
Greenland MAR Explorer Tool (G-MARx)

version 3.2

User's guide version 1.1
October 2013



Thank you for your interest in the MAR Explorer tool ! This interface provides access to the output of the regional climate model MAR (Modele Atmospherique Regional) for Greenland and vicinity.

To begin, select a time period of interest and a region of interest or a specific point. Coordinates of the point or of the area corners will appear in the area on the left of the Greenland mask. Click the preview button to see a time series and/or overview animation. For a spatial subset, select the point or extent option and click a point or drag a rectangle on the map, which updates the preview. The status of the system is given in the lower left of the page. At this stage, it is also possible to select more than one variable. If you decide to do so, you will both time series of the selected variables

To download data, select the variables of interest and click the download button. Data can be delivered in raw binary or comma-separated value format (binary is faster). A metadata file will also be generated containing the required information for scaling appropriately the output variables.

Citation: M. Tedesco, X. Fettweis, P. Alexander, G. Green, T. Datta: MAR Greenland Outputs [from date] - [to date] ver. 3.2, CCNY Digital Archive

TIME SELECTION

Select a **timespan** and **area** for your dataset

Select

Start date
(min 1/1/1958): 1/1/1958

End date
(max 8/31/2013):

Area:

January						
S	M	T	W	T	F	S
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1
2	3	4	5	6	7	8
1957	1958	1959				

lon: -72.6996 lat: 83.8318

The “Start date” and “End date” of the dataset can be defined by either typing directly into the edit box or by selecting the arrow and choosing a date directly.

AREA SELECTION

Your area of study can be defined in the “Area” dropdown as either

- *the full extent shown*
- *a single point (latitude and longitude) , which you can select with your cursor*
- *a rectangle that you define, either by drawing the box directly with your cursor or by specifying coordinates in the box at the bottom of the pane*

The latitude and longitude of your cursor are also shown at the bottom of the image

Full Extent

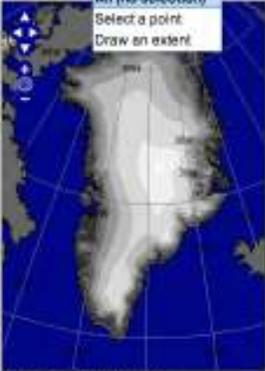
Select

Start date (min 1/1/1958): 1/1/1958

End date (max 8/31/2013): 1/1/2013

Area: All (no selection)

