

**EURASLIC: European Association of Aquatic Sciences Libraries and Information Centres – An opportunity for cooperation through the internet marine sciences thematic gateways.**

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Abstract

Inside Europe, from Russia and Ucraina to Argelia and Tunisia, EURASLIC – a regional group of IAMSILIC (International Association of Aquatic and Marine Science Libraries and Information Centres) – is an online community of Marine sciences librarians and information specialists. The original unity of the libraries of EURASLIC – 98 – comes from the production of the database Aquatic Sciences and Fisheries Abstracts (ASFA). The coordinated publishing effort of EURASLIC result in the elaboration of: an european directory of aquatic information centres based on internet; an interlibraries circulation service open to the libraries of the network; of a bi-annual bulletin; an electronic forum for the direct communication between the members; a web site ([www.euraslic.org](http://www.euraslic.org)); and the proceedings of its own biannual conferences. EURASLIC coordinates and disseminates actions generating an unified profile through grants to buy computers (Bulgaria, Georgia and Ucraina), or to the development of regional networks (Black Sea, Baltic Sea, Mediterranean Sea), in order to value the holdings of the libraries and to develop the skills of the librarians. A view of Europe as a whole, thought to be reliable in terms of open access to the information, copyright and scholarly publishing, management of electronic journals and digitalisation projects, internet tools and systems, document supply and sharing resources. EURASLIC has 16 years of experience and maintains agreements with the Intergovernmental Oceanographics Commission (IOC) of UNESCO.

## **1.INTRODUCTION.**

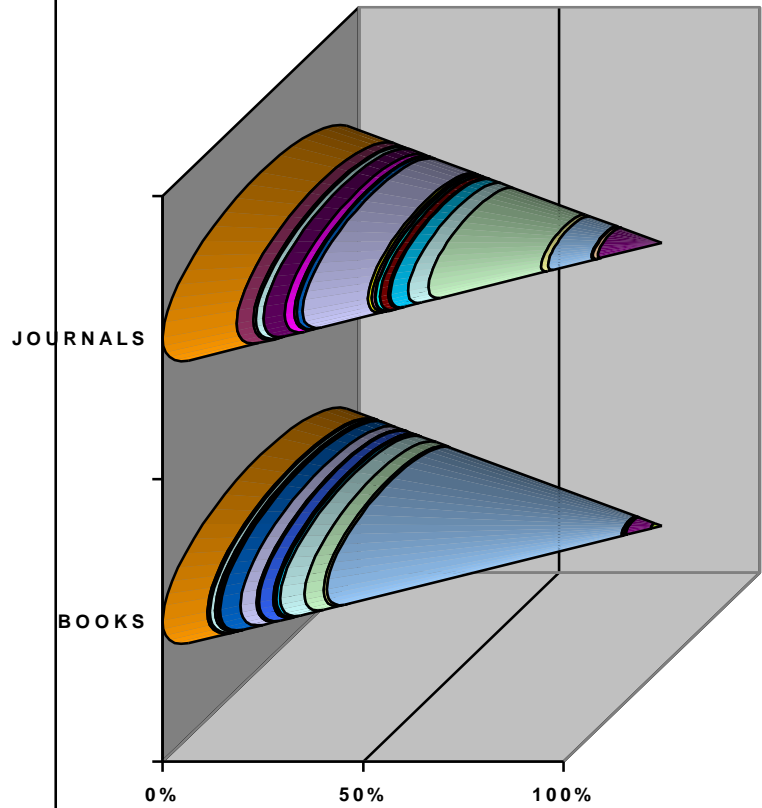
At the initiative of the Food and Agriculture Organization (FAO) Rome, and with the assistance of collaborating centres, the first issue of ASFA was published in the United Kingdom in July 1971 (1). Allen Varley and David Moulder (Marine Biological Association, Plymouth, United Kingdom) cooperated in the development of ASFA from the early 1970s, and at their initiative the group EURASLIC was inaugurated at a meeting of European marine and freshwater sciences librarians in Plymouth in 1988 (2).

