

Software overview

ADMB and stock assessment

Arni Magnusson
Anders Nielsen

ICES, 21–25 Feb 2011

Outline

- 1 Compiler - required to build model executables
- 2 ADMB - components, basic steps, user interface
- 3 Editor - choosing a text editor, ADMB-IDE
- 4 Install - download, build, configure, test

C++ compilers

GCC used by the ADMB development team
free software, Linux/Mac/Windows

Borland popular in the 1990s
shareware, Windows

Intel optimized for Intel processors
proprietary, Linux/Mac/Windows

Visual C++ popular IDE
proprietary, Windows

ADMB components

C++ libraries

admod, ado, ads, adt, df1b2o, df1b2s

TPL → C++ translator

tpl2cpp, tpl2rem

Compilation scripts

adcomp, adlink, admb

Using ADMB

Basic steps

Prepare data

- Write code
- Compile
- Run model

View results

User interface

- Shell, and/or
- IDE (integrated development environment)

Text editor

Emacs Powerful and complex editor
particularly good support for ADMB

Vim Powerful and complex editor

Notepad Not recommended

Notepad++ User-friendly

TextMate Mac OS

... many more

ADMB-IDE

ADMB main program

Emacs editor

GCC compiler

GDB debugger

`admb-mode` syntax highlighting, compilation, file manipulation,
code navigation, templates, and smaller tools

`.emacs` disable standard Emacs behavior, make ADMB-IDE
beginner-friendly

- Installer to set everything up automatically, or
- Zip file to set up components manually

Download

<http://code.google.com/p/admb-project/downloads/list>

Download center

Windows ADMB-IDE installer is easiest

Linux download source and build from scratch

Mac OS installer or build from source

<http://admb-project.org>

Main website

<http://admb-project.org/community/editing-tools>

Editor add-ons

<http://admb-project.org/community/related-software/gcc>

GCC for Windows

Build from source [Linux]

- 1 Download and unzip the ADMB source code

- 2 Inside the main ADMB directory, run

```
$ ./configure
```

or

```
$ ./configure BUILD_64BIT=yes
```

- 3 Then build:

```
$ make
```

After a while, ADMB will appear in a directory called 'build'.
You can move it to some practical location like:

```
$ mv build/admb-10.0-linux-gcc4.5.1-64bit ~/admb
```

Build from source [Windows]

① Download and unzip the ADMB source code

② Get the program `make.exe` from
<http://gnuwin32.sourceforge.net>

③ Inside the main ADMB directory, run

```
$ make
```

After a while, ADMB will appear in a directory called 'build'.

You can move it to some practical location like:

```
$ move build/admb_gcc345_mingw32 c:/admb
```

Configure

Set the PATH environment variable so it includes ADMB and compiler bin directories

Set the ADMB_HOME environment variable so it points at the ADMB main directory

Test

Make a copy of the simple directory

Open a shell and navigate to your simple directory

Run: `admb simple`
 `simple`