

# **SAFARI 2000 River Discharge Data (Coe and Olejniczak)**

## **Summary:**

The data set consists of southern Africa subset of the CPEP Global River Discharge Data Set.

The Climate, People, and Environment Program (CPEP) global river discharge data set is a compilation of monthly mean discharge data for over 2600 sites worldwide. The data sources are RivDis2.0, the United States Geological Survey, and Brazilian National Department of Water and Electrical Energy. The period of record is variable; from 3 years to greater than 100.

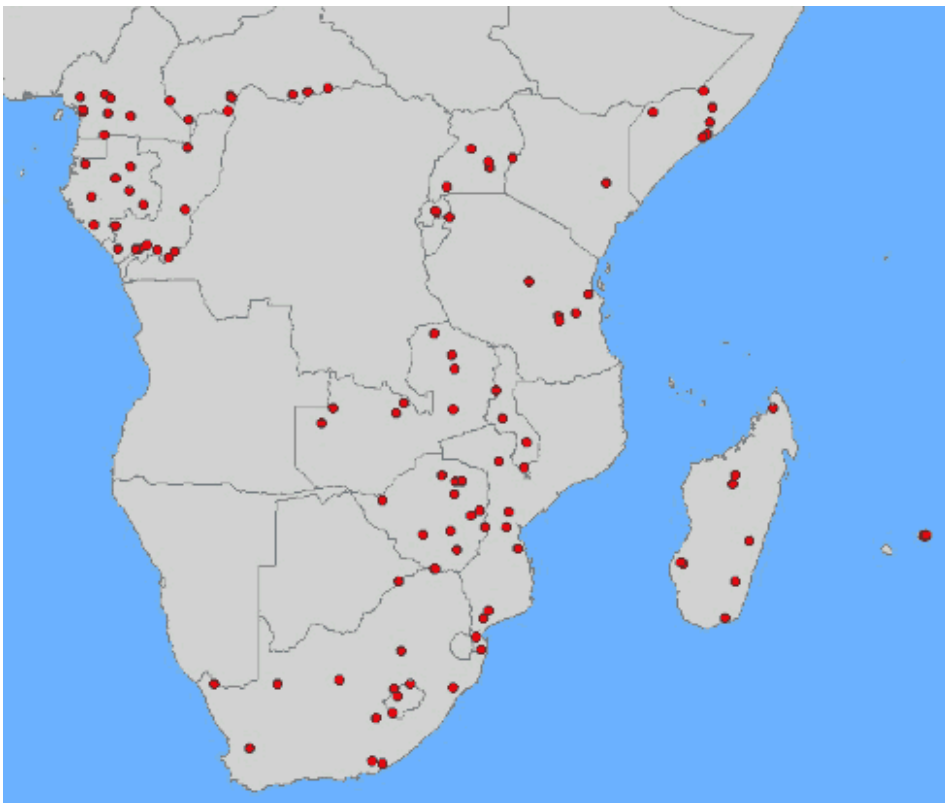
The purpose of this compilation is to provide detailed hydrographic information to the climate research community in as general a format as possible. The data are freely available from our web site. Data is provided in units of meters cubed per second ( $m^3/sec$ ).

Data from stations with less than 3 years of information or with basin area less than 5000 km<sup>2</sup> were excluded from this compilation. Therefore the original sources may have more sites available.

-

## **Southern Africa Subset of the CPEP Discharge Data Set**

Each point on the map below represents a station with reported data available for download. Click on the map to see what data are available for a specific country. Only countries for which there are data are clickable. Alternatively, scroll through the table below the map. The table is organized alphabetically by country. To download data for a particular station, please click on the id number. To download all data for the southern Africa subset click on the 'Download All Data' button below.



