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Procedure to install software for Introduction to Marxan course

You will need to complete these steps when preparing a computer for the course. Note that instructions for different systems and programs such as 32 vs. 64 bit and ArcGIS 9.x vs. 10.x are **bold and underlined**. The tool symbol 🔧 indicates technical details.

Step 1: Copy file IntroMarxan folder to your C:\ drive

❖ Obtain the IntroMarxan folder and copy it your C:\ drive. You may receive this folder as a compressed file (i.e. IntroMarxan.zip). If you do, copy file in your C:\ drive and extract it in the same directory.

Step 2: Install Map Window Active X control

❖ Ensure you are logged in as an administrative user
❖ Run "C:\IntroMarxan\Install\MapWindow\MapWinGIS45OCXOnly.exe"
❖ Use all default settings to complete the install
❖ It may also be necessary to issue the following command in a startup script to register the Map Window active X component: regsvr32 "C:\Program Files\Common Files\MapWindow\MapWinGIS.ocx"
❖ If during the installation you get an Error message similar to "Unable to register OCX MapWinGIS.ocx", please select the "Ignore" option

🔧 If you are using **Windows7 or Vista**, you may need to temporarily disable UAC (User Access Control) in to register the Map Window ActiveX control. This will be necessary if step 2 above does not register the map control on your system. This may be apparent as very slow performance of the map control, or as a runtime error when attempting to use the map control. To temporarily disable UAC follow these steps:

❖ Ensure you log in as an administrative user,
❖ Disable UAC with the registry editor:
  1. Run the registry editor (RegEdit) by typing regedit at command prompt or at Run in Start menu.
  2. Locate following registry key: HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\Policies\System
  3. Locate the following REG_DWORD value: EnableLUA
  4. Set the value of EnableLUA to 0.
  5. Reboot the computer
❖ Register the active X control;
  On a 64 bit OS: regsvr32.exe "c:\Program Files (x86)\Common Files\MapWindow\MapWinGIS.ocx"
  On a 32 bit OS: regsvr32.exe "c:\Program Files\Common Files\MapWindow\MapWinGIS.ocx"

- Enable UAC by setting EnableLUA to 1 with the registry editor,
- Reboot the computer.

Step 3: Install R
- Ensure you are logged in as an administrative user
- Run "C:\IntroMarxan\Install\R\R-3.0.1.exe"
- Use all default settings to complete the install

Step 4: Install R packages
- Ensure you are logged in as an administrative user
- Launch the R application from the start menu
- Within the R application, from the "Packages" menu, click "Install package(s) ..."
- Select the CRAN mirror closer to you (e.g., if in Victoria, Canda, select "Canada (BC)"), and click OK
- Select the following packages: "labdsv", "rgl"", "tkrgl" and "vegan" and click "OK"
- You can close R now.

Step 5: Install Zonae Cogito
- Ensure you are logged in as an administrative user
- Run "C:\IntroMarxan\Install\ZonaeCogito174\ZonaeCogito174\SETUP.EXE"
- Use all default settings to complete the install
- If the install wizard does not open – copy and paste the contents of the ZonaeCogito174 folder directly into the computer's temp folder (copy all the files and paste them in, don't copy and transfer the folder)

    The latest version of ZonaeCogito174 includes **32 and 64 bit versions** of native compiled executables for Windows, while the earlier release (ZonaeCogito154) is only compatible with **32 bit operating systems.** Note that **Zone Cogito is not compatible with Mac OS.**

If you have ArcMap installed in your computer, please follow the next steps to install additional tools. Otherwise, go to Step 9 for instructions to install QGIS and QMarxan plugin.

Step 6a: Install JNCC extension if using ArcMap 9.x
- Ensure you are logged in as an administrative user
- Run "C:\IntroMarxan\Install\extensions\JNCC\SETUP.EXE"
- Ensure you select "Everyone" when it asks who to install the extensions for
- Use default settings for all other options to complete the install

OR

Step 6b: Install ABP Marine Environmental Research Ltd extension if using ArcMap10.x

