

## Summer 2018 - Speedwell Weather Gridded Data Inventory

The gridded data sets listed below are available for no additional charge to SuperPack® Premium users on a reasonable request basis. These data sets can be accessed directly by users of the Speedwell Weather System via API. We are continuously adding gridded data and will therefore be updated on a regular basis.

Please contact us for further information relating to the provision of Settlement Data based on gridded data.

# ARC2 - NOAA Climate Prediction Center (CPC)

Description: Africa region rainfall climatology using 3 hourly infrared satellite imagery (EUMETSAT) and hourly/24 hour rainfall totals from WMO reporting rain gauges (GTS)

Earliest Data: 1983-01-01

Latest Data: 3 days ago

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
Rain	N	Africa: 0.1(~10) x 0.1(~10) degrees( km)	Daily	mm	A

HR = Speedwell derived high resolution product

Y = available

N = not available

Status = Availability of the dataset

A = currently available

X = coming soon

# Bureau of Meteorology (Australia)

Description: Reanalysis of quality controlled surface rainfall observations, projected to a regular grid.  
Series is revised over time as further improvements in data quality applied

Earliest Data: Rain 1900-01-01, Temperature 1911-01-01, Solar 1990-01-01

Latest Data: 2 days ago

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
Rainfall	N	Australia: 0.05(5) x 0.05(5) degrees (km)	Daily	mm	A
Maximum Temperature	N	Australia: 0.05(5) x 0.05(5) degrees (km)	Daily	C	A
Minimum Temperature	N	Australia: 0.05(5) x 0.05(5) degrees (km)	Daily	C	A
Global Solar Exposure	N	Australia: 0.05(5) x 0.05(5) degrees (km)	Daily	MJ/m <sup>2</sup>	A

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# CHIRPS - Climate Hazards Group (CHG)

Description: A global rainfall estimate, derived from satellite imagery using algorithms to estimate rainfall at the surface based upon cloud top temperatures

Earliest Data: 1981-01-01

Latest Data: 6 days ago

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
Rain	N	Global: 0.05(5) x 0.05(5) degrees (km)	Daily	mm	A

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# NOAA Climate prediction Centre (CPC)

Description: CPC Unified Gauge-Based Analysis of Global Daily Precipitation Project

Earliest Data: 1979-01-01

Latest Data: 2 days ago

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
Precipitation	N	Global: 0.5(~50) x 0.5(~50) degrees (km)	Daily	mm	A

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# Deutscher Wetterdienst (DWD)

Description: German gridded daily rain

Earliest Data: 1931-01-01

Latest Data: 2 days ago

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
Rain	N	Germany: 0.01(1) x 0.01(1) degrees (km)	Daily	mm	A

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# ERA5

Description: ERA5 is produced using 4DVar data assimilation in CY41R2 of ECMWF's Integrated Forecast System (IFS), with 137 hybrid sigma/pressure (model) levels in the vertical, with the top level at 0.01 hPa

Earliest Data: 1950-01-01

Latest Data: TBD

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
2m Dew Point Temperature	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	K	X
Mean Sea Level Pressure	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	Pa	X
Mean Wave Direction	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	degrees	X
Sea Surface Temperature	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	K	X
Significant Wave Height & Swell	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	m	X
Snow Depth	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	m	X
Soil Temperature Layer 1	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	K	X
Soil Temperature Layer 2	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	K	X
Soil Temperature Layer 3	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	K	X
Soil Temperature Layer 4	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	K	X
Surface Pressure	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	Pa	X
Surface solar radiation downwards	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	J m <sup>2</sup>	X
Temperature 2m	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	K	X
TMax	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	K	X
TMin	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	K	X
Total Precipitation	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	m	X
Volumetric Soil Water Layer 1	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	m <sup>3</sup>	X
Volumetric Soil Water Layer 2	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	m <sup>3</sup>	X
Volumetric Soil Water Layer 3	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	m <sup>3</sup>	X
Volumetric Soil Water Layer 4	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	m <sup>3</sup>	X
Wind Direction (10m)	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	degrees	X
Wind Speed 10m	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	m/s	X
Wind u +10m	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	m/s	X
Wind v +10m	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	m/s	X
Wind Direction 100m	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	degrees	X
Wind Speed 100m	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	m/s	X
Wind Speed 80m	Y	Europe: 0.05(5) x 0.05(5) degrees (km) Global: 0.14(16) x 0.14(16) degrees (km)	Daily	m/s	X
Wind Direction 80 m	Y	Europe: 0.05(5) x 0.05(5) degrees (km) Global: 0.14(16) x 0.14(16) degrees (km)	Daily	degrees	X
Wave Height	Y	Europe: 0.05(5) x 0.05(5) degrees (km) Global: 0.14(16) x 0.14(16) degrees (km)	6-hourly	m	X
Wave direction	Y	Europe: 0.05(5) x 0.05(5) degrees (km) Global: 0.14(16) x 0.14(16) degrees (km)	6-hourly	degrees	X
Wave period	Y	Europe: 0.05(5) x 0.05(5) degrees (km) Global: 0.14(16) x 0.14(16) degrees (km)	6-hourly	s	X
Solar Radiation Surface Downwards	Y	Asia: 0.05(5) x 0.05(5) degrees (km) Europe: 0.05(5) x 0.05(5) degrees (km)	Daily	J/cm <sup>2</sup>	X
Wind 10 m	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	m/s	X
T24 Ave	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	° C	X
TMax	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	° C	X
TMin	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	° C	X
Precipitation	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	mm	X