Country	Id	River	Station	Lat	Lon
Cameroon	<a href="#">685</a>	Dja	Somalomo	3.38	12.77
	<a href="#">1336</a>	Mbam	Goura	4.56	11.36
	<a href="#">1675</a>	Ntem	Ngoazik	2.3	11.3
	<a href="#">1690</a>	Nyong	Dehane	3.57	10.12
	<a href="#">1691</a>	Nyong	Mbalmayo	3.51	11.5
	<a href="#">2238</a>	Sanaga	Edea	3.76	10.06
	<a href="#">2239</a>	Sanaga	Nachtigal	4.35	11.63
	<a href="#">2820</a>	Wouri	Yabassi	4.45	9.96
Central_African_Rep.	<a href="#">437</a>	Chinko	Rafai	4.97	23.92
	<a href="#">1145</a>	Kotto	Kembe	4.6	21.92
	<a href="#">1239</a>	Lobaye	M'Bata	3.66	18.3
	<a href="#">1338</a>	M'Bomou	Bangassou	4.72	22.82
	<a href="#">1516</a>	M'Poko	Bossele-Bali	4.53	18.47
	<a href="#">1786</a>	Oubangui	Bangui	4.37	18.5
	<a href="#">2242</a>	Sangha	Salo	3.18	16.12
Congo	<a href="#">597</a>	Comba	Kingoyi	-4.21	14.28
	<a href="#">604</a>	Congo	Brazzaville	-4.26	15.31

	<a href="#">687</a>	Djoui	Kibassi	4.22	15
	<a href="#">766</a>	Foulakary	Kimpanzou	-4.6	14.93
	<a href="#">1146</a>	Kouilou	Sounda	-4.1	12.06
	<a href="#">1248</a>	Loudima	IFAC	-4.13	13.06
	<a href="#">1590</a>	Niari	Kayes	-4.16	13.3
	<a href="#">1591</a>	Niari	Loudima	-4.11	13.08
	<a href="#">1592</a>	Niari	Safel	-3.95	13.76
	<a href="#">1626</a>	Nkeni	Gamboma	-1.9	15.85
	<a href="#">1688</a>	Nyanga	Donguila	-2.86	11.96
	<a href="#">2241</a>	Sangha	Ouessou	1.61	16.05
<b>Gabon</b>	<a href="#">997</a>	Ivindo	Loa-Loa	0.51	12.83
	<a href="#">1585</a>	Ngounie	Fougamaou	-1.22	10.59
	<a href="#">1689</a>	Nyanga	Ibanga	-2.76	10.72
	<a href="#">1702</a>	Ogooue	Booue	-0.1	11.94
	<a href="#">1703</a>	Ogooue	Franceville	-1.64	13.53
	<a href="#">1704</a>	Ogooue	Lambarene	0.68	10.23
	<a href="#">1705</a>	Ogooue	Lastourville	-0.81	12.73
<b>Kenya</b>	<a href="#">2548</a>	Tana	Garissa	-0.45	39.7
<b>Lesotho</b>	<a href="#">343</a>	Caledon	Mohlakaqala	-29	27.7
	<a href="#">1283</a>	Makhaleng	Molimo-Nthuse	-29.43	27.9
	<a href="#">2308</a>	Senqu	Seaka	-30.35	27.56
	<a href="#">2658</a>	Tsehlanyane	Oxbow	-28.72	28.62
<b>Madagascar</b>	<a href="#">233</a>	Betsiboka	Ambodiroka	-16.93	46.93
	<a href="#">968</a>	Ikopa	Antsatrana	-17.41	46.85
	<a href="#">1277</a>	MahavavyNord	Ambilobe	-13.15	49.07
	<a href="#">1289</a>	Mananara	Maroangaty	-22.93	46.96
	<a href="#">1290</a>	Mananjary	Antisindra	-20.65	47.72
	<a href="#">1292</a>	Mandare	Amboassary	-25.03	46.38
	<a href="#">1294</a>	Mangoky	Banian	-21.9	44.02
	<a href="#">1295</a>	Mangoky	Bevoay	-21.83	43.87
<b>Malawi</b>	<a href="#">1220</a>	Linthipe	Malapa	-13.72	33.84
	<a href="#">1337</a>	Mbewe	Chiromo	-16.5	35
	<a href="#">2341</a>	Shire	Liwonde	-15.06	35.2
	<a href="#">2460</a>	SouthRukuru	Chisewezo	-12.11	33.42
	<a href="#">656</a>	DeepRiver	PontLardier	-20.26	57.73

