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World Ocean of Data & Information: Creating Value by their Organization and Management

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THE CONCEPT OF INFORMATION LITERACY: HOW IT DEVELOPED OVER THE YEARS AND WHAT IT MEANS TODAY

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Abstract

The term "information literacy" was used for the first time by Paul Zurkowski in the Report of National Commission Libraries and Information Sciences in 1974. The sense of the concept is rather clear, i.e., the basic role and significance of the information literacy is to educate various groups of information users which means to provide "information education" or "the ability to recognize information needs", and some others. The term "information society" developed simultaneously. It is and has to be recognized that such society can exist and function only when people are educated on how to use the information sources.

A few years ago (in 2006), the InfoLit Global Program was created as a product of cooperation between IFLA (International Federation of Library Associations) and UNESCO (United Nations Educational, Scientific and Cultural Organization). This program includes various types of activities which are designed to create a universal database on information literacy and to gather information about developments regarding information literacy in all countries.

The term "**information literacy**" **–** the meaning of the concept is quite clear, it is to provide a common education regarding how to use information sources, for example how to extract information from databases, Internet, etc. The term "information literacy" was used for the first time about 40 years ago (in 1974) by Paul Zurkowski in the Report of National Commission Libraries and Information Sciences. The basic role and significance of the information literacy is to educate various groups of information users by providing "an information education" or "the ability to recognize information needs", and some others (Bruce, 1999; Piotrowska 2012).

Christine Bruce (1999, 2003) describing information literacy enumerated seven categories or "seven faces" of the term which are:

1. The information technology (which is using an information technology for information retrieval and communication);
2. The information conception (as finding an information located in various information sources);
3. The information process conception (as executing a process);
4. The information control conception (as controlling information);

5. The knowledge construction conception (as building up a personal knowledge base in a new area of interest);
6. The knowledge extension conception (as working with knowledge and personal perspective adopted in such a way that novel insights are gained);
7. The wisdom conception (as using information wisely for the benefit of others).

The term "**information society**", which was developed along with the term "information literacy", appeared a bit earlier in Japan than in other countries. It was first used by T. Umesao in 1963, and shortly thereafter in 1968 by K. Koyama. Koyama described this term in his dissertation entitled "Introduction to information theory". A quite good definition of the term "information society" can be found in "The new results – Report of the National Working Party for Social Inclusion (1997)", Report of IBM Community Development Foundation which says that the information society is "a society characterized by a high level of information intensity in the everyday life of most citizens, in most organizations and work places; by the use of common or compatible technology for a wide range of personal, social, educational and business activities; and by the ability to transmit and receive digital data rapidly between places irrespective of distance". Both terms, "information literacy" and "information society", were developed about the same time, because they are associated with each other. If we want to have an information society, we must propagate the idea of information literacy, and place a significant effort on education. Libraries and librarians play important part in the realization of these tasks.

In this place I have some reflections concerning these new terms. I would like to point out to how many years have passed since the first use of those words and and at the time they have become reality and commonly used. This can be compared with a similar phenomenon: many years ago cars became new form of moving and people had to learn the process and develop the skills needed for driving the car. Now almost everyone is able to drive and almost every person owns a car. In this way "a motorized society" was created. Computers are a new phase of technological development of society, but everybody must learn how to use them, and then the information society will become reality. If we want to have an information society, we must propagate the idea of information literacy.

Only recently **the decade of information literacy** (2003-2013) was proclaimed by UN (United Nations). During that period some international conferences were dedicated to information literacy. For example a conference organized by IFLA (International Federation of Library Associations) took place in Puerto Rico in 13-18 September 2011. The conference

was entitled: “The importance of information literacy for multicultural populations: needs, strategies, programs, and the role of libraries”.

One of the conference themes was devoted to discussion on how societies bearing low level of education can be included into information society. Autochthons or emigrants are often treated as second-categories citizens. They are often ignored groups, for example Indian, Mori or Rom society. One of the first steps in their education should be learning how to use library sources. Lack of information education is a barrier in cultural and social integration of many ethnic minorities as they can have problems with information literacy (Wiarogórska, 2011).

