha-9 each and Mohanpur, Kharagpur, Suri, Mangalkote, Bankura, Lalgah & Midnapore-7 each, Odisha: Bhograi-13, Rajghat & Jaleswar-12 each and Chandanpur & Bangiriposi-11 each, Paradeep, Samakhunta, Betanati & Baripada-9 each and Chandikhol, Joshipur & Danagadi-7 each, 22 May 2020</p>
<p>19.05.2020/0300</p>	<p>Odisha Coastal Odisha to experience heavy to very heavy rainfall at isolated places Jagatsinghpur, Kendrapara and Bhadrak Districts and isolated heavy falls over Jajpur, Balasore, Cuttack, Mayurbhanj, Khordha & Puri districts on 19th May and isolated heavy to very heavy rainfall at isolated places over north coastal Odisha</p>	<p>Chandanpur, Betanati, Rajkanika, Jagatsinghpur, Tirtol & Baripada-8 each and Binjharpur, Satyabadi, Nischintakoili, Chandbali, Bhograi, Jajpur, Dhamnagar, Soro, Tihidi, Bari & Basudevpur-7 each, 21 May 2020</p> <p>Assam & Meghalaya: Williamnagar-23, Mawsynram-15, Sohra (RKM)-13, Bhaghmara-11 and Sohra & Shillong-9 each SHWB & Sikkim: Sevoke-7, Gangetic West Bengal: Alipore-24, Dum Dum-20, Harinkhola & Debagram-13 each, Burdwan-10, Manteswar & Digha-9 each and Mohanpur, Kharagpur, Suri, Mangalkote, Bankura, Lalgah & Midnapore-7 each, Odisha: Bhograi-13, Rajghat & Jaleswar-12 each and Chandanpur & Bangiriposi-11 each, Paradeep, Samakhunta, Betanati & Baripada-9 each and Chandikhol, Joshipur & Danagadi-7 each, 22 May 2020</p>

	<p>(Jagatsinghpur, Bhadrak and Keonjhar Districts) on 20th May 2020.</p> <p>West Bengal Coastal districts of Gangetic West Bengal (East Medinipur, South & North 24 Parganas) are likely to experience light to moderate rainfall at many places commencing from today, the 19th May afternoon. Rainfall intensity is likely to increase gradually and become maximum on 20th May. Heavy to very heavy falls at a few places & extremely heavy falls at isolated places likely over Gangetic West Bengal (east & west Medinipur, south & north 24 Parganas, Howrah, Hoogli, Kolkata and adjoining districts) on 20th May and isolated heavy rain over interior districts on 21st May, 2020.</p> <p>Sub-Himalayan West Bengal and Sikkim Heavy to very heavy falls at a few places over Malda & Dinajpur districts on 20th May and over most of the districts of Sub-Himalayan West Bengal & Sikkim on 21st May, 2020.</p> <p>Assam & Meghalaya Heavy to very heavy falls at a few places over the western districts of Assam & Meghalaya on 21st May.</p>	<p>Arunachal Pradesh: Bhalukpong-12, Bomdila-10, Itanagar & Ziro-9 each, Roing-8, Pasighat Aero-7, Assam & Meghalaya: Sohra (RKM)-25, Mawsynram-22, Sohra-21, Khliehriat-15, Goalpara-12, Goalpara-11, Nongstein, Dhubri & Mela bazar -10 each, Goibargaon, N.Lakhimpur/Lilabari & Shillong-8 each and Tamulpur, Barapani, Williamnagar, DRF & Tezpur-7 each, Nagaland, Manipur, Mizoram & Tripura: Sabroom-13, SHWB & Sikkim: Buxaduar-8,</p>
<p>20.05.2020/ 0300</p>	<p>Odisha Heavy to very heavy rainfall very likely at isolated places over north coastal Odisha (Balasore, Bhadrak, Mayurbhanj, Jajpur, Kendrapara and Keonjhar Districts) and isolated heavy falls over Jagatsinghpur district on 20th May 2020.</p> <p>West Bengal Heavy to very heavy falls at a few places & extremely heavy falls at isolated places likely over Gangetic West Bengal (east & west Medinipur, south & north 24 Parganas, Howrah, Hoogli, Kolkata and adjoining districts) on 20th May and isolated heavy rain over interior districts on 21st May, 2020.</p> <p>Sub-Himalayan West Bengal and Sikkim Heavy to very heavy falls at a few places over Malda & Dinajpur districts on 20th May and over most of the districts of Sub-Himalayan West Bengal & Sikkim on 21st May, 2020.</p> <p>Assam & Meghalaya Heavy to very heavy falls at a few places over the western districts of Assam & Meghalaya on 21st May.</p>	

21.05.2020/ 0300	Assam & Meghalaya Heavy to very heavy & extremely heavy falls (≥20 cm) at isolated places very likely on 21st May, 2020. Arunachal Pradesh Heavy to very heavy falls at isolated places very likely on 21st May, 2020.	
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Severe Cyclonic Storm “NISARGA” over the east-central and adjoining southeast Arabian Sea (01st-04th June 2020)

Date/Base Time of observation	24 hr Heavy rainfall warning ending at 0300UTC of next day	Realised 24-hour heavy rainfall ending at 0300 UTC of date
01.06.2020/ 0300	<ul style="list-style-type: none"> ➤ Isolated heavy falls very likely over Lakshadweep area, north Kerala and coastal Karnataka on 1st June. Isolated heavy to very heavy falls over south Konkan & Goa on 1st June. Isolated heavy to very heavy falls very over Konkan & Goa on 02nd June and over south Konkan & Goa on 03rd June. ➤ Heavy to very heavy falls at a few places and extremely heavy falls at isolated places over north Konkan and north Madhya Maharashtra on 03rd & 04th June. ➤ Isolated heavy to very heavy falls very likely over south Gujarat state, Daman, Diu, Dadra & Nagar Haveli on 03rd June and with heavy to very heavy falls at a few places and extremely heavy falls at isolated places over south Gujarat state, Daman, Diu, Dadra & Nagar Haveli and on 04th June. 	<p>1 June 2020 Coastal Karnataka: Kota-10 and Kundapur-7 3 June 2020 Konkan & Goa: Mormugao & Panjim-13 each, Quepem & Malvan-11 each, Valpoi & Sanguem-9 each, Sawantwadi, Dodamarg, Canacona & Devgad-8 each and Kudal-7 Madhya Maharashtra: Khed Rajgurunagar-7 4 June 2020 Konkan & Goa: Pen-16, Poladpur-15, Mangaon-14, Lanja, Mandangad & Dapoli -13 each, Tala-12, Vaibhavwadi & Alibag-11 each, Chiplun-10, Roha, Rajapur & Harnai -9 each, Guhagarh & Khed-8 each and Shahapur, Murud, Sangameshwar Devrukh, Khalapur, Jawhar & Ulhasnagar-7 each</p>
02.06.2020/ 0300	<ul style="list-style-type: none"> ➤ Heavy to very heavy falls at isolated places over Konkan & Goa during next 24 hours. Isolated heavy falls over Coastal Karnataka, Madhya Maharashtra and Marathwada during next 24 hours. ➤ Heavy to very heavy falls at a few places and extremely heavy falls (≥ 20 cm in 24hours) at isolated places over north Konkan (Mumbai, Palghar, Thane, Raigad districts) and north Madhya Maharashtra 	<p>Madhya Maharashtra: Mahabaleshwar-19, Gaganbawada-15, Nashik-14, Sinnar, Bhusawal & Igatpuri-11 each, Akole, Devla, Satna Baglan & Chandgad-9each, Javali Medha, Patan & Khed Rajgurunagar-8 each and Girnadam, Malegaon Camp, Sakri, Kalvan, Dindori, Yaval, Shahuwadi, Surgana & Radhanagari-7each Vidarbha: Mangrulpir, Karanjalad,</p>

	<ul style="list-style-type: none"> ➤ Heavy to very heavy falls at isolated places over south Konkan (Ratnagiri & Sindhudurg districts) & Goa and south Gujarat region (Valsad, Navsari, Dang, Daman, Dadra & Nagar Haveli and Surat districts) ➤ Heavy falls at isolated places over west Madhya Pradesh on 03rd June. 	<p>Jalgaon Jamod & Washim-8 each and Manora & Malegaon-7 each</p>
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<p>03.06.2020/0300</p>	<ul style="list-style-type: none"> ➤ Heavy to very heavy falls at a few places and extremely heavy falls (≥ 20 cm in 24 hours) at isolated places very likely over north Konkan (Mumbai, Palghar, Thane, Raigad districts) and north Madhya Maharashtra during next 24 hours. ➤ Heavy to very heavy falls at isolated places over south Konkan (Ratnagiri & Sindhudurg districts) & Goa and south Gujarat region (Valsad, Navsari, Dang, Daman, Dadra & Nagar Haveli and Surat districts) during next 24 hours. ➤ Heavy falls at isolated places over west Madhya Pradesh and Vidarbha during next 24 hours. 	
<p>04.06.2020/0300</p>	<ul style="list-style-type: none"> ➤ Heavy to very heavy falls at isolated places very likely over east Madhya Pradesh and Chhattisgarh. ➤ Heavy falls at isolated places very likely over Vidarbha and west Madhya Pradesh during next 24 hours. 	

Very severe cyclonic storm “NIVAR” over the Bay of Bengal (22-27 November-2020)

Date/Base Time of observation	24 hr Heavy rainfall warning ending at 0300 UTC of next day	Realised 24-hour heavy rainfall ending at 0300 UTC of date
23.11.2020/0300UTC	Fairly widespread to widespread rainfall/thunderstorm activity very likely over Tamilnadu, Puducherry & Karaikal during 24 th to 26 th November and over south Coastal Andhra Pradesh,Rayalaseema during 25 th to 26 th and Telangana during 26 th to 27 th November, 2020. Isolated extremely heavy rainfall activity also very likely over Tamilnadu & Puducherry (Pudukottai, Thanjavur, Tiruvarur, Karaikal, Nagapattinam, Cuddalore, Ariyalur & Perabalu districts during 24 th and Kadalur, Kallakurchi, Puducherry, Villupuram, Tiruvannamalai, Chengalpattu to Ariyalur, Perambalur and Karaikal districts during 25 th) and over south Coastal Andhra Pradesh & Rayalaseema (Nellore and Chittoor districts) on 25 th & 26 th and over Telangana on 26 th November, 2020.	<p>24 November 2020</p> <p>Tamilnadu, Puducherry & Karaikal: Tambaram-9, Mgr Nagar, Chennai-8 each, Chennai, Alandur-7 each.</p> <p>25 November 2020</p> <p>Tamilnadu, Puducherry & Karaikal: Chennai (N)-16, Anna University, Chennai, Sholinganallur-15 each, Taramani, Anna University, dgp Office, Mgr Nagar-14 each, Mahabalipuram, Alandur, Hindusthan University, Puzhal, Chembarambakkam-12 each, Tambaram, Ambathur-11 each, Perambur, Chembarabakkam, Red Hills, Kolapakkam, Poonamallee-10 each, Ennore, Thirupporur, Cholavaram-9 each, Maduranthagam, Kelambakkam-8 each, Sriperumbudur-7.</p> <p>26 November 2020</p>
24.11.2020/0300	Fairly widespread to widespread rainfall/thunderstorm activity very likely over coastal and north interior Tamilnadu, Puducherry & Karaikal during 24 th to 26 th November and over south coastal Andhra Pradesh, Rayalaseema during 25 th to 26 th and southeast Telangana	<p>Andhra Pradesh: Kodur-25, Venkatagiri-24, Gudur-19, Rapur-16, Atmakur, Sullurpeta-15 each, Nellore, Kavali, Satyavedu, Sambepalle-14 each, Nagari, Rajampet, Tirupati-13 each, Thottambedu,</p>

	<p>during 26 th November, 2020. Isolated extremely heavy rainfall activity also very likely over coastal & north interior Tamilnadu & Puducherry (Pudukottai, Thanjavur, Tiruvarur, Karaikal, Nagapattinam, Cuddalore, Ariyalur & Perabalu districts during 24 th and Kadalur, Kallakurchi, Puducherry, Villupuram, Tiruvannamalai, Chengalpattuto Ariyalur, Perambalur and Karaikal districts during 25 th) and over Nellore and Chittoor districts of Andhra Pradesh on 25 th and over Rayalseema & southeast Telangana on 26 th November, 2020.</p>	<p>Puttur-12 each, Palamaner, Srikalahasti, Tada-11 each, Penagaluru, Kalakada-10 each, Palasamudram, Royachoti, Amalapuram-9 each, Vinjamur, Udayagiri, Pullampeta, Pakala-8 each, Chittoor, Chinnamandem, Cuddapah, Madanapalle-7 each.</p> <p>27 November 2020</p> <p>Andhra Pradesh: Kavali-27, Nambulipulikunta-25, Gurrakonda-21, Sambepalle-20, Royachoti, Madanapalle, Chinnamandem, Kalakada-18 each, Punganur, Udayagiri, Vinjamur-17 each, Atmakur, Pullampeta, Thambalapalle, Palamaner-16 each, Chapad, Chittoor, Proddutur, Arogyavaram, Avanigada, Ongole, Amalapuram-15 each, Yanam, Marripudi, Podili, Veligandla, Kandukur, Utukuru(A), Vempalle, Kamalapuram-14 each, Atlur-13, Kakinada, Palakoderu, Cuddapah -12 each, Bheemavaram, Bapatla, Vijayawada Airport, Gudivada, Narsapuram, Chimakurthi, Duvvur-11, Raju Palem, Pakala, Palasamudram-11 each, Vallur, Kodur, Rajampet, Karamchedu, Repalle, Seetharamapuram, Tanuku-10 each, Mundlamuru,</p>
<p>25.11.2020/0300</p>	<p>Fairly widespread to widespread rainfall/thunderstorm activity very likely over coastal and north interior Tamilnadu, Puducherry & Karaikal, south coastal Andhra Pradesh and Rayalaseema during 25th and 26th November and southeast Telangana on 26th November, 2020. Isolated extremely heavy rainfall activity also very likely over coastal & north interior Tamilnadu; Puducherry (Thanjavur, Tiruvarur, Nagapattinam, Cuddalore, Chennai, Kanchipuram, Chengalpattu, Myladuthirai, Ariyalur, Perambalur, Kallakurchi, Villupuram, Tiruvannamalai, Puducherry and Karaikal districts) during 25th ; over Nellore and Chittoor districts of Andhra Pradesh on 25th and over Rayalaseema & southeast Telangana on 26th</p>	

	November, 2020.	Addanki, Mangalagiri, Tadepalligudem, Masulipatnam, Peddapuram, Kaikalur, Jammalamadugu, Badvel, Porumamilla, Puttur-9 each, Pulivendla, Muddanur, Lakkireddipalle, Konakanamitla, Cumbum, Bestavaripeta, Markapur, Nellore, Darsi-8 each, Vijayawada, Tuni, Anakapalle, Rapur, Santhamaguluru, Guntur, Bhimadole, Racherla, Prathipadu, Visakhapatnam, Eluru, Penagaluru, Kadiri, Tanakal, Venkatagiri Kota-7 each.
26.11.2020/03 00	Rainfall at most/many places with heavy to very heavy falls at a few places and isolated extremely heavy falls likely to occur over Chittoor, Kurnool, Prakasam; Cuddappa districts of Andhra Pradesh and adjoining southeast Telangana on 26th Nov. Heavy to very heavy rainfall at isolated places are very likely over north Tamilnadu, remaining districts of Andhra Pradesh and southeast Telangana.	
27.11.2020/00 00 UTC	Light to moderate rainfall at many places with heavy falls at isolated places is likely over coastal Andhra Pradesh during next 24 hours.	Tamilnadu, Puducherry & Karaikal: Sholingur-23, Vadapudupattu-16, Vellore, Ponnai Dam, Ammundi-14 each, Ambur, R.K.Pet-13 each, Alangayam, Katpadi-12 each, Vaniyambadi, Tirupuvanam, Kaveripakkam-9 each, Wallajah, Gudiyatham, Virinjipuram-8 each, Devakottai, Vembakkam, Melalathur-7 each.

