



National Agromet Advisory Service Bulletin
Based on
Extended Range Weather Forecast (ERFS)

Validity: 28 December 2018 to 10 January 2019

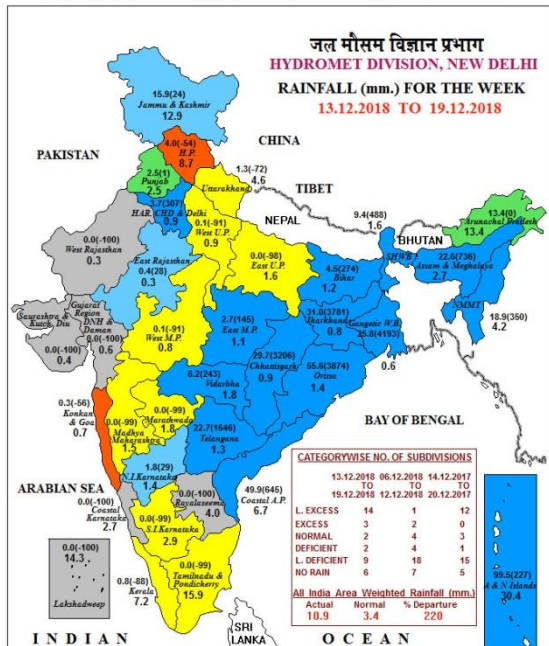
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&
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India Meteorological Department

Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

Realized Rainfall (13th to 26th December 2018)

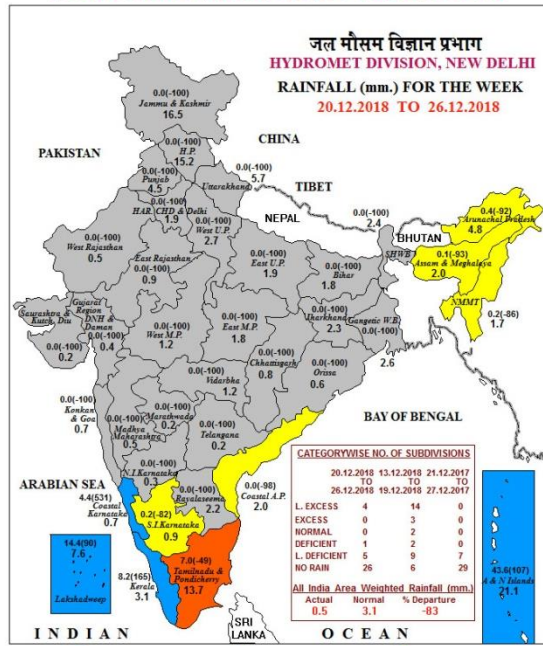
भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



LEGEND: ■ L. EXCESS (+60% OR MORE) ■ EXCESS (+20% TO +59%) ■ NORMAL (+19% TO -19%)
■ DEFICIENT (-20% TO -59%) ■ L. DEFICIENT (-60% TO -99%) ■ NO RAIN (-100%) ■ NO DATA

NOTES:
 (a) Rainfall figures are based on operational data.
 (b) Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)
 Percentage Departures of Rainfall are shown in Brackets.

