

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

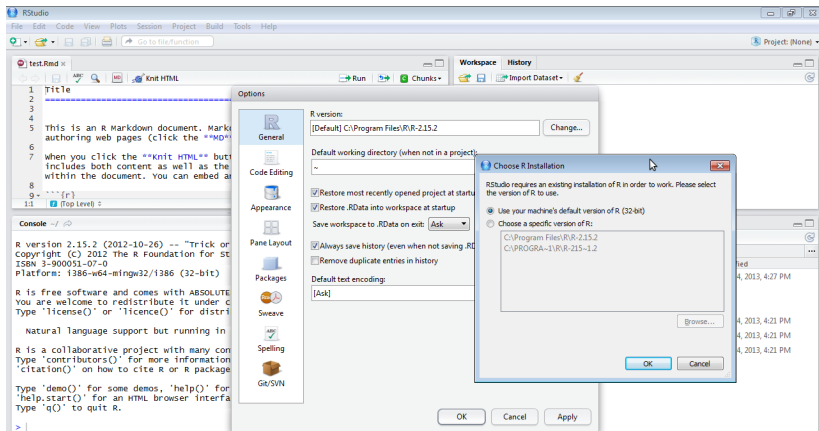
- Hotel Europa
- Other places in Ispra
- Course dinner THU

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

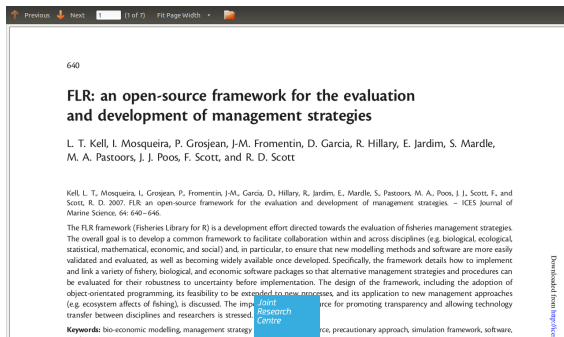
1. Introduction to FLR
2. Loading data, plotting and EDA
3. Non-linear modelling
4. Stock assessment using a4a (I)
5. Stock assessment using a4a (II)
6. Reference points
7. Short and medium term forecasting for advice
8. From stock assessment to MSE

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