INSTITUTE of HYDROLOGY

VARIABILITY OF TROPICAL
RAINFALL IN THE SOLOMON
ISLANDS

Visit Report – August 1986

Variability of Tropical Rainfall in the Solomon Islands

Visit Report

C.S. Green

Institute of Hydrology
Wallingford
Oxfordshire, UK

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Contents

1. Background

This project was established to investigate the relationship of rainfall with altitude on the Solomon Islands. The project was proposed as a result of the advisory visit undertaken by Dr M Lowing of the Institute of Hydrology in 1982.

The aim of Phase I of the project was to establish a north-south transect of automatic recording raingauges across the island of Guadalcanal. Data collected from these gauges would then be used to determine a relationship of rainfall depth with altitude at durations of one hour to one year. Other benefits were seen as the ability to study the difference in rainfall regime on either side of the island divide and provide an insight into catchment behaviour in the vicinity of the transect. Analysis of the data collected would enable a better understanding of the water resources of the islands, assist in engineering design and have benefits for agricultural production.

The Overseas Development Administration (ODA) of the British Government and the Solomon Islands Government (SIG) agreed to fund the project. The cost of Institute of Hydrology staff time, travel, and the raingauges are being met by ODA. The raingauge installation, raingauge maintenance and data collection is provided by the Water Resources Section, Geology Division, Ministry of Natural Resources, SIG.

During the second half of 1984 four raingauges were installed on the northern half of the transect at the following locations:

SIG Number

(1)	S.I.P.L.	5006150	(Altitude 50 m)	(Figure 2)
(2)	MBUMBULAKE	5006650	(" 280 m)	(Figure 3)
(3)	GOLD RIDGE	5006651	(" 290 m)	(Figure 4)
(4)	MOUNT CHAUNAPAHO	5006652	(" 1250 m)	

Two gauges were installed on the more inaccessible southern transect in May 1985 at the following locations:

(5) LEIVASUVASU RIDGE   5018151   (Altitude 495 m)

(6) KAKAKE   5018150   ("   45 m)

Locations of these six raingauges are shown in Figure 1.

It was originally intended to install a gauge in the vicinity of Mount Popomanaseu (2330 m), the summit of the transect. However, in spite of repeated attempts, this was not possible because of land ownership problems and local opposition.

The raingauges provided were RIMCO 0.5 mm tipping bucket gauges attached to Institute of Hydrology electronic loggers. The loggers were set to record at a 1 hour time interval giving a maximum possible time in the field of 5.5 months before the solid state store becomes full. In practice the batteries are unable to support the logger for more than 2-3 months.

The intention of the project is to provide two years of concurrent data from all sites upon which the analysis may be based.

A good return of data was obtained until September/October 1985. From then on problems with the loggers resulted in most of the data being lost. The most common problem to date has been the loss of battery power which results in loss of data from the memory. Unfortunately the remoteness of most of the sites means that the raingauges can only be visited once every 2 or 3 months. Loss of battery power normally results in loss of data for the whole period since the last visit.

Various improvements to the battery system have been made in an attempt to resolve the situation. However, power supply problems persisted and were compounded by logger translations which revealed obviously erroneous data. Furthermore vandalism of some of the raingauges added to the loss of data.

The presence of an Institute of Hydrology hydrologist in the South Pacific (Fiji) in August 1986 enabled a short visit to be made to the Solomon Islands at a relatively low cost. The terms of reference of the visit were:

(1) To discuss data capture difficulties with the Water Resources Officer

(2) Obtain copies of all available data

(3) Agree the form of final report for Phase I of the study.

Figure 2

Mbumbulake site

Figure 3

* Gold Ridge site

Figure 4

* S.I.L.P. and Gold Ridge temporarily being serviced by French Oedipe gauges while project Gauges out of service

This visit report describes the work carried out during this one weekvisit and recommends certain courses of action for the future.

2. Data capture difficulties

The normal procedure for collecting data from the raingauges in the transect is to visit the site, remove the logger unit, and return the unit to the office. A fresh logger unit with new batteries is attached to the raingauge as soon as the original unit is removed. The original logger unit is then interrogated by the office computer and data stored on magnetic cassette and floppy disc. For this to be possible more logger units than raingauges are required. As it is desirable to visit more than one raingauge per field visit, several extra loggers are needed.

The project therefore provided 10 loggers for use with the 6 RIMCO tipping bucket gauges. Two field recorders with liquid crystal displays were also provided. These units enable the contents of the logger to be checked in the field without the need to attach a computer.

Loggers 7 and 8 were brought to the Solomon Islands by the IH hydrologist following repair in the UK.

Loggers 4, 5, 9 and 10 were in the office with reported faults of either low battery power resulting in loss of data or erroneous data during translation.

Loggers 1, 2, 3 and 6 were installed in the field.

One cause of low battery power was found immediately and is easily avoided. The batteries as supplied have metal tags on both the positive and negative terminals. When inserted in the battery holder it is possible for both these tags to touch the metal case of the battery holder and thereby short out the battery. It would only need one of the four batteries in each logger to be short circuited in this way to cause serious loss of power. The solution is simply to cut off the metal tags on each battery before inserting in the holder.

Since many of the reported faults related to loss of battery power, an old logger battery board was modified to enable the current consumption of any logger to be checked. The results of the test on the four loggers with reported problems and the recently repaired logger 7 as a control were:

Logger number	Current mA
7	0.5
4	0.7
5	0.65
9	7.5
10	6.0

Clearly loggers 4 and 5 were applying no undue drain on the battery compared to logger 7. Loggers 9 and 10 however were drawing approximately ten times the current of the others. As a result of this test it was decided to return loggers 9 and 10 to the UK for repair. (These loggers have subsequently been repaired and returned to the Solomon Islands). Loggers 4 and 5 were then tested further.

Loggers 4 and 5 were connected to the two spare RIMCO gauges and tips entered manually on the raingauge. Both loggers recorded the tips correctly and transferred data without error to the computer.

Loggers 4 and 5, still attached to the raingauges were then installed outside the office for a long field test. Checks made each day by the field reader showed data were being recorded correctly. This test was continuing at the time of the departure of the IH hydrologist.

The fault with one field reader was identified as a broken wire inside the connection plug. Unfortunately this could not be repaired in the Solomon Islands and was therefore brought back to the UK.

Clearly Water Resources Section staff in the Solomon Islands were experiencing difficulties with the equipment. Considerable effort is required to visit some of the gauges (Leivasuvasu Ridge and Kakake require a 6 or more day trip), moral is low and confidence in the system easily lost when loggers malfunction and data lost.

If the aims of the project (2 years continuous, concurrent record at all gauges) are to be achieved, the present situation of trying to 'patch up' loggers either in the Solomon Islands or returning to UK for repair must not continue. It is recommended that all the existing loggers be replaced as soon as possible with a more reliable type with a guaranteed battery life. Ideally the new system would comprise the French Oedipe raingauges, since this would give full compatibility with existing equipment operated by the Water Resources Section. However, the requirment

to buy British and a probable cost advantage would suggest that Didcot Instrument 'RAINLOG' might be suitable (Annex 2). In any case the new equipment should be obtained as soon as possible to reduce the current unacceptable loss of data. The Water Resources Section have offered to renew their commitment to collect 2 years good quality data, provided they are provided with adequate equipment to do the job.

3. Collection of data and preliminary analysis

Copies of all rainfall data collected by the project to date was obtained in the following forms:

(1) an 8 inch disc containing the basic hourly rainfall data for all stations

(2) print summary of daily rainfall totals for all stations

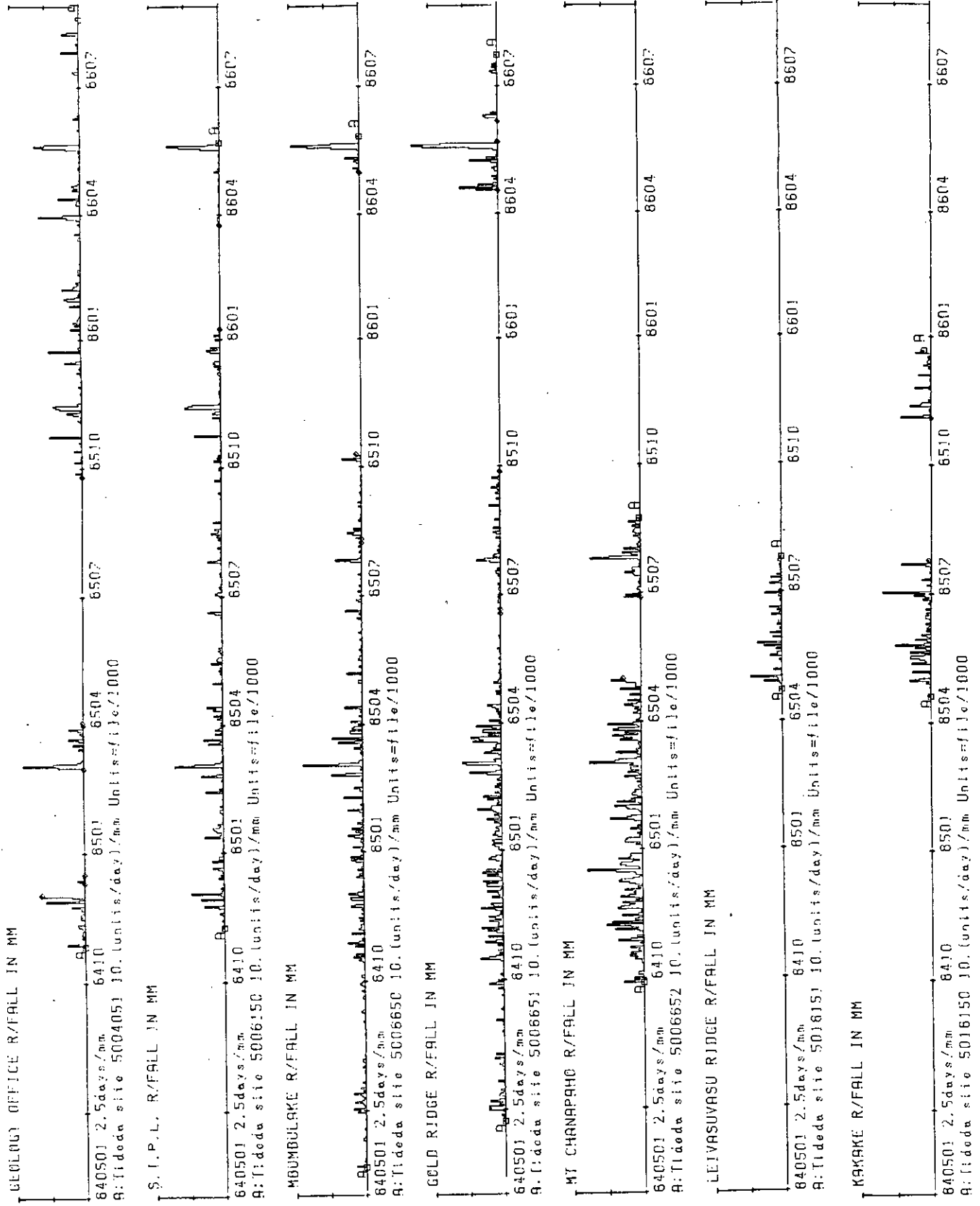(3) plots of the daily rainfall totals for all stations

