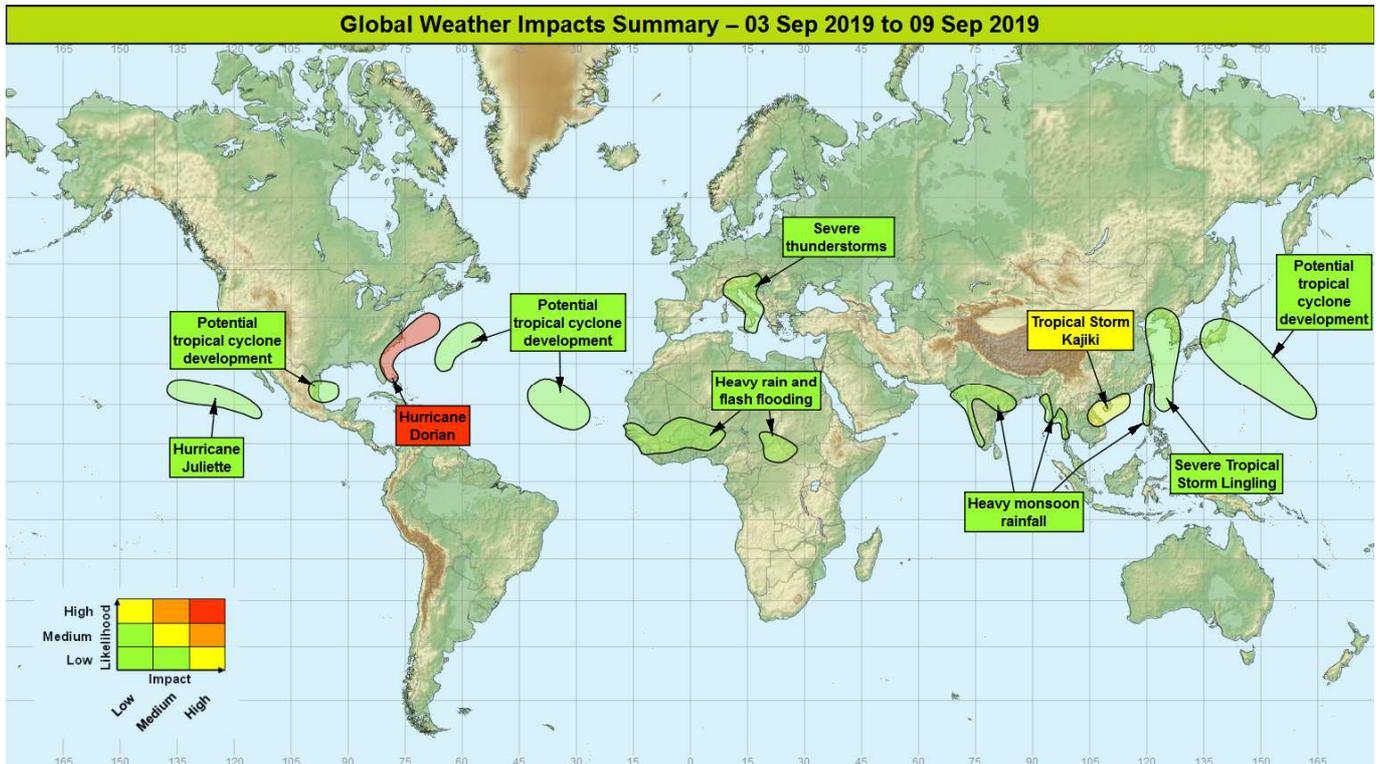


## Global Weather Impacts – Tuesday 3<sup>rd</sup> to Monday 9<sup>th</sup> September 2019

Issued on Tuesday 3<sup>rd</sup> September 2019

### HEADLINES

- Hurricane Dorian expected to move slowly away from northwest Bahamas today but with some impacts extending to portions of the southeast USA.
- Increased tropical cyclone activity across the remainder of the northern hemisphere.



