

Marxan Release Notes 2nd May 2011

This release includes 32 and 64 bit versions of native compiled executables for Windows, Linux and MacOSX;

Marxan Matrix Files

Marxan versions 2 and above are not compatible with old style Marxan matrix files. You must convert your Planning Unit versus Conservation Feature file into a relational format using the matrix converter provided. Marxan versions 2 and above are not compatible with tabular format Conservation Feature file.

Usage of convert_mtx.exe

Marxan versions 2 and above are sensitive to the order of planning unit identifiers in the Marxan planning unit by species sparse (or relational) matrix. They can only use a sparse matrix, and are not compatible with a tabular matrix. The command line program `convert_mtx.exe` converts existing Marxan matrix files into a format compatible with Marxan Optimised.

The command line program performs 2 different types of conversion on Marxan matrix files. To bring up the command line, click the Start button in windows then click Run. Type CMD. Type your directory "d:". Type `cd directory\directory`, etc.... Now navigate to the directory containing your input files, and copy the `convert_mtx.exe` file to this directory.

To convert a Marxan sparse (or relational) matrix file from one sorted by speciesid to one sorted by puid, use the following command;

```
convert_mtx.exe 2 puvspr2.dat matrix.dat
```

This will convert a sparse matrix sorted by speciesid (`puvspr2.dat`) to one sorted by puid (`matrix.dat`). To convert a Marxan tabular matrix file to a sparse matrix file sorted by puid, use the following command;

```
convert_mtx.exe 1 puvspr2.dat relational.dat
```

This will convert a tabular matrix file (`puvspr2.dat`) to a sparse matrix file sorted by puid (`relational.dat`).

Using Marxan with Windows

Marxan.exe

Marxan version 2.43 32 bit Windows

Marxan_x64.exe	Marxan version 2.43 64 bit Windows
MarZone.exe	Marxan with Zones version 2.01 32 bit Windows
MarZone_x64.exe	Marxan with Zones version 2.01 64 bit Windows

The 64 bit native compiled executable of Marxan allows for increased data segment size greater than 2GB. It is designed for use with monolithic datasets and provides a large speedup and increase in data capacity for monolithic datasets. You should use the 64 bit version of Marxan if you are using an x64 Windows operating system such as Windows XP Professional x64, Windows Server 2003, Windows Server 2008, Windows Vista 64 bit edition and Windows 7 64 bit. These executables also ensure continued compatibility of Marxan with new generations of 64 bit Windows operating systems.

You should use the 32 bit version of Marxan if you are using a 32 bit Windows operating system such as Windows XP.

To use Marxan with Windows;

- Copy the relevant executables to a directory containing your Marxan input parameter file (input.dat),
- Run the relevant executable to perform Marxan analysis, in the usual way.

A sample Marxan dataset for Windows operating systems is provided with this distribution; "MarxanData". A sample Marxan with Zones dataset for Windows operating systems is provided with this distribution; "MarZoneData".

Using Marxan with MacOSX and Linux

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
MarZone_v201_Mac32	Marxan with Zones version 2.01 32 bit MacOSX
MarZone_v201_Mac64	Marxan with Zones version 2.01 64 bit MacOSX
MarZone_v201_Linux32	Marxan with Zones version 2.01 32 bit Linux
MarZone_v201_Linux64	Marxan with Zones version 2.01 64 bit Linux

The MacOSX and Linux versions of Marxan have been tested for robustness and compatibility with other versions of Marxan, however the amount of testing performed is less than that performed for Windows versions of Marxan. If you experience problems with these versions of Marxan, please send you input files to Matt Watts (m.watts@uq.edu.au) for validation.

For these operating systems you will need to;

- Copy the relevant executables to a directory containing your Marxan input parameter file (input.dat),

- Open a terminal window in MacOSX or Linux (consult your OS documentation for instructions on doing this),
- Use the cd command to change to the directory containing your executable and input.dat files,
- Set the execute bit for the MacOSX or Linux executables before you run them, like this;


```
chmod a+x Marxan_v243_Linux64
```
- This will switch on the execute bit for all users with the Linux 64 bit version of Marxan Optimised version 2.43.
- Run the relevant executable to perform Marxan analysis, like this;


```
./Marxan_v243_Linux64
```
- This will run the executable for the Linux 64 bit version of Marxan Optimised version 2.43

Preparing Marxan input datasets for MacOSX and Linux

MacOSX and Linux are both Unix style operating systems and use Unix style end-of-line characters in ascii files such as the Marxan input files. The Unix end-of-line character is a single line-feed character, commonly called LF with an ASCII code of 10. By contrast Windows has uses two characters to indicate end-of-line; a carriage-return (CR, ASCII 13) followed by a line-feed (LF, ASCII 10). If you have Marxan input datasets created with a Windows operating system, you may need to convert the files to use the Unix style end-of-line character before using those input files with a Unix style operating system.

MacOSX and Linux provide the "dos2unix" command for this purpose. Consult your operating system documentation for instructions on installing "dos2unix" on your operating system. You can convert a Marxan input.dat input parameter file to Unix style end-of-line characters in this way;

- Open a terminal window in MacOSX or Linux (consult your OS documentation for instructions on doing this),
- Use the cd command to change to the directory containing your input.dat file,
- Convert the input.dat file, like this;


```
dos2unix input.dat
```

You can convert Marxan input files in an input directory to Unix style end-of-line characters in this way;

- Open a terminal window in MacOSX or Linux (consult your OS documentation for instructions on doing this),
- Use the cd command to change to the directory containing your input files,
- Convert all the input files in a directory, like this;


```
dos2unix *
```

A sample Marxan dataset for Unix style operating systems is provided with this distribution; "MarxanData_unix". A sample Marxan with Zones dataset for Unix style operating systems is provided with this distribution; "MarZoneData_unix".

Using Zonae Cogito

If you are using Zonae Cogito 1.74, the appropriate windows executable for your operating system will be automatically copied from your Zonae Cogito program folder to your Marxan database folder and executed when pressing the Run button.

Zonae Cogito is only compatible with Windows operating systems. The current version of Zonae Cogito is compatible with 32 bit and x64 Windows operating systems.