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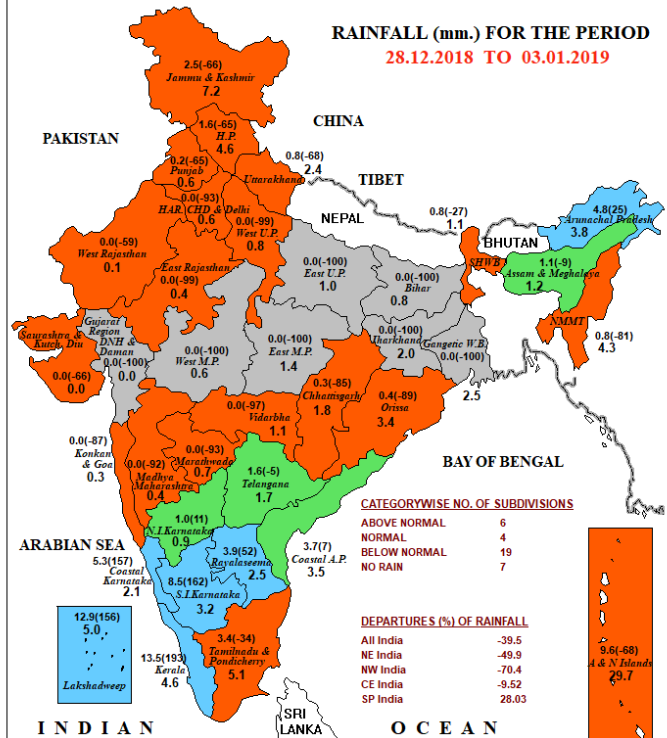
- Normal or above normal rainfall occurred in both the weeks in Andaman & Nicobar Islands.
- Normal or above normal rainfall occurred in either of the last two weeks in Jammu & Kashmir, Punjab, Haryana Chandigarh & Delhi, East Rajasthan, West Bengal & Sikkim, Bihar, Jharkhand, Odisha, East Madhya Pradesh, Chhattisgarh, Vidarbha Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Telangana, Coastal Andhra Pradesh, North Interior Karnataka Coastal Karnataka. Kerala and Lakshadweep.
- Below normal rainfall occurred in both the weeks in South Interior Karnataka and Tamil Nadu.
- Below normal rainfall / no rain occurred in either of the two weeks in Himachal Pradesh, Uttar Pradesh, West Madhya Pradesh, Konkan & Goa, Madhya Maharashtra and Marathwada.
- No rain occurred in both the weeks in West Rajasthan, Gujarat and Rayalaseema.

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 26 December) (28th December 2018 to 10th January 2019)

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Rainfall Forecast Map - Normal RF Based Categories

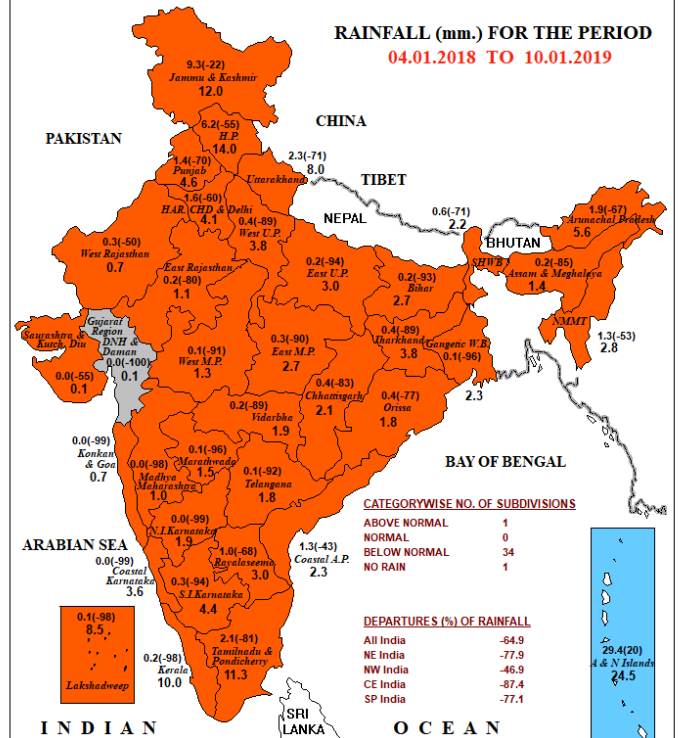


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■ BELOW NORMAL (-20% TO -99%) ■ NO RAIN (-100%) ■ NO DATA

NOTES:
 [a] Rainfall figures are based on MME Forecast data.
 [b] Small figures indicate actual rainfall [mm.], while bold figures indicate Normal rainfall [mm.]
 Percentage Departures of Rainfall are shown in Brackets.

