

The African Water Resource Database (AWRD) is a set of data and custom-designed tools, combined in a geographic information system (GIS) analytical framework aimed at facilitating responsible inland aquatic resource management with a specific focus on inland fisheries and aquaculture. It thus provides a valuable instrument to promote food security.

The AWRD data archive includes an extensive collection of datasets covering the African continent, including: surface waterbodies, watersheds, aquatic species, rivers, political boundaries, population density, soils, satellite imagery and many other physiographic and climatological data. To display and analyse the archival data, it also contains a large assortment of new custom applications and tools programmed to run under version 3 of the ArcView GIS software environment (ArcView 3.x).

The database allows integration of different types of information into a cohesive program that, because of its visual nature, is easy to understand and interpret. Creative applications of these tools and data could deepen our understanding of inland aquatic resource management and be of immediate value in addressing a wide variety of management and research questions.

The AWRD was designed based on recommendations of the Committee on Inland Fisheries for Africa (CIFA) and is both an expansion and an update of an earlier project led by the Aquatic Resource Management for Local Community Development Programme (ALCOM) entitled the “Southern African Development Community Water Resource Database” (SADC-WRD).

The AWRD publication is organized in two parts to inform readers who may be at varying levels of familiarity with GIS and with the benefits of the AWRD. The first part describes the AWRD and is divided into two main sections. The first presents a general overview and is addressed to administrators and managers while the second is written for professionals in technical fields. The second part is a “how to” supplement and includes a technical manual for spatial analysts and a workbook for university students and teachers.

The primary AWRD interface, tool-sets and data integral to the function of the AWRD are distributed in two DVD's accompanying part 2 of this publication, and are also available for download from FAO's GeoNetwork and GISFish GIS portals. A more limited distribution of the above primary database/interface, but divided among ten separate CD-ROM disks, is available upon request to FAO's Aquaculture Management and Conservation Service. Also, high resolution elevation datasets and images amounting to 38 gigabytes are available upon request.

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