

Released: October 2013
Modified:

Retrieving bathymetry data of the Oceans and its processing for iRIC calculation

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Training Course for iRIC

Sep.19(Thu) Nays2D Flood

GEBCO Top

The screenshot shows the GEBCO website homepage. At the top, there is a navigation bar with links: Home, Contact us, Disclaimer, Privacy and cookies, and a search box. Below this is the GEBCO logo and the text "General Bathymetric Chart of the Oceans". To the right of the logo are logos for the International Hydrographic Organization (IHO), UNESCO, and the Intergovernmental Oceanographic Commission (IOC). Below the logos is a secondary navigation bar with links: About us, Data and products, Training, Regional mapping, General interest, and Links.

On the left side, there is a "Quick links" sidebar. The first item, "Gridded bathymetry data", is highlighted with a red box. A red arrow points from this box to a larger red box on the main content area that contains the text "Click the link to bathymetry data".

The main content area features a large bathymetric map of the world's oceans. Below the map, the heading "General Bathymetric Chart of the Oceans" is followed by a paragraph: "The General Bathymetric Chart of the Oceans (GEBCO) aims to provide the most authoritative, publicly-available bathymetry data sets for the world's oceans." Below this, another paragraph describes the organization: "The General Bathymetric Chart of the Oceans (GEBCO) consists of an international group of experts who work on the development of a range of bathymetric data sets and data products, including gridded bathymetric data sets, the GEBCO Digital Atlas, the GEBCO world map and the GEBCO Gazetteer of Undersea Feature Names. [more]". A third paragraph mentions training: "We are involved in training a new generation of scientists in ocean bathymetry through the Nippon Foundation/GEBCO Training Project. [more]". A final paragraph states: "To get involved in GEBCO please [contact us](#)."

At the bottom of the sidebar, there is a "NEW!" section with three items: "Welcome to the newly-appointed Guiding Committee members", "IBCSO digital chart now available", and "Call for Papers GEBCO Science Day 2013".

At the bottom right of the page, there is a copyright notice: "©2013. Last updated : July 26, 2013."

- <http://www.gebco.net/>

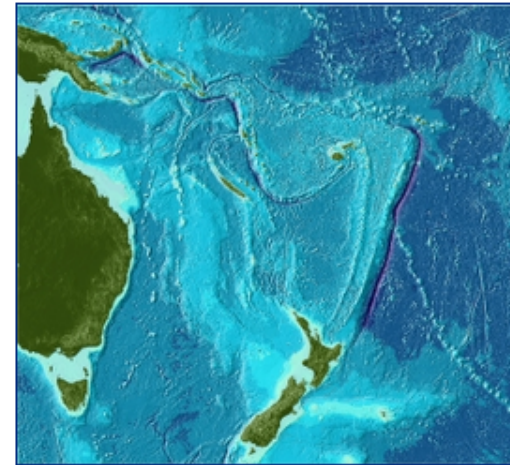
Gridded bathymetry data top page

Gridded bathymetry data

GEBCO provides global bathymetry data sets for the world's oceans.

We make the following gridded bathymetry data sets available:

- **The GEBCO_08 Grid** — a global 30 arc-second grid largely generated by combining quality-controlled ship depth soundings with interpolation between sounding points guided by satellite-derived gravity data. However, in areas where they improve on the existing grid, data sets generated by other methods have been included. Land data are largely based on the Shuttle Radar Topography Mission (SRTM30) gridded digital elevation model. A 'source identifier', SID, grid is also available to download to accompany the GEBCO_08 Grid. This shows which grid cells have been constrained by bathymetry data during the gridding process.




- **The GEBCO One Minute Grid** — a global one arc-minute grid

Released: 2003, updated: 2008 — largely based on the most recent set of bathymetric contours contained within the GEBCO Digital Atlas.

Click the link to download page

On behalf of GEBCO, the GEBCO_08 and GEBCO One Minute Grid are **available to download** from the British Oceanographic Data Centre (BODC). Using this web application, you can select to download the **complete global grid files** or **data for a user-defined area** using an interactive map or by entering the geographic co-ordinates of your area of interest in a dialogue box.

BODC top page



British Oceanographic
Data Centre
NATURAL ENVIRONMENT RESEARCH COUNCIL

Home Contact us Glossary Site map Site styles search BODC

My account Register Log in

About usDataProjectsPartnersProductsHelp and hints

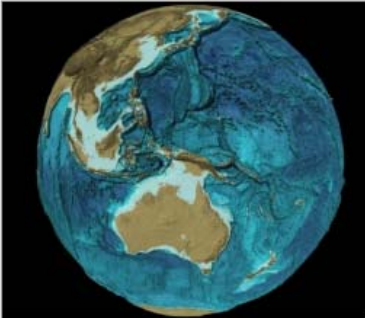
Where to find data
Online delivery>
All data series
Argo floats
CTD and underway data (AMT)
Gridded bathymetry data (GEBCO)
UK Tide Gauge Network
Historical UK tide gauge data
International sea level
Numerical model data
OPeNDAP/DODS server
Historical BPR data
Online request>
Published Data Library>
Information and inventories>
Code and format definitions>
Submitting data to BODC
Portals and links>

General Bathymetric Chart of the Oceans (GEBCO)
Gridded bathymetric data sets
GEBCO's aim is to provide the most authoritative, publicly-available bathymetry for the world's oceans. It operates under the joint auspices of the Intergovernmental Oceanographic Commission (IOC) and the International Hydrographic Organization (IHO).
Two GEBCO gridded bathymetric data sets, maintained and distributed by BODC, are available to download as netCDF files. You may opt to download data for a user-defined area or the complete global file(s).

- The **GEBCO One Minute Grid** — a global one arc-minute grid
Released: 2003, updated: 2008 — largely based on the most recent set of bathymetric contours contained within the GEBCO Digital Atlas.
- The **GEBCO_08 Grid** — a global 30 arc-second grid
Released: September 2010 — generated by combining quality-controlled ship depth soundings with interpolation between sounding points guided by satellite derived gravity data. A 'source identifier', SID, grid is also available to download to accompany the GEBCO_08 Grid. This shows which grid cells have been constrained by bathymetry data during the gridding process.
The GEBCO_08 Grid is currently a development product which will undergo periodic update. Although every effort has been made to reduce the number of errors in the data set, we expect that some grid artifacts will be found. A list of reported bugs may be found on the [errata](#) pages.

To download the data you are required to be a registered BODC web user. If you have already registered, please [log in](#), alternatively please [register](#) to become a new user.

Additional information
Data set documentation and metadata is also available.



Bathymetry data from the GEBCO_08 Grid

For downloading GEBCO data, you need to create an account , register, and log in to the account home page

Registration

My account

User registration

Why register?

By providing us with a few simple details about yourself we can

- Provide you with access to our inventories and data download areas
- Keep you informed of changes to this site and the data accessible through it
- Get a better idea of who our customers are and what they want

If you consider yourself an academic user, please register to quickly validate your academic status.

Fill in the forms and create your account

s to quickly

Email address:

Password:

Confirm password:

Title:

First name:

Last name:

Organisation:

Address:

Your login details

You will use this information to login to areas of the BODC web site. The password may be between 8 and 20 characters in length. Capitalisation also matters for your password!

Your contact details

The 'Personal Details' provided will not be given to any third parties and will only be used to provide you with data and/or information and to generate the online licences for when you request data.

This information will also enable us to characterise the user profile of clients using BODC web services over the internet. This characterisation of the client base will allow us to direct future web-based developments and services to you, our users. It will also provide 'performance indicators' to support future funding of our web development.

Link to bathymetry data

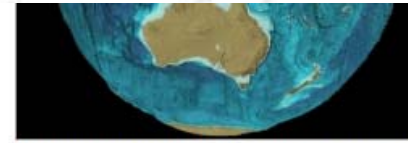
- The **GEBCO One Minute Grid** — a global one arc-minute grid

Released: 2003, updated: 2008 — largely based on the most recent set of bathymetric contours contained within the GEBCO Digital Atlas.

- The **GEBCO_08 Grid** — a global 30 arc-second grid

Released: September 2010 — generated by combining quality-controlled ship depth soundings with interpolation between sounding points guided by satellite derived gravity data. A 'source identifier', SID, grid is also available to download to accompany the GEBCO_08 Grid. This shows which grid cells have been constrained by bathymetry data during the gridding process.

The GEBCO_08 Grid is currently a development product which will undergo periodic update. Although every effort has been made to reduce the number of errors in the data set, we expect that some grid artifacts will be [errata](#) pages.



Bathymetry data from the GEBCO_08 Grid

©

After registering and logging in, link button to download page appears

Users must familiarise themselves with the [terms of use](#) before accessing the GEBCO bathymetry data.

☒ I have read and agree to the terms of use

Access the GEBCO gridded bathymetry data

Additional information

Data set documentation along with information on export formats, grid version numbering and bug alerts for each of GEBCO's gridded data sets is also available

- [GEBCO_08 grid](#) — 30 arc-second resolution
- [GEBCO one minute grid](#) — one arc-minute resolution

Free software is available for viewing and accessing data from the grids in ASCII as well as netCDF. Find out more about the [GEBCO Grid display software](#)

GEBCO gridded bathymetry data sets

General Bathymetric Chart of the Oceans (GEBCO)

Gridded bathymetric data sets

Data are available for download from GEBCO's gridded bathymetric data sets in netCDF. You may opt to select and download data for a user-defined area using the [map or form](#) below or use the default global area to download the complete grid files.

To accompany the GEBCO_08 grid, a 'source identifier' or SID grid is also available; this shows which grid cells are based on bathymetric soundings or depth values from a grid and which cells contain predicted depth values.

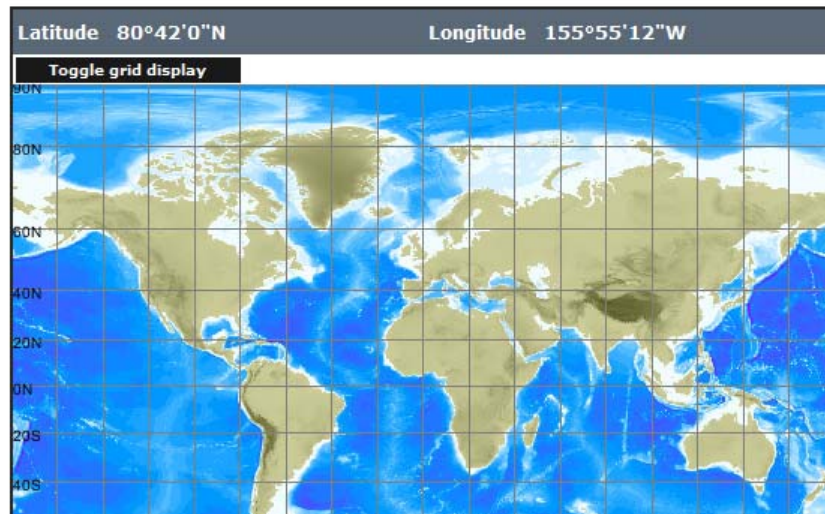
Please note that the bathymetric grids do not contain detailed information in shallow water areas.

