Day 4

FISHREG
Maritime Affairs Unit - IPSC
European Commission
Joint Research Center

Where are we?

So far we have covered:

1. Install and start running R and RStudio
2. Find help and support
3. Get to know the R language basics
4. Create objects of various classes (vector, data.frame)
5. Load data stored in text files
6. Plot data and results
7. Data exploration and analysis
8. **for** loops
9. Mapping

`https://github.com/iagomosqueira/RforFisheries`

Where are we?

So far we have covered:

10. Introduce **array**s
11. Introduce **FLCore** package
12. **FLQuant** - the heart of **FLCore**
13. **FLStock** objects
14. exploring data with ggplot2

`https://github.com/iagomosqueira/RforFisheries`

Today

Stock Assessment with FLR

What is stock assessment ?

How many fish there are in the sea ?

- method to estimate
- stock abundance
- stock productivity (S/R)
- fishing mortality

Conditioned on the holy grail - M

History

- VPAs
  - N = f(C|FIast)
- Tunned Models (VPAs, XSA)
  - N = f(I|C)
  - Error in I
- SCA
  - N = f(I,C)
  - Error in I
  - Error in C
  - Error in S/R, etc

Outline

- Biomass dynamic models
- VPA
- Seperable VPA
- XSA
- Statistical catch-at-age framework (a4a)

Teach yourself FLR

http://tyflr.flr-project.org