

PART II – WEATHER AND AGRICULTURE

2. WEATHER 2011

Weather data encompasses the data related to temperature, rain, humidity, and wind maximum power provided by the stations of Rafic Hariri International Airport (RHIA), Beirut Golf, Zahleh (Bekaa), and Tripoli (North Lebanon). The analysis is for the year 2011 as the General Directorate of Civil Aviation, Climatology Service did not provide the Central Administration of Statistics with the complete data for the years 2012-2013

Temperature

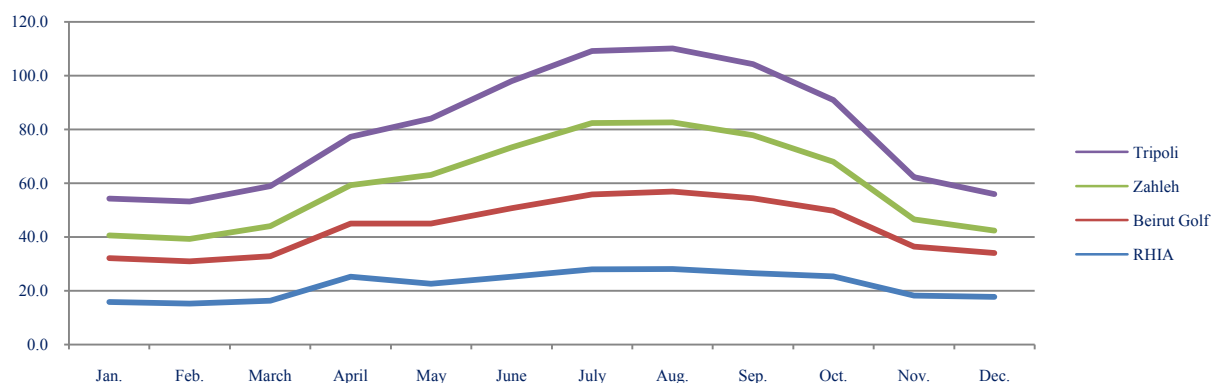
Lebanon witnessed a minimum temperature of 1.6 degrees Celsius and a maximum temperature of 38.0 degree Celsius in 2011.

Table 2.1 – Minimum and maximum temperature in Lebanon. January 2011 – December 2011

Temperature. Degrees Celsius	Year 2011	
	Minimum	Maximum
RHIA	10.3 (December)	38.0 (April)
Beirut Golf	12.1 (February)	32.6 (August)
Zahleh	1.6 (December)	34.9 (July)
Tripoli	8.8 (December)	31.7 (August)
Lebanon	1.6 (December)	38.0 (April)

Table made by CAS based on the General Directorate of Civil Aviation, Climatology Service data (2011)

Graph 2.1 – Average temperature. Degrees Celsius in 2011



Graph made by CAS based on the General Directorate of Civil Aviation, Climatology Service data (2011)

Rain

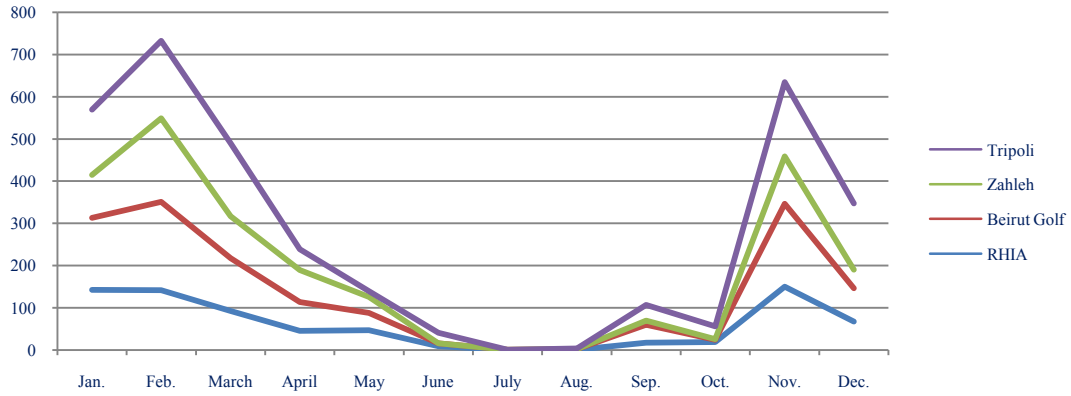
Lebanon witnessed a minimum rain fall of 0.0 mm and a maximum of 208.9 mm in 2011.

