

# Software overview

## ADMB and stock assessment

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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: admbsimple  
simple
```