These data were produced by the micro-Tideda database system on the Water Resources Section Altos microcomputer and returned to the Institute of Hydrology.

Figure 5 shows the plot of daily rainfall totals for all stations. From this figure the good return of data until September/October 1985 can be seen. The poor return of data after this time is also clearly illustrated. Note that the raingauge at the Geology Office in Honiara does not form part of the transect study, but is mainly used to test equipment prior to field installation.

Annex 3 contains the daily rainfall totals collected at each gauge to date. These data are published here so that they may be of use in engineering or agricultural application before a more complete data set is available.

A little time was available towards the end of the visit to enable a quick look at some of the data already collected. The analysis has been applied to the four gauges on the northern section of the transect, S.I.P.L., Mbumbulake, Gold Ridge and Chaunapahe and covers the twelve month

Solomon Island rainfall data as of August 1986

GEOLOGY OFFICE R/FALL IN MM

640501 2.5days/mm
A:Tideda site 5004051 10.(units/day)/mm Units=file/1000

S.I.P.L. R/FALL IN MM

640501 2.5days/mm
A:Tideda site 5006150 10.(units/day)/mm Units=file/1000

MBUMBULAKE R/FALL IN MM

640501 2.5days/mm
A:Tideda site 5006650 10.(units/day)/mm Units=file/1000

GOLD RIDGE R/FALL IN MM

640501 2.5days/mm
A:Tideda site 5006651 10.(units/day)/mm Units=file/1000

MT CHANAPAHO R/FALL IN MM

640501 2.5days/mm
A:Tideda site 5006652 10.(units/day)/mm Units=file/1000

LEIVASUVASU RIDGE R/FALL IN MM

640501 2.5days/mm
A:Tideda site 5016151 10.(units/day)/mm Units=file/1000

KAKAKE R/FALL IN MM

640501 2.5days/mm
A:Tideda site 5016150 10.(units/day)/mm Units=file/1000

Figure 5

period from 1st November 1984 to 31st October 1985. During this period there was a reasonable return of data:

Gauge	Percent data missing
S.I.P.L.	2%
Mbumbulake	6%
Gold Ridge	10%
Chaunapaho	35%

For each station the maximum hourly rainfall, maximum daily rainfall, maximum monthly rainfall and twelve month total rainfall was abstracted and is shown below in Table 1.

Period 1/11/84 to 31/10/85

Gauge	Altitude m	Max 1 hour mm	Max day mm	Max month mm	Annual total mm
S.I.P.L.	50	59	150	443	2174 (2237)*
Mbumbulake	280	79	146	653	2660 (2728)*
Gold Ridge	290 (600)**	50	138	958	3825 (4169)*
Chaunapaho	1250	79	150	1059	5449 (6392)*

* Adjusted total allowing for missing data

** Gold Ridge gauge installed on relatively low ground for locality.
    600 m assumed as effective altitude.

Table 1

From Table 1 it can be seen that there is no obvious trend of increase in maximum precipitation with altitude for durations of 1 hour or one day. However there is a definite increase in both monthly maximum and annual total rainfalls with altitude. This seems to indicate that the increase in long term average rainfall with altitude is caused not by more intense rainfall, but by from rainfall occurring more often.

Not shown in Table 1, but also of interest, is the fact that at all four gauges the maximum daily rainfall occurred on the same day, 3/3/85, (Cyclone Hina) and that the maximum monthly total was in March for all gauges.

Table 1 also gives adjusted annual totals for the four gauges. Missing months or part months of record were estimated from other gauges operating using multiplying factors derived from periods of good record. These missing months were added to the genuine record to give more realistic annual total rainfall estimates. Since the 12 months period for which data were available could be wetter or drier than average, a more useful representation of the annual total data is given in Figure 6. Figure 6 provides a non-dimensional relationship between annual rainfall at 50 m altitude to rainfall at other altitudes. It should be noted that this relationship only applies to northern Guadaleanal. Since only 12 months data were used and some of that was estimated, there must be some doubt about the accuracy of the ratios of annual average rainfall. Furthermore, more work needs to be done to determine a more realistic representation of altitude for the three upper gauges. For these reasons the relationship given in Figure 6 should be treated with caution, but may be used until more data are collected and a more rigorous analysis undertaken.

Between 17th and 20th May 1986 the Solomon Islands were hit by cyclone Namu, causing extensive damage, landslides, flooding and loss of life. The return period of the cyclone has been estimated as 70 years. Unfortunately this was in the period when problems were occurring with the loggers, however data were obtained for three gauges, S.I.P.L., Mbumbulake and Gold Ridge and this has been plotted on Figure 7. Individual daily gauge totals for the cylone may be abstracted from Annex A3. The four day rainfall totals at these gauges are given below:

    S.I.P.L.   – 359 mm

    Mbumbulake – 512 mm

    Gold Ridge – 874 mm

The Solomon Island's Water Resources Officer, Bob Curry, has plotted these 4 day totals against altitude and this is reproduced here as Figure 8.

Relationship of annual average rainfall (AAR)   1/11/84 - 31/10/85

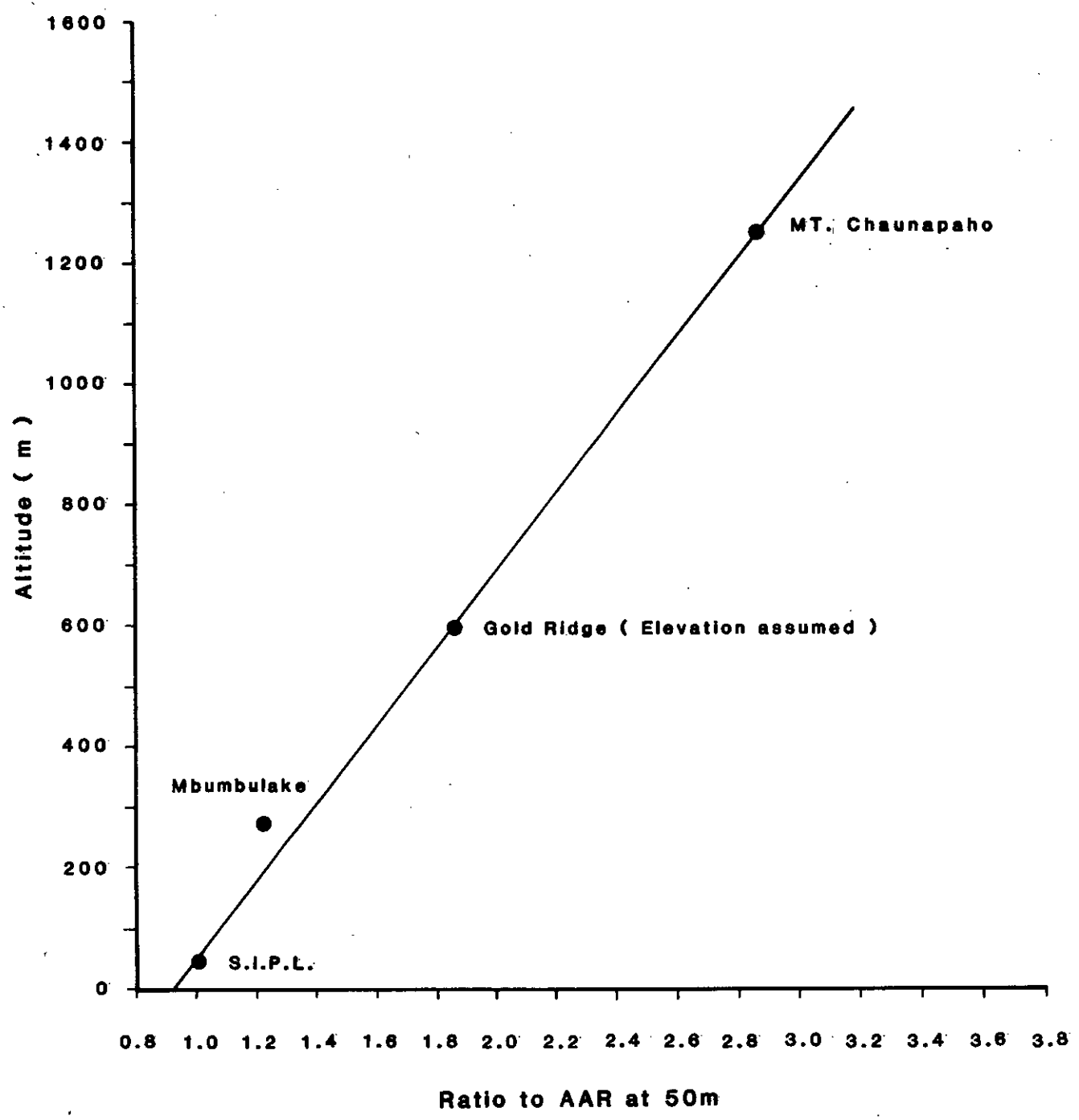to altitude (provisional) for Northern Guadalcanal