Interactive map

Use the interactive map below to define the geographic area of the gridded data sets that you want to download. Alternatively, type the coordinates of the required area in the form below the map.

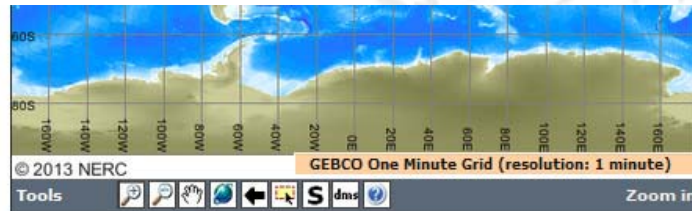
The default display is the GEBCO One Minute Grid. To view the GEBCO_08 Grid (30 arc-second resolution) use the 'Toggle grid display' tab above the map display area.

The GEBCO_08 Grid display includes the option to view the Source Identifier (SID) grid by toggling the 'Toggle SID grid display'. It shows those grid cells for which the data in the GEBCO_08 Grid are based on bathymetric sounding or grid values. It is best viewed at a zoomed in level to appreciate the detail in the data set.



In the download page, you can select your region of interest in the interactive map like shown in this figure, however, several steps are needed for accessing GEBCO data.

Downloading world ocean data



Leave values and characters unchanged

Northernmost latitude

Westernmost longitude Easternmost longitude

Southernmost latitude

Download data

Grid selection

Use the tick boxes to select the dataset you wish to download for the geographic region defined above. Depending on the grid resolution and the size of your area selection, data delivery may take several minutes. For this reason different grid files need to be downloaded separately.

☒ ☐ ☐

GEBCO_08 Grid (30 arc-second interval)

GEBCO_08 SID Grid (30 arc-second interval)

GEBCO One Minute Grid (1 arc-minute interval)

Grid format selection

The data file will be made available as a netCDF formatted data file consisting of a one-dimensional (1D) array of 2-byte signed integer values.

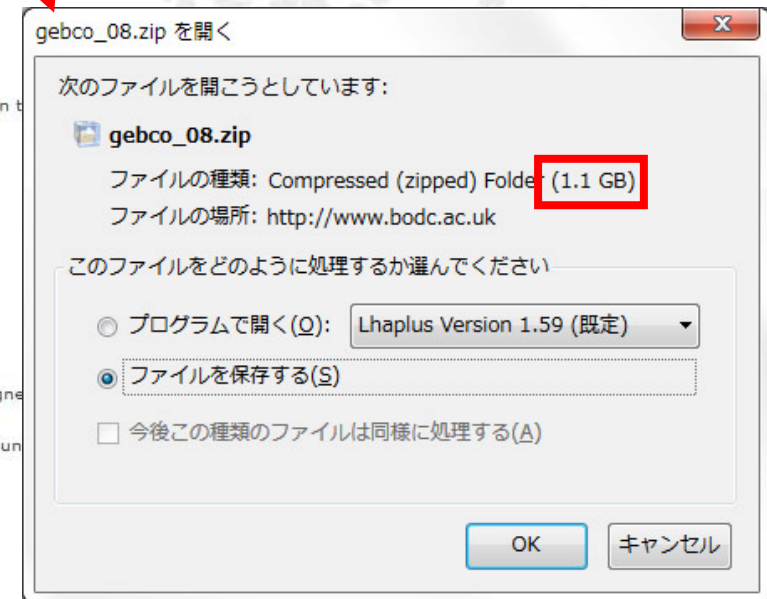
[Free software](#) is available to download to view and access the data in ASCII or netCDF formats. Further information can be found in the data set documentation.

Download

You must download the documentation first which includes the license and grid documentation.

Data delivery may take several minutes depending on the grid resolution and area selection, please be patient.

Firstly, you must download the whole data, namely, GEBCO_08 grid (30 arc-second interval).



Downloading free software

Use the tick boxes to select the dataset you wish to download for the geographic region defined above.

Depending on the grid resolution and the size of your area selection, data delivery may take several minutes. For this reason the different grid files need to be downloaded separately.

- ☒ GEBCO_08 Grid (30 arc-second interval) ?
- ☐ GEBCO_08 SID Grid (30 arc-second interval) ?
- ☐ GEBCO One Minute Grid (1 arc-minute interval) ?

Secondly, for visualization of GEBCO data, a software provided in the same page is needed. Download link is just above the “Download Data” button.

Grid format selection

The data file will be made available as a netCDF formatted data file consisting of a one-dimensional (1D) array of 2-byte signed integer values.

[Free software](#) is available to download to view and access the data in ASCII or netCDF formats. Further information can be found in the data set documentation.

Download

You must download the documentation first which includes the license and grid documentation.

[Download Documentation](#) [Download Data](#)

Data delivery may take several minutes depending on the grid resolution and area selection, please be patient.

Additional information

Data set documentation along with information on export formats, grid version numbering and bug alerts for each of GEBCO's gridded data sets is also available

- [GEBCO_08 grid](#) — 30 arc-second resolution
- [GEBCO one minute grid](#) — one arc-minute resolution



GEBCO Grid display

The GEBCO grid display software allows you to view and access data from GEBCO's gridded bathymetric data sets

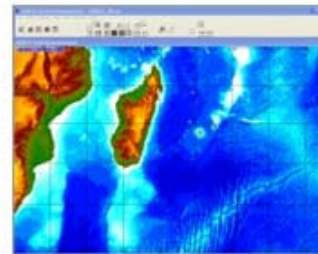
- the GEBCO One Minute Grid — a global one arc-minute grid
- the GEBCO_08 Grid — a global 30 arc-second grid

The software is available to download under licence and can be used with either or both gridded data sets. Please note that the software is designed for use with the complete, global data files. It will not work with subsets of the full global data sets.

It provides the means for displaying the data and accessing the data in netCDF and also in simple ASCII formats, including one suitable for conversion to a raster file which can be used with ESRI ArcGIS products.

The software has been developed by BODC to run on a PC running Microsoft Windows 95 or later. It is controlled by a series of drop-down menus and toolbar buttons. The current version is 2.13 and was released in April 2010.

Find out more about the GEBCO Grid display software and updates included in this release.  (27 KB)



Viewing data from the GEBCO_08 Grid 

Features of the GEBCO Grid display software

- Display GEBCO's gridded bathymetric data sets on your PC screen, colour coded for depth/elevation.
- Export data in simple ASCII formats including a format that can be converted to a raster file, which can be used with ESRI ArcGIS products.
- Export data in netCDF.
- Choice of five map projections for display — Equidistant Cylindrical, Mercator, Miller Cylindrical, Lambert Cylindrical Equal-Area and Polar Stereographic.
- Import your own file(s) of data points to display in the map area.
- Select your geographic area of interest either by chart number, by latitude and longitude limits, or by an on-screen zoom box.
- Zoom into and pan across your selected area.
- Overlay a geographic grid for reference.

Reported bug on 31 July 2012

A bug has been reported in the GEBCO grid display software that affects the export of the GEBCO_08 Grid and GEBCO_08 SID and. In some limited cases when the selected geographic region for export is defined as a fraction of a whole degree, then the exported data value at each grid point has been shifted (in longitude) by one grid cell, i.e. 30 arc-seconds, from its correct value.

We apologise for any inconvenience caused and are working to fix this bug. We will make a revised version of the software available as soon as possible.

In the meantime, we recommend that users of the GEBCO grid display software select geographic regions for export at whole degree intervals rather than as fractions of a degree.

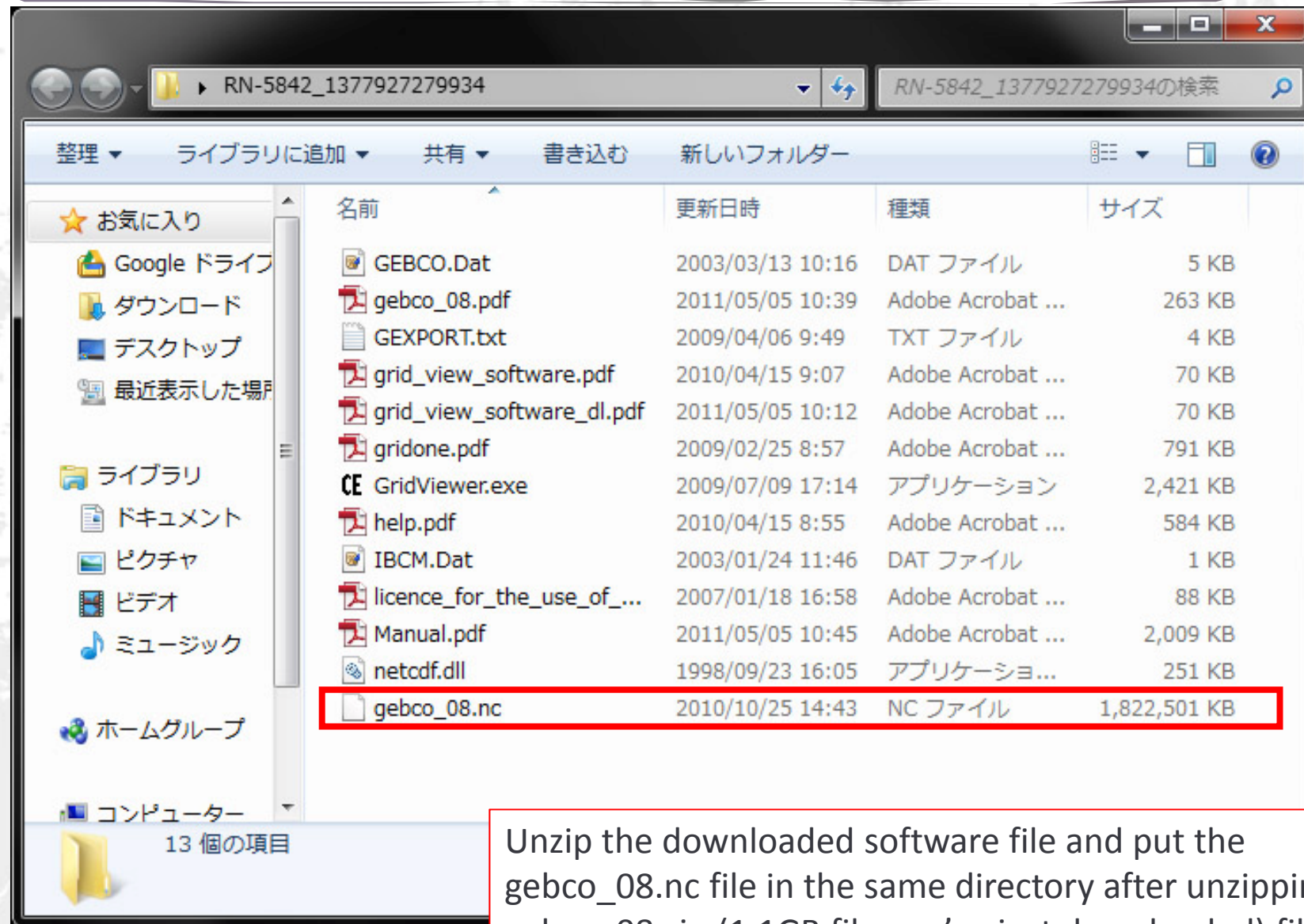
Software download

To download this software you are required to have a BODC web user account. If you have already registered and have an account, please follow the link below to download the software. Alternatively, [register](#) to become a new user.

