## **Procedure for CPT Output from CLIMSOFT**

**Step 1:** The stations required for CPT analysis are selected in the **station** table in the **main Climsoft database**. The selection is done by checking the box in the **CPT\_selection** column of the station table as shown in Fig 1. The screenshot below shows some GTS stations selected for CPT analysis for Niger.

	st	ation						- = ×
		id 👻	station_name 👻	qualifier 👻	country 🚽	district 👻	authority 👻	CPT_selection 🔫
	+	61036	TILLABERY		NIGER			
	+	61080	MARADI		NIGER			
	+	61075	BIRNI-N'KONNI		NIGER			
	+	61053	DOSSO		NIGER			
	+	61099	GAYA		NIGER			
	+	61052	NIAMEY-AERO		NIGER			
	+	61049	N'GUIGMI		NIGER			
	+	61091	MAGARIA		NIGER			
	+	61043	TAHOUA		NIGER			
	+	61024	AGADEZ		NIGER			
	+	61017	BILMA		NIGER			
	+	61090	ZINDER		NIGER			
	+	61096	MAINE-SOROA		NIGER			
	+	61085	DIFFA		NIGER			
	+	61045	GOURE		NIGER			
	+	65028	KATSINA		NIGERIA			
	+	65010	SOKOTO		NIGERIA			
	+	65001	YELWA		NIGERIA			
	+	65167	YOLA		NIGERIA			<b>— —</b>
Red	cor	d: I4 🔺	1022 of 1545 🕨 🕨	📫 🕅 🕅 No Filt	er Search	•		•

## Fig 1. Station selection

Step 2: After log on to CLIMSOFT, Click on "Products" button on the Welcome screen. See Fig 2 below.

🕫 Welcome	×							
Welcome to CLIMSOFT Data Management System. This system allows you to enter data, generate a number of products, carry out quality control of your data and more !								
Perform key entry using pre-defined forms	Key Entry							
Synoptic feature data entry	Synoptic Feature							
Archive paper images	Paper Archive							
Perform data transfer operations	DB Utilities							
Perform quality control checks	QC							
Retrieve tabulated data, graphs and special products	Products							
Add, remove or modify users	User Admin							
Add or modify metadata information	Metadata							
Unzip Downloaded NOAA GTS data	Unzip NOAA							
	Close							

Fig 2. CLIMSOFT Welcome screen showing the products button.

**Step 3:** The next screens shown in Fig 3, that appears after clicking the **Products** button shows a number of options for products. Click on **Data** Button.

ducts 🛛 🔀
Inventory
Data 🤇
Graphs
CLIMAT
Summaries
Synop Feature
Backup
oft_database_
Help

Fig 3.Dialogue with different options for products

7	Data		X					
	C Hourly	🔿 Dekadal						
	🔿 Daily	C Monthly						
	C Daily for RolimDex	© Annual						
	C Daily for Instat	C Long-term Means						
	C Pentad Rainfall	C Long-term Extremes						
	C Climatology XML Output	C Monthly XML Output						
	C Three Month Climate Monitoring	CPT output						
	C Daily for WACA-DARE	$\smile$						
	Satellite Estimates							
	C SURFER Residuals	C Sat. estimates by country						
	C Sat. Estimates for single day							
OK Close Help								

Step 4: On the dialogue that appears next, choose CPT output and click OK as shown in Fig 4

## Fig 4. Data output options

**Step 5:** On the CPT dialogue enter the required parameters , namely , **Begin Year**, **End Year**, **Begin Month** and **End Month**. Next, click **Execute** button. Information will appear above the **Execute** button to show that processing is in progress.

🕫 CPT Output	×						
Stations required for CPT output are pre-selected in the station table by checking the CPT_selection field to TRUE							
Begin Year:	2001						
End Year:	2010						
Begin Month:	7						
End Month:	9						
Processing Please wait !							
Execute _	Close help						

Fig 5. Dialogue for entering parameters for required data range

**Step 6:** When processing is complete the message above the **Execute** changes to show that processing is complete and a standard message box will appear indicating that the CPT data table has been created.

CPT Output     Stations required for CPT output are pre-selected in the station table by checking the CPT_selection field to TRUE	
	Climsoft
Begin Year: 2001	
End Year: 2010	CPT table created successfully !
Begin Month: 7	ОК
End Month: 9	
Processing complete !	
Execute Close help	

## Fig 6. Completion of CPT output

**Step 7:** The generated data table for CPT is stored in the CLIMSOFT **Data** subfolder under the name **CPT\_output** and will be in CSV format which can be viewed in Excel. The station ID appears in the first row. This example shows WMO station ID, but NMHSs should use the local ID. Station ID was used to represent the station to avoid editing long station names to meet the criteria for CPT which stipulates that the station name must not have spaces and the length of the name must <= 16 characters.

1	CPT_output.csv										= x	
	А	В	С	D	E	F	G	Н	I.	J	К	
1	STN	61017	61024	61036	61043	61045	61052	61053	61075	61090	61099	
2	LAT	18.68333	16.96667	14.2	14.9	13.98333	13.48333	13.03333	13.8	13.78333	11.88333	
3	LON	12.91667	7.983333	1.45	5.25	10.3	2.166667	3.3	5.25	8.983334	3.45	
4	2001-07_09	10.7	72.6	295.5	375.3	357.5	453.3	-999	240.6	384.8	532.5	
5	2002-07_09	0	128.2	212.9	269.1	172.2	297.5	-999	327.4	265.9	544.3	=
6	2003-07_09	2	156.8	83.2	222.6	190.6	359.5	-999	282.2	377.5	605.2	
7	2004-07_09	35.1	153.7	229.8	127.4	240.7	368.8	-999	351.9	281.3	400.4	
8	2005-07_09	0	131.5	41.9	153.6	146.7	414.5	-999	166.8	327.3	453.3	
9	2006-07_09	2	150.5	-999	138.6	162.5	255.3	-999	251.4	365.3	552.6	
10	2007-07_09	0	227.9	371	159.8	189	399.8	-999	157.9	433.9	355.3	
11	2008-07_09	-999	100.6	123.7	399.6	38.8	376.4	-999	266	373.8	408.7	
12	2009-07_09	0.5	148.8	146.6	272.5	85	488.1	-999	241.2	312.5	518	
13	2010-07_09	6.7	172.8	372.3	250.1	350	356.4	109.9	407.1	423.8	447.1	
14												<b>•</b>
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Fig 7. CPT output from CLIMSOFT displayed in Excel