A few years ago (in 2006), the InfoLit Global Program was created as a product of cooperation between IFLA and UNESCO (United Nations Educational, Scientific and Cultural Organization). This program includes various types of activities which are designed to create an universal database on information literacy and to gather information about developments regarding information literacy in all countries (Piotrowska, 2012). A logo for this program, produced by Edgar Luy Perez, is available online at www.infolitglobal.info/logo .

The logo for information literacy presents an open book with a spot above it. The open book can be considered as a symbol of openness to information and knowledge. The spot above the book looks like a letter “i”, which is the first letter of “information”. Whole symbol looks like a person – after all, information is created by the people, and for the people. InfoLit Global is international program concerning communication and cooperation between people who are working in information education.

In Poland information education begins in primary schools and continues throughout secondary schools and universities. The librarians fulfill an important role in teaching the information literacy at these institutions (Antczak, 2010). However, not only young people are being educated how to use the information sources, older generation is given many chances to gain this knowledge as well. For example, computer courses are organized even for seniors. New computer technology is used in many forms and in many fields. In Poland much more than half of the households have computers (73% in 2012) and access to Internet (71% in 2012). Progress is really enormous and the realization of information society in practice proceeds quite fast.

In the Inland Fisheries Institute in Olsztyn (Poland) two courses were recently organized for scientists employed at the Institute. One, which took place in November 2012, included

training on using e-books offered by EBSCO. The other took place in March 2013 and was conducted by a representative of Thomson Reuters agency. The course included three parts:

1. **Web of Science** – contains 12 000 electronic journals and 148 000 reports from various conferences and materials from many fields. Several ways of information retrieval were demonstrated during the training. Also the way to create personal scope Researcher ID, which allows a scientist to gather specific literature and to describe his achievements, was demonstrated.

2. **Journal Citation Reports** – it is a database which allows journal evaluation based on the number of citations. Generally 7600 journals covering 220 disciplines, issued by 3300 editors all over the world, can be assessed. The database also enables an evaluation of a given scientist.

3. **Endnote WEB** – it is Internet program for management of bibliography. Authors can collect citations and automatically prepare references for their publications. In addition, its "Cite while you write" function allows an automatic placement of references in the text of a manuscript when writing and/or editing is done in Microsoft Word.

My observations allow to state that such training is very needed and beneficial.

Internet is used in many ways in scientific research. It facilitates the work enormously during gathering data, literature searching, and writing publications.

Gaining the knowledge on new information technology has to go hand in hand with gaining the knowledge on new possibilities of information retrieval which are needed for scientific research and another tasks. When we observe an overspread of information, it is very important to be able to selective searching of information. The huge progress in the development of information technology which is observed in the several years, makes me optimistic about the future. Many facilities became outdated in a relatively short time, such as diskettes, audio and video cassettes, typewrites, television sets, and many others. On second side we see new technological gadgets appearing on the market, such as i-pads, touch-pads, tablets, consoles etc. which make the access to knowledge and information much easier. What will be the next step? We can't imagine it. Maybe cosmos space will be penetrated?

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SUPPORT OF YUGNIRO MISSION AND PRIORITIES VIA INFORMATION TECHNOLOGIES

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Abstract

Current trends in information management, implemented within the institution specialized in marine research, are studied. Participation in various international projects, which enable more digital materials from the institution to be easily accessible and, the other way round, more external data to be fully retrieved, is thoroughly considered. YugNIRO results as the ASFA National Partner of Ukraine are presented in relation to the FAO Secretariat recent requirements on submission records with regard to full text access and timeliness. YugNIRO activities within the CEEMaR e-Repository are shown as the initiative for storage, conservation and global access of the institute's born-digital and digitized collections. Transition from the library local catalog to e-catalogs uniting several aquatic libraries, visible and accessible online, is discussed with the Union Catalog of Serials (IODE Project by the ODINECET Group) as an example.

