V. NOTI, *GIS Open Source per geologia e ambiente*. Analisi e gestione di dati territoriali e ambientali con QGIS, Dario Flaccovio Editore, Palermo, Italy, 2014, 350 pp., fig. 1, tab., bibl.

The author's choice of GIS used in his book, which might be more appropriately described as a "practical operations manual", instantly reveals his in-depth knowledge, evidently based on extensive experience of teaching and training, of the expectations and requirements of the reader who is keen to learn how to use a Geographic Information System. QGIS is in fact the current Open Source – and therefore free – GIS, that best combines high performance with a user – friendly and easy to manage interface.

The theoretical aspects, essential for the correct use of the system, are not overlooked and indeed are explained simply but thoroughly, while the reader is cleverly introduced to the use of the software right from the start, with precise instructions for its installation for different operating systems, and is then guided gradually, with exemplary clarity, to the discovery of the system's amazing potential through a specifically designed data set.

The computing capacity of a GIS is fully explained and tested, including subjects such as geostatistics, which are commonly considered to be more difficult and are therefore not normally covered in an introductory manual.

Reference systems, essential for the proper management of geographic data in a GIS environment, are handled in a simple and highly-organised way, clarifying the main systems used, an area which is certainly not easy for first-time users to understand. Among the basic topics covered in the first part of the book, it is also worth mentioning those of symbology and representation of geodata, for which the significant possibilities of categorized and graduated theming of the software are discussed.

One of the most important chapters is certainly that which deals with geoprocessing and which looks at the most common tools in vector and raster domains thoroughly and comprehensively, while tools such as overlay analysis, joins and spatial query, and the Map Algebra are presented with great clarity. Particular attention is also paid to the analysis of grids with the use of the QGIS calculator and other raster analysis geo algorithms, an area in which the software used has reached a notable degree of operational maturity.

A substantial chapter covers Digital Elevation Models (DEM) and deterministic and geostatistical techniques for creating interpolated areas, a topic of great interest in the field of Earth Sciences. After an important introduction to terminology, the main classes of interpolation and the DEM generation mode are described. The description of the functionality of morphological and morphometric analysis is also indispensable with tools such as the creation of slope maps, aspect maps, curvature of surfaces, calculation of topographic indices and visibility analysis.

In addition, there are references to important geological plugins in the QGIS software that allow you to derive the stratigraphic contact from a DTM and a geological plan automatically and project the layer measurements on a geological section.

Examples of use in specific sectors, such as geochemistry, the morphometric analysis of river basins, the zonation of landslide susceptibility and assessment of flood risk, are included, especially towards the end of the book, further demonstrating the author's geological and environmental expertise. The user, whether a professional, an administrator or a student, will easily identify with the learning process of GIS functionality and the opportunities for its application in their own field of interest, not necessarily geo-environmental, but also, for example, socio-economic or humanistic.

It should also be pointed out that the concepts and procedures covered are valid in any GIS environment, both Open Source and proprietary, and are not specific to the GIS used so are of great interest to anyone who is interested in learning about the fields of application of this type of software. To this end, a short chapter summarizing tips for the delivery and management of a GIS project, a kind of operating handbook on the correct use of data and functionality in GIS, is particularly useful.

Finally, even though the book is primarily aimed at first-time users, even more experienced users may find useful operational and educational suggestions, updated information and an extensive bibliography subdivided by subject.

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