All (no selection)
Select a point
Draw an extent



lon: -69.7148 lat: 83.7156

Single Point

Select

Start date (min 1/1/1958): 1/1/1958

End date (max 8/31/2013): 1/1/2013

Area: Select a point



lon: -50.1268 lat: 77.4592

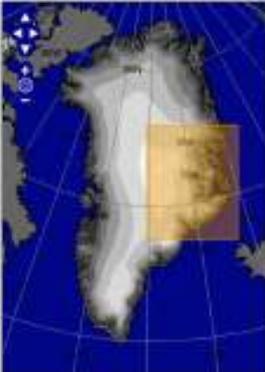
Rectangle

Select

Start date (min 1/1/1958): 1/1/1958

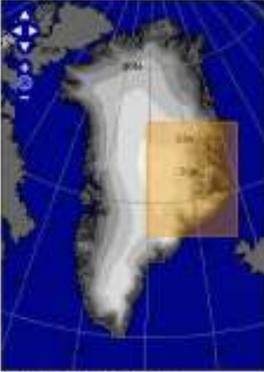
End date (max 8/31/2013): 1/1/2013

Area: Draw an extent



lon: -23.0546 lat: 66.8255

Specifying Coordinates



lon: -11.0061 lat: 71.3525

-40.2979 67.4267
-14.7218 74.6118

Load coordinates



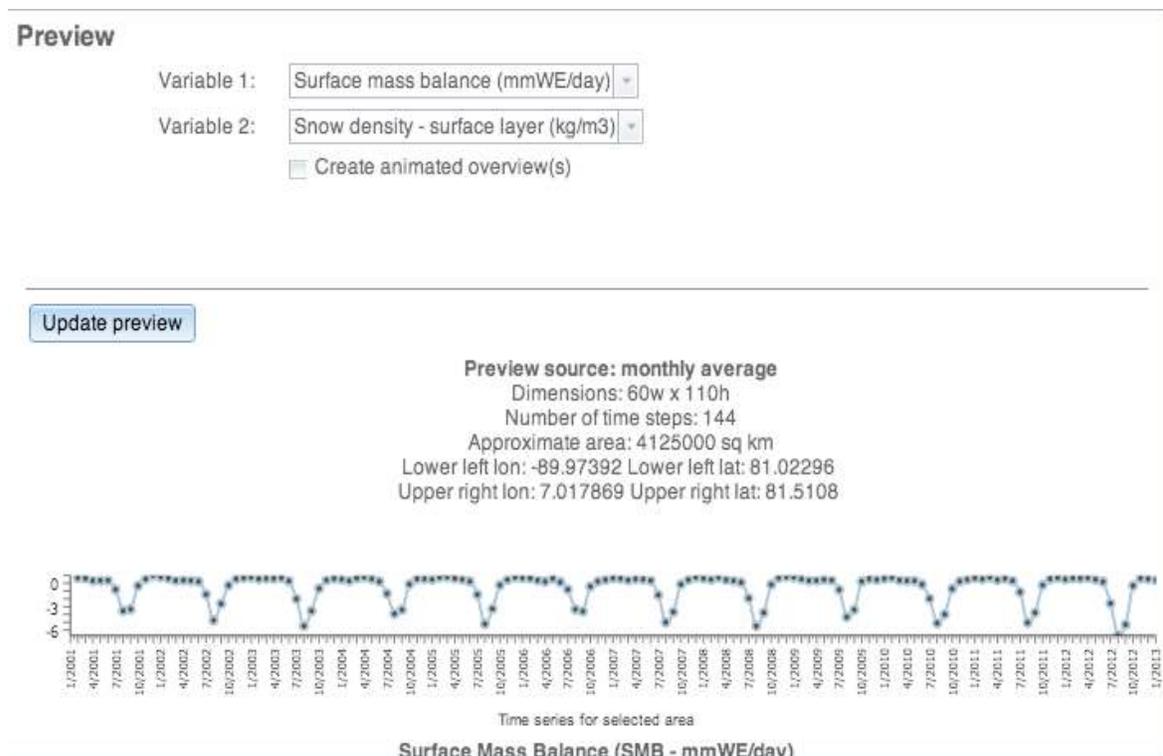
PREVIEW OF MAR OUTPUTS

Having chosen your region of interest as either a point or rectangle, this panel will allow you to [select preview variables](#) of interest, preview [animated maps](#), [timeseries](#) of monthly/yearly averages (depending on the timespan chosen) as well as [histograms](#), and [plots](#) correlating variables.

Select Preview Variables

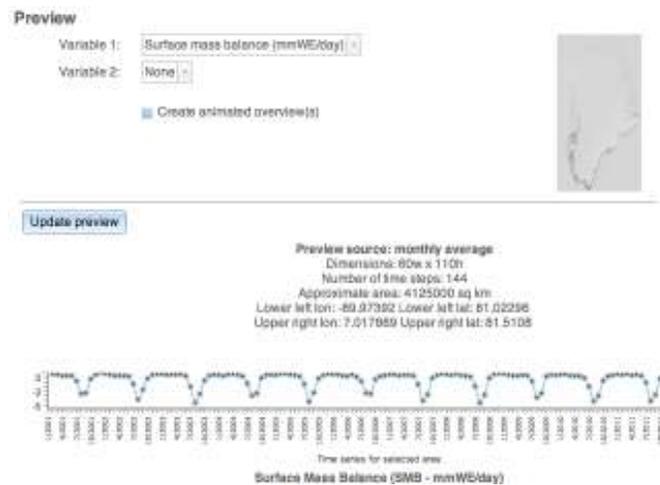
From the [preview](#) panel, you can select either one or two variables of interest from dropdown menus and then click “Update Preview” to view summary results.

Note that detailed descriptions of these variables is available in the [glossary](#) link, always available on the top right of the screen.



Animated Maps

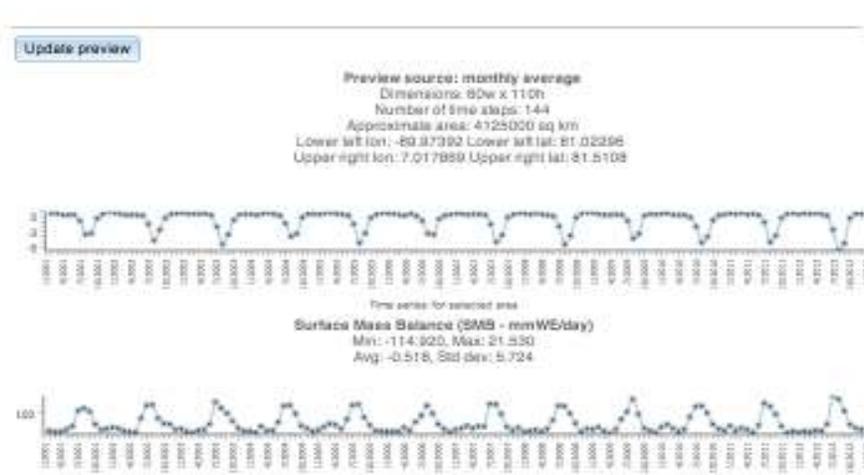
Within the **Preview** pane, after having **selected preview variables** as well as a **timespan**, click the checkbox “Create animated overview(s)”. Then click “Update Preview”. This will provide you with a short film of this variable changing over the selected timeframe.



Timeseries

From the middle **Preview** pane, once you have **selected preview variables** as well as an **area** and a **timespan**, clicking “Update preview” will provide a timeseries for each of the selected variables.