Figure 6

Cyclone Namu rainfall (17/5/86 to 20/5/86)

S.I.P.L. HOURLY R/FALL IN MM

860517 .5 hrs/mm 0518   0519   0520
A:Tideda site 5006150 1.(units/ hr)/mm Units=file/1000

MBUMBULAKE HOURLY R/FALL IN MM

860517 .5 hrs/mm 0518   0519   0520
A:Tideda site 5006650 1.(units/ hr)/mm Units=file/1000

GOLD RIDGE HOURLY R/FALL IN MM

860517 .5 hrs/mm 0518   0519   0520
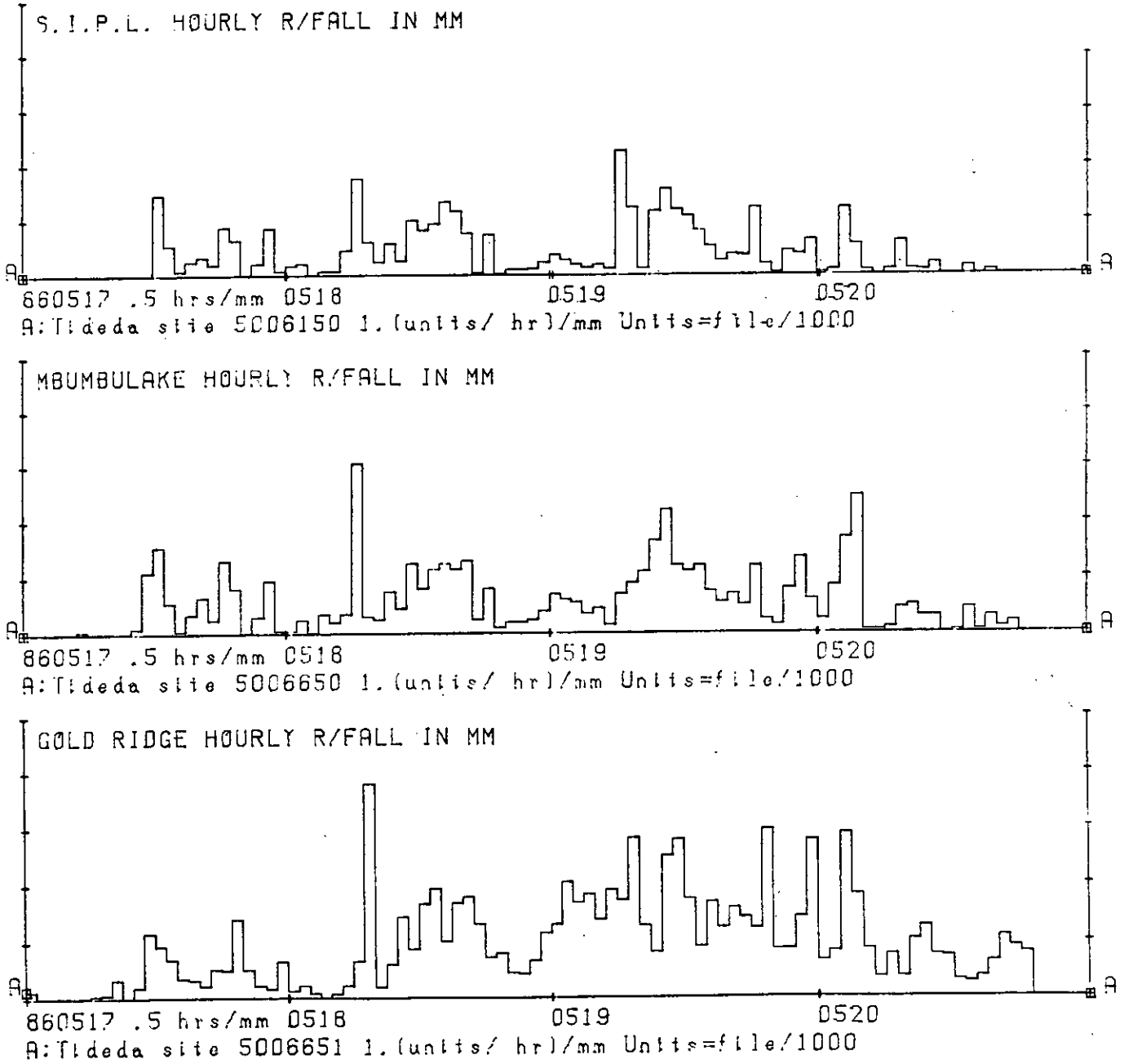A:Tideda site 5006651 1.(units/ hr)/mm Units=file/1000

Figure   7

Cyclone Namu – Rainfall vs altitude
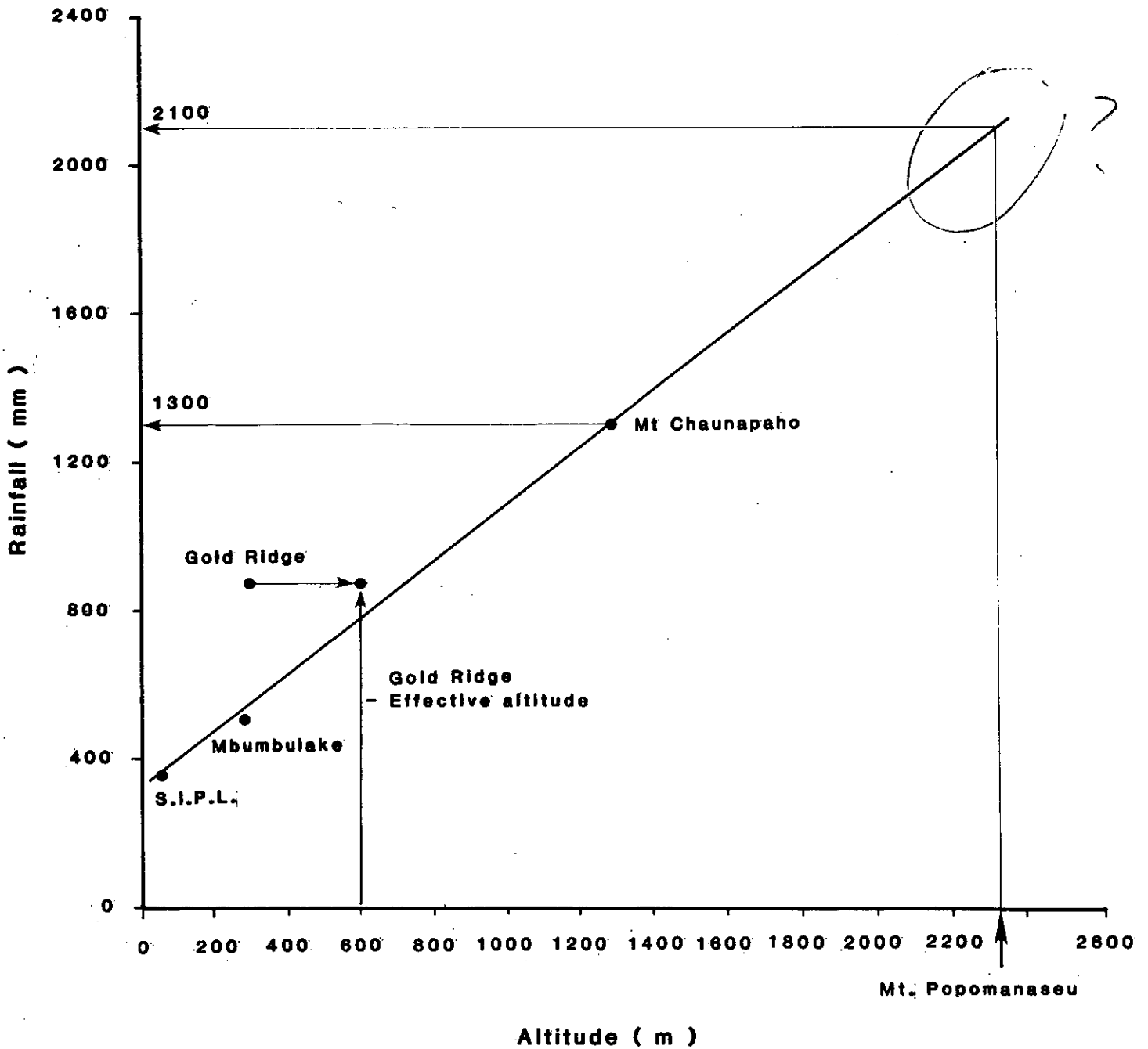Northern Guadalcanal

Figure 8

4. **Form of final report**

Discussions were held with the Solomon Islands Water Resource Officer on the form of the final report on Phase I of the project.