### DISCUSSION

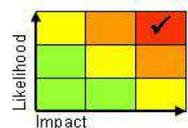
#### Tropical Cyclones

#### Hurricane Dorian (Bahamas and southeast USA)

#### Weather

Dorian has been almost stationary over Grand Bahama through the past 24 hours. At 0900 UTC Tuesday, Dorian was located just offshore northern Grand Bahama, around 30 miles northeast of Freeport. Although maximum sustained winds eased slightly to 120 mph, Dorian remains a powerful category 3 hurricane. Dorian's slow movement is prolonging the period of destructive winds, torrential rainfall and significant storm surge affecting the northwest Bahamas. A further 150 to 350 mm of rain is possible here, with the surge raising water levels around 3 to 4.5 metres above normal tides accompanied on the coast by large and destructive waves. After clearing the Bahamas, Dorian is expected to pass close to the east coast of Florida through Tuesday and Wednesday, then the Carolinas later this week. There is some uncertainty in its exact track, with most models and the official National Hurricane Centre track keeping the eye of the hurricane offshore. However, there does remain a small risk of Dorian making landfall on the east coast of the USA between Florida and North Carolina, before then curving back out into the Atlantic. Although the storm is likely to be gradually weakening, regardless of the track, storm surge, hurricane force winds and torrential rain are expected across eastern parts of the USA from Florida to The Carolinas.

#### Discussion



**This forecast may be amended at any time**

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter, Tel: +44(0)1392 884319

VPN: n6225 4319 Email: [ggu@metoffice.gov.uk](mailto:ggu@metoffice.gov.uk)

Environmental conditions suggest Dorian will gradually lose strength over the next several days resulting in a slow reduction in peak wind speeds. Overnight, dry air being entrained with the system appears to have contributed to a slight deterioration in presentation and this trend is expected to continue as a result of land interaction and later increasing wind shear. Good model agreement exists in Dorian moving close to and parallel to the US coastline over the next 3-4 days, similar to that of Hurricane Matthew in October 2016. Should Dorian make landfall again, this is most likely to occur across North Carolina from Wilmington to Cape Hatteras on Friday.

**Expected Impacts**

Extremely damaging winds, particularly across the northern Bahamas are occurring, with near-total destruction of even well-built structures possible in Grand Bahama. Prolonged disruption to utilities and services is likely, with transport routes and travel services severely affected or severed for a prolonged period. Flash flooding, and widespread coastal flooding due to significant storm surge, is also occurring. Impacts across Florida, eastern Georgia and the eastern Carolinas are currently expected to be less severe but still potentially life-threatening.

**Tropical Storm Lingling (Western Pacific)**

**Weather**

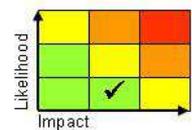
Lingling formed overnight Sunday into Monday and currently lies around 200 miles SE of Taiwan. Steady strengthening of the system is expected as it tracks north over open water during the coming days probably becoming a typhoon. The favoured track of Lingling takes the storm east of Taiwan, then across the East China Sea towards the Korean Peninsula by the weekend.

**Discussion**

Lingling is a small system. It is expected to remain in a favourable environment of low vertical wind shear over warm SSTs, although towards midweek upper level divergence is expected to decrease a little which could slow its strengthening trend, and it may well become a typhoon. Ensembles favour a broadly northerly track, likely passing across the outlying southern Japanese islands, then eventually toward the Korean Peninsula.

**Expected Impacts**

Lingling will likely bring damaging winds and torrential rainfall along its path, affecting the southern Japanese islands and perhaps eastern Taiwan. There is a risk of Lingling bringing typhoon conditions to the Korean Peninsula next weekend.



**Hurricane Juliette (Eastern Pacific)**

**Weather**

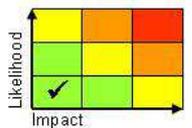
Juliette formed early Sunday over the eastern Pacific and has strengthened quickly into a major hurricane. Juliette will track west-northwestwards over open water over the next five days but will start to weaken during Thursday and Friday.

**Discussion**

Juliette rapidly intensified in a favourable atmospheric environment of low shear and high SSTs. However the system is expected to stay over the open ocean.

**Expected Impacts**

Nil.