<b>Mauritius</b>	<a href="#">895</a>	GrandRiverSouth	BeauChamp	-20.27	57.76
	<a href="#">896</a>	GrandRiverSouth	LaPipe	-20.31	57.61
	<a href="#">2107</a>	RivieredesCreol	RicheenEau	-20.38	57.64
	<a href="#">2108</a>	RiviereLaChaux	BeauVallon	-20.41	57.69
	<a href="#">2109</a>	RiviereSeche	BelAir	-20.25	57.74
<b>Mozambique</b>	<a href="#">339</a>	Buzi	Estaquina	-19.83	34
	<a href="#">980</a>	Imcomati	Chobela	-25.01	32.73
	<a href="#">1218</a>	Limpopo	Chokwe	-24.54	33.06
	<a href="#">1308</a>	Maputo	Madubula	-26.78	32.6
	<a href="#">1968</a>	Pungoe	Bue-Maria	-19.01	34.18
	<a href="#">2289</a>	Save	VillafrancadoSave	-21.1	34.68
	<a href="#">2673</a>	Umbeluzi	Boane	-26.05	32.31
	<a href="#">2873</a>	Zambeze	Matundo-Cais	-16.15	33.58
<b>Rwanda</b>	<a href="#">14</a>	Akagera	Rusumo	-2.37	30.78
	<a href="#">1685</a>	Nyabarongo	Kanzenze	-2.06	30.11
	<a href="#">1686</a>	Nyabarongo	Kigali	-1.99	29.99
<b>Somalia</b>	<a href="#">1038</a>	Juba	LughGanana	3.56	42.32
	<a href="#">2330</a>	Shebelle	Balad	2.37	45.42
	<a href="#">2331</a>	Shebelle	BeletUen	4.78	45.2
	<a href="#">2332</a>	Shebelle	BuloBurti	3.87	45.67
	<a href="#">2333</a>	Shebelle	MahaddeiUen	3	45.53
	<a href="#">2334</a>	Shebelle.	Afgoi	2.17	45.09
<b>South_Africa</b>	<a href="#">693</a>	Doring	Aspoort	-32.34	19.54
	<a href="#">912</a>	Groot-Vis	Outspan	-33.24	26.99
	<a href="#">913</a>	Groot-Vis	Piggot'sBridge	-33.1	26.45
	<a href="#">1217</a>	Limpopo	Beitbrug	-22.22	29.99
	<a href="#">1219</a>	Limpopo	OxenhamRanch	-22.95	27.96
	<a href="#">1751</a>	Orange	AliwalNorth	-30.65	26.69
	<a href="#">1752</a>	Orange	Upington	-28.69	21.08
	<a href="#">1753</a>	Orange	Vioolsdrif	-28.71	17.51
	<a href="#">2660</a>	Tugela	Mandini	-28.96	31.04
	<a href="#">2687</a>	Vaal	DeHoop65	-28.52	24.6
	<a href="#">2688</a>	Vaal	Engelbrechtsdrift	-26.82	28.06
	<b>Tanzania</b>	<a href="#">324</a>	Bubu	Bahi	-5.97
<a href="#">902</a>		GreatRuaha	Mtera	-7.92	36.98
<a href="#">1101</a>		Kilombero	Swero	-8.2	37
<a href="#">2130</a>		Rufiji	Stiegeler'sGorge	-7.8	37.92

