Open session

Everything you wanted to know about FLR but where afraid to ask.

Conveners: Finlay Scott and Ernesto Jardim (Joint Research Centre, European Commission)

Dr. Brown opened the session with an introduction to the session schedule and objectives, FLR is a collection of tools for quantitative fisheries science, developed in the R language. It is particularly suited for the construction of bio-economic simulation models of fisheries systems and evaluating proposed management plans through Management Strategy Evaluation (MSE), as well as stock assessment, data visualisation and fisheries modelling. FLR has been extensively used to provide scientific advice in a wide range of fora, including ICES working groups, the European Commission's Scientific, Technical and Economic Committee (STECF), FAO and various RFMOs (ICCAT, IOTC, NAFO). Its open-source nature promotes transparency, openness and replicability, and makes use of the R ecosystem, enabling the user to benefit from a large number of R packages for statistics, High Performance Computing and plotting.

The open session provided an opportunity for participants to explore the latest version of FLR and learn about the new features and developments. Participants were provided with a USB stick that contained the FLR packages, installation instructions, tutorials and publications. The session was interactive and participants were strongly encouraged to bring their own computers and start using FLR. For newcomers to FLR, participants were guided through the installation process and encouraged to start working through an introductory tutorial by themselves or in groups. More experienced users were encouraged to try out some of the more advanced tutorials. A live demonstration of FLR was also provided.

The session was concluded with a discussion about FLR and open source software in general. One of the points of discussion was whether the software had been peer reviewed. There is no such thing as bug-free software and FLR makes no claim to be perfect in this respect. However, FLR is an open source project and takes advantage of all benefits of open source development (e.g. many eyes make shallow bugs). The source code is always available for inspection and users are encouraged to report the performance of the software. Additionally, each FLR package is thoroughly tested before release and these tests are also available. This part of the discussion was also linked to the Open Session on peer review for science products that support fisheries management advice that had been held on Monday.

Another point of discussion was the longevity of the project. This arose from the perception that many open source projects are not well supported after their creation or disappear when the main developers move on to other projects. It was emphasised that the FLR project is mature and has been in development for over 10 years. The main developers use the software themselves and therefore have a motivation to continue maintaining it. Even if the main developers do move on, the core packages are stable and no significant developments other than bug fixes and minor maintenance are required, meaning that the project will remain usable for the foreseeable future.

The importance of growing the FLR development community was discussed. An active community has many benefits including increased robustness of code and protection against changes in the FLR core development team. Additionally, the FLR core development team are not able to implement all proposed or requested features, such as alternative stock assessment methods. Users are encouraged to become developers to implement features they

require. It is hoped that the Open Session increased awareness of the FLR project and generated sufficient interest so that it will be uptaken by new users and developers.