

DAFTAR PUSTAKA

- Altman, M. 2020. A more scientific approach to applied economics: Reconstructing statistical, analytical significance, and correlation analysis. *Economic Analysis and Policy*, 66, 315-324.
- BMKG, 2020. Pemahaman Iklim, <http://iklim.ntb.bmkg.go.id/> Diakses pada 28 Januari 2023
- BOM, 2017. *El Nino* Southern Oscillation (ENSO), www.bom.gov.au Diakses pada 9 November 2022
- Cane, M. A. 2005. The evolution of *El Nino*, past and future. *Earth and Planetary Science Letters*, 230(3-4), 227-240.
- Chiew, F. H., Piechota, T. C., Dracup, J. A., & McMahon, T. A. (1998). *El Nino*/Southern Oscillation and Australian rainfall, streamflow and drought: Links and potential for forecasting. *Journal of hydrology*, 204(1-4), 138-149.
- Firdaus, Z. 2009. Korelasi antara Pelatihan Teknis Perpajakan, Pengalaman dan Motivasi Pemeriksa Pajak dengan Kinerja Pemeriksa Pajak pada Kantor Pelayanan Pajak di Jakarta Barat. Fakultas Ekonomi dan Ilmu Sosial Universitas Islam Negeri Syarif Hidayatullah Jakarta
- Fu, T., Tang, X., Cai, Z., Zuo, Y., Tang, Y., & Zhao, X. 2020. Correlation research of phase angle variation and coating performance by means of

- Pearson's correlation coefficient. *Progress in Organic Coatings*, 139, 105-459.
- Heidke, P., 1926: Berechnung des Erfolges und der Gute der Windstarke Vorhersagen in Sturmwarnungs Dienst. *Geogr. Ann.*, Stockh., 8, 310-349.
- Halide, H. 2009. *Esensi Prediksi*. Makassar: *Pustaka Pena Press Makassar*. 206pp.
- Iskandar, F. 2012. Variabilitas Curah Hujan dan Debit Sungai di DAK Brantas. Depok: Skripsi Universitas Indonesia.
- Kementerian Lingkungan Republik Indonesia. 2007. Indonesia Country Report: Climate Variability and Climate Changes, dan Their Implication. Jakarta.
- Kirono, D. G. C. 2004. Principal component analysis for identifying period of seasons in Indonesia. *Indonesian Journal of Geography*, 36(2).
- Linsley, R. K., Kohler, M. A., & Paulus, J. L. H. Hermawan. 1996. *Hidrologi Untuk Insinyur (Edisi Ketiga)*. Erlangga, Jakarta.
- Mulyono, D. 2014. Analisis karakteristik curah hujan di wilayah Kabupaten Garut Selatan. *Jurnal Konstruksi*, 12(1).
- NOAA. 2022 www.ncei.noaa.gov Diakses pada 11 November 2022
- NOAA Climate.gov. 2009. *Climate Variability: Oceanic Niño Index* <https://www.climate.gov>. Diakses pada 11 November 2022

- Nusantara, Y. B. W. 1992. Profil Propinsi Republik Indonesia, Nusa Tenggara Barat. *Jakarta: PT. Intermasa.*
- Pasaribu, J. M., & Haryani, N. S. 2012. Perbandingan Teknik Interpolasi DEM SRTM dengan Metode Inverse Distance Weighted (IDW), Natural Neighbor dan Spline (Comparison of DEM SRTM Interpolation Techniques Using Inverse Distance Weighted (IDW), Natural Neighbor and Spline Method). *Jurnal Penginderaan Jauh Dan Pengolahan Data Citra Digital*, 9(2).
- Pramono, G.H. 2008. Akurasi Metode IDW dan Kriging Untuk Interpolasi Sebaran Sedimen Tersuspensi. *Forum Geografi*, Vol. 22(2), 97-110.
- Qian, J. H., Robertson, A. W., & Moron, V. 2010. Interactions among ENSO, the monsoon, and diurnal cycle in rainfall variability over Java, Indonesia. *Journal of the Atmospheric Sciences*, 67(11), 3509-3524.
- Raffles, T. S. 1965. History of Java. In *Travels, Explorations and Empires* (pp. 137-168). Routledge.
- Roy, D. 2011. "Interannual variability of monsoon rainfall over Indonesia: Remote and regional impacts." *Climate Dynamics*, 37(3-4), 615-628.
- Sandy, I. 1985. Geografi Regional Republik Indonesia. *Jurusan Geografi–FMIPA–Universitas Indonesia, Jakarta.*
- Sekaran, U., & Bougie, R. 2016. *Research methods for business: A skill building approach.* John Wiley & Sons.

- Sriyanti, M. G. 2010. Indonesia Climate Change Sectoral Roadmap-ICCSR. *BAPPENAS: Jakarta, Indonesia.*
- Sudiarta, I. W. 2013. Pengantar Meteorologi. Universitas Mataram. Nusa Tenggara Barat
- Swastiko, W. A., & Rifani, A. 2017. Prakiraan Hujan Lebat Menggunakan Model Wrf-Arw Di Palangka Raya (Studi Kasus 3 Juni 2016). *Jurnal Meteorologi Klimatologi dan Geofisika*, 4(2), 16-23.
- Tjasyono, B. 1999. Klimatologi Umum. ITB. Bandung.
- Trenberth, K. E. 1997. The definition of *el Nino*. *Bulletin of the American Meteorological Society*, 78(12), 2771-2778.
- Wilks D. S. 2006. *Statistical Methods in the Atmospheric Sciences 2nd Ed.* Elsevier. USA. 649pp.
- Zakir, A., Sulistya, W., & Khotimah, M. K. (2010). Perspektif operasional cuaca tropis. *Jakarta: BMKG.*
- Zhang, Y., Li, Y., Song, J., Chen, X., Lu, Y., & Wang, W. (2020). Pearson correlation coefficient of current derivatives based pilot protection scheme for long-distance LCC-HVDC transmission lines. *International Journal of Electrical Power & Energy Systems*, 116, 105-526.

LAMPIRAN

Lampiran 1: Prediksi Curah Hujan *Indonesia Climate Change Sectoral Roadmap*

Region	Mean Rainfall												Standard Deviation											
	Month (January to December)												Month (January to December)											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Java-Bali	↘	↗	↗	↗	⦿	↗	⦿	⦿	↘	⦿	↘	↗	✱	✱	✱	⦿	⦿	⦿	⦿	⦿	✱	⦿	⦿	
Sumatra	↗	↗	↗	↗	+	⦿	↗	↗	↗	↗	+	↗	✱	✱	✱	✱	⦿	⦿	⦿	✱	⦿	✱	✱	
Sulawesi	↗	↗	↗	↗	+	↗	⦿	↘	+	↘	+	↗	✱	✱	✱	⦿	✱	⦿	⦿	✱	✱	✱	⦿	
Kalimantan	↗	↗	↗	↗	+	⦿	↘	↘	↗	↘	+	↗	✱	✱	✱	✱	⦿	⦿	⦿	✱	⦿	✱	⦿	
Maluku	⦿	↗	↗	⦿	⦿	↗	↘	↘	⦿	↘	+	↗	✱	✱	✱	✱	⦿	✱	⦿	⦿	⦿	⦿	⦿	
Nusa Tenggara	↘	↘	↗	⦿	⦿	⦿	⦿	⦿	↗	↘	⦿	↗	✱	✱	✱	⦿	⦿	⦿	⦿	⦿	✱	⦿	⦿	
Papua	↗	↘	↗	↗	+	↗	+	↗	↗	⦿	↗	↗	✱	✱	✱	✱	⦿	⦿	✱	✱	⦿	⦿	⦿	

↗: mainly increasing, ↘: mainly decreasing, +: ↗ and ↘ are almost evenly distributed,
 ○: mainly unchanged, *: mainly increasing (standard deviation), *: most area increasing,
 *: most area decreasing, ○: unchanged or changes are not significant