4.3.2 Cyclonic Storm “BUREVI” over the Bay of Bengal (30th November - 05th December 2020)

Date/Base Time of observation	24 hr Heavy rainfall warning ending at 0300 UTC of next day	Realised 24-hour heavy rainfall ending at 0300 UTC of date
30.11.2020/0300 UTC	<ul style="list-style-type: none"> • Heavy to very heavy rainfall at a few places with isolated Extremely heavy falls very likely over south Tamilnadu(Kanniyakumari, Tirunelveli, Thoothukudi, Tenkasi, Ramanathapuram and Sivagangai; south Kerala(Thiruvananthapuram, Kollam, Pathanamthitta and Alappuzha) on 2nd and 3rd December, 2020 and Isolated heavy to very heavy rainfall likely over these regions on 1st and 4th December 2020. • Heavy to very heavy rainfall at isolated places very likely over north Tamilnadu, Puducherry, Mahe & Karaikal and north Kerala during 2nd and 3rd December, 2020 and isolated heavy rainfall during 1st and 4th December. • Heavy rainfall at isolated places very likely over south Coastal Andhra Pradesh during 2nd & 3rd December and over Lakshadweep during 3rd and 4th December, 2020. 	<p>2nd December: Vedaranyam (dist Nagapattinam) - 20, Karaikal (dist Karaikal)- 16, Thalaignayer (dist Nagapattinam) & Tirupoondi (dist Nagapattinam) -15 each, Nagapattinam (dist Nagapattinam)- 14, Thiruthurai poondi (dist Tiruvarur) -13, Mayiladuthurai (dist Nagapattinam) , Rameswaram (dist Ramanathapuram)- 12 each, Mudukulatur (dist Ramanathapuram) - 11, Sirkali (dist Nagapattinam), Kodavasal (dist Tiruvarur) , Adirampatnam (dist Thanjavur) , Manjalaru (dist Thanjavur) - 10 each, Tiruvarur (dist Tiruvarur) , Aduthurai (dist Thanjavur) , Tambaram (dist Chengalpattu) , Pattukottai (dist Thanjavur) - 9 each, Nannilam (dist Tiruvarur), Marakkanam (dist Villupuram), Pamban (dist Ramanathapuram), Thiruidaimaruthur (dist Thanjavur), Thirukalukundram (dist Chengalpattu), Puducherry (dist Puducherry), Valangaiman (dist Tiruvarur) -8 each, Manalmedu (dist Nagapattinam), Kollidam (dist</p>

01.12.2020/0300	<ul style="list-style-type: none"> • Heavy to very heavy rainfall at a few places with isolated Extremely heavy falls very likely over south Tamilnadu (Kanniyakumari, Tirunelveli, Thoothukudi, Tenkasi, Ramanathapuram and Sivagangai) on 2nd and 3rd December, 2020; over south Kerala (Thiruvananthapuram, Kollam, Pathanamthitta and Alappuzah) on 3rd December and isolated heavy to very 	<p>Nagapattinam), Kelambakkam (dist Chengalpattu), K.M.koil (dist Cuddalore), Vanur (dist Villupuram), Mannargudi (dist Tiruvarur), Taramani (dist Chennai), Madukkur (dist Thanjavur), Parangipettai (dist Cuddalore), Ayyampettai (dist Thanjavur), Thanjai Papanasam (dist Thanjavur), Cuddalore (dist Cuddalore), Needamangalam (dist Tiruvarur) -7 each</p> <p>3rd December:</p> <p>Kollidam (dist Nagapattinam) -</p>
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	<p>heavy rainfall likely over south Tamilnadu on 2 nd & 4 th December 2020 and south Kerala on 3 rd & 4 th December, 2020.</p> <ul style="list-style-type: none"> • Heavy to very heavy rainfall at Isolated places very likely over north Tamilnadu, Puducherry, Mahe & Kariakal and north Kerala during 2nd & 3rd December, isolated heavy rainfall on 4th December and isolated heavy rainfall over coastal Tamilnadu on 1st December. • Heavy rainfall at isolated places very likely over south Coastal Andhra Pradesh during 2nd & 03rd December and over Lakshadweep during 03rd and 4th December, 2020. 	<p>36, Chidambaram (dist Cuddalore) - 34, Parangipettai (dist Cuddalore) - 26, Manalmedu (dist Nagapattinam), Kurinjipadi (dist Cuddalore) - 25 each, Thiruthuraiipoondi (dist Tiruvarur) - 22, Sirkali (dist Nagapattinam) , Kodavasal (dist Tiruvarur) - 21 each, Rameswaram (dist Ramanathapuram) -20, Peravurani (dist Thanjavur), Manjalaru (dist Thanjavur), Bhuvanagiri (dist Cuddalore), Mayiladuthurai (dist Nagapattinam)- 19 each, Karambakudi (dist Pudukkottai), Pattukottai (dist Thanjavur)-17 each, Madukkur (dist Thanjavur)-16, Srimushnam (dist Cuddalore)-15, Tindivanam (dist Villupuram), Nannilam (dist Tiruvarur), Thiruidaimaruthur (dist Thanjavur)-14 each, Kumbakonam (dist Thanjavur), Ayyampettai (dist</p>
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<p>02.12.2020/0300</p>	<ul style="list-style-type: none"> • Heavy to very heavy rainfall at a few places with isolated extremely heavy falls very likely over south Tamilnadu (Ramanathapuram, Thoothukudi, Tirunelveli, Kanniyakumari, Tenkasi and Sivagangai districts) on 2nd & 3rd December, 2020; over south Kerala (Thiruvananthapuram, Kollam, Pathanamthitta and Alappuzha) on 3rd December and isolated heavy to very heavy rainfall likely over south Tamilnadu on 4th December 2020 and south Kerala on 2nd & 4th December, 2020. • Heavy to very heavy rainfall at isolated places very likely over north Tamilnadu, Puducherry, Mahe & Karaikal and north Kerala on 3rd December, isolated heavy rainfall on 2nd & 4th December. 	<p>Thanjavur), Valangaiman (dist Tiruvarur), Panruti (dist Cuddalore), Ulundurpet (dist Villupuram)-13 each, Aduthurai (dist Thanjavur), Alangudi (dist Pudukkottai), Pandavaiyar Head (dist Tiruvarur) 12 each, Tiruvarur (dist Tiruvarur), Budalur (dist Thanjavur), Mahabalipuram (dist Chengalpattu), Mannargudi (dist Tiruvarur)-11 each, Vallam (dist Thanjavur), Perambalur (dist Perambalur), Thanjavur (dist Thanjavur), Thirumanur (dist Ariyalur), Needamangalam (dist Tiruvarur)-10 each, Sendurai (dist Ariyalur), Tirukattupalli (dist Thanjavur), Vilupuram (dist Villupuram), Mylam Awas (dist Villupuram), Cholavaram (dist Tiruvallur), Vanur (dist Villupuram), Gandarvakottai (dist Pudukkottai), Marakkanam (dist Villupuram), Chengalpattu (dist Chengalpattu), Gingee (dist Villupuram) - 9 each, Keeranur (dist Pudukkottai), Thalaigaiyur (dist Nagapattinam), Agaram Seegoor (dist Perambalur)</p>
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	<ul style="list-style-type: none"> • Heavy rainfall at isolated places very likely over south Coastal Andhra Pradesh and Lakshadweep on 3 rd & 04 th December. 	<p>, Eraiyur (dist Perambalur) , Gummidipoondi (dist Tiruvallur) , Adirampatnam (dist Thanjavur) , Manamelkudi (dist Pudukkottai) , Pullambadi (dist Trichy) , Annavasal (dist Pudukkottai) , Samayapuram (dist Trichy) , Pamban (dist Ramanathapuram) , Perungalur (dist Pudukkottai) , Tarangambadi (dist Nagapattinam) - 8 each , Labbaikudikadu (dist Perambalur) , Tozhudur (dist Cuddalore) , Tirukoilur (dist Villupuram) , Thuvakudi Imti (dist Trichy) , Uthukottai (dist Tiruvallur) , Ariyalur (dist Ariyalur) , Anna UTY (dist Chennai) , Uthiramerur (dist Chengalpattu) , Tirupoondi (dist Nagapattinam) , Tirumayam (dist Pudukkottai) , Tondi (dist Ramanathapuram) , TRP Town (dist Trichy) - 7 each</p>
03.12.2020/0300	<ul style="list-style-type: none"> • Heavy to very heavy rainfall at a few places with isolated Extremely heavy falls very likely over south Tamilnadu (Ramanathapuram, Thoothukudi, Tirunelveli, Kanniyakumari, Tenkasi, Virudhunagar, Theni, Madurai and Sivagangai districts) and over south Kerala (Thiruvananthapuram, Kollam, Pathanamthitta, Idukki and Alappuzha) on 3rd December and isolated heavy to very heavy rainfall likely over south Tamilnadu and south Kerala on 4th December, 2020. □ Heavy to very heavy rainfall at isolated places very likely over north Tamilnadu, Puducherry, Mahe & Karaikal and north Kerala on 3 rd December, isolated heavy rainfall on 4 th December. • Heavy rainfall at isolated places very likely over south Coastal Andhra Pradesh and Lakshadweep on 3rd & 04th December. 	<p>4th December: Nagapattinam (Nagapattinam) and Karaikal (Karaikal)-16 each, Kodavasal (Tiruvarur) and Bhuvanagiri (Cuddalore)- 15 each, Sethiyathope (Cuddalore)-14, Tarangambadi (Nagapattinam)-13, Sirkali (Nagapattinam), DGP Office (Chennai), Vembakkam (Tiruvannamalai) and</p>

<p>04.12.2020/0000 UTC</p>	<ul style="list-style-type: none"> • Heavy to very heavy rainfall at isolated places with extremely heavy falls at isolated places very likely over Tamilnadu, Puducherry and Karaikal today, the 4th December and heavy to very heavy rainfall at isolated places on 05th December. • Heavy to very heavy rainfall at isolated places very likely over Kerala & Mahe on 04th & 05th December. India Meteorological Department (Ministry of Earth 	<p>Srimushnam(Cuddalore)- 12 each, Rameswaram (Ramanathapuram), Anna University (Chennai), Tirupoondi (Nagapattinam) and Kayalpattinam (Toothukudi)-11 each, Sriperumbudur(Kancheepuram), Kollidam (Nagapattinam), Mgr Nagar (Chennai) and Pelandurai (Cuddalore)-10 each, Uthukottai (Tiruvallur), Chembarambakkam (Tiruvallur), Tuticorin (Toothukudi), Thalaigaiy (Nagapattinam)-9each</p> <p>5th December: Muthupet (dist Tiruvarur)-</p>
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	<p>Sciences) Spatial rainfall distribution: Isolated: $\leq 25\%$, A few: 26-50%, Many: 51-75%, Most: 76-100% Rainfall amount(mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.</p> <ul style="list-style-type: none"> • Heavy rainfall at isolated places very likely over south coastal Andhra Pradesh on 04th & 05th December and over Lakshadweep on 05th December. 	<p>10, Mahabalipuram (dist Chengalpattu)-7 each, Kodavasal(dist Tiruvarur), Nannilam (dist Tiruvarur) & Thalaignayer (dist Nagapattinam)-6 each and Thiruthuraipoondi (dist Tiruvarur), Cheyyur (dist Chengalpattu), Kollidam (dist Nagapattinam), Cholavaram (dist Tiruvallur), Tirupoondi (dist Nagapattinam) and Chidambaram (dist Cuddalore) 5 each.</p> <p>6th December:</p>
<p>05.12.2020/0000 UTC</p>	<ul style="list-style-type: none"> • Heavy to very heavy rainfall at isolated places very likely over Tamilnadu & Puducherry on 05th & 06th December. • Heavy rainfall at isolated places over south Kerala & Mahe on 05th and heavy to very heavy rainfall at isolated places very likely over Kerala on 06th December. • Heavy to very heavy rainfall at isolated places very likely over Lakshadweep on 05th & 06th December. 	<p>Maniyachi (dist Toothukudi) - 16, Vaippar (dist Toothukudi) -12, Kadambur (dist Toothukudi) - 11, Kayathar (dist Toothukudi), Sirkali (dist Nagapattinam), Karaikal (dist Karaikal), Chittar (dist Kanyakumari) - 9 each, Thalaignayer (dist Nagapattinam), Mayiladuthurai (dist Nagapattinam), Valinokam (dist Ramanathapuram), Needamangalam (dist Tiruvarur) -8 each, Kodavasal (dist Tiruvarur), Manalmedu (dist Nagapattinam), Palayamkottai (dist Tirunelveli), Vilathikulam (dist Toothukudi) - 7 each</p>

Cyclonic Storm “PABUK” over Andaman Sea (04-08 January-2019)

Date/Base Time of observation (0300 UTC)	24 hr Heavy rainfall warning ending at 0300 UTC of next day	Realised 24-hour heavy rainfall ending at 0300 UTC of date
03/01/2019	Heavy falls at isolated places likely to commence over Andaman Islands from 5 th January evening. Intensity is very likely to increase and heavy to very heavy rainfall at a few places on 6 th and at isolated places on 7 th over Andaman Islands	7th January Hut Bay-10 and Maya Bandar& Port Blair-7 each.
04/01/2019	-do-	
05/01/2019	-do-	
06/01/2019	Heavy to very heavy rainfall at a few places on today, the 6 th January, 2019 and at heavy rainfall isolated places on 7 th over Andaman Islands.	
07/01/2019 0300 UTC	Heavy rainfall at isolated places over Andaman Islands during next 24 hours.	

Extremely severe cyclonic storm FANI over the Bay of Bengal (26 April-04 May-2019)

Very severe cyclonic storm VAYU over the Arabian Sea (10-17 June-2019)

Very Severe Cyclonic Storm “Titli” over Eastcentral Bay of Bengal (08-13 October 2018)

Date/Base Time of observation (UTC)	24 hr Heavy rainfall warning ending at 0830 hrs IST of next day	Realised 24-hour heavy rainfall ending at 0300 UTC of date
08/10/2018 0300 UTC	<p>For 9th October: Heavy rainfall (H) at isolated places over south coastal Odisha.</p> <p>For 10th October Heavy to very heavy rainfall (H-VH) at a few places and extremely heavy falls (Ex. H) at isolated places over coastal Odisha, heavy falls at isolated places over north coastal Andhra Pradesh (CAP) and H-VH falls at isolated places over Gangetic West Bengal (GWB).</p> <p>For 11th October H-VH at a few places and Ex.H falls at isolated places over coastal & adjoining interior Odisha, H at isolated places over north CAP and H-VH at isolated places over GWB.</p> <p>For 12th October: H at isolated places over north coastal Odisha</p>	<p>10th October Moderate rainfall occurred at a few places over coastal Odisha</p> <p>11th October Odisha:- Heavy to very heavy rainfall at a few places over coastal Odisha and extremely heavy rainfall at isolated places over south coastal Odisha</p> <p>Gangetic West Bengal:- Isolated</p>

<p>09/10/2018 0300 UTC</p>	<p>For 9th October: H at isolated places over south coastal Odisha and north CAP from evening/night and H at isolated places over Mizoram & Tripura.</p> <p>For 10th October H-VH at a few places and Ex.H falls at isolated places over coastal Odisha, H at isolated places over north coastal Andhra Pradesh (CAP), H-VH at isolated places over Gangetic West Bengal (GWB) and H at isolated places over Mizoram & Tripura..</p> <p>For 11th October H-VH at a few places and Ex.H falls at isolated places over coastal & adjoining interior Odisha, H at isolated places over north CAP and H-VH at isolated places over GWB, H at isolated places over Assam & Meghalaya and H-VH falls at isolated places over Mizoram & Tripura.</p> <p>For 12th October: H at isolated places over north coastal Odisha, H-VH at isolated places over GWB, Assam & Meghalaya and Mizoram & Tripura.</p>	<p>heavy to very heavy rainfall over coastal districts</p> <p>Coastal Andhra Pradesh: Heavy to extremely heavy rainfall at a few places over Srikakulam district.</p> <p>12th October</p> <p>Coastal Andhra Pradesh: Heavy to extremely heavy rainfall at a few places over Srikakulam district.</p>
<p>10/10/2018 0300 UTC</p>	<p>For 10th October H-VH at a few places and Ex.H at isolated places over coastal Odisha and isolated H over interior Odisha, H- VH falls at isolated places over north CAP & GWB.</p> <p>For 11th October H-VH at a few places and extremely heavy falls at isolated places over coastal Odisha and isolated H over interior Odisha, H-VH at isolated places over north CAP & GWB, H-VH at isolated places over Mizoram & Tripura.</p> <p>For 12th October: H falls at isolated places over north coastal Odisha, H- VH falls at isolated places over GWB, Assam & Meghalaya and Mizoram & Tripura.</p> <p>For 13th October: H at isolated places over Assam & Meghalaya and Mizoram & Tripura.</p>	<p>Odisha: Heavy to very heavy rainfall at a few places and extremely heavy rainfall at isolated places over south and north coastal Odisha</p> <p>Gangetic West Bengal: Heavy rainfall at isolated places over coastal</p>

<p>11/10/2018 0300 UTC</p>	<p>For 11th October H-VH at a few places and Ex.H at isolated places over south Odisha, H-VH at isolated places over north CAP & GWB, Assam & Meghalaya and Mizoram & Tripura. For 12th October: H-VH at isolated places over Odisha, heavy to very heavy falls at a few places over GWB, H-VH and Ex.H falls at isolated places over Assam & Meghalaya and</p> <p>H-VH falls at isolated places over Mizoram & Tripura. For 13th October: H falls at isolated places over GWB, H-VH and Ex.H at isolated places over Assam & Meghalaya and H-VH at isolated places Mizoram & Tripura.</p>	<p>districts Assam, Meghalaya, Mizoram and Tripura: Moderate rainfall upto 5 cm at many places</p> <p>13th October Assam</p> <p>& Meghalaya: Heavy rainfall at isolated places</p> <p>Nagaland, Manipur, Mizoram & Tripura: Heavy rainfall at isolated places</p> <p>Gangetic West Bengal: Heavy to very heavy rainfall at isolated places over coastal West Bengal</p> <p>Odisha:- Heavy to very heavy rainfall at isolated places over north Odisha.</p>
<p>12/10/2018 0300 UTC</p>	<p>For 12th October: H-VH and Ex.H at isolated places over north Odisha, H-VH at isolated places over GWB, Assam & Meghalaya and Mizoram, Tripura & Manipur For 13th October: H-VH at isolated places over GWB, Assam & Meghalaya and Mizoram, Tripura & Manipur</p>	<p>14th October Assam</p> <p>& Meghalaya: Heavy rainfall at isolated places over Meghalaya</p>
<p>13/10/2018 0300 UTC</p>	<p>H at isolated places very likely over south Assam, east Meghalaya, Mizoram, Tripura and Manipur during next 24 hours</p>	<p>14th October Assam</p> <p>& Meghalaya: Heavy rainfall at isolated places over Meghalaya</p>

Very Severe Cyclonic Storm “Gaja” over southeast Bay of Bengal (10-19 November 2018)

Date/Base Time of observation (UTC)	24 hr Heavy rainfall warning ending at 0830 hrs IST of next day	Realised 24-hour heavy rainfall ending at 0300 UTC of date
10/11/2018 0300 UTC	<ul style="list-style-type: none"> • Heavy falls at isolated places very likely to commence over coastal Tamil Nadu and adjoining south coastal Andhra Pradesh from 14th November. • Heavy to very heavy rainfall at isolated places is very likely over Andaman and Nicobar Islands on 10th and isolated heavy rainfall over Andaman Islands on 11th November 2018. 	<p>10 November 2018 Andaman & Nicobar Islands: Long Island-14, Maya Bandar-10, Port Blair-9 11 November 2018 Andaman & Nicobar Islands: Maya</p>
11/11/2018 0300 UTC	<ul style="list-style-type: none"> • Heavy falls at isolated places very likely to commence over north coastal Tamil Nadu and adjoining south coastal Andhra Pradesh from evening of 14th November. Rainfall intensity is very likely to increase gradually thereafter with rainfall at most places and heavy to very heavy at a few places and extremely heavy falls (≥ 20 cm) at isolated places very likely over north Tamil Nadu and at most places with heavy to very heavy falls at isolated places very likely over south Tamil Nadu, south Coastal Andhra Pradesh and Rayalaseema on 15th November. • Heavy rainfall at isolated places likely over Andaman Islands on 11th November 2018 and decrease thereafter. 	<p>Bandar-7, 16 November: Tamilnadu & Puducherry: Thiruthuraipoondi & Muthupet-17 each, Adirampatnam-16, Peravurani, Pattukottai & Neyveli-14 each, Virudachalam-12, Chengalpattu-11, Cuddalore-9, Madukkur, Arantangi & Vandavasi-8 each, and Srimushnam, Valinokkam,</p>

<p>12/11/2018 0300 UTC</p>	<p><u>Tamilnadu</u> 14 November 2018 Heavy falls at isolated places very likely to commence over north coastal Tamil Nadu from 14th November evening 15 November 2018 Heavy to very heavy at a few places and extremely heavy falls (≥ 20 cm) at isolated places very likely over north Tamil Nadu and rainfall at most places with heavy to very heavy falls at isolated places very likely over south Tamil Nadu. 16 November 2018 Heavy falls at a few places and very heavy at</p>	<p>Nagercoil, Uthiramerur, Orthanad, Needamangalam, Thuckalay, Sethiathope, Pondicherry & Tozhudur-7 each</p>
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	<p>isolated places very likely over interior Tamil Nadu. <u>South Coastal Andhra Pradesh</u> 14 November 2018 Heavy falls at isolated places very likely to commence from 14th November evening. 15 November 2018 Heavy falls at isolated places 16 November 2018 Heavy falls at isolated places. <u>Rayalaseema</u> 15 November 2018 Heavy falls at isolated places <u>Kerala</u> 15 November 2018 Heavy at isolated places 16 November 2018 Heavy to very heavy falls at isolated places</p>	<p>17 November: Coastal Andhra Pradesh: Kandukur and Gudivada-7 each, Telangana: Aswaraopeta-7, Tamilnadu & Puducherry: Sivaganga-17, Kodaikanal-14, Thammampatty-10, Nilakottai, Illuppur, Periyakulam & Bodinaickanur-9 each, Tirupathur-8 and Chinnakalar, Vadipatti-7 each Kerala: Kozha-28, Piravam-19, Thodupuzha-15,</p>
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13/11/2018 0300 UTC	<p><u>Tamilnadu</u> 14 November 2018 Heavy falls at isolated places very likely to commence over north coastal Tamil Nadu & adjoining districts of south coastal Tamil Nadu from 14th Nov. evening 15 November 2018 Heavy to very heavy at a few places over Tamilnadu. Extremely heavy falls (≥ 20 cm) at isolated places is also likely over Cuddalore, Nagappattinam, Tiruvarur, Thanjavur, Pudukkottai, Tuticorin and Ramanathapuram districts. 16 November 2018 Heavy falls at a few places and very heavy at isolated places very likely over interior Tamil Nadu. <u>South Coastal Andhra Pradesh</u> 14 November 2018 Heavy falls at isolated places very likely to commence from 14th November evening. 15 November 2018 Heavy falls at isolated places <u>Rayalaseema</u> 15 November 2018 Heavy falls at isolated places <u>Kerala</u> 15 November 2018 Heavy to very heavy falls at isolated places 16 November 2018 Heavy to very heavy falls at isolated places.</p>	Cherthala & Munnar Kseb-12 each, Kumarakam-11, Idukki-10, Vaikom, & Myladumpara-9 each, Kottayam-8, Peermade To-7.
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14/11/2018
0300 UTC

15 November
2018

Tamilnadu &
Puducherry

Heavy to very heavy at a few places over Tamilnadu & Puducherry. **Extremely heavy falls** (≥ 20 cm) at isolated places is also likely over Cuddalore, Nagappattinam, Tiruvarur, Thanjavur, Pudukkottai, Tuticorin and Ramanathapuram districts.

