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Datameteo.com High Resolution Weather Provider Weather professional solutions Datameteo powered by LRC SERVIZI Srl Via Piave 4/C Busca 12022(Cuneo) Italy e-mail: info@datameteo.it

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LRC	LRC
Customer	Customer

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1) Alert Maps

We can offer very precise alert maps updated twice a day for the next 72 hours at 6 hours step with your brand.

The most convenient source to have an immediate outlook

Туре	Weather Alerting Maps	20 Pagama
Format	GIF, PNG or JPG	Bogotá
Weather Model:	WRF High Resolution	Guayaquil Jquito
	72 hours on 6 hours step	lima
Availability	USA, Europe with single countries, S America, Africa (partially)	
Updated	Twice a day	- 1
Demo:	http://www.datameteo.com/meteo/mod ello-alert_eu_center-meteovid.html	

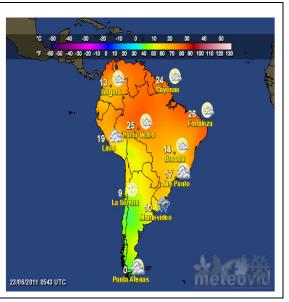


2) Weather Maps

We can offer one of the most complete superior quality weather maps dataset updated 4 times a day for the next 7 days with actual weather updated hourly and area forecast.

All the weather you need in a single map a the best market rate.

Туре	Weather Maps
Format	GIF, PNG or JPG
Weather Model:	Current weather (wind, temperature, phenomena clouds, humidity, pressure, windchill, etc)
	GFS 144 hrs on 12 hrs step (precipitation, temperature)
Availability	USA, Europe, South America, Africa , Asia, Australia
Updated	Current every hour
	Forecast 4 times a day
Demo:	http://www.datameteo.com/meteo/mod ello-carte_world-meteovid.html



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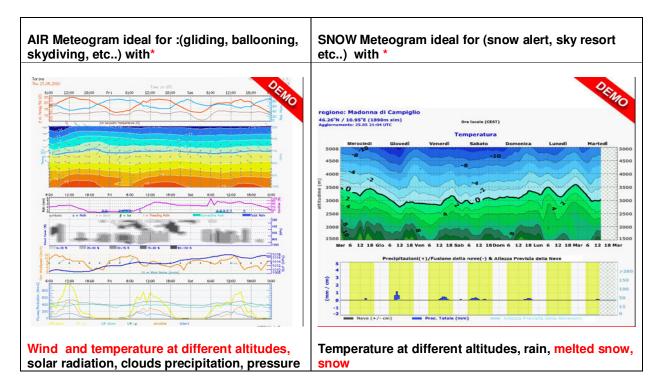
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3) Meteograms: agro, air, snow

We can offer one of the most complete quality weather meteograms dataset updated twice a day for the next 7 days specially settled up for special purposes (agro, air, snow)

All the high resolution weather you need in a single meteogram.

All the high resolu	tion weather you need in a si	nyle melevyram.
Туре	Meteograms	DEMO
	IT, ES, EN, DE, FR	L'Aquila Meteogramma (1-7 giorni) 42.37N / 33.37E (657m stm)
Format	GIF, PNG or JPG	20 20 21 21 21 21 21 22 24 25 26 27 27 28 28 28 28 28 28 28 28 28 28 28 28 28
Weather Model	WRF 3,10, 18 Km	Procipitarion Probabilità di procipitarioni
		Anarystamente 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
		Finestra per irrorazione Mer 6 12 18 Gio 6 12 18 Ven 6 12 18 Seb 6 12 18 Dun 6 12 18 Lun 6 12 18 Mar 6 12 18 Mar
		Evapotraspirazione / Umidità Relativa
Availability	USA, Europe, South America,	Raffiche à 10m Voiccità dei vento (10m) Direzione del vento
	Africa (part) , Asia (part), India, NZ	AGRO Meteogram ideal for agricultural purposes
Updated	Twice a day	with*
Demo	http://www.datameteo.com/m eteo/meteogram-agro-italy	Wind, 0-10cm temperature, cloud fraction, precipitation, evapotranspiration, spray window



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4) Actual Data Report

We can offer via xml, csv actual and archived data (weather report) updated every half an hour of more than 8000 locations worldwide collected according WMO* 306 Manual.