Lampiran 2: Script Matlab

1. Script Anomali Curah Hujan

```

clear
load ch.txt

y=ch(:,1);year=1981:2021;year=year';
son=ch(:,2);%s11

prod=son; %hujan OND (okt-nov-des)

opol = 2; %2
[p,s,mu] = polyfit(year,prod,opol);
f_y = polyval(p,year,[],mu); %fitting pakai polinomial orde-2

dt_prod = prod - f_y;
%dt_prod=prod;

plot(year,prod,'o',year,f_y)
legend('Observasi','Polinomial orde 2','Location','NorthWest')
ylabel('Curah Hujan musiman SON [mm]')
xlabel('Tahun')
text(1960,590,'Y= -17.7424 X^2 + 15.1813 X + 661.6132')
exitt
clf

mprod=mean(dt_prod);
sprod=std(dt_prod);
aprode=(dt_prod-mprod)./sprod;
  
```

```

aprod1=pearmsel (aprod,son)%r=-0.5872    rmse=1.8819
%exitt
% untuk menentukan batas-batas anomali curah hujan terstandar:
rendah, sedang, tinggi
yy = prctile(aprod,[33.33 66.67]); %-0.2279    0.3823
% exitt

atas=0.3823.*ones(70); %angka 70 adalah jumlah data
bawah=-0.2279.*ones(70);
plot(year,aprod,year,atas,'-r',year,bawah,'-g','LineWidth',2)
ylabel('Anomali Curah Hujan SON terstandar')
xlabel('Tahun')
% grid on
set(gca,'Ytick',[-3,-0.2279,0.3823,3])
% exitt

%plot(year,aprod)
clf

enso=son;
%enso=ndj;
x=-2.5:2.5;y=-2.5:2.5;
yy = prctile(aprod,[33.33 66.67]); %-0.2279    0.3823

n=70;
A=zeros(n,1);
for m=1:n;
    if enso(m,1)<-0.5
        if aprod(m,1)<-0.2279
            A(m,1)=1;
        end
    end
end
A1=sum(A);

B=zeros(n,1);
for m=1:n;
    if enso(m,1)>=-0.5 & enso(m,1)<=0.5
        if aprod(m,1)<-0.2279
            B(m,1)=1;
        end
    end
end
B1=sum(B);

%-0.2279    0.3823

C=zeros(n,1);
for m=1:n;
    if enso(m,1)>0.5
        if aprod(m,1)<-0.2279
            C(m,1)=1;
        end
    end
end
C1=sum(C);

```

```

%-0.2279    0.3823

D=zeros(n,1);
for m=1:n;
    if enso(m,1)<-0.5
        if apro(m,1)>=-0.2279 & apro(m,1)<=0.3823
            D(m,1)=1;
        end
    end
end
D1=sum(D);

%-0.2279    0.3823
E=zeros(n,1);
for m=1:n;
    if enso(m,1)>=-0.5 & enso(m,1)<=0.5
        if apro(m,1)>=-0.2279 & apro(m,1)<.3823
            E(m,1)=1;
        end
    end
end
E1=sum(E);
%-0.2279    0.3823
F=zeros(n,1);
for m=1:n;
    if enso(m,1)>0.5
        if apro(m,1)>=-0.2279 & apro(m,1)<=0.3823
            F(m,1)=1;
        end
    end
end
F1=sum(F);

%-0.2279    0.3823
G=zeros(n,1);
for m=1:n;
    if enso(m,1)<-0.5
        if apro(m,1)>.3823
            G(m,1)=1;
        end
    end
end
G1=sum(G);

%-0.2279    0.3823
H=zeros(n,1);
for m=1:n;
    if enso(m,1)>=-0.5 & enso(m,1)<=0.5
        if apro(m,1)>0.3823
            H(m,1)=1;
        end
    end
end
H1=sum(H);

```

```

%-0.2279      0.3823
I=zeros(n,1);
for m=1:n;
    if enso(m,1)>0.5
        if apro(m,1)>-1.2361
            I(m,1)=1;
        end
    end
end
I1=sum(I);

ADG1=(A1+D1+G1);BEH1=(B1+E1+H1);CFI1=(C1+F1+I1);
PA=A1/ADG1*100;
PB=B1/BEH1*100;
PC=C1/CFI1*100;
PD=D1/ADG1*100;
PE=E1/BEH1*100;
PF=F1/CFI1*100;
PG=G1/ADG1*100;
PH=H1/BEH1*100;
PI=I1/CFI1*100;
PADG=PA+PD+PG;
PBEH=PB+PE+PH;
pgda=[PG PD PA];%nina 54.5455    36.3636         9.0909
pheb=[PH PE PB];%netr  30.7692    46.1538         23.0769
pifc=[PI PF PC];%nino 45.7143    11.4286         42.8571
%exitt

p=[PG PH PI;PD PE PF;PA PB PC];

%%%----
opol1 = 1; %membuat garis linear
[p1,s1] = polyfit(enso,apro,opol1);
%p1= -0.5735    -0.0139 %persamaan garis lurus antara anomali CH
terstandar
%vs ENSO
%exitt
[f_y1,delta] = polyval(p1,enso,s1);
ensocontoh=[-0.74 0 0.74];
[Y,delta] = polyval(p1,ensocontoh,s1);

Yup=[Y+delta];%
Ylow=[Y-delta];%
%exitt
prod_max=Yup*sprod+mprod; % ()
prod_mean=Y*sprod+mprod; % ()
prod_min=Ylow*sprod+mprod; % ()
%exitt
anom_max=Yup*sprod; % ()
anom_mean=Y*sprod;% ()
anom_min=Ylow*sprod; % ()
nina=[anom_max(1) anom_mean(1) anom_min(1)];
%[371.5048,247.4172,123.3296]
netr=[anom_max(2) anom_mean(2) anom_min(2)]; %[119.0183,1.9868,-
115.0447]

```



```

nino=[anom_max(3) anom_mean(3) anom_min(3)]; %[-119.5746,-
243.4435,-367.3125]
%exittt

plot(enso,aprod,'o',enso,f_y1)%,hold on
xlabel('X (ENSO SON) [^oC]')
ylabel('Y (Anomali Curah Hujan SON terstandar)')
title('Periode tahun 1950-2019 (n=70), Y = -0.5387*X - 0.0008')
text(-2.8,-2.5,'r = -0.5589 RMSE = 178.70 mm')
%title('nama nim Indonesia')
%plot(x,y,':')
%pl= -0.5735 0.0139 %persamaan garis lurus antara anomali CH
terstandar
%vs ENSO
% text(-1.8,1.2,'ANOM-CH-STD -0.5643 * ENSO 0.0137')
axis('square')
axis([-3 3 -3 3])
%axis([-1.5 1.5 -1.5 1.5])
grid on

%-0.2279 0.3823
set(gca,'Xtick',[-3,-0.5,0.5,3])
set(gca,'Ytick',[-3,-0.2279,0.3823,3])

text(-2.2,-1.5,[num2str(PA,'%2f'),'%'])
text(-2.2,-1.25,[num2str(A1)])
text(-2.2,-0.05,[num2str(PD,'%2f'),'%'])
text(-2.2,0.25,[num2str(D1)])
text(-2.2,2,[num2str(PG,'%2f'),'%'])
text(-2.2,2.2,[num2str(G1)])

text(-.25,-1.5,[num2str(PB,'%2f'),'%'])
text(-.25,-1.25,[num2str(B1)])
text(-.25,-0.05,[num2str(PE,'%2f'),'%'])
text(-.25,.25,[num2str(E1)])
text(-.25,2,[num2str(PH,'%2f'),'%'])
text(-.25,2.2,[num2str(H1)])

text(1.5,-1.5,[num2str(PC,'%2f'),'%'])
text(1.5,-1.25,[num2str(C1)])
text(1.5,-0.05,[num2str(PF,'%2f'),'%'])
text(1.5,.25,[num2str(F1)])
text(1.5,2,[num2str(PI,'%2f'),'%'])
text(1.5,2.2,[num2str(I1)])

aprod1=pearmse1(aprod,son)%r=-0.5475 rmse=1.7794

```

2. Script Korelasi

```

load Korelasi.txt
x = Korelasi(:,1);
y = Korelasi(:,2);
% menghitung koefisien korelasi dari x dan y
R = corr(x,y)
[r p]=corrcoef(x,y)