It was agreed that the final report should include the following:

(i)   Background to the project
(ii)   Choice and design of raingauges and loggers
(iii) Siting of gauges
(iv)   Operational experience of equipment
(v)   Analysis of data
(vi)   Recommendations for future work

5. **Discussions at the Agricultural Research Station, Dodo Creek**

At the request of BDDP, Suva, discussions were held with the Chief Research Officer and staff of the SIG Agricultural Department. A useful meeting was held on 21/8/86 in which the rainfall project was discussed. The outcome of the discussion was that the rainfall data collected by the project would be very useful for agricultural purposes. Data collected by the project would therefore be made available to staff at the Dodo Creek Research Station. In particular the data collected by the Gold Ridge gauge would be of immediate use in the design of an experimental plot close by.

6. **Recommendations**

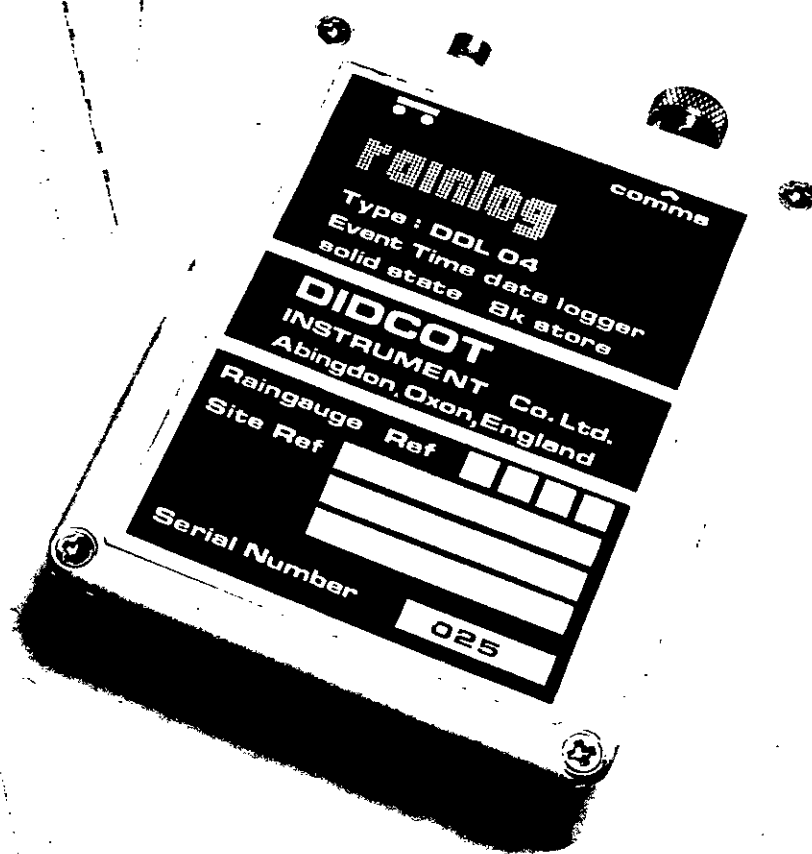The following recommendations are made as a result of this visit:

(1) This recommendation is important and critical to the success of the project. Existing loggers should be replaced with 10 loggers of a more reliable design. In the interests of obtaining two years of good quality data at sites as soon as possible, these loggers should be provided without delay.

(2) New batteries inserted in existing loggers should have the metal tags removed before use.

(3) Data should be collected for a further two year period using new loggers. This should be followed by publication and analysis of the data.

(4) A possible phase 2 should be considered only after satisfactory logger performance has been achieved.

Annex 1   **Diary of visit**

August 14   Arrive Honiara from Suva. Field visit to gauges at S.I.P.L.,
               Mbumbulake and Gold Ridge. Discuss problems of loggers and in
               particular loggers 4, 5, 9 and 10 which were in the office
               with faults reported. Inspect solar powered Oedipe raingauge
               at Geology Office and Chloe water level recorder on Lungga
               River.

August 15   Two repaired loggers (7 and 8) tested in the office. Problem
               of shorting out of battery discovered. Vandalised RIMCO gauge
               temporarily repaired with insulation tape (a more permanent
               repair with Araldite is recommended). Defective field reader
               checked and fault identified. Replaced battery boards in
               loggers where required.

August 16   Weekend - Background reading to project

August 17   "   "   "   "   "

August 18   Modify an old battery board to check current consumption of
               loggers. Tested all loggers in office and found loggers 9 and
               10 to be drawing excess current. Start testing loggers 4 and
               5 by connecting to spare RIMCO gauges and inserting tips
               manually. Start preparation of data for return to UK.

August 14   Investigate connection lead from loggers to EPSON
               microcomputer. Tests reveal lead is good. Continue testing
               loggers 4 and 5. Continue abstraction of data and preliminary
               analysis.

August 20   Field reader test on loggers 4 and 5 reveal they are so far
               performing without error. Obtain printouts and plots of
               data. Discuss final report.

August 21   Final check on loggers and collection of data. Meeting at
               Dodo creek Agricultural Research Station. Depart Honiara
               2 pm.

Annex 2

Didcot Instruments 'Rainlog'

DIDCOT

DIDCOT RAINLOG

Description

The DIDCOT RAINLOG is a stand alone solid state data logger for use with a tipping bucket rain-guage which records the time of each bucket tip with a resolution of ' minute.

,... Epson HX 20 portable computer is used for setting up and data collection. Collected data is stored on a microcassette. A dot matrix printer (Epson RX 80) is used to produce data printouts. Charts and histograms, as well as formatted output for the transfer of data to other computer systems, are also available.

The operating program for the HX 20 is supplied on microcassette but would normally reside permanently in the computer RAM.

Advantages of System

No interface required. No modification to a standard HX 20 microcomputer plus 16k memory expansion. No battery change should be required for at least four years. Totally waterproof, provided connectors are capped to prevent electrolytic action.

Specification

Capacity: An eight kilobyte memory is used with advanced data compression techniques to ensure maximum data storage. In event of continuous rainfall with one bucket tip in each minute the capacity is in excess of 7,500 tips. The number of bucket tips that could be recorded with only one tip per day is 1600. The Rainlog accepts 39 contact closures per minute. In the context of a rain-guage, contact closures are bucket tips.

With a 0.5 mm sized bucket RAINLOG will record a minimum capacity of 800 mm of rain over 4 years, and a maximum capacity of 3,750 mm over 5 days.

Identity: User entered four character code is permitted.

Clock: RAINLOG has a real time clock and calendar with leap year correction and a one minute resolution. Clock and calendar are reset as part of the intitialisation procedure.

Batteries: Lithium batteries are fitted which have a life expectancy of four years. A battery guarantee of THREE years is given.

Casing: The aluminium housing is chemically treated and plastic coated to resist corrosion and is sealed with a silicone rubber compound.
Size: Excluding connectors
120 x 95 x 35mm
4.75 x 3.75 x 1.4 inches

Connectors: Two weather proof BNC connectors are fitted, one coaxial for the rain-guage bucket switch and one twin for computer communications.

Annex 3

Listing of daily rainfall 1984-1986

DAILY TOTALS YEAR=1984   SITE=5004051   ITEM= 1   RATING NOT APPLIED
Table=File/1000   READ TABLE:

GEOL OFFICE R/FALL IN MM   [19.8.86]

DAY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC
1	?	?	?	?	?	?	?	?	?	?	0	5
2	?	?	?	?	?	?	?	?	?	?	10	132
3	?	?	?	?	?	?	?	?	?	?	10	?
4	?	?	?	?	?	?	?	?	?	?	6	?
5	?	?	?	?	?	?	?	?	?	?	8	?
6	?	?	?	?	?	?	?	?	?	?	3	?
7	?	?	?	?	?	?	?	?	?	?	0	?
8	?	?	?	?	?	?	?	?	?	?	0	?
9	?	?	?	?	?	?	?	?	?	?	10	?
10	?	?	?	?	?	?	?	?	?	?	19	0
11	?	?	?	?	?	?	?	?	?	?	23	0
12	?	?	?	?	?	?	?	?	?	?	0	21
13	?	?	?	?	?	?	?	?	?	?	1	2
14	?	?	?	?	?	?	?	?	?	?	0	1
15	?	?	?	?	?	?	?	?	?	?	5	7
16	?	?	?	?	?	?	?	?	?	?	12	0
17	?	?	?	?	?	?	?	?	?	?	9	?
18	?	?	?	?	?	?	?	?	?	?	15	?
19	?	?	?	?	?	?	?	?	?	?	2	?
20	?	?	?	?	?	?	?	?	?	?	0	?
21	?	?	?	?	?	?	?	?	?	?	0	?
22	?	?	?	?	?	?	?	?	?	?	14	?
23	?	?	?	?	?	?	?	?	?	?	20	?
24	?	?	?	?	?	?	?	?	?	?	24	?
25	?	?	?	?	?	?	?	?	?	?	0	?
26	?	?	?	?	?	?	?	?	?	?	0	?
27	?	?	?	?	?	?	?	?	?	8	1	?
28	?	?	?	?	?	?	?	?	?	50	125	?
29	?	?	?	?	?	?	?	?	?	13	0	?
30	?		?	?	?	?	?	?	?	0	35	?
31	?		?		?		?	?		1		?
MIN	?	?	?	?	?	?	?	?	?	0	0	0	0
TOT	?	?	?	?	?	?	?	?	?	73	358	170	602
MAX	?	?	?	?	?	?	?	?	?	50	125	132	132
NO>0	0	0	0	0	0	0	0	0	0	4	22	8	34

GEOL OFFICE R/FALL IN MM   [19.8.86]

