

Eighth Session of the ASEAN Climate Outlook Forum (ASEANCOF-8) May 2017, Centre for Climate Research Singapore (CCRS), Meteorological Service Singapore

Consensus Bulletin for June-July-August (JJA) 2017 Season

Introduction

The ASEAN Climate Outlook Forum (ASEANCOF) is an avenue to collaboratively develop consensus-based seasonal climate outlooks and related information on a regional scale. The forum outlook and its activities contribute significantly to one of the key roles of the ASEAN Specialised Meteorological Centre (ASMC), which is to conduct climate and seasonal prediction for ASEAN region through pooling the expertise of ASEAN National Meteorological Services.

The Eighth ASEANCOF (ASEANCOF-8) was organized by Meteorological Services Singapore as host of the ASEAN Specialised Meteorological Centre. Representative from National Meteorological and Hydrological Services (NMHSs) of 10 ASEAN Member countries: Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam created a consensus forecast for the summer monsoon 2017 in the ASEAN region. As with previous June-July-August (JJA) outlooks, the consensus was achieved through online correspondence. Each country completed a questionnaire on the current conditions and predictions for the Southeast Asia region. In particular, the forum took into account the significant influence of the El Niño Southern Oscillation (ENSO) and the Indian Ocean Dipole (IOD) on the climate over Southeast Asia.

Conditions and Outlook

Recent analysis of sea surface temperature (SST) anomalies over the tropical Pacific indicate an ENSO neutral state. The warmer than average SSTs in the eastern Pacific weakened slightly in May.

During JJA 2017, international climate outlooks show a near equal chance of conditions remaining neutral and a weak El Niño developing. An El Niño is indicated by warmer SST over central and eastern tropical Pacific, and often leads to drier conditions for Southeast Asia. Should an El Niño develop, the conditions are expected to be weak and have less impact on the Maritime Continent than previous El Niño events.

The Indian Ocean Dipole (IOD) is currently slightly positive, but still within the neutral state. While some international climate models predict a positive IOD for JJA, the skill of the models is low at this point.

The Southwest Monsoon is predicted to be near normal, but over the Western North Pacific monsoon surges may occur during the passage of tropical cyclones. For the Bay of Bengal, the number of TCs is predicted to be normal to above normal.

Taking into consideration the national level forecasts, the present state of the climate, and the forecasts available from GPCs and other global centers, the forum agreed on the following consensus-based outlook for JJA 2017 for the Southeast Asia region:

RAINFALL

For the upcoming Northern Hemisphere summer monsoon season (June-July-August), drier than normal conditions are expected over central and southern Southeast Asia, including southern Sumatra, southern Kalimantan, Java, Singapore and Sarawak. There is a slightly enhanced probability of wetter than normal conditions over coastal Myanmar, northern Thailand, northern Philippines, northern Papua, and northern Kalimantan. Near normal conditions are predicted for the rest of the region, including most of mainland Southeast Asia.

TEMPERATURE

Near normal or above normal temperatures are expected over much of Southeast Asia for the Northern Hemisphere summer monsoon season (June-July-August). Above normal temperature is expected over much of Indonesia, Singapore, Brunei, Sarawak, Thailand, and northern Myanmar.

Refer to Annex A for reference on what is meant by "above, near, or below normal" in the outlook. For more information on the Northern Hemisphere winter monsoon outlook and further updates on the national scale, the relevant NMSs should be consulted (see Annex B).

Consensus Maps for JJA 2017

PROBABILISTIC RAINFALL OUTLOOK



PROBABILISTIC TEMPERATURE OUTLOOK



Acknowledgements

The forum would like to thank the National Meteorological Services of the ASEAN Member countries for conveying their national-level forecasts, the Global Producing Centres and other participating international climate modelling centres for their products and expertise made available for this climate outlook forum.

Annex A: Rainfall and Temperature Tercile Climatologies

The following figures are rainfall and temperature mean and tercile boundary climatologies to reference against the consensus outlook. Only a single source of data for each variable is provided (<u>CRU, UEA</u>). For more representative climatologies, reference should be made also against observational datasets known to better characterize local patterns (e.g. quality-controlled station data from the respective National Meteorological Services).



Figure A1: Rainfall mean climatology in mm/month (left) and the temperature mean climatology (right) for JJA from 1981-2010 from TS3p21 (CRU, UEA).



Figure A2: Rainfall climatologies of the lower tercile boundary (left) and the upper tercile boundary (right) for JJA from 1981-2010 from TS3p21 (CRU, UEA) in mm/month.



Figure A3: Temperature climatologies of the lower tercile boundary (left) and the upper tercile boundary (right) for JJA from 1981-2010 from TS3p21 (CRU, UEA).

Annex B: National Meteorological Services' Contact Information

- Brunei Darussalam Meteorological Department (BDMD)

http://www.met.gov.bn/weather

- Department of Meteorology, Cambodia

http://www.cambodiameteo.com/map?menu=3&lang=en

- Badan Meteorologi, Klimatologi dan Geofisika, Indonesia (BMKG)

http://www.bmkg.go.id

- Department of Meteorology and Hydrology (DMH), Lao

http://dmhlao.etllao.com/

- Malaysian Meteorological Department (MMD)

http://www.met.gov.my/

- Department of Meteorology and Hydrology (DMH), Myanmar

http://www.dmh.gov.mm/

- Philippines Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)

http://www.pagasa.dost.gov.ph/

- Meteorological Service Singapore Government (MSS)

http://www.weather.gov.sg/home/

- Thai Meteorological Department (TMD)

http://www.tmd.go.th/en/

- National Center for Hydro-Meteorological Forecasting (NCHMF), Vietnam

http://www.nchmf.gov.vn/Web/en-US/43/Default.aspx

Annex C: Review of Consensus outlook for DJF 2016/2017

The following consensus statements were prepared for DJF:

RAINFALL

For the upcoming Northern Hemisphere winter monsoon season (Dec-Jan-Feb 2016-17), there is a slightly enhanced probability of below normal rainfall over northern mainland Southeast Asia, near normal to above normal rainfall over central and western Southeast Asia, which includes most parts of Thailand, Cambodia, southern Myanmar, and western portion of the Philippines. Slightly enhanced probabilities of above normal rainfall are predicted over the rest of the Philippines and eastern Maritime Continent.

TEMPERATURE

Slightly above to above normal air temperatures are very likely to occur over much of Southeast Asia region for the upcoming Northern Hemisphere winter monsoon season (Dec-Jan-Feb), with the highest probabilities over the northern portions of Myanmar, Vietnam, and Lao. Near average air temperatures are predicted over Thailand and Philippines.

REVIEW

For rainfall, the outlook was generally representative of the observed conditions. Most of mainland Southeast Asia received near normal rainfall with areas both below normal and above normal. Parts Indonesia experienced below normal rainfall, with other locations experiencing above normal rainfall. However, opposite to what was predicted, above normal rainfall was recorded in parts of Vietnam, northern Philippines, and in eastern, northern and southern parts of Myanmar.

For temperature, Southeast Asia experienced normal to above normal temperature for DJF 2016-17, which was representative of the outlook. Parts of Peninsular Malaysia and the Philippines were slightly warmer than predicted. Some areas of Indonesia were not significantly above normal.