```

Lampiran: 3 Data Penelitian

1. Data Penelitian Curah Hujan Pulau Jawa – Bali

Tahun	Kota Surabaya - StaMet Kelas I Bandara Int'l Juanda	Kab. Magetan - StaMet Lanud Iswahjudi	Kab. Gresik - StaMet Kelas III Sangkapura Bawean
Jan 1981 - 2007	8888.57	9088.81	12049.71
Feb 1981 - 2007	7956.88	9333.93	7184.23
Mar 1981 - 2007	7466.32	8872.31	7237.6
Apr 1981 - 2007	183468.93	158303.14	5178.211
May 1981 - 2007	905098.12	532978.17	4695.093
Jun 1981 - 2007	835755.35	723534.1	2540.011
Jul 1981 - 2007	703205.16	566809.58	1637.745
Aug 1981 - 2007	1140926.648	735207.05	454.1511
Sep 1981 - 2007	954554.79	760230.19	853.291
Oct 1981 - 2007	1143415.35	403130	2298.065
Nov 1981 - 2007	634169.5	6617.66	6510.805
Des 1981 - 2007	6235.49	7945.75	12312.34
Jan 2010 - 2020	4361.51	4431.49	6074.53
Feb 2010 - 2020	3851.85	4243.02	2745.74
Mar 2010 - 2020	3291.19	4004.75	2719.83
Apr 2010 - 2020	171070.28	3102.37	2518.2
May 2010 - 2020	188523.94	116076.89	2079.857
Jun 2010 - 2020	243438.67	398661.51	1334.829
Jul 2010 - 2020	440314.2	225600.89	951.815
Aug 2010 - 2020	371585.2661	239492.63	187.3751
Sep 2010 - 2020	674272	302649.07	576.984
Oct 2010 - 2020	334521.24	234248.42	967.6545
Nov 2010 - 2020	190343.67	3424	3152.584
Des 2010 - 2020	3471.55	4019.59	6230.93

Tahun	Kab. Sumenep - StaMet Kelas III Kalianget Bandara Trunojoyo	Kab. Blora - Bandara Ngloram	Kota Surakarta - StaMet Bandara Adi Soemarmo
Jan 1981 - 2007	7308.59	8332.52	8908.32
Feb 1981 - 2007	6437.58	7691.42	8819.6
Mar 1981 - 2007	6771.82	8002.87	8382.31
Apr 1981 - 2007	442655.37	234868.55	147933.73
May 1981 - 2007	870224.57	578838.42	582039.57
Jun 1981 - 2007	920300.54	863254.4	602254.1
Jul 1981 - 2007	693707.36	666101.13	530035.7
Aug 1981 - 2007	1070542.132	618663.39	1132852.96
Sep 1981 - 2007	971356.8755	796197.19	783468.21
Oct 1981 - 2007	1031605.03	396706.23	414355.87
Nov 1981 - 2007	648183.61	83672.19	83198.7
Des 1981 - 2007	102828.49	8232.36	7978.36
Jan 2010 - 2020	3916.94	3997.88	4021.76
Feb 2010 - 2020	2595.62	3574.85	4221.03
Mar 2010 - 2020	2868.35	3429.57	4059.76
Apr 2010 - 2020	56537.97	2504.59	2845.02
May 2010 - 2020	109010.37	374741.98	128996.63
Jun 2010 - 2020	241064.57	337178.14	207109.6
Jul 2010 - 2020	590992	299057.73	279034.63
Aug 2010 - 2020	283343.4892	246045.87	281556.64
Sep 2010 - 2020	241376.9183	156736.82	174768.09
Oct 2010 - 2020	434981.6	237512.85	269795.01
Nov 2010 - 2020	214993.31	78045.83	3184.27
Des 2010 - 2020	3334.35	4129.85	3923.91

Tahun	Kota Semarang - StaMet Kelas II Bandara Int'l Jend. Ahmad Yani	Kab. Purbalingga - Bandara Jend. besar Soedirman	Kab. Cilacap - StaMet Kelas III Bandara Tunggal Wulung
Jan 1981 - 2007	11416	12198.74	8530.03
Feb 1981 - 2007	9473.01	12177.11	8486.33
Mar 1981 - 2007	7820.14	12350.86	9497.83
Apr 1981 - 2007	176241.34	9232.9	88406.28
May 1981 - 2007	650104.71	109607.74	223920.53
Jun 1981 - 2007	761121.03	549390.17	577523.79
Jul 1981 - 2007	946764.88	853951.37	1027353.28
Aug 1981 - 2007	978058.31	629228.35	678302.49
Sep 1981 - 2007	874470.6	724973.84	761674.05
Oct 1981 - 2007	447913.36	223885.41	285074.5
Nov 1981 - 2007	6599.86	12184.96	100397.91
Des 1981 - 2007	9033.73	14663.72	10075.31
Jan 2010 - 2020	5311.33	5420.44	3853.92
Feb 2010 - 2020	4466.5	5740.5	4124.81
Mar 2010 - 2020	3524.41	5547.99	4320.82
Apr 2010 - 2020	2636.1	4195.71	3047.46
May 2010 - 2020	312549.26	93287.02	94103.56
Jun 2010 - 2020	286643.45	341591.83	273771.89
Jul 2010 - 2020	310479.59	333003.54	343021.38
Aug 2010 - 2020	282027.43	212137.14	229826.85
Sep 2010 - 2020	259535.1	167098.44	332325.7
Oct 2010 - 2020	247167.55	201761.26	107259.76
Nov 2010 - 2020	3207.81	6054.64	96553.26
Des 2010 - 2020	4293.14	6389.8	4973.42

Tahun	Kota Semarang - StaMet Kelas II Bandara Int'l Jend. Ahmad Yani	Kab. Purbalingga - Bandara Jend. besar Soedirman	Kab. Cilacap - StaMet Kelas III Bandara Tunggul Wulung
Jan 1981 - 2007	11416	12198.74	8530.03
Feb 1981 - 2007	9473.01	12177.11	8486.33
Mar 1981 - 2007	7820.14	12350.86	9497.83
Apr 1981 - 2007	176241.34	9232.9	88406.28
May 1981 - 2007	650104.71	109607.74	223920.53
Jun 1981 - 2007	761121.03	549390.17	577523.79
Jul 1981 - 2007	946764.88	853951.37	1027353.28
Aug 1981 - 2007	978058.31	629228.35	678302.49
Sep 1981 - 2007	874470.6	724973.84	761674.05
Oct 1981 - 2007	447913.36	223885.41	285074.5
Nov 1981 - 2007	6599.86	12184.96	100397.91
Des 1981 - 2007	9033.73	14663.72	10075.31
Jan 2010 - 2020	5311.33	5420.44	3853.92
Feb 2010 - 2020	4466.5	5740.5	4124.81
Mar 2010 - 2020	3524.41	5547.99	4320.82
Apr 2010 - 2020	2636.1	4195.71	3047.46
May 2010 - 2020	312549.26	93287.02	94103.56
Jun 2010 - 2020	286643.45	341591.83	273771.89
Jul 2010 - 2020	310479.59	333003.54	343021.38
Aug 2010 - 2020	282027.43	212137.14	229826.85
Sep 2010 - 2020	259535.1	167098.44	332325.7
Oct 2010 - 2020	247167.55	201761.26	107259.76
Nov 2010 - 2020	3207.81	6054.64	96553.26
Des 2010 - 2020	4293.14	6389.8	4973.42