South Coastal

Andhra Pradesh

Heavy falls at isolated places

Rayalaseema

Heavy falls at isolated places

Kerala

Heavy falls at isolated places

16 November
2018

Tamilnadu &
Puducherry

Heavy falls at a few places and very heavy at isolated places very likely over interior Tamil Nadu.

South Coastal

Andhra Pradesh

Heavy falls at isolated places

Kerala

Heavy to very heavy falls at isolated places

<p>15/11/2018 0300 UTC</p>	<p><u>15 November</u> <u>2018</u> Tamilnadu & Puducherry Heavy to very heavy at a few places over Tamilnadu & Puducherry. Extremely heavy falls (≥ 20 cm) at isolated places is also likely over Cuddalore, Nagappattinam, Karaikal, Tiruvarur, Thanjavur, Pudukkottai, Tuticorin and Ramanathapuram districts. South Coastal Andhra Pradesh Heavy falls at isolated places in Nellore and Prakasam districts. Rayalaseema Heavy falls at isolated places Chittoor district Kerala Heavy falls at isolated places over south Kerala</p> <p><u>16 November</u> <u>2018</u> Tamilnadu & Puducherry Heavy falls at a few places and very heavy at isolated places very likely over south interior Tamil Nadu. Rainfall at most places with heavy falls at isolated places very likely over north interior Tamil Nadu. Kerala Heavy to very heavy falls at isolated places</p>	
<p>16/11/2018 0300 UTC</p>	<ul style="list-style-type: none"> • Heavy falls at a few places and very heavy at isolated places over south interior Tamil Nadu and with heavy falls at isolated places over north interior 	

	<p>Tamil Nadu during next 24 hours. Rainfall at most places with heavy to very heavy falls at isolated places very likely over Kerala during next 24 hours.</p> <ul style="list-style-type: none"> • Heavy falls at isolated places very likely over Lakshadweep on 17th November, 2018. 	
17/11/2018 0300 UTC	<p>Heavy to very heavy falls with extremely heavy falls at isolated places very likely over Lakshadweep during next 24 hours and heavy falls at isolated places during subsequent 24 hours.</p>	

CS Maarutha, 2017

Verification of Heavy Rainfall Forecast

Date & Time	Heavy rainfall warning issued	24-hour Heavy rainfall realised ending at 0300 UTC of date
15.04.2017 0300 UTC	Rainfall at most places with heavy rainfall at isolated places very likely to occur over Andaman Islands during next 24 hrs and isolated heavy rainfalls during subsequent 24 hours.	Andaman & Nicobar Islands: Maya Bandar-4, Port Blair-2
16.04.2017 0300 UTC	Light to moderate (upto 3 cm) rainfall at many places very likely to occur over Andaman Islands during next 12 hrs.	Andaman & Nicobar Islands:: Long Island-5, Hut Bay-4, Port Blair-4, Maya Bandar-4, IAF Carnicobar-2

SCS Mora, 2017

Verification of Heavy Rainfall Forecast

Date/Time (UTC) of issue	Heavy rainfall warning for the date	Realised 24-hour heavy rainfall ending at 0300 UTC of date
28.05.2017 0300	<p>30th May 2017: Heavy to very heavy rainfall at isolated places over south Assam, Meghalaya, Tripura and Mizoram; and heavy rainfall at isolated places over Arunachal Pradesh and Nagaland.</p> <p>31st May 2017: Heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall over Assam & Meghalaya. Heavy to very heavy rainfall at isolated places over Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh.</p>	<p><u>31.05.2017</u></p> <p>Arunachal Pradesh: Pasighat AERO and Basar-8 each</p> <p>Assam & Meghalaya: Halflong and B P Ghat-11 each, Lumding-10, Shillong C.S.O.-9, Lakhipur-8 and Karimganj,</p>
29.05.2017 0300	<p>29th May 2017: Heavy rainfall at isolated places to commence over Tripura and Mizoram from today evening, the 29th May, 2017.</p> <p>30th May 2017: Heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall over Assam & Meghalaya. Heavy to very heavy rainfall at isolated places over Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh.</p> <p>31st May 2017: Heavy to very heavy rainfall at isolated places over Assam & Meghalaya, Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh.</p>	<p>Chauldhowaghat, Matijuri, Barpathar, Jia Bharali N T Xing and N.Lakhimpur/Lilabari-7 each</p> <p>Nagaland, Manipur, Mizoram & Tripura: Lunglei and Serchip (Hydro)-10 each and Kohima-7.</p>

30.05.2017 0300	<p>30th May 2017: Heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall over Assam & Meghalaya. Heavy to very heavy rainfall at isolated places over Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh.</p> <p>31st May 2017: Heavy to very heavy rainfall at isolated places over Assam & Meghalaya, Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh.</p>	<p>01.06.2017 Arunachal Pradesh: Roing-11 Assam & Meghalaya: Karimganj-9, A P Ghat-8, Mawsynram, Cherrapunji (RKM),</p>
31.05.2017 0000	<p>Heavy to very heavy rainfall at isolated places verylikely over south and eastern Assam, eastern Meghalaya, Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh during next 24 hours.</p>	<p>Cherrapunji & Silchar-7 each Manipur, Mizoram & Tripura: Agartala AERO-13 Kailashahar AERO-10</p>

VSCS OCKHI, 2017

Verification of Heavy Rainfall Forecast

Date/Time of issue (base time (hours IST))	Heavy rainfall warning for the date	Realised 24-hour heavy rainfall ending at 0300 UTC of date
29.11.2017 1150 (0830)	<ul style="list-style-type: none"> • Heavy to very heavy rainfall at isolated places is very likely over south Tamil Nadu during next 48 hours. • Heavy rainfall at isolated places during next 24 hours and isolated heavy to very heavy rainfall during subsequent 24 hours over south Kerala. • Heavy to very heavy rainfall at isolated places is very likely over Lakshadweep islands on 1st and 2nd December. 	<p><u>27 November 2017</u></p> <p>Tamil Nadu & Puducherry: Rameswaram-14, Chembarabakkam-12, Chembarambakkam ARG-11, Chennai & Sirkali-10 each, Kancheepuram-9, Vedaranyam-8, Poonamalle ARG, Kolapakkam ARG, Chidambaram, Poonamallee, Anaikaranchatram, Kollid and Anna University-7 each. South Interior Karnataka:-Imangala ARG-100 Kerala:-Kollam RLY-7</p>
30.11.2017 1200 (0830)	<ul style="list-style-type: none"> • Heavy to very heavy rainfall at isolated places very likely over south Tamil Nadu & south Kerala during next 24 hours and isolated heavy falls over interior Tamil Nadu and Kerala during subsequent 24 hours. • Heavy to very heavy rainfall at a few places and isolated extremely heavy falls very likely over Lakshadweep area during next 48 hours. 	<p><u>28 November 2017</u> Kerala:- Piravam-7</p> <p><u>29 November 2017</u> Tamilnadu & Puducherry:-Nannilam-7</p> <p><u>30 November 2017</u> Tamil Nadu & Puducherry: Vallam, Thuckalay and Pondicherry-7 each Kerala: Aryankavu-15</p>

1 December 2017

01.12.20 17 1130 (0830)	<ul style="list-style-type: none">• Heavy to very heavy rainfall at a few places and isolated extremely heavy falls (>20 cm) very likely over Lakshadweep area during next 24 hours and isolated heavy to very heavy falls during subsequent 24 hours.• Heavy rainfall at isolated places very likely over Kerala during next 24 hours.
02.12.20 17 1130 (0830)	<ul style="list-style-type: none">• Heavy to very heavy rainfall at a few places and isolated extremely heavy falls (>20 cm) very likely over north Lakshadweep Islands during next 24 hours and isolated heavy to very heavy falls during subsequent 24 hours. Isolated heavy to very rainfall is very likely over south Lakshadweep Islands during next 24 hours.• Heavy rainfall at isolated places very likely over Kerala during next 24 hours.
03.12.20 17 1130 (0830)	<ul style="list-style-type: none">• Heavy rainfall at isolated places is very likely over south Gujarat on 05th December.
04.12.20 17 1200 (0830)	<ul style="list-style-type: none">• Gujarat: Light to moderate rainfall is very likely at a few places over Saurashtra and south Gujarat region on 4th December. Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region on 05th December and light to moderate rainfall over Gujarat region at many places on 6th December (upto around noon).• Maharashtra: Light to moderate rainfall is very likely at a few places over north Konkan including Mumbai on 4th December. Light to moderate rainfall at most places with isolated heavy rainfall is also likely over north Konkan on 5th December.

Tamil Nadu & Puducherry:

Papanasam (District: Tirunelveli)-45, Manimutharu-38, Mylaudy-19, Thenkasi-17, Thuckalay, Pechiparai, Gudalur & Bhoothapandy-16 each, Watrap-15, Maniyachi, Eraniel & Colachel-14 each, Nagercoil, Kodaikanal & Coonoor PTO-13 each, Kuzhithurai, Srivilliputhur, Satankulam, Shencottah, Ayikudi, Coonoor, Samayapuram & Srivaikuntam-12 each, Ottapadiram, Tiruchendur & Kovilpatti AWS-11 each, Tuticorin, Ambasamudram, Uttamapalayam & Kanyakumari-10 each, Radhapuram, Polur, Kovilpatti, Madavaram AWS, Sankarankoil & Sattur-9 each, Arani, Sivaganga, Sivagiri, Uthiramerur, Rajapalayam, Anna University, Grand Anaicut, Uthagamandalam, Chembarabakkam & DGP Office-8 each and Musiri, Vadipatti, K.Paramathi, Karur, Vilathikulam, Anna UTY ARG, Lalgudi, Ambur, Padalur, Panchapatti, Mayanur, Thamarapakkam, K Bridge, Cholavaram, Nanguneri, Periyakulam, Kalugumalai & Chennai(N)-7 each

Kerala: Aryankavu-26, Myladumpara AGRI-12, Varkala & Punalur-9 each and Trivandrum AERO & Neyyattinkara-8 each
Lakshadweep: Minicoy-19.

2 December 2017

Tamil Nadu & Puducherry:

Sathanur Dam-23, Sirkali-19, Chidambaram & Anaikaranchatram (Kollid)-18 each, Chidambaram AWS-17, Virudachalam & Chengam-15 each, Gingee-14, Mylam AWS & K.M.Koil-14 each, Tirukoilur, Vilupuram, Coonoor PTO & Karaikal-13 each, Cuddalore, Sethiathope & Tiruvannamalai-12 each, Pondicherry-11, Mayanur, Paramathivelur & Polur-10 each, Parangipettai, Kallakurichi, Kodavasal, Nagapattinam, Vanur, Mayiladuthurai, Sankarapuram, & Eraniel, Jayamkondam, Rayakottah, Neyveli AWS, Kuzhithurai, Ariyalur & Tindivanam-9 each, Tiruvaiyaru, Tozhudur, Srimushnam, Valangaiman, Tiruvarur, Ulundurpet, Papanasam (District: Thanjavur) &, Kothagiri-8 each and Harur,

<p>05.12.2017 1150 (0830)</p>	<ul style="list-style-type: none"> • Gujarat: Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region till the morning of 6th December, 2017 (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir-Somnath, Bhavnagar, Diu, Daman, Dadra, and Nagar Haveli districts) and light to moderate rainfall over Gujarat region at many places during subsequent 12 hours. • Maharashtra: Light to moderate rainfall at most places with isolated heavy rainfall is also likely over north Konkan till the morning of 6th December, 2017 (Palghar, Thane, Raigarh, Greater Mumbai, Dhule, Nandurbar, Nashik, Jalgaon, Ahmednagar and Pune districts). 	<p>Panruti, Needamangalam, Thuckalay, Uthangarai, Nagercoil, Arani & Attur-7 each.</p> <p>Kerala: Trivandrum AERO-8 and Perinthalamanna & Angadipuram-7 each Lakshadweep: Minicoy-14</p> <p>3 December 2017 Tamil Nadu & Puducherry: Tiruvarur-14, Pandavaiyar Head & Kodavasal-13 each, Valangaiman & Nannilam-12 each, Nagapattinam-11, Needamangalam, Kumbakonam, & Karaikal-9 each, Thiruthurai AWS & Tiruvadana-8 each and Thiruvadam-7</p> <p>6 December 2017 Konkan & Goa: Dahanu-10, Talasari & Colaba-8 each and Palghar AGRI-7 Gujarat Region: Umergam & Vapi-9 each and Pardi, Waghai, Vansda & Gandevi ARG-7 each</p>
<p>06.12.2017 1150 (0830)</p>	<ul style="list-style-type: none"> • Heavy rainfall very likely over Nicobar Islands and rainfall at many places over Andaman Islands during next 2 days • Rainfall at many places very likely over north Andhra Pradesh and south Odisha during 7th to 9th December, 2017 with isolated heavy falls on 8th and 9th. 	

CS NANAUK, 2014

Heavy rainfall warning issued by IMD and realized rainfall

Date	Forecast heavy rainfall	Actual heavy rainfall ending at 0300 UTC of date.
10. 06.2014 (0900 UTC)	Isolated heavy falls over coastal Karnataka, Kerala and Lakshadweep during next 24 hrs	11.06.2014 Isolated heavy falls over coastal Karnataka and Kerala
11. 06.2014 (0300 UTC)	Isolated heavy falls over coastal Karnataka, Kerala and Lakshadweep during next 24 hrs	12.06.2014 Isolated heavy falls over coastal Karnataka, Kerala and Lakshadweep
11. 06.2014 (2100 UTC)	Isolated heavy falls over coastal Karnataka, Kerala and Lakshadweep during next 24 hrs	13.06.2014 Isolated heavy falls over coastal Karnataka and Kerala

VSCS, HUDHUD, 2014

Verification of Heavy Rainfall warning

Date/ Time(UTC)	Forecast Rainfall	Observed Rainfall
06.10.14 (0300)	Andaman and Nicobar Islands: Isolated heavy to very heavy rainfall during the next 24 hours. Intensity would increase thereafter with heavy to very heavy rainfall at a few places and isolated extremely heavy falls (≥ 25 cm) during subsequent 48 hours.	08 October 2014: Andaman & Nicobar Islands: Isolated heavy to very heavy rainfall
07.10.14/ (0300)	Andaman and Nicobar Islands: Heavy to very heavy rainfall at a few places and isolated extremely heavy falls (≥ 25 cm) would occur over during subsequent 48 hours.	12 October 2014: North Andhra Pradesh: Heavy to very heavy rainfall at a few places
08.10.14/ (0300)	(i) Andaman and Nicobar Islands: (ii) Heavy to very heavy rainfall at a few places and isolated extremely heavy falls (≥ 25 cm) during next 24 hours. (iii) North Andhra Pradesh and South Odisha: (iv) Heavy to very heavy falls at a few places with isolated extremely heavy falls over south Odisha from 11th evening onwards. Heavy rain to very heavy rainfall would also commence at a few places over Visakhapatnam, Vizianagaram. Srikakulam districts of north coastal Andhra Pradesh and districts of north coastal Odisha during the same period.	Odisha: Isolated heavy to very heavy rainfall 13 October 2014: North Andhra Pradesh: Heavy to very heavy rainfall at a few places with isolated extremely heavy rainfall.
09.10.14/ (0300)	(v) North Andhra Pradesh and South Odisha coasts: (vi) Heavy to very heavy falls at a few places and isolated extremely heavy falls over East Godavari, Visakhapatnam, Vizianagaram and Srikakulam districts of North Coastal Andhra Pradesh and South Odisha from 11 th evening onwards. Heavy to very heavy rainfall at isolated places over remaining districts of Andhra Pradesh and North Coastal Odisha during the same period.	South Odisha: Heavy to very heavy rainfall at a few places with isolated extremely heavy rainfall.