All data are checked by a filtering system in order to prevent out of scale values or anomalies

Туре	Actual Weather Data IT, ES, EN, DE, FR	Mexico City/Lice, Mexico		Sunrise: Sunset:	6:00 AM UTC-6 7:18 PM UTC-6		42N, Lon: 99.08W CAO Used: MMMX
Format	XML, CSV	Current weather Updated: 28.00	8.11 - 08:47 UTC-8 Humidity:		73%	Wind Chill:	17°C 62F
Weather Model	Current weather (wind, temperature, phenomena clouds, humidity, pressure, windchill, etc)	Overcast Overcast	Wind speed: Barometer: 10 Dewpoint:	N 27 hPa 30.3	N 7 KT I 8 mph	T. max (last 2	14 h): 25°C 77F 4 h): 14°C 57F
Availability	17000 station worldwide	17°C Temp: 63F	Heat Index: Visibility:		°C 63F 0SM m. 10 SM	MMMX 280447	Z 35007KT 10SM SCT020 2 A3032 NOSIG RMK 60025
Updated Demo	Current every half an hour http://www.datameteo.com/ meteo/modules.php?name= Dati attuali&op=Cerca stazi oni mondo&language=EN&c ountry=PE	Current weather template with phenomena full associated according WMO* (World Meteorological Organization) 306 Manual					ation)

5) Climate Data Report

We can offer via xml, csv climate data of more than 1300 locations worldwide and 80 in Italy All data are checked every year in order to have the most updated climate archive

Туре	Climate Weather Data						
	IT, ES, EN, DE, FR			Dati climatologi	ci / Climate data		
Format	XML, CSV	Mese Month	T Min. Daily mean Lows	T Max. Daily mean Highs	Mean Precipitations	Mean Number of Precipitation Days	Vento Wind
- Omiac	,	Gennaio January	17 °C 63 °F	29 °C 84 °F	19.3 mm 0.76"	4.4	
Weather Model	Average climate data (wind,	Febbraio Febraury	17 °C 63 °F	29 °C 84 °F	12.4 mm 0.49"	3.4	
	temperature, precipitation Climate information is based	Marzo March	15 °C 59 °F	26 °C 79 °F	24.9 mm 0.98"	5.6	
	on monthly averages for th	Aprile April	12 °C 54 °F	23 °C 73 °F	40.9 mm 1.61"	8	
	30-years period	Maggio May	10 °C 50 °F	19 °C 66 °F	59.9 mm 2.36"	12	2
		Giugno June	8 °C 46 °F	16 °C 61 °F	79.3 mm 3.12"	14.9	19
Availability	17000 locations worldwide	Luglio July	8 °C 46 °F	15 °C 59 °F	75.4 mm 2.97*	16.2	2
Updated	every year	Agosto August	8 °C 46 °F	17 °C 63 °F	68.2 mm 2.69"	16.4	5
Opualeu	http://www.datameteo.com/	Settembre September	10 °C 50 °F	19 °C 66 °F	60.6 mm 2.39"	13.6	
Demo	meteo/modules.php?name	Ottobre October	11 °C 52 °F	22 °C 72 °F	43.8 mm 1.72"	10.2	
	=Datiltalia&language=EN&	Novembre November	14 °C 57 °F	25 °C 77 °F	31.5 mm 1.24"	8.1	
	op=Mondo=Dati_attuali&op =Cerca stazioni mondo&la	Dicembre December	16 °C 61 °F	27 °C 81 °F	28 mm 1.1"	6.9	¥
	nguage=EN&country=PE						

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6) High Resolution Weather Model and Coverage

Our WRF's numerical weather forecasts cover168 hours from the moment of initialization to the end, updated 2 times a day, every 12 hours. This means that a forecast for a specific time step is calculated 12 times ranging from the first model run (168 hours in advance) till the closer one (12 hours in advance) which is stored in the archive. This enhances the value of the archived data by a factor 2,5 because there are much more "potential solutions" for that parameter at the selected time step. 4,5 Years of archived data, with 12 different deterministic solutions for each value, are in point of fact similar to more than 10 years of continues data series. Numerical models cover the entire world and enable the production of weather forecast for any place on Earth, irrespective of whether a meteorological recording station exists or not.

