

## NOTICE



## A Geoplatform for improving accessibility to environmental cartography

Studying the factors related to the geographical distribution of biodiversity and examining the representativeness of protected area networks are key scientific goals, and hence hot research fields. Owing to obvious time, manpower and funding limitations, work in both fields must rely on previously collected information on the distribution of species (i.e. primary data), which has been gathered by the dedicated compilation efforts of hundreds of taxonomists from all over the world during the last two centuries. The scientific and applied use of this huge amount of data has been enhanced thanks to the new opportunities provided by the emergence and progress of Geographic Information Systems (GIS) (Fig. 1) through: (1) the increasing availability of digital cartography for all kinds of environmental variables, (2) the development of technologies for the storage and accessibility of primary biological data (of which the GBIF project <http://www.gbif.org/> is probably the best

example), and (3) the development of new methods and tools for the analysis of geographical data.

Since the 1960s, a steadily increasing number of GIS applications have allowed the capture, storage, analysis, display and management of georeferenced biological data. The initial phase, in which the use of these applications was expensive and restricted to qualified technical personnel, has already been superseded. A number of free and/or open-source GIS packages now allow the management of geographically referenced biological or environmental information (e.g. DIVA-GIS, <http://www.diva-gis.org/>; GeoServer, <http://www.geoserver.org/>; GRASS, <http://www.grass.itc.it/>; gvSIG, <http://www.gvsig.gva.es> and Quantum GIS, <http://www.qgis.org/>). This permits taxonomists and other providers of primary biological data to manage and analyse their own information, a process that favours the correct biological interpretation of the obtained results. However, the access of many of these data providers to environmental information is still difficult. Geographical data are gathered in heterogeneous formats, resolutions and projections, and are also sparse and fragmentarily

distributed, often being either difficult to find or unavailable on the Internet.

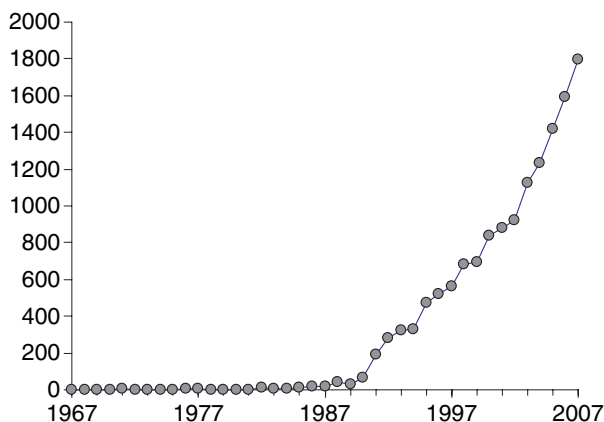
The European Distributed Institute of Taxonomy (EDIT, <http://www.e-taxonomy.eu>) is a collective project of 27 leading European, North American and Russian institutions, which has been financed by the European Commission since 2006. Among its objectives, EDIT aims to create shared resources within European taxonomic research institutions. Given the need for easy access to and easy processing of geographical data, one of the projects of EDIT is the development of a portal of geographical resources for biologists. These resources include the promotion of the accessibility of environmental digital data through a web page on which environmental cartography from diverse sources, gathered in a unified way, is freely available. This web page is now online at <http://edit.csic.es/GISdownloads.html> and includes an important amount of geographical information on a variety of thematic areas, from climate and topography to world-wide regular grids, stored in IDRISI<sup>®</sup> and ESRI<sup>®</sup> ASCII and shapefile formats.

The European Distributed Institute of Taxonomy's Work Package 5 (Internet Platform for Cybertaxonomy) hereby invites the community of taxonomists, biogeographers, ecologists and conservation biologists to access and use this information freely. In addition, we would be grateful to receive any supplementary information on data sources and/or freely available digital cartography that could be incorporated into Geoplatform's GIS database, thus contributing to the original purpose of the corresponding open-information sources: their universal availability.

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**Figure 1** Number of scientific papers published each year in the journals included in Web of Science (<http://scientific.thomson.com>) that contain either 'Geographic Information System' or 'GIS' within their keywords.