Tahun	Kab. Kulon Progo - StaMet Kelas II Bandara Int'l Yogyakarta	Kab. Gunung Kidul	Kab. Sleman - AirNav Yogyakarta, Bandara Int'l Adisutjipto
Jan 1981 - 2007	8428.49	7930.32	8951.29
Feb 1981 - 2007	8686.12	8085.24	8819.17
Mar 1981 - 2007	9150.83	50009.6	8610.463
Apr 1981 - 2007	265835.07	444756.01	4080.828
May 1981 - 2007	691832.12	774884.59	3230.807
Jun 1981 - 2007	445451.43	792594.19	1816.715
Jul 1981 - 2007	795687.31	498517.95	884.9288
Aug 1981 - 2007	1006542.5	899973.38	508.0297
Sep 1981 - 2007	561773.55	830366.22	1008.32
Oct 1981 - 2007	489684.57	1052613.88	2844.205
Nov 1981 - 2007	231451.44	240068.95	5028.397
Des 1981 - 2007	8943.52	194200	7793.165
Jan 2010 - 2020	3606.6	3597.72	3952.39
Feb 2010 - 2020	4063.76	3609.07	4112.26
Mar 2010 - 2020	4330.37	3662.3	4114.72
Apr 2010 - 2020	2363.74	287011.36	2155.75
May 2010 - 2020	140559.57	350472.15	2029.712
Jun 2010 - 2020	201360.12	291396.43	1160.833
Jul 2010 - 2020	207506.17	308006.1	539.2535
Aug 2010 - 2020	504523.61	443801.91	319.1438
Sep 2010 - 2020	229821.94	293002.43	816.498
Oct 2010 - 2020	148097.71	201375.7	1314.31
Nov 2010 - 2020	77404.2	57398.11	2849.888
Des 2010 - 2020	4605.54	3766.06	3976.83

Tahun	Kab. Bantul	Kab. Tasikmalaya - StaMet Bandara Wiriadinata	Kab. Majalengka - StaMet Kelas III Bandara Int'l Jawa Barat
Jan 1981 - 2007	7954.22	8784.16	10611.11
Feb 1981 - 2007	8394.65	9189.16	8674.96
Mar 1981 - 2007	61373.17	10771.59	8979.12
Apr 1981 - 2007	524778	8255.52	6729.19
May 1981 - 2007	829864.27	73194.97	559705.73
Jun 1981 - 2007	504310.26	620632.69	647101.7
Jul 1981 - 2007	698154.97	764777.43	982786.16
Aug 1981 - 2007	978950.56	511398.64	1251129.73
Sep 1981 - 2007	638552.53	950804.72	1034715.9
Oct 1981 - 2007	724886.36	386187.54	313154.14
Nov 1981 - 2007	208975.14	82997.39	226186.31
Des 1981 - 2007	7560.34	11192.25	9816.21
Jan 2010 - 2020	3468.02	3982.41	4805.34
Feb 2010 - 2020	3812.92	4509.95	4212.95
Mar 2010 - 2020	3917.89	5200.32	4313.31
Apr 2010 - 2020	188305.29	3626.16	2878.96
May 2010 - 2020	257394.78	193070.1	231459.69
Jun 2010 - 2020	253643.35	114529.29	300287.23
Jul 2010 - 2020	296015.62	337202.58	230190.84
Aug 2010 - 2020	541412.21	379824.8	307441.72
Sep 2010 - 2020	248671.15	339959.95	348255.79
Oct 2010 - 2020	185670	63906.42	313523.06
Nov 2010 - 2020	58968.01	5518.27	4039.37
Des 2010 - 2020	3768.27	5483.61	4227.03

Tahun	Kota Bandung - StaMet Bandara Int'l Husein Sastranegara	Kab. Bandung - Pusat Penelitian Teh dan Kina	Kab. Bogor - StaKlim Kelas I Bogor
Jan 1981 - 2007	6548.09	8040.42	10062.57
Feb 1981 - 2007	6521.26	8291.2	9893.65
Mar 1981 - 2007	7566.29	9397.78	10080.36
Apr 1981 - 2007	8036.81	8882	11895.25
May 1981 - 2007	310598.96	337360.81	9860.85
Jun 1981 - 2007	944628	868027	5008.492
Jul 1981 - 2007	1083289.77	1198190	4329.751
Aug 1981 - 2007	1096621.08	1060803.8	5553.965
Sep 1981 - 2007	742692.13	1007155.32	6662.262
Oct 1981 - 2007	441350.54	385616.96	12143.306
Nov 1981 - 2007	8051.19	8247.47	13198.77
Des 1981 - 2007	9106.89	10143.3	11460.77
Jan 2010 - 2020	3069.43	3759.34	4299.76
Feb 2010 - 2020	3309.47	4142.2	4990.3
Mar 2010 - 2020	3537.97	4475.8	4384.55
Apr 2010 - 2020	3609.16	3933.43	5174.55
May 2010 - 2020	3359.12	3199.46	4593.1
Jun 2010 - 2020	319390.81	358786.18	2632.779
Jul 2010 - 2020	319497.53	284606.55	2387.669
Aug 2010 - 2020	359509.79	375522.66	2378.801
Sep 2010 - 2020	340377.51	260062.09	4077.211
Oct 2010 - 2020	119375.62	208534.64	5168.954
Nov 2010 - 2020	4774.9	5154.15	7611.49
Des 2010 - 2020	4361.32	4722.17	5093.03

Tahun	Kab. Subang - StaMet Lanud Suryadarma Kalijati	Kota Cirebon - AirNav Cirebon, Bandara Cakrabhuwana	Kab. Sukabumi
Jan 1981 - 2007	9992.03	12167.45	8813.79
Feb 1981 - 2007	9723.57	11876.99	8515.46
Mar 1981 - 2007	9828.94	13094.15	8820.74
Apr 1981 - 2007	9314.4	7916.027	9827.89
May 1981 - 2007	6478.579	5613.167	7606.72
Jun 1981 - 2007	2623.393	3461.708	702332.9
Jul 1981 - 2007	2337.861	2036.314	872873.85
Aug 1981 - 2007	1956.312	1243.269	752452.14
Sep 1981 - 2007	2207.958	914.4902	664160.32
Oct 1981 - 2007	6703.998	4464.911	289573.13
Nov 1981 - 2007	9779.04	7687.369	11687.66
Des 1981 - 2007	11074.47	11571.52	11024.62
Jan 2010 - 2020	4547.61	5405.51	3755.65
Feb 2010 - 2020	4978	5533.99	4286.31
Mar 2010 - 2020	4527.82	6209.72	3874.76
Apr 2010 - 2020	4116.96	3342.76	4441.32
May 2010 - 2020	3545.84	3156.541	3757.7
Jun 2010 - 2020	1460.765	1721.571	202180.16
Jul 2010 - 2020	1394.083	1373.59	205696.12
Aug 2010 - 2020	909.045	586.475	235240.74
Sep 2010 - 2020	1647.139	716.5043	394604.81
Oct 2010 - 2020	2649.204	1598.293	59447.31
Nov 2010 - 2020	5685.52	4212.503	6799.77
Des 2010 - 2020	5062.65	5055.73	4892.38

Tahun	Kota Jakarta Timur - StaMet Bandara Int'l Halim Perdana Kusuma	Jakarta Pusat - Sta. Met. Kelas III Kemayoran	Kota Tangerang - Sta. Met. Kelas I Bandara Int'l Soekarno Hatta
Jan 1981 - 2007	10066.8	10253.14	9481.05
Feb 1981 - 2007	8450.18	8124.65	7507.87
Mar 1981 - 2007	6736.71	93456.35	86209.3
Apr 1981 - 2007	7401.71	341536.91	4936.14
May 1981 - 2007	186828.99	518467.94	260010.38
Jun 1981 - 2007	699938.55	987406.43	1076865.99
Jul 1981 - 2007	1014278.9	881955.53	1159171.72
Aug 1981 - 2007	889852.14	858831.72	835951.57
Sep 1981 - 2007	417302.59	1062495.84	928745.73
Oct 1981 - 2007	247764.3	545910.53	405308.02
Nov 1981 - 2007	7890.45	838739.25	331637.59
Des 1981 - 2007	8422.45	102616.5	6940.12
Jan 2010 - 2020	4523.93	4931.46	4485.16
Feb 2010 - 2020	4387.31	4357.38	3946.73
Mar 2010 - 2020	3038.78	2272.85	2217.78
Apr 2010 - 2020	3285.76	82484.93	83723.59
May 2010 - 2020	2638.2	116724.9	72596.93
Jun 2010 - 2020	268056.6	377556.3	320267.93
Jul 2010 - 2020	159648.09	365935.9	311638.78
Aug 2010 - 2020	377420.93	289823.3	376510.45
Sep 2010 - 2020	307894.74	488776.82	279363.73
Oct 2010 - 2020	150080.89	481592.12	395462.65
Nov 2010 - 2020	4735.69	143504.44	73999.29
Des 2010 - 2020	3585.25	90784.22	2878.08