Table 2.2 – Minimum and maximum temperature in Lebanon. January 2011 – December 2011

Rain. Mm	Year 2011	
	Minimum	Maximum
RHIA	0.0 (July/August)	149.8 (November)
Beirut Golf	0.4 (July)	208.9 (February)
Zahleh	0.0 (July/August)	198 (February)
Tripoli	0.0 (July)	183.9 (February)
Lebanon	0.0 (July/August)	208.9 (February)

Table made by CAS based on the General Directorate of Civil Aviation, Climatology Service data (2011)

Graph 2.2 – Rain. Mm in 2011



Graph made by CAS based on the General Directorate of Civil Aviation, Climatology Service data (2011)

Relative humidity

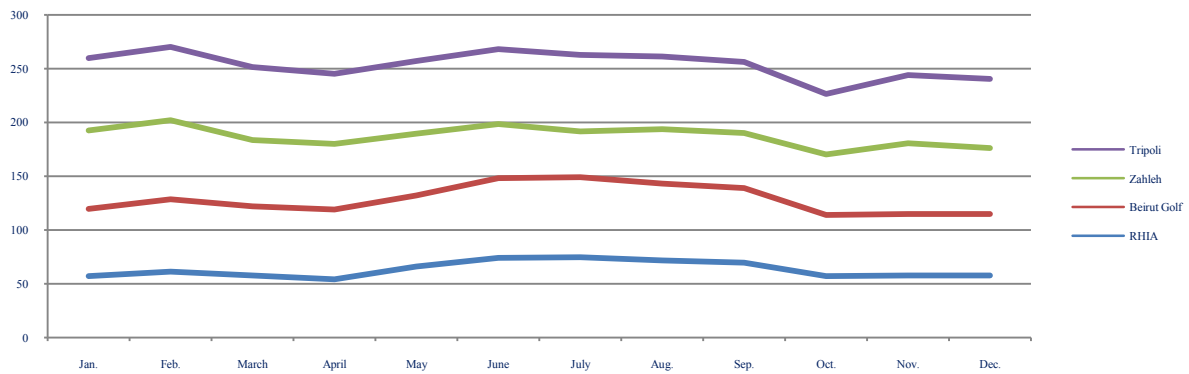
Lebanon witnessed a minimum relative humidity of 19% and a maximum of 92% in 2011.

Table 2.3 – Minimum and maximum relative humidity in Lebanon. January 2011 – December 2011

Relative humidity. %	Year 2011	
	Minimum	Maximum
RHIA	38 (April)	89 (July)
Beirut Golf	40 (December)	89 (July)
Zahleh	19 (July)	92 (January/February)
Tripoli	37 (October)	88 (March)
Lebanon	19 (July)	92 (January/February)

Table made by CAS based on the General Directorate of Civil Aviation, Climatology Service data (2011)

Graph 2.3 – Average relative humidity. Per cent in 2011



Graph made by CAS based on the General Directorate of Civil Aviation, Climatology Service data (2011)

Wind maximum power

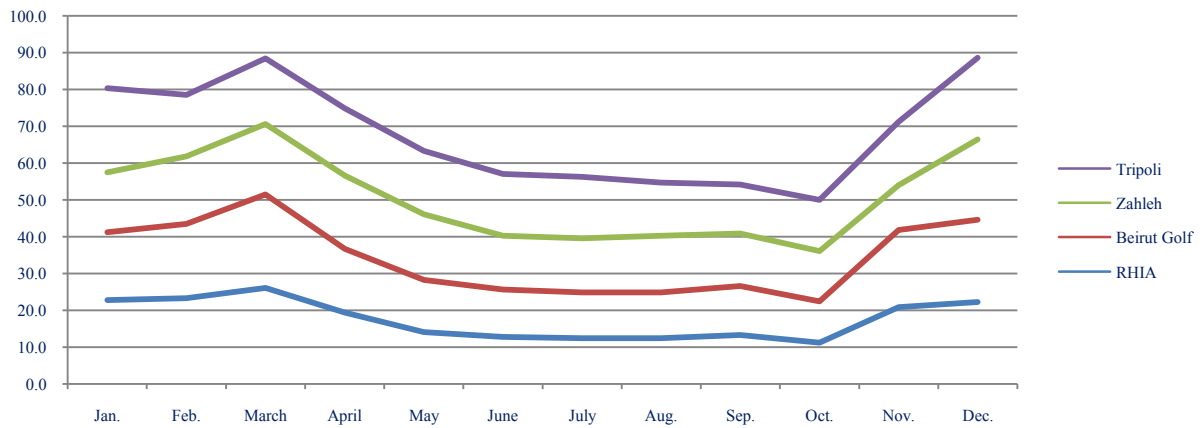
Lebanon witnessed a minimum wind maximum power of 11.2 m/sec. and a maximum of 26.1 m/sec. in 2011.

Table 2.4 – Minimum and maximum wind maximum power in Lebanon. January 2011 – December 2011

Wind maximum power. M/sec.	Year 2011	
	Minimum	Maximum
RHIA	11.2 (October)	26.1 (March)
Beirut Golf	11.2 (October)	25.4 (March)
Zahleh	12.2 (November)	21.8 (December)
Tripoli	13.3 (September)	22.8 (January)
Lebanon	11.2 (October)	26.1 (March)

Table made by CAS based on the General Directorate of Civil Aviation, Climatology Service data (2011)

Graph 2.4 – Wind maximum power. M/sec. in 2011



Graph made by CAS based on the General Directorate of Civil Aviation, Climatology Service data (2011)

3. GREEN PROJECT AND AGRICULTURE 2010 - 2013

This chapter analyzes the Green project (2011-2013) and agricultural census (2010) statistics.