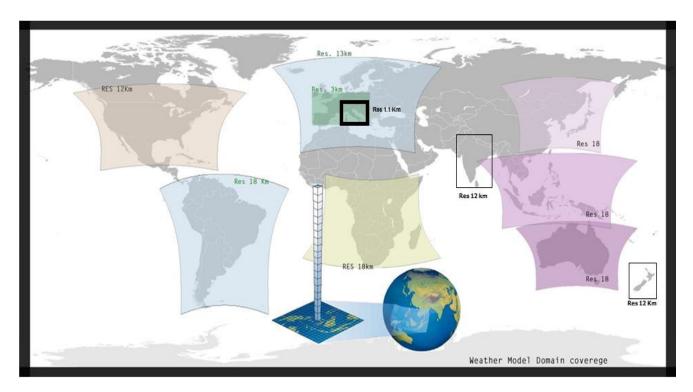
Through the high spatial resolution, which calculates forecast for every 10-18 km, we produce local forecasts which include the effects of local climate, topography and soil cover.

Examples of the capabilities of numerical high resolution forecast are:

- 1. Distinction between valley, slope and summit temperatures in mountain areas.
- 2. Detection of weather barriers (e.g. Alps, Andes), with distinction of rain, wind, etc.
- 3. Display of local thermal phenomena, such as winds (e.g. Föehn, Tramontana, Chinook), thunderstorm activity, etc.

Our high resolution forecast are "live corrected, when applicable, with validated satellite feed observations

Below you can see the operational areas covered by our high resolution weather models and the grid resolution applied. Weather model resolution applied depends on the area topography complexity.



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7) Basic Weather Forecast 8-16 days

We can offer general weather forecast based on our post processed 20 Km grid GFS weather model updated 4 times a day on 3 hours step for the first 192 hours or 6 hours step from 192 to 384 hours Quality worldwide weather forecasts at interesting rates

Quality WorldWide	weather lorecasts at interesting i	uico
Туре	Data	Available Parameters
Language	IT, ES, GB, DE, FR	both in English and metric units
Format	Include Url Html, API, xml, csv	-Weather forecast and icon
Weather Model	Postprocessed GFS 20 Km gridded resolution for first 192	-10 m Wind direction , speed and gust
	hours forecast	-2 m Temperature, High, Lows,
	Postprocessed GFS 60 Km gridded resolution for 192-384	-Precipitation amount, probability
	hours forecast	-Humidity,
Availability	Worldwide unlimited locations ltaly 8103 locations	-Windchill,
Updated	4 times a day	-Visibility,
	3 hours step first 192 hours	-Pressure,
	6 hours step 192-384 hours	-Freezing Level,
Demo	http://www.datameteo.com/me teo/weather_WORLD_0_0	-UV index Other parameters on request