Around 1990, an integrated network of aquatic information did not exist for the complete set of the U.N. countries. ASFA was acknowledged as the main database for this thematic area, with 350.000 records and a technological development which permits spectacular advances in managing and disseminating information. For the EURASLIC community the meaning of the cooperative association with this database stands from the fact that many of its libraries are accredited centres for the data input at ASFA. Three out of four agencies of the United Nations associated to ASFA - FAO, UNEP (United Nations Environmental Program), IOC (UNESCO Intergovernmental Oceanographic Commission) - are active in EURASLIC. And the fact that the abstracts, inside the records, when they are not written in English, are not limited to the employ of the German, French and Spanish but that can be found into Croatian, Norwegian, Portuguese, Italian and Slovenian adds value to the presence of EURASLIC when the introduction of content is in need. When the collaboration with the development staff of the database attains training aspects and support material, EURASLIC do require it by the introduction of new users to the database or by encouraging occasional user further employ of the database. EURASLIC discusses the ASFA indexing problems; this way are detected added records to ASFA without the standard ASFA indexation, coming from the CSA (Cambridge Scientific Abstracts) databases in biological sciences, pollution management and environmental sciences. It means, that EURASLIC discover network information resources, that are confuse for their users, eventually qualify them as useful, and ASFA (that yearly introduce thousands of new terms) evaluate the costs of the proposed modifications. Moreover, the ASFA search interface is an EURASLIC field of observation, such as the updating of the members directory, the updating of the database source serials list (more than 1200 nuclear journals) or the employ of multiple brackets for showing the rationale of a search. Other questions that EURASLIC discusses on ASFA are the counsels on the best reference tools to be used by the database editors, the links to full text documents produced by institutions belonging to EURASLIC, or the format preferences (ASFISIS) of the downloading module designed to users in countries with very few resources when filing and referencing. At last, the EURASLIC conferences are financed by such publishing firms as CSA, or Swets, Elsevier, Nisc y Ebsco. A sponsorship that coincides with the full text links management by the publishers of ASFA (offered by SwetsNet and Elsevier Science, and also by Academic Press, IDEAL, Catchword RealPage, Springer-Verlag, Kluwer, y HighWire Press).

ASFA, a database coordinated from the United Nations Food and Agriculture Organisation (FAO), Rome, is a cooperation effort, to which EURASLIC contributes in producing useful tools for their users. In an additional show of credits exchange between professional societies and the market forces [3].

**Table I. The Euraslic libraries. Countries after holdings graph.**  
 (See Appendix)

- Germany
- Algeria
- Belgium
- Bulgaria
- Croatia
- Denmark
- Spain
- Estonia
- Finland
- France
- Georgia
- Greece
- The Netherlands
- Ireland
- Island
- Italy
- Lithuania
- Malta
- Monaco
- Norway
- Poland
- Portugal
- Russia
- Sweden
- Switzerland
- United Kingdom
- Tunisia
- Ucraina



## 2. EURASLIC AND THE SUBJECT GATEWAYS.

The other information system in marine and fishery research that translates the suggestions and recommendations of the EURASLIC members, is the subject gateway oneFish ([www.onefish.org](http://www.onefish.org)) [4][5]. The subject gateway offers a alternative to the internet searchers and to the web directories. A quality controlled information service, its characteristics are: to provide links to sites or documents in internet, to select resources according to quality and scope published criteria, the generation and intellectual construction (not automatized) of content descriptors and browse structures (classification), and the manually generated bibliographic metadata for each resource. oneFish, developed by SIFAR, the Support Unit for Fisheries and Aquatic Research (a FAO autonomous project created in Rome, in 1998, after the guidelines of a study on fisheries research by the World Bank), present its first online version on May 2000, at the Aberdeen meeting, the EURASLIC 8th. Its working philosophy assumes that those inside an specific subject area can communicate, discuss and profer its opinions and ideas and above all that they feel they can influence the discussion. Thus, the librarians have opportunities to be concerned by the collection development policies, to provide their advise on the service definition and to negotiate consortia agreements on the provision and quality of the information. One of the original ideas of oneFish was the regeneration of the fisheries projects information system (FIPIS). The first step was the conversion of 5460 project records from the original FIPIS system not only into a format that provides its information inside oneFish but, also, by establishing automatic cross-references with many subjects relevant to the thematic cope. The required textual re-format, with the addition of keywords and descriptions, was performed by the EURASLIC secretary along the period 2000 to 2002.

From 2001 September, EurOcean ([www.eurocean.org](http://www.eurocean.org)) is a gateway that provides access to hierarchical organized information groups related with the marine technology and sciences in Europe. It is the result of a combined France-Portugal initiative, with a permanent secretary in Lisbon. EurOcean do cooperate with the Maine Board of the European Science Foundation, Efaró, EURASLIC, Ervo, Bonus Era-Net. The regional portal for Europe of the Intergovernmental Oceanographic Commission (IOC), is a part of EurOcean [6].

EURASLIC, as a community of libraries implied into the development of gateways, observes the development of distributed Hubs and gateways like BIOME (the hub for the health and life sciences resources in internet) created in the 2000 Fall, with 25000 resources and weekly updating and Renardus (a sole interface, created along the 5th European Union framework program, that provides the users with integrated access to the thematic gateways distributed all over Europe). Other internet gateways, with centrality in what makes the information needs of those working in marine and fishery sciences, are Fishbase (with 190,000 individual monthly visitors, and the subject of a presentation along the 10<sup>th</sup> biannual EURASLIC meeting) or Freshwater Life (which classification schemata uses ontologic reference principia based upon the experience of EURASLIC members). A potential role for EURASLIC exist at the gateway Yahoo – oceanography ([http://dir.yahoo.com/Science/Earth\\_Sciences/Oceanography/](http://dir.yahoo.com/Science/Earth_Sciences/Oceanography/)) [7] because of the absence of editors at their thematic groups. In the same sense the Open Directory Project is considered, on the part of EURASLIC, in terms of voluntary edition and a proposal exist in working as a group to produce a thematic gateway, with a minimum of resources.