Download the [GEBCO Grid display software](#) — the download consists of a compressed zip file containing the software, the user guide and help files (3090 KB).

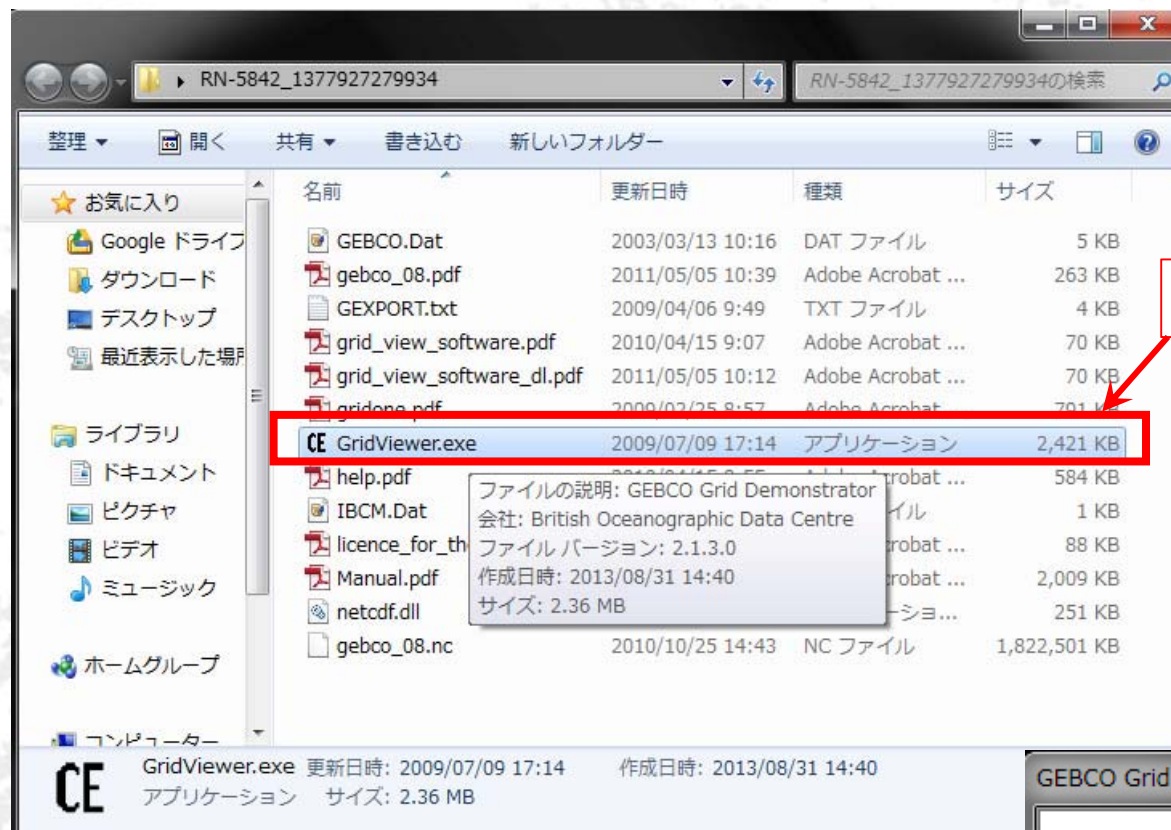
Link to [GEBCO Grid display software](#) is at the bottom of the download page.

Grid Viewer download

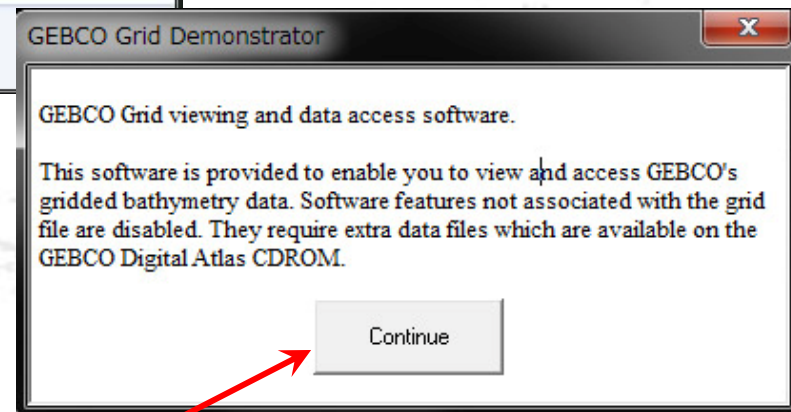


Unzip the downloaded software file and put the gebco_08.nc file in the same directory after unzipping gebco_08.zip (1.1GB file you've just downloaded) file.

Execute the viewer



Execute the GridViewer.exe



Click "Continue"

Region settings

GEBCO Grid Demonstrator : Chart Definition Dialog

Data Source Area Palette Contours Chart View Supplementary Data Graticule SCAR Ice

Chart Name

Select from the Map

☐ Use Chart Outlines

☒ Use Zoom

Projection

☒ Equidistant Cylindrical

☐ Mercator

☐ Polar Central Meridian

☐ Lambert Cylindrical Equal-Area

☐ Miller

Exact Area

Northern most latitude N

Western most longitude E

Eastern most longitude E

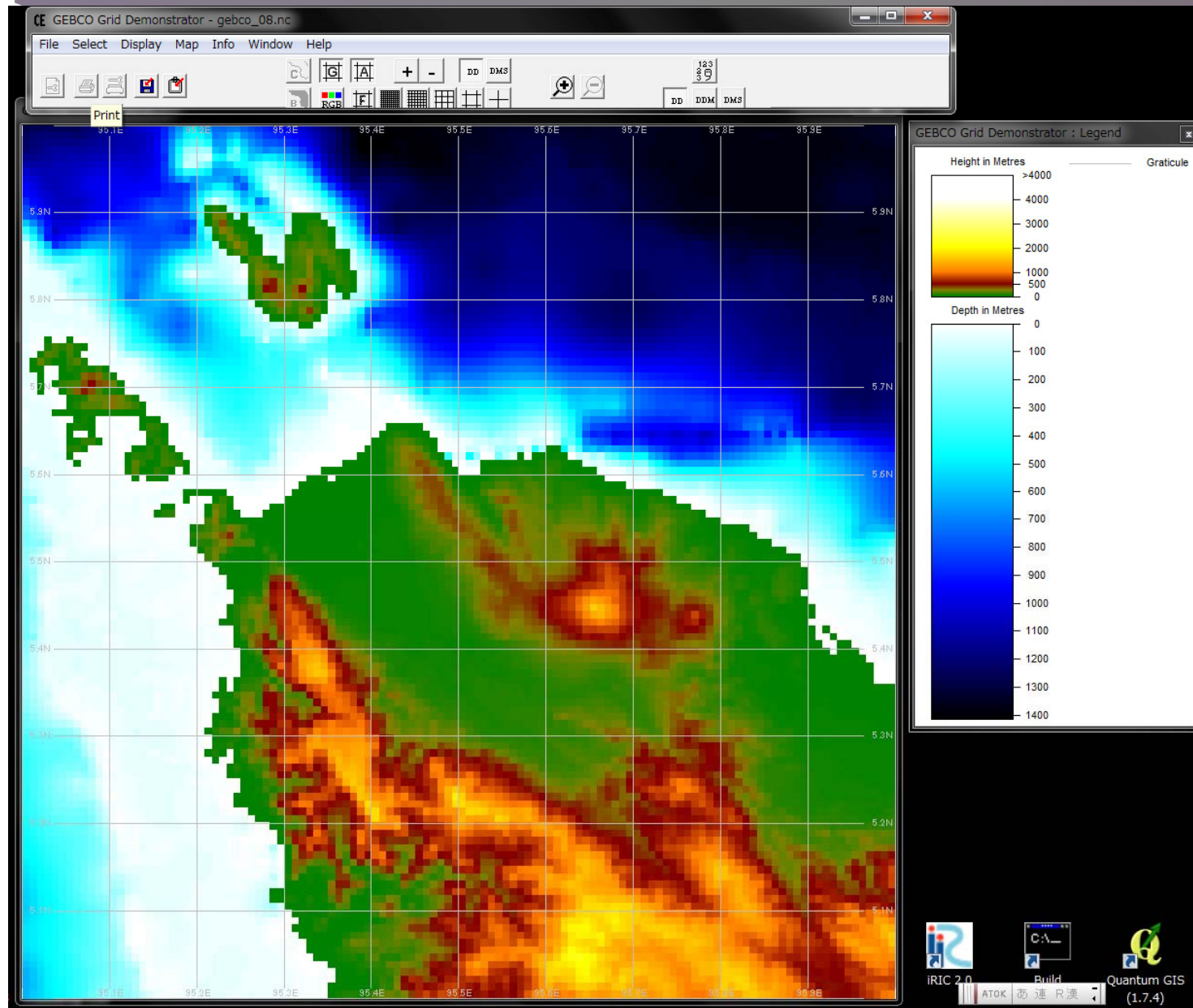
Southern most latitude N

Display Format :