	For	ecast	deta	ils bas	ed on	3 hou	rs step		8-16 Days Weather	sum	mary	forec	ast	
Agro 🔪 A	Aero 🔭	Alt. 128 m (Nación:					English-Metric	7 dias Ver mas data	Pronostico del tiempo: Mundo >> South america >> Peru >> Lima Büsqueda Sación:	Fue:	Provinca:	Ubicación:	io de alta resolución	
JUE 23 Ora		VEN 24 Tiempo	SAB 25 T. °C	DOM 26 °C In Calor	LUN 27 Hum(%)	MAR 28 Precipit.	MIE 29 Viento Km/h	0°C	PERU Cocation: Lima Alt. 128 m (Nación: Peru) ahora 06:44:21 (UTC-5)			Lima	≖	
2.00		Parcialmente nuboso	20.8°C	19.6°C	84%		S 15 max 19	4857m	Agro 🔪 Aero 📐 Ski 🌑			Radar Precip		dias sh-Metric
5.00	8	Algunas nubes	20.5°C	19.3°C	82%			4874m	Amanecer:19:28UTC-5 Puesta del sol:08:18UTC-5 Lat-12:05S Lon:77.05W (ICAO en las proxim Giorno Tiempo	idades SPIM) Min °C	Max °C	Precipit.	Viento Km/h	UV
8.00	0	Casi sereno	21.1°C	20.2°C	76%		S 13 max 17	4904m	JUE 23 Casi sereno	20.5°C	24.4°C		SSW 24 max 28	
11.00	Ö	Sereno	23.9°C	22.6°C	65%			4985m	VEN 24 Sereno	20.3°C	24.3°C			
14.00	Ö	Sereno	24.4°C	23.0°C	66%		SSW 24 max 28	4991m	SAB 25 Casi sereno	19.4°C	23.6°C		SW 20 max 24	
17.00	Ö	Sereno	23.2°C	21.8°C	73%		S 20 max 26	4971m	DOM 26 Casi sereno	20.1°C	24.1°C	-		
20.00	Ö	Sereno	21.5°C	20.4°C	81%		S 15 max 19	5000m	LUN 27 Casi sereno	19.9°C	24.0°C	-2	SW 19 max 24	
23.00	Ö	Sereno	21.2°C	19.9°C	82%			5088m	MAR 28 Algunas nubes	19.5°C	23.3°C			
El tiempo e		Mi- 20 C	10.1424.490				reno por la noche. Vien	te del DOM	MIE 29 Parcialmente nuboso	19.2°C	24.1°C		SSW 22 max 26	
		si sereno. Min 20.5 ongelación de nivel			io por la manana, sei	eno por la tarde, se	reno por la noche. Vien	IO DEI SSW	JUE 30 Algunas nubes	19.4°C	24.5°C			
Carry To		Actuali	zación: JUE 23	Junio 2011,08:24 H	lora local (UTC+1 lv	ierno UTC+2 Verar	no)		Actualización: JUE 23 Junio 2011,08:24 Hor	ra local (UTC+1	Ivierno UTC+2 \	Verano)		

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8) High Resolution Weather Forecast

We can offer high resolution validated weather 168 hours forecast on hourly step based on our WRF 3-12 Km models available for Europe, USA, South America and part of Africa and Asia. Every place cover by the models is simply available via latitude and longitude.

Validated top quality worldwide high resolution weather forecast at interesting rates

vandated top quan	worldwide night resolution v	veather forecast at interesting rates
Туре	Data	Available Parameters
Language	IT, ES, GB, DE, FR	both in English and metric units
Format	Include Url Html, API, xml, csv	-Weather forecast and icon
Weather Model	WRF 3, 12,18 Km	Wind direction , speed and gust at diff altitudes,
Availability	Europe, USASouth America,	-Temperature at different altitudes, High, Lows,
	Africa (part), Asia (part), NZ, India	-Precipitation amount, type, probability, Humidity,
	More than 8.000.000 of locations available simply	-Windchill, Visibility, pressure, Freezing Level, UV
	digiting latitude and longitude. Others available on	Special Parameters for selected services
	request, adding the desired latitude and longitude.	-Air: Wind, Temperature, Cloud fraction at different
		altitudes
Updated	Twice a day	Agra : 0.10 cm Tompovative Evanction
	1 hours step till 168 hours	-Agro: 0-10 cm Temperature, Evapotranspiration, Leaf wetness Index, soil moisture
		-Snow: melted snow, snow fraction
Demo	http://www.datameteo.com/me teo/weather_WORLD_0_0	-Wind Power: mean wind speed, gust, air density, icing at different heights (0-140 m)
		-Solar Power: mean solar radiation value