The cooperation of the EURASLIC librarians to the cooperative hierarchical indexing of internet fixes the idea that the step from the library's cataloguing to the metadata in internet is not difficult. The great part of the thematic gateways that

survives have the support of the great organizations (like the national libraries or the great specialized libraries). A thematic gateway needs a considerable waste of time in terms of staff and investment for the development and the maintenance and a long term strategy for a sustained service. The EURASLIC libraries, being units of little size, ask itself on the way for using its strengths. [8]

### **3. EURASLIC PUBLISHING ACTIVITY.**

The EURASLIC Directory (<http://ioc2.unesco.org:591/euraslic/>) is a product, a database, developed by the UNESCO Intergovernmental Oceanographic Commission (IOC), for EURASLIC, as a benefit for the Ocean researchers community. The functionalities with which the software operates permit the search of all the EURASLIC members, the creation of new records for the libraries that asóciate their data to the directory, and the edition of the records for their updating. The information appraisal strategy aimed to the directory is conducted by EURASLIC and, in exchange, the association provides content to diverse IOC portals (like OceanTeacher) and to the Internacional Directory of Aquatic Libraries and Information Centres. The *Directory* was first published in 1991 and a second printed edition was published in Madrid in 1994, on the behalf of the Ministry of Agriculture, Fishery and Food. Online from 1998 via IOC web, it list the 530 european libraries in aquatic sciences. The new version of the Directory, partly financed with a subvention by the IAMSLIC, is to be hosted by the Marine Information System (IMIS) of the Flanders Marine Institute (VLIZ), where is to be inaugurate 2005 April onwards, the project office of the IOC program for the international oceanographic information and data exchange, IODE. Nowadays three directories do exist with these characteristics: the IOC system GLODIR, the IAMSLIC directory IDALIC, and the EURASLIC directory.

The EURASLIC inter-libraries circulation service is based upon the personal knowledge and connection of their members. [9] The positive association with the use of an electronic network is identified with the efficiency when a demand is required (by using the electronic mail), and with the satisfaction in terms of time-savings facing the caducity of the requirement life cycle. An electronic forum, specific for the circulation of document demands, and with restricted access, satisfies these quality criteria looking for the improvement of the flux, exchange and dissemination of the aquatic information. Almost all the demands are served (with the requirements being formulated only once), and the delay by answer until the real reception (by electronic or by snail post) of the item, spends a minimum cycle (from 25 minutes to a weekend). Rusia and Estonia amounts for 30% of the demands, and then comes Germany (17%), Denmark (14%), Belgium (11%), Greece (8%), France (8%), Spain (3%). The sharing resources practice seems more established in the Baltic Sea area, the oceanographics institutional origin, and the transmission method based on a forum do center its performances after the speed.

EURASLIC generates competitive advantage between the information services of the European organizations working in marine and fisheries sciences.

The EURASLIC biannual bulletin, with information on its activities and businesses, general interest short articles intended for the libraries and the information centres in aquatic sciences, and with the news, has resulted into 30 issues until 2004 October. The online collection (ISSN 1560-5299) goes from issue Nº 22 (2000 October) to issue Nº 30 (2004 October), and is available as in pdf format for The members. Along this period the editors have been at France (Lyon, 2000-2001), United Kingdom (Windermere, 2002-2003), and Bulgaria (Sofia, 2003-).

The discussion list for the direct communication between the members is “knitted” on the behalf of the services to the librarians in marine and fishery sciences. This Forum uses free software, in such a way that it can be completely managed by the EURASLIC members, without external interference or in provenance from the providers of the software. Along the last 2004 six months some 34% of the messages come from the United Kingdom, 23% from Germany and 16% from Belgium. In what concerns the nature of the messages [10], the most (26%) are organizational information, the expression of the satisfaction criteria in a transitional phase between the former version of the web page and the modern web site of EURASLIC. The information from the list has been visualized on 3986 occasions. Other messages can be displayed after the access criteria this way: work offers (15%), information about the list (15%), discussion related with the collection (12%), professional opportunities (9%), relevant advertisements for the readers (6%), demand/supply of articles (5%), announcements on the collections (4%), information demands (3%), duplicates supply/demand (2%).

**Table II. Nature of the messages**

Reference questions		Information demands	1
Questions on the collection		Citation verification	
Supply/demand of duplicates	1	Articles demand/supply	1
Work announcement	4	Professional opportunities	3
Collection announcements	2	Discussion related with the collection	5
Relevant announcements for the readers	2	Information related with the organization	8
Information about the list	3	Mistake messages	
Personal messages		Humour	

The participation pattern underlines the professional opportunities, the continuity at work and the debates fitting the political alternatives proposals into the editorial market and the copyright. And the answers inside the forum to conjectures posed are also concentrated, at these same headlines.

