



# User Guide of Myanmar Climate Data Web Portal (Initial Draft)

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## Chapter One: Introduction

Myanmar Climate Data Web Portal (MCDWP) is an interactive web platform developed to search, display/visualize, evaluate, analyze and distribute various types (observed, gridded, projected-raw, and projected-biased) of climate data. This user guide explains quick and easy steps to follow when using certain tasks.

### Disclaimer

MCDWP web platform has been designed to share various data of Myanmar free of charge and/or with purchase depending on data types. This user guide serves as a quick start for users who want to manipulate available data. Final version of the platform may differ from illustrations of this guide.

### Accessibility

MCDWP is provided open public access to any person or organization interested on climatic data of Myanmar. However access to certain data products required user registration and payments. Please refer Chapter 4 for details.

### Privacy

User information (in registration and when purchasing data) collected through this web site is only use for stated purpose and will be protected within the platform.

### Policies and Notices

MCDWP is a property of Department of meteorology of Myanmar and any kind of illegal use of whole web site, part of it or data without prior notice is bounded by local and international law.

### Terms and conditions for the provision of data

Department of Meteorology and Hydrology (DMH), Myanmar provides the climate data under the following terms and conditions. Please read and understand these Terms and Conditions and abide by them when you buy data.

1. These data must only be used by the named person(s)/institution for the sole purpose of their work / on the named project/thesis etc.
2. The data will not be supplied in whole or in part to any third party without the authorization of DMH.
3. Data will not be used for commercial purposes.
4. Articles, papers, thesis, reports or written scientific works of any form, based in whole

or in part on data supplied by DMH, will contain an acknowledgement concerning the supplied data.

5. Although every care has been taken in preparing and testing the data, DMH cannot guarantee that the data are correct in all circumstances; neither does DMH accept any liability whatsoever for any error or omission in the data, or for any loss or damage arising from its use.
6. Access to the data is restricted to the named person(s)/institution.
7. Users should help improve the quality of the data and its delivery by giving feedback where appropriate.
8. It is the responsibility of the user to ensure that use of the data is restricted to that set out under the Item 1 to 6 above.

## Chapter Two: Overview of Web Portal

### Introduction

Web platform consists of six (5) main interactive components as shown in Figure 2.1 here.

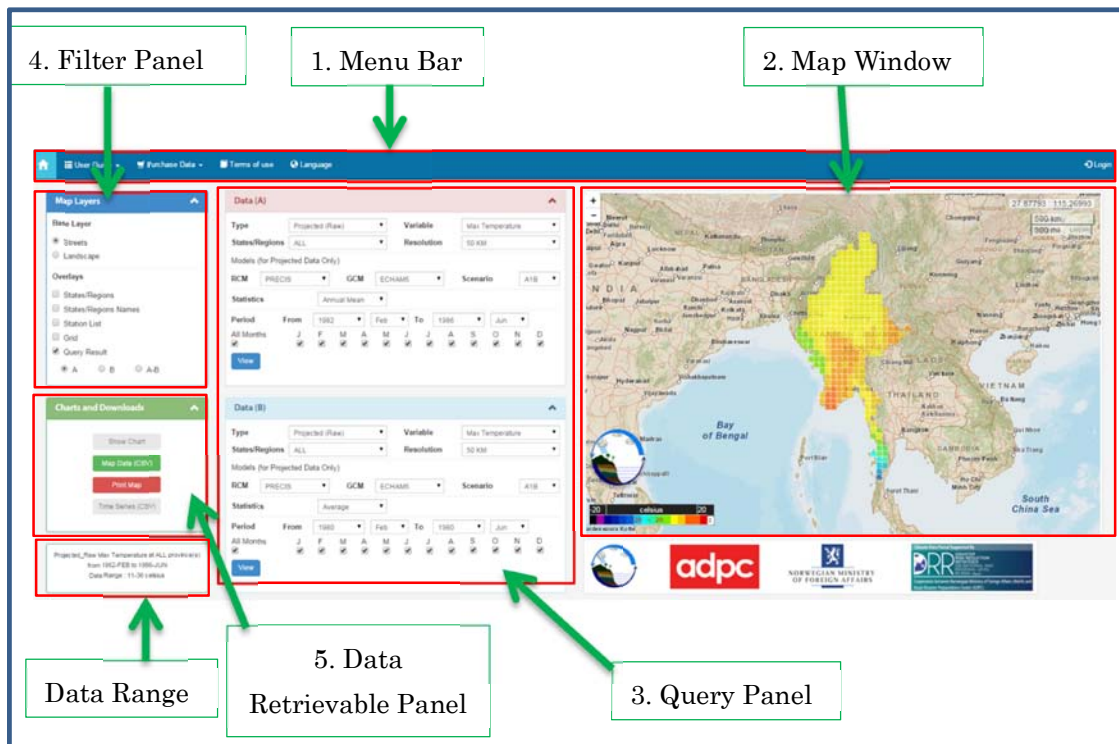


Figure 2.1: Main Components of Web Platform

### User Interface & Components

#### ✧ Menu Bar:

This provides access to Home, User guide, Data purchase (For registered users only, please refer Chapter 4 for details), Terms of use of the web portal and Language options (present user interface available in English only) starting from top left side. Login (Chapter 4 for details) to the web portal available at the right side of the menu bar.