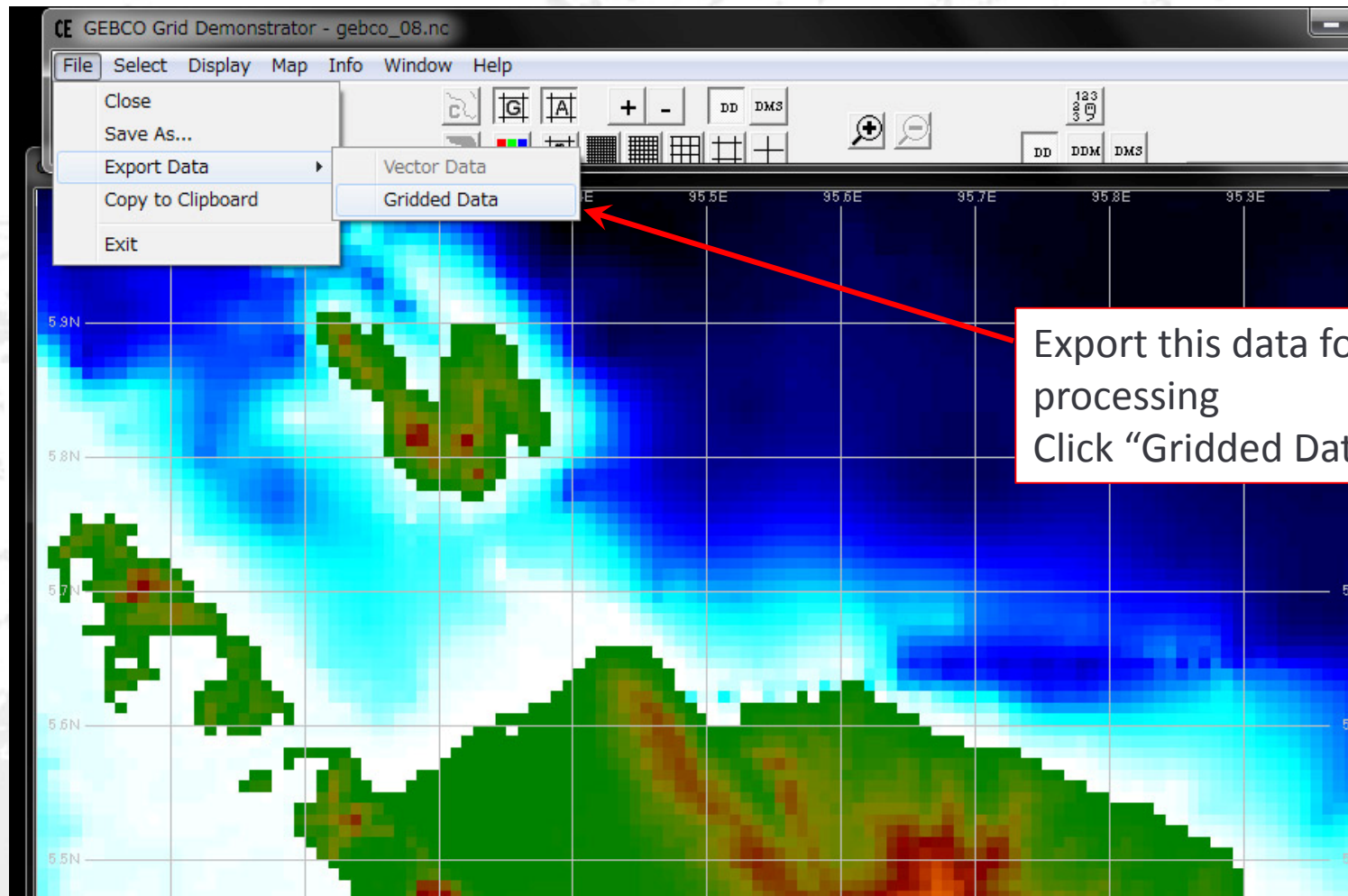
☒ Ok ☐ Cancel

Input the region of interest

Aceh BODC data

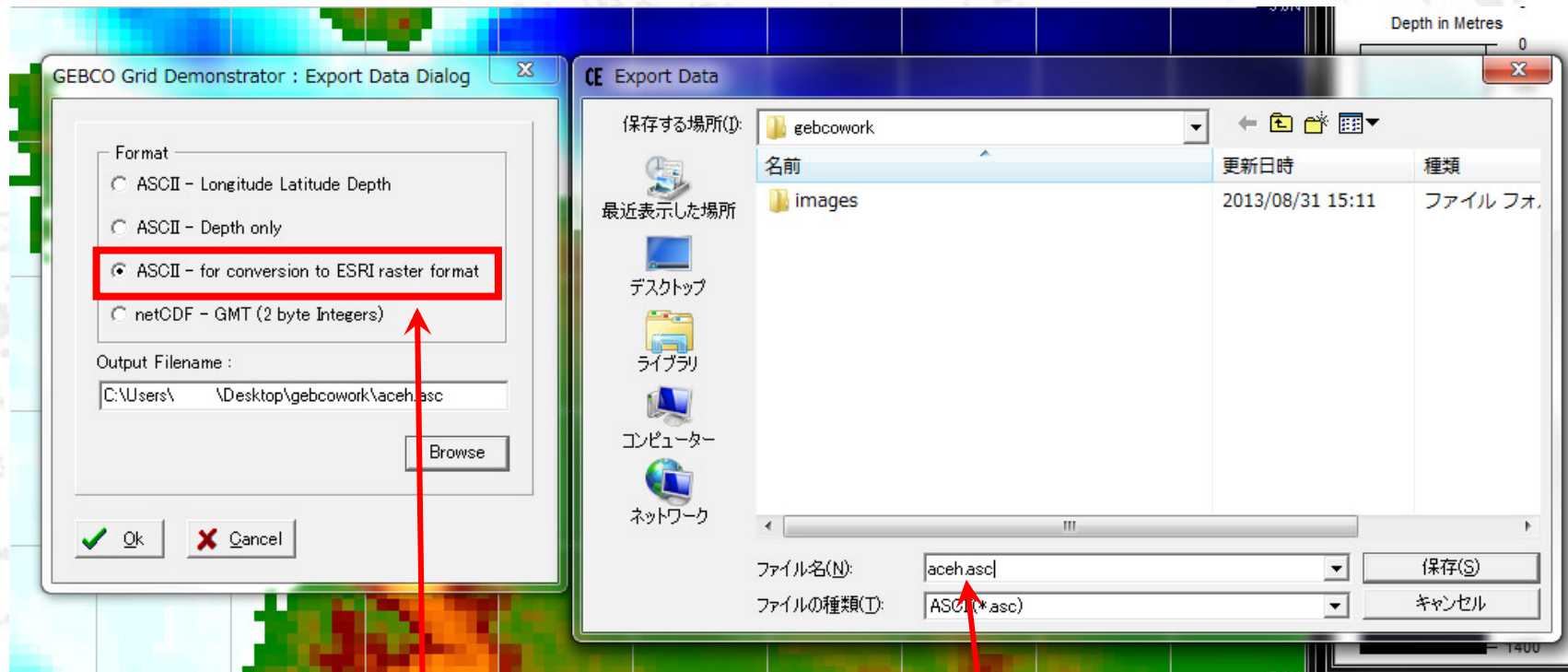


Data export



Export this data for QGIS processing
Click "Gridded Data"

Export options



Select "ESRI raster format"

Input name as "aceh.asc"

tpo file preparation for ELIMO solver (optional)

The image shows two windows from the TeraPad application. The top window, titled 'aceh.asc - TeraPad', contains a text file with header information for a gridded data set. The bottom window, titled 'aceh.tpo - TeraPad', shows the same data after the header has been removed, with the first line containing the count of data points (144000). A red box highlights the first line of the bottom window. A red arrow points from the text box at the bottom to the first line of the bottom window. Another red arrow points from the top window to the 'Pre-processing Window' in the ELIMO solver, which displays a map of the region.

aceh.asc - TeraPad

```
1 Gridded data provided through the GEBCO Grid Demonstrator software
2 Data source GEBCO_08 Grid version 20100927↓
3 Minimum longitude : 95 degrees (+ve East)↓
4 Maximum longitude : 96 degrees (+ve East)↓
5 Minimum latitude : 5 degrees (+ve North)↓
6 Maximum latitude : 6 degrees (+ve North)↓
7 Data spacing : 30 seconds↓
8 Rows*Columns : 120x120↓
9 Units : Depths in Metres (terrestrial values are positive)↓
10 Points start at the North-West corner working eastwards across to t
11 est↓
12 The data set is pixel registered, i.e. the data points are centred
13 d lines) and represent the values within each grid cell.↓
14 Longitude Latitude Depth↓
15 95.0042 5.9958 -1275↓
16 95.0125 5.9958 -1242↓
17 95.0208 5.9958 -1238↓
18 95.0292 5.9958 -1236↓
19 95.0375 5.9958 -1239↓
20 95.0458 5.9958 -1239↓
```

aceh.tpo - TeraPad

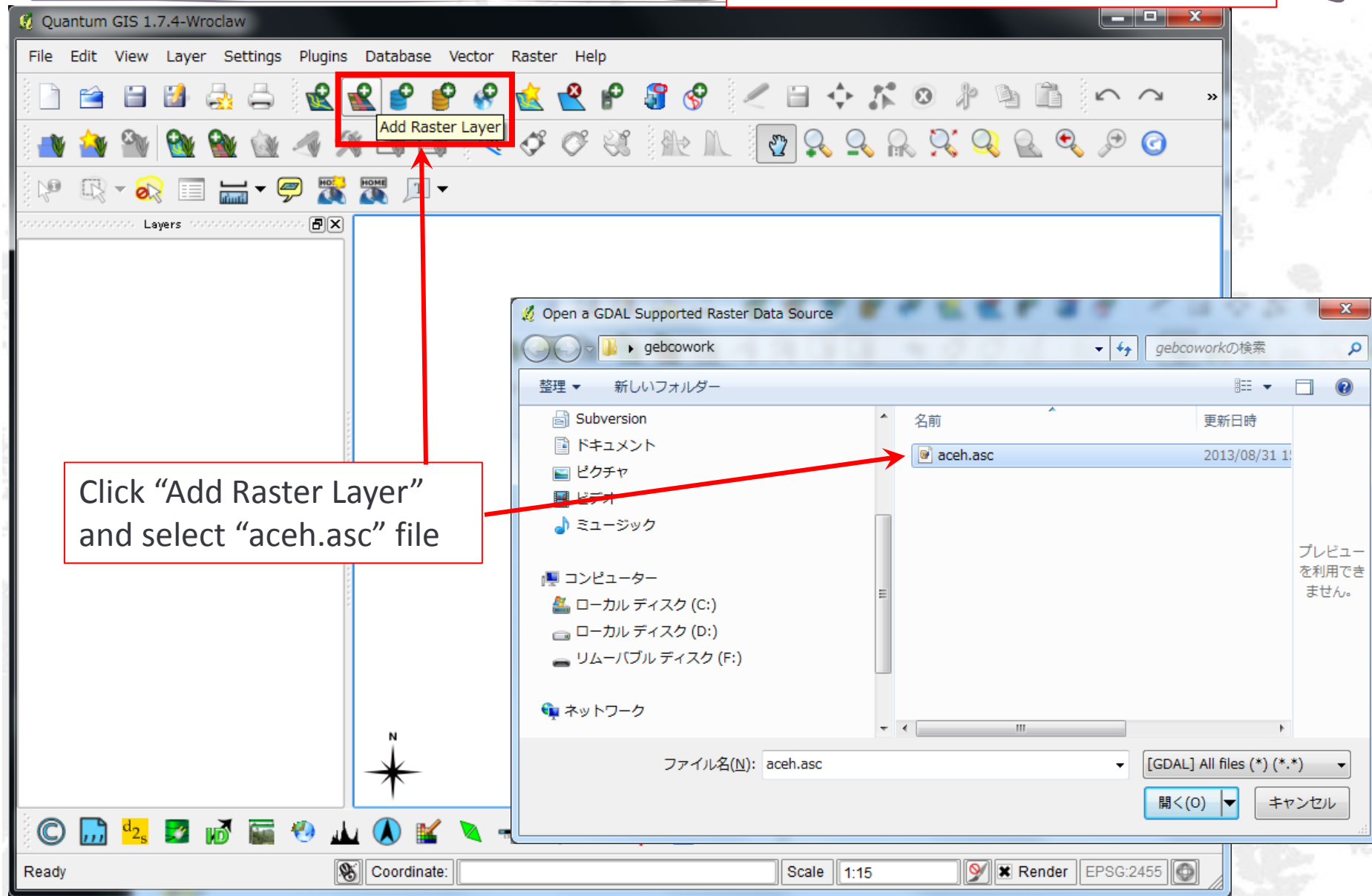
```
1 144000↓
2 95.0042 5.9958 -1275↓
3 95.0125 5.9958 -1242↓
4 95.0208 5.9958 -1238↓
5 95.0292 5.9958 -1236↓
6 95.0375 5.9958 -1239↓
7 95.0458 5.9958 -1239↓
```

Imported tpo file
in ELIMO solver

The ELIMO solver needs longitude and latitude data in tpo file. Open aceh.asc in your text editor (or Excel), delete the header information in the file (14 lines from the top), count the number of data points, add it in the first line and save as tpo file with .tpo extension like "aceh.tpo"

Open raster layer

If you are going to use other solvers, following procedures are needed.



