

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

RAPA (FR. POLYNESIA -FR-)

Altitude: 1 m.

Latitude: 27°37'S Longitude: 144°20'W

Temperature observation period.: 1952-1993 (42)

Rainfall observation period....: 1944-1993 (50)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	23.29	26.28	20.43	0.00	0.00	258.7	119.10
Feb.	23.98	28.28	19.83	0.00	0.00	193.4	109.97
Mar.	23.46	27.68	19.23	0.00	0.00	256.9	108.76
Apr.	22.28	26.20	18.40	0.00	0.00	248.2	86.74
May.	20.53	23.01	18.14	0.00	0.00	252.1	70.58
Jun.	18.96	21.78	15.93	0.00	0.00	199.7	55.16
Jul.	18.28	22.30	14.50	0.00	0.00	247.8	53.13
Aug.	17.73	19.93	15.38	0.00	0.00	242.0	52.85
Sep.	18.11	20.80	15.60	0.00	0.00	196.1	57.16
Oct.	18.96	21.78	15.93	0.00	0.00	175.4	70.38
Nov.	20.35	22.90	17.70	0.00	0.00	194.6	84.07
Dec.	21.74	26.76	16.69	0.00	0.00	218.7	103.66
Year	20.64	23.98	17.31	0.00	0.00	2684	971.56

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	559
Compensated thermicity index.....(Itc):	542
Simple continentality index.....(Ic):	6.3
Diurnality index.....(Id):	10.1
Annual ombrothermic index.....(Io):	10.84
Monthly dry ombrothermic index.....(Iod1):	9.25
Bimonthly dry ombrothermic index.....(Iod2):	9.41
Three monthly dry ombrothermic index.....(Iod3):	9.86
Four monthly dry ombrothermic index.....(Iod4):	10.75
Annual ombro-evaporation index.....(Ioe):	1.14
Annual positive temperature.....(Tp):	2477
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	574
Positive precipitation.....(Pp):	2684

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	12	0	0	0	0

Latitudinal Belt...: Subtropical

Continentalty.....: Hyperoceanic - Low Euhyperoceanic

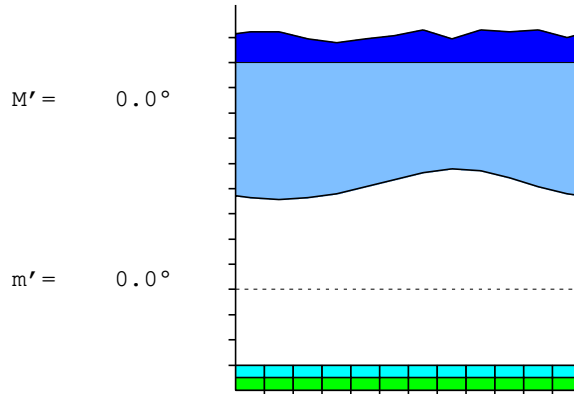
Bioclimate(Variant): TROPICAL PLUVIAL (HYGROPHYTIC)

Bioclimatic Belt...: UPPER THERMOTROPICAL UPPER HUMID

RAPA (FR. POLYNESIA -FR-)

1 m

P= 2684 27° 37' S 144° 20' W 42/50 y.
 T= 20.6° Ic= 6.3 Tp= 2477 Tn= 0
 m= 15.4° M= 19.9° Itc= 542 Io= 10.8



TROPICAL PLUVIAL (HYGROPHYTIC)
 UPPER THERMOTROPICAL UPPER HUMID

WATER INDEX CARD

RAPA (FR. POLYNESIA -FR-)

Altitude: 1 m.