#### ✧ Map Window:

Map window displays query results for different base layer and filter (overlays) options of filter panel. Left bottom corner shows color pallets for user to choose for intended visualization. Right side bottom corner (below the logo mark) of map window displays queried terms. Map can be zoomed in or zoomed out and moved. Top right corner of the map window display coordinates (Longitude & Latitude) of user cursor and map scale.

#### ✧ Query Panel:

User can query and evaluate climatic data interactively (please refer Chapter 3 for detail data products available at present) for two given places (called as place A and place B) and compare them each other. When a data type (Gridded data) is selected different options automatically set to other required inputs depending on the properties and scopes. In general these are: Variable (e.g. Min temperature), Provinces (for all provinces or a selected one province e.g. Yangon), Resolution (data grid size, 25kmx25km or 50 kmx50km), Climatic models (only for projected data e.g. PRECIS, Regional climatic model), Statistics (e.g. Annual mean of data parameter selected), and period of interested (for selected month of different years in the given range or all months of the given period of years depending on the availability of data). By pressing [Evaluate](#) button user selected set of conditions are fed to the system and generate results accordingly. The same steps will be followed for place B and visualization is described in next section.

When visualizing user data queries, range of data set selected display in bottom left corner of the screen called [Data Range](#). This piece of information can be used to change the color palate interactively to display data differences distinctly (e.g.: 50kmx50km, color pixels).

#### ✧ Filter Panel or Map Layers:

This contains Base layers (streets map and landscape map) and several overlays (provinces, provinces name, weather station list, grid and query result options).By switching between A, B and AB data query results for Data (A) selection or Data (B) selection or their comparison (AB) is displayed in map window.

#### ✧ Data Retrievable Panel:

Results of queried data are available in various formats such as charts, .csv (comma separated values), printable map and time series csv data depending on the types of data selected.

### Features

MCDWP is an interactive web platform and present form of the user interface it provides;

- ✧ Access to climatic data (observed, gridded, projected-raw or projected biased) easily and quickly
- ✧ Data selection and display on the map with different filter options
- ✧ Flexible and focused data queries
- ✧ Preselected options for quick access and selection data sets
- ✧ Two base layers and several overlays for displaying results with selected focus
- ✧ Different data retrievable options (download, printing)

- ✧ Data purchase facility
- ✧ Management of data purchase

#### Access to Web Portal

Web portal can be accessed through <http://dev1.wospace.org/team/homex.php> using several popular web browsers: Google Chrome, Internet Explorer, Firefox and Safari. The web template also automatically adjusted to the mobile or tablet screens.

## Chapter Three: Data Products

### Types of Data Products

Four types of data can be accessed through this web platform are observed data from weather stations located in Myanmar, Gridded data, projected data (as projected-raw and projected-biased) obtained from regional climatic models (RCM) and Global climatic models (GCM). Table 3.1 summarizes available variables at the present portal and their specifications.

Data types	Variables	Available periods	Specifications	Other information
Observed data	Minimum temperature	1982-January to 2013-December	Available for 25 Weather Stations	
	Maximum temperature			
	Rainfalls			
Gridded data	Minimum temperature	2001-January to 2013-December	Spatial Resolution: 25kmx25km 50kmx50km	
	Maximum temperature			
	Rainfalls			
Projected – raw data	Minimum temperature	1980-January to 2040-December	Spatial Resolution: 25kmx25km 50kmx50km	RCM: PRECIS model GCM: ECHAM5 & HadCM3Q0 model A1B emission scenario
	Maximum temperature			
	Mean temperature			
	Surface wind			
	Surface pressure			
	Relative humidity			
Projected - biased	Minimum temperature	2001-January to 2040-December	Spatial Resolution: 25kmx25km 50kmx50km	RCM: PRECIS model GCM: ECHAM5 & HadCM3Q0 model A1B emission scenario
	Maximum temperature			
	Rainfalls			

Table 3.1 Data Variables of Four Data Types (available at present system)



## Chapter Four: Data Queries (Basic Steps)

This chapter demonstrate basic steps of display, data queries and data retrieval. Main components of user interface of web portal are referred from Chapter 2 Figure 2.1.

### Map Layer and Map Window

Basic layer option of Map layer has two options; *Streets* to show street map and *Landscape* to show landscape map. Switching between these two options Map window is switched accordingly (Figure 3.1 & Figure 3.2).