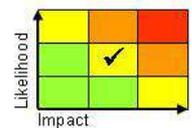


**Tropical Storm Kajiki (South China Sea)**

**Weather**

Kajiki formed on Monday close to the eastern coast of Vietnam. There is a very large spread in the models as to the behaviour the system, however the official track from the Japanese Meteorological Agency show the system moving east or northeast, perhaps threatening the southern Chinese coast and Hong Kong. Damaging winds and torrential rainfall are likely to be the main impacts, with some parts of eastern Vietnam perhaps seeing 500 to 750 mm of rainfall over the next few days.

**Discussion**



**This forecast may be amended at any time**

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter, Tel: +44(0)1392 884319  
 VPN: n6225 4319 Email: [ggu@metoffice.gov.uk](mailto:ggu@metoffice.gov.uk)

There remain very large model differences for the evolution of Kajiki, especially the subsequent track. The majority of solutions take Kajiki back eastwards into the western South China Sea. If that is the case conditions would be favourable for some modest strengthening, although the system looks unlikely to become a typhoon as it passes close to Hainan, then southern China and Hong Kong. To emphasise the uncertainty the track favoured by JTWC has Kajiki moving into central Vietnam and dissipating by midweek.

**Expected Impacts**

Flash flooding and landslides, plus damaging winds, storm surge and rough seas.

*The following areas are being monitored for possible tropical storm development*

**Potential Tropical Cyclone Seven (Gulf of Mexico)**

**Weather**

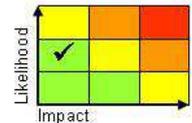
There is the potential for a tropical cyclone to develop in the Gulf of Mexico in the next couple of days. This is not expected to be a major system if it does form, and will likely dissipate as it moves inland over northeastern Mexico soon after. This is not expected to produce strong winds, but heavy rain (100-200mm, locally 400 mm over higher ground) is likely to be associated with this feature.

**Discussion**

A broad area of low pressure located over the Gulf of Mexico is consolidating into an increasingly organised area of showers and thunderstorms. Some gradual development of this system is possible during the next several days while it moves slowly westward across the southern and southwestern Gulf of Mexico.

**Expected Impacts**

Flash flooding and landslides to parts of northeastern Mexico.



**Western Pacific**

**Weather**

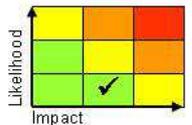
There is the potential for a tropical depression to become organised and to develop into a tropical cyclone south of Wake Island in the western Pacific. The system may well strengthen into a typhoon, but is likely to remain over the ocean through this week. By the weekend model consensus suggests that the system could threaten southern Japan.

**Discussion**

This system is in an environment favourable for development, and is likely to become a tropical storm later Monday, then perhaps a typhoon later this week. The storm will likely track north-westwards in the general direction of Japan where it could reach later this weekend.

**Expected Impacts**

Increased swells and large waves may affect some remote islands in the western Pacific. The system may threaten southern Japan but probably not before next weekend at the earliest.



**Tropical Atlantic**

**Weather**

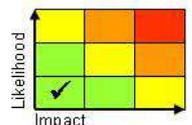
There is potential for tropical cyclones to develop through this coming week, both near Cabo Verde, further northwest across the Atlantic nearer Bermuda. At this stage, the impact on land areas in either region is expected to be limited.

**Discussion**

Further AEWs are expected to move through the tropical Atlantic. Compared to earlier in the month, conditions are much more favourable for tropical cyclogenesis and there is potential for a number of systems to form this week. The area of low pressure close to Cabo Verde has been assessed as most likely of these areas to see a cyclone develop, with the NHC giving a high likelihood of this occurring during the next two days. At this stage there is little to suggest that any of these systems will affect The Caribbean.

**Expected Impacts**

Low risk that these systems could bring torrential rainfall to parts of Cabo Verde and/or Bermuda with some flash flooding possible.



