

## Chapter 1 - Introduction\*

I developed much of the material in this training system between 1998 and 2005. My trainees had diverse disciplinary backgrounds (natural and social sciences) and were attending a multi-disciplinary program on International Fishery Management. Altogether, the time devoted to fish population dynamics and conservation management corresponded roughly to a one semester course. Given the wide background of the students and the purpose of the program, this training course was eminently practical. In the first part of the course we would have a classical progression, normally a lecture on a topic followed by a practical class. At later stages, problem-based approaches were more common.

Simulations and problem-solution often require intensive use of mathematics or computational tools. That is why this training system is mostly based on quantitative worksheets and software. I start this book (Chapter 2) with a simple test to the reporting and quantitative skills of the student, followed by some elementary training in the spreadsheet Excel. Spreadsheets have their limitations, but are low-threshold quantitative tools that are nearly free and available everywhere. These were definitively strong points with our batches of students that came from all over the world. Then, a simple refresher course in basic mathematics and statistics is made (Chapter 3), also in Excel. Later in the course, a soft introduction to a more powerful programming language, the R software, is made. This software is useful for i.a. simulation modelling.

This master document introduces the different topics in different chapters. Each chapter provides a hyperlink to one or several workbooks that are self-explanatory. The master document also provides links to internet sites that have relevant theoretical information for the topic. If working offline, the only practical requirement in order for the master document to link properly to the dependent workbooks is that they are installed in the same directory. Workbooks can otherwise be utilized independently from the master document or downloaded directly from the internet if working online. Some links to workbooks are inactive, particularly when they refer to material that must be collected in practical classes, such as e.g. research cruises, as in the original course in Tromsø.

This document and the dependent workbooks were inspired by co-workers and works from many other people. I will mention some of these sources of inspiration in the different chapters. I will also attempt to give a full reference list of the literature as well as of the photographic material, at the end of this master document. The books often used to cover part of this course were King (2005) and Cochrane & Garcia (Eds.) (2009), which are relatively easy reading for most students. On the next page is shown a list of logotypes:

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\* Santos, J. 2015. FIŞH IT 1.0 – Student Manual: A Training System for Aquatic Resource Managers. *Septentrio Educational* 2015(3). DOI: <http://dx.doi.org/10.7557/se.2015.3> . This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

these logotypes make it easier to identify the source or type of external learning material used along the training system.

## LOGOTYPES

### Software



### Online information