	Forecas	t deta	ails ba	sed or	n hour	lv hour	s st	ер		7 Days Weat	her sumn	narv	forec	ast
	Lima Alt. 128 m (Nación:								Mundo >>	co del tiempo: South america >> Peru >> Lima		,		
Agro 🔪 A	ero 📐 Ski 🦱					Radar Precip English-Metric	7 dias	16 dias	Nación:	úsqueda	Fue:	Province:	Ubicación:	de alta resolución
UE 23	VEN 24	SAB 25	DOM 26	LUN 27	MAR 2	8 MIE 29		JUE 30	PERU	▼ : Lima Alt. 128 m (Nación: Peru) ahora 06:44:21 (U	Fue:	Provinca:	Lima	•
Ora	Tiempo	T. °C	°C In Calor	Hum(%)	Precipit.	Viento Km/h	0°C	Visib. UV Press. (hpa)	Location	. LIIII ANI. 128 m (Nacion: Peru) anora 00:44:21 (U	G-5)			
2.00	Parcialmente nuboso	20.8°C	19.6°C	84%		S 15 max 19	4857m	3.7 0 1017 Km	Agro 🔪	Aero 📐 Ski 🎨		i i	Radar Precip	7 dias 16 di
5.00	Algunas nubes	20.5°C	19.3°C	82%	12		4874m	6.9 0 1016 Km	Amanecer:	19:28UTC-5 Puesta del sol:08:18UTC-5 Lat:12.05S Lor:77.05W Tiempo	(ICAO en las proximidades SPIM) Min °C	Max °C	Precipit.	Viento Km/h
8.00	Casi sereno	21.1°C	20.2°C	76%		S 13 max 17	4904m	6.9 0 1016	JUE 23	Casi sereno	20.5°C	24.4°C	-	SSW 24 max 28
11.00	Sereno	23.9°C	22.6°C	65%	10		4985m	6.0 3 1016	VEN 24	Sereno	20.3°C	24.3°C		
4.00	Sereno	24.4°C	23.0°C	66%		SSW 24 max 28	4991m	6.0 5 1015	SAB 25	Casi sereno	19.4°C	23.6°C		SW 20 max 24
7.00	Sereno	23.2°C	21.8°C	73%			4971m	4.8 5 1014	DOM 26	Casi sereno	20.1°C	24.1°C		
0.00	Sereno	21.5°C	20.4°C	81%			5000m	6.0 3 1015	LUN 27	Casi sereno	19.9°C	24.0°C	-	SW 19 max 24
	X							×m 1013	MAR 28	Algunas nubes	19.5°C	23.3°C		
23.00	Sereno	21.2°C	19.9°C	82%	•	S 17 max 19	5088m	Km U 1016	MIE 29	Parcialmente nuboso	19.2°C	24.1°C	-	SSW 22 max 26
	itima impo: casi sereno. Min 20.5' Km/h. Congelación de nivel			o por la mañana, sei	reno por la tarde, s	ereno por la noche. Vie	nto del SSW		JUE 30	Algunas nubes	19.4°C	24.5°C		
Me	Actuali	zación: JUE 23	Junio 2011,08:24 H	ora local (UTC+1 lv	rierno UTC+2 Vera	ino)				Actualización: JUE 23 Juni	o 2011,08:24 Hora local (UTC+1	Ivierno UTC+2 V	/erano)	

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9) Sea Forecast

Weather professional solutions

We can offer the most reliable high resolution wave model forecast use for oil spill drifting operation, navigation planning, sailing etc.. Your precise sea point forecast in a click

Type Language	our precise sea point forecast in a click Data , Maps IT	, ES, GB, DE, FR
Format	Data: Include Url Html, xml, csv Maps:JPG, PNG, GIF	
Weather Model:	WW3+WAM4+Hycom+ SWAN (Simulating WAve Nearsho	ore)
Availability	Mediterranean 0.01°, Oceans 0.25°, Global 0.5°	
Updated	4 times a day 0-240 hours (Mediterranean hourly upd Other updated on 3 hours step till 180 hours on 6 hours	ated till 180 hours) step till 240 hours
Demo	http://www.datameteo.com/meteo/modello-carte_m meteovid.html	nare-
Parameter	Unit	
Wind Direction and speed	°, KTS	
Pressure	Ectopascal	
Peak Direction	٥	
Superficial current	KTS	
Mean wave direction	0	
Primary wave direction	0	
Primary wave period	sec	
Peak Peruiod	sec	
Wave height	m	
Wave lenght	m	
Swell Direction	0	
Swell height	m	
Swell period	sec	
Wind sea direction	0	
Wind sea height	m	
Wind sea period	sec	