**This forecast may be amended at any time**

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter, Tel: +44(0)1392 884319

VPN: n6225 4319 Email: [ggu@metoffice.gov.uk](mailto:ggu@metoffice.gov.uk)

**Europe****Central Mediterranean and southern Europe****Weather**

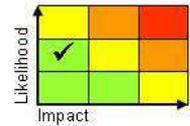
Occasional severe thunderstorms are possible through the rest of this week, bringing the threat of 50-75 mm of rain in a few hours, along with large hail and strong winds. However, many parts will avoid these thunderstorms. Northeast Italy through Slovenia and into Czechia and the western Balkans is likely to be the main focus.

**Discussion**

Upper troughs moving south-east across Europe and engaging the warm plume will trigger thunderstorms across this region this week. Forecast profiles show in excess of 2000 j/kg CAPE and high precipitable water, with some locally torrential downpours possible along with frequent lightning, strong gusts of wind and large hail.

**Expected Impacts**

Flash flooding, with frequent lightning strikes perhaps leading to an increased risk of power outages. There is a lower likelihood of impacts from strong winds and large hail.

**North America**

**Southeast USA** – see *Tropical Cyclones* section.

**Central America and Caribbean**

**Bahamas and Mexico** – see *Tropical Cyclones* section.

**South America**

Nil.

**Africa****Portions of West Africa****Weather**

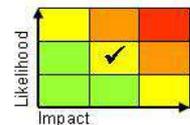
Frequent heavy showers and thunderstorms will continue across this region over the coming week. Thunderstorms are likely to produce locally 50 to 100mm of rain in a short period, with up to 250 mm possible in places during this period. The focus for the largest rainfall totals looks likely to be around coastal areas in the west. This comes on top of wetter than average conditions for many parts over the summer monsoon season so far – around 125-150% of climatology.

**Discussion**

Enhanced seasonal rainfall continues to be signalled with above normal totals expected in this region. This will likely come in the form of MCS developments, organised at times by African Easterly Waves (AEWs), with impacts especially likely should these affect any of the more urbanised regions within this zone.

**Expected Impacts**

Flash flooding is possible in places together with an increased risk of landslides and river flooding. Risk of some dense lifted dust on the northern periphery of the thunderstorms.

**Middle East**

Nil.

**Asia**

**Northern Vietnam, Hainan and southern China, Taiwan, Japan, eastern China and the Korean Peninsula** – see *Tropical Cyclones* section.

**This forecast may be amended at any time**

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter, Tel: +44(0)1392 884319

VPN: n6225 4319 Email: [ggu@metoffice.gov.uk](mailto:ggu@metoffice.gov.uk)

© Crown copyright 2019. This information is for use by UK government only. It does not replace the advice and guidance provided by the official meteorological service for this region. Where there is a requirement to share this information with non-UK government agencies, please contact the Met Office to discuss.

**Parts of south and southeast Asia****Weather**

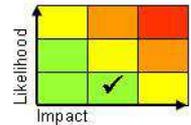
Frequent intense showers and thunderstorms are expected to continue, producing up to 75-150 mm in a 24-hour period. 300-500 mm could fall through the next five days across parts of western, central and northern India, with 400-600 mm in parts of southern Myanmar and neighbouring Thailand. This would result in the average August rainfall falling in a week in places.

**Discussion**

Convection associated with a developing monsoon depression will continue to move west across central and northern India in the coming 3 or 4 days. This being the focus for heavy showers/thunderstorms. Meanwhile, a strong monsoonal flow will bring heavy rainfall to southern Myanmar and parts of Thailand. Southwest-facing upslopes will be most threatened by enhanced rainfall due to orographic uplift of the very moist airmass.

**Expected Impacts**

Flash flooding events are likely, with an increasing likelihood of river flooding and landslides.

**Australasia**

Nil.

**Additional information**

Nil.

**Issued at:** 030940UTC

**Meteorologist:** Mark Sidaway and Matthew Lehnert

**Global Guidance Unit**

**This forecast may be amended at any time**

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter, Tel: +44(0)1392 884319

VPN: n6225 4319 Email: [ggu@metoffice.gov.uk](mailto:ggu@metoffice.gov.uk)

© Crown copyright 2019. This information is for use by UK government only. It does not replace the advice and guidance provided by the official meteorological service for this region. Where there is a requirement to share this information with non-UK government agencies, please contact the Met Office to discuss.