



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

Validity: 13 September to 26 September 2019

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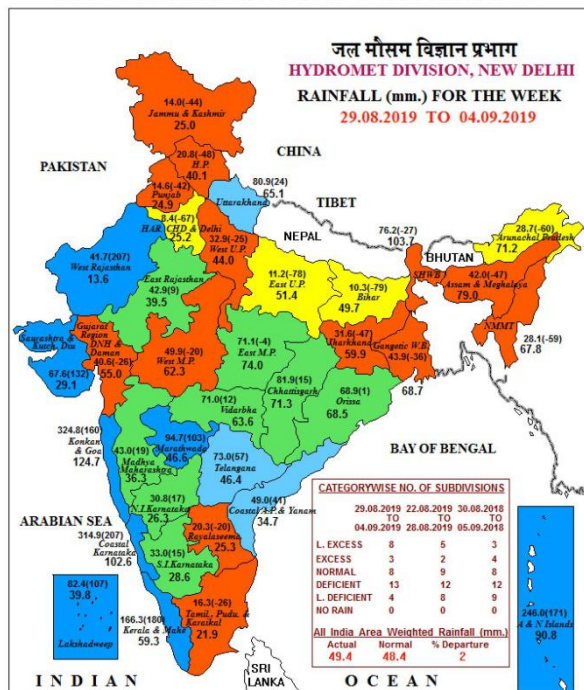
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&
Earth System Science Organization
India Meteorological Department

Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

Realized Rainfall

(29th August to 11th September, 2019)

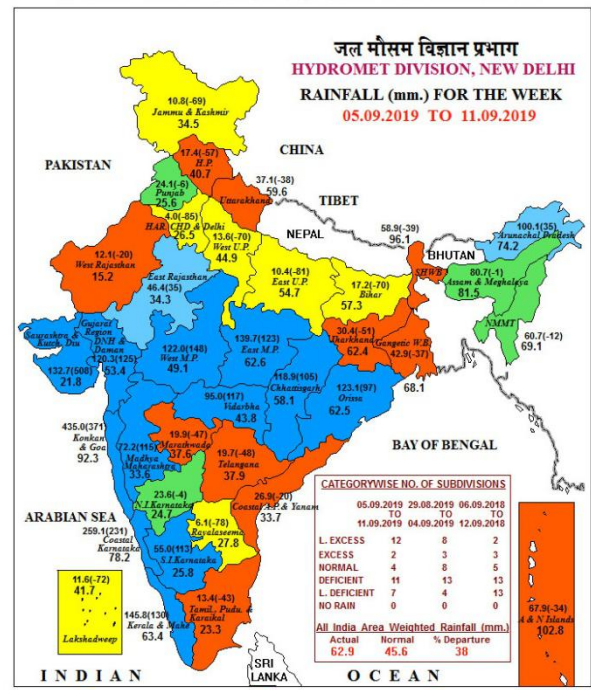
भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