Define CRS

Coordinate Reference System Selector

Define this layer's coordinate reference system:

This layer appears to have no projection specification. By default, this layer will now have its projection set to that of the project, but you may override this by selecting a different projection below.

Coordinate Reference System	Authority ID	ID
WGS 66	EPSG:4760	3603
WGS 72	EPSG:4322	3450
WGS 72BE	EPSG:4324	3451
WGS 84	EPSG:4326	3452
WGS72	IGNF:WGS72G	10050
Wake Island 1952	EPSG:4733	3576
Wallis - Uvea 1978 (MOP78)	IGNF:WALL78...	10049

+proj=longlat +ellps=WGS84 +datum=WGS84 +no_defs +towgs84=0,0,0

Search

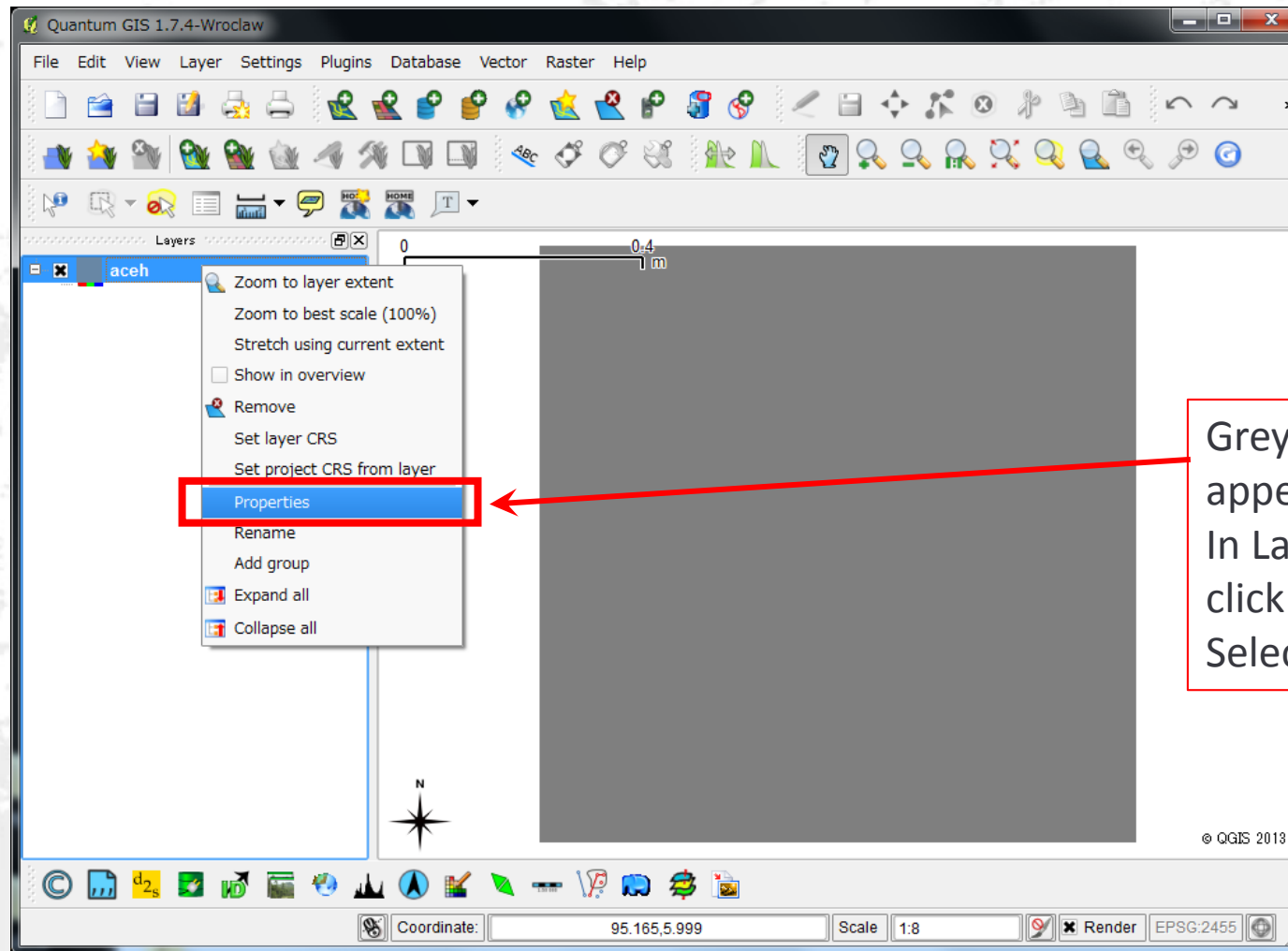
Authority: All Search for: Name ☐ Hide deprecated CRSs

Recently used coordinate references systems

Coordinate Reference System	Authority ID	ID
WGS 84 / UTM zone 47N	EPSG:32647	3131
DGN95 / Indonesia TM-3 zone 46.2	EPSG:23830	1991
WGS 84	EPSG:4326	3452
WGS 84 / UTM zone 46N	EPSG:32646	3130

Define the CRS
(Coordinate Reference
System) as "WGS 84"
(EPSG:4326 or ID:3452)

Raster layer added



Grey square region will appear
In Layers window right click the aceh layer
Select "Properties"

Set color map

Quantum GIS 1.7.4-Wroclaw

File Edit View Layer Settings Plugins Database Vector Raster Help

Layers

aceh

0 0.4 m

Layer Properties - aceh

Style Transparency Colormap General Metadata

Render as

☒ Single band gray ☐ Three band color ☐ Invert color map

Single band properties

Gray band Band 1

Color map Pseudocolor

☐ Custom min / max values Min: -2.14748e+09 Max: 2.14748e+09

☒ Use standard deviation 0.00

Note: Minimum Maximum values are estimates, user defined, or calculated from the current extent

Load min / max values from band

☐ Estimate (faster) ☐ Actual (slower) ☐ Current extent Load

Contrast enhancement

Current No Stretch

Default No Stretch

Restore Default Style Save As Default Load Style ... Save Style ...