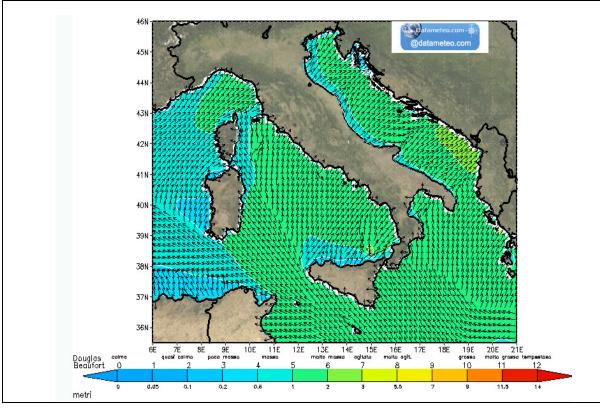
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Details of a 180 hours high resolution sea point forecast on hourly basis

				Seapoint Forecast Ma		oo - Mar Tirreno I 2011-07-02 21:		nale / Northe	rn Tyrrhen	ian		
Data	Dir.	Wave Wind KTS	10m Wind KTS	Wave Height (Swell)	Wave Lenght m	Direction Spread	Mean Dir	Mean Period sec.	Peak Dir	Peak Period sec	Wind Sea Dir	Wind Sea Period sec.
02-07- 2011 00:00	000	04	05	Poco mosso (con piccole onde) 0.2 m	11.8	0	300	3	260	2	000	0
02-07- 2011 01:00	350	04	05	Calmo (con increspature) 0.1 m	12	0	310	3	330	4	000	0
02-07- 2011 02:00	360	04	05	Calmo (con increspature) 0.1 m	12.4	0	330	3	330	4	000	0
02-07- 2011 03:00	020	04	05	Calmo (con increspature) 0.1 m	12.5	0	340	3	330	3	000	0
02-07- 2011 04:00	000	04	05	Calmo (con increspature) 0.1 m	12.3	0	340	3	330	3	000	0
02-07- 2011 05:00	360	04	05	Calmo (con increspature) 0.1 m	11.8	0	340	3	340	3	000	0

Details of an high resolution wave model map forecast



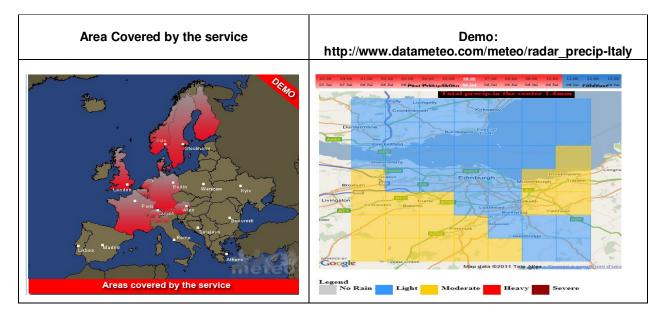
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10) Radar Forecast

We offer Radar Precip the latest frontier for nowcasting-short term weather forecasting service showing the precipitation amount by the weather radar for a selected location. he precipitation shown is the rate in mm in the area surrounding the selected location, displayed as forecast for the next 2 hours and data for the past 12.