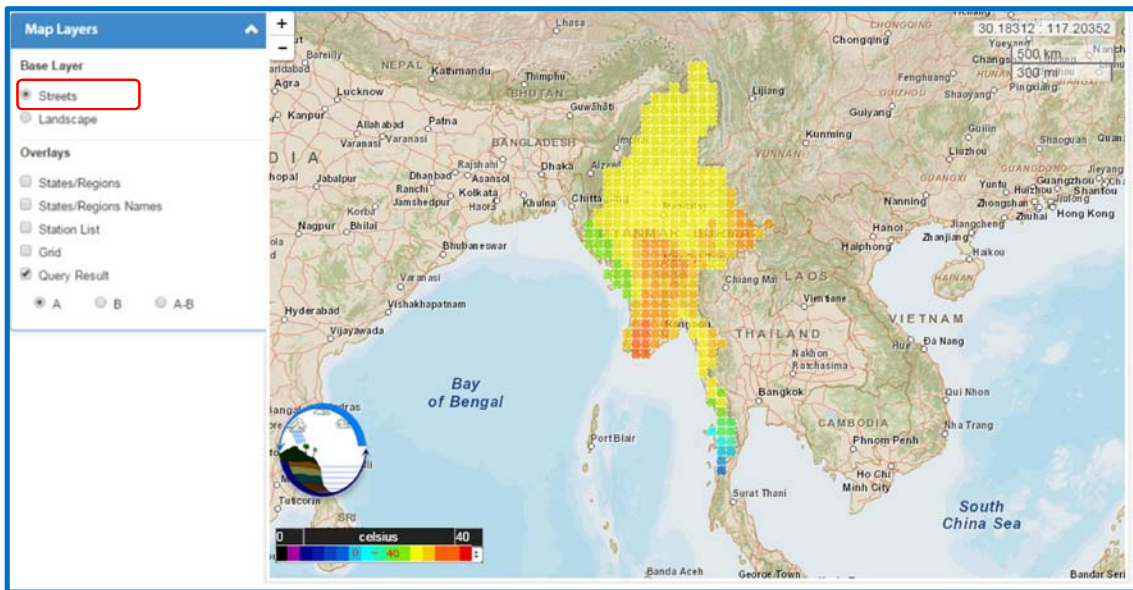


Figure 3.1: Streets Map

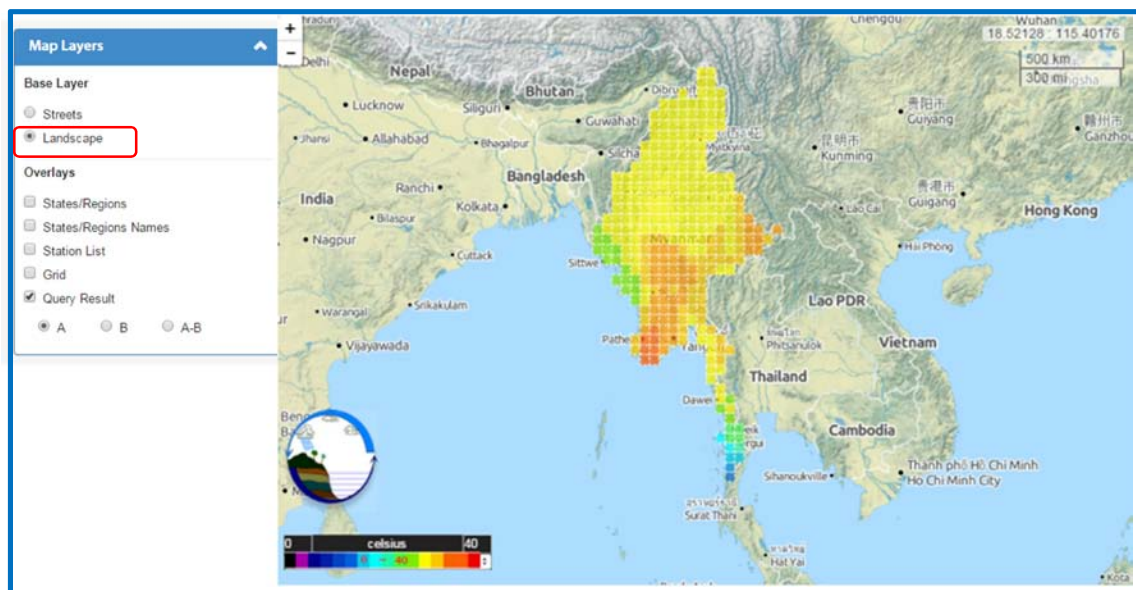


Figure 3.2: Landscape Map

Similarly first four overlays interactively work with the map window showing Provinces, Provinces Names, Station List and Grid.