10.10.1 4/ (0300)	North Andhra Pradesh and South Odisha coasts: Heavy to very heavy falls at a few places and isolated extremely heavy falls would occur over West and East Godavari, Visakhapatnam, Vizianagaram and Srikakulam districts of North Coastal Andhra Pradesh and Ganjam, Gajapati, Koraput, Rayagada, Nabarangpur, Malkangiri, Kalahandi, Phulbani districts of South Odisha commencing from 11th onwards. Heavy to very heavy rainfall at isolated places over Krishna, Guntur and Prakasham districts of Andhra Pradesh and North Coastal Odisha during the same period.	Chhattisgarh: Isolated heavy to very heavy rainfall Jharkhand: Isolated heavy to very heavy rainfall 14 October 2014: North Andhra Pradesh: Isolated heavy to very heavy rainfall.
11.10.1 4/ (0300)	Andhra Pradesh and Odisha coasts: Heavy to very heavy falls at a few places and isolated extremely heavy falls (≥ 24.5 cm) over West & East Godavari, Visakhapatnam, Vizianagaram & Srikakulam districts of North Andhra Pradesh and Ganjam, Gajapati, Koraput, Rayagada, Nabarangpur, Malkangiri, Kalahandi, Phulbani districts of South Odisha during next 48 hrs. Heavy to very heavy rainfall at isolated places over Krishna, Guntur & Prakasham districts of Andhra Pradesh and North Coastal Odisha during the same period.	South Odisha: Isolated heavy to very heavy rainfall .Chhattisgarh: Heavy to very heavy rainfall at a few places over south Chhattisgarh and Isolated heavy to very heavy rainfall over north Chhattisgarh. East Madhya Pradesh: Heavy to very heavy rainfall at isolated places.
12.10.1 4/ 0830	Andhra Pradesh and Odisha coasts: Heavy (6.5–12.4 cm) to very heavy falls (12.5–24.4 cm) at a few places and isolated extremely heavy falls (≥ 24.5 cm) over West & East Godavari, Visakhapatnam, Vizianagaram & Srikakulam districts of North Andhra Pradesh and Ganjam, Gajapati, Koraput, Rayagada, Nabarangpur, Malkangiri, Kalahandi, Phulbani districts of South Odisha during next 48 hrs. Heavy to very heavy rainfall at isolated places over Krishna, Guntur & Prakasham districts of Andhra Pradesh and North coastal Odisha during the same period.	15 October 2014: Bihar: Heavy to very heavy rainfall at isolated places. East Uttar Pradesh: Heavy to very heavy

13.10.1 4/ (0300)	<p>Isolated heavy falls over Vizianagaram and Srikakulam districts of North Andhra Pradesh and adjoining districts of South coastal Odisha during next 6 hours and decrease thereafter.</p> <p>Isolated heavy to very heavy falls over Chhattisgarh & adjoining east Madhya Pradesh and interior Odisha during next 24 hrs and over East Uttar Pradesh, Jharkhand & Bihar during next 48 hrs.</p>	<p>rainfall at isolated places.</p> <p>Sub-Himalayan West Bengal & Sikkim: Isolated heavy rainfall.</p>
14.10.1 4/ (0300)	<p>Heavy to very heavy falls at a few places over East Uttar Pradesh and Bihar; isolated heavy to very heavy over North Chhattisgarh & East Madhya Pradesh and isolated heavy over Jharkhand during next 24 hours.</p> <p>During subsequent 24 hours, heavy to very heavy falls at isolated places over East Uttar Pradesh, Bihar, Sub-Himalayan West Bengal and Sikkim and isolated heavy rainfall over Jharkhand and North Chhattisgarh.</p>	

VSCS, Nilofar 2014

Heavy rainfall forecast verification of VSCS, Nilofar

Date/ Time(IST)	Forecast Rainfall	Observed Rainfall
26.10.2014/ 1430	Rainfall at many places with isolated heavy to very heavy falls along coastal districts of Saurashtra and Kutch from 30 th morning.	Gujarat: No rainfall due to weakening of the system over the sea itself
27.10.2014/ 0530	Rainfall at most places with isolated heavy to very heavy falls along coastal districts of Saurashtra and Kutch from 30 th morning. Intensity would increase gradually with heavy to very heavy falls at a few places and isolated extremely heavy falls from the night of 30 th .	
28.10.2014/ 0530	Rainfall at most places with isolated heavy to very heavy falls along coastal districts of Saurashtra and Kutch from 31 st night.	
29.10.2014/ 1730	Moderate rainfall at most places with heavy to very heavy falls at isolated places over all districts of Saurashtra and Kutch and North Gujarat on 30 th and 31 st October.	
30.10.2014/ 0830	Moderate rainfall at most places with isolated heavy to very heavy falls over Kutch and coastal districts of Saurashtra during next 48 hrs. Light to moderate rainfall at many places with isolated heavy falls over remaining districts of Saurashtra, North Gujarat and Southwest Rajasthan during the same period.	
31.10.2014/ 0230	Moderate rainfall at most places with isolated heavy to very heavy falls over Kutch and coastal districts of Saurashtra during next 24 hrs. Light to moderate rainfall at many places with isolated heavy falls over remaining districts of Saurashtra, North Gujarat and Southwest Rajasthan during the same period.	
31.10.2014/ 0830	Moderate rainfall at many places over Kutch and Saurashtra during next 24 hrs	

CS Komen, 2015

Verification of Heavy Rainfall Forecast

Date & Time	Heavy rainfall warning issued	24-hour rainfall ending at 0300 UTC of date	Heavy realised 0300 UTC of date
26.07.2015 0300 UTC	Heavy rainfall at isolated places over Gangetic west Bengal during next 24 hours and heavy to very heavy during subsequent 24 hours. Heavy rainfall at isolated places over Odisha on 27 th . Increase in rainfall intensity over Gangetic West Bengal and Odisha from 28 th July 2015.	<u>27.07.2015:</u> Heavy to very heavy rainfall at isolated places over Odisha and Gangetic West Bengal. Heavy rainfall at isolated places over Nagaland, Manipur, Mizoram & Tripura and Jharkhand	
27.07.2015 0300 UTC	Heavy to very heavy rainfall at isolated places over the Gangetic West Bengal during next 48 hours and heavy to very heavy at a few places during the subsequent 24 hours. Heavy rainfall at isolated places over Odisha during next 48 hours and heavy to very heavy rainfall at a few places during subsequent 24 hours.	<u>28.07.2015:</u> Heavy to very heavy rainfall at isolated places over Odisha, Jharkhand and Gangetic West Bengal. Heavy rainfall at isolated places over Bihar.	
28.07.2015 0300 UTC	Heavy to very heavy rainfall at isolated places over the Gangetic West Bengal during next 48 hours and heavy to very heavy at a few places during the subsequent 24 hours. Heavy rainfall at isolated places over Odisha during next 48 hours and heavy to very heavy rainfall at a few places during subsequent 24 hours.	<u>29.07.2015:</u> Heavy to very heavy rainfall at isolated places over Gangetic West Bengal, Odisha	
29.07.2015 0300 UTC	Heavy to very heavy rainfall at a few places over the Gangetic West Bengal on 29 July; heavy to very		

heavy falls at a few places with isolated extremely heavy falls on 30 July and heavy to very heavy falls at a few places on 31 July.
Heavy rainfall at isolated places over **Odisha** on 29 & 30 July and heavy to very heavy rainfall at a few places with isolated extremely heavy falls on 31 July.

<p>30.07.2015 0300 UTC</p>	<p>Heavy to very heavy rainfall at a few places and extremely heavy at isolated places over Gangetic West Bengal on 30 & 31 July; heavy to very heavy falls at a few places on 01 August.</p> <p>Heavy to very heavy rainfall at isolated places over Odisha on 30 and heavy to very heavy rainfall at a few places with isolated extremely heavy falls on 31 July & 01 August.</p> <p>Heavy to very heavy rainfall at isolated places over Mizoram, Tripura and south Assam on 30 & 31 July. Heavy to very heavy rainfall at isolated places over Jharkhand on 31 July & 01 August.</p>	<p>and Jharkhand.</p> <p><u>30.07.2015:</u> Heavy to very heavy rainfall at isolated places over Gangetic West Bengal.</p> <p><u>31.07.2015:</u> Heavy to very heavy rainfall at isolated places over Nagaland, Manipur, Mizoram & Tripura and Jharkhand.</p>
<p>31.07.2015 0300 UTC</p>	<p>Heavy to very heavy rainfall at a few places over the Gangetic West Bengal on 31 July and 01 August. Heavy to very heavy rainfall at a few places with isolated extremely heavy falls on 31 July & 01 August over north Odisha and isolated heavy to very heavy rainfall over south Odisha during same period.</p> <p>Heavy to very heavy rainfall at isolated places over sub-Himalayan West Bengal, Sikkim, Mizoram, Tripura, Meghalaya and south Assam on 31 July. Heavy to very heavy rainfall at isolated places over Jharkhand on 31 July & 01 August.</p>	<p><u>01.08.2015:</u> Heavy to very heavy rainfall at isolated places over Assam & Meghalaya, Gangetic West Bengal, Bihar and Jharkhand. Heavy rainfall at isolated</p>

<p>01.08.2015 0300 UTC</p>	<p>Heavy to very heavy rainfall at a few places over the Gangetic West Bengal during next 24 hrs and isolated heavy to very heavy rainfall thereafter.</p> <p>Heavy to very heavy rainfall at a few places with isolated extremely heavy falls over north Odisha and Jharkhand during next 24 hrs and heavy to very heavy rainfall at a few places over north Odisha and isolated heavy to very heavy rainfall over Jharkhand in subsequent 24 hrs. Isolated heavy to very heavy rainfall over south Odisha during same period.</p> <p>Heavy to very heavy rainfall at isolated places over north Chhattisgarh and east Madhya Pradesh on 01 August and heavy to very heavy rainfall at few places with isolated extremely heavy falls on 02 August over north Chhattisgarh and on 03 August over east Madhya Pradesh.</p> <p>Heavy to very heavy rainfall at isolated places over</p>	<p>places over Nagaland, Manipur, Mizoram & Tripura.</p> <p>02.08.2015: Heavy to very heavy rainfall at isolated places over Gangetic West Bengal, Odisha and Jharkhand.</p> <p>Heavy rainfall at isolated places over Bihar.</p> <p>03.08.2015: Heavy to very heavy at isolated places over</p>
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	<p>sub-Himalayan West Bengal, Sikkim, Mizoram, Tripura, Meghalaya and south Assam during next 24 hrs.</p>	<p>Odisha, Jharkhand, East Madhya Pradesh and</p>
<p>02.08.2015 0300 UTC</p>	<p>Heavy to very heavy rainfall at isolated places over the Gangetic West Bengal during next 24 hrs and isolated heavy rainfall during subsequent 24 hrs. Heavy to very heavy rainfall at isolated places over Jharkhand, Odisha and Chhattisgarh during next 48 hrs. Heavy to very heavy rainfall over east Madhya Pradesh on 03 and 04 August. Heavy rainfall at isolated places over sub-Himalayan West Bengal, Bihar and Sikkim during next 24 hrs.</p>	<p>Chhattisgarh. Heavy rainfall at isolated places over Arunachal Pradesh.</p> <p>04.08.2015: Heavy to very heavy at isolated places over East Madhya Pradesh. Heavy rainfall at isolated places over Chhattisgarh.</p> <p>05.08.2015 Extremely heavy at isolated places with Heavy to very heavy rainfall at few places over west Madhya Pradesh. Heavy rainfall at isolated places over east Madhya Pradesh. Extremely heavy at isolated places with Heavy to very heavy rainfall at many places over Vidarbha.</p>

CS Roanu, 2016

Verification of Heavy Rainfall Forecast

Date & Time	Heavy rainfall warning issued	24-hour Heavy rainfall realised ending at 0300UTC of date
17.05.2016 0300 UTC	<p>Heavy to very heavy falls at a few places over north coastal Tamil Nadu & Puducherry and isolated places over north interior Tamil Nadu and isolated heavy falls over south Tamil Nadu during next 24 hours. Isolated heavy to very heavy falls over north Tamil Nadu & Puducherry during subsequent 24 hours.</p> <p>Isolated heavy falls over south coastal Andhra Pradesh coast on 17th May 2016. Isolated heavy to very heavy falls on 18th May and isolated heavy falls on 19th over coastal Andhra Pradesh.</p> <p>Isolated heavy falls over Rayalaseema during the next 48 hours.</p>	<p>18.05.2016: Isolated extremely heavy rainfall and heavy to very heavy rainfall at a few places over Tamil Nadu.</p> <p>Heavy to very heavy falls at a few places over coastal Andhra Pradesh.</p> <p>Isolated heavy to very heavy falls over Rayalaseema.</p> <p>19.05.2016: Isolated heavy to very heavy falls over Tamil Nadu.</p>
	<p>Isolated heavy rainfall on 17th, isolated heavy to very heavy falls on 18th and isolated heavy falls on 19th May over south interior Karnataka.</p>	<p>Isolated extremely heavy rainfall and heavy to very heavy rainfall at a few places over coastal Andhra Pradesh.</p>
18.05.2016 0300 UTC	<p>Isolated heavy to very heavy falls over north Tamil Nadu & Puducherry during next 24 hours.</p> <p>Heavy to very heavy falls at a few places and isolated extremely heavy falls likely over coastal Andhra Pradesh during next 48 hours.</p> <p>Heavy to very heavy falls at a few places over coastal Odisha on 19th & 20th May.</p> <p>Isolated heavy to very heavy falls over</p>	<p>Isolated heavy to very heavy falls over Rayalaseema.</p> <p>Isolated heavy falls over south interior Karnataka.</p> <p>20.05.2016: Heavy to very heavy falls at a few places</p>

	<p>Rayalaseema during next 24 hours.</p>	<p>with isolated extremely heavy falls over Tamil Nadu.</p> <p>Heavy to very heavy falls at a few places over coastal Andhra Pradesh.</p> <p>Isolated heavy falls over Rayalaseema.</p>
<p>19.05.2016 0300 UTC</p>	<p>Heavy to very heavy falls at a few places and isolated extremely heavy falls over coastal Andhra Pradesh during next 24 hours and heavy to very heavy at a few places during subsequent 24 hours.</p> <p>Heavy to very heavy falls at isolated places over coastal Odisha during next 24 hours and heavy to very heavy falls at a few places on 20 May and isolated heavy on 21st May.</p> <p>Isolated heavy falls over Telangana and Rayalaseema during next 24 hours.</p>	<p>Isolated heavy to very heavy falls over Odisha.</p> <p>Isolated heavy falls over south interior Karnataka.</p> <p><u>21.05.2016:</u> Heavy to very heavy falls at a few places with isolated extremely heavy falls over Odisha.</p>
<p>20.05.2016 0300 UTC</p>	<p>Heavy to very heavy falls at a few places and isolated extremely heavy falls over north coastal Andhra Pradesh during next 24 hours.</p> <p>Heavy to very heavy falls at a few places with extremely heavy falls at isolated places over coastal Odisha during next 24 hours and isolated heavy rainfall during subsequent 24 hrs.</p> <p>Heavy to very heavy at a few places over Gangetic West Bengal during next 24 hours and isolated heavy rainfall during subsequent 24 hrs.</p>	<p>Isolated heavy falls over Gangetic West Bengal and coastal Andhra Pradesh.</p> <p><u>22.05.2016:</u> Heavy to very heavy falls at isolated places over Assam & Meghalaya.</p> <p>Heavy to very heavy falls at a few places</p>

<p>21.05.2016 0300 UTC</p>	<p>Heavy to very heavy falls at isolated places over coastal districts of West Bengal during next 12 hours.</p> <p>Heavy to very heavy falls at a few places & isolated extremely heavy falls over Mizoram and isolated heavy to very heavy falls over south Assam, Manipur & Tripura during next 24 hours</p>	<p>over Nagaland- Manipur- Mizoram- Tripura.</p>
<p>22.05.2016 0300 UTC</p>	<p>Isolated heavy falls over east Arunachal Pradesh and Nagaland during next 24 hours.</p>	

CS KYANT, 2016

Verification of Heavy Rainfall Forecast

Table : Heavy Rainfall warning issued by IMD and realized heavy rainfall		
Date /Time	Warning issued	Realized weather during past 24hrs ending at 0830 hrs IST
21-Oct-2016 0830 IST	Heavy rainfall at isolated places over Andaman Islands	27 Oct. 2016 Tamilnadu & Puducherry: Pechiparai-8,
22-Oct-2016 0830 IST	Nil	
23-Oct-2016 0830 IST	Nil	
24-Oct-2016 0830 IST	Nil	
25-Oct-2016 0830 IST	Nil	
26-Oct-2016 0830 IST	Heavy rainfall at isolated places over south coastal Andhra Pradesh on 28 th to 30 th October 2016 and over north coastal Tamilnadu on 29 th to 31 st October 2016.	28 Oct. 2016 Coastal Andhra Pradesh: Kalingapatnam-7, Visakhapatnam-7 29 Oct. 2016 Nil
27-Oct-2016 0830 IST	Heavy rainfall at isolated places over south coastal Andhra Pradesh during 28 th to 30 th October 2016 and over north coastal Tamilnadu from 28 th evening to 31 st October 2016.	30 Oct. 2016 Tamilnadu & Puducherry: Tiruvaiyaru-7, 31 Oct. 2016 Tamilnadu & Puducherry:
28-Oct-2016 0830 IST	Heavy rainfall at isolated places over Andhra Pradesh and north coastal Tamilnadu during next 72 hours	Udumalpet-12, Vadipatti-12, Pollachi-11, Pechiparai-10, Tirumayam-8, Tirupathur-7, Peelamedu Ap-7,

CS Nada, 2016

Verification of heavy rainfall warning in case of CS, Nada

Date/ Time(IST)	Heavy rainfall warning issued	24-hour Heavy rainfall realized ending at 0300UTC
30.11.2016 0300 UTC	Heavy to very rainfall at a few places over Tamilnadu and Puducherry and isolated heavy to very rainfall over interior Tamilnadu on 1 st and 2 nd December.	Isolated heavy rainfall over Tamilnadu, Puducherry & coastal Andhra Pradesh
01.12.2016 0300 UTC	Isolated heavy to very heavy rainfall over Tamilnadu and Puducherry during next 48 hours.	