Latitude: 27° 37' S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	18.3	53	248	0	100	53	0	195	174	3.6
Aug.	17.7	53	242	0	100	53	0	189	182	3.5
Sep.	18.1	57	196	0	100	57	0	139	160	2.4
Oct.	19.0	70	175	0	100	70	0	105	133	1.4
Nov.	20.4	84	195	0	100	84	0	110	122	1.3
Dec.	21.7	104	219	0	100	104	0	115	118	1.1
Jan.	23.3	119	259	0	100	119	0	140	129	1.1
Feb.	24.0	110	193	0	100	110	0	83	106	0.7
Mar.	23.5	109	257	0	100	109	0	148	127	1.3
Apr.	22.3	87	248	0	100	87	0	161	144	1.8
May.	20.5	71	252	0	100	71	0	182	163	2.5
Jun.	19.0	55	200	0	100	55	0	145	154	2.6
Year	20.6	972	2684	*	*	972	0	1712	1712	*

R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

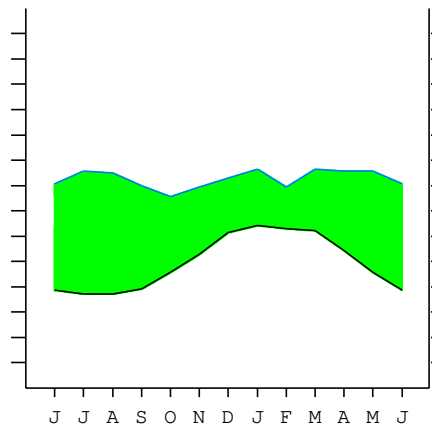
RAPA (FR. POLYNESIA -FR-)

27°37' S 144°20' W

1 m 42/50 y.

T= 20.6 Ic= 6.3 TROPICAL PLUVIAL (HYGROPHYTIC)
 m= 15.4 Tp= 2477 UPPER THERMOTROPICAL
 M= 19.9 Tn= 0 UPPER HUMID
 M' = 0.0 Itc= 542
 m' = 0.0 Io= 10.8
 P= 2684 mm ———
 PE= 972 mm ———

	Imbibing
	Saturation
	Reserve Use
	Deficit



All over the year,
 there is no hydric deficit

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [A2b]
 + Type: A. Hyperoceanic
 + Subtype: 2. Euhyperoceanic
 + Variant: b. Low

Thermic types [A3.A2]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 3. Subtropical
 + Thermic type: A. Warm
 + Thermic subtype: 2. Warm

Bioclimatic types [A5.2a.7a]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 5. PLUVIAL
 + Bioclimatic variant ..:
 + Thermic type.....: 2. THERMOTROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 7. HUMID
 + Ombrothermic subtype : a. UPPER
 Bioclimatic Classification: Trhd.Ttr.Hum

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 1428
 Coldest semester of the year.....(Psw): 1256
 Warmest four months period of the year.....(Pcm1): 957
 Following warmest four months period.....(Pcm2): 942
 Positive precipitation dryest 3 months.....(Ppd): 566
 Positive precipitation dryest 2 months.....(Ppd2): 370
 Positive precipitation dryest 1 month.....(Ppd1): 175
 Positive precipitation warmest 3 months.....(Pps): 709
 Positive precipitation warmest 2 months.....(Pps2): 450
 Positive precipitation warmest 1 month.....(Pps1): 193
 Positive precipitation coldest 3 months.....(Ppw): 686
 Positive precipitation coldest 2 months.....(Ppw2): 438
 Positive precipitation coldest 1 month.....(Ppw1): 242

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	689	566	670	757

Seasonal rainfall rhythms: F > W > S > P

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 24.0
 Average coldest month [T].....(Tmin): 17.7
 Maximum temp. warmest month [M].....(Tmmax): 28.3
 Minimum temp. coldest month [m].....(Tmmin): 14.5
 Absolute Max.temp. warmest month [M'].....(Tamax): 0.0
 Absolute Min.temp. coldest month [m'].....(Tamin): 0.0
 First warmest contrasted month [M].....(Tcmax): 26.8 (12)
 First coldest contrasted month [m].....(Tcmin): 16.7 (12)
 Dry station temperature.....(Td): 574
 Positive temperature dryest 3 months.....(Tpd): 574
 Positive temperature dryest 2 months.....(Tpd2): 393
 Positive temperature dryest 1 month.....(Tpd1): 190
 Positive temperature warmest 3 months.....(Tps): 707
 Positive temperature warmest 2 months.....(Tps2): 474
 Positive temperature warmest 1 month.....(Tps1): 240
 Positive temperature coldest 3 months.....(Tpw): 541
 Positive temperature coldest 2 months.....(Tpw2): 358
 Positive temperature coldest 1 month.....(Tpw1): 177