DAY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC	
1	?	?	4	0	?	?	?	?	?	0	0	1	
2	?	?	74	2	?	?	?	?	?	0	1	2	
3	?	?	176	?	?	?	?	?	?	0	4	0	
4	?	?	87	?	?	?	?	?	?	0	12	0	
5	?	?	19	?	?	?	?	?	?	23	0	0	
6	?	?	8	?	?	?	?	?	?	0	4	3	
7	?	?	4	?	?	?	?	?	?	3	1	4	
8	?	?	0	?	?	?	?	?	?	0	25	14	
9	?	?	0	?	?	?	?	?	?	2	43	0	
10	?	?	1	?	?	?	?	?	?	1	6	4	
11	?	?	0	?	?	?	?	?	?	0	0	8	
12	?	?	0	?	?	?	?	?	?	0	64	5	
13	?	?	0	?	?	?	?	?	?	24	75	0	
14	?	?	4	?	?	?	?	?	?	0	82	1	
15	?	?	17	?	?	?	?	?	?	0	9	47	
16	?	?	0	?	?	?	?	?	?	0	13	15	
17	?	?	2	?	?	?	?	?	?	3	0	0	
18	?	?	32	?	?	?	?	?	?	0	0	0	
19	?	?	0	?	?	?	?	?	?	9	0	0	
20	?	?	0	?	?	?	?	?	?	0	0	0	
21	?	?	15	?	?	?	?	?	?	0	0	0	
22	?	?	44	?	?	?	?	?	?	0	1	0	
23	?	?	0	?	?	?	?	?	?	93	5	93	
24	?	?	2	?	?	?	?	?	0	1	2	1	
25	?	?	4	?	?	?	?	?	0	0	1	7	
26	?	?	12	?	?	?	?	?	0	0	0	8	
27	?	?	0	?	?	?	?	?	21	0	0	1	
28	?	?	16	?	?	?	?	?	0	0	10	0	
29	?		43	?	?	?	?	?	0	0	0	0	
30	?		0	?	?	?	?	?	0	0	0	1	
31	?		0		?		?	?		0		0	
MIN	?	?	0	0	?	?	?	?	0	0	0	0	0
TOT	?	?	569	2	?	?	?	?	21	159	357	214	1322
MAX	?	?	176	2	?	?	?	?	21	93	32	93	176
NO>0	0	0	22	1	0	0	0	0	1	14	19	20	77

DAILY TOTALS   YEAR=1986   SITE=5004051   ITEM= 1   RATING NOT APPLIED
Table=File/1000   READ TABLE:

GEOL OFFICE R/FALL IN MM   [19.9.86]

DAY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC	
1	0	5	0	0	0	0	0	0	?	?	?	?	
2	0	8	0	0	0	1	0	0	?	?	?	?	
3	1	3	0	0	6	0	0	0	?	?	?	?	
4	0	1	0	2	3	1	0	2	?	?	?	?	
5	5	2	1	3	0	0	0	1	?	?	?	?	
6	0	55	0	1	0	0	0	0	?	?	?	?	
7	0	22	0	0	0	0	0	48	?	?	?	?	
8	30	17	0	13	1	19	0	33	?	?	?	?	
9	0	10	0	10	1	0	0	0	?	?	?	?	
10	0	6	0	10	0	7	13	0	?	?	?	?	
11	18	14	0	3	0	0	18	0	?	?	?	?	
12	1	1	0	63	1	2	0	0	?	?	?	?	
13	23	0	0	0	1	0	0	0	?	?	?	?	
14	10	0	7	3	0	0	4	0	?	?	?	?	
15	8	0	8	2	6	0	0	0	?	?	?	?	
16	6	0	0	0	4	1	2	0	?	?	?	?	
17	4	9	0	1	43	0	0	0	?	?	?	?	
18	1	0	17	22	107	0	0	?	?	?	?	?	
19	0	8	0	6	133	1	0	?	?	?	?	?	
20	3	8	0	19	102	1	0	?	?	?	?	?	
21	1	0	0	24	1	0	0	?	?	?	?	?	
22	0	0	0	7	0	2	0	?	?	?	?	?	
23	0	0	0	0	0	0	0	?	?	?	?	?	
24	2	0	1	0	0	0	0	?	?	?	?	?	
25	33	2	8	2	0	0	51	?	?	?	?	?	
26	0	1	0	1	0	0	2	?	?	?	?	?	
27	0	1	0	0	0	0	0	?	?	?	?	?	
28	1	0	11	0	1	0	0	?	?	?	?	?	
29	38		40	0	1	0	1	?	?	?	?	?	
30	48		120	0	0	0	1	?	?	?	?	?	
31	16		51		8		8	?		?		?	
MIN	0	0	0	0	0	0	0	0	?	?	?	?	0
TOT	248	171	264	192	419	34	103	85	?	?	?	?	1517
MAX	48	55	120	63	133	19	51	48	?	?	?	?	133
NO>0	21	20	13	20	20	11	11	6	0	0	0	0	122

End of process

~~~ MICRO-TIDEDA ~~~ VER 2.8 WATER RESOURCES DEPT - SOLOMON ISLANDS
~~~ PDAY ~~~ VER 1.4 25-07-83

DAILY TOTALS YEAR=1984   SITE=5006150   ITEM= 1   RATING NOT APPLIED
Table=File/1000   READ TABLE:

SIPL R/FALL IN MM   [19.8.86]

DAY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC	
1	?	?	?	?	?	?	?	?	?	?	?	7	
2	?	?	?	?	?	?	?	?	?	?	?	96	
3	?	?	?	?	?	?	?	?	?	?	?	0	
4	?	?	?	?	?	?	?	?	?	?	?	13	
5	?	?	?	?	?	?	?	?	?	?	?	0	
6	?	?	?	?	?	?	?	?	?	?	?	10	
7	?	?	?	?	?	?	?	?	?	?	?	0	
8	?	?	?	?	?	?	?	?	?	?	?	0	
9	?	?	?	?	?	?	?	?	?	?	0	3	
10	?	?	?	?	?	?	?	?	?	?	1	0	
11	?	?	?	?	?	?	?	?	?	?	0	0	
12	?	?	?	?	?	?	?	?	?	?	2	0	
13	?	?	?	?	?	?	?	?	?	?	7	15	
14	?	?	?	?	?	?	?	?	?	?	0	1	
15	?	?	?	?	?	?	?	?	?	?	0	10	
16	?	?	?	?	?	?	?	?	?	?	0	0	
17	?	?	?	?	?	?	?	?	?	?	2	5	
18	?	?	?	?	?	?	?	?	?	?	18	5	
19	?	?	?	?	?	?	?	?	?	?	4	16	
20	?	?	?	?	?	?	?	?	?	?	0	32	
21	?	?	?	?	?	?	?	?	?	?	0	0	
22	?	?	?	?	?	?	?	?	?	?	7	1	
23	?	?	?	?	?	?	?	?	?	?	58	0	
24	?	?	?	?	?	?	?	?	?	?	14	2	
25	?	?	?	?	?	?	?	?	?	?	0	34	
26	?	?	?	?	?	?	?	?	?	?	0	1	
27	?	?	?	?	?	?	?	?	?	?	0	13	
28	?	?	?	?	?	?	?	?	?	?	68	14	
29	?	?	?	?	?	?	?	?	?	?	0	3	
30	?		?	?	?	?	?	?	?	?	2	0	
31	?		?		?		?	?		?		0	
MIN	?	?	?	?	?	?	?	?	?	?	0	0	0
TOT	?	?	?	?	?	?	?	?	?	?	185	286	471
MAX	?	?	?	?	?	?	?	?	?	?	68	96	96
NO>0	0	0	0	0	0	0	0	0	0	0	13	21	34

SIPL R/FALL IN MM   [19.8.86]

DAY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC	
1	1	0	4	0	0	0	2	3	0	0	0	3	
2	3	10	41	4	2	0	19	0	3	0	0	1	
3	3	3	150	3	0	0	19	0	0	0	2	2	
4	0	0	52	0	0	0	0	13	0	1	4	0	
5	0	0	2	16	1	2	0	0	0	18	23	0	
6	1	0	7	0	0	0	0	0	0	4	0	2	
7	0	0	1	21	6	0	11	0	0	13	0	13	
8	0	4	0	5	0	0	0	0	3	0	24	1	
9	3	0	1	4	10	0	3	0	0	6	12	0	
10	0	0	0	0	0	0	1	10	0	4	4	8	
11	2	0	0	6	5	0	0	0	2	0	0	4	
12	64	0	0	38	1	0	0	0	10	0	69	17	
13	4	51	1	47	0	1	0	16	0	3	80	1	
14	5	12	7	0	31	0	0	32	0	0	79	1	
15	21	0	1	0	0	0	0	11	0	0	51	22	
16	18	0	1	0	14	6	7	0	0	0	5	12	
17	39	1	0	0	13	0	6	27	0	0	0	0	
18	2	0	41	0	16	1	0	0	0	0	0	0	
19	19	1	8	0	0	61	1	0	0	0	0	0	
20	1	5	0	0	0	0	0	0	0	0	2	0	
21	14	1	17	0	0	0	0	0	3	2'	1	0	
22	3	0	38	0	5	0	0	1	11	0	5	29	
23	0	62	0	0	3	0	0	23	2	75	4	39	
24	0	16	0	0	14	3	2	2	0	2	6	7	
25	0	3	22	0	10	0	38	0	0	1	0	27	
26	0	0	3	2	1	0	17	0	0	0	1	0	
27	0	1	1	2	0	0	0	2	0	0	0	0	
28	5	0	21	0	1	0	3	0	0	0	2	0	
29	11		16	0	0	0	0	0	0	0	1	0	
30	8		0	28	0	2	1	0	8	1	0	0	
31	2		4		0		0	0		0		14	
MIN	0	0	0	0	0	0	0	0	0	0	0	0	0
TOT	233	174	443	179	135	77	134	145	50	132	380	209	2292
MAX	64	62	150	47	31	61	38	32	11	75	80	39	150
NO>0	24	17	24	15	18	8	16	14	10	12	22	21	201