The current EURASLIC Web space ([www.euraslic.org](http://www.euraslic.org)) is a resource hosted, free of costs, at the VLIZ (Flanders Marine Institute, Belgium). The previous to 2004 EURASLIC Web site, was hosted by the National Centre for the Marine Research (NCOMR) Athens, Greece (<http://atlantis.ncmr.gr/info.htm>). An EURASLIC group for the re-design of the Web site studied:

the general presentation of the web site: colours, illustration use, visual hierarchy;

the TIC application to the access area for the members (secure access to publications and to the membership list), to the distributed search for information from the EURASLIC site, the full text documents hosting (like the access to the biannual bulletins and to the conference proceedings), the hosting of databases (e.g., the Euraslic directory, or the Euraslic union catalogue and/or a connection to the Z39-50 Iamslic catalogue), the hosting of an EURASLIC discussion list, the employ of film material, Flash-technology, Java-scripts, etc.;

the choice of a webmaster and the adoption of the guidelines in need and of the tools for the adequate management of the web;

The re-design team work along a year and cover phases of allocation of contents, revision and redesign, reprogramming and launching. 1000 € was the operation estimated cost. The work finished with the adoption of an agreement "Memorandum of Understanding" (MOU) between the VLIZ and EURASLIC.

For the EURASLIC web information system the central concept, essential, over which its strategy, the employed languages, its requirements and standards do switch is the idea of interoperability. [11][12]

The EURASLIC biannual conferences hve been celebrated in the United Kingdom, France, The Netherlands, Germany, Poland, Malta, Greece, United Kingdom. France, Germany and Croatia, from 1988 April to 2005 May (<http://www.euraslic.org/conferences.php>). The content analysis of the proceedings (available in what concern the Vth (Gdynia), the VIth (La Valetta) and the VIIth (Athens) meetings from <http://atlantis.ncmr.gr/publs.htm>, [conf5.htm](http://atlantis.ncmr.gr/conf5.htm), [conf6.htm](http://atlantis.ncmr.gr/conf6.htm), [conf7.htm](http://atlantis.ncmr.gr/conf7.htm); and completely at reach through the names of the authors by using the system <http://www.vliz.be/Vmdcdata/imis2>) reveals an important presence of the national reports (on the informative activity and the professional development) at the meetings (some 40%). From 1998, the success of the conferences (the book of proceedings pass from 114 to 262 pages, between the VIth and VIIth editions) introduces sessions, workshops, open forums, commercial presentations and posters.

The scheme of contents in the last four conferences (1998, 2000, 2001 and 2003), is distributed along 172 contributions and 963 pages, allocates some 13% to the technological innovation in electronic resources, 8% to the management of knowledge, 6% to the professional development, 5% to the European cooperation, 3% to the digital libraries, activity and history of Euraslic, commercial presentations and workshops, also concerned are the product and services of the e-learning, the networks configuration along the Mediterranean Sea, and East of Europe, and the activities of IAMSLIC.

**Table III. The distribution of thematic contents at the EURASLIC VIIth-Atenas, VIIIth-Aberdeen, IXth-Brest and Xth-Kiel conferences.**

Profesional development 10	Knowledge management 14	Electronic publishing 7	European Cooperation 9
Electronic Resources 22	National Reports 57	Commercial presentations 6	Posters 19
Euraslic (history and activities) 6	Workshops 6	Iamslic 2	Digital libraries 5
Networks at I Mediterránea 4	East Europe Networks 3	e-Learning 2	

Como grupo regional de la asociación basada en norteamérica IAMSLIC, las reuniones de EURASLIC cuarta, en Bremerhaven (Alemania, octubre 1992) y novena en Brest (Francia, octubre 2001) celebraron sus sesiones conjuntamente con las reuniones anuales 18ª y 27ª de la International Association of Aquatic and Marine Sciences Libraries and Information Centers (IAMSLIC). La temática del informe de la primera reunión en Plymouth (Reino Unido, Abril 1988) abordó problemas de interés general y la oportunidad de generar un grupo europeo dentro de IAMSLIC.

#### **4. EURASLIC AND THE DEVELOPMENT OF THE ELECTRONIC MARKET.**

To supply with platforms and facts making easy the communication, the exchange and the debate beyond the "classic" frontiers of the European Union. Such is the EURASLIC experience in producing genuine outputs for the management of aquatic information, free from politics, religious and social limitations. The talent and continuous effort of the associate members suggest a behaviour as organization close to the "benchmarking emulation".

In paying attention to the candidate countries and to the new members of the European Union, the incentives that EURASLIC develops for the promotion of technological innovative processes into the technologies of information rely on the concept of Annual Grant for the equipment. Along the last annual exercises, 2002 and 2003, EURASLIC has received grant demands exceeding between 80% and 160% the original budget valuations. The infrastructure acquired by the beneficiaries includes additional PC, reprographic engines, printers, fax, scanner. In 2002, 62% of the budget was assigned to Georgia (library of the Marine Ecology and Fisheries Research Institute, at Batumi) and 38% to Bulgaria (library of the Oceanology Institute, at Sofia). And in 2003, Ucraina (South seas Institute, at Sebastopol) received 53% of the budget and Bulgaria 43%.