- ❖ Ensure you are logged in as an administrative user
- ❖ Run "C:\IntroMarxan\Install\extensions\ABP_MER\ MarxanBoundaryFile.esriAddIn " and click on "Install Add-In"
- ❖ Launch the ArcMap application from the start menu
- ❖ In ArcMap, select the menu "Customize", then "Customize mode"
- ❖ Click on the "Add from file..." button
- ❖ Browse to and select the file: C:\IntroMarxan\Install\extensions\ABP_MER\MarxanBoundaryFile.esriAddIn
- ❖ In the "Categories" box, scroll down to and select "ABPMerTools"
- ❖ In the "Commands" box, click and hold down "Marxan boundary file"

- ❖ Drag and drop this ![M] icon to an existing ArcMap task bar
- ❖ Click the "Close" button on the "Customize" window

Step 7a: Install ET GeoWizards extension if using ArcMap 9.x

- ❖ Ensure you are logged in as an administrative user
- ❖ If you have a previous version of ET GeoWizards installed, uninstall it first
- ❖ Browse to and select the file: C:\IntroMarxan\Install\extensions\ET GeoWizards\ArcGIS9 \setup.exe and follow the install guide
- ❖ Launch the ArcMap application from the start menu
- ❖ In ArcMap, select the menu "Tools", "Customize", then click on the "Commands" tab
- ❖ In the "Categories" box, scroll down to and select "ET GeoWizards"
  - ⇒ If you cannot find it, then click on the "Add from file..." button, browse to and select the file: C:\IntroMarxan\Install\extensions\ET GeoWizards\ETGeoWizards951_9x.dll
- ❖ In the "Commands" box, click on "ET GeoWizards"

- ❖ Drag and drop this ![ET] icon onto an existing ArcMap task bar
- ❖ Click the "Close" button on the "Customize" window

OR

Step 7b: Install ET GeoWizards extension if using ArcMap 10.x

- ❖ Ensure you are logged in as an administrative user
- ❖ If you have a previous version of ET GeoWizards installed, uninstall it first
- ❖ Browse to and select the file: C:\IntroMarxan\Install\extensions\ET GeoWizards\ArcGIS10 \setup.exe and follow the install guide (be sure to select "Everyone" when prompted)
- ❖ In ArcMap, select the menu "Customize", then "Customize mode"
- ❖ In the "Categories" box, scroll down to and select "ET GeoWizards "

❖ In the "Commands" box, click "ET GeoWizards "

❖ Drag and drop this ![ETGW] icon onto an existing ArcMap task bar
❖ Click the "Close" button on the "Customize" window

Step 8: Install Jenness Repeating Shapes extension
❖ Ensure you are logged in as an administrative user
❖ Browse to and select the file:
   C:\IntroMarxan\Install\extensions\ Jenness\
❖ **Follow the install guide "Repeating_Shapes_ArcGIS.pdf"**
❖ To view the tool in ArcMap, select the menu "Customize", then "Customize mode"
❖ Click on the commands tab and click on the "Add from file..." button
❖ Browse to and select the file:
   C:\IntroMarxan\Install\extensions\Jenness\repeating_shapes\repeat_shapes.dll
❖ In the "Categories" box, scroll down to and select "Jenness Enterprises "
❖ In the "Commands" box, click "Repeating Shapes"
❖ Drag and drop this ![icon] icon onto an existing ArcMap task bar
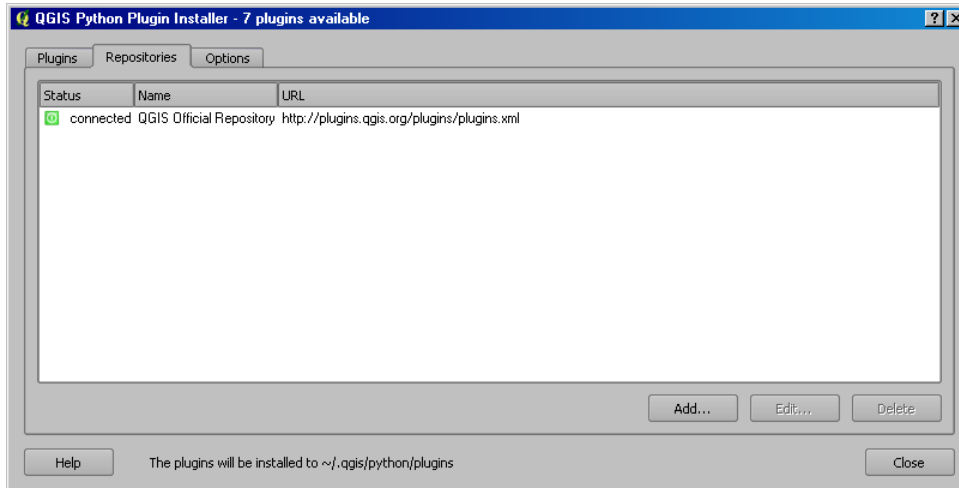❖ Click the "Close" button on the "Customize" window