SIPL R/FALL IN MM   [19.8.86]

DAY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC	
1	1	?	?	0	14	?	?	?	?	?	?	?	
2	0	?	?	0	0	?	?	?	?	?	?	?	
3	19	?	?	0	5	?	?	?	?	?	?	?	
4	0	?	?	1	1	?	?	?	?	?	?	?	
5	3	?	?	0	0	?	?	?	?	?	?	?	
6	0	?	?	1	0	?	?	?	?	?	?	?	
7	0	?	?	3	0	?	?	?	?	?	?	?	
8	?	?	?	2	3	?	?	?	?	?	?	?	
9	?	?	?	2	0	?	?	?	?	?	?	?	
10	?	?	?	1	0	?	?	?	?	?	?	?	
11	?	?	?	1	0	?	?	?	?	?	?	?	
12	?	?	?	0	1	?	?	?	?	?	?	?	
13	?	?	?	0	3	?	?	?	?	?	?	?	
14	?	?	?	0	0	?	?	?	?	?	?	?	
15	?	?	?	0	0	?	?	?	?	?	?	?	
16	?	?	?	0	0	?	?	?	?	?	?	?	
17	?	?	?	2	56	?	?	?	?	?	?	?	
18	?	?	?	1	118	?	?	?	?	?	?	?	
19	?	?	?	0	151	?	?	?	?	?	?	?	
20	?	?	?	4	34	?	?	?	?	?	?	?	
21	?	?	?	2	0	?	?	?	?	?	?	?	
22	?	?	?	0	?	?	?	?	?	?	?	?	
23	?	?	?	0	?	?	?	?	?	?	?	?	
24	?	?	0	0	?	?	?	?	?	?	?	?	
25	?	?	0	3	?	?	?	?	?	?	?	?	
26	?	?	0	2	?	?	?	?	?	?	?	?	
27	?	?	5	0	?	?	?	?	?	?	?	?	
28	?	?	6	0	?	?	?	?	?	?	?	?	
29	?		5	0	?	?	?	?	?	?	?	?	
30	?		2	0	?	?	?	?	?	?	?	?	
31	?		0		?		?	?		?		?	
MIN	0	?	0	0	0	?	?	?	?	?	?	?	0
TOT	23	?	18	24	387	?	?	?	?	?	?	?	453
MAX	19	?	6	4	151	?	?	?	?	?	?	?	151
NO>0	4	0	7	22	14	0	0	0	0	0	0	0	47

End of process

~~~ MICRO-TIDEDA ~~~ VER 2.8 WATER RESOURCES DEPT - SOLOMON ISLANDS
~~~ PDAY ~~~   VER 1.4   25-07-83

DAILY TOTALS   YEAR=1984   SITE=5006650   ITEM= 1   RATING NOT APPLIED
Table=File/1000   READ TABLE:

MBUMBULAKE R/FALL IN MM   [19.8.86]

DAY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC	
1	?	?	?	?	?	2	36	3	7	1	0	19	
2	?	?	?	?	?	2	5	0	0	0	0	57	
3	?	?	?	?	?	0	0	0	0	0	37	0	
4	?	?	?	?	?	0	4	3	0	17	0	8	
5	?	?	?	?	?	0	3	17	0	2	1	0	
6	?	?	?	?	?	0	10	0	0	0	20	6	
7	?	?	?	?	?	0	43	0	0	0	0	0	
8	?	?	?	?	?	0	7	2	16	0	17	1	
9	?	?	?	?	?	0	0	0	2	1	0	3	
10	?	?	?	?	?	18	1	0	5	0	9	0	
11	?	?	?	?	?	0	11	0	0	0	4	1	
12	?	?	?	?	?	2	13	0	0	0	0	0	
13	?	?	?	?	?	0	34	0	0	0	14	21	
14	?	?	?	?	?	0	12	0	0	5	6	2	
15	?	?	?	?	?	0	0	0	0	11	10	14	
16	?	?	?	?	?	0	15	0	0	17	0	0	
17	?	?	?	?	?	6	0	0	1	1	9	5	
18	?	?	?	?	?	0	0	0	0	31	1	4	
19	?	?	?	?	?	0	0	0	12	22	3	19	
20	?	?	?	?	?	0	2	0	0	4	7	8	
21	?	?	?	?	?	0	9	0	0	0	0	0	
22	?	?	?	?	8	0	0	0	0	0	7	1	
23	?	?	?	?	0	0	0	1	1	0	54	0	
24	?	?	?	?	0	0	0	2	9	0	9	21	
25	?	?	?	?	0	3	0	0	0	4	0	38	
26	?	?	?	?	7	0	0	0	0	26	0	0	
27	?	?	?	?	3	0	3	0	10	14	0	30	
28	?	?	?	?	0	2	3	0	3	40	78	13	
29	?	?	?	?	0	24	0	0	13	10	0	2	
30	?		?	?	0	16	0	0	11	7	2	0	
31	?		?		0		10	0		0		0	
MIN	?	?	?	?	0	0	0	0	0	0	0	0	0
TOT	?	?	?	?	20	78	228	30	93	213	294	281	1242
MAX	?	?	?	?	8	24	43	17	16	40	78	57	78
NO>0	0	0	0	0	4	12	25	8	13	18	21	26	127

DAILY TOTALS   YEAR=1985   SITE=5006650   ITEM= 1   RATING NOT APPLIED
Table=File/1000   READ TABLE:

MBUMBULAKE R/FALL IN MM   [19.8.86]

DAY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC	
1	8	0	3	0	12	0	0	2	0	0	?	?	
2	0	2	59	33	0	0	2	0	10	0	?	?	
3	34	11	146	1	0	0	3	0	0	0	?	?	
4	0	1	49	0	0	0	11	9	0	1	?	?	
5	0	0	6	5	0	10	0	0	11	14	?	?	
6	2	1	4	1	24	0	0	0	0	54	?	?	
7	8	0	1	9	21	0	5	0	0	0	?	?	
8	7	56	0	2	0	0	3	?	0	0	?	?	
9	4	0	0	7	0	3	0	?	0	15	?	?	
10	25	0	4	1	0	0	0	9	2	?	?	?	
11	3	3	7	0	9	0	0	0	0	?	?	?	
12	52	9	0	20	0	1	4	0	5	?	?	?	
13	2	2	4	42	0	0	0	26	0	?	?	?	
14	4	35	10	1	0	4	1	42	0	?	?	?	
15	19	0	19	0	1	13	0	21	1	?	?	?	
16	19	2	1	0	7	1	11	0	0	?	?	?	
17	21	0	8	0	6	10	2	24	3	?	?	?	
18	1	0	70	0	13	2	0	0	1	?	?	?	
19	3	6	21	0	3	8	0	0	0	?	?	?	
20	8	3	4	0	0	42	0	0	0	?	?	?	
21	11	1	33	0	0	0	0	0	2	?	?	?	
22	4	1	55	0	1	0	0	0	1	?	?	?	
23	0	89	2	2	2	0	0	9	0	?	?	?	
24	0	48	0	0	9	0	31	4	0	?	?	?	
25	3	1	37	0	2	0	55	1	0	?	?	?	
26	0	0	36	0	2	9	31	0	0	?	?	?	
27	2	7	1	0	0	16	0	3	0	?	?	?	
28	11	0	15	0	0	0	3	0	0	?	?	?	
29	44		41	0	0	0	1	0	0	?	?	?	
30	2		0	11	6	0	0	0	0	?	?	?	
31	1		13		0		8	0		?		?	
MIN	0	0	0	0	0	0	0	0	0	0	?	?	0
TOT	306	283	653	139	126	120	176	154	40	86	?	?	2085
MAX	52	89	146	42	24	42	55	42	11	54	?	?	146
NO>0	26	22	27	14	22	12	17	15	14	6	0	0	175

End of process

DAILY TOTALS   YEAR=1986   SITE=5006650   ITEM= 1   RATING NOT APPLIED
Table=File/1000   READ TABLE:

MBUMBULAKE R/FALL IN MM   [19.8.86]

DAY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC	
1	?	?	?	?	7	?	?	?	?	?	?	?	
2	?	?	?	?	5	?	?	?	?	?	?	?	
3	?	?	?	?	18	?	?	?	?	?	?	?	
4	?	?	?	?	2	?	?	?	?	?	?	?	
5	?	?	?	?	0	?	?	?	?	?	?	?	
6	?	?	?	?	0	?	?	?	?	?	?	?	
7	?	?	?	?	8	?	?	?	?	?	?	?	
8	?	?	?	?	15	?	?	?	?	?	?	?	
9	?	?	?	?	4	?	?	?	?	?	?	?	
10	?	?	?	?	42	?	?	?	?	?	?	?	
11	?	?	?	?	0	?	?	?	?	?	?	?	
12	?	?	?	?	1	?	?	?	?	?	?	?	
13	?	?	?	?	3	?	?	?	?	?	?	?	
14	?	?	?	?	0	?	?	?	?	?	?	?	
15	?	?	?	?	0	?	?	?	?	?	?	?	
16	?	?	?	?	7	?	?	?	?	?	?	?	
17	?	?	?	?	80	?	?	?	?	?	?	?	
18	?	?	?	?	151	?	?	?	?	?	?	?	
19	?	?	?	?	197	?	?	?	?	?	?	?	
20	?	?	?	?	81	?	?	?	?	?	?	?	
21	?	?	?	?	2	?	?	?	?	?	?	?	
22	?	?	?	?	0	?	?	?	?	?	?	?	
23	?	?	?	?	0	?	?	?	?	?	?	?	
24	?	?	?	?	0	?	?	?	?	?	?	?	
25	?	?	?	?	0	?	?	?	?	?	?	?	
26	?	?	?	?	?	?	?	?	?	?	?	?	
27	?	?	?	?	?	?	?	?	?	?	?	?	
28	?	?	?	?	?	?	?	?	?	?	?	?	
29	?		?	?	?	?	?	?	?	?	?	?	
30	?		?	2	?	?	?	?	?	?	?	?	
31	?		?		?		?	?		?		?	
MIN	?	?	?	2	0	?	?	?	?	?	?	?	0
TOT	?	?	?	2	628	?	?	?	?	?	?	?	631
MAX	?	?	?	2	197	?	?	?	?	?	?	?	197
NO>0	0	0	0	1	18	0	0	0	0	0	0	0	19