Tahun	Kab. Pandeglang - Bandara Tanjung Lesung	Kab. Pandeglang - Ujung Kulon	Kota Serang - StaMet Kelas I Kota Serang
Jan 1981 - 2007	11082.96	9934.58	8615.02
Feb 1981 - 2007	8725.18	8261.42	7578.87
Mar 1981 - 2007	9500.13	8256.98	90926.08
Apr 1981 - 2007	8000.05	6235.8	5905.87
May 1981 - 2007	85706.33	50236.59	281902.81
Jun 1981 - 2007	660126.76	569306.6	840989.31
Jul 1981 - 2007	528278.97	861023.46	995853.94
Aug 1981 - 2007	948162.68	669731.74	437025.58
Sep 1981 - 2007	485435.62	461957.26	837016.59
Oct 1981 - 2007	420912.73	482503.85	405069.5
Nov 1981 - 2007	99856.33	72190.98	185783.76
Des 1981 - 2007	13702.17	104636.75	8072.18
Jan 2010 - 2020	4653.78	4232.09	3864.43
Feb 2010 - 2020	3803.25	3294.56	3717.21
Mar 2010 - 2020	4097	3582.05	2491.16
Apr 2010 - 2020	99194.04	74670.03	80913.59
May 2010 - 2020	3122.19	2692.79	69740.23
Jun 2010 - 2020	133662.54	219406.98	349264.46
Jul 2010 - 2020	101655.79	194558.79	184776.45
Aug 2010 - 2020	193128.15	227683.88	241352.27
Sep 2010 - 2020	280217.23	191789.74	203533.11
Oct 2010 - 2020	180287.46	275902.41	156607.81
Nov 2010 - 2020	5948.03	57647.97	3434.62
Des 2010 - 2020	5702.7	5136.21	3290.7

Tahun	Kab. Lebak	Kab. Badung - StaMet Kelas II Bandara int't Ngurah Rai	Kab. Buleleng
Jan 1981 - 2007	9846.35	5828.705	9109.2
Feb 1981 - 2007	8581.33	4543.138	9546.47
Mar 1981 - 2007	8998.6	4395.977	8154.45
Apr 1981 - 2007	9625.13	2707.236	4107.598
May 1981 - 2007	8222.14	1714.451	2063.685
Jun 1981 - 2007	317039.65	1588.178	1282.069
Jul 1981 - 2007	473509.35	1026.012	868.553
Aug 1981 - 2007	755512.48	715.352	560.3192
Sep 1981 - 2007	427630.71	1201.035	268.62664
Oct 1981 - 2007	297389.49	2012.297	1139.6975
Nov 1981 - 2007	10909.68	3824.157	3675.288
Des 1981 - 2007	12614.11	5037.029	6859.15
Jan 2010 - 2020	4080.31	3073.75	4840.07
Feb 2010 - 2020	3855.59	1826.47	3945.39
Mar 2010 - 2020	3752.31	1753.193	3573.08
Apr 2010 - 2020	4254.49	1276.218	2211.202
May 2010 - 2020	3863.36	946.826	1078.371
Jun 2010 - 2020	160090.32	952.786	863.557
Jul 2010 - 2020	101535.81	710.422	628.069
Aug 2010 - 2020	330541.05	274.403	240.973
Sep 2010 - 2020	263187.01	696.122	139.4078
Oct 2010 - 2020	90184.5	1073.331	618.2727
Nov 2010 - 2020	6564.51	2038.714	1879.167
Des 2010 - 2020	5390.91	2665.518	3727.52

2. Data rata-rata Curah Hujan September, Oktober, November

Tahun	Kab. Banyuwangi - StaMet Kelas III Bandara Int'l Banyuwangi	Kab. Jember - Pos Meteorologi Penerbangan Bandara Notohadinegoro	Kab. Malang - StaKlim Kelas II Bandara Abdul Rachman Saleh
1981	45770.90667	225.7833333	33185.33
1982	16999.66667	29462.66667	33160.33333
1983	35930.07333	6468.573333	6852.986667
1984	138.3633333	247.5133333	208.2
1985	68.54666667	17833.83	14445.47667
1986	29742.12333	23576.52	26570.90667
1987	32815.30667	16323.50333	16093.33333
1988	40545.83667	13024.63667	11594.95
1989	62712.66667	14402.57	16762.86667
1990	29400.05	42128.79	29916.38333
1991	57383.33333	29801.48667	10248.30667
1992	76.22	13152.35667	19614.01
1993	44384	38082.92667	12862.11333
1994	25221.96	28935.86333	14647.92
1995	27209.31	9560.423333	131.6966667
1996	39230.41	9629.98	9946.76
1997	30268.33333	19714.98333	49134.66667
1998	12403.72	18184.31667	20769.60333
1999	8728.203333	12901.22	10959.74
2000	30988.61333	10325.68667	13457.45333
2001	7946.636667	164.56	11760.01667
2002	13341.57667	17992.53667	7756.496667
2003	16161.79667	33599.83333	7419.183333
2004	41150.93667	35319.90667	18590.23
2005	10888.61667	14608.36667	19949.74333
2006	23512.33333	45427.66667	35240.66667
2007	28143.25667	5386.09	37461.35667
2008	33692.62667	7743.556667	7840.196667
2009	27667.36667	15423.26333	26282.98667
2010	178.7333333	278.5166667	284.1433333
2011	4991.446667	36896.65333	6579.063333
2012	38959	38177.26667	37143.76667
2013	13643.92	26884.82333	20759.77667
2014	44907.66667	17312.44	17467.30667
2015	23591	5781.32	13075.2
2016	15392.90667	323.24	302.65

2017	29620.49667	7761.98	6878.363333
2018	9119.283333	7845.776667	13789.69667
2019	11866.69667	33825	32251.66667
2020	9692.97	15348.17	14595.14667
2021	26703.92	29431.36667	27316.95

tahun	Kota Surabaya - StaMet Kelas I Bandara Int'l Juanda	Kab. Magetan - StaMet Lanud Iswahjudi	Kab. Gresik - StaMet Kelas III Sangkapura Bawean
1981	21345.72	54162.23667	181.8816667
1982	47108.66667	36777.20667	15.48566667
1983	39934.26	29283.50333	252.4063333
1984	39492.32333	159.63	144.8286667
1985	59005.66667	40294.50333	110.116
1986	25996.08	26094.36	169.7003333
1987	38362.00333	38436.35667	74.45033333
1988	26454.34	6165.583333	199.3596667
1989	26992.62667	6677.816667	151.5293333
1990	26909	6558.86	46.729
1991	24066.91667	13025.58	94.69966667
1992	38594.88333	16115.13333	160.8236667
1993	30926.66667	24521.29333	80.58
1994	28184	13812.51667	37.483
1995	3647.333333	5385.3	133.608
1996	48557	9604.51	130.6536667
1997	43218.46333	5707.476667	21.92533333
1998	9681.363333	12168.33	222.324
1999	65896.92	6509.783333	151.586
2000	25173.75333	11297.79667	144.0866667
2001	26304.18	16379.44667	172.9816667
2002	71232.33333	12512.91667	56.25033333
2003	87.48	6255.746667	122.1856667
2004	42611.66333	11226.66	83.99866667
2005	32642.23667	15873.28667	168.1836667
2006	7598.333333	9583.74	17.13366667
2007	60689	57009.51333	75.72966667
2008	43081.99667	6069.976667	112.578
2009	71304	12325.74333	50.15166667
2010	29322.05667	220.7566667	214.88
2011	34216.88333	3977.046667	111.2703333

2012	33174.20333	64174.84333	90.52266667
2013	33667.62	21344.98667	121.623
2014	44063.33333	11220.74667	41.09033333
2015	48721.66667	8113.38	22.48716667
2016	18590.57	305.3066667	234.625
2017	17759.13333	11065.78667	276.277
2018	35160.67	16324.07333	91.32333333
2019	46114	10034.24667	15.89766667
2020	28927.49667	6630.463333	130.1496667
2021	29994.67	26695.52667	215.5946667