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Rainfall Forecast Map - Normal RF Based Categories



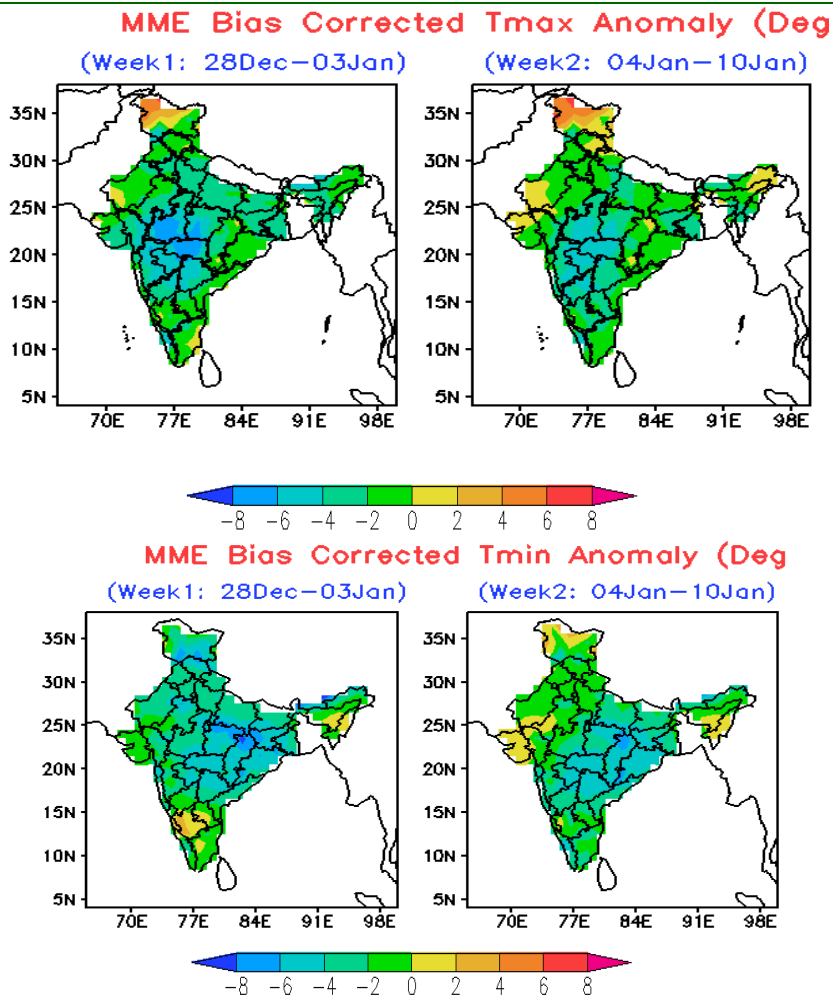
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Extended Range Rainfall Forecast

- **Week 1 (28.12.2018 to 03.01.2019):** No significant rainfall during the week along with parts of south peninsula.
- **Week 2 (04.01.2019 to 10.01.2019):** Slight rainfall activity over extreme north India and Bay Island.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 26 December)
(28th December 2018 to 10th January 2019)**



Maximum Temperature (Tmax)

- **Week 1 (28.12.2018 to 03.01.2019) and Week 2 (04.01.2019 to 10.01.2019):** Mainly below normal Tmax over most of India.

Minimum Temperature (Tmin)

- **Week 1 (28.12.2018 to 03.01.2019):** Cold wave is expected to continue over most parts of India. Higher negative anomaly belt gradually concentrate over eastern belt by end of the week.
- **Week 2 (04.01.2019 to 10.01.2019):** Mostly below normal Tmin over India during week 2. Eastern parts of India (Odisha, Chhattisgarh and adjoining region) will be under the grip of cold wave / lower minimum temperature.

Strategic Agricultural Planning based on rainfall during next two weeks till 10th January 2019

Agromet Advisories

Kerala

Rainfall received during the period from 01 October to 27 December 2018 over Kerala is 456.0 mm, which is 4% deficit than normal. The extended range weather forecast provided for next two weeks (28 December to 03 January and 04 to 10 January) is above normal for week-1 and below normal for week-2.