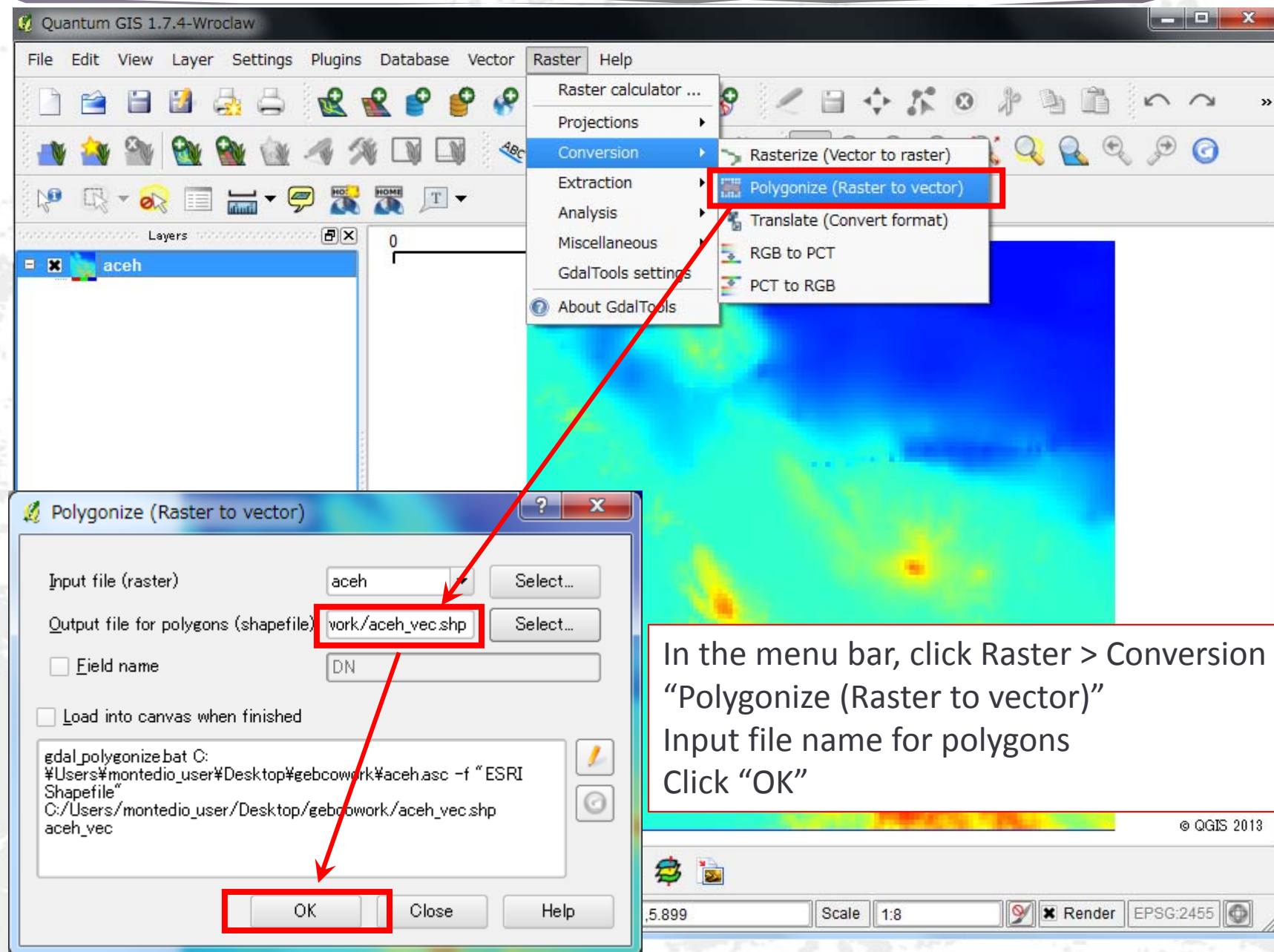
OK Cancel Apply Help

94.730,5.673 Scale 1:8 Render EPSG:2455

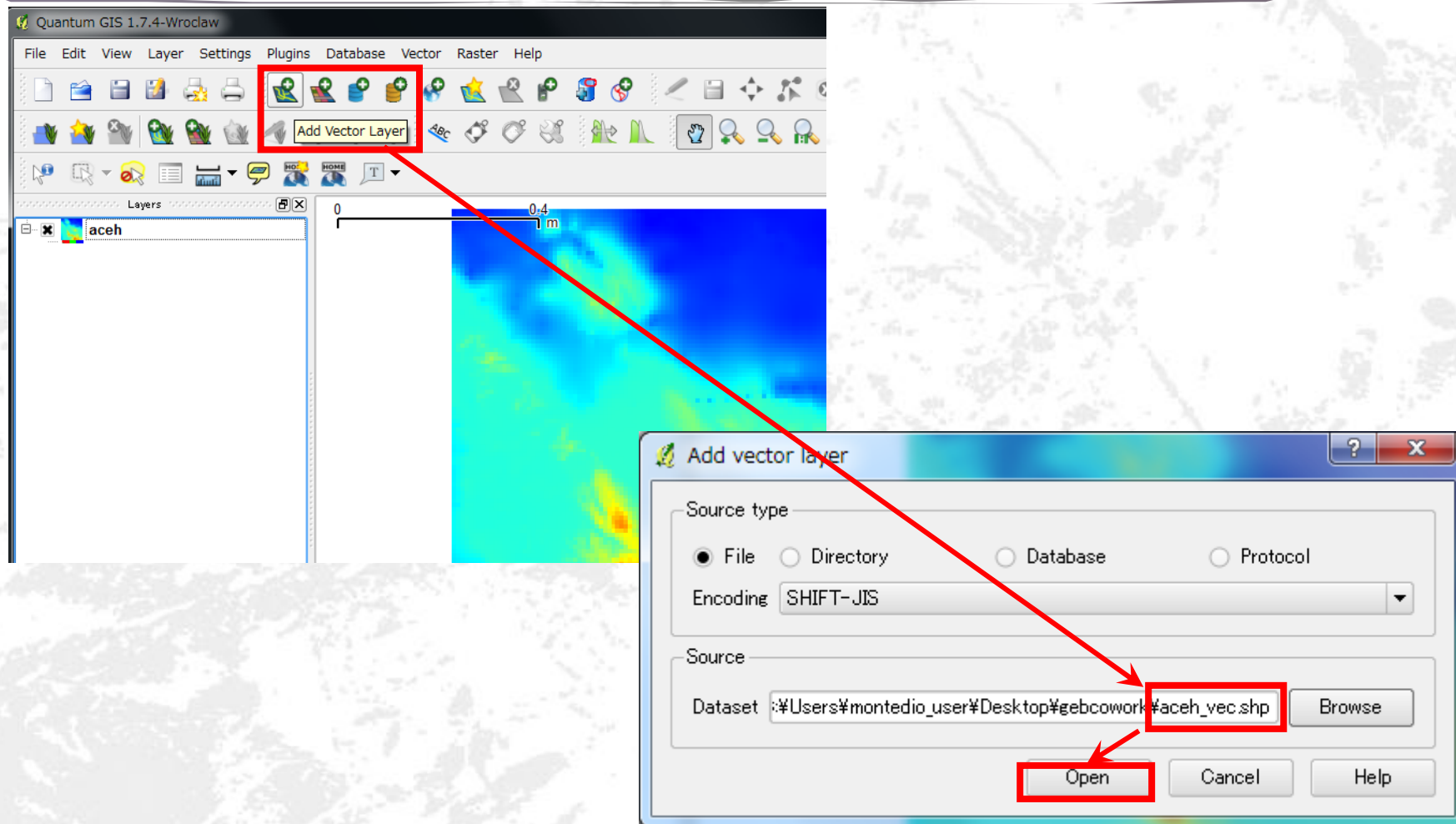
© QGIS 2013

Set Color map of the Elevation

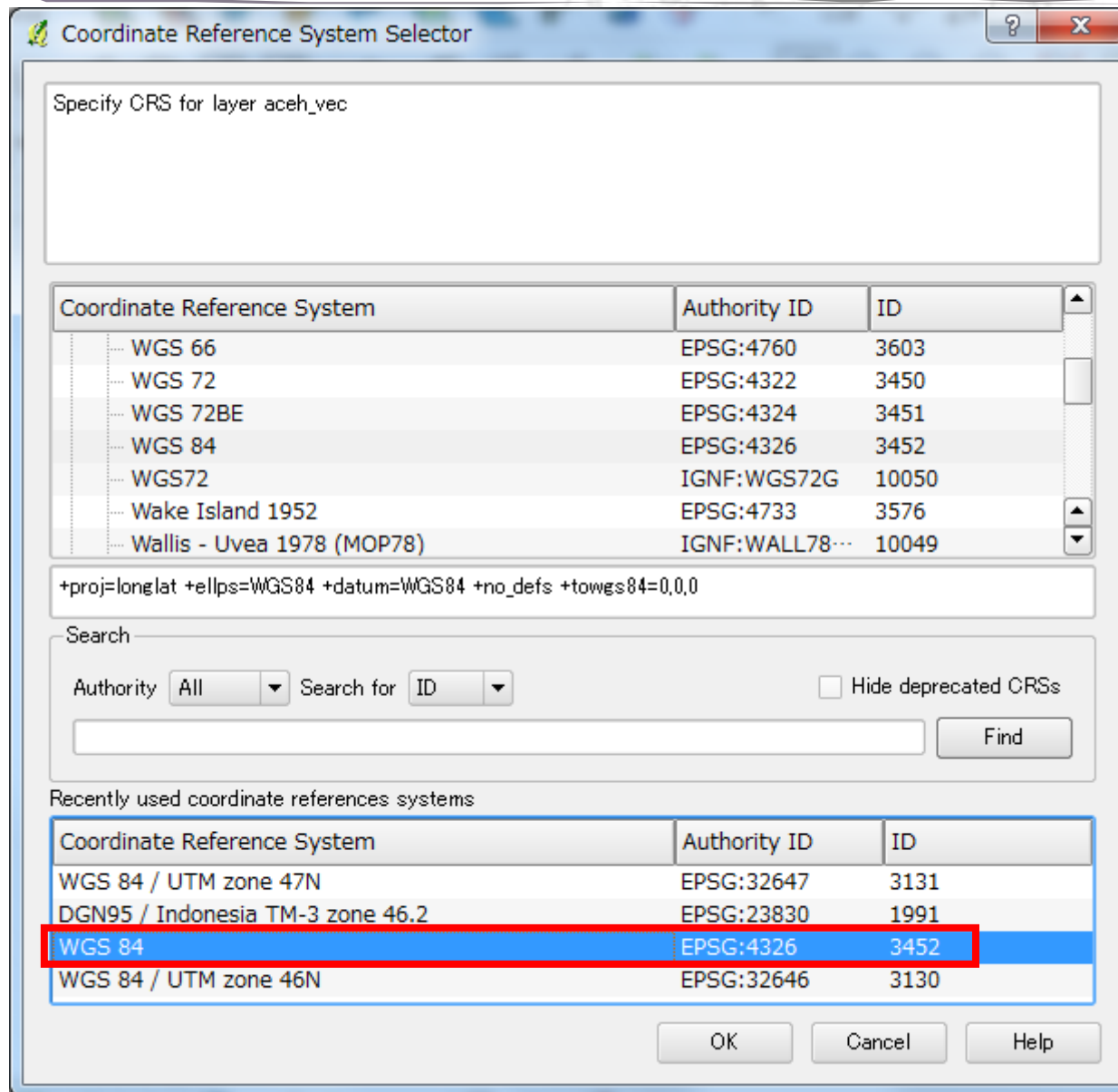
Convert raster to vector



Add vector layer



Specify CRS



Coordinate Reference System Selector

Specify CRS for layer aceh_vec

Coordinate Reference System	Authority ID	ID
WGS 66	EPSG:4760	3603
WGS 72	EPSG:4322	3450
WGS 72BE	EPSG:4324	3451
WGS 84	EPSG:4326	3452
WGS72	IGNF:WGS72G	10050
Wake Island 1952	EPSG:4733	3576
Wallis - Uvea 1978 (MOP78)	IGNF:WALL78...	10049

+proj=longlat +ellps=WGS84 +datum=WGS84 +no_defs +towgs84=0,0,0

Search

Authority All Search for ID ☐ Hide deprecated CRSs

Find

Recently used coordinate references systems

Coordinate Reference System	Authority ID	ID
WGS 84 / UTM zone 47N	EPSG:32647	3131
DGN95 / Indonesia TM-3 zone 46.2	EPSG:23830	1991
WGS 84	EPSG:4326	3452
WGS 84 / UTM zone 46N	EPSG:32646	3130

OK Cancel Help

Again, define the CRS
(Coordinate Reference
System) as "WGS 84"
(EPSG:4326 or ID:3452)

Save vector layer as UTM

Input the name for output

Select "Selected CRS"

Browse CRS and here, you must choose "WGS 84 / UTM zone 46N"

Quantum GIS 1.7.4-Wroclaw

File Edit View Layer Settings Plugins Database Vector Raster Help

Layers

aceh_vec

aceh

Zoom to layer extent

Show in overview

Remove

Set layer CRS

Set project CRS from layer

Open attribute table

Toggle editing

Save as...

Save selection as...

Add group

Expand all

Collapse all

Format: ESRI Shapefile

Save as: ser/Desktop/gebcowor/aceh_vec_utm.shp

Encoding: SHIFT-JIS

Selected CRS

CRS: WGS 84 / UTM zone 46N

Browse

OGR creation options

Recently used coordinate references systems

Coordinate Reference System	Authority ID	ID
WGS 84 / UTM zone 47N	EPSG:32647	3131
DGN95 / Indonesia TM-3 zone 46.2	EPSG:23830	1991
WGS 84	EPSG:4326	3452
WGS 84 / UTM zone 46N	EPSG:32646	3130