VSCS Vardah, 2016

Verification of Heavy Rainfall Forecast

Date/Time(UTC)	Heavy rainfall warning issued	Realised 24-hour heavy rainfall ending at 0300 UTC of date
06.12.2016 0900	Heavy to very heavy falls at a few places over Andaman and Nicobar Islands during next 48 hrs.	Andaman & Nicobar Islands
07.12.2016 0300	Heavy to very heavy falls at a few places over Andaman Islands and heavy rainfall at isolated places over Nicobar Islands during next 24 hrs. isolated heavy falls	07-10 Dec. 2016 Heavy to very heavy rainfall at a few places

	over Andaman and Nicobar Islands during subsequent 24 hours.	over Andaman and Nicobar Islands. Isolated
08.12.2016 0300	Heavy to very heavy falls at a few places over Andaman Islands and heavy rainfall at isolated places over Nicobar Islands during next 24 hrs and isolated heavy falls over Andaman & Nicobar Islands during subsequent 24 hours. Isolated heavy falls over coastal Andhra Pradesh is very likely to commence from 11 th December evening.	extremely heavy rainfall on 8 th Dec. Tamil Nadu, South coastal Andhra Pradesh, Rayalaseema
09.12.2016 0300	Isolated heavy falls over coastal Andhra Pradesh is very likely to commence from 11 th December evening.	13.12.2016
10.12.2016 0300	Isolated heavy to very heavy falls over south coastal Andhra Pradesh to commence from 11 th December evening for subsequent 36 hrs.	Heavy rainfall at many places with very heavy falls at few places and isolated
10.12.2016 1200	Isolated heavy to very heavy falls over south coastal Andhra Pradesh and adjoining areas of north coastal Tamil Nadu to commence from 11 th December evening for subsequent 36 hrs.	extremely heavy rainfall over
11.12.2016 0300	Isolated heavy to very heavy falls over south coastal Andhra Pradesh, north coastal Tamil Nadu and Puducherry to commence from 11 th December evening for subsequent 36 hrs. The rainfall intensity will increase gradually becoming heavy to very heavy rainfall (7-19 cm) at a few places and isolated extremely heavy rainfall (≥ 20 cm) over Chennai, Thiruvallur and Kanchipuram districts of Tamil Nadu and Nellore and Prakasam districts of Andhra Pradesh on 12 th December	Chennai, Kancheepuram, Tiruvallur, districts of Tamil Nadu. Isolated Heavy to very heavy rainfall at a few places over Villipuram, Vellore, Krishnagiri, Tiruvannamalai districts of Tamil Nadu, Nellore district of coastal Andhra Pradesh and Chittoor, Anantapuram & Cuddapah districts of Rayalaseema.
12.12.2016 0300	Do	14.12.2016
13.12.2016 0300	Isolated heavy falls over north interior Tamil Nadu and adjoining areas of south interior Karnataka & north Kerala during next 12 hrs.	Isolated heavy rainfall over south coastal Andhra Pradesh

CS Maarutha, 2017

Verification of Heavy Rainfall Forecast

Date & Time	Heavy rainfall warning issued	24-hour Heavy rainfall realised ending at 0300 UTC of date
15.04.2017 0300 UTC	Rainfall at most places with heavy rainfall at isolated places very likely to occur over Andaman Islands during next 24 hrs and isolated heavy rainfalls during subsequent 24 hours.	Andaman & Nicobar Islands: Maya Bandar-4, Port Blair-2
16.04.2017 0300 UTC	Light to moderate (upto 3 cm) rainfall at many places very likely to occur over Andaman Islands during next 12 hrs.	Andaman & Nicobar Islands:: Long Island-5, Hut Bay-4, Port Blair-4, Maya Bandar-4, IAF Carnicobar-2

SCS Mora, 2017

Verification of Heavy Rainfall Forecast

Date/Time (UTC) of issue	Heavy rainfall warning for the date	Realised 24-hour heavy rainfall ending at 0300 UTC of date
28.05.2017 0300	<p>30th May 2017: Heavy to very heavy rainfall at isolated places over south Assam, Meghalaya, Tripura and Mizoram; and heavy rainfall at isolated places over Arunachal Pradesh and Nagaland.</p> <p>31st May 2017: Heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall over Assam & Meghalaya. Heavy to very heavy rainfall at isolated places over Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh.</p>	<p>31.05.2017</p> <p>Arunachal Pradesh: Pasighat AERO and Basar-8 each</p> <p>Assam & Meghalaya: Halflong and B P Ghat-11 each, Lumding-10, Shillong C.S.O.-9, Lakhipur-8 and Karimganj,</p>
29.05.2017 0300	<p>29th May 2017: Heavy rainfall at isolated places to commence over Tripura and Mizoram from today evening, the 29th May, 2017.</p> <p>30th May 2017: Heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall over Assam & Meghalaya. Heavy to very heavy rainfall at isolated places over Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh.</p> <p>31st May 2017: Heavy to very heavy rainfall at isolated places over Assam & Meghalaya, Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh.</p>	<p>Chauldhowaghat, Matijuri, Barpathar, Jia Bharali N T Xing and N.Lakhimpur/Lilabari-7 each</p> <p>Nagaland, Manipur, Mizoram & Tripura: Lunglei and Serchip (Hydro)-10 each and Kohima-7.</p>

30.05.2017 0300	<p>30th May 2017: Heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall over Assam & Meghalaya. Heavy to very heavy rainfall at isolated places over Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh.</p> <p>31st May 2017: Heavy to very heavy rainfall at isolated places over Assam & Meghalaya, Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh.</p>	<p>01.06.2017 Arunachal Pradesh: Roing-11 Assam & Meghalaya: Karimganj-9, A P Ghat-8, Mawsynram, Cherrapunji (RKM),</p>
31.05.2017 0000	<p>Heavy to very heavy rainfall at isolated places verylikely over south and eastern Assam, eastern Meghalaya, Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh during next 24 hours.</p>	<p>Cherrapunji & Silchar-7 each Manipur, Mizoram & Tripura: Agartala AERO-13 Kailashahar AERO-10</p>

VSCS OCKHI, 2017

Verification of Heavy Rainfall Forecast

Date/Time of issue (base time (hours IST))	Heavy rainfall warning for the date	Realised 24-hour heavy rainfall ending at 0300 UTC of date
29.11.2017 1150 (0830)	<ul style="list-style-type: none"> • Heavy to very heavy rainfall at isolated places is very likely over south Tamil Nadu during next 48 hours. • Heavy rainfall at isolated places during next 24 hours and isolated heavy to very heavy rainfall during subsequent 24 hours over south Kerala. • Heavy to very heavy rainfall at isolated places is very likely over Lakshadweep islands on 1st and 2nd December. 	<p><u>27 November 2017</u></p> <p>Tamil Nadu & Puducherry: Rameswaram-14, Chembarabakkam-12, Chembarambakkam ARG-11, Chennai & Sirkali-10 each, Kancheepuram-9, Vedaranyam-8, Poonamalle ARG, Kolapakkam ARG, Chidambaram, Poonamallee, Anaikaranchatram, Kollid and Anna University-7 each.</p> <p>South Interior Karnataka:- Imangala ARG-100</p> <p>Kerala:-Kollam RLY-7</p>
30.11.2017 1200 (0830)	<ul style="list-style-type: none"> • Heavy to very heavy rainfall at isolated places very likely over south Tamil Nadu & south Kerala during next 24 hours and isolated heavy falls over interior Tamil Nadu and Kerala during subsequent 24 hours. • Heavy to very heavy rainfall at a few places and isolated extremely heavy falls very likely over Lakshadweep area during next 48 hours. 	<p><u>28 November 2017</u> Kerala :- Pirava m-7</p> <p><u>29 November 2017</u> Tamilnadu & Puducherry:- Nannilam-7</p> <p><u>30 November 2017</u> Tamil Nadu & Puducherry: Vallam, Thuckalay and Pondicherry-7 each Kerala: Aryankavu-15</p>

1 December 2017

01.12.20 17 1130 (0830)	<ul style="list-style-type: none"> • Heavy to very heavy rainfall at a few places and isolated extremely heavy falls (>20 cm) very likely over Lakshadweep area during next 24 hours and isolated heavy to very heavy falls during subsequent 24 hours. • Heavy rainfall at isolated places very likely over Kerala during next 24 hours.
02.12.20 17 1130 (0830)	<ul style="list-style-type: none"> • Heavy to very heavy rainfall at a few places and isolated extremely heavy falls (>20 cm) very likely over north Lakshadweep Islands during next 24 hours and isolated heavy to very heavy falls during subsequent 24 hours. Isolated heavy to very rainfall is very likely over south Lakshadweep Islands during next 24 hours. • Heavy rainfall at isolated places very likely over Kerala during next 24 hours.
03.12.20 17 1130 (0830)	<ul style="list-style-type: none"> • Heavy rainfall at isolated places is very likely over south Gujarat on 05th December.
04.12.20 17 1200 (0830)	<ul style="list-style-type: none"> • Gujarat: Light to moderate rainfall is very likely at a few places over Saurashtra and south Gujarat region on 4th December. Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region on 05th December and light to moderate rainfall over Gujarat region at many places on 6th December (upto around noon). • Maharashtra: Light to moderate rainfall is very likely at a few places over north Konkan including Mumbai on 4th December. Light to moderate rainfall at most places with isolated heavy rainfall is also likely over north Konkan on 5th December.

Tamil Nadu & Puducherry: Papanasam (District: Tirunelveli)-45, Manimutharu-38, Mylaudy-19, Thenkasi-17, Thuckalay, Pechiparai, Gudalur & Bhoothapandy-16 each, Watrap-15, Maniyachi, Eraniel & Colachel-14 each, Nagercoil, Kodaikanal & Coonoor PTO-13 each, Kuzhithurai, Srivilliputhur, Satankulam, Shencottah, Ayikudi, Coonoor, Samayapuram & Srivaikuntam-12 each, Ottapadiram, Tiruchendur & Kovilpatti AWS-11 each, Tuticorin, Ambasamudram, Uttamapalayam & Kanyakumari-10 each, Radhapuram, Polur, Kovilpatti, Madavaram AWS, Sankarankoil & Sattur-9 each, Arani, Sivaganga, Sivagiri, Uthiramerur, Rajapalayam, Anna University, Grand Anaicut, Uthagamandalam, Chembarabakkam & DGP Office-8 each and Musiri, Vadipatti, K.Paramathi, Karur, Vilathikulam, Anna UTY ARG, Lalgudi, Ambur, Padalur, Panchapatti, Mayanur, Thamarapakkam, K Bridge, Cholavaram, Nanguneri, Periyakulam, Kalugumalai & Chennai(N)-7 each

Kerala: Aryankavu-26, Myladumpara AGRI-12, Varkala & Punalur-9 each and Trivandrum AERO & Neyyattinkara-8 each
Lakshadweep: Minicoy-19.

2 December 2017

Tamil Nadu & Puducherry: Sathanur Dam-23, Sirkali-19, Chidambaram & Anaikaranchatram (Kollid)-18 each, Chidambaram AWS-17, Virudachalam & Chengam-15 each, Gingee-14, Mylam AWS & K.M.Koil-14 each, Tirukoilur, Vilupuram, Coonoor PTO & Karaikal-13 each, Cuddalore, Sethiathope & Tiruvannamalai-12 each, Pondicherry-11, Mayanur, Paramathivelur & Polur-10 each, Parangipettai, Kallakurichi, Kodavasal, Nagapattinam, Vanur, Mayiladuthurai, Sankarapuram, & Eraniel, Jayamkondam, Rayakottah, Neyveli AWS, Kuzhithurai, Ariyalur & Tindivanam-9 each, Tiruvaiyaru, Tozhudur, Srimushnam, Valangaiman, Tiruvarur, Ulundurpet, Papanasam (District: Thanjavur) & Kothagiri-8 each and Harur,

<p>05.12.2017 1150 (0830)</p>	<ul style="list-style-type: none"> • Gujarat: Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region till the morning of 6th December, 2017 (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir-Somnath, Bhavnagar, Diu, Daman, Dadra, and Nagar Haveli districts) and light to moderate rainfall over Gujarat region at many places during subsequent 12 hours. • Maharashtra: Light to moderate rainfall at most places with isolated heavy rainfall is also likely over north Konkan till the morning of 6th December, 2017 (Palghar, Thane, Raigarh, Greater Mumbai, Dhule, Nandurbar, Nashik, Jalgaon, Ahmednagar and Pune districts). 	<p>Panruti, Needamangalam, Thuckalay, Uthangarai, Nagercoil, Arani & Attur-7 each.</p> <p>Kerala: Trivandrum AERO-8 and Perinthalamanna & Angadipuram-7 each Lakshadweep: Minicoy-14</p> <p>3 December 2017 Tamil Nadu & Puducherry: Tiruvarur-14, Pandavaiyar Head & Kodavasal-13 each, Valangaiman & Nannilam-12 each, Nagapattinam-11, Needamangalam, Kumbakonam, & Karaikal-9 each, Thiruthurai AWS & Tiruvadana-8 each and Thiruvadam-7</p> <p>6 December 2017 Konkan & Goa: Dahanu-10, Talasari & Colaba-8 each and Palghar AGRI-7 Gujarat Region: Umergam & Vapi-9 each and Pardi, Waghai, Vansda & Gandevi ARG-7 each</p>
<p>06.12.2017 1150 (0830)</p>	<ul style="list-style-type: none"> • Heavy rainfall very likely over Nicobar Islands and rainfall at many places over Andaman Islands during next 2 days • Rainfall at many places very likely over north Andhra Pradesh and south Odisha during 7th to 9th December, 2017 with isolated heavy falls on 8th and 9th. 	

CS NANAUK, 2014

Heavy rainfall warning issued by IMD and realized rainfall

Date	Forecast heavy rainfall	Actual heavy rainfall ending at 0300 UTC of date.
10.06.2014 (0900 UTC)	Isolated heavy falls over coastal Karnataka, Kerala and Lakshadweep during next 24 hrs	11.06.2014 Isolated heavy falls over coastal Karnataka and Kerala
11.06.2014 (0300 UTC)	Isolated heavy falls over coastal Karnataka, Kerala and Lakshadweep during next 24 hrs	12.06.2014 Isolated heavy falls over coastal Karnataka, Kerala and Lakshadweep
11.06.2014 (2100 UTC)	Isolated heavy falls over coastal Karnataka, Kerala and Lakshadweep during next 24 hrs	13.06.2014 Isolated heavy falls over coastal Karnataka and Kerala

VSCS, HUDHUD, 2014

Verification of Heavy Rainfall warning

Date/ Time(UTC)	Forecast Rainfall	Observed Rainfall
06.10.14 (0300)	Andaman and Nicobar Islands: Isolated heavy to very heavy rainfall during the next 24 hours. Intensity would increase thereafter with heavy to very heavy rainfall at a few places and isolated extremely heavy falls (≥ 25 cm) during subsequent 48 hours.	08 October 2014: Andaman & Nicobar Islands: Isolated heavy to very heavy rainfall
07.10.14/ (0300)	Andaman and Nicobar Islands: Heavy to very heavy rainfall at a few places and isolated extremely heavy falls (≥ 25 cm) would occur over during subsequent 48 hours.	12 October 2014:
08.10.14/ (0300)	(vii) Andaman and Nicobar Islands: (viii) Heavy to very heavy rainfall at a few places and isolated extremely heavy falls (≥ 25 cm) during next 24 hours. (ix) North Andhra Pradesh and South Odisha: (x) Heavy to very heavy falls at a few places with isolated extremely heavy falls over south Odisha from 11th evening onwards. Heavy rain to very heavy rainfall would also commence at a few places over Visakhapatnam, Vizianagaram. Srikakulam districts of north coastal Andhra Pradesh and districts of north coastal Odisha during the same period.	North Andhra Pradesh: Heavy to very heavy rainfall at a few places Odisha: Isolated heavy to very heavy rainfall 13 October 2014: North Andhra Pradesh: Heavy to very heavy rainfall at a few places with isolated extremely heavy rainfall.
09.10.14/ (0300)	(xi) North Andhra Pradesh and South Odisha coasts: (xii) Heavy to very heavy falls at a few places and isolated extremely heavy falls over East Godavari, Visakhapatnam, Vizianagaram and Srikakulam districts of North Coastal Andhra Pradesh and South Odisha from 11 th evening onwards. Heavy to very heavy rainfall at isolated places over remaining districts of	South Odisha: Heavy to very heavy rainfall at

	Andhra Pradesh and North Coastal Odisha during the same period.	a few places with isolated extremely heavy rainfall.
10.10.14/ (0300)	<p>North Andhra Pradesh and South Odisha coasts:</p> <p>Heavy to very heavy falls at a few places and isolated extremely heavy falls would occur over West and East Godavari, Visakhapatnam, Vizianagaram and Srikakulam districts of North Coastal Andhra Pradesh and Ganjam, Gajapati, Koraput, Rayagada, Nabarangpur, Malkangiri, Kalahandi, Phulbani districts of South Odisha commencing from 11th onwards. Heavy to very heavy rainfall at isolated places over Krishna, Guntur and Prakasham districts of Andhra Pradesh and North Coastal Odisha during the same period.</p>	<p>Chhattisgarh: Isolated heavy to very heavy rainfall</p> <p>Jharkhand: Isolated heavy to very heavy rainfall</p> <p>14 October 2014:</p> <p>North Andhra Pradesh: Isolated heavy to very heavy rainfall.</p> <p>South Odisha: Isolated heavy to very heavy rainfall</p> <p>.Chhattisgarh: Heavy to very heavy rainfall at a few places over south</p> <p>Chhattisgarh and Isolated heavy to very heavy rainfall over north Chhattisgarh.</p> <p>East Madhya Pradesh: Heavy to very heavy</p>
11.10.14/ (0300)	<p>Andhra Pradesh and Odisha coasts:</p> <p>Heavy to very heavy falls at a few places and isolated extremely heavy falls (≥ 24.5 cm) over West & East Godavari, Visakhapatnam, Vizianagaram & Srikakulam districts of North Andhra Pradesh and Ganjam, Gajapati, Koraput, Rayagada, Nabarangpur, Malkangiri, Kalahandi, Phulbani districts of South Odisha during next 48 hrs. Heavy to very heavy rainfall at isolated places over Krishna, Guntur & Prakasham districts of Andhra Pradesh and North Coastal Odisha during the same period.</p>	<p>South Odisha: Isolated heavy to very heavy rainfall</p> <p>.Chhattisgarh: Heavy to very heavy rainfall at a few places over south</p> <p>Chhattisgarh and Isolated heavy to very heavy rainfall over north Chhattisgarh.</p> <p>East Madhya Pradesh: Heavy to very heavy</p>
12.10.14/ 0830	<p>Andhra Pradesh and Odisha coasts:</p> <p>Heavy (6.5–12.4 cm) to very heavy falls (12.5–24.4 cm) at a few places and isolated extremely heavy falls (≥ 24.5 cm) over West & East Godavari, Visakhapatnam, Vizianagaram & Srikakulam districts of North Andhra Pradesh and Ganjam, Gajapati, Koraput, Rayagada, Nabarangpur, Malkangiri, Kalahandi, Phulbani districts of South Odisha</p>	<p>Chhattisgarh and Isolated heavy to very heavy rainfall over north Chhattisgarh.</p> <p>East Madhya Pradesh: Heavy to very heavy</p>

	during next 48 hrs. Heavy to very heavy rainfall at isolated places over Krishna, Guntur & Prakasham districts of Andhra Pradesh and North coastal Odisha during the same period.	rainfall at isolated places.
13.10.14/ (0300)	Isolated heavy falls over Vizianagaram and Srikakulam districts of North Andhra Pradesh and adjoining districts of South coastal Odisha during next 6 hours and decrease thereafter. Isolated heavy to very heavy falls over Chhattisgarh & adjoining east Madhya Pradesh and interior Odisha during next 24 hrs and over East Uttar Pradesh, Jharkhand & Bihar during next 48 hrs.	15 October 2014: Bihar: Heavy to very heavy rainfall at isolated places. East Uttar Pradesh: Heavy to very heavy rainfall at isolated places.
14.10.14/ (0300)	Heavy to very heavy falls at a few places over East Uttar Pradesh and Bihar; isolated heavy to very heavy over North Chhattisgarh & East Madhya Pradesh and isolated heavy over Jharkhand during next 24 hours. During subsequent 24 hours, heavy to very heavy falls at isolated places over East Uttar Pradesh, Bihar, Sub-Himalayan West Bengal and Sikkim and isolated heavy rainfall over Jharkhand and North Chhattisgarh.	Sub-Himalayan West Bengal & Sikkim: Isolated heavy rainfall.