### Data Queries

Data can be queried for two places of interested called as Data (A) and Data (B). Let's precede Data (A) with an example.

To query Projected (raw) data type Max temperature of variable for *Bago* province for the period 1980-Jan to 2000-Jan including all months, following selection of the interface will be used (Figure 3.3).

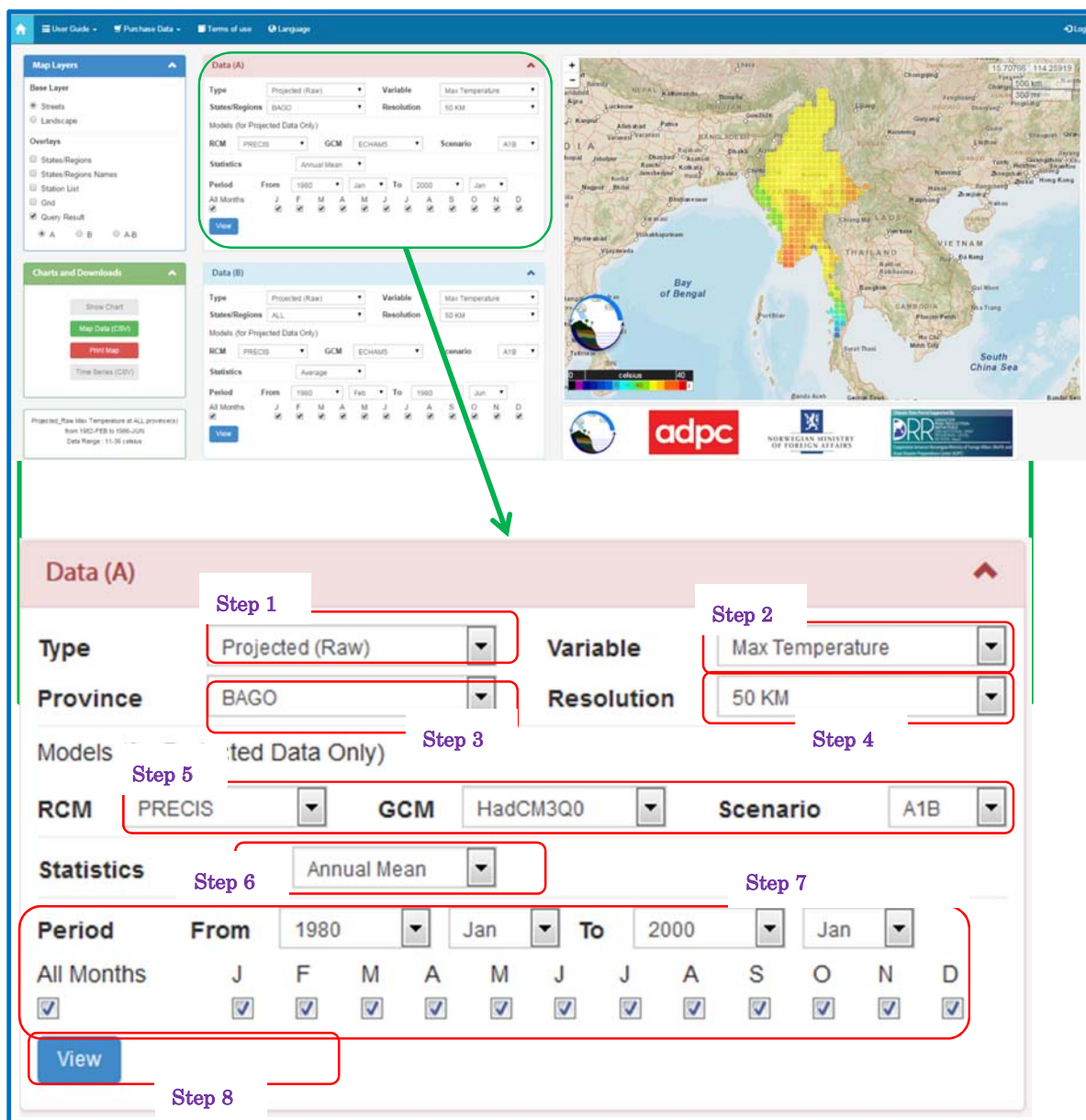


Figure 3.3: Steps of sample data query

*Step1:* select data type among four types

*Step2:* select data variable

*Step3:* Select province

*Step4:* Select data resolution

*Step5:* select data model options

*Step6:* Statistics

*Step7:* Select the period from (Year/Month) to (Year/Month) and select whether you need to include all month or one or several selected months.

*Step8:* Click View to see the results on the map

By selecting overlays you can filter the results for various templates.