End of process

DAILY TOTALS   YEAR=1984   SITE=5006651   ITEM= 1   RATING NOT APPLIED
Table=File/1000   READ TABLE:

GOLD RIDGE R/FALL IN MM   19.08.86

DAY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC	
1	?	?	?	?	?	?	42	15	23	1	0	13	
2	?	?	?	?	?	?	49	0	0	0	0	46	
3	?	?	?	?	?	?	4	0	0	0	20	0	
4	?	?	?	?	?	?	3	4	2	13	46	9	
5	?	?	?	?	?	?	15	28	1	1	12	0	
6	?	?	?	?	?	?	15	0	0	0	64	47	
7	?	?	?	?	?	?	54	1	0	0	0	48	
8	?	?	?	?	?	?	0	25	0	0	15	13	
9	?	?	?	?	?	?	0	0	3	0	0	58	
10	?	?	?	?	?	?	9	0	3	0	24	0	
11	?	?	?	?	?	?	9	0	4	0	42	3	
12	?	?	?	?	?	?	16	0	0	0	7	7	
13	?	?	?	?	?	?	5	0	0	0	23	45	
14	?	?	?	?	?	?	13	0	0	3	41	13	
15	?	?	?	?	?	?	0	0	0	67	12	58	
16	?	?	?	?	?	?	0	0	0	42	0	1	
17	?	?	?	?	?	?	0	0	0	14	9	47	
18	?	?	?	?	?	?	0	0	0	10	1	1	
19	?	?	?	?	?	?	4	0	7	11	22	4	
20	?	?	?	?	?	?	7	0	0	3	64	8	
21	?	?	?	?	?	?	13	1	0	15	0	1	
22	?	?	?	?	?	?	0	0	0	0	9	4	
23	?	?	?	?	?	0	0	0	1	0	43	1	
24	?	?	?	?	?	4	0	7	18	1	12	19	
25	?	?	?	?	?	2	0	0	0	1	0	40	
26	?	?	?	?	?	12	0	0	0	19	0	31	
27	?	?	?	?	?	0	0	1	42	21	3	18	
28	?	?	?	?	?	0	3	0	19	42	32	3	
29	?	?	?	?	?	7	0	3	4	16	9	1	
30	?		?	?	?	47	3	0	18	3	12	0	
31	?		?		?		8	5		44		0	
MIN	?	?	?	?	?	0	0	0	0	0	0	0	0
TOT	?	?	?	?	?	73	279	95	155	339	530	546	2018
MAX	?	?	?	?	?	47	54	28	42	67	64	58	67
NO>0	0	0	0	0	0	6	22	16	19	23	25	29	140

DAILY TOTALS YEAR=1985   SITE=5006651   ITEM= 1   RATING NOT APPLIED
Table=File/1000   READ TABLE:

GOLD RIDGE R/FALL IN MM   19.08.86

DAY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC
1	11	0	8	0	6	10	2	8	2	?	?	?
2	9	14	43	33	3	0	3	0	32	?	?	?
3	22	6	138	2	3	0	1	0	1	?	?	?
4	28	11	51	0	0	0	6	6	1	?	?	?
5	1	0	17	5	0	0	5	1	0	?	?	?
6	25	44	6	1	6	0	0	0	0	?	?	?
7	29	0	1	4	4	0	3	0	12	?	?	?
8	0	55	1	5	2	0	8	0	1	?	?	?
9	0	5	8	14	1	0	0	0	0	?	?	?
10	12	20	50	7	0	0	1	13	1	?	?	?
11	10	2	29	0	2	0	0	0	13	?	?	?
12	36	2	3	43	6	0	2	0	6	?	?	?
13	19	7	20	39	1	0	0	12	0	?	?	?
14	7	19	16	1	0	0	8	21	8	?	?	?
15	12	0	17	1	1	0	5	0	25	?	?	?
16	12	13	9	0	0	0	12	0	1	?	?	?
17	12	1	4	0	6	?	15	19	10	?	?	?
18	0	0	81	0	0	?	0	1	5	?	?	?
19	9	13	51	0	0	?	9	2	0	?	?	?
20	2	5	64	0	3	0	0	2	0	?	?	?
21	23	1	37	11	4	0	0	0	6	?	?	?
22	43	1	51	0	2	0	0	0	24	?	?	?
23	0	41	37	14	10	0	0	16	3	?	?	?
24	9	89	1	0	0	0	30	2	0	?	?	?
25	22	19	53	0	0	7	69	2	0	?	?	?
26	0	0	53	6	3	7	45	0	0	?	?	?
27	18	4	1	0	0	5	0	1	?	?	?	?
28	27	0	11	0	1	3	20	2	?	?	?	?
29	71		89	15	2	8	17	0	?	?	?	?
30	29		1	10	1	1	5	0	?	?	?	?
31	31		0		1		1	0		?		?
MIN	0	0	0	0	0	0	0	0	0	?	?	?	0
TOT	536	378	958	214	73	44	274	113	157	?	?	?	2749
MAX	71	89	138	43	10	10	69	21	32	?	?	?	138
NO>0	28	24	30	19	23	9	26	19	20	0	0	0	198