Layer

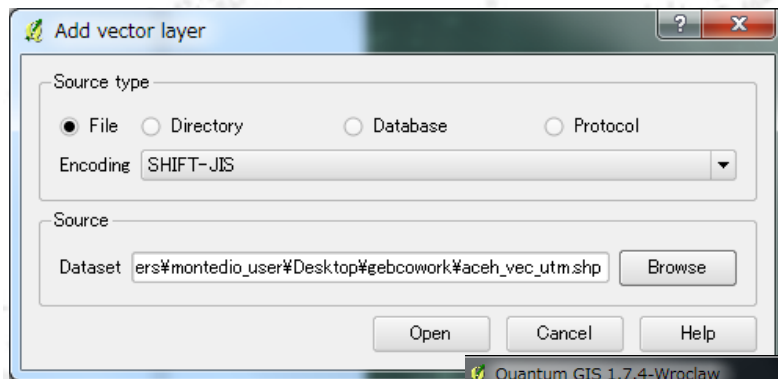
Skip attribute creation

OK Cancel Help

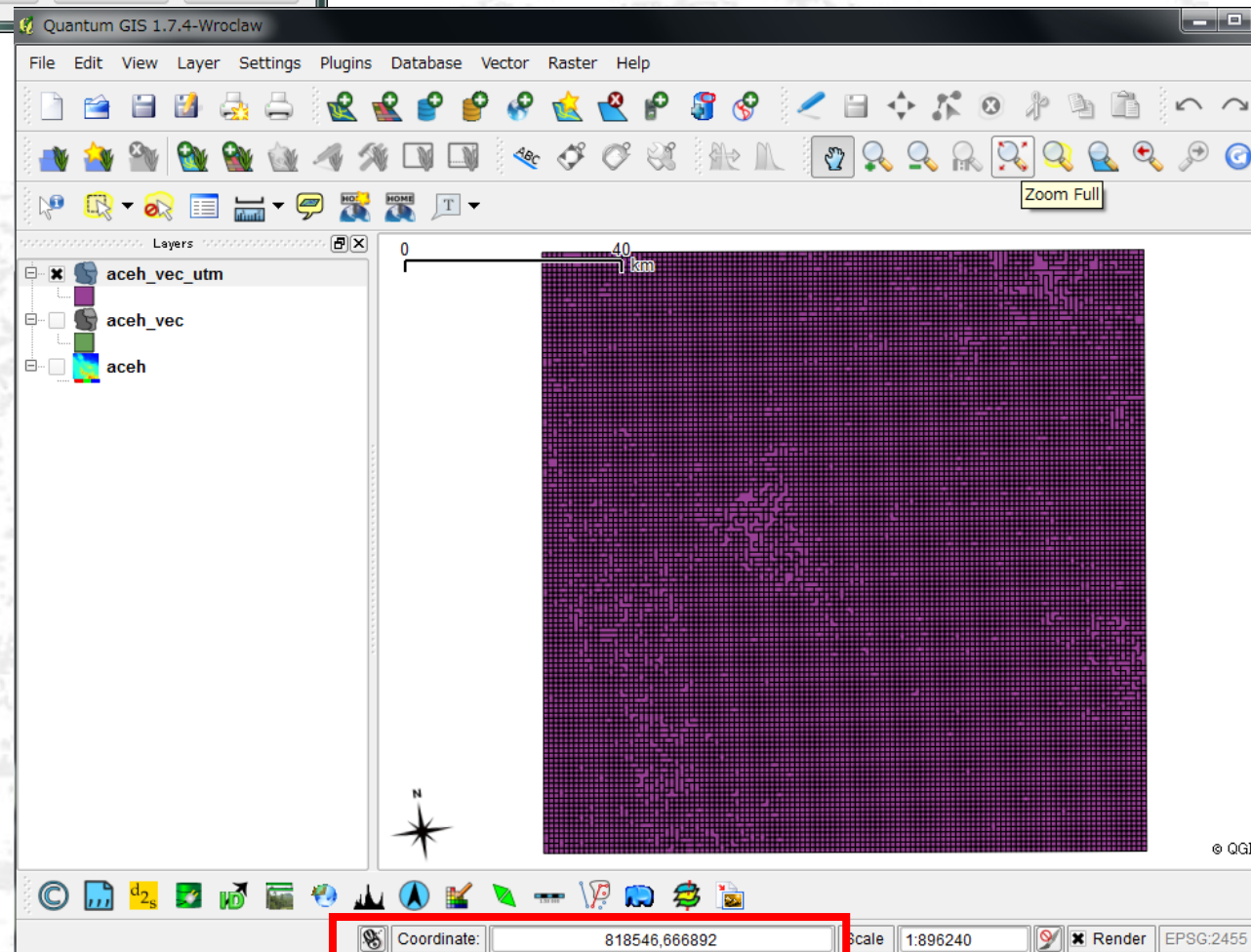
New vector layer is added

Right click the layer name and click "Save as..."

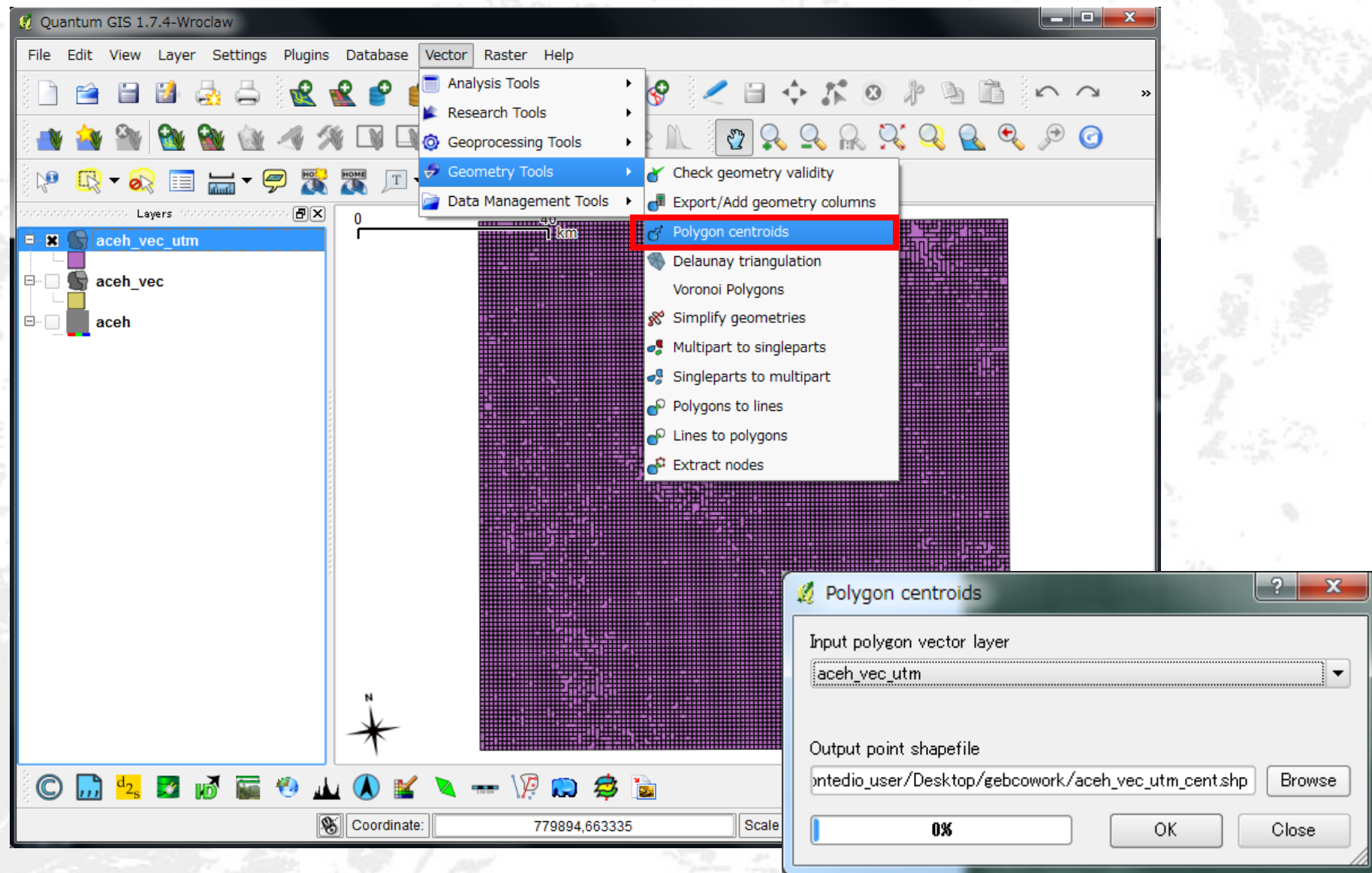
Add vector layer



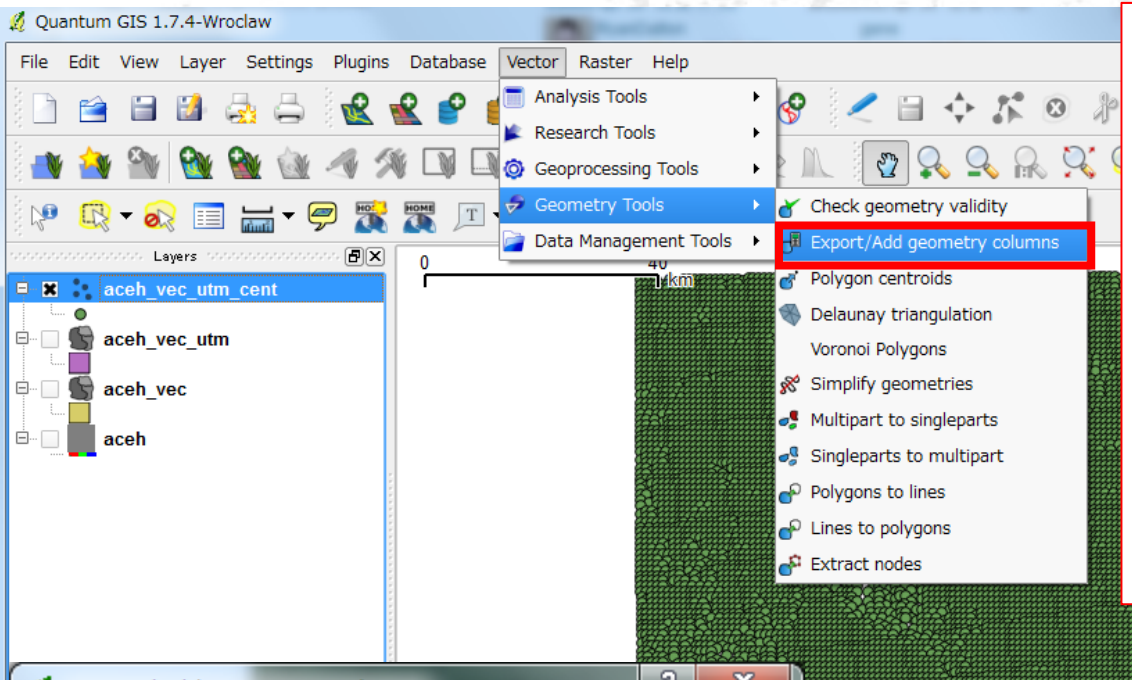
Add vector layer
in rectangular coordinates system



Convert polygon to point data



Add geometry columns



In the menu bar, click Vector > Geometry Tools > “Export/Add geometry columns”