Tahun	Kab. Sumenep - StaMet Kelas III Kalianget Bandara Trunojoyo	Kab. Blora - Bandara Ngloram	Kota Surakarta - StaMet Bandara Adi Soemarmo
1981	11713.23	25042.61333	217.04
1982	31288.33333	6050.163333	35357.66667
1983	16925.51333	4838.92	4662.146667
1984	24377.89667	175.2233333	166.1
1985	26089.98333	21261.30333	14110.85667
1986	4805.48	28627.42	188.5266667
1987	69512	9668.35	12660.66
1988	45662.31	163.2733333	7941.803333
1989	22885.31	10898.29667	8193.773333
1990	32119	25398.02667	32785.95667
1991	28894	13410.81333	8954.116667
1992	25162.15667	21249.86333	24828.71
1993	37933.26333	30877.58667	20594.86
1994	12962.33	13826.49667	17710.81667
1995	24291.86333	8706.216667	38920.26667
1996	39647.12	8517.526667	16582.87667
1997	45226	10141.85667	11988.64
1998	39466.56667	19641.48667	12844.73667
1999	46848.38667	9925.056667	11414.99667
2000	41955.97	17567.44667	20911.02
2001	30517.49667	17112.73667	23564.01333
2002	43935	17961.8	22559.13
2003	15336.08667	7469.663333	14926.11

2004	53025.66667	6454.893333	17433.48
2005	56523.16333	23724.33667	29314.32667
2006	29412.75333	35695.66667	13014.82333
2007	27198.29184	31118.16667	5160.14
2008	17259.04667	7579.193333	9397.396667
2009	55608	12522.72	21875.80667
2010	16896.08667	242.8633333	246.1766667
2011	13923.78333	5884.026667	32090.63667
2012	14415.3	33891.73333	6106.396667
2013	13126.86667	19559.97	29795.00667
2014	29775.26818	9964.236667	17833.3
2015	30121.42005	24912.80667	11658.40333
2016	6315.506667	266.4033333	355.1
2017	23801.53667	8764.62	19056.81667
2018	23723.40119	12755.41	17334.20667
2019	29859.33333	33356	14416.81333
2020	67572.33333	7622.323333	153.7933333
2021	27586.44	211.44	202.4733333

Tahun	Kota Semarang - StaMet Kelas II Bandara Int'l Jend. Ahmad Yani	Kab. Purbalingga - Bandara Jend. besar Soedirman	Kab. Cilacap - StaMet Kelas III Bandara Tunggal Wulung
1981	244.7333333	369.7333333	346.6966667
1982	19840.30333	28616.85	52953
1983	196.57	9367.29	10052.98
1984	207.3533333	396.4533333	370.5866667
1985	32883.99333	283.3433333	24472.98
1986	232.0133333	416.6266667	379.0533333
1987	21978.4	26215.95333	19257.95333
1988	159.87	328.44	307.54
1989	13021.01	19144.84667	19375.69333
1990	43939.87667	20422.29667	219.5566667
1991	24224.05	26186.91	21346.36667
1992	181.4466667	433.74	427.3266667
1993	17471.77667	25791.82	43286.70333
1994	30254.44	33727.11667	25806.14333
1995	16835.92333	354.2	23182.7

1996	28399.77	507.82	465.1366667
1997	17960.16333	21335.17667	17285.85
1998	22283.96667	24106.45	27067.31667
1999	15538.83	15828.77333	15397.29
2000	226.8966667	451.9333333	403.6933333
2001	27957.42333	512.6033333	477.94
2002	36903.13	9709.303333	25877.67333
2003	16312.33333	29080.32667	253.5333333
2004	26389.65	15618.71333	35281.04333
2005	196.06	371.2933333	316.67
2006	21493.21667	10519.58333	17547.94667
2007	7661.406667	250.4733333	222.78
2008	177.4633333	21264.86667	24333.91333
2009	13566.49	17839.15667	17956.88667
2010	261.1	551.4266667	530.3166667
2011	36791.17667	10926.98	11968.12333
2012	9259.816667	310.7166667	15120.93
2013	9993.786667	23199.91333	25618.47667
2014	24194.1	34780.45	23730.03
2015	16796.58667	7282.943333	19626.12333
2016	356.4266667	760.4533333	787.6733333
2017	21276.00667	463.01	456.9533333
2018	33377.85333	24728.86	34122.46
2019	17267.32667	21141.93667	45902.33333
2020	186.18	422.43	442.2
2021	209.7933333	402.3266667	407.2866667

Tahun	Kab. Kulon Progo - StaMet Kelas II Bandara Int'l Yogyakarta	Kab. Gunung Kidul	Kab. Sleman - AirNav Yogyakarta, Bandara Int'l Adisutjipto
1981	250.5633333	43941.47667	189.7963333
1982	45266	39094.33333	24.04033333
1983	4838.203333	26748.33333	128.6303333
1984	186.29	26996.46667	157.4166667
1985	8871.216667	36122.26	133.742
1986	200.04	44442.84	148.2586667
1987	8478.743333	62580.09333	60.76766667
1988	171.9433333	4972.226667	134.7216667

1989	7584.553333	37520.28333	88.19833333
1990	22019.83	14673.89667	88.36166667
1991	39400.86	8265.856667	71.20633333
1992	24254.56	11922.08333	138.1633333
1993	14673.17	16558.18333	81.97766667
1994	41859	28039.33333	32.656
1995	160.1166667	31987.64667	117.456
1996	13480.86	8172.856667	150.2266667
1997	26093.22333	29242.33	39.24033333
1998	12314.26	5855.92	153.3883333
1999	8269.41	139.14	156.32
2000	18045.50333	9239.773333	161.7696667
2001	222.7033333	10253.21333	170.4233333
2002	14589.83333	40616.63	64.478
2003	14415.43667	30743.64667	123.6326667
2004	6267.67	7921.98	89.31866667
2005	26508.51667	47595.67	120.2293333
2006	64183.33333	25344.12	36.53066667
2007	5030.68	58692.42333	99.35666667
2008	11439.6	5610.146667	135.211
2009	27910.35	14925.56	88.43866667
2010	286.0466667	185.4366667	223.8833333
2011	4676.076667	32270.76333	97.336
2012	6643.823333	21775.28667	113.7226667
2013	36176.03	4651.46	85.03833333
2014	5118.263333	9471.406667	88.27433333
2015	9214.003333	7472.553333	53.129
2016	410.32	268.2233333	329.0566667
2017	23347.87333	13074.10333	211.53
2018	15160.23	11009.57333	93.36566667
2019	34103	26290.33333	31.95533333
2020	16395.05333	6828.86	146.9506667
2021	243.8966667	50627.41333	185.99

Tahun	Kab. Bantul	Kab. Tasikmalaya - StaMet Bandara Wiriadinata	Kab. Majalengka - StaMet Kelas III Bandara Int'l Jawa Barat
1981	21968.55	351.0933333	45357.83333

1982	47659	69382.66667	62770
1983	31389.22	10608.60667	30334.93333
1984	153.2066667	431.07	27288.07
1985	139.0066667	323.3333333	8166.406667
1986	56707.61667	447.74	15044.95333
1987	7512.28	39516.50667	19527.25667
1988	140.6333333	25494.98333	5155.273333
1989	35410.95667	21433.58	5410.326667
1990	15462.77667	20388.09333	41637.10333
1991	9920.01	26325.39333	7026.966667
1992	127.7166667	403.66	11217.84
1993	23835.63667	170.1833333	4223.19
1994	12118.2	32693.53	55876.66333
1995	40817.26333	414.41	6918.54
1996	8772.063333	28037.87	7743.15
1997	63443	10922.81333	20199.27667
1998	7853.83	386.3233333	10357.00667
1999	5310.166667	10397.16333	23932.78333
2000	10874.82667	30988.80667	8578.683333
2001	10914.61	543.5466667	8782.886667
2002	13726.95667	16146.73	3690.36
2003	40846.29	26742.38333	8124.206667
2004	9441.75	48372.98333	13662.72
2005	17727.46	341.2166667	13111.37
2006	28007.13333	30807.61	54835.33333
2007	3857.85	21257.58667	5712.316667
2008	6388.49	29588.02667	5512.873333
2009	21213.98667	30955.79	29587.08
2010	215.7633333	540.16	218.0233333
2011	18987.93333	11258.46333	46080.76333
2012	31962.24333	13924.50667	63099.85333
2013	5402.636667	32093.32333	25132.17667
2014	10725.60667	23612.72333	16375.67
2015	4024.323333	22491.32333	15903.71
2016	313.6033333	803.9166667	351.4533333
2017	14906.89	456.4966667	12352.98667
2018	13423.04333	20844.79333	13221.94
2019	27990	9476.143333	14451.00667
2020	10088.63667	472.0066667	194.5133333
2021	26395.70667	487.69	14557.31