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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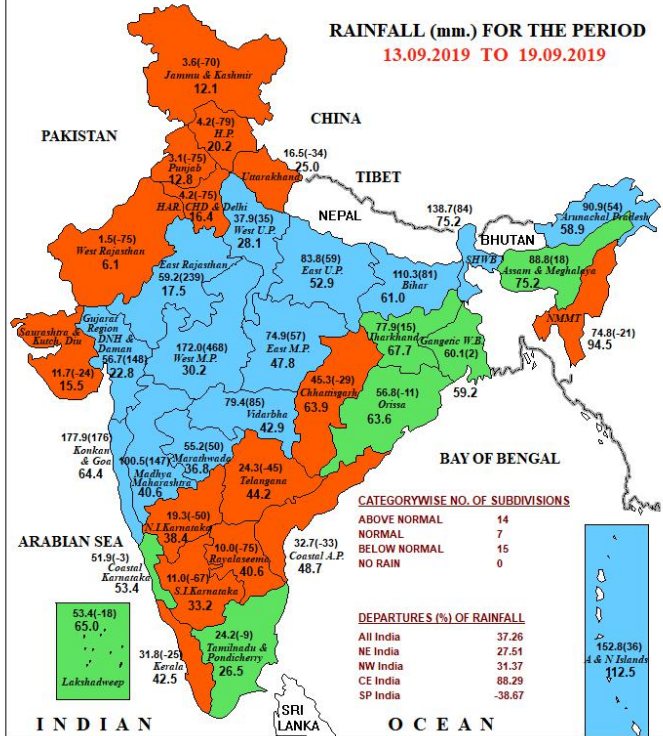
- Normal or above normal rainfall occurred in both the weeks in East Rajasthan, East Madhya Pradesh, Chhattisgarh, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra, Vidarbha, Odisha, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka and Kerala & Mahe.
- Normal or above normal rainfall occurred in either of the two weeks in Uttarakhand, Punjab, West Rajasthan, Gujarat Region, Marathwada, West Madhya Pradesh, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura (NMMT), Telangana, Coastal Andhra Pradesh & Yanam, Andaman & Nicobar Islands and Lakshadweep.
- Below normal rainfall occurred in both the weeks in Jammu & Kashmir, Himachal Pradesh, Haryana, Chandigarh & Delhi, East Uttar Pradesh, West Uttar Pradesh, Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Gangetic West Bengal, Rayalaseema and Tamil Nadu Puducherry & Karaikal.

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 11 September) (13th to 26th September 2019)

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Rainfall Forecast Map - Normal RF Based Categories

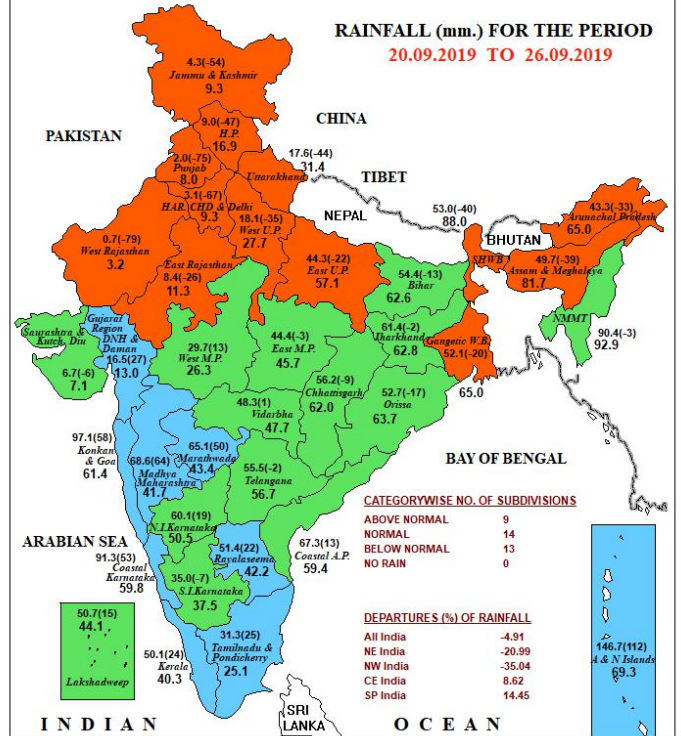


LEGEND: ■ ABOVE NORMAL (+20% OR MORE) ■ NORMAL (+19% TO -19%)
■ BELOW NORMAL (-20% TO -99%) ■ NO RAIN (-100%) ■ NO DATA

NOTES:
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Rainfall Forecast Map - Normal RF Based Categories