With grants from the Intergovernmental Oceanographic Commission (IOC, UNESCO) and from IAMSLIC, and with the baseline of the z39.50 standard for the library's distributed catalogues and the provision of access to cooperative resources, the regional cooperative project for the black sea libraries (BLICOP, <http://www.euraslic.org/projects.php#blicop>) expect to create a bibliographic information system. The three EURASLIC libraries previously mentioned, plus the Russian library from the Research Institute on the Fishery problems of the Azov's Sea (Rostov-on-Don, Russia), also an EURASLIC member, seek the digitalisation of 35528 catalogue's cards produced after some 8150 books, periodical publications and serials, and postprints. Some 7917 OPACS' entries are already prepared. No Turkish's, neither Romanian's libraries are involved into the project, as they are not ASFA partners (as neither Bulgaria, nor Georgia). The contents of the printed reference books (prepared by the Ucrainian library) get an idea of the magnitude of the project : 18914 russian bibliographic references, 8450 in English, 573 with Turkish origin in English), and 521 with Georgian origin (in English). It is expected that users will be able to retrieve online literature searches inside the electronic catalogues of the libraries concerned by the project and that they will receive electronic versions of full text documents coming from the holdings of the libraries.

The European Countries with Economies in Transition (ECET) EURASLIC group develops a union catalogue project for the periodical publications of the aquatic libraries from East- and Centre- Europe (<http://www.euraslic.org/projects.php#union>), in 2002 counting on a grant from IAMSLIC and from 2005 February after the recommendations of the GEMIM group inside IODE. The library from the Marine Institute of Estonia, in Tallin, centralizes the technical consultations for the staff at charge with the data input, the training sessions, and the discussion about the platform from which the catalogue will be available.

The EURASLIC business meeting received, on 2003 May, a proposal for a Special Interest Mediterranean Group (MedSIG), coming from the libraries, at Athens, of the Mediterranean Action Plan by the United Nations Environmental Program (UNEP) and from the Hellenic Centre for the Marine Research. This proposal was presented, informally, in 2001 October, by the fishery's library of FAO



(Rome), and it assembles the EURASLIC corporative strategy in the sense of the integration of the North-African (Algeria, Tunisia, Lybia) and Mediterranean Levant (Syria).

## **5. EURASLIC AND THE UNESCO INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION.**

The UNESCO Intergovernmental Oceanographic Commission (IOC), for the period 2001-2003, has credited with between 50% and 60% of the grants for projects with EURASLIC (including the Conferences). Also, the IOC hosts, at its web page, the EURASLIC Directory of the Aquatic Sciences Libraries, assist to the meetings that the BLICOP and ECET projects hold, and support the EURASLIC web space. EURASLIC is present at the Committee for the international oceanographic information and data exchange (IODE) from IOC, as the projects office of IODE is sited at VLIZ (Flanders Marine Institute) whose librarian is the EURASLIC's president, and because diverse national representatives at IODE are EURASLIC's members. EURASLIC is also inside the Group of experts for the marine information management (GE-MIM) inside IODE, attending to their sessions (2004 GEMIM meeting – having been held at the same time than an IAMSLIC meeting, at Hobart, Tasmania – <http://ioc3.unesco.org/iode/files/ggemim08.pdf>) and through the national representatives at this committee that, in several occasions, are EURASLIC's members. The OceanTeacher system used by IODE for their training courses is also sensible to the influence of the EURASLIC circle.

The IOC and IAMSLIC signed, in 2004 April, a declaration of purposes (MOU), of mutual interest for the european group EURASLIC. This declaration promotes the cooperation between the projects of the ocean data and information network (ODIN) from IOC and the regional groups of IAMSLIC. In 2004 September, the group GEMIM accepted the formulation of a proposal for the establishment of an ODIN European network, in order to support the marine information management, specially at the East-European region. The group recommends, in view of the 2005 April meeting (IODE-XVIII), that the evaluation of the national and regional needs should be undertaken in cooperation with EURASLIC.

## **6. CONCLUSION.**

The standards are changing in the scientific publication [13][14]. The option for sharing resources and for open access to the contents is one of the points of balance in current discussion. EURASLIC, with its presence in data and information management in internet, puts forward the practice of digital "literacy", the assignment of resources, the creation of networks, the supply of professional services in providing documents, reference and directory items, the internet cataloguing, the approximation to the problems of copyright and the role of libraries in conformity with the suggestions by IFLA ([www.ifla.org](http://www.ifla.org)). At EURASLIC are planified the development of ontologies and of thematic gateways for the fisheries and marine sciences, the e-learning at this sector, the metainformation, the creation of union catalogues at digital platforms paying attention to the information needs from the Mediterranean area, the Baltic, the Black Sea, the Caspian Sea. Specialized online services and bibliographic information networks works through EURASLIC for the effective formulation of an information policy at the cyberspace frontier.