Tahun	Kota Bandung - StaMet Bandara Int'l Husein Sastranegara	Kab. Bandung - Pusat Penelitian Teh dan Kina	Kab. Bogor - StaKlim Kelas I Bogor
1981	215.85	249.9133333	456.5966667
1982	42235.99667	21073.26	229.771
1983	10591.84667	14278.31333	437.99
1984	258.8733333	293.5333333	490.5466667
1985	203.19	234.9433333	396.3033333
1986	255.3666667	270.8066667	492.66
1987	26517.89	29275.62333	386.6033333
1988	10311.15333	11010.93667	325.6366667
1989	14593.22667	17294.56	319.8566667
1990	38562.77	44586.39	299.6933333
1991	19472.86333	28516.27	277.3093333
1992	292.7133333	312.1866667	534.2333333
1993	16448.99333	20958.73333	411.0633333
1994	29033.02667	30512.46333	226.4
1995	222.2766667	31063.44667	483.1133333
1996	24223.40333	32990.07667	574.0733333
1997	16735.91	19476	258.4113333
1998	243.55	22983.77333	383.0066667
1999	7692.023333	9531.643333	409.5566667
2000	25726.76333	30197.09	545.27
2001	355.1133333	392.32	650.92
2002	11258.14333	22968.67667	232.8966667
2003	32380.07333	282.6833333	485.3166667
2004	16179.31667	16923.04667	412.3066667
2005	208.1833333	215.0233333	388.4466667
2006	32179.43333	36499.1	210.0543333
2007	20966.67	24615.77	350.0766667
2008	216.4933333	23738.47333	382.97
2009	32025.39667	223.2566667	508.2866667
2010	352.0066667	402.7633333	661.1766667
2011	11474.98667	14137.01	364.0433333
2012	10609.20333	12503.75667	406.2633333
2013	23171.89667	30354.34	400.16
2014	22799.14333	24461.86	296.5066667
2015	18572.86333	23406.99333	210.0103333
2016	530.4233333	610.8533333	938.9266667

2017	32876.13667	376.3433333	567.4633333
2018	16361.42	29396.18667	372.1366667
2019	17458.21333	21528.36667	222.8846667
2020	254.21	306.9333333	518.55
2021	382.1733333	431.5533333	661.0966667

Tahun	Kab. Subang - StaMet Lanud Suryadarma Kalijati	Kota Cirebon - AirNav Cirebon, Bandara Cakrabhuwana	Kab. Sukabumi
1981	240.7633333	200.7593333	327.5166667
1982	77.17033333	34.35166667	24722.94333
1983	296.637	234.3313333	24318.98
1984	271.1566667	230.0466667	369.05
1985	224.6133333	153.6936667	288.5166667
1986	324.1566667	223.8773333	368.86
1987	220.5333333	95.092	286.2633333
1988	187.712	194.4983333	236.97
1989	222.9616667	163.2853333	221.5033333
1990	153.919	98.98633333	30998.13667
1991	150.8933333	93.39433333	44162.99667
1992	340.5566667	209.8993333	400.4366667
1993	202.3596667	121.5863333	303.6366667
1994	89.886	46.22233333	51446.18333
1995	261.2453333	206.4813333	329
1996	369.218	256.7856667	390.7233333
1997	95.683	38.343	30668.80667
1998	300.7313333	210.6936667	306.2766667
1999	272.8003333	194.357	20584.28333
2000	360.849	260.5786667	425.51
2001	414.8	303.659	493.2733333
2002	141.0116667	108.9936667	42755.41
2003	301.2633333	213.0586667	369.3866667
2004	154.5886667	97.34366667	285.3066667
2005	252.0766667	186.926	275.08
2006	83.57166667	47.29506667	13400.44333
2007	219.174	131.0503333	33071.54333
2008	256.6493333	207.672	302.5533333
2009	236.923	144.334	355.1733333

2010	419.12	274.6433333	484.6333333
2011	251.889	170.067	25333.32
2012	223.6576667	145.4496667	22254.96
2013	208.861	102.9643333	277.24
2014	160.042	103.9026667	19999.59
2015	109.1813333	62.64166667	34376.66333
2016	589.1233333	412.3033333	744.73
2017	357.8266667	256.8643333	467.49
2018	193.066	109.8546667	32130.82667
2019	83.84066667	27.27176667	16636.06333
2020	293.7366667	249.3803333	375.0466667
2021	436.9433333	260.4236667	536.7333333

Tahun	Kota Jakarta Timur - StaMet Bandara Int'l Halim Perdana Kusuma	Jakarta Pusat - Sta. Met. Kelas III Kemayoran	Kota Tangerang - Sta. Met. Kelas I Bandara Int'l Soekarno Hatta
1981	240.9033333	29376.62	32513.44
1982	17583.96333	27221	33282.13
1983	16033.44667	34465.64667	6722.623333
1984	253.4433333	64760.49333	131.4833333
1985	223.72	53238.32667	28677.98667
1986	307.8566667	129.6333333	160.12
1987	184.7833333	49185	29085.12
1988	20946.75667	6962.38	11664.25667
1989	189.6066667	36684.73333	47266.79333
1990	156.3966667	51639.33333	59290.66667
1991	28115.07	29117.48333	10158.45667
1992	292.6066667	26707.82	155.2666667
1993	205.5833333	14597.82	33332.74333
1994	37041.39667	27394.66667	29948.89667
1995	271.1633333	11057.87	16853.85
1996	322.71	41015.28667	21715.49667
1997	10052.51	50954.33333	32186.54667
1998	234.3933333	11716.59667	16237.96333
1999	12957.52667	36081.54	8703.916667
2000	316.5333333	16294.98667	25461.70333
2001	371.83	19941.03333	26964.22667
2002	15051.32667	8213.29	12379.95

2003	286.7966667	17387.68333	21987.99333
2004	185.54	20951.51	11994.61
2005	235.09	13969.12	18408.76667
2006	37516.73667	50886.66667	10374.84333
2007	24741.42333	65764.33333	9570.596667
2008	24584.93333	36478.48333	15995.85667
2009	254.5633333	34174.38667	20190.46333
2010	401.5233333	165.57	217.6033333
2011	13882.46	23710.57667	36829.84667
2012	15521.92	30573.36333	6544.183333
2013	29719.47667	37904.24333	53435.33
2014	30453.33	8973.123333	13339.19333
2015	21036.55667	72929.33333	28222.91333
2016	557.1333333	217.1	290.76
2017	313.1666667	20740.17667	30488.48667
2018	16851.41333	9641.306667	22199.68333
2019	24845.04	75160.66667	57695.33333
2020	282.8066667	64852.1	142.6266667
2021	372.28	26423.56667	202.5966667

Tahun	Kab. Pandeglang - Bandara Tanjung Lesung	Kab. Pandeglang - Ujung Kulon	Kota Serang - StaMet Kelas I Kota Serang
1981	322.7033333	301.9433333	204.8566667
1982	62402.66667	28756.79667	57822.33333
1983	13221.93	11325.14667	8452.016667
1984	277.0633333	254.9933333	192.6966667
1985	234.69	210.0133333	171.2466667
1986	276.1633333	275.97	224.55
1987	18683.80667	14703.65333	26435.80333
1988	242.47	14703.65333	17107.8
1989	33038.99	26082.89	144.8266667
1990	161.23	28756.12333	47717.24
1991	24425.65333	18336.57	16551.55667
1992	321.8	290.13	215.4666667
1993	254.3066667	29146.35	18850.34
1994	25787.8	20747.69	48380
1995	316.2533333	296.4	24254.86