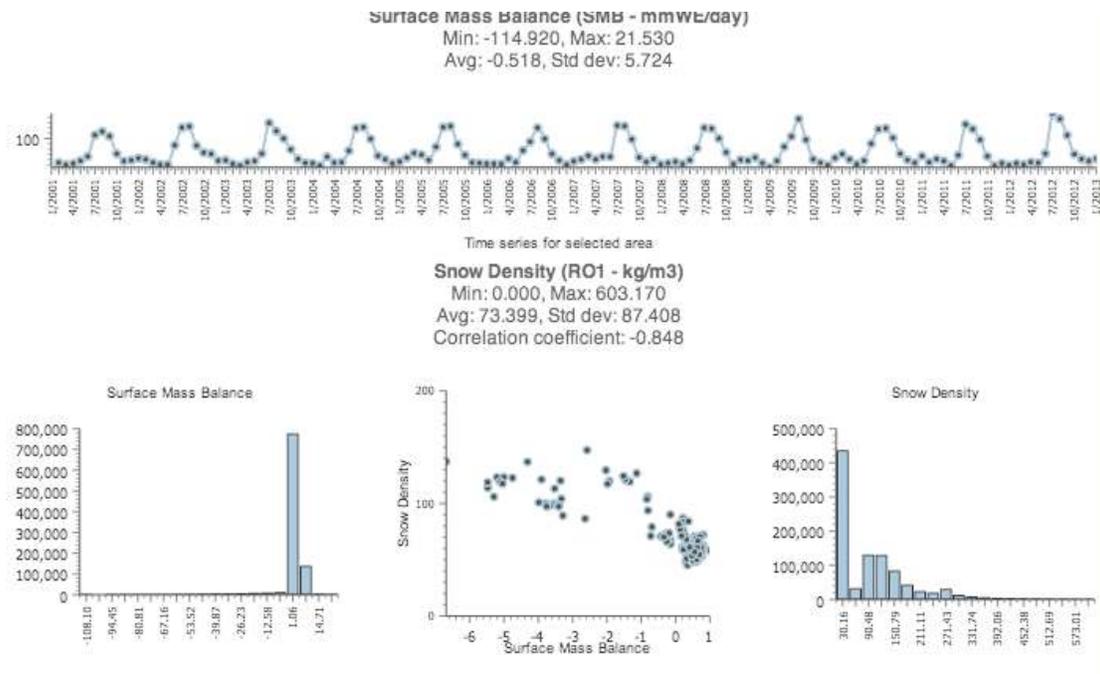
Note that you may have to scroll down within the “Preview” pane to view.



Histograms and Plots

From the middle [Preview](#) pane, once you have [selected preview variables](#) as well as an [area](#) and a [timespan](#), clicking “Update preview” will provide a histograms and plots for each of the selected variables, as well as a correlation coefficient.

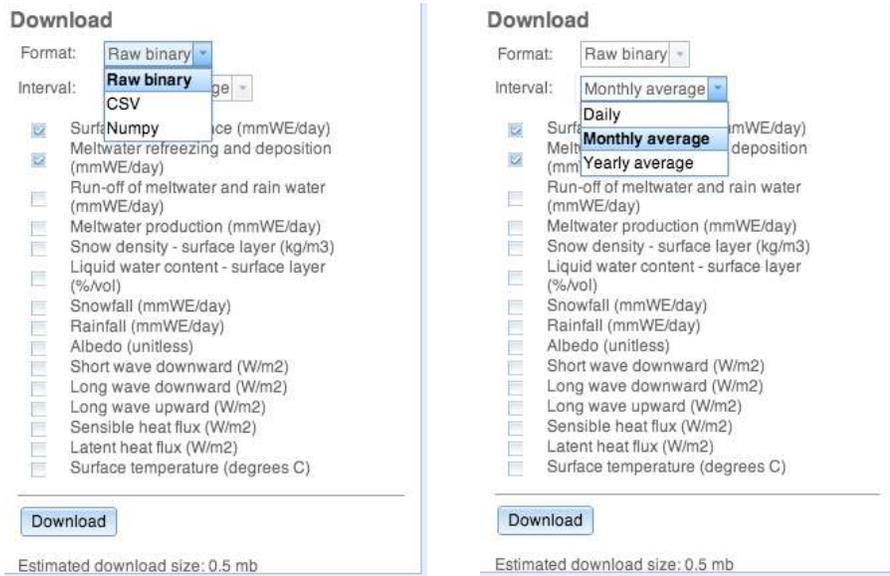
Note that you may have to scroll down within the “Preview” pane to view.



DOWNLOAD

Once you have selected an [area](#) and [timespan](#) in the [Preview](#) window, you can download MAR variable outputs of your choice in one of three formats (raw binary, csv, or numpy), at specific intervals (daily, monthly averages or yearly averages). Simply choose a format, an interval and the variables of interest. The size of your download is estimated at the bottom of the screen and click “Download”. Your download will be processed upon clicking the “Download” button.

Note that detailed descriptions of these variables may be available in the [glossary](#) link, always available on the top right of the screen.



Acknowledgment

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