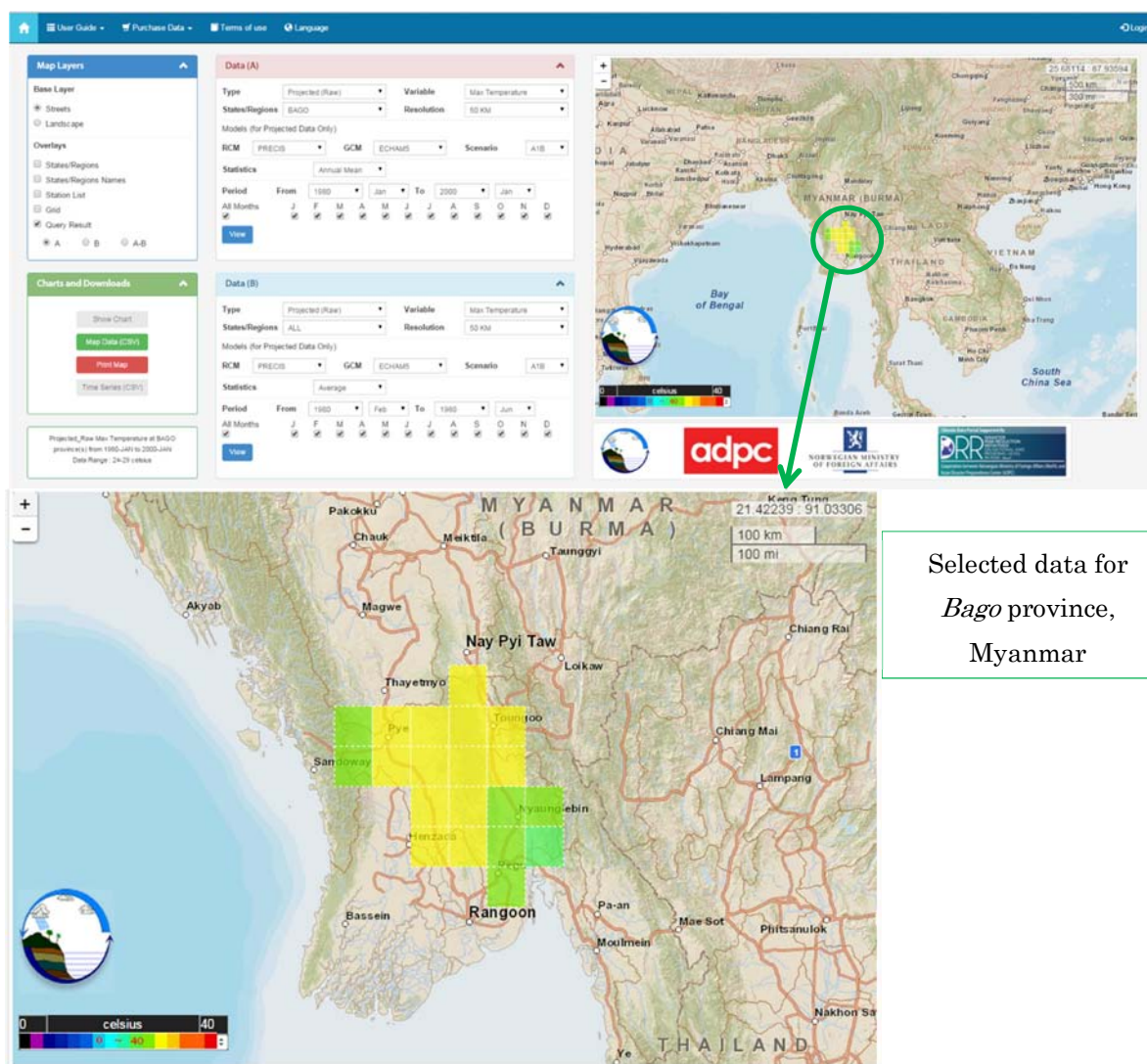


Figure 3.4: Result of sample data query



### Data Comparison (Arithmetic difference)

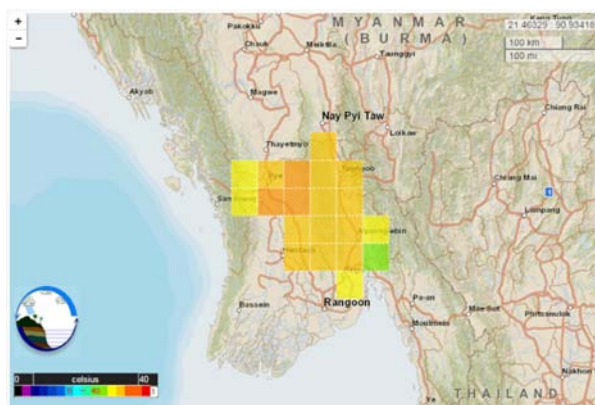
By inputting second set of data for Data (B), two data sets can be compared by taking arithmetic difference of data pixels of a certain parameter's statistical variables for same time period or different time periods, e.g. Maximum of maximum monthly temperatures for the period 1980/Jan to 2000/Jan with average of maximum temperature for the same period or different period for *Bago* province). Result is shown in the map. Maps can be switched between by using selection options in Layer panel. It also can be downloaded as csv file or map can also be printed.