1996	349.4633333	287.4633333	231.48
1997	349.4633333	34779.66667	11533.73
1998	28163.14667	227.7933333	20987.48
1999	23148.19667	13215.27333	150.2
2000	282.0966667	222.6433333	30772.64333
2001	373.84	340.78	250.65
2002	22409.27667	10733.37667	18364.74333
2003	249.45	197.4666667	31018.51333
2004	21738.41333	14452.39333	39037.80667
2005	31095.82	237.6533333	26950.24333
2006	13637.43333	24515.02	16581.98333
2007	13637.43333	45486.17667	13351.55
2008	292.8766667	260.9733333	24824.40667
2009	332.6833333	293.8666667	31854.44667
2010	388.15	369.2666667	290.14
2011	18530.29	42911.23	11904.44667
2012	17231.88667	18148.18667	8604.543333
2013	211.6733333	195.5366667	150.5666667
2014	39957.55333	36339.33667	23311.12667
2015	25665.89	26143.63	13343.86667
2016	633.41	608.18	400.2166667
2017	346.7466667	351.8666667	210.0566667
2018	31251.60667	31834.08	47808.2
2019	20379.27667	17389.25333	14635.25667
2020	393.9866667	345.6533333	232.7566667
2021	493.77	477.1533333	300.67

Tahun	Kab. Lebak	Kab. Badung - StaMet Kelas II Bandara int't Ngurah Rai	Kab. Buleleng
1981	403.3566667	142.9373333	97.49833333
1982	20168.36667	22.53166667	12.66151333
1983	22350.16	118.461	120.7128
1984	387.87	154.0066667	76
1985	324.7866667	79.86266667	68.25676667
1986	384.0233333	81.223	69.23333333
1987	233.38	52.25233333	44.13913333
1988	290.48	110.6986667	84.86923333

1989	229.2833333	52.59866667	47.30566667
1990	240.02	44.609	28.70203333
1991	43833.42333	82.493	45.704
1992	427.8333333	79.91566667	58.68343333
1993	358.2133333	54.93266667	37.44166667
1994	51964.42	61.82566667	32.69633333
1995	416.85	104.9883333	76.60866667
1996	415.5433333	82.171	68.39293333
1997	16657.28	45.47733333	22.40443333
1998	261.0966667	145.8756667	105.4366667
1999	283.9733333	118.4053333	94.73236667
2000	419.6333333	126.7063333	102.4511
2001	510.9133333	90.21366667	75.4377
2002	45782.81	77.32366667	59.4122
2003	364.3566667	101.048	66.42533333
2004	314.64	112.6886667	67.0268
2005	331.8133333	111.2386667	79.18366667
2006	13100.00333	37.09133333	25.6103
2007	24855.43	54.25366667	27.51096667
2008	341.7233333	95.82466667	66.8542
2009	424.2133333	59.47733333	36.93266667
2010	513.0666667	227.75	126.7126667
2011	298.1133333	78.02066667	57.90933333
2012	24444.66667	47.29233333	34.75246667
2013	316.6066667	88.393	80.7415
2014	30294.04	47.345	41.00506667
2015	42583.83667	29.62066667	12.87556667
2016	750.7833333	191.8666667	112.1976667
2017	451.48	141.737	114.5729
2018	309.8333333	91.44566667	54.86316667
2019	18955.14333	26.45633333	15.0005
2020	471.1933333	119.853	80.65433333
2021	589.91	179.6086667	147.664

3. Data penelitian rata – rata ENSO Nino 3.4 September, Oktober, November

Tahun	Bulan S-O-N	Tahun	Bulan S-O-N
1981	-0.12333	2000	-0.56333
1982	1.82	2001	-0.27333
1983	-0.88667	2002	1.13
1984	-0.78667	2003	0.333333
1985	-0.54667	2004	0.673333
1986	0.843333	2005	-0.22333
1987	1.393333	2006	0.79
1988	-1.86667	2007	-1.34
1989	-0.36	2008	-0.31667
1990	0.11	2009	1.043333
1991	0.756667	2010	-1.59333
1992	-0.21	2011	-0.92667
1993	0.3	2012	0.333333
1994	0.813333	2013	-0.11667
1995	-0.69	2014	0.58
1996	-0.30667	2015	2.263333
1997	2.27	2016	-0.61333
1998	-1.08	2017	-0.64
1999	-1.09333	2018	0.713333
2000	-0.56333	2019	0.466667
2001	-0.27333	2020	-0.95333
2002	1.13	2021	-0.72

4. Data Koordinat Lokasi Penelitian

Provinsi	No	Lokasi	Latitude	Longitude
Jawa Timur	1	Kab. Banyuwangi - StaMet Kelas III Bandara Int'l Banyuwangi	-8.312353	114.339900
	2	Kab. Jember - Pos Meteorologi Penerbangan Bandara Notohadinegoro	-8.243260	113.695856
	3	Kab. Malang - StaKlim Kelas II Bandara Abdul Rachman Saleh	-7.937165	112.711840
	4	Kota Surabaya - StaMet Kelas I Bandara Int'l Juanda	-7.376958	112.794500
	5	Kab. Magetan - StaMet Lanud Iswahjudi	-7.614686	111.433162
	6	Kab. Gresik - StaMet Kelas III Sangkapura Bawean	-5.724932	112.676981
	7	Kab. Sumenep - StaMet Kelas III Kalianget Bandara Trunojoyo	-7.023100	113.889373
Jawa Tengah	8	Kab. Blora - Bandara Ngloram	-7.193347	111.54695
	9	Kota Surakarta - StaMet Bandara Adi Soemarmo	-7.515053	110.750923
	10	Kota Semarang - StaMet Kelas II Bandara Int'l Jend. Ahmad Yani	-6.966837	110.374494
	11	Kab. Purbalingga - Bandara Jend. besar Soedirman	-7.458987	109.412289
	12	Kab. Cilacap - StaMet Kelas III Bandara Tunggal Wulung	-7.643026	109.034564
Yogyakarta	13	Kab. Kulon Progo - StaMet Kelas II Bandara Int'l Yogyakarta	-7.899831	110.059122
	14	Kab. Gunung Kidul	-7.964493	110.601509
	15	Kab. Sleman - AirNav Yogyakarta, Bandara Int'l Adisutjipto	-7.785098	110.442391
	16	Kab. Bantul	-7.972270	110.318359
Jawa Barat	17	Kab. Tasikmalaya - StaMet Bandara Wiriadinata	-7.349461	108.245566
	18	Kab. Majalengka - StaMet Kelas III Bandara Int'l Jawa Barat	-6.651207	108.157464

	19	Kota Bandung - StaMet Bandara Int'l Husein Sastranegara	-6.904027	107.581897
	20	Kab. Bandung - Pusat Penelitian Teh dan Kina	-7.143894	107.516252
	21	Kab. Bogor - StaKlim Kelas I Bogor	-6.544167	106.753056
	22	Kab. Subang - StaMet Lanud Suryadarma Kalijati	-6.529368	107.660679
	23	Kota Cirebon - AirNav Cirebon, Bandara Cakrabhuwana	-6.756667	108.538889
	24	Kab. Sukabumi	-6.924592	106.929378
DKI Jakarta	25	Kota Jakarta Timur - StaMet Bandara Int'l Halim Perdana Kusuma	-6.26543	106.886218
	26	Jakarta Pusat - Sta. Met. Kelas III Kemayoran	-6.175446	106.827158
Banten	27	Kota Tangerang - Sta. Met. Kelas I Bandara Int'l Soekarno Hatta	-6.125489	106.659305
	28	Kab. Pandeglang - Bandara Tanjung Lesung	-6.659253	105.582858
	29	Kab. Pandeglang - Ujung Kulon	-6.752346	105.343291
	30	Kota Serang - StaMet Kelas I Kota Serang	-6.111677	106.131897
	31	Kab. Lebak	-6.597095	106.224867
Bali	32	Kab. Badung - StaMet Kelas II Bandara int't Ngurah Rai	-8.745484	115.166506
	33	Kab. Buleleng	-8.125714	115.092837