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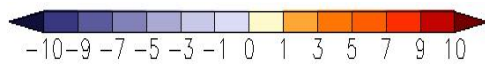
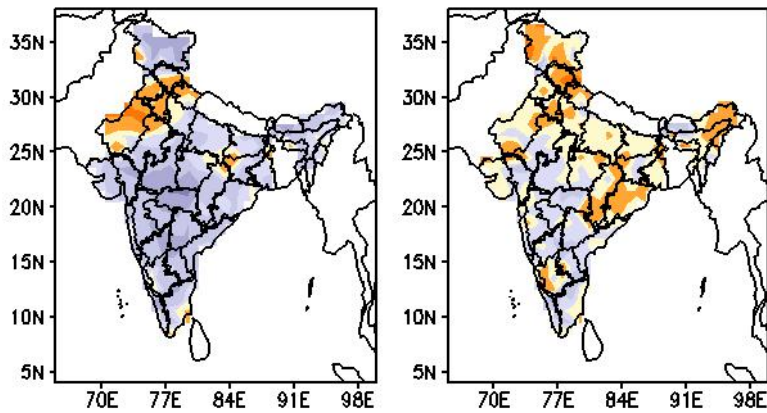
- **Week 1 (13.09.2019 to 19.09.2019):** Mainly above normal rainfall over central parts of India and adjoining northern India (Konkan, Madhya Pradesh, Uttar Pradesh, Bihar, Northeast etc.) northern parts of Maharashtra, Gujarat etc. The southern peninsula and south-eastern coastal regions will have below normal rainfall.
- **Week 2 (20.09.2019 to 26.09.2019):** Mostly normal rainfall over central and south peninsula region, whereas the northwest and northeast belts will have below normal rainfall.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 11 September)
(13th to 26th September 2019)**

MME forecast Tmax anomaly (Deg C)

(Week1: 13Sep–19Sep)

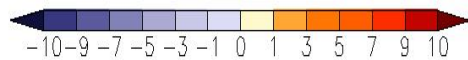
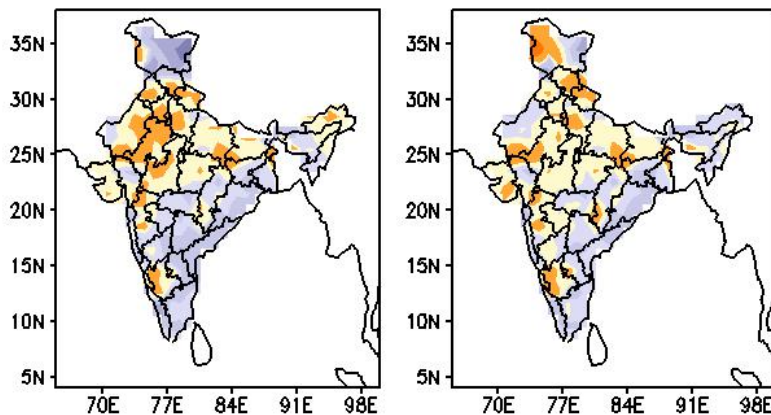
(Week2: 20Sep–26Sep)



MME forecast Tmin anomaly (Deg C)

(Week1: 13Sep–19Sep)

(Week2: 20Sep–26Sep)



Maximum Temperature (Tmax)

- **Week 1 (13.09.2019 to 19.09.2019) and Week 2 (20.09.2019 to 26.09.2019):** Tmax anomaly is likely to be positive over north-west parts of India during week 1 and over northern India and along the Indo-Gangetic region during week 2. During week 1 to week 2, it is mainly below normal over most parts of India.

Minimum Temperature (Tmin)

- **Week 1 (13.09.2019 to 19.09.2019) and Week 2 (20.09.2019 to 26.09.2019):** Slight above normal Tmin over northern and adjoining central parts of India during the period and weak negative anomaly over rest of the region.

Strategic Agricultural Planning based on weather during next two weeks till 26th September 2019

Agromet Advisories

Kerala

Amount of rainfall received over Kerala during the period from 01 June to 13 September 2019 is 2130.8 mm (13% excess). The extended range weather forecast for next two weeks (13 - 19 September and 20 - 26 September) is below normal for week-1 and above normal for week-2.