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## APPENDIX: Libraries of EURASLIC

lib. (books), mon. (books, dissertations, reports, videos; at † books and bound serial publications; <sup>1</sup> pub = publications; <sup>2</sup> u.a. = holdings unit (unidad de almacenaje); <sup>3</sup> books and journals), rev. = total periodical publications, vol.enc. = bound volumes, \* 1998 data (last EURASLIC dir. ed.; others come from their web pages or from recent printed sources) , § Library's web is not available.

COUNTRY	WEB	PAPER HOLDINGS
Germany 307628 lib. 14401 rev.	<a href="http://www.awi-bremerhaven.de/Library/index.html">http://www.awi-bremerhaven.de/Library/index.html</a> <a href="http://bibliothek.bafg.de">http://bibliothek.bafg.de</a> <a href="http://www.ifm.uni-kiel.de/ze/zb/biblio-e.html">http://www.ifm.uni-kiel.de/ze/zb/biblio-e.html</a> <a href="http://www.terramare.de/amb/amblist.htm#LAWK§">http://www.terramare.de/amb/amblist.htm#LAWK§</a> <a href="http://www.bfa-fish.de/iud/index.html">http://www.bfa-fish.de/iud/index.html</a> <a href="http://www.mpil-ploen.mpg.de/english/biblio/biblio.htm">http://www.mpil-ploen.mpg.de/english/biblio/biblio.htm</a> <a href="http://www.io-warnemuende.de/dir/en_home.html">http://www.io-warnemuende.de/dir/en_home.html</a> <a href="http://www.terramare.de/biblioteca/index_bib_esp_n.htm">http://www.terramare.de/biblioteca/index_bib_esp_n.htm</a>	38000 mon. 995 rev. 100000* mon. 1000* rev. 34078* mon. 10000 rev. 10000 lib. 476 rev. 90000 lib. 830 rev. 9900 lib. 400 rev. 25000 lib. 700 rev. 650 lib.
Algeria	<a href="http://www.cndpa-dz.org/biblio.html">http://www.cndpa-dz.org/biblio.html</a>	
Belgium 215950 lib. 6800 rev.	<a href="http://www.ibw.vlaanderen.be/bibliotheek/bibliotheek.html">http://www.ibw.vlaanderen.be/bibliotheek/bibliotheek.html</a> <a href="http://www.vliz.be/En/Activ/Library/library.htm">http://www.vliz.be/En/Activ/Library/library.htm</a> <a href="http://www.vub.ac.be/BIBLIO/index_en.html">http://www.vub.ac.be/BIBLIO/index_en.html</a>	15500 lib. 600 rev. 450* lib. 1200* rev. 200000* lib. 5000* rev.
Bulgaria 2560 lib. 598 rev.	<a href="http://www.io.bas.bg/§">http://www.io.bas.bg/§</a> <a href="http://www.iwp.bas.bg/§">http://www.iwp.bas.bg/§</a>	2560* lib. 381* rev. 217* rev.
Croatia 34237 lib. 2120 rev.	<a href="http://nippur.irb.hr/eng/">http://nippur.irb.hr/eng/</a> <a href="http://www.izor.hr/eng/library/lib_g.html">http://www.izor.hr/eng/library/lib_g.html</a>	30000 lib. 1200 rev. 4237* lib. 920* rev.
Denmark 17300 lib. 4150 rev.	<a href="http://www.dhi.dk/§">http://www.dhi.dk/§</a> <a href="http://www.dfu.min.dk/uk/default_uk.htm§">http://www.dfu.min.dk/uk/default_uk.htm§</a> <a href="http://www.dmu.dk/International/About+NERI/Departments/Library/">http://www.dmu.dk/International/About+NERI/Departments/Library/</a> <a href="http://www.ices.dk/§">http://www.ices.dk/§</a> <a href="http://www.nscentre.dk/bibl/general.htm">http://www.nscentre.dk/bibl/general.htm</a>	6000* lib. 3000* rev. 5000* lib. 100* rev. 300* lib. 500* rev. 6000* lib. 550* rev.
Spain 8900 lib. 1870 rev.	<a href="http://www.cmima.csic.es/serveis/biblio/">http://www.cmima.csic.es/serveis/biblio/</a> <a href="http://biblioteca.ulpgc.es/directorio/directorio.shtml#Biblioteca_del_Edificio_de_Ciencias_Basicas">http://biblioteca.ulpgc.es/directorio/directorio.shtml#Biblioteca del Edificio de Ciencias Basicas</a> <a href="http://www.ieo.es/publicaciones/publicaciones.html">http://www.ieo.es/publicaciones/publicaciones.html</a> <a href="http://www.icman.csic.es/servic/servB_sp.htm">http://www.icman.csic.es/servic/servB_sp.htm</a>	7000 lib. 1400 rev.  1900 lib. 470 rev.
Estonia 8400 lib. 450 rev.	<a href="http://www.sea.ee/lehed/raamatukogu.htm">http://www.sea.ee/lehed/raamatukogu.htm</a> <a href="http://www.envir.ee/eng/§">http://www.envir.ee/eng/§</a>	8400* lib. 450* rev.
Finland 140500 mon. 1200 rev.	<a href="http://www.ymparisto.fi/default.asp?contentid=75299&amp;lan=en">http://www.ymparisto.fi/default.asp?contentid=75299&amp;lan=en</a> <a href="http://www.fimr.fi/en/palvelut/kirjasto.html">http://www.fimr.fi/en/palvelut/kirjasto.html</a>	90000 lib. 550 rev. 50500 mon. † 650 rev.

