

FLR and a4a for Quantitative Fisheries Science



FLR Team
Maritime Affairs Unit - IPSC
EC Joint Research Center

Welcome to the EC JRC, Ispra, Italy.



AGENDA

- TIMETABLE: 9.00 - 12.30 / 14.00 - 17.30
- BREAKS @ 10.30 / 15.30

LOGISTICS

Lunch

- JRC Mensa

Dinner

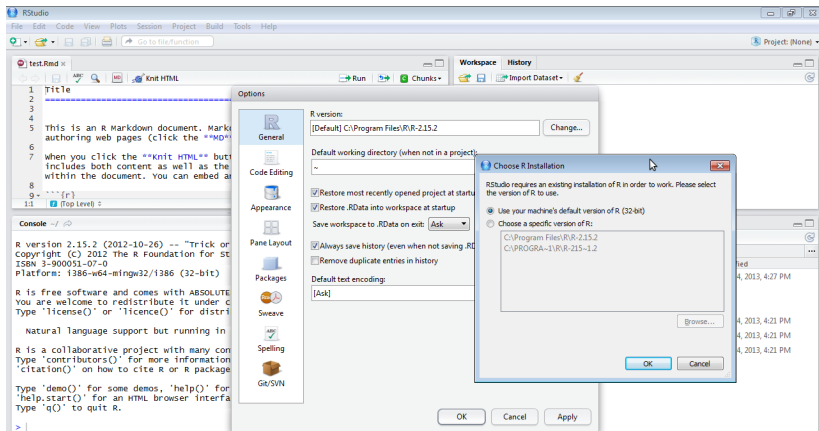
- Hotel Europa
- Other places in Ispra
- Course dinner THU

MATERIALS

- R 3.1: <http://cran.r-project.org/>
- RStudio: <http://rstudio.org/>
- git: <http://msysgit.github.io/>
- github account: <http://github.com/>

INSTALLATION

Select 32 bit R



INSTALLATION: packages

```
install.packages("")
```

- copula
- triangle
- mgcv
- splines
- plyr
- ggplot2
- knitr

INSTALLATION: packages

```
install.packages(repos="http://flr-project.org/R")
```

- FLCore
- FLEDA
- FLash
- ggplotFL
- FLBRP
- FLa4a

OUTLINE

1. Introduction to FLR
2. Loading data, plotting and EDA
3. Stock-recruitment and reference points
4. Modelling M and growth with a4a
5. Stock assessment using a4a
6. Short term forecasting for advice
7. Forecasting scenarios
8. From stock assessment to MSE

HOW WILL IT RUN

- Presentations
- Tutorials
- Exercises
- Paper of the day

Today's paper

Kell, L. T., Mosqueira, I., Grosjean, P., Fromentin, J-M., Garcia, D., Hillary, R., Jardim, E., Mardle, S., Pastoors, M. A., Poos, J. J., Scott, F., and Scott, R. D. 2007. FLR: an open-source framework for the evaluation and development of management strategies. – *ICES Journal of Marine Science*, 64: 640–646.



LICENSE

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ABOUT US

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Iago Mosqueira - FLR, IOTC, MPs

Finlay Scott - BioEco, FLR

Nekane Alzorriz - BioEco, BoB

READING

- Using Version Control with RStudio
- Using GitHub with R and RStudio

READY !!

'Men learn while they teach.'

Seneca the Younger