- With the prevailing weather conditions, there is a chance of incidence of rice bug in paddy. To control, spray 2 ml malathion per one litre of water. Pesticides application should be done either before 9 am or after 3 pm. Otherwise, the pesticide application will adversely affect the pollination.
- Due to prolonged rains, there is a chance of bud rot in coconut. Keep three perforated Mancozeb sachets (5 g per packet) around spindle leaves as a prophylactic measure against bud rot..
- Due to heavy rains in monsoon season, there is a chance of quick wilt disease in pepper. To control quick wilt and pollu disease, drench the soil with 0.2 % Copper oxychloride and spray the aerial part(plant) with 1% Bordeaux mixture as a prophylactic measure. Application Trichoderma/ Psuedomonas culture will control the quick wilt infestation.
- High rainfall during this month may cause fruit rot and leaf fall in nutmeg. As a prophylactic measure, apply Trichoderma mixture (Add 2 kg Trichoderma to a mixture of 90 kg FYM and 10 kg Neemcake and keep for two weeks with sufficient moisture). Basal application of 2.5 kg of this mixture followed by foliar spray with Pseudomonas (20g/litre) or 1% Bordeaux mixture can control the fruit rot.
- There is a chance of mahali disease in arecanut due to heavy rainfall. The conidia of the fungus carried by wind and rainwater is favourable for disease spread. Prophylactic spraying of Bordeaux mixture (1%) or Copper Oxychloride 50WP (2g/l) with sticker is recommended.
- Due to prolonged rains/ cloudy days, there is a chance of incidence of fungal diseases on leaves and buds in Rubber. To control, spray Indofil M45 4g/ litre.
- There is a chance of erwinia rot in banana due to heavy rainfall in this season. As a precaution, apply lime in the banana basin or bleaching powder in the irrigation channels. To enhance the disease resistance, drench the basin with Pseudomonas @ 20g per litre of water. Affected plants can be protected by drenching the basin with 5 g bleaching powder or 3 g Copper oxychloride or 2g Copper hydroxide per one litre of water. Severely affected plants should be cut and removed to prevent the spread of disease.

Karnataka

Amount of rainfall received over North Interior Karnataka is 494.7 mm (26 % excess), South Interior Karnataka is 709.0 mm (23 % excess) and Coastal Karnataka is 3615.4 mm (24 % excess) during 01 June to 13 September 2019. The extended range weather forecast for next two weeks (13 - 19

September and 20 - 26 September) over both south and North interior Karnataka is below normal for week-1 and normal for week-2.

South Interior Karnataka

- Wherever pre-monsoon short duration crops are sown in the month of May. They have to be harvested in August
- In mango, canopy thinning is suggested for proper penetration of sunlight and remove malformed inflorescence to prevent further spread.

Tamil Nadu

Amount of rainfall received over Tamil Nadu is 247.9 mm (-5 % deficit) during the period of 01 June to 13 September 2019. The extended range weather forecast for next two weeks (13 - 19 September and 20 - 26 September) is normal for week-1 and above normal for week-2.

- In the prevailing weather conditions, fruit rot and die back is likely to appear in the chilli. To control the disease, spray Ziram O. 25% or Captan 0.2% or Miltox 0.2%.
- Shoot and fruit borer occurrence is noticed in Brinjal. To control, remove the affected fruits, terminal shoot showing boreholes and spray Neem Seed Kernel Extract 5 %.
- There is a chance of occurrence of red spider mite in bhendi. To control, spray Neem Seed Kernel Extract 5 %.

Maharashtra

Rainfall received over Madhya Maharashtra is 1013.8mm (56% excess), over Marathwada is 458.8 mm (19% deficit), Vidarbha is 902.6 mm (4% excess) and Konkan region 4051.8 mm (51% excess) during 01 June to 13 September 2019. The extended range weather forecast for next two weeks (13 - 19 September and 20 - 26 September) over Madhya Maharashtra, Konkan and Marathwada is above normal for both week-1 and week-2. Whereas in Vidarbha, it is above normal for week-1 and normal for week-2.