VSCS, Nilofar 2014

Heavy rainfall forecast verification of VSCS, Nilofar

Date/ Time(IST)	Forecast Rainfall	Observed Rainfall
26.10.2014/ 1430	Rainfall at many places with isolated heavy to very heavy falls along coastal districts of Saurashtra and Kutch from 30 th morning.	Gujarat: No rainfall due to weakening of the system over the sea itself
27.10.2014/ 0530	Rainfall at most places with isolated heavy to very heavy falls along coastal districts of Saurashtra and Kutch from 30 th morning. Intensity would increase gradually with heavy to very heavy falls at a few places and isolated extremely heavy falls from the night of 30 th .	
28.10.2014/ 0530	Rainfall at most places with isolated heavy to very heavy falls along coastal districts of Saurashtra and Kutch from 31 st night.	
29.10.2014/ 1730	Moderate rainfall at most places with heavy to very heavy falls at isolated places over all districts of Saurashtra and Kutch and North Gujarat on 30 th and 31 st October.	
30.10.2014/ 0830	Moderate rainfall at most places with isolated heavy to very heavy falls over Kutch and coastal districts of Saurashtra during next 48 hrs. Light to moderate rainfall at many places with isolated heavy falls over remaining districts of Saurashtra, North Gujarat and Southwest Rajasthan during the same period.	
31.10.2014/ 0230	Moderate rainfall at most places with isolated heavy to very heavy falls over Kutch and coastal districts of Saurashtra during next 24 hrs. Light to moderate rainfall at many places with isolated heavy falls over remaining districts of Saurashtra, North Gujarat and Southwest Rajasthan during the same period.	
31.10.2014/ 0830	Moderate rainfall at many places over Kutch and Saurashtra during next 24 hrs	

CS Komen, 2015

Verification of Heavy Rainfall Forecast

Date & Time	Heavy rainfall warning issued	24-hour Heavy rainfall realised ending at 0300 UTC of date
26.07.2015 0300 UTC	Heavy rainfall at isolated places over Gangetic west Bengal during next 24 hours and heavy to very heavy during subsequent 24 hours. Heavy rainfall at isolated places over Odisha on 27 th . Increase in rainfall intensity over Gangetic West Bengal and Odisha from 28 th July 2015.	<u>27.07.2015:</u> Heavy to very heavy rainfall at isolated places over Odisha and Gangetic West Bengal. Heavy rainfall at isolated places over Nagaland, Manipur, Mizoram & Tripura and Jharkhand
27.07.2015 0300 UTC	Heavy to very heavy rainfall at isolated places over the Gangetic West Bengal during next 48 hours and heavy to very heavy at a few places during the subsequent 24 hours. Heavy rainfall at isolated places over Odisha during next 48 hours and heavy to very heavy rainfall at a few places during subsequent 24 hours.	<u>28.07.2015:</u> Heavy to very heavy rainfall at isolated places over Odisha, Jharkhand and Gangetic West Bengal. Heavy rainfall at isolated places over Bihar.
28.07.2015 0300 UTC	Heavy to very heavy rainfall at isolated places over the Gangetic West Bengal during next 48 hours and heavy to very heavy at a few places during the subsequent 24 hours. Heavy rainfall at isolated places over Odisha during next 48 hours and heavy to very heavy rainfall at a few places during subsequent 24 hours.	<u>29.07.2015:</u> Heavy to very heavy rainfall at isolated places over Gangetic West Bengal, Odisha
29.07.2015 0300 UTC	Heavy to very heavy rainfall at a few places over the Gangetic West Bengal on 29 July;	

heavy to very
heavy falls at a few places with isolated
extremely
heavy falls on 30 July and heavy to very
heavy falls at a
few places on 31 July.
Heavy rainfall at isolated places over
Odisha on 29 &
30 July and heavy to very heavy rainfall at a
few places
with isolated extremely heavy falls on 31
July.

<p>30.07.2015 0300 UTC</p>	<p>Heavy to very heavy rainfall at a few places and extremely heavy at isolated places over Gangetic West Bengal on 30 & 31 July; heavy to very heavy falls at a few places on 01 August.</p> <p>Heavy to very heavy rainfall at isolated places over Odisha on 30 and heavy to very heavy rainfall at a few places with isolated extremely heavy falls on 31 July & 01 August.</p> <p>Heavy to very heavy rainfall at isolated places</p> <p>over Mizoram, Tripura and south Assam on 30 & 31 July. Heavy to very heavy rainfall at isolated places</p> <p>over Jharkhand on 31 July & 01 August.</p>	<p>and Jharkhand.</p> <p><u>30.07.2015:</u> Heavy to very heavy rainfall at isolated places over Gangetic West Bengal.</p> <p><u>31.07.2015:</u> Heavy to very heavy rainfall at isolated places</p> <p>er Nagaland, Manipur, Mizoram & Tripura and Jharkhand.</p>
<p>31.07.2015 0300 UTC</p>	<p>Heavy to very heavy rainfall at a few places over the Gangetic West Bengal on 31 July and 01 August. Heavy to very heavy rainfall at a few places with isolated extremely heavy falls on 31 July & 01 August over north Odisha and isolated heavy to very heavy rainfall over south Odisha during same period.</p> <p>Heavy to very heavy rainfall at isolated places over sub-Himalayan West Bengal, Sikkim, Mizoram, Tripura, Meghalaya and south Assam on 31 July.</p> <p>Heavy to very heavy rainfall at isolated places</p> <p>over Jharkhand on 31 July & 01 August.</p>	<p><u>01.08.2015:</u> Heavy to very heavy rainfall at isolated places over Assam & Meghalaya, Gangetic West Bengal, Bihar and Jharkhand. Heavy rainfall at isolated places over Nagaland, Manipur, Mizoram & Tripura.</p> <p><u>02.08.2015:</u> Heavy to very heavy</p>

<p>01.08.2015 0300 UTC</p>	<p>Heavy to very heavy rainfall at a few places over the Gangetic West Bengal during next 24 hrs and isolated heavy to very heavy rainfall thereafter.</p> <p>Heavy to very heavy rainfall at a few places with isolated extremely heavy falls over north Odisha and Jharkhand during next 24 hrs and heavy to very heavy rainfall at a few places over north Odisha and isolated heavy to very heavy rainfall over Jharkhand insubsequent 24 hrs. Isolated heavy to very heavy rainfall over south Odisha during same period.</p> <p>Heavy to very heavy rainfall at isolated places over north Chhattisgarh and east Madhya Pradesh on 01 August and heavy to very heavy rainfall at few places with isolated extremely heavy falls on 02 August over north Chhattisgarh and on 03 August over east Madhya Pradesh.</p> <p>Heavy to very heavy rainfall at isolated places over</p>	<p>rainfall at isolated places over Gangetic West Bengal, Odisha and Jharkhand. Heavy rainfall at isolated places over Bihar.</p> <p><u>03.08.2015:</u> Heavy to very heavy at isolated places over</p>
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	<p>sub-Himalayan West Bengal, Sikkim, Mizoram, Tripura, Meghalaya and south Assam during next 24 hrs.</p>	<p>Odisha, Jharkhand, East Madhya Pradesh and Chattisgarh.</p>
<p>02.08.2015 0300 UTC</p>	<p>Heavy to very heavy rainfall at isolated places over the Gangetic West Bengal during next 24 hrs and isolated heavy rainfall during subsequent 24 hrs. Heavy to very heavy rainfall at isolated places over Jharkhand, Odisha and Chhattisgarh during next 48 hrs. Heavy to very heavy rainfall over east Madhya Pradesh on 03 and 04 August. Heavy rainfall at isolated places over sub-Himalayan West Bengal, Bihar and Sikkim during next 24 hrs.</p>	<p>Heavy rainfall at isolated places over Arunachal Pradesh.</p> <p>04.08.2015: Heavy to very heavy at isolated places over East Madhya Pradesh. Heavy rainfall at isolated places over Chhattisgarh.</p> <p>05.08.2015 Extremely heavy at isolated places with Heavy to very heavy rainfall at few places over west Madhya Pradesh. Heavy rainfall at isolated places over east Madhya Pradesh. Extremely heavy at isolated places with Heavy to very heavy rainfall at many places over Vidarbha.</p>

CS Roanu, 2016

Verification of Heavy Rainfall Forecast

Date & Time	Heavy rainfall warning issued	24-hour Heavy rainfall realised ending at 0300 UTC of date
<p>17.05.2016 0300 UTC</p>	<p>Heavy to very heavy falls at a few places over north coastal Tamil Nadu & Puducherry and isolated places over north interior Tamil Nadu and isolated heavy falls over south Tamil Nadu during next 24 hours. Isolated heavy to very heavy falls over north Tamil Nadu & Puducherry during subsequent 24 hours.</p> <p>Isolated heavy falls over south coastal Andhra Pradesh coast on 17th May 2016. Isolated heavy to very heavy falls on 18th May and isolated heavy falls on 19th over coastal Andhra Pradesh.</p> <p>Isolated heavy falls over Rayalaseema during the next 48 hours.</p>	<p><u>18.05.2016:</u> Isolated extremely heavy rainfall and heavy to very heavy rainfall at a few places over Tamil Nadu.</p> <p>Heavy to very heavy falls at a few places over coastal Andhra Pradesh.</p> <p>Isolated heavy to very heavy falls over Rayalaseema.</p> <p><u>19.05.2016:</u> Isolated heavy to very heavy falls over Tamil</p>

	Isolated heavy rainfall on 17 th , isolated heavy to very heavy falls on 18 th and isolated heavy falls on 19 th May over south interior Karnataka.	Nadu. Isolated extremely heavy rainfall and heavy to very heavy rainfall at a few places over coastal Andhra Pradesh. Isolated heavy falls over Rayalaseema. Isolated heavy falls over south interior Karnataka.
18.05.2016 0300 UTC	Isolated heavy to very heavy falls over north Tamil Nadu & Puducherry during next 24 hours. Heavy to very heavy falls at a few places and isolated extremely heavy falls likely over coastal Andhra Pradesh during next 48 hours. Heavy to very heavy falls at a few places over coastal Odisha on 19 th & 20 th May. Isolated heavy to very heavy falls over Rayalaseema during next 24 hours.	20.05.2016: Heavy to very heavy falls at a few places with isolated extremely heavy falls over Tamil Nadu. Heavy to very heavy falls at a few places over coastal Andhra Pradesh. Isolated heavy falls over Rayalaseema. Isolated heavy to very heavy falls over Odisha. Isolated heavy falls over south interior Karnataka.
19.05.2016 0300 UTC	Heavy to very heavy falls at a few places and isolated extremely heavy falls over coastal Andhra Pradesh during next 24 hours and heavy to very heavy at a few places during subsequent 24 hours. Heavy to very heavy falls at isolated places over coastal Odisha during next 24 hours and heavy to very heavy falls at few places on 20 May and isolated heavy on 21 st May. Isolated heavy falls over Telangana and Rayalaseema during next 24 hours.	21.05.2016: Heavy to very heavy falls at a few places with isolated extremely heavy falls over Odisha. Isolated heavy falls over Gangetic West Bengal and coastal Andhra Pradesh. 22.05.2016: Heavy to very heavy falls at isolated places over
20.05.2016 0300 UTC	Heavy to very heavy falls at a few places and isolated extremely heavy falls over north coastal Andhra Pradesh during next 24 hours. Heavy to very heavy falls at a few places with extremely heavy falls at isolated places over coastal Odisha during next 24 hours and isolated heavy rainfall during subsequent 24 hrs. Heavy to very heavy at a few places over Gangetic West Bengal during next 24 hours and isolated heavy rainfall during subsequent 24 hrs.	

<p>21.05.2016 0300 UTC</p>	<p>Heavy to very heavy falls at isolated places over coastal districts of West Bengal during next 12 hours.</p> <p>Heavy to very heavy falls at a few places & isolated extremely heavy falls over Mizoram and isolated heavy to very heavy falls over south Assam, Manipur & Tripura during next 24 hours</p>	<p>Assam & Meghalaya.</p> <p>Heavy to very heavy falls at a few places over Nagaland-Manipur-Mizoram-Tripura.</p>
<p>22.05.2016 0300 UTC</p>	<p>Isolated heavy falls over east Arunachal Pradesh and Nagaland during next 24 hours.</p>	

CS KYANT, 2016

Verification of Heavy Rainfall Forecast

Table : Heavy Rainfall warning issued by IMD and realized heavy rainfall		
Date /Time	Warning issued	Realized weather during past 24hrs ending at 0830 hrs IST
21-Oct-2016 0830 IST	Heavy rainfall at isolated places over Andaman Islands	27 Oct. 2016 Tamilnadu & Puducherry: Pechiparai-8,
22-Oct-2016 0830 IST	Nil	
23-Oct-2016 0830 IST	Nil	
24-Oct-2016 0830 IST	Nil	
25-Oct-2016 0830 IST	Nil	
26-Oct-2016 0830 IST	Heavy rainfall at isolated places over south coastal Andhra Pradesh on 28 th to 30 th October 2016 and over north coastal Tamilnadu on 29 th to 31 st October 2016.	28 Oct. 2016 Coastal Andhra Pradesh: Kalingapatnam-7, Visakhapatnam-7 29 Oct. 2016 Nil
27-Oct-2016 0830 IST	Heavy rainfall at isolated places over south coastal Andhra Pradesh during 28 th to 30 th October 2016 and over north coastal Tamilnadu from 28 th evening to 31 st October 2016.	30 Oct. 2016 Tamilnadu & Puducherry: Tiruvaiyaru-7, 31 Oct. 2016 Tamilnadu & Puducherry:
28-Oct-2016 0830 IST	Heavy rainfall at isolated places over Andhra Pradesh and north coastal Tamilnadu during next 72 hours	Udumalpet-12, Vadipatti-12, Pollachi-11, Pechiparai-10, Tirumayam-8, Tirupathur-7, Peelamedu Ap-7,

CS Nada, 2016

Verification of heavy rainfall warning in case of CS, Nada

Date/ Time(IST)	Heavy rainfall warning issued	24-hour Heavy rainfall realized ending at 0300UTC
30.11.2016 0300 UTC	Heavy to very rainfall at a few places over Tamilnadu and Puducherry and isolated heavy to very rainfall over interior Tamilnadu on 1 st and 2 nd December.	Isolated heavy rainfall over Tamilna du, Puducherry & coastal Andhra Pradesh
01.12.2016 0300 UTC	Isolated heavy to very heavy rainfall over Tamilnadu and Puducherry during next 48 hours.	

VSCS Vardah, 2016

Verification of Heavy Rainfall Forecast

Date/Time(UTC)	Heavy rainfall warning issued	Realised 24-hour heavy rainfall ending at 0300 UTC of date
06.12.2016 0900	Heavy to very heavy falls at a few places over Andaman and Nicobar Islands during next 48 hrs.	Andaman & Nicobar Islands
07.12.2016 0300	Heavy to very heavy falls at a few places over Andaman Islands and heavy rainfall at isolated places over Nicobar Islands during next 24 hrs. isolated heavy falls	07-10 Dec. 2016 Heavy to very heavy rainfall at a few places

	over Andaman and Nicobar Islands during subsequent 24 hours.	over Andaman and Nicobar Islands.
08.12.2016 0300	Heavy to very heavy falls at a few places over Andaman Islands and heavy rainfall at isolated places over Nicobar Islands during next 24 hrs and isolated heavy falls over Andaman & Nicobar Islands during subsequent 24 hours. Isolated heavy falls over coastal Andhra Pradesh is very likely to commence from 11 th December evening.	Isolated extremely heavy rainfall on 8 th Dec. Tamil Nady, South coastal Andhra Pradesh, Rayalaseema
09.12.2016 0300	Isolated heavy falls over coastal Andhra Pradesh is very likely to commence from 11 th December evening.	13.12.2016 Heavy rainfall at many places with very heavy falls at few places and isolated
10.12.2016 0300	Isolated heavy to very heavy falls over south coastal Andhra Pradesh to commence from 11 th December evening for subsequent 36 hrs.	extremely heavy rainfall over
10.12.2016 1200	Isolated heavy to very heavy falls over south coastal Andhra Pradesh and adjoining areas of north coastal Tamil Nadu to commence from 11 th December evening for subsequent 36 hrs.	Chennai, Kancheepuram, Tiruvallur, districts of Tamil Nadu.
11.12.2016 0300	Isolated heavy to very heavy falls over south coastal Andhra Pradesh, north coastal Tamil Nadu and Puducherry to commence from 11 th December evening for subsequent 36 hrs. The rainfall intensity will increase gradually becoming heavy to very heavy rainfall (7-19 cm) at a few places and isolated extremely heavy rainfall (≥ 20 cm) over Chennai, Thiruvallur and Kanchipuram districts of Tamil Nadu and Nellore and Prakasam districts of Andhra Pradesh on 12 th December	Isolated Heavy to very heavy rainfall at a few places over Villipuram, Vellore, Krishnagiri, Tiruvannamalai districts of Tamil Nadu, Nellore district of coastal Andhra Pradesh and Chittoor, Anantapuram & Cuddapah districts of Rayalaseema.
12.12.2016 0300	Do	14.12.2016 Isolated heavy rainfall over south coastal Andhra Pradesh
13.12.2016 0300	Isolated heavy falls over north interior Tamil Nadu and adjoining areas of south interior Karnataka & north Kerala during next 12 hrs.	