Example: Please compare following two queries for Data (A) and Data (B) and their individual maps. Third map shows the A-B arithmetic difference. By adjusting color palate variation can be visualized.

**Data (A)**

Type: Projected (Raw) Variable: Max Temperature  
States/Regions: BAGO Resolution: 50 KM  
Models (for Projected Data Only)  
RCM: PRECIS GCM: ECHAM5 Scenario: A1B  
Statistics: Max  
Period: From 1980 To 2000  
All Months: J F M A M J J A S O N D

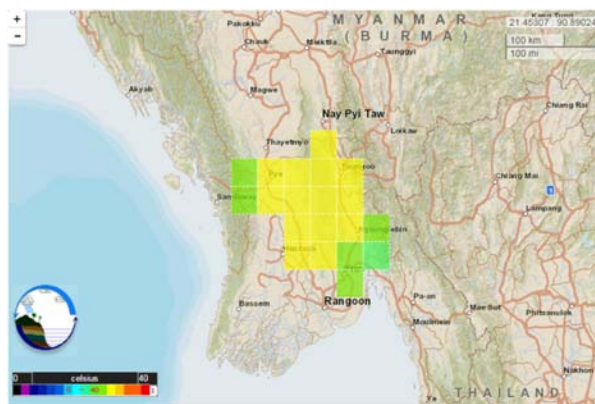
*Bago* province



**Data (B)**

Type: Projected (Raw) Variable: Max Temperature  
States/Regions: BAGO Resolution: 50 KM  
Models (for Projected Data Only)  
RCM: PRECIS GCM: ECHAM5 Scenario: A1B  
Statistics: Average  
Period: From 1981 To 2000  
All Months: J F M A M J J A S O N D

Data query (B) for  
*Bago* province



Data difference  
(A-B)

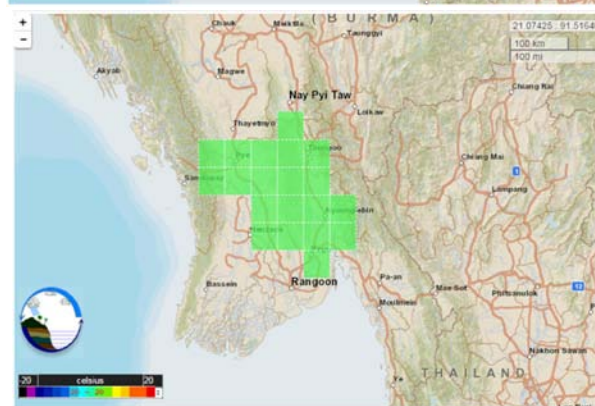


Figure 3.5: Result of sample data query (A-B)

### Downloading Data Products

Charts and download panel shows **show chart**: to display observed data for certain weather station, **Map data (csv)**: to download map data pixels as comma separate values (.csv) file, **Print Map**: to print map locally at user computer and **Time Series (csv)**: to down load data of given time period in .csv file format.

e.g. : Observed Min temperature data at Bago weather station for the period 1990/ Jan to 2009/Dec can be display as a chart as shown in Figure 3.6.



Figure 3.6: Display observed data using Show chart option

### Purchase Data Products

When the data products are not available for download freely, a pop up window will guide you for available options (Figure 3.7).