Marathwada

- Regular monitoring is necessary to control Girdle beetle, Stem fly and Leaf eating caterpillar. If infestation is noticed, spray Thiamethoxam 12.6 % + Lambda – cyhalothrin 9.5 % @ 2.5 ml, Indoxacarb 15.8% @ 6.66ml or Chlorantraniliprole 18.5 % @ 3 ml per 10 liter of water.

Vidarbha

- Present weather conditions are favorable for infestation of aphids and jassids in cotton. To control, spray Azadirachtin 1500 ppm @ 25 ml or Azadirachtin 0.03% (300 ppm) @ 50 ml or Imidacloprid

17.8% SL 2.5 ml or Profenofos 50% EC @ 20 ml per 10 litres water.

- For biological control of soyabean pod borer, spray *Bacillus thuringiensis* var. *kurstaki* (Serotype H-39,3b, Strain Z-52) @ 15 g per 10 litres of water. Depending upon the severity of infestation, spraying may be repeated after 10 to 12 days.
- For surveillance and control of pink boll worm incidence, erect 4 to 5 pheromone traps/ha in cotton fields. Collect and destroy rosette flowers-buds before application of insecticides. Upon 5% infested flowers-buds, spray Quinolphos 25% AF @ 25 ML OR Chlorpyrifos 20% EC @ 25 ml per 10 litres of water.

Konkan

- Due to continuous heavy rain, high relative humidity and low sunshine hours favours development of fungal diseases like leaf drop and branch rot in cashewnut. To control, collect and destroy all diseased infected leaves, branches and apply Bordo paste to cut portion of branches and after that spray Metalaxyl 8% + Mancozeb 64% combination fungicide @ 20 g per 10 liter of water.
- Due to increase in humidity, there is possibility of incidence of false smut disease in rice. Grains will be transformed into greenish smutballs with velvety appearance. For management of disease spray hexaconazole 5%SC @10 ml per 10 liter of water at panicle initiation stage.

Uttarakhand

Uttarakhand received 825.9 mm rainfall which is 23 % deficit during 01 June to 13 September 2019. The extended range weather forecast for next two weeks (13 - 19 September and 20 - 26 September) is below normal for both week-1 and week-2.

- In present weather condition, monitor pulse crops regularly. If white flies or sucking pests insect observed above ETL on crops, farmers are advised to spray Imidacloprid @0.5-1.0 ml or Neem oil @2-2.5ml per liter of water with added adhesive in small quantity on a non rainy day.

Jammu

Rainfall received during 01 June to 06 September 2019 over Jammu was 419.2 mm, which is 18% deficit. The extended range weather forecast for next two weeks (13 - 19 September and 20 - 26 September) is below normal for week-1 and week-2.

- The present weather conditions are favourable for attack of leaf blight in maize crop, under such situation spray mancozeb 75WP @ 0.25% or Zineb @0.02 %. If attack of stem borer is noticed, then apply the Carbofuran 3G @ 20kg/ha directly into the whorles.
- Weather is favorable for the attack of stem borer in maize. Under such conditions, application of

Carbofuran/ Cartap granules @ 5g /whorl is recommended to control the pest.

- In the Prevailing weather conditions, there might be a chance of plant hopper damage. If incidence is observed, install pheromone traps @ 1/kanal (or) spray Imidacloprid 200SL @ 6.25 ml/Kanal.

Andhra Pradesh

Rainfall received during 01 June to 13 September 2019 over Coastal Andhra Pradesh and Yanam was 479.3 mm (normal) whereas in Rayalaseema 253.0 mm (20% deficit). The extended range weather forecast for next two weeks over Coastal Andhra Pradesh and Yanam (13 - 19 September and 20 - 26 September) is below normal for week-1 and normal for week-2. Over Rayalaseema, it is below normal for week-1 and above normal for week-2.