- White powdery spots are seen on the leaves of the affected plants of cucurbitaceous vegetables. If any fruits are present, harvest them. Then apply 1.5 ml tebuconazole or 0.5 ml difenoconazole per one litre of water. After 10 days, apply 20 gram of Trichoderma viride per one litre of water to control powdery mildew disease of vegetables.
- Green ginger can be harvested. To control soft rot, drench the soil with 1% Bordeaux mixture/0.3% mancozeb. Application of pseudomonas, split application of fertilizers and increased application of organic fertilizers are found to be effective in controlling the disease. Spray 0.1% malathion to control shoot borer.
- Farmers are advised to spray Quinalphos (0.05%) 400 ml in 200 litres of water against coffee berry borer.

Karnataka

Rainfall received during the period from 01 October to 27 December 2018 over different meteorological sub-divisions of Karnataka viz, North Interior Karnataka is 50.5 mm (65% deficit), South Interior Karnataka is 123.6 mm (41% deficit) and Coastal Karnataka is 182.8 mm (30% deficit). The extended range weather forecast provided for 28 December to 03 January and 04 to 10 January over North Interior Karnataka is normal for week-1 and below normal for week-2, over south interior and coastal Karnataka is above normal for week-1 and below normal for week-2.

South Interior Karnataka

- One protective irrigation to rabi crops is advised due to lack of soil moisture.
- Clear the weeds in Mango orchard, Guava, Sapota and put it under the basin as mulch.

Tamil Nadu

Rainfall received during the period of 01 October to 27 December 2018 over Tamil Nadu is 334.6 mm, which is 22% deficit as compared to the normal. The extended range weather forecast provided for next two weeks (28 December to 03 January and 04 to 10 January) is below normal for both the weeks.

With the prevailing weather conditions, the following management is required to manage the pest:

- There is a possibility of powdery mildew disease in pulses, to control spray, wettable sulphur 1800 g/ha or Carbendazim 500 g/ha.
- Rust and Charcoal rot disease is expected in sorghum. To control Rust spray Mancozeb @ 1kg/ha.
- Leafhopper, Thrips and stem weevil incidence in cotton is possible. To control, spray Imidacloprid 200 SL 100 ml/ha or fipronil 5%SC 1500-2000 ml/ha.

Maharashtra

Rainfall received during 01 October to 27 December 2018 over different meteorological sub divisions of the state viz., Konkan: 65.5 mm (56% deficit), Madhya Maharashtra: 38.7 mm (64% deficit), Vidarbha: 10.0mm (88% deficit) and Marathwada: 16.0 mm (84% deficit). The extended range weather forecast provided for next two weeks (28 December to 03 January and 04 to 10 January) over all the subdivisions of Maharashtra is below normal.

Marathwada

- Under the prevailing weather conditions, farmers are advised to control the attack of aphids in cruciferous vegetables take a spray of 1 litre 300 ppm NSKE or Dimethoate 30 % @ 260 ml per acre. Irrigation management should be done in vegetable crops.
- For management of Sigatoka leaf spot disease in banana orchard take a spray of Propiconazole 10 ml per 10 litre of water.
- Top dressing of 50 kg Nitrogen per hectare should be done in wheat crop sown in the month of November.
- For management of pod borer in chickpea crop take spray of Quinalphos 25 % @ 400 ml or Emamectin benzoate 5 % @ 80 g per acre.
- To control leaf spot disease in turmeric crop spray Mancozeb 25 gm or Carbendazim 10 gm per 10 litre of water along with sticker.

Vidarbha

- For very late sowing of wheat (December 15- 7 January) recommended variety is AKW-381. Seed treatment with Thiram @ 3.0 g / kg seed OR Vitavax 75 WP@ 2.5 g / kg seed is advisable.
- In chickpea, for management of pod borer after attaining ETL (one/meter row length or 5% pod damage), undertake insecticidal application of Deltamethrin 2.8% @10 ml is recommended.