The best added value weather service at your disposal



11) Satellite Images and Forecast

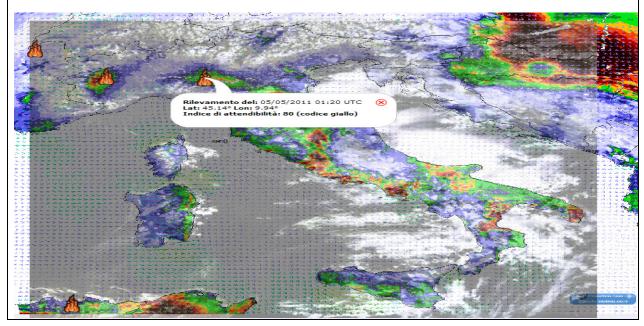
We can offer this new forecast source derived by a combination of different satellite channels comparison like IR, Visibile, Water Vapour etc..Satellite feeds are constantly quality checked by comparation with ground measure or other forecast sources.

Туре	Туре	Demo: http://www.datameteo.com/meteo/modules.php?name=Gallery
Images PNG, JPG	Data	· · · · · · · · · · · · · · · · · · ·
Data available		Weather satellites are used to get a space-bird's eye view of Earth's atmosphere. There are two main types of weather satellites: polar
-Fire Index		orbiting and geostationary. Both monitor the following: Day and night
-Radiation data		cloud images and low-level cloud and fog images. Images showing the amounts of water vapor at various altitudes in the lower atmosphere, land temperatures and sea surface temperatures. Winds are calculated
-Clouds coverage		by measuring cloud motion. Other data are: the amounts of solar energy being reflected by various parts of the Earth Infrared, or heat,
-Temperatures		energy leaving the earth locations of forest fires and the estimates of precipitation amounts and the total amounts of ozone above different
Etc		locations.

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Details of our interactive GIS 3D Platform Meteobrowser with fire index display overlayed at a weather maps combined with an RGB satellite image



12) Archived Weather Forecast

We can offer 9 standard parameters supplied for the surface level. Atmosphere data are not archived. Other data can be generated on request

Validated top quality worldwide high resolution weather archived forecast

Type Availability	Data Europe, USA, S America, Africa and Asia (part), NZ, India	Available Parameters In metric units
Format	Xml, csv	- 2m Air Temperature in ℃
	Standard format for forecast data archive includes	- Dew Point in °C
	forecast. Other formats require separate agreement.	- 10 m Wind u, v component in m/s
	The model forecasts are statistically most accurate	- Total Precipitation in mm
	between forecast hours 12 and 36.	- Total Convective Precipitation in mm
	Archives start from 2007	- Solar Radiation in w/m2
	expect for Asia starting in Febrary 2008	- Pressure in hPa

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13) Delivering platform and support

All data are quality checked, <u>very accurate weather phenomena are shown, particularly in actual weather (214 reported weather associations possible).</u> Our feed comes with an icon set, associated phenomena details database and are downloadable via secure http download url protected by declared download lps and personal customer code. Support available via mail or skype during business days and hours. On request, other special Service Level Agreement are quoted separately.

14) CSV - XML Feed example

189|23062011|05:00|4.5|WSW|4 |Sereno|pcloudy.gif |0|

189	23/06/2011	05:00	4.5	WSW	4	Sereno	pcloudy.g	if 0	etc	_
Location id	Date	Time step	Temp °C	Wind Dir ℃	WindSpee d Km/h	Weather	Icon	Precip mm	Other	

This in only an example. Complete feed flow chart will be available upon subcription

15) Icon Dataset

You can choose our icon set or you can build your own, based on our phemomena reference.



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16) Model Data Validation and Comparison

Datameteo numerical models cover the entire world and enable the production of weather forecast for any place on Earth, irrespective of whether a meteorological recording station exists or not. Through the high spatial resolution, which calculates forecast for every 1.- 3-18 km, datameteo produces local forecasts which include the effects of local climate, topography and soil cover.

We conduct regular verification of our forecast, comparing them to actual observation data (2800 stations). Thereby, we make sure that our services are delivering verified quality forecasts, and continuously improving

Statistics vs. High Resolution Modelling Forecast

Statistics

Needs weather stations (past data)-depends on station density

good in NAFTA, W-EU,

less in LATAM, Africa, Australia, Asia

Quality highly dependent on intensity of observation data: good in NAFTA, W-EU

forecast extremes only if extremes already occured (statistics).