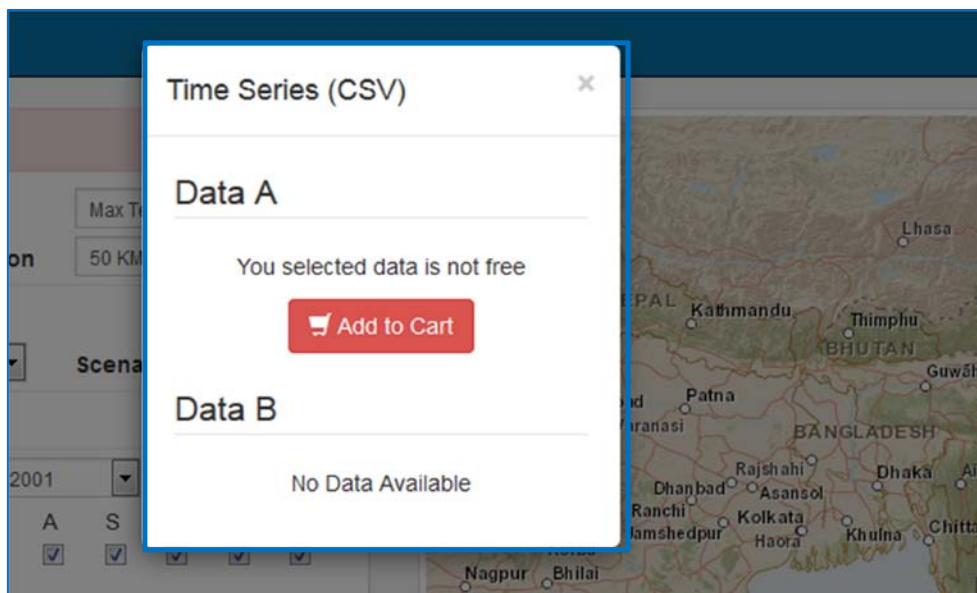
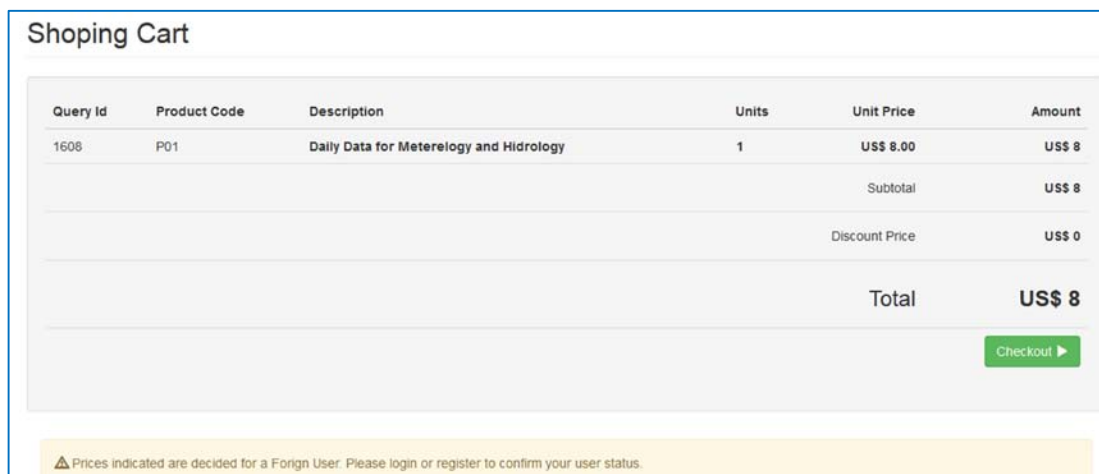


Figure 3.7: Data retrieval options

By clicking add to cart button, you will be directed to a shopping cart window showing price of your selected product(s) (Figure 3.8).

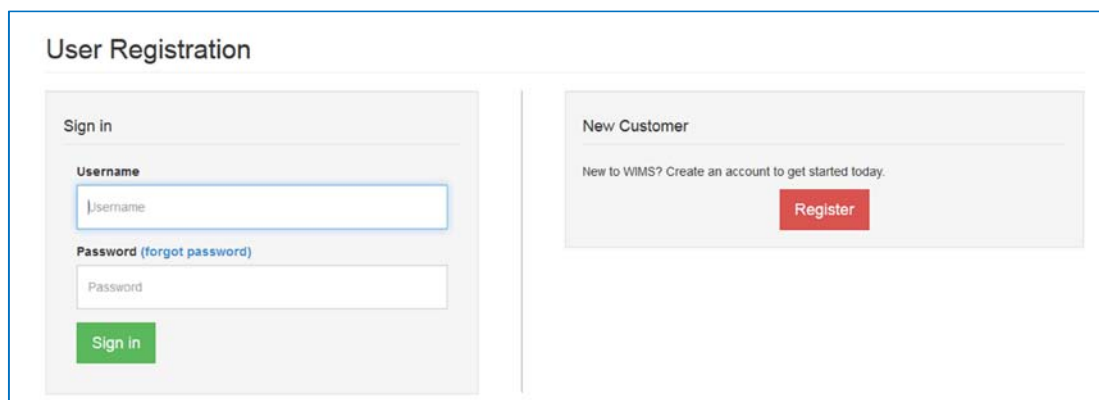


Query Id	Product Code	Description	Units	Unit Price	Amount
1608	P01	Daily Data for Meterology and Hidrology	1	US\$ 8.00	US\$ 8
Subtotal					US\$ 8
Discount Price					US\$ 0
Total					<b>US\$ 8</b>

Prices indicated are decided for a Foreign User. Please login or register to confirm your user status.

Figure 3.8: Shopping Cart

This shows the all products in shopping cart, cost of each and the total. To precede user need to Register or Login using username and password if already registered (Figure 3.9).



### User Registration

#### Sign in

Username

Password (forgot password)

Sign in

#### New Customer

New to WIMS? Create an account to get started today.

Register

Figure 3.9: User registration or Login option

If you are a new user please register using quick form appear and input your contact data to proceed. Web portal validate your information and then you can login using your username and password. Then you will be forwarded to Data purchase dashboard as shown in Figure 3.8.