CS Maarutha, 2017

Verification of Heavy Rainfall Forecast

Date & Time	Heavy rainfall warning issued	24-hour Heavy rainfall realised ending at 0300 UTC of date
15.04.2017 0300 UTC	Rainfall at most places with heavy rainfall at isolated places very likely to occur over Andaman Islands during next 24 hrs and isolated heavy rainfalls during subsequent 24 hours.	Andaman & Nicobar Islands: Maya Bandar-4, Port Blair-2
16.04.2017 0300 UTC	Light to moderate (upto 3 cm) rainfall at many places very likely to occur over Andaman Islands during next 12 hrs.	Andaman & Nicobar Islands:: Long Island-5, Hut Bay-4, Port Blair-4, Maya Bandar-4, IAF Carnicobar-2

SCS Mora, 2017

Verification of Heavy Rainfall Forecast

Date/Time (UTC) of issue	Heavy rainfall warning for the date	Realised heavy rainfall ending at 0300 UTC of date
<p>28.05.2017 0300</p>	<p>30th May 2017: Heavy to very heavy rainfall at isolated places over south Assam, Meghalaya, Tripura and Mizoram; and heavy rainfall at isolated places over Arunachal Pradesh and Nagaland.</p> <p>31st May 2017: Heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall over Assam & Meghalaya. Heavy to very heavy rainfall at isolated places over Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh.</p>	<p><u>31.05.2017</u></p> <p>Arunachal Pradesh: Pasighat AERO and Basar-8 each</p> <p>Assam & Meghalaya: Halflong and B P Ghat-11 each, Lumding -10, Shillong C.S. O.-9, Lakhipur-8</p>
<p>29.05.2017 0300</p>	<p>29th May 2017: Heavy rainfall at isolated places to commence over Tripura and Mizoram from today evening, the 29th May, 2017.</p> <p>30th May 2017: Heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall over Assam & Meghalaya. Heavy to very heavy rainfall at isolated places over Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh.</p> <p>31st May 2017: Heavy to very heavy rainfall at isolated places over Assam & Meghalaya, Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh.</p>	<p>and Karimganj, Chauldhowaghat, Matijuri, Barpathar, Jia Bharali N T Xing</p> <p>and N.Lakhimpur/Lilabari-7 each</p> <p>Nagaland, Manipur, Mizoram & Tripura: Lunglei and Serchip (Hydro)-10 each and Kohima-7.</p>

30.05.2017 0300	<p>30th May 2017: Heavy to very heavy rainfall at a few places and isolated extremely heavy rainfall over Assam & Meghalaya. Heavy to very heavy rainfall at isolated places over Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh.</p> <p>31st May 2017: Heavy to very heavy rainfall at isolated places over Assam & Meghalaya, Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh.</p>	<p>01.06.2017</p> <p>Arunachal Pradesh: Roing-11</p> <p>Assam & Meghalaya: Karimganj-9, A P Ghat-8, Mawsynram, Cherrapunji(RKM),</p>
31.05.2017 0000	<p>Heavy to very heavy rainfall at isolated places verylikely over south and eastern Assam, eastern Meghalaya, Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh during next 24 hours.</p>	<p>Cherrapunji & Silchar-7 each</p> <p>Manipur, Mizoram & Tripura: Agartala AERO-13 Kailashahar AERO-10</p>

VSCS OCKHI, 2017

Verification of Heavy Rainfall Forecast

Date/Time of issue (base time (hours IST))	Heavy rainfall warning for the date	Realised 24-hour heavy rainfall ending at 0300 UTC of date
29.11.2017 1150 (0830)	<ul style="list-style-type: none"> • Heavy to very heavy rainfall at isolated places is very likely over south Tamil Nadu during next 48 hours. • Heavy rainfall at isolated places during next 24 hours and isolated heavy to very heavy rainfall during subsequent 24 hours over south Kerala. • Heavy to very heavy rainfall at isolated places is very likely over Lakshadweep islands on 1st and 2nd December. 	<p><u>27 November 2017</u></p> <p>Tamil Nadu & Puducherry: Rameswaram-14, Chembarabakkam-12, Chembarambakkam ARG-11, Chennai & Sirkali-10 each, Kancheepuram-9, Vedaranyam-8, Poonamalle ARG, Kolapakkam ARG, Chidambaram, Poonamallee, Anaikaranchatram, Kollid and Anna University-7 each.</p> <p>South Interior Karnataka:- Imangala ARG-100</p> <p>Kerala:-Kollam RLY-7</p>
30.11.2017 1200 (0830)	<ul style="list-style-type: none"> • Heavy to very heavy rainfall at isolated places very likely over south Tamil Nadu & south Kerala during next 24 hours and isolated heavy falls over interior Tamil Nadu and Kerala during subsequent 24 hours. • Heavy to very heavy rainfall at a few places and isolated extremely heavy falls very likely over Lakshadweep area during next 48 hours. 	<p><u>28 November 2017</u></p> <p>Kerala:- Piravam-7</p> <p><u>29 November 2017</u></p> <p>Tamilnadu & Puducherry:- Nannilam-7</p> <p><u>30 November 2017</u></p> <p>Tamil Nadu & Puducherry: Vallam, Thuckalay and Pondicherry-7 each</p> <p>Kerala: Aryankavu-15</p>

1 December 2017

01.12.2017 1130 (0830)	<ul style="list-style-type: none"> • Heavy to very heavy rainfall at a few places and isolated extremely heavy falls (>20 cm) very likely over Lakshadweep area during next 24 hours and isolated heavy to very heavy falls during subsequent 24 hours. • Heavy rainfall at isolated places very likely over Kerala during next 24 hours.
02.12.2017 1130 (0830)	<ul style="list-style-type: none"> • Heavy to very heavy rainfall at a few places and isolated extremely heavy falls (>20 cm) very likely over north Lakshadweep Islands during next 24 hours and isolated heavy to very heavy falls during subsequent 24 hours. Isolated heavy to very rainfall is very likely over south Lakshadweep Islands during next 24 hours. • Heavy rainfall at isolated places very likely over Kerala during next 24 hours.
03.12.2017 1130 (0830)	<ul style="list-style-type: none"> • Heavy rainfall at isolated places is very likely over south Gujarat on 05th December.
04.12.2017 1200 (0830)	<ul style="list-style-type: none"> • Gujarat: Light to moderate rainfall is very likely at a few places over Saurashtra and south Gujarat region on 4th December. Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region on

Tamil Nadu & Puducherry: Papanasam (District: Tirunelveli)-45, Manimutharu-38, Mylaudy-19, Thenkasi-17, Thuckalay, Pechiparai, Gudalur & Bhoothapandy-16 each, Watrap-15, Maniyachi, Eraniel & Colachel-14 each, Nagercoil, Kodaikanal & Coonoor PTO-13 each, Kuzhithurai, Srivilliputhur, Satankulam, Shencottah, Ayikudi, Coonoor, Samayapuram & Srivaikuntam-12 each, Ottapadiram, Tiruchendur & Kovilpatti AWS-11 each, Tuticorin, Ambasamudram, Uttamapalayam & Kanyakumari-10 each, Radhapuram, Polur, Kovilpatti, Madavaram AWS, Sankarankoil & Sattur-9 each, Arani, Sivaganga, Sivagiri, Uthiramerur, Rajapalayam, Anna University, Grand Anaicut, Uthagamandalam, Chembarabakkam & DGP Office-8 each and Musiri, Vadipatti, K.Paramathi, Karur, Vilathikulam, Anna UTY ARG, Lalgudi, Ambur, Padalur, Panchapatti, Mayanur, Thamarapakkam, K Bridge, Cholavaram, Nanguneri, Periyakulam, Kalugumalai & Chennai(N)-7 each
Kerala: Aryankavu-26, Myladumpara AGRI-12, Varkala & Punalur-9 each and Trivandrum AERO & Neyyattinkara-8 each
Lakshadweep: Minicoy-19.

2 December 2017

Tamil Nadu & Puducherry: Sathanur Dam-23, Sirkali-19, Chidambaram & Anaikaranchatram (Kollid)-18 each, Chidambaram AWS-17, Virudachalam & Chengam-15 each, Gingee-14, Mylam AWS & K.M.Koil-14 each, Tirukoilur, Vilupuram, Coonoor PTO & Karaikal-13 each, Cuddalore, Sethiathope & Tiruvannamalai-12 each, Pondicherry-11, Mayanur, Paramathivelur & Polur-10 each, Parangipettai, Kallakurichi, Kodavasal, Nagapattinam, Vanur, Mayiladuthurai, Sankarapuram, & Eraniel, Jayamkondam, Rayakottah, Neyveli AWS, Kuzhithurai, Ariyalur & Tindivanam-9 each, Tiruvaiyaru, Tozhudur, Srimushnam, Valangaiman, Tiruvarur, Ulundurpet, Papanasam (District: Thanjavur) & Kothagiri-8 each and Harur,

<p>05.12.2017 1150 (0830)</p>	<ul style="list-style-type: none"> Gujarat: Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region till the morning of 6th December, 2017 (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir-Somnath, Bhavnagar, Diu, Daman, Dadra, and Nagar Haveli districts) and light to moderate rainfall over Gujarat region at many places during subsequent 12 hours. Maharashtra: Light to moderate rainfall at most places with isolated heavy rainfall is also likely over north Konkan till the morning of 6th December, 2017 (Palghar, Thane, Raigarh, Greater Mumbai, Dhule, Nandurbar, Nashik, Jalgaon, Ahmednagar and Pune districts). 	<p>Panruti, Needamangalam, Thuckalay, Uthangarai, Nagercoil, Arani & Attur-7 each. Kerala: Trivandrum AERO-8 and Perinthalamanna & Angadipuram-7 each Lakshadweep: Minicoy-14 <u>3 December 2017</u> Tamil Nadu & Puducherry: Tiruvarur-14, Pandavaiyar Head & Kodavasal-13 each, Valangaiman & Nannilam-12 each, Nagapattinam-11, Needamangalam, Kumbakonam, & Karaikal-9 each, Thiruthurai AWS & Tiruvadanaai-8 each and Thiruvudaimaruthur-7 <u>6 December 2017</u> Konkan & Goa: Dahanu-10, Talasari & Colaba-8 each and Palghar AGRI-7 Gujarat Region: Umergam & Vapi-9 each and Pardi, Waghai, Vansda & Gandevi ARG-7 each</p>
<p>06.12.2017 1150 (0830)</p>	<ul style="list-style-type: none"> Heavy rainfall very likely over Nicobar Islands and rainfall at many places over Andaman Islands during next 2 days Rainfall at many places very likely over north Andhra Pradesh and south Odisha during 7th to 9th December, 2017 with isolated heavy falls on 8th and 9th. 	

CS Roanu, 2016

Date & Time	Heavy rainfall warning issued	24-hour Heavy rainfall realised ending at 0300 UTC of date
<p>17.05.2016 0300 UTC</p>	<p>Heavy to very heavy falls at a few places over north coastal Tamil Nadu & Puducherry and isolated places over north interior Tamil Nadu and isolated heavy falls over south Tamil Nadu during next 24 hours. Isolated heavy to very heavy falls over north Tamil Nadu & Puducherry during subsequent 24 hours.</p> <p>Isolated heavy falls over south coastal Andhra Pradesh coast on 17th May 2016. Isolated heavy to very heavy falls on 18th May and isolated heavy falls on 19th over coastal Andhra Pradesh.</p> <p>Isolated heavy falls over Rayalaseema during the next 48 hours.</p>	<p><u>18.05.2016:</u> Isolated extremely heavy rainfall and heavy to very heavy rainfall at a few places over Tamil Nadu.</p> <p>Heavy to very heavy falls at a few places over coastal Andhra Pradesh.</p> <p>Isolated heavy to very heavy falls over Rayalaseema.</p> <p><u>19.05.2016:</u> Isolated heavy to very heavy falls over Tamil</p>

	Isolated heavy rainfall on 17 th , isolated heavy to very heavy falls on 18 th and isolated heavy falls on 19 th May over south interior Karnataka.	Nadu. Isolated extremely heavy rainfall and heavy to very heavy rainfall at a few places over coastal Andhra Pradesh. Isolated heavy falls over Rayalaseema. Isolated heavy falls over south interior Karnataka.
18.05.2016 0300 UTC	Isolated heavy to very heavy falls over north Tamil Nadu & Puducherry during next 24 hours. Heavy to very heavy falls at a few places and isolated extremely heavy falls likely over coastal Andhra Pradesh during next 48 hours. Heavy to very heavy falls at a few places over coastal Odisha on 19 th & 20 th May. Isolated heavy to very heavy falls over Rayalaseema during next 24 hours.	20.05.2016: Heavy to very heavy falls at a few places with isolated extremely heavy falls over Tamil Nadu. Heavy to very heavy falls at a few places over coastal Andhra Pradesh. Isolated heavy falls over Rayalaseema. Isolated heavy to very heavy falls over Odisha. Isolated heavy falls over south interior Karnataka.
19.05.2016 0300 UTC	Heavy to very heavy falls at a few places and isolated extremely heavy falls over coastal Andhra Pradesh during next 24 hours and heavy to very heavy at a few places during subsequent 24 hours. Heavy to very heavy falls at isolated places over coastal Odisha during next 24 hours and heavy to very heavy falls at few places on 20 May and isolated heavy on 21 st May. Isolated heavy falls over Telangana and Rayalaseema during next 24 hours.	21.05.2016: Heavy to very heavy falls at a few places with isolated extremely heavy falls over Odisha. Isolated heavy falls over Gangetic West Bengal and coastal Andhra Pradesh. 22.05.2016: Heavy to very heavy falls at isolated places over
20.05.2016 0300 UTC	Heavy to very heavy falls at a few places and isolated extremely heavy falls over north coastal Andhra Pradesh during next 24 hours. Heavy to very heavy falls at a few places with extremely heavy falls at isolated places over coastal Odisha during next 24 hours and isolated heavy rainfall during subsequent 24 hrs. Heavy to very heavy at a few places over Gangetic West Bengal during next 24 hours and isolated heavy rainfall during subsequent 24 hrs.	

<p>21.05.2016 0300 UTC</p>	<p>Heavy to very heavy falls at isolated places over coastal districts of West Bengal during next 12 hours.</p> <p>Heavy to very heavy falls at a few places & isolated extremely heavy falls over Mizoram and isolated heavy to very heavy falls over south Assam, Manipur & Tripura during next 24 hours</p>	<p>Assam & Meghalaya.</p> <p>Heavy to very heavy falls at a few places over Nagaland-Manipur-Mizoram-Tripura.</p>
<p>22.05.2016 0300 UTC</p>	<p>Isolated heavy falls over east Arunachal Pradesh and Nagaland during next 24 hours.</p>	

CS KYANT, 2016

Verification of Heavy Rainfall Forecast

Table : Heavy Rainfall warning issued by IMD and realized heavy rainfall		
Date /Time	Warning issued	Realized weather during past 24hrs ending at 0830 hrs IST
21-Oct-2016 0830 IST	Heavy rainfall at isolated places over Andaman Islands	27 Oct. 2016 Tamilnadu & Puducherry: Pechiparai-8,
22-Oct-2016 0830 IST	Nil	
23-Oct-2016 0830 IST	Nil	
24-Oct-2016 0830 IST	Nil	
25-Oct-2016 0830 IST	Nil	
26-Oct-2016 0830 IST	Heavy rainfall at isolated places over south coastal Andhra Pradesh on 28 th to 30 th October 2016 and over north coastal Tamilnadu on 29 th to 31 st October 2016.	28 Oct. 2016 Coastal Andhra Pradesh: Kalingapatnam-7, Visakhapatnam-7 29 Oct. 2016 Nil
27-Oct-2016 0830 IST	Heavy rainfall at isolated places over south coastal Andhra Pradesh during 28 th to 30 th October 2016 and over north coastal Tamilnadu from 28 th evening to 31 st October 2016.	30 Oct. 2016 Tamilnadu & Puducherry: Tiruvaiyaru-7, 31 Oct. 2016 Tamilnadu & Puducherry:
28-Oct-2016 0830 IST	Heavy rainfall at isolated places over Andhra Pradesh and north coastal Tamilnadu during next 72 hours	Udumalpet-12, Vadipatti-12, Pollachi-11, Pechiparai-10, Tirumayam-8, Tirupathur-7, Peelamedu Ap-7,

CS Nada, 2016

Verification of heavy rainfall warning in case of CS, Nada

Date/ Time(IST)	Heavy rainfall warning issued	24-hour Heavy rainfall realized ending at 0300UTC
30.11.2016 0300 UTC	Heavy to very rainfall at a few places over Tamilnadu and Puducherry and isolated heavy to very rainfall over interior Tamilnadu on 1 st and 2 nd December.	Isolated heavy rainfall over Tamilnadu, Puducherry &
01.12.2016 0300 UTC	Isolated heavy to very heavy rainfall over Tamilnadu and Puducherry during next 48 hours.	coastal Andhra Pradesh

VSCS Vardah, 2016

Verification of Heavy Rainfall Forecast

Date/Time (UTC)	Heavy rainfall warning issued	Realised 24-hour heavy rainfall ending at 0300 UTC of date
06.12.2016 0900	Heavy to very heavy falls at a few places over Andaman and Nicobar Islands during next 48 hrs.	Andaman & Nicobar Islands
07.12.2016 0300	Heavy to very heavy falls at a few places over Andaman Islands and heavy rainfall at isolated places over Nicobar Islands during next 24 hrs. isolated heavy falls	07-10 Dec. 2016 Heavy to very heavy rainfall at a few places

	over Andaman and Nicobar Islands during subsequent 24 hours.	over Andaman and Nicobar Islands. Isolated
08.12.2016 0300	Heavy to very heavy falls at a few places over Andaman Islands and heavy rainfall at isolated places over Nicobar Islands during next 24 hrs and isolated heavy falls over Andaman & Nicobar Islands during subsequent 24 hours. Isolated heavy falls over coastal Andhra Pradesh is very likely to commence from 11 th December evening.	extremely heavy rainfall on 8 th Dec. Tamil Nadu, South Coastal Andhra Pradesh, Rayalaseema
09.12.2016 0300	Isolated heavy falls over coastal Andhra Pradesh is very likely to commence from 11 th December evening.	13.12.2016 Heavy rainfall at many places with very heavy falls at few places and isolated
10.12.2016 0300	Isolated heavy to very heavy falls over south coastal Andhra Pradesh to commence from 11 th December evening for subsequent 36 hrs.	extremely heavy rainfall over
10.12.2016 1200	Isolated heavy to very heavy falls over south coastal Andhra Pradesh and adjoining areas of north coastal Tamil Nadu to commence from 11 th December evening for subsequent 36 hrs.	Chennai, Kancheepuram, Tiruvallur, districts of Tamil Nadu.
11.12.2016 0300	Isolated heavy to very heavy falls over south coastal Andhra Pradesh, north coastal Tamil Nadu and Puducherry to commence from 11 th December evening for subsequent 36 hrs. The rainfall intensity will increase gradually becoming heavy to very heavy rainfall (7-19 cm) at a few places and isolated extremely heavy rainfall (≥ 20 cm) over Chennai, Thiruvallur and Kanchipuram districts of Tamil Nadu and Nellore and Prakasam districts of Andhra Pradesh on 12 th December	Isolated Heavy to very heavy rainfall at a few places over Villipuram, Vellore, Krishnagiri, Tiruvannamalai districts of Tamil Nadu, Nellore district of
12.12.2016 0300	Do	coastal Andhra Pradesh and Chittoor, Anantapuram & Cuddapah districts of
13.12.2016 0300	Isolated heavy falls over north interior Tamil Nadu and adjoining areas of south interior Karnataka & north Kerala during next 12 hrs.	Rayalaseema. 14.12.2016 Isolated heavy rainfall over south coastal Andhra Pradesh