France 110151 mon. 12624 rev.	<a href="http://www.lyon.cemagref.fr/doc/index.shtml">http://www.lyon.cemagref.fr/doc/index.shtml</a> <a href="http://www.ifremer.fr/blp/">http://www.ifremer.fr/blp/</a> <a href="http://www.sb-roscoff.fr/BibDoc/">http://www.sb-roscoff.fr/BibDoc/</a> <a href="http://www.ifremer.fr/com/20ans/site/palavas/index.htm">http://www.ifremer.fr/com/20ans/site/palavas/index.htm</a> <a href="http://intechmer.cnam.fr/crd.html">http://intechmer.cnam.fr/crd.html</a> <a href="http://www.thalesgeodis-freightlogistics.com/impl.htm">http://www.thalesgeodis-freightlogistics.com/impl.htm</a> <a href="http://www.ifremer.fr/bibnantes/">http://www.ifremer.fr/bibnantes/</a> <a href="http://www.engref.fr/Docmont.htm">http://www.engref.fr/Docmont.htm</a> <a href="http://www.epoc.u-bordeaux.fr/fr/labos.html#Stationlevel">http://www.epoc.u-bordeaux.fr/fr/labos.html#Stationlevel</a> <a href="http://www.oceano.org/io/bib/index.html">http://www.oceano.org/io/bib/index.html</a> <a href="http://www.thonon.inra.fr/station/publication/publications-frame.htm">http://www.thonon.inra.fr/station/publication/publications-frame.htm</a> <a href="http://www.obs-banyuls.fr/biblio/">http://www.obs-banyuls.fr/biblio/</a> <a href="http://www.nausicaa.fr/Accueil.htm">http://www.nausicaa.fr/Accueil.htm</a> <a href="http://www.ifremer.fr/crema/documentation/index.htm">http://www.ifremer.fr/crema/documentation/index.htm</a> <a href="http://www.eid-med.org/FR/Documentation/Documentation.htm">http://www.eid-med.org/FR/Documentation/Documentation.htm</a>	8000 lib. 385* rev. 35000 mon. 3118 rev. 5000 lib. 1196 rev. 210* rev. 2800 mon. 69 rev. 5651* lib. 750* rev. 17000 lib. 2500 rev. 150 rev. 3000 lib. 714 rev. 8000 lib. 1000 rev. 6000 mon. 120 rev. 13500* mon. 2180 rev. 5000* lib. 168* rev. 1200 mon. 154 rev.
Georgia	<a href="http://mefri.iatp.org.ge/aboutus2.html#anchor3489">http://mefri.iatp.org.ge/aboutus2.html#anchor3489</a>	
Greece 3700 lib. 828 rev.	<a href="http://www.hcmr.gr/english_site/library/index.html">http://www.hcmr.gr/english_site/library/index.html</a> <a href="http://www.imbc.gr/institute/library/index.html">http://www.imbc.gr/institute/library/index.html</a>	3100* lib. 798* rev. 600* lib. 30* rev.
The Netherlands	<a href="http://www.rikz.nl/home/EN/index.html">http://www.rikz.nl/home/EN/index.html</a>	10000* lib. 600* rev.
Ireland	<a href="http://homepage.tinet.ie/~sherkinmarine/LIBRARY.html">http://homepage.tinet.ie/~sherkinmarine/LIBRARY.html</a> <a href="http://www.bim.ie/templates/text_content.asp?node_id=374">http://www.bim.ie/templates/text_content.asp?node_id=374</a>	100.000* lib. 150 rev.
Iceland	<a href="http://www.hafro.is/Bokasafn/bokasafn.e.htm">http://www.hafro.is/Bokasafn/bokasafn.e.htm</a>	6500 lib. 800 rev.
Italy	<a href="http://www.fao.org/fi/library/library.htm">http://www.fao.org/fi/library/library.htm</a>	1600 rev.
Lituania	<a href="http://www.vzp.gov.lv/?sadala=115">http://www.vzp.gov.lv/?sadala=115</a>	11140 lib. 76 rev.
Malta	<a href="http://ioc.unesco.org/ioi/categories.php?category_no=5">http://ioc.unesco.org/ioi/categories.php?category_no=5</a>	3000* lib. 300* rev.
Monaco	<a href="http://www.oceano.org/mc/bibliotheque/sommairebibliotheque">http://www.oceano.org/mc/bibliotheque/sommairebibliotheque</a>	28000 lib. 3500 rev.
Norway 163000 lib. 3978 rev.	<a href="http://www.niva.no/">http://www.niva.no/</a> <a href="http://biblioteket.imr.no/index_eng.htm">http://biblioteket.imr.no/index_eng.htm</a> <a href="http://odin.dep.no/fkd/engelsk/bn.html">http://odin.dep.no/fkd/engelsk/bn.html</a>	40000* lib. 653* rev. 120000* lib. 3300* rev 3000* lib. 125* rev.
Poland 132612 lib. 22027 rev.	<a href="http://bg.wsm.szczecin.pl/">http://bg.wsm.szczecin.pl/</a> <a href="http://www.sfi.gdynia.pl/info/biblio.htm">http://www.sfi.gdynia.pl/info/biblio.htm</a> <a href="http://www.iopan.gda.pl/libidx.html">http://www.iopan.gda.pl/libidx.html</a> <a href="http://www.infish.com.pl/ifi-pliki/Department_of_Scientific_Information.html">http://www.infish.com.pl/ifi-pliki/Department of Scientific Information.html</a>	95000* lib. 7526* rev. 11012 lib. 13611 rev. 5600* lib. 140* rev. 21000 lib. 750 rev.
Portugal 19900 lib. 1400 rev.	<a href="http://ipimar-iniap.ipimar.pt/departamentos/ddap.html">http://ipimar-iniap.ipimar.pt/departamentos/ddap.html</a> <a href="http://www.hidrografico.pt/hidrografico/documentacao/documentacao.htm">http://www.hidrografico.pt/hidrografico/documentacao/documentacao.htm</a>	9000 mon. 1400 rev. 10900* lib.
Russia 2020000 lib. 8358 rev.	<a href="mailto:riasfp@aanet.ru">riasfp@aanet.ru (AzNIIRKh)</a> <a href="http://kstu.enet.ru/">http://kstu.enet.ru/</a> <a href="http://www.limno.org.ru/homengl.htm">http://www.limno.org.ru/homengl.htm</a> <a href="http://www.vniro.ru/labs/onti/en/index.html#library">http://www.vniro.ru/labs/onti/en/index.html#library</a> <a href="http://www.bstu.ru/en/">http://www.bstu.ru/en/</a> <a href="http://www.pinro.ru/labs/indexbiblio.htm">http://www.pinro.ru/labs/indexbiblio.htm</a> <a href="http://www.atlantniro.ru/en/index.html">http://www.atlantniro.ru/en/index.html</a> <a href="http://library.timacad.ru/">http://library.timacad.ru/</a>	1258* rev. 250000 pub. <sup>1</sup> 50000 mon. <sup>2</sup> 35000* lib. 7100* rev. 1685000 mon. <sup>3</sup>
Sweden	<a href="http://www.wmu.se/Pages/PageTemplate_9.asp?SectionId=853">http://www.wmu.se/Pages/PageTemplate_9.asp?SectionId=853</a>	17000 lib. 350 rev.
Switzerland	<a href="http://www.iucn.org/publications/library.htm">http://www.iucn.org/publications/library.htm</a>	15000* lib. 920* rev.
United Kingdom 169250 lib.	<a href="http://www.nafc.ac.uk/library.htm">http://www.nafc.ac.uk/library.htm</a> <a href="http://www.cefas.co.uk/library.htm">http://www.cefas.co.uk/library.htm</a>	6000* lib. 1000* rev.