Madhya Maharashtra

- To control pod borer in chick pea, install Heliculture traps @ 5 no./ ha If the incidence is more spray Chlorpyrifos/ Quinalphos @ 15-20 + 10 litre water.
- For control of powdery mildew disease in the late pruned ber, spray 80 WP wettable sulphur 20gm and karathane 5 ml per 10 litre water in alternation at 10 – 12 days interval.
- To control aphids & alternaria on Safflower spray dimethoate 15 ml + ready mix fungicide (carbendazim + mancozeb) @ 20 gm/ 10 L water.
- In scarcity zone situation for fodder production those farmers having facility of 1-2 irrigation the following crop varieties to be sown. Sorghum (Phule Ruchira, Phule Amruta, MP- Chari, SSG-59-3, Phule Godhan with 40 kg/ha seed) and Bajara (Giant Bajara), hybrid Napier grass, Phule Jayawant, Phule Gunwant and for Maize African tall with 75 kg/ha seed.

Uttar Pradesh

Amount of rainfall received over East Uttar Pradesh region is 0.4 mm (99% deficit) and West Uttar Pradesh is 7.5 mm (86% deficit) during 01 October to 27 December 2018. The extended range weather forecast provided for two weeks (28 December to 03 January and 04 to 10 January) for West Uttar Pradesh

is below normal for both the weeks and East Uttar Pradesh is no rain for week-1 and below normal for week-2.

- Dry weather during this week, therefore, farmers are advised to irrigate their timely sown Rabi crops as per need.
- Late sown wheat varieties such as HI-1563, DBW-16, K-307, K-9423, K-9533, K-9162, NW-1076 and PBW-373 with 120 kg seed/ha and row to row spacing 18-20 cm is recommended.
- Light to scattered clouds to be appeared, during this week therefore, aphid infestation is possible in mustard crop. If seen, spray Chlorpyrifos 20% EC @ 1.0 litre/ha or monocrotophos 36 % S.L. @ 500 ml/ha with 500-600 litter of water solution.
- Need based irrigation should be taken up for protection of fog and frost condition in potato crop and spray mancozeb 2 gram / litre water to counter the effect of blight disease at 10-15 days intervals.

West Bengal

Rainfall received over Gangetic West Bengal during 01 October to 27 December 2018 is 96.6 mm, which is 39% deficit. The extended range weather forecast provided for next two weeks (28 December to 03 January and 04 to 10 January) is no rain for week-1 and below normal for week-2.

- Boro-rice: cover the nursery bed with transparent polythene sheet. Keep stagnant water in the evening and drain out the same during early morning to keep the nursery bed warm.

Jharkhand

Rainfall received over Jharkhand during 01 October to 27 December 2018 is 55.3 mm, which is 39% deficit. The extended range weather forecast provided for next two weeks (28 December to 03 January and 04 to 10 January) is no rain for week-1 and below normal for week-2.

- In late sown wheat crops, broadcast urea @ 22 kg per acre after weeding. If the weeds are vigorous in the field, then spray weedicide Isoproburon (0.30 kg a.i.) and 2,4 - D (0.20 kg a.i.) in 240 litre of water per acre between 30 and 35 days of sowing of the crop.
- Nipping (pruning of upper parts of the plant) should be done in 30 to 40 days (before flowering stage) old gram crops. It enables the plant to bear more and more branches and subsequently flowers and pods.
- Timely sown mustard crops are now approaching the maturity stage. Harvest the crops when siliqua turns into bright yellow colour and dry the harvested crop in the sun for 2-3 days before threshing.
- The table pea crop may be attacked by powdery mildew disease. Hence, spray Karathen @ 1 ml per litre of water or Sulfex @ 3 gm per litre of water to control the disease.

Rajasthan

Amount of rainfall received over East Rajasthan region is 2.2 mm (92% deficit) and West Rajasthan is 0.5 mm (95% deficit) during 01 October to 27 December 2018. The extended range weather forecast provided for two weeks (28 December to 03 January and 04 to 10 January) for West and East Rajasthan is below normal for both the weeks.

- Farmers are advised to give light irrigation and spray 0.1% H₂SO₄ in Rabi crops to avoid injury from frost. Also burn crop residue for lowering the temperature.
- Apply irrigation in mustard where the crop at flowering to seed development stage.

- Intercultural operation should be done in vegetable crops and give remaining dose of fertilizer with irrigation as per recommended dose.