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# ERA Interim

Description: The data assimilation system used to produce ERA-Interim is based on a 2006 release of the IFS (Cy31r2). The system includes a 4-dimensional variational analysis (4D-Var) with a 12-hour analysis window

Earliest Data: 1980-01-01

Latest Data: 3 months ago

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
Hourly Dewpoint	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	K	A
Mean Sea Level Pressure	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	Pa	A
Hourly Mean Wave Direction minus poles	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	degrees	A
Hourly Sea Surface Temperature	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	K	A
Hourly Significant Wave Height and Swell minus	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m	A
Hourly Snow Depth (Water)	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m	A
Hourly Soil Temperature Layer 1	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	K	A
Hourly Soil Temperature Layer 2	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	K	A
Hourly Soil Temperature Layer 3	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	K	A
Hourly Soil Temperature Layer 4	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	K	A
Hourly Surface Pressure	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	Pa	A
Surface solar radiation downwards	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	J m <sup>2</sup>	A
Hourly Temperature 2m	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	K	A
Hourly Temp Max	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	K	A
Hourly Temp Min	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	K	A
Hourly Total Precipitation	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m	A
Hourly Volumetric Soil Water Layer 1	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m <sup>3</sup>	A
Hourly Volumetric Soil Water Layer 2	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m <sup>3</sup>	A
Hourly Volumetric Soil Water Layer 3	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m <sup>3</sup>	A
Hourly Volumetric Soil Water Layer 4	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m <sup>3</sup>	A
Hourly Wind 10m Direction	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	degrees	A
Hourly Wind 10m Speed	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m/s	A
Hourly Wind 10m U Component	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m/s	A
Hourly Wind 10m V Component	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m/s	A
Wind 80m Speed	Y	Europe: 0.05(5) x 0.05(5) degrees (km) Global: 0.14(16) x 0.14(16) degrees (km)	Daily	m/s	A
Wind Direction 80 m	Y	Europe: 0.05(5) x 0.05(5) degrees (km) Global: 0.14(16) x 0.14(16) degrees (km)	Daily	degrees	A
Hourly Significant Wave Height and Swell	Y	Europe: 0.05(5) x 0.05(5) degrees (km) Global: 0.14(16) x 0.14(16) degrees (km)	6-hourly	m	A
Hourly Mean Wave Direction	Y	Europe: 0.05(5) x 0.05(5) degrees (km) Global: 0.14(16) x 0.14(16) degrees (km)	6-hourly	degrees	A
Hourly Mean Wave Period	Y	Europe: 0.05(5) x 0.05(5) degrees (km) Global: 0.14(16) x 0.14(16) degrees (km)	6-hourly	s	A
Surface Solar Radiation Downwards	Y	Asia: 0.05(5) x 0.05(5) degrees (km) Europe: 0.05(5) x 0.05(5) degrees (km) United States: 0.05(5) x 0.05(5) degrees (km)	Daily	J/cm <sup>2</sup>	A
Wind 10m Speed	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	m/s	A
Temp T24 Ave	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	° C	A
Temp Max	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	° C	A
Temp Min	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	° C	A
Total Precipitation	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	mm	A

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# Earth Observation System (EOS)

Description: Global 16-day composite of the MODIS Vegetation Index (NDVI) included in the MOD13C1 product

Earliest Data: 2000-02-18

Latest Data: 1 month ago

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
NVDI : MOD13C1	N	Global: 0.05(5) x0.05(5) degrees (km)	16 days	NDVI	A

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# MERRA 2

Description: The second Modern-Era Retrospective analysis for Research and Applications (MERRA-2) is a NASA atmospheric reanalysis, using an upgraded version of the Goddard Earth Observing System Model, Version 5 (GEOS-5) data assimilation system.

Earliest Data: 1980-01-01  
 Latest Data: 1.5 months ago

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
Wind 10 m, 50 m and 100 m	Y	South America: 0.05(5) x0.05(5) degrees (km) United States: 0.05(5) x0.05(5) degrees (km)	Daily	m/s	A
Wind 10m Direction	Y	Europe: 0.05(5) x0.05(5) degrees (km)	Daily	m/s	A
Temp T24 Ave	Y	Europe: 0.05(5) x0.05(5) degrees (km) South America: 0.05(5) x0.05(5) degrees (km)	Daily	° C	A
Temp Max	Y	Europe: 0.05(5) x0.05(5) degrees (km) South America: 0.05(5) x0.05(5) degrees (km)	Daily	° C	A
Temp Min	Y	Europe: 0.05(5) x0.05(5) degrees (km) South America: 0.05(5) x0.05(5) degrees (km)	Daily	° C	A
Total Precipitation	Y	Europe: 0.05(5) x0.05(5) degrees (km) South America: 0.05(5) x0.05(5) degrees (km)	Daily	mm	A
Wind Direction 10 m, 50 m and 100 m	Y	South America: 0.05(5) x0.05(5) degrees (km)	Daily	degrees	A
Surface Solar Radiation Downwards	Y	South America: 0.05(5) x0.05(5) degrees (km)	Daily	J/cm <sup>2</sup>	A

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Description: Global SST & Sea Ice Analysis, L4 OSTIA, 0.05 deg daily

Earliest Data: 2007-01-01

Latest Data: 2 days ago

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
Sea Surface Temperature : L4 OSTIA	<b>N</b>	Global: 0.05(5) x0.05(5) degrees (km)	Daily	K	<b>A</b>

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