12451 rev.	<a href="http://www.library.stir.ac.uk/index.html">http://www.library.stir.ac.uk/index.html</a> <a href="http://www.imo.org/library/">http://www.imo.org/library/</a> <a href="http://www.marlab.ac.uk/FRS.Web/Delivery/display_standalone_with_menu.aspx?contentid=740">http://www.marlab.ac.uk/FRS.Web/Delivery/display_standalone_with_menu.aspx?contentid=740</a> <a href="http://www.port.ac.uk/research/cemare/readingroom/">http://www.port.ac.uk/research/cemare/readingroom/</a> <a href="http://library.ceh.ac.uk/">http://library.ceh.ac.uk/</a> <a href="http://www.mba.ac.uk/nmb1/">http://www.mba.ac.uk/nmb1/</a> <a href="http://www.sos.bangor.ac.uk/about/facilities/library/index.html">http://www.sos.bangor.ac.uk/about/facilities/library/index.html</a> <a href="http://www.library.soton.ac.uk/nol/">http://www.library.soton.ac.uk/nol/</a>	70000 mon. 15000* lib. 220* rev. 20000 lib. 1000 rev.  12000 lib. 400 rev. 9000 lib.2400 rev. 13250 lib. 4550 rev. 4000 lib. 381 rev. 20000* lib 2500 rev.
Tunisia	<a href="http://www.universites.tn/instm/fr/bibliotheque/document.html">http://www.universites.tn/instm/fr/bibliotheque/document.html</a>	
Ucrania 74000 lib.	<a href="http://www.ibss.iuf.net/biblio/biblio.html">http://www.ibss.iuf.net/biblio/biblio.html</a> <a href="http://www.mhi.iuf.net/bibi1.htm">http://www.mhi.iuf.net/bibi1.htm</a>	54000 lib. 86000 rev. (vol.enc.) 20000 lib. 79000 rev. (vol.enc.)