Keywords: data management, open access, e-repository, e-catalog, international projects, research institutions, library

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The increase of created and collected data, occurred in the 20th century, resulted in the necessity to launch specific "information search systems" related to the quick and reliable search of the requested data and providing access to them.

Professional data management under conditions of drastically developing information technologies is an actual task nowadays. Its successful decision will give us an opportunity to obtain extra advantages due to accumulation and efficient management of information and technical resources. The result will be evident: optimal implementation of any activities within the organization is to be 100% achieved.

Considerable circulation of huge information volumes in today's society demands both strict selection of the requested information in any specific academic sphere and its presentation in the form appropriate for the user. All that will mean scientific research and analytical processing of its content. All the users start their search from the popular search tools; however, the search task will be fulfilled in a peculiar way, revealing hundreds of links, which, unluckily for the users, have nothing to do with what they were eager to receive.

Data management includes collection, description, standardization, storage, critical analysis and usage of information, created by a certain organization while conducting its own activities

and accumulating outside data, which, if generated in one, gives enormous potential for decision-making.

Aquatic Sciences and Fisheries Information System (ASFIS) was established by the Food Agriculture Organization functioning under the aegis of the UNO. ASFIS is based on the FAO statutes, which regulate the main tasks of FAO. This is how the FAO defines its statistical and information activities: “FAO is the only intergovernmental organization formally mandated by its constitution to undertake the worldwide collection, compilation, analysis and diffusion of data and information in fisheries and aquaculture. The compilation of accurate, relevant and timely data in a standard form facilitates monitoring, comparisons and analyses of status and trends that are essential to underpin the responsible development of the world's fisheries and aquaculture sectors and the sustainable utilization of the resources. It requires intensive international collaboration and cooperation, an area in which FAO plays a central role. Since its inception, the FAO Fisheries and Aquaculture Department has built up statistical databases that are publicly accessible. The data is provided by FAO Members and verified from other sources wherever possible. The reliability of the analysis based on the data, and the quality of the advice to which it gives rise, depends on the reliability and quality of the data itself. To this end the FAO seeks to continue supporting and strengthening national capacity in the collecting, analysis and use of accurate, reliable and timely data. In this respect the FAO has a unique role in supporting the management and development of the aquaculture and fishery sectors.”

ASFIS is one of the largest, or probably the largest from the existing in the world specific information systems, aimed at dissemination of the fishery information as well as other biotic and abiotic processes in the water. ASFIS is a valuable multi-scale international information system with various ways of information support.

Currently the system unites 67 partners (4 of them are the UNO organizations (FAO, IOC, UN/DOALOS, UNEP), 11 International Partners, 51 National Partners, and one Publishing Partner – ProQuest). All of the members provide a highly developed search system.

YugNIRO as the National Partner from Ukraine has open access to the database and obtains the right to provide outside organizations within the country with minimal data from the database, which was established in the agreement between FAO and YugNIRO. YugNIRO is assisted by the national network of the Collaborating Centers, which started joining since the year of Ukraine’s membership in ASFA – 1995:

1. Southern Scientific Research Institute of Marine Fisheries and Oceanography, YugNIRO (Kerch) – National ASFA Partner (Coordinating Center)

2. Institute of Biology of the Southern Seas, IBSS (Sevastopol) – Collaborating Center (Inputting Center)
3. Institute of Zoology, IZ (Kiev) – Collaborating Center (Inputting Center)
4. Kerch State Marine Technological University, KGMTU (Kerch) – Collaborating Center (Inputting Center)
5. Marine Hydrophysical Institute, MHI (Sevastopol) – Collaborating Center (Inputting Center)

The first three centers have been operational for the last 18 years of the network formation. The latter two institutions do not take a direct part in the ASFA activities; nevertheless, they have launched their own institutional e-repositories, which is a great help for the inputters while processing their articles, making abstracts submission and providing links to their full-texts.