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SEASONAL PARAMETERS

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Warmest semester...(Sms)	o	o	o	o	o							o
Dryest semester....(Smd)	o	o							o	o	o	o
Warmest 4 months...(Cm1)	o	o	o	o								
Dryest 4 months....(Cmd)									o	o	o	o
Vegetation Activity(Pav)	o	o	o	o	o	o	o	o	o	o	o	o
Ultragelid...[M' <=0] (Pf)												
Hypergelid...[M <=0] (Pf)												
Gelid.....[T <=0] (Pf)												
Subgelid.....[m <=0] (Pf)												
Pregelid.....[m' <=0] (Pf)												
Agelid.....[m' > 0] (Pf)												
HiperAgelid..[all>0] (Pf)	o	o	o	o	o	o	o	o	o	o	o	o

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.36
 Mediterranean index of January.....(Im1): 0.46
 Mediterranean index of January & February.....(Im2): 0.51
 Mediterranean index of December to February...(Im3): 0.50

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	2187	2587	1934	2569	2482	2521	1997	2478	2420	1961	1754	1946
Tp	217	233	240	235	223	205	190	183	177	181	190	204
Io (Iom)	10.1	11.1	8.07	11.0	11.1	12.3	10.5	13.6	13.7	10.8	9.25	9.56
Seasons	Summer			Automn			Winter			Spring		
Pp(x10)/Tp	6709 / 690			7572 / 663			6896 / 550			5661 / 574		
Io (Iot)	9.721			11.43			12.54			9.858		
Semesters	December-May						June-November					
Pp(x10)/Tp	14281 / 1353						12556 / 1124					
Io (Iosm)	10.56						11.17					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 26837/2477=10.84 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	2187	2587	1934	2569	2482	2521	1997	2478	2420	1961	1754	1946
Tp [T*10]	217	233	240	235	223	205	190	183	177	181	190	204
Iom [Pp/Tp]	\$\$	\$\$	807	\$\$	\$\$	\$\$	\$\$	\$\$	\$\$	\$\$	925	956
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Summer			Automn			Winter			Spring		
Pp / Tp	6709 / 690			7572 / 663			6896 / 550			5661 / 574		
Iot [Pp/Tp]	972			1143			1254			986		
Avs E[Avm<200]	***			***			***			***		

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 6.25
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 2.52
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 3.41
 + Hyperoceanic (-20<CI<20)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 0.61
 + Oceanic (0.6<CI<1.1)
 Rainfall Index of Lang (1925) [R=P/T]: 130.03
 + Temperate humid (160>R>100)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 87.59
 + Perhumid (Ia>60)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 455.25
 + Humid (Q>90)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 0.77
 + Humid (2>DR>0)
 Aridity Index of UNEP [I=P/PE]: 2.76
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 24.94
 + Very low (K<60)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate: A. Warm and temperate warm
 + Region: 6. Termoaxeric (Axic warm)
 + Thermic type: 2. Macrothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	1.10	0.79	1.09	1.08	1.15	0.92	1.19	1.18	0.93	0.80	0.86	0.95
T-E ratio	10.48	10.79	10.56	10.03	9.24	8.53	8.23	7.98	8.15	8.53	9.16	9.78
Precipitation-effectiveness: 120.49						Temperature-efficiency: 111.45						
Moisture Index [MI=100*(P-PE)/PE]: 176.23 + A.Extremely humid (MI>100)												
Index of dryness [DI=100*d/PE]: 0.00 + No deficit (0<DI<16.7)												
Index of humidity [HI=100*s/PE]: 176.22 + Strong surplus (20<HI)												
Potential Evapotranspiration PE: 971.56 + Third mesothermic (855<PE<997)												