Assam

Rainfall received over Assam is 86.6 mm (55% deficit) during 01 October to 27 December 2018. The extended range weather forecast provided for next two weeks (28 December to 03 January and 04 to 10 January) is normal for week-1 and below normal for week-2.

- Transplanting of Boro rice seedlings in the main field may be continued. Before transplanting, root dip treatment of the seedlings with Chloropyriphos @ 1ml/litre of water along with 10 gm of urea for 2-3 hours is recommended.
- The weather condition since past week was found favourable for occurrence of late blight in potato. To control, spray Mancozeb @ 2.5gm/litre of water in the fair weather.
- Due to low temperature, occurrence of saw fly may be seen in the rapeseed & mustard crop. To control this pest, spray chloropyriphos 20EC @ 5mm/litre of water.

Punjab

Rainfall received over Punjab is 9.6 mm rainfall (74% deficit) during 01 October to 27 December 2018. The extended range weather forecast provided for next two weeks (28 December to 03 January and 04 to 10 January) is below normal for both the weeks.

- As night temperatures are below normal these days, and there is prediction of frost, so farmers are advised to protect the fruit plants particularly young ones from low temperature. Prepare the thatches on the young fruit plants and apply light irrigation to orchards. The plants are covered on all sides except south-west so that the plant gets sufficient sunlight.
- As dry weather is expected in coming 2-3 days, farmers are advised to apply irrigation to early and normal sown wheat crop.
- Weather during previous week was congenial for appearance of rust in pea, in case symptoms appear spray 500 g of Indofil M-45 in 200 litres of water.
- If wheat crop show deficiency of sulphur, broadcast 100 kg of Gypsum/acre and irrigate the field. If yellowing of leaves appear due to manganese deficiency in wheat crop, spray the crop with manganese sulphate.

Haryana

Rainfall received over Haryana is 9.9 mm rainfall (64% deficit) during 01 October to 27 December 2018. The extended range weather forecast provided for next two weeks (28 December to 03 January and 04 to 10 January) is below normal for both the weeks.

- Apply need based irrigation and intercultural operations to conserve the soil moisture in Gram.
- Do intercultural operation to conserve soil moisture and apply need based irrigation in barley, wheat and mustard.
- Due to fall in night temperature keep the animals under shed. Provide 50 grams iodized salt and 50 to 100 grams mineral mixture daily with animal feed/fodder to keep them healthy.

Himachal Pradesh

Himachal Pradesh has received 56.2 mm of rainfall during 01 October to 27 December 2018, which is 41% deficit. The extended range weather forecast provided for next two weeks (28 December to 03 January and 04 to 10 January) is below normal for both the weeks.

- Add mulch material in space between two rows of vegetables crops for conservation of soil moisture and maintaining the soil temperature.
- Farmers are advised to complete sowing of potato in lower & mid hill regions.
- Farmers are advised to start earthing-up in potato if crop has attained a height of 15-22 cm.
- Apply manures and fertilizers in mango and other orchard gardens. Wrapping of plastic sheets around mango trunk should be done for preventing climbing of young mealy bugs.
- Temperature is falling and cold wave is likely to grip the area, so protect the newly born calves and animals from cold.

Jammu

Rainfall received during 01 October to 27 December 2018 over Jammu is 128.6 mm, which is 13% excess. The extended range weather forecast provided for next two weeks (28 December to 03 January and 04 to 10 January) over Jammu is below normal for both the weeks.

- Due to the decrease in minimum temperature farmers are advised to go for very late sown wheat variety such as Raj 3077, HD-2285, Raj-3765 and HD-2402.
- If 50-60 aphids observed per plant in mustard crop, spray Chlorpyrifos 20EC @ 0.05% or Monochrotophos 36 WSC @ 0.04%.
- Due to congenial weather for collar rot and root rot in gram, rogue out affected plants and drench the affected patches of the field with thiram or captan @ 2g/litre of water.
- Spray mancozeb @ 0.25% at 10-15 days interval, if attack of downey mildew is observed in vegetable and horticulture crops.

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