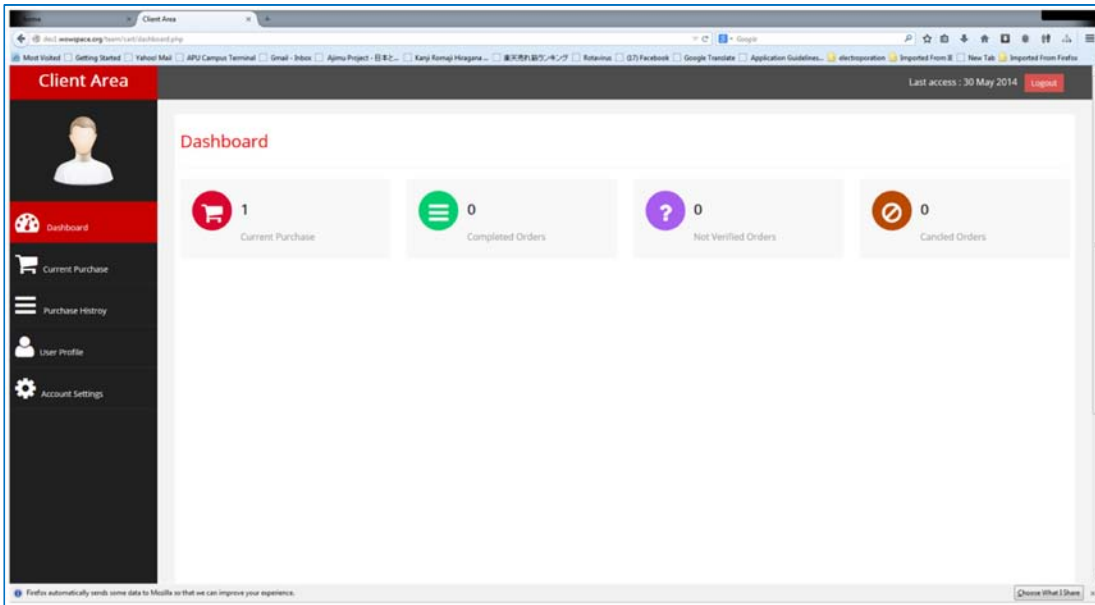


Figure 3.10: Data Purchase Dashboard

Please click Current purchase shopping cart from left side client area panel to complete your order. It shows your all current orders and you can confirm the purchase by clicking green button (Figure 3.11).

There are several other options are available in Client Area to manage user profile, purchase history and dashboard shows the summery.

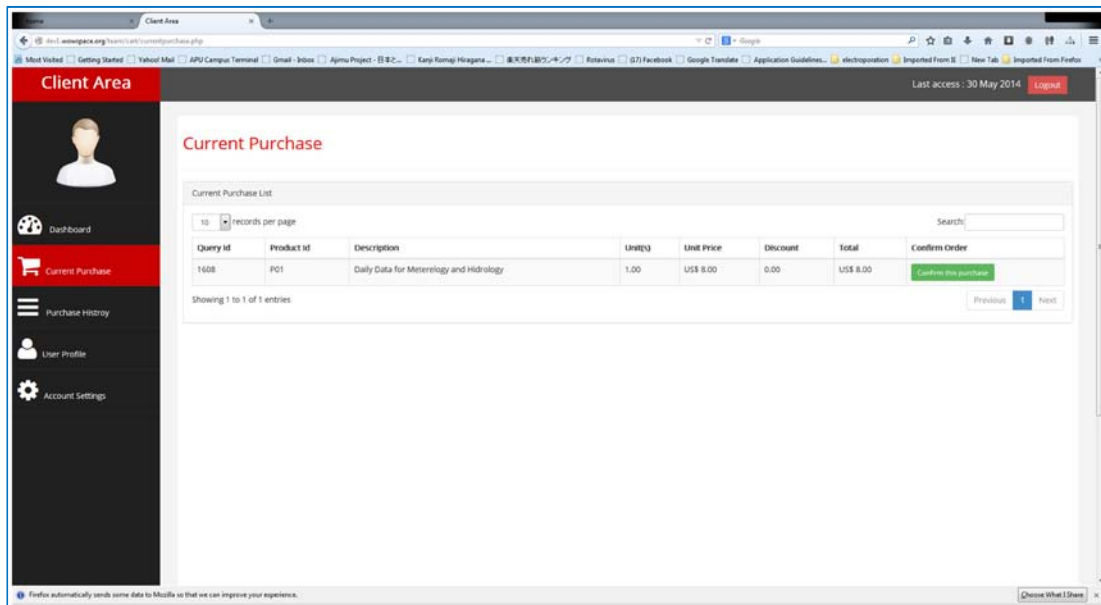


Figure 3.11: Current purchase window