End of process

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~~~ MICRO-TIDEDA ~~~ VER 2.8 WATER RESOURCES DEPT - SOLOMON ISLANDS
~~~ PDAY ~~~   VER 1.4   25-07-83

DAILY TOTALS  YEAR=1986    SITE=5006651    ITEM= 1    RATING NOT APPLIED
Table=File/1000                            READ TABLE:

GOLD RIDGE R/FALL IN MM       [20.8.86]
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DAY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC	
1	?	?	?	?	9	?	0	?	?	?	?	?	
2	?	?	?	?	10	?	0	?	?	?	?	?	
3	?	?	?	?	17	?	0	?	?	?	?	?	
4	?	?	?	?	1	?	0	?	?	?	?	?	
5	?	?	?	?	2	3	0	?	?	?	?	?	
6	?	?	?	?	0	3	0	?	?	?	?	?	
7	?	?	?	?	19	1	0	?	?	?	?	?	
8	?	?	?	?	82	37	0	?	?	?	?	?	
9	?	?	?	?	0	42	0	?	?	?	?	?	
10	?	?	?	?	34	0	13	?	?	?	?	?	
11	?	?	?	?	0	19	21	?	?	?	?	?	
12	?	?	?	?	4	0	0	?	?	?	?	?	
13	?	?	?	?	2	0	5	?	?	?	?	?	
14	?	?	?	?	0	0	15	?	?	?	?	?	
15	?	?	?	?	3	0	0	?	?	?	?	?	
16	?	?	?	?	14	1	15	?	?	?	?	?	
17	?	?	?	42	83	0	3	?	?	?	?	?	
18	?	?	?	16	219	0	0	?	?	?	?	?	
19	?	?	?	113	406	0	0	?	?	?	?	?	
20	?	?	?	1	165	0	0	?	?	?	?	?	
21	?	?	?	58	1	0	1	?	?	?	?	?	
22	?	?	?	14	?	0	0	?	?	?	?	?	
23	?	?	?	0	?	0	?	?	?	?	?	?	
24	?	?	?	0	?	2	?	?	?	?	?	?	
25	?	?	?	12	?	0	?	?	?	?	?	?	
26	?	?	?	3	?	0	?	?	?	?	?	?	
27	?	?	?	18	?	0	?	?	?	?	?	?	
28	?	?	?	0	?	0	?	?	?	?	?	?	
29	?		?	0	?	0	?	?	?	?	?	?	
30	?		?	1	?	0	?	?	?	?	?	?	
31	?		?		?		?	?		?		?	
MIN	?	?	?	0	0	0	0	?	?	?	?	?	0
TOT	?	?	?	278	1077	111	76	?	?	?	?	?	1543
MAX	?	?	?	113	406	42	21	?	?	?	?	?	406
NO>0	0	0	0	10	19	10	9	0	0	0	0	0	48

End of process

DAILY TOTALS YEAR=1984   SITE=5006652   ITEM= 1   RATING NOT APPLIED
Table=File/1000   READ TABLE:

MT CHANAPAHO R/FALL IN MM   [20.8.86]

DAY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC	
1	?	?	?	?	?	?	?	?	?	13	0	31	
2	?	?	?	?	?	?	?	?	?	1	1	68	
3	?	?	?	?	?	?	?	?	?	1	13	0	
4	?	?	?	?	?	?	?	?	?	25	80	22	
5	?	?	?	?	?	?	?	?	?	8	4	1	
6	?	?	?	?	?	?	?	?	?	2	46	0	
7	?	?	?	?	?	?	?	?	?	0	88	27	
8	?	?	?	?	?	?	?	?	?	0	17	100	
9	?	?	?	?	?	?	?	?	?	1	0	53	
10	?	?	?	?	?	?	?	?	?	0	87	34	
11	?	?	?	?	?	?	?	?	?	0	27	5	
12	?	?	?	?	?	?	?	?	?	10	12	11	
13	?	?	?	?	?	?	?	?	?	0	2	13	
14	?	?	?	?	?	?	?	?	?	15	33	17	
15	?	?	?	?	?	?	?	?	?	31	42	86	
16	?	?	?	?	?	?	?	?	?	20	0	62	
17	?	?	?	?	?	?	?	?	?	31	8	98	
18	?	?	?	?	?	?	?	?	?	35	1	12	
19	?	?	?	?	?	?	?	?	?	13	52	4	
20	?	?	?	?	?	?	?	?	?	4	85	58	
21	?	?	?	?	?	?	?	?	?	26	14	114	
22	?	?	?	?	?	?	?	?	?	39	27	21	
23	?	?	?	?	?	?	?	?	?	1	62	8	
24	?	?	?	?	?	?	?	?	?	0	18	18	
25	?	?	?	?	?	?	?	?	?	5	21	65	
26	?	?	?	?	?	?	?	?	?	6	0	54	
27	?	?	?	?	?	?	?	?	?	42	33	38	
28	?	?	?	?	?	?	?	?	74	46	67	2	
29	?	?	?	?	?	?	?	?	3	22	22	2	
30	?		?	?	?	?	?	?	31	2	2	0	
31	?		?		?		?	?		17		0	
MIN	?	?	?	?	?	?	?	?	3	0	0	0	0
TOT	?	?	?	?	?	?	?	?	108	427	869	1032	2437
MAX	?	?	?	?	?	?	?	?	74	46	88	114	114
NO>0	0	0	0	0	0	0	0	0	3	29	27	30	89

DAILY TOTALS   YEAR=1985   SITE=5006652   ITEM= 1   RATING NOT APPLIED
Table=File/1000   READ TABLE:

MT CHANAPAHO R/FALL IN MM   [20.8.86]

DAY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC	
1	2	1	32	11	?	?	0	47	?	?	?	?	
2	0	15	54	4	?	?	2	1	?	?	?	?	
3	0	66	150	3	?	?	11	8	?	?	?	?	
4	19	46	53	0	?	?	8	11	?	?	?	?	
5	53	3	52	4	?	?	1	5	?	?	?	?	
6	51	12	8	1	?	?	0	1	?	?	?	?	
7	40	2	3	22	?	?	5	0	?	?	?	?	
8	7	33	1	9	?	?	7	0	?	?	?	?	
9	9	23	27	14	?	?	0	5	?	?	?	?	
10	3	34	62	11	?	?	5	19	?	?	?	?	
11	4	0	19	0	?	?	0	1	?	?	?	?	
12	16	2	2	48	?	?	0	13	?	?	?	?	
13	2	6	5	29	?	?	18	22	?	?	?	?	
14	13	11	8	4	?	?	22	18	?	?	?	?	
15	20	1	5	41	?	?	44	14	?	?	?	?	
16	4	15	10	0	?	?	15	0	?	?	?	?	
17	9	0	11	0	?	?	24	23	?	?	?	?	
18	1	0	34	0	?	?	23	0	?	?	?	?	
19	5	22	38	29	?	?	4	14	?	?	?	?	
20	17	48	62	4	?	?	0	33	?	?	?	?	
21	10	1	20	0	?	?	5	1	?	?	?	?	
22	127	0	62	0	?	?	0	3	?	?	?	?	
23	0	10	54	59	?	?	1	?	?	?	?	?	
24	29	43	2	0	?	?	8	?	?	?	?	?	
25	0	31	51	0	?	?	142	?	?	?	?	?	
26	0	1	84	30	?	?	88	?	?	?	?	?	
27	6	35	10	8	?	20	9	?	?	?	?	?	
28	18	18	9	40	?	9	25	?	?	?	?	?	
29	51		99	65	?	42	52	?	?	?	?	?	
30	39		3	80	?	1	3	?	?	?	?	?	
31	64		21		?		8	?		?		?	
MIN	0	0	1	0	?	1	0	0	?	?	?	?	0
TOT	627	484	1059	521	?	73	537	245	?	?	?	?	3548
MAX	127	66	150	80	?	42	142	47	?	?	?	?	150
NO>0	30	26	31	24	0	4	29	20	0	0	0	0	164

End of process

DAILY TOTALS YEAR=1985 SITE=5018151 ITEM= 1 RATING NOT APPLIED
Table=File/1000   READ TABLE:

LEIVASUVASU RIDGE R/FALL IN MM   [20.8.86]

DAY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC	
1	?	?	?	?	90	23	8	?	?	?	?	?	
2	?	?	?	?	2	11	0	?	?	?	?	?	
3	?	?	?	?	0	0	0	?	?	?	?	?	
4	?	?	?	?	2	5	1	?	?	?	?	?	
5	?	?	?	?	0	3	0	?	?	?	?	?	
6	?	?	?	?	2	0	34	?	?	?	?	?	
7	?	?	?	?	22	15	4	?	?	?	?	?	
8	?	?	?	?	0	0	3	?	?	?	?	?	
9	?	?	?	?	0	11	0	?	?	?	?	?	
10	?	?	?	?	0	0	30	?	?	?	?	?	
11	?	?	?	?	1	1	0	?	?	?	?	?	
12	?	?	?	?	3	0	13	?	?	?	?	?	
13	?	?	?	?	7	2	2	?	?	?	?	?	
14	?	?	?	?	0	31	0	?	?	?	?	?	
15	?	?	?	?	0	6	0	?	?	?	?	?	
16	?	?	?	?	33	0	4	?	?	?	?	?	
17	?	?	?	?	6	15	5	?	?	?	?	?	
18	?	?	?	?	23	0	0	?	?	?	?	?	
19	?	?	?	?	0	11	0	?	?	?	?	?	
20	?	?	?	?	0	25	6	?	?	?	?	?	
21	?	?	?	?	18	0	4	?	?	?	?	?	
22	?	?	?	?	0	0	11	?	?	?	?	?	
23	?	?	?	0	42	0	3	?	?	?	?	?	
24	?	?	?	0	9	8	5	?	?	?	?	?	
25	?	?	?	0	40	4	?	?	?	?	?	?	
26	?	?	?	5	31	1	?	?	?	?	?	?	
27	?	?	?	8	0	11	?	?	?	?	?	?	
28	?	?	?	51	0	4	?	?	?	?	?	?	
29	?		?	10	2	40	?	?	?	?	?	?	
30	?		?	14	25	14	?	?	?	?	?	?	
31	?		?		0		?	?		?		?	
MIN	?	?	?	0	0	0	0	?	?	?	?	?	0
TOT	?	?	?	90	364	244	141	?	?	?	?	?	839
MAX	?	?	?	51	90	40	34	?	?	?	?	?	90
NO>0	0	0	0	6	23	21	19	0	0	0	0	0	69

End of process

~~~ MICRO-TIDEDA ~~~ VER 2.8 WATER RESOURCES DEPT - SOLOMON ISLANDS
~~~ PDAY ~~~   VER 1.4   25-07-83

DAILY TOTALS   YEAR=1985   SITE=5018150   ITEM= 1   RATING NOT APPLIED
Table=File/1000   READ TABLE:

KAKAKE R/FALL IN MM   [20.8.86]

DAY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC	
1	?	?	?	?	91	26	154	?	?	?	?	4	
2	?	?	?	?	1	12	0	?	?	?	?	0	
3	?	?	?	?	0	0	0	?	?	?	0	0	
4	?	?	?	?	0	13	0	?	?	?	84	35	
5	?	?	?	?	4	0	0	?	?	?	21	0	
6	?	?	?	?	16	0	13	?	?	?	1	1	
7	?	?	?	?	37	19	0	?	?	?	0	0	
8	?	?	?	?	0	0	1	?	?	?	3	1	
9	?	?	?	?	0	16	0	?	?	?	5	7	
10	?	?	?	?	0	0	27	?	?	?	4	4	
11	?	?	?	?	0	1	0	?	?	?	0	21	
12	?	?	?	?	39	3	2	?	?	?	59	1	
13	?	?	?	?	28	11	0	?	?	?	30	10	
14	?	?	?	?	0	23	0	?	?	?	25	9	
15	?	?	?	?	23	6	0	?	?	?	3	5	
16	?	?	?	?	83	14	6	?	?	?	10	3	
17	?	?	?	?	6	0	2	?	?	?	0	11	
18	?	?	?	?	67	0	4	?	?	?	4	2	
19	?	?	?	?	3	1	0	?	?	?	0	0	
20	?	?	?	0	12	15	20	?	?	?	0	43	
21	?	?	?	0	46	0	77	?	?	?	2	21	
22	?	?	?	0	13	0	9	?	?	?	0	?	
23	?	?	?	0	26	0	3	?	?	?	0	?	
24	?	?	?	0	19	12	4	?	?	?	7	?	
25	?	?	?	0	27	3	?	?	?	?	47	?	
26	?	?	?	3	93	25	?	?	?	?	3	?	
27	?	?	?	0	1	5	?	?	?	?	0	?	
28	?	?	?	13	7	8	?	?	?	?	0	?	
29	?		?	3	32	19	?	?	?	?	0	?	
30	?		?	2	13	38	?	?	?	?	2	?	
31	?		?		2		?	?		?		?	
MIN	?	?	?	0	0	0	0	?	?	?	0	0	0
TOT	?	?	?	23	702	277	327	?	?	?	317	182	1829
MAX	?	?	?	13	93	38	154	?	?	?	84	43	154
NO>0	0	0	0	5	26	23	18	0	0	0	21	17	110

End of process