CS Komen, 2015

Date & Time	Heavy rainfall warning issued	24-hour Heavy rainfall ending at 0300 UTC of date
26.07.2015 0300 UTC	Heavy rainfall at isolated places over Gangetic west Bengal during next 24 hours and heavy to very heavy during subsequent 24 hours. Heavy rainfall at isolated places over Odisha on 27 th . Increase in rainfall intensity over Gangetic West Bengal and Odisha from 28 th July 2015.	<u>27.07.2015:</u> Heavy to very heavy rainfall at isolated places over Odisha and Gangetic West Bengal. Heavy rainfall at isolated places over Nagaland, Manipur, Mizoram & Tripura and Jharkhand
27.07.2015 0300 UTC	Heavy to very heavy rainfall at isolated places over the Gangetic West Bengal during next 48 hours and heavy to very heavy at a few places during the subsequent 24 hours. Heavy rainfall at isolated places over Odisha during next 48 hours and heavy to very heavy rainfall at a few places during subsequent 24 hours.	<u>28.07.2015:</u> Heavy to very heavy rainfall at isolated places over Odisha, Jharkhand and Gangetic West Bengal. Heavy rainfall at isolated places over Bihar.
28.07.2015 0300 UTC	Heavy to very heavy rainfall at isolated places over the Gangetic West Bengal during next 48 hours and heavy to very heavy at a few places during the subsequent 24 hours. Heavy rainfall at isolated places over Odisha during next 48 hours and heavy to very heavy rainfall at a few places during subsequent 24 hours.	<u>29.07.2015:</u> Heavy to very heavy rainfall at isolated places over Gangetic West Bengal, Odisha
29.07.2015 0300 UTC	Heavy to very heavy rainfall at a few places over the Gangetic West Bengal on 29 July; heavy to very heavy falls at a few places with isolated extremely heavy falls on 30 July and heavy to very	

heavy falls at a few places on 31 July. Heavy rainfall at isolated places over Odisha on 29 & 30 July and heavy to very heavy rainfall at a few places with isolated extremely heavy falls on 31 July.	
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CS NANAUK, 2014

Heavy rainfall warning issued by IMD and realized rainfall

Date	Forecast heavy rainfall	Actual heavy rainfall ending at 0300 UTC of date.
10. 06.2014 (0900 UTC)	Isolated heavy falls over coastal Karnataka, Kerala and Lakshadweep during next 24 hrs	11.06.2014 Isolated heavy falls over coastal Karnataka and Kerala
11. 06.2014 (0300 UTC)	Isolated heavy falls over coastal Karnataka, Kerala and Lakshadweep during next 24 hrs	12.06.2014 Isolated heavy falls over coastal Karnataka, Kerala and Lakshadweep
11. 06.2014 (2100 UTC)	Isolated heavy falls over coastal Karnataka, Kerala and Lakshadweep during next 24 hrs	13.06.2014 Isolated heavy falls over coastal Karnataka and Kerala

VSCS, HUDHUD, 2014

Verification of Heavy Rainfall warning

Date/ Time(UTC)	Forecast Rainfall	Observed Rainfall
06.10.14 (0300)	Andaman and Nicobar Islands: Isolated heavy to very heavy rainfall during the next 24 hours. Intensity would increase thereafter with heavy to very heavy rainfall at a few places and isolated extremely heavy falls (≥ 25 cm) during subsequent 48 hours.	08 October 2014: Andaman & Nicobar Islands: Isolated heavy to very heavy rainfall
07.10.14/ (0300)	Andaman and Nicobar Islands: Heavy to very heavy rainfall at a few places and isolated extremely heavy falls (≥ 25 cm) would occur over during subsequent 48 hours.	12 October 2014:
08.10.14/ (0300)	(xiii) Andaman and Nicobar Islands: (xiv) Heavy to very heavy rainfall at a few places and isolated extremely heavy falls (≥ 25 cm) during next 24 hours. (xv) North Andhra Pradesh and South Odisha: (xvi) Heavy to very heavy falls at a few places with isolated extremely heavy falls over south Odisha from 11th evening onwards. Heavy rain to very heavy rainfall would also commence at a few places over Visakhapatnam, Vizianagaram. Srikulam districts of north coastal Andhra Pradesh and districts of north coastal Odisha during the same period.	North Andhra Pradesh: Heavy to very heavy rainfall at a few places Odisha: Isolated heavy to very heavy rainfall 13 October 2014: North Andhra Pradesh: Heavy to very heavy rainfall at a few places with isolated extremely heavy rainfall. South Odisha: Heavy to very heavy rainfall at a few places with isolated
09.10.14/ (0300)	(xvii) North Andhra Pradesh and South Odisha coasts: (xviii) Heavy to very heavy falls at a few places and isolated extremely heavy falls over East Godavari, Visakhapatnam, Vizianagaram and Srikulam districts of North Coastal Andhra Pradesh and South Odisha from 11 th evening onwards. Heavy to very heavy rainfall at isolated places over remaining districts of Andhra Pradesh and North Coastal Odisha during the same period.	
10.10.14/ (0300)	North Andhra Pradesh and South Odisha coasts:	

	<p>Heavy to very heavy falls at a few places and isolated extremely heavy falls would occur over West and East Godavari, Visakhapatnam, Vizianagaram and Srikakulam districts of North Coastal Andhra Pradesh and Ganjam, Gajapati, Koraput, Rayagada, Nabarangpur, Malkangiri, Kalahandi, Phulbani districts of South Odisha commencing from 11th onwards. Heavy to very heavy rainfall at isolated places over Krishna, Guntur and Prakasham districts of Andhra Pradesh and North Coastal Odisha during the same period.</p>	<p>extremely heavy rainfall.</p> <p>Chhattisgarh: Isolated heavy to very heavy rainfall</p> <p>Jharkhand: Isolated heavy to very heavy rainfall</p> <p>14 October</p>
11.10.14/ (0300)	<p>Andhra Pradesh and Odisha coasts:</p> <p>Heavy to very heavy falls at a few places and isolated extremely heavy falls (≥ 24.5 cm) over West & East Godavari, Visakhapatnam, Vizianagaram & Srikakulam districts of North Andhra Pradesh and Ganjam, Gajapati, Koraput, Rayagada, Nabarangpur, Malkangiri, Kalahandi, Phulbani districts of South Odisha during next 48 hrs. Heavy to very heavy rainfall at isolated places over Krishna, Guntur & Prakasham districts of Andhra Pradesh and North Coastal Odisha during the same period.</p>	<p>2014:</p> <p>North Andhra Pradesh: Isolated heavy to very heavy rainfall.</p> <p>South Odisha: Isolated heavy to very heavy rainfall</p> <p>.Chhattisgarh: Heavy to very heavy rainfall at a few places over south</p>
12.10.14/ 0830	<p>Andhra Pradesh and Odisha coasts:</p> <p>Heavy (6.5–12.4 cm) to very heavy falls (12.5–24.4 cm) at a few places and isolated extremely heavy falls (≥ 24.5 cm) over West & East Godavari, Visakhapatnam, Vizianagaram & Srikakulam districts of North Andhra Pradesh and Ganjam, Gajapati, Koraput, Rayagada, Nabarangpur, Malkangiri, Kalahandi, Phulbani districts of South Odisha during next 48 hrs. Heavy to very heavy rainfall at isolated places over Krishna, Guntur & Prakasham districts of Andhra Pradesh and North coastal Odisha during the same period.</p>	<p>Chhattisgarh and Isolated heavy to very heavy rainfall over north Chhattisgarh.</p> <p>East Madhya Pradesh: Heavy to very heavy rainfall at isolated places.</p>
13.10.14/ (0300)	<p>Isolated heavy falls over Vizianagaram and Srikakulam districts of North Andhra Pradesh and adjoining districts of South coastal Odisha during next 6 hours and decrease thereafter.</p>	<p>15 October</p> <p>2014:</p> <p>Bihar: Heavy to very heavy</p>

	Isolated heavy to very heavy falls over Chhattisgarh & adjoining east Madhya Pradesh and interior Odisha during next 24 hrs and over East Uttar Pradesh, Jharkhand & Bihar during next 48 hrs.	rainfall at isolated places. East Uttar Pradesh: Heavy to very heavy rainfall at isolated places.
14.10.14/ (0300)	Heavy to very heavy falls at a few places over East Uttar Pradesh and Bihar; isolated heavy to very heavy over North Chhattisgarh & East Madhya Pradesh and isolated heavy over Jharkhand during next 24 hours. During subsequent 24 hours, heavy to very heavy falls at isolated places over East Uttar Pradesh, Bihar, Sub-Himalayan West Bengal and Sikkim and isolated heavy rainfall over Jharkhand and North Chhattisgarh.	Sub-Himalayan West Bengal & Sikkim: Isolated heavy rainfall.

VSCS, Nilofar 2014

Heavy rainfall forecast verification of VSCS, Nilofar

Date/ Time(IST)	Forecast Rainfall	Observed Rainfall
26.10.2014 / 1430	Rainfall at many places with isolated heavy to very heavy falls along coastal districts of Saurashtra and Kutch from 30 th morning.	Gujarat: No rainfall due to weakening of the system over the sea itself
27.10.2014 / 0530	Rainfall at most places with isolated heavy to very heavy falls along coastal districts of Saurashtra and Kutch from 30 th morning. Intensity would increase gradually with heavy to very heavy falls at a few places and isolated extremely heavy falls from the night of 30 th .	
28.10.2014 / 0530	Rainfall at most places with isolated heavy to very heavy falls along coastal districts of Saurashtra and Kutch from 31 st night.	
29.10.2014 / 1730	Moderate rainfall at most places with heavy to very heavy falls at isolated places over all districts of Saurashtra and Kutch and North Gujarat on 30 th and 31 st October.	
30.10.2014 / 0830	Moderate rainfall at most places with isolated heavy to very heavy falls over Kutch and coastal districts of Saurashtra during next 48 hrs. Light to moderate rainfall at many places with isolated heavy falls over remaining districts of Saurashtra, North Gujarat and Southwest Rajasthan during the same period.	
31.10.2014 / 0230	Moderate rainfall at most places with isolated heavy to very heavy falls over Kutch and coastal districts of Saurashtra during next 24 hrs. Light to moderate rainfall at many places with isolated heavy falls over remaining districts of Saurashtra, North Gujarat and Southwest Rajasthan during the same period.	
31.10.2014 / 0830	Moderate rainfall at many places over Kutch and Saurashtra during next 24 hrs	

Cyclonic storm 'Viyaru' over the Bay of Bengal (10-16 May, 2013)

Date/ Time(UTC)	Forecast for heavy rainfall	Actual heavy rainfall
15 May 2013 1200 UTC	Mizoram, Manipur and Tripura, south Assam, Nagaland : Rainfall at most places with isolated heavy fall on 16 th and 17 th	Rainfall at most places occurred over Mizoram, Tripura, south Assam with isolated heavy fall over Tripura 24 hrs cumulative rainfall (5 cm or more) recorded at 0300 UTC 16.05.2013 :
14 May 2013 1200 UTC	Mizoram, Manipur and Tripura : Rainfall at most places with isolated heavy fall on 16 th and 17 th	Tripura : Agartala, Bishalgarh 8cm each and Sonamura 7 cm 17.05.2013
13 May 2013 1200 UTC	Mizoram, Manipur and Tripura : Rainfall at many places with isolated heavy fall on 16 th and 17 th	Tripura : Gokulpur : 6 cm, Agartala : 5 cm
12 May 2013 1200 UTC	Mizoram and Tripura : Rainfall at many places with isolated heavy fall on 16 th and 17 th	

**Very Severe Cyclonic Storm (VSCS) Phailin over the Bay of Bengal
(08-14 October 2013)**

Date/ Time(IST)	Forecast Rainfall	Observed Rainfall
08.10.13/ 0830	Andaman and Nicobar Islands during next 48 hrs: Heavy to very heavy rainfall at a few places with isolated extremely heavy falls ($\geq 25\text{cm}$)	<p>Andaman & Nicobar Islands: 08 October: scattered heavy to very heavy rainfall. 09 October: scattered heavy to very heavy rainfall with isolated extremely heavy. 10 October: isolated heavy to very heavy rainfall.</p> <p>Odisha 12 October: Isolated heavy over coastal Odisha 13 October: scattered heavy to very heavy with isolated extremely heavy. 14 October: Isolated heavy 15 October : Isolated heavy</p> <p>Coastal Andhra Pradesh</p>
09.10.13/ 0830	Andaman and Nicobar Islands during next 24 hrs: Heavy to very heavy rainfall at a few places with isolated extremely heavy falls ($\geq 25\text{cm}$)	
09.10.13/ 1730	Andaman and Nicobar Islands during next 12 hrs: Heavy to very heavy rainfall at a few places with isolated extremely heavy falls ($\geq 25\text{cm}$)	
10.10.13/ 0830	Odisha : heavy to very heavy falls at a few places with isolated extremely heavy falls ($\geq 25\text{cm}$) would occur over coastal Odisha commencing from 12 th October 2013 morning. It would continue and extend to interior Odisha and coastal areas of Gangetic West Bengal from 13 th morning. North Coastal Andhra Pradesh : Heavy to very heavy rainfall would also occur at a few places over north coastal Andhra Pradesh commencing from 12 th Oct 2013	
11.10.13/ 0830	Commencement of rainfall over coastal Odisha, changed to 11 th night, Interior Odisha from 12 th evening and West Bengal 12 th night. Others remained same	
12.10.13/ 0830	Isolated heavy falls over north Chhattisgarh and Jharkhand, next 48 hrs	
13.10.13/ 0830	Isolated heavy to very heavy falls would occur over Bihar, Sub-Himalayan West Bengal & Sikkim during next 48 hours.	

14.10.13/ 0830	Isolated heavy to very heavy falls would occur over Bihar including Kosi and Gandak river catchments during next 24 hour and over Sub- Himalayan West Bengal & Sikkim including Teesta river catchment during next 48 hours. Isolated heavy falls over north Jharkhand during next 24 hours.	
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Severe Cyclonic Storm 'Helen' over Bay of Bengal (19-23 Nov 2013)

Date & time	Warning issued : Heavy rainfall	24 hr heavy rainfall realised at 0300UTC of
19/11/2013 0300 UTC	Isolated heavy to very heavy rainfall would occur over coastal Andhra Pradesh and north coastal Tamil Nadu commencing from 20 st November 2013 night.	21st November Isolated heavy rainfall- Tamil Nadu & Puducherry
20/11/2013 0300 UTC	Isolated extremely heavy falls (25cm or more) would occur over south coastal Andhra Pradesh on 21 st and 22 nd November. Isolated heavy to very heavy falls would occur over Rayalseema and adjoining north Tamil Nadu on 22 nd November.	22nd November Isolated heavy rainfall - Coastal Andhra Pradesh, Tamil Nadu & Puducherry and Kerala
21/11/2013 0300 UTC	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 21 st November 2013 night. Isolated heavy to very heavy falls would occur over Rayalseema and Telangana on 22 nd and 23 rd November.	23rd November Isolated Heavy to very heavy rainfall - Coastal Andhra Pradesh 24th November Heavy to very heavy rainfall- Tamil Nadu & Pudicherry and South interior Karnataka Isolated heavy rainfall- Telengana, coastal Karnataka & Kerala
22/11/2013 0300 UTC	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. 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.	

Very Severe Cyclonic Storm VSCS 'Lehar'(23-28 November, 2013)

Date & time	Warning issued	24 hr heavy rainfall realised at 0300UTC of date
23 rd November 1200 UTC	Heavy to very heavy rainfall at a few places with isolated extremely heavy falls (25 cm or more) would occur over Andaman & Nicobar Islands during 48 hrs.	25th November,2013 Heavy to very heavy rainfall at a few places – Andaman & Nicobar Island
24 th November 0300 UTC	Heavy to very heavy rainfall at a few places with isolated extremely heavy falls (25 cm or more) would occur over Andaman & Nicobar Islands during 48 hrs.	28th November, 2013 Isolated Heavy rainfall - Kerala
25 th November 0300 UTC	Isolated heavy to very heavy rainfall would occur over Andaman & Nicobar Islands during next 24 hrs. and intensity would decrease thereafter.	
26 th November 0300 UTC	Heavy to very heavy falls at a few places and isolated extremely heavy falls over north coastal Andhra Pradesh on 28 th and isolated heavy rainfall over south Odisha and south coastal Andhra Pradesh.	29th November, 2013 Isolated Heavy rainfall – Coastal Andhra Pradesh
27 th November 0300 UTC	Heavy to very heavy falls at a few places and isolated extremely heavy falls over coastal Andhra Pradesh and Yanam district of Puducherry on 28 th November and isolated heavy to very heavy rainfall over these regions on 29 th November 2013. Isolated heavy to very heavy falls would also occur over Telangana on 28 th and 29 th Nov 2013.	
28 th November 0300 UTC	Isolated heavy to very heavy falls would occur over coastal Andhra Pradesh and Yanam district of Puducherry during next 24 hours. Isolated heavy to very heavy falls would also occur over Telangana during next 36 hours.	

Very Severe Cyclonic Storm 'Madi' (06-13 December 2013)

Date & time	Warning issued	24 hr heavy rainfall realised at 0300UTC of date
06 th December 0300 UTC	Isolated heavy falls r Andaman and Nicobar Island during next 72 hours.	07th December- Nil 08TH Decem ber,2013 Isolated Heavy rainfall- Andaman & Nicobar 09TH Decem ber,2013 Isolated Heavy rainfall- Andaman & Nicobar 10th , 11th & 12thDecember – Nil 13th Decem ber,2013 Isolated heavy rainfall - Tamil Nadu & Puducherry 14th December – Nil
07 th December 0300 UTC	NIL	
08 th December 0300 UTC	NIL	
09 th December 0300 UTC	NIL	
10 th December 0300 UTC	NIL	
11 th December 0300 UTC	Isolated places over Tamil Nadu and Puducherry during next 48 hours.	
12 th December 0000 UTC	Isolated places over Tamil Nadu and Puducherry during next 48 hours.	
13 th Decembe r0000 UTC	Isolated places over Lakshadweep during next 24hours.	