+ can be better in microscale topography (less then 3 km)

Modelling

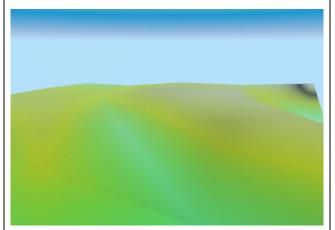
Forecast for every location: NA, EU, LATAM, Africa, LATAM, Africa, Australia, (and Asia on request)

Quality consistent through entire domain: NA=EU=AF=LA=AU

Can predict extremes even if they have not yet occured (pyhsics)

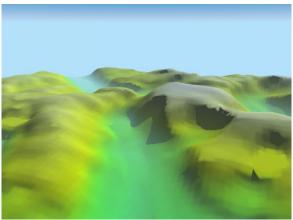
Can include local observations if needed: local adjustment

Low resolution landscape seen by the model



Quality weather station dependant

High resolution landscape seen by the model



Quality forecast everywhere

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Temperatures

Our weather models predicts more than 70% of all temperatures with less than 2 ℃ difference to the reality - 3 days (72 hours) in advance. For 12 hours ahead, more than 80% of all temperature forecasts are less than 2 ℃ different from measurement - on an hourly basis. The RMSE (Root Mean Square Error) of the hourly forecast is less than 2.5 ℃ for up to 3 day forecasts, and around 2 ℃ for 1 day forecast (these data are valid for Europe and North America).

Winds

The datameteo wind forecast for the period of **12-48 hours** ahead reaches **70-80%** agreement (Correlation r²) with measured values. Knowing that wind can vary substantially within a 200 meters distance, this is a very high correlation.

Precipitations

Datameteo can forecast more than 75% or 85% of all precipitation events with more than 2 or 5 millimeters (mm) correctly 3 days in advance. This includes forecasting the days on which such events will not occur. Looking at precipitation events of 2 mm, datameteo can forecast 50% of those 6 days in advance, and more than 60% one day in advance.

Below and example of comparison between a global model and an high resolution model

www.climatempo.com.br

- Little differentiation in less populated areas
- Only GFS output (100 km)

www.datameteo.com

- Forecast quality same everywhere
- Fronts are visible (time resolution)



Example:: rainfall maps

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17) Technologies (MOS-Neural Network) to refine weather forecast

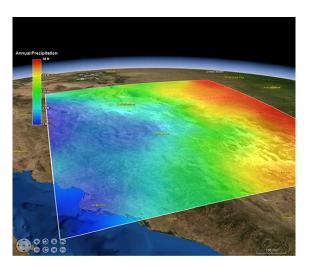
Model output statistic, Kalman filter and neural network technologies are a scientific method for developing a comprehensive record of how weather and climate are changing over time in a limited area or over a specified point. In it, observations and a numerical model that simulates one or more aspects of the Earth system are combined objectively to generate a synthesized estimate of the state of the system. These techniques cam combines observational datasets from surface stations and satellites with a comprehensive Numerical Weather Prediction (NWP) model. Using modern data assimilation methods, a complete estimate of the atmospheric state, for every location without the aid of ground measures, is computed that is both dynamically consistent and optimally close to the observations.

Correlating h data and forecast we can refine in a very accurate way forecast for a specified location or area



-Resolution defines how the model see -Parametrization defines what the model see





Below a correlation example of a **global GFS weather model** with MOS technology applied at the air temperature field show an RMSE score of **0.9996-.9999 RMSE** while the WRF **high resolution weather model** reaches a RSME **>of 0.09998**, with MOS technology applied



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18) References

Datameteo offers an **increasing products range** for different businesses. For individual industries, we offer specialized services. These include wind and solar energy forecasts, weather services for the building management, special data supply and warning services.

These **high value outputs** are the cornerstone for all our market tailored services, being integrated into specific packages and distribution tools. As a key player in the Italian fast growing meteorological market.

Datameteo continuously develops **new services** through **scientific** and **commercial** collaborations which can add value to our operational forecast.



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