Step 9: Install QGIS and QMarxan Plug-in
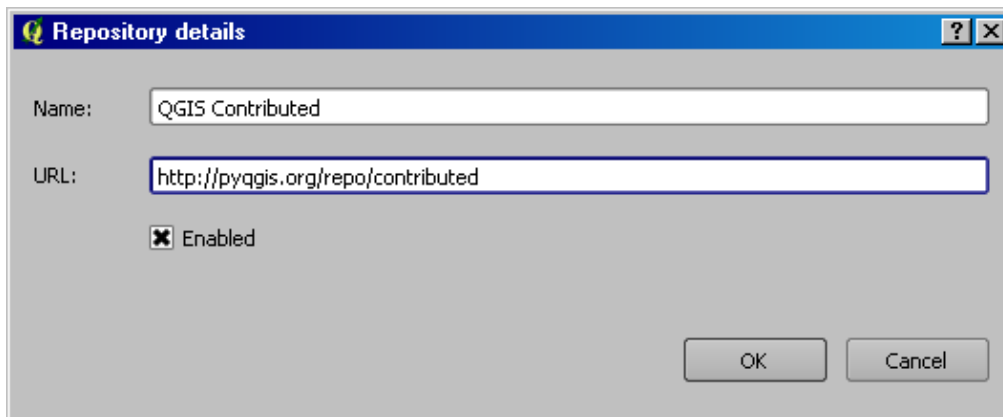Installation of QGIS is very simple. Standard installer packages are available for MS Windows and Mac OS X.
❖ Ensure you are logged in as an administrative user
❖ Browse to and select the file:
   C:\IntroMarxan\Install\QGIS_QMarxan\QGIS-OSGeo4W-1.8.0-1-Setup.exe
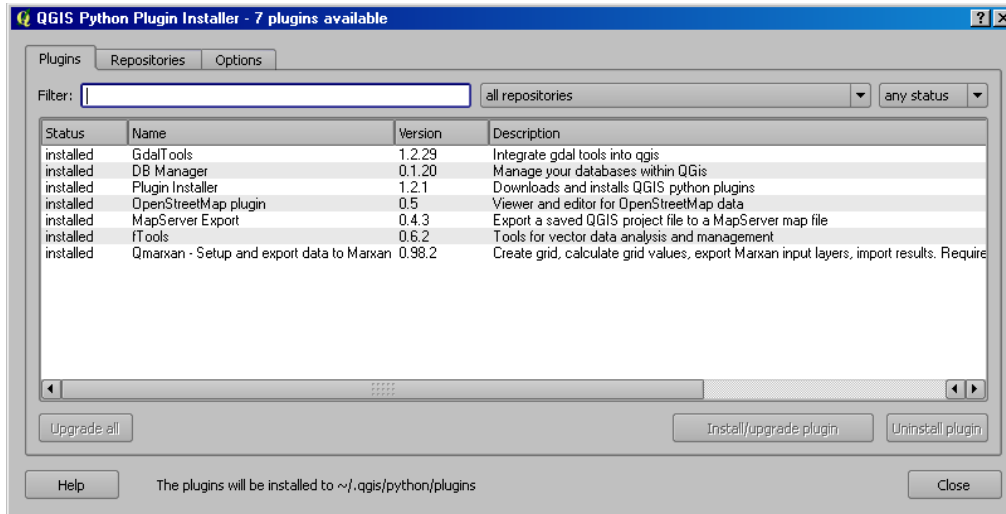❖ Use all default settings to complete the install

To enable the QMarxan plug-in:
❖ In QGIS, click the "Plugins" menu, and click "Fetch Python Plugins...".
❖ On the form that displays, click the "Repositories" tab.
❖ If the repository is already added, you should see this URL address "http://pyqgis.org/repo/contributed", and your form should look like the window below. If you cannot see the repository, then you will have to add it.