Green project

Green Project undertook several agricultural works in Lebanon during the period January 2011 – December 2013.

Table 3.1 – Green Project. Activities during the period January 2011 – December 2013

Mohafazat	Total 2011	Total 2012	Total 2013	Change 2013/2011. Per cent
Farmers	1,082	945	708	-34.6
Number of villages where work was done	559	534	424	-24.2
Reworked area (dounams)	4,574	3,612	2,628	-42.6
Walls in square meters	54,507	56,453	49,204	-9.7
Irrigation Channels in meters	2,100	200	130	-93.8
Concrete Tanks (CM)	16,875	21,114	15,059	-10.8
Vine Columns	2,462	430	6,200	151.8
Tank perforation (CM)	127,772	70,954	113,937	-10.8
Fruitful saplings	25,911	12,865	19,789	-23.6
Fence in meter	21,158	15,358	14,313	-32.4
Modern irrigation in dounams	1,305	231	274	-79.0
Paid amounts in thousands LBP	5,526,961	5,119,720	3,929,041	-28.9

1 Dounam = 1,000 m²

Table made by CAS based on Green Project data (2011 - 2013)

The activities of the Green project decreased in general during the period January 2011 – December 2013. The minimum decrease affected the walls in square meters (-9.7%) and the maximum decrease affected the irrigation channels in meters (-93.8%). Vine columns activities are the exception as their number increased by 151.8% to reach 6,200 in 2013.

Agricultural census 2010

The total agricultural area in Lebanon was 2,309,943 dounams in 2010. The regional mode was Baalbeck-Hermel (24.9% of this total area) and the modal legal status was the individual property (85.0%). The total irrigated area consisted of 1,129,546 dounams or 49.8% of the total agricultural area.

The agricultural census conducted by the Ministry of Agriculture covers crops, Land use within agricultural exploitations, living stock, and labor in agriculture.

Table 3.2 – Green Total agricultural area and total irrigated area by Mohafazat. Dounams in 2010

Mohafazat	Agricultural area. Dounams	Agricultural area. %	Irrigated agricultural area. Dounams	Irrigated agricultural area. %
Baalbeck-Hermel	576,249	24.9	317,030	28.1
Bekaa	416,489	18.0	298,663	26.4
Akkar	353,519	15.3	156,485	13.9
Nabatieh	260,949	11.3	49,385	4.4
South Lebanon	256,211	11.1	122,025	10.8
North Lebanon	240,648	10.4	92,003	8.1
Mount-Lebanon	205,878	8.9	93,955	8.3
Total. Dounams	2,309,943	100.0	1,129,546	100.0

Ministry of Agriculture (2010)

Crops

However, the 2,321,999 dounams of occupied area delivered permanent crops (54.0%), seasonal crops (44.0%) and protected crops (2.0%). The modal crop was fruit trees (31.0% of total crops in dounams).

Table 3.3 – Crops. Dounams in 2010

Crop	Dounams	%
Fruit trees	719,820	31.0
Olives	534,060	23.0
Cereals	464,400	20.0
Vegetable crops	394,740	17.0
Leguminous	92,880	4.0
Industrial crops	92,880	4.0
Forage crops	23,220	1.0
Total. Dounams	2,321,999	100.0

Ministry of Agriculture (2010)

Land use within agricultural exploitations

Total land use within agricultural exploitations was 3,215,000 dounams in 2010 of which temporarily fallow was the mode (71.8%). Forests constituted only 5.8% of these lands. This area is object to decrease especially with the progressing frequency of forest fires.

Table 3.4 – Land use within agricultural exploitations. Dounams in 2010

Land use	Dounams	%
Temporarily fallow	2,309,000	71.8
Abandoned lands	470,000	14.6
Uncultivated areas	217,000	6.7
Forests	188,000	5.8
Other non-cropland	31,000	1.0
Total. Dounams	3,215,000	100.0

Ministry of Agriculture (2010)

Living stock

There were 15,800 livestock farmers in Lebanon in 2010. These exploited cattles, chickens, and bees in all over Lebanon.

Table 3.5 – Living stock in Lebanon. Number in 2010

Land use	Number
Broiler chicken	45,000,000
Laying hen	3,800,000
Goat	403,861
Sheep	265,345
Hives	169,308
Dairy cow	40,159
Pig	7,735

Ministry of Agriculture (2010)

Labor in agriculture

111,457 permanent household labor worked in agricultural exploitation in 2010. Hired ones constituted 45.8% of total households. The following table shows the labor balance in Agriculture in 2010.

Table 3.6 – Labor balance in agriculture. Number in 2010

Labor	Number	%
Permanent households labor	165,594	63.4
Permanent non households labor	51,049	19.5
Seasonal non households labor	44,666	17.1
Total. Number	261,309	100.0

Ministry of Agriculture (2010)