	<a href="#">2134</a>	Ruvu	MorogoroRd.	-6.68	38.7	
<b>Uganda</b>	<a href="#">1044</a>	Kafu	Kampala/GuluRd	1.55	32.05	
	<a href="#">1175</a>	LakeVictoria	OyeaRes.(OwenFalls)	0.46	33.11	
	<a href="#">1288</a>	Manafwa	Bulucheke/Butaleja	1	34.35	
	<a href="#">2135</a>	Rwizi	MbararaWaterSupply	-0.61	30.65	
	<a href="#">2708</a>	VictoriaNile	Mbulamuti	0.81	33.03	
<b>Zaire</b>	<a href="#">2872</a>	Zaire	Kinshasa	-4.3	15.3	
<b>Zambia</b>	<a href="#">401</a>	Chambeshi	OldPontoon	-10.95	31.07	
	<a href="#">1045</a>	Kafue	Nduben	-13.4	27.82	
	<a href="#">1046</a>	Kafue	Wusakili	-12.88	28.25	
	<a href="#">1252</a>	Luombe	ChishimbaFalls	-10.12	30.92	
	<a href="#">1253</a>	Lusiwasi	Masase	-13.22	31.03	
	<a href="#">1307</a>	Manyinga	ManyingaRoadBridge	-13.14	24.2	
	<a href="#">1532</a>	Mwambeshi	Nsama	-8.9	29.93	
	<a href="#">2874</a>	Zambia	WatopaPontoon	-14.02	23.6	
<b>Zimbabwe</b>	<a href="#">928</a>	Gwaai	Kamativi	-18.36	27.05	
	<a href="#">1216</a>	Limpopo	BeitbridgePumpstation	-22.22	29.98	
	<a href="#">1251</a>	Lundi	TokweConfluence	-21.13	31.27	
	<a href="#">1305</a>	Manyame	ManguraMineWeir	-16.95	30.35	
	<a href="#">1306</a>	Manyame	PrinceEdwardDam	-17.98	31.06	
	<a href="#">1334</a>	Mazowe	Bindura	-17.27	31.17	
	<a href="#">1335</a>	Mazowe	Lion'sDen	-17.28	31.55	
	<a href="#">1531</a>	Mutare	PremierEstate	-18.91	32.55	
	<a href="#">1551</a>	Ncema	NcemaDam	-20.31	29.31	
	<a href="#">1687</a>	Nyabodi	NyaruwaFlume	-19.85	32.8	
	<a href="#">2137</a>	Sabi	Condo	-19.21	32.01	
	<a href="#">2675</a>	Umshagashi	WaterworksWeir	-20.05	30.85	

-----  
DATA SET FORMAT  
-----

The southern Africa subset of the CPEP Discharge Data Set can be downloaded either by individual stations or for the entire southern Africa subset area. The entire subset download consists of a single file,

cpep\_discharge.tar.gz. This is a UNIX compressed tar file. Once the file is uncompressed there will be 116 files each for an individual station.

The naming convention used is that of the original CPEP data - #####.sum - where ##### is the CPEP Discharge Data Set id number. The data is provided in ASCII format. The files contain monthly mean data and, for those years in which data are recorded for each month, annual means as well. Data is provided in units of meters cubed per second (m3/sec). Data from stations with less than 3 years of information or with basin area less than 5000 km2 were excluded from the original CPEP compilation. Therefore the original sources may have more sites available.

Below is an example file with the data for months July through December removed due to spacing (the actual data file does contain data for these months):

```
-----  
-  
Country= Gabon  
Station= Fougamaou  
River= Ngounie  
Area= 22000 km2  
Lat= -1.22  
Lon= 10.59  
PointID= 01493  
Datasource= RivDIS  
Starting_Year= 1965  
Ending_Year= 1974  
Total_Years= 10  
Year      Jan      Feb      Mar      Apr      May      Jun  
Avg_Annual  
1965 -9999.00 -9999.00 -9999.00 -9999.00 -9999.00 -9999.00 -9999.00  
1966  845.00  1195.00  1296.00  1209.00  1299.00  608.00  814.67  
1967  789.00  1032.00  978.00   670.00  665.00  371.00  683.42  
1968  950.00  941.00  786.00  825.00  912.00  443.00  635.17  
1969  955.00  689.00  840.00  1038.00  867.00  433.00  668.67  
1970  929.00  1138.00  1615.00  1533.00  1514.00  574.00  924.17  
1971  868.00  562.00  673.00  933.00  803.00  444.00  611.00  
1972  802.00  674.00  692.00  770.00  798.00  495.00  612.83  
1973  852.00  974.00  792.00  1057.00  1231.00  631.00  773.67  
1974  928.00  1080.00  1110.00  1180.00  892.00  442.00 -9999.00  
Avg_Mon   699.00   720.50   767.20   803.50   808.90   399.90  
715.45  
Std_Dev   197.64   301.82   389.80   348.88   368.47   142.33  
112.06  
Total_Usable_Years= 8  
Area= km2  
Discharge= m3/sec  
-----  
-
```

There is extremely limited documentation for the CPEP compilation of discharge data. What does exist can be found on-line at:  
<http://cpep.meteor.wisc.edu/pages/available.html> . Users are referred to the data originator for documentation.

-----  
ORIGINAL DATA SET CITATION  
-----

Coe, Michael T. and Nick Olejniczak (1999) CPEP River Discharge Data Set.  
Climate, People, and Environment Program, University of Wisconsin, Madison,  
Wisconsin, U.S.A. Data available on-line at  
<http://cpep.meteor.wisc.edu/pages/available.html>