❖ To add the repository for QMarxan, click the "Add..." button. On the form that displays, set these parameters:
- Set "Name" to "QGIS Contributed",
- Set "URL" to " http://pyqgis.org/repo/contributed".
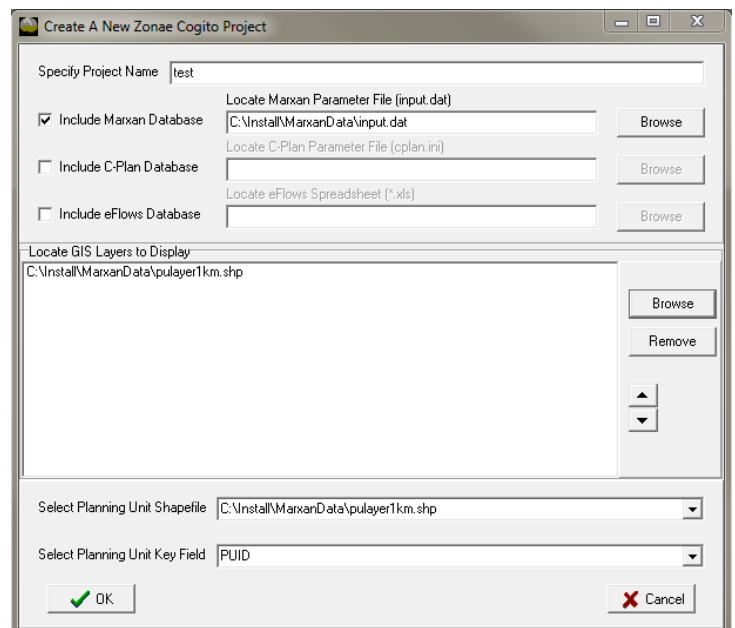Your form should then look like this:

❖ Click "Ok", then click the "Plugins" tab. Your form should then look like this:

❖ Click "Install/upgrade plugin". Qmarxan will now be installed and ready to use.

Step 10: Finalising the Install

❖ Reboot the computer so all the application installed are ready for use
❖ Ensure you log in as an administrative user
❖ Run Zonae Cogito with the administrative login
❖ To test whether Zonae Cogito is functioning correctly, create a new project (name it something like "test")
❖ Check the "Include Marxan Database" box and browse to and select the file: C:\IntroMarxan\Install\MarxanData\input.dat
❖ Under "Locate GIS Layers to Display" browse to and select the file: C:\IntroMarxan\ Install\MarxanData\pulayer1km.shp
❖ Ensure that "PUID" appears under the "Selected Planning Unit Key Field" heading
❖ The window should look like the image to the right.
❖ Click "OK"
❖ Two different windows within Zonae Cogito should appear, one being a map, if the installation was successful (it is possible that you need to click "Run" on the right side of the ZC screen to see the map in one of the windows. Also you should see a spinning cube which indicates the Zonae Cogito and R are communicating).

⇒ It is important to start Zonae Cogito at least once with administrative login, otherwise MapWindow ActiveX will fail to initialise and Zonae Cogito will not function.

Use the correct version of Marxan for your system!

Marxan version 2.43 was released in May 2011. This release comes with several executables for use on different operating systems. You should use the 64 bit version of Marxan if you are using a **64 bit Windows operating system** and the 32 bit version of Marxan if you are using a **32 bit Windows operating system**. Use the table below to help find the appropriate version.

Executable file	Operating system
Marxan.exe	Marxan version 2.43 32 bit Windows
Marxan_x64.exe	Marxan version 2.43 64 bit Windows
Marxan_v243_Mac32	Marxan version 2.43 32 bit MacOSX
Marxan_v243_Mac64	Marxan version 2.43 64 bit MacOSX
Marxan_v243_Linux32	Marxan version 2.43 32 bit Linux
Marxan_v243_Linux64	Marxan version 2.43 64 bit Linux

If you are installing and **running Marxan in a Mac**, you need to open the Mac Terminal, change the directory containing the input data and Marxan program and type "./MarOpt_243_Mac64"

End

Note: If you have any issues with installed any of the software provided, please do not hesitate to contact Norma Serra at nserra@pacmara.org