- As the prevailing conditions are favourable for incidence of blast and sheath blight in Rice crop in East Godavari, Srikakulam, Vishakhapatnam, Vizianagaram, Ananthapuramu, Kurnool districts. Farmers are advised to spray Isoprothioline@1.5ml/L of water for control of blast and hexaconazole@2ml/L or Propiconazole@1ml/L of water for control of sheath blight.
- There is a chance for early shoot borer incidence in sugarcane in Srikakulam, Vizianagaram and Vishakhapatnam districts. Farmers are advised to spray Chlorpyrifos@2.5ml/L or Monochrotophos@1.6ml/L for control.

Assam

Rainfall received during 01 June to 13 September 2019 over Assam and Meghalaya was 1346.9 mm (15% deficit). The extended range weather forecast for next two weeks (13 - 19 September and 20 - 26 September) is normal for week-1 and below normal for week-2.

- Current weather is favorable for attack of leaf folder, army worm, rice hispa in tillering stage of paddy. To control those pest, the farmers are advised to spray Chloropyriphos 20EC or Monocrotophos 40EC @ 1.5ml per liter of water mainly in sunny weather.
- In the affected plant, dark staining of the bark occurs which becomes olive brown in colour with water soaked appearance. In advanced stages, the bark cracks, strips off lengthwise and gum exudates resulting yellowing and die back. The affected portion should be scraped out with a small portion of healthy tissue without injuring the wood and smear with Bordeaux paste.

Punjab

Rainfall received during 01 June to 13 September 2019 over Punjab was 403.2 mm (6% deficit). The extended range weather forecast for next two weeks (13 - 19 September and 20 - 26 September) is below normal for both week-1 and week-2.

- Prevailing weather is favourable for the onset of false smut. To protect, spray 500 ml Kocide in 200 litres of water per acre at boot stage.
- Regularly monitor the rice fields for plant hopper infestation. If 5 or more plant hoppers per hill are observed, spray Chess 50 WG @ 170 g/acre or Confidor 200 SL @ 40 ml/acre.
- In cotton crop, if incidence of whitefly nymphs are observed, spray Lano 10 EC (Pyriproxyfen) @ 500 ml or Oberon/Voltage 22.9 SC (Spiromesifen) @ 200 ml/acre.

Bihar

Rainfall received during 01 June to 13 September 2019 over Bihar was 686.6 mm(23% deficit). The extended range weather forecast for next two weeks (13 - 19 September and 20 - 26 September) is above normal for week-1 and normal for week-2.

- Monitoring of *khaira* disease is advised in late transplanted paddy. If symptoms occur, spray zinc sulphate@5.0 kg mixed with [lime@2.5](#) kg in 500 liters of water is advised for one hectare area.
- Monitoring of sucking insect-pests such as white fly, leaf hopper and aphid is advised in vegetables nursery/crops. These insect-pests work as vectors to transmit diseases from diseased plants to healthy plants in the nursery. For prevention, spraying of Imidacloprid @ 0.3ml/liter of water is advised in clear day condition.

Rajasthan

Rainfall received during 01 June to 13 September 2019 over East Rajasthan was 795.7 (41% excess). The extended range weather forecast for next two weeks (13 - 19 September and 20 - 26 September) over east Rajasthan is above normal for week-1 and below normal for week-2.

- Current weather is suitable for hemorrhagic septicemia and black quarter diseases in livestock so farmers are advised to do vaccination to protect their animal from these diseases.
- Wherever the cereals and oil seed crops growth is stunted due to water logging conditions farmers are advised harvest the crops for green fodder purpose for animals and prepare silage and hay.

Himachal Pradesh

Rainfall received during 01 June to 13 September 2019 over Himachal Pradesh was 618.7 mm, which is 12% deficit. The extended range weather forecast for next two weeks (13 - 19 September and 20 - 26 September) is below normal for week-1 and week-2.

- To control the fruit rot in tomato, remove the yellow leaves 15 to 20 cm near the ground and bury them into the soil and spray Mancozeb 250g or Redomil 250 g @ 100 litre of water at an interval of

8-10 days.

- Prevailing weather conditions are favorable for blast and brown spot incidence. To control, spray Carbendazim @ 2 gram per litre of water.

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