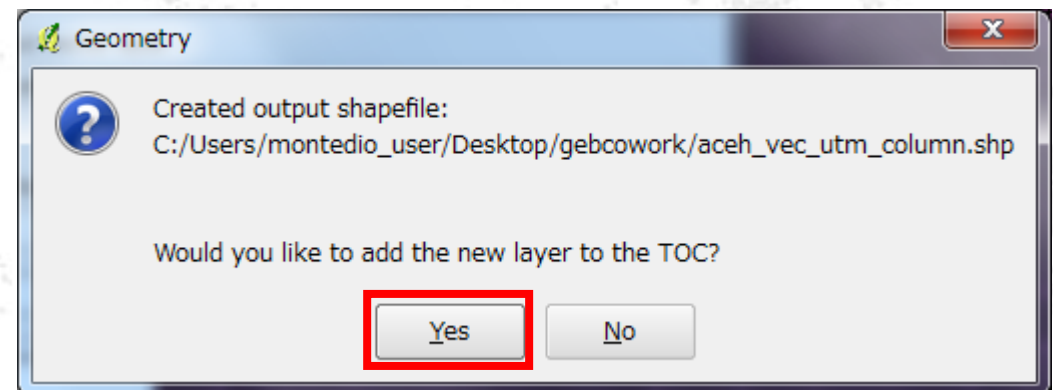
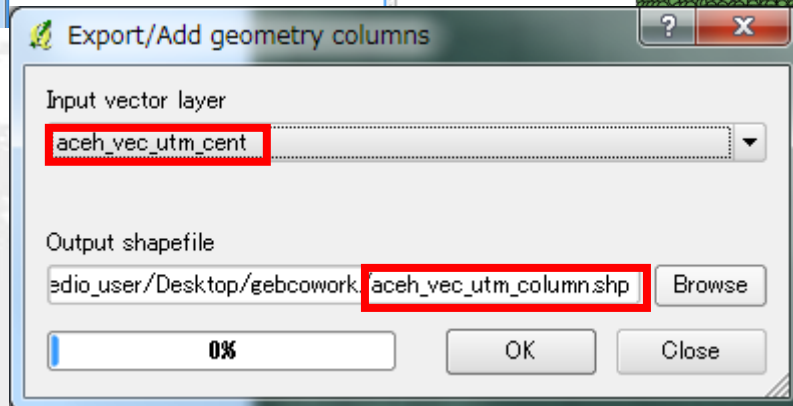
Select Input vector layer

Input “Output shapefile name”

Click “OK”

NOTE: It may take several minutes

Click OK and add the new layer



Geometry column table

Quantum GIS 1.7.4-Wroclaw

File Edit View Layer Settings Plugins Database Vector Raster

Layers

- aceh_vec_utm_column
- aceh_vec_utm
- aceh_vec
- aceh

Context menu for 'aceh_vec_utm_column':

- Zoom to layer extent
- ☐ Show in overview
- Remove
- Set layer CRS
- Set project CRS from layer
- Open attribute table**
- Toggle editing
- Save as...
- Save selection as...
- Query...
- ☐ Show feature count
- Properties
- Rename
- Add group
- Expand all
- Collapse all

Attribute Table:

	DN	XCOORD	YCOORD
0	-1275	721846.231112	663149.39195
1	-1242	722769.041613	663152.77214
2	-1238	723691.856757	663156.166385
3	-1236	724614.676566	663159.574684
4	-1239	726921.761467	663168.183303
5	-1222	729228.846238	663176.827018
6	-1197	730151.694433	663180.319655
7	-1172	731074.547426	663183.826349
8	-1150	731997.405238	663187.347101
9	-1131	732920.267887	663190.881911
10	-1101	733843.135392	663194.43078
11	-1075	734766.007772	663197.993708
12	-1051	735688.885048	663201.570695
13	-1027	736611.767238	663205.161742
14	-1000	737534.654361	663208.766849
15	-961	738457.546437	663212.386016
16	-872	739382.259003	662755.100291
17	-765	740303.345525	663219.666534
18	-649	741226.252575	663223.327885

Look for in

☐ Show selected only ☐ Search selected only ☒ Case sensitive

Copy attribute table

Attribute table - aceh_vec_utm_column :: 13484 / 13484 feature(s) selected

	DN	XCOORD	YCOORD
0	-1275	721846.231112	663149.39195
1	-1242	722769.041613	663152.77214
2	-1238	723691.856757	663156.166385
3	-1236	724614.676566	663159.574684
4	-1239	726921.761467	663168.183303
5	-1222	729228.846238	663176.827018
6	-1197	730151.694433	663180.319655
7	-1172	731074.547426	663183.826349
8	-1150	731997.405238	663187.347101
9	-1131	732920.267887	663190.881911
10	-1101	733843.135392	663194.43078
11	-1075	734766.007772	663197.993708
12	-1051	735688.885048	663201.570895
13	-1027	736611.767238	663205.161742
14	-1000	737534.654361	663208.766849
15	-961	738457.546437	663212.386016
16	-872	739382.259003	662755.100291
17	-765	740303.345525	663219.666534
18	-649	741226.252575	663223.327885

Look for in Search

☐ Show selected only ☐ Copy selected rows to clipboard (Ctrl+C) ☐ Advanced search ?

Select all lines and copy them to clipboard

Convert to X[m],Y[m],Z[m] data

Open Excel and paste the clipboard data

Delete the 1st column and change row positions like below

	A	B	C
1	XCOORD	YCOORD	DN
2	721846.2	663149.4	-1275
3	722769	663152.8	-1242
4	723691.9	663156.2	-1238
5	724614.7	663159.6	-1236
6	726921.8	663168.2	-1239
7	729228.8	663176.8	-1222
8	730151.7	663180.3	-1197
9	731074.5	663183.8	-1172
10	731997.4	663187.3	-1150
11	732920.3	663190.9	-1131
12	733843.1	663194.4	-1101
13	734766	663198	-1075
14	735688.9	663201.6	-1051
15	736611.8	663205.2	-1027
16	737534.7	663208.8	-1000
17	738457.5	663212.4	-961
18	739382.3	662755.1	-872
19	740303.3	663219.7	-765
20	741226.3	663223.3	-649
21	742149.2	663227	-546
22	743072.1	663230.7	-490

tpo file export

Book1 - Microsoft Excel

ファイル ホーム 挿入 ページレイアウト 数式 データ 校閲 表示

MS Pゴシック 11 標準

貼り付け クリップボード

Input the number of lines in the 1st line

	A	B	C	D	E	F	G	H	I	J
1	13484									
2	850600.5	3689.121	-1275							
3	850609.1	3689.14	-1242							
4	850617.8	3689.158	-1238							
5	850626.5	3689.177	-1236							
6	3402594	9226.267	-1239							
7	850670.6	3689.273	-1222							
8	850679.5	3689.292	-1197							
9	850688.5	3689.312	-1172							
10	850697.5	3689.331	-1150							
11	850706.5	3689.351	-1131							
12	850715.6	3689.37	-1101							
13	850724.7	3689.39	-1075							
14	850733.8	3689.41	-1051							
15	850743	3689.43	-1027							
16	850752.2	3689.45	-1000							
17	850761.5	3689.47	-961							
18	1701554	5533.18	-872							
19	850780.1	3689.51	-765							
20	850789.5	3689.531	-649							
21	850798.9	3689.551	-546							
22	850808.3	3689.571	-490							

名前を付けて保存

デスクトップ

整理 新しいフォルダー

Microsoft Excel

Save as "aceh.tpo" and select Text (tab delimited) (*.txt)

ファイル名(N): "aceh.tpo"

ファイルの種類(I): テキスト (タブ区切り) (*.txt)

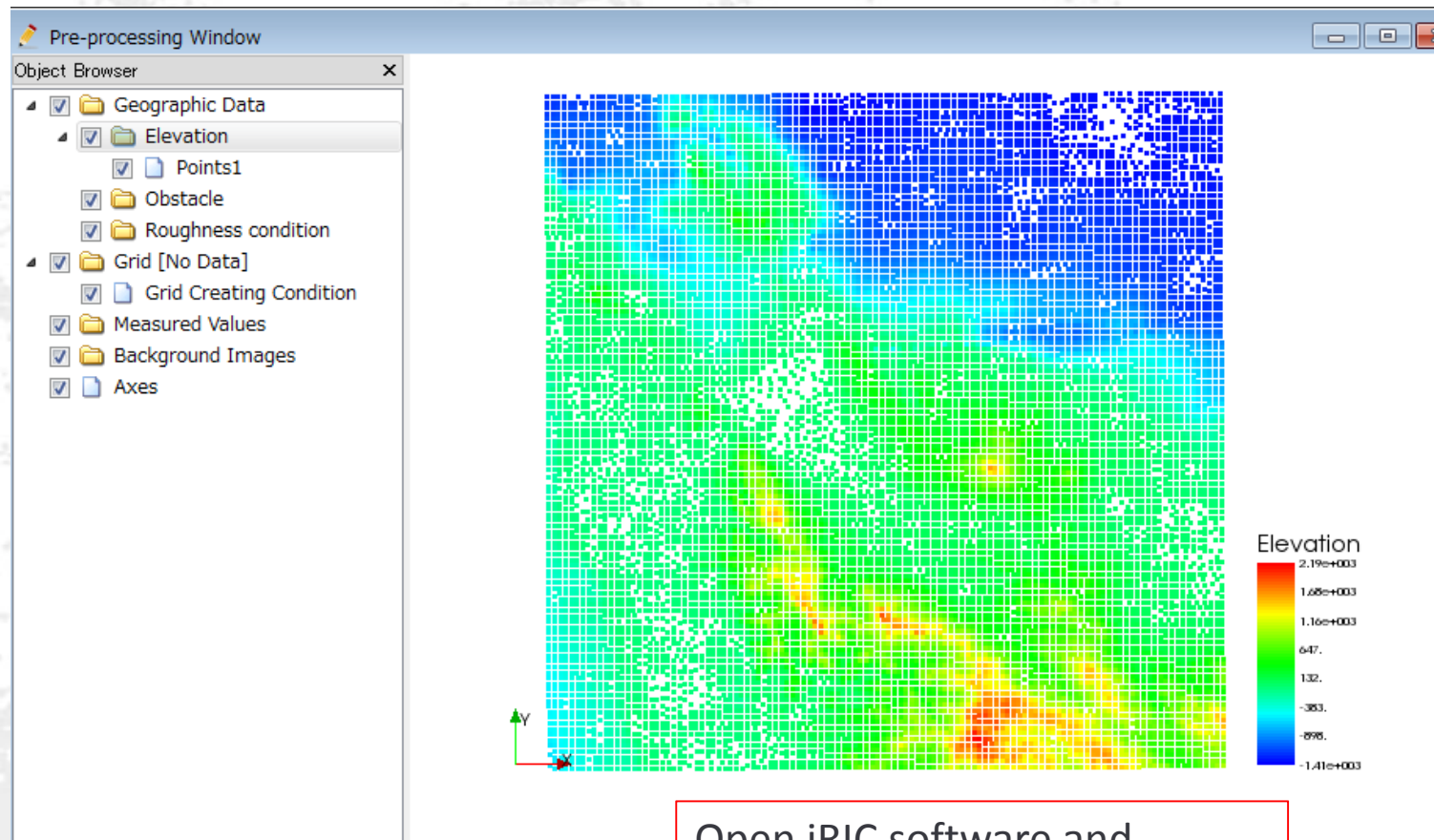
作成者: montedio_user タグ: タグの追加 タイトル: タイトルの追加

フォルダーの非表示 ツール(L) 保存(S)

Sheet1 Sheet2 Sheet3

コマンド 100%

Tpo file import to iRIC preprocessor



Open iRIC software and
import "aceh.tpo" file



End.