During the period of 1995-2013 the total number of submissions, prepared by the YugNIRO, IBSS and IZ's specialists has made up 3140 inputs. All of them are thoroughly checked by FAO and sent to ProQuest (former CSA). At least 200 abstracts are at the final processing stage. The last ASFA Board Meeting took place in June 2012 in Oranmore, Galway, Ireland. This intersessinal period is going to finish by the end of September 2013, when the ASFA members gather for the next ASFA Meeting in order to discuss important agenda items such as timeliness and volume of the records sent to ProQuest, support of links to the full texts, digitization projects, and software developments (conversion tools for the greatest full-text aquatic e-repositories OceanDocs and Aquatic Commons are among the agenda key points).

During ASFA Board Meeting in July 2010, FAO representatives as well as member states discussed a number of issues on the agenda and came to conclusions, which changed the selection and order criteria for the database population. The FAO Secretariat recommended to all the member states to select as prior "grey literature" at the fullest volume possible, providing the data with open access and a URL/handle, based on any chosen e-repository.

Initiated by the ODINECET Group, the CEEMaR e-repository proved to be a solution in the implementation of the assigned requirements. We gladly joined the project, which engaged a number of marine libraries from the research and academic institutions of Bulgaria, Croatia, Poland, Russia, Latvia and Ukraine. With the first articles deposited, we immediately felt the results: step by step the status of the YugNIRO was increasing, our scientists became recognizable, their works and developments – promoted. The idea of open archive for better preservation purposes and scientific heritage popularization was at once given a start.

For the YugNIRO its participation in the CEEMaR means:

1. Global access to the scientists' own and accumulated data;
2. Electronic environment for the remote users;
3. Marine research advocacy;
4. Access to the previously hidden "grey literature";
5. Long-term preservation (a new server has been purchased recently, it is now on the final stage of installation, that is why we could not provide an appropriate preservation level for the born-digital documents till present).

For our researchers CEEMaR gives an opportunity of

1. Centralized archive of their research (both current and earlier ones);
2. Increasing influence and recognition of himself or herself;
3. Increasing influence and recognition of his or her institution;
4. His or her getting involved into a number of corresponding projects.

The meaning of CEEMaR for the scientific community will not be discussed here. It is as considerable as the one of the Aquatic Commons or OceanDocs, because it is specialized in the very specific area of the World Ocean and daily accumulates the data necessary for the researchers of the Central and Eastern Europe Region. The influence of e-science in the ecological sphere should be emphasized nowadays, and the CEEMaR can be a good example.

CEEMaR clearly meets the international requirements to the open access regulations. The data are uploaded voluntarily; the data acquisition is done for free. One of the further steps in the CEEMaR software development is going to be harvesting by the main marine e-repository, functioning on the DSpace platform – OceanDocs, which will be a step forward in the CEEMaR growing rating.

YugNIRO joined the CEEMaR under the motto of providing open access to the information for the benefit of readers worldwide with the help of information technologies. For the time being we have deposited 6 volumes of the YugNIRO Proceedings (1998-2012) and 6 volumes of the YugNIRO Conference Materials (2002-2012), which seems rather fruitful work for the institution with very limited budget. Some of the articles uploaded were scanned; some of them are born digital. We are thankful to our administration for understanding the leading information tendencies and allowing us to deposit the material with no embargo or any other restrictions: the data become visible when the volume is signed for publishing.

Thus, the digitization process is of high priority in our institution; however, we have to apply for grants from funding agencies, because we have neither human resources nor budget to cope with all the volumes we have produced for 90 years since the YugNIRO foundation. According to our digitization plan, we intend to upload the most valuable documents at the

library's disposal, such as rare books, serials published in the first half of the 20th century, ANTCOM and NAFO Working Materials, theses etc. Here I would like to bring to your attention the quotation in the article "Science and Life", published in January 2013: "It is impossible to preserve all old documents, and it is not necessary. But what should remain and what should be thrown away? It is up to every single generation to decide. And it decides this problem within the limits of its possibilities and comprehension".

One more on-going project that we have joined recently was creation of joint e-catalog Union List of Serials, launched by the ODINECET Group. The reasons for that are many. Since 1922 the YugNIRO has accumulated a vast archive of paper materials, which have to be structured, classified and catalogued. All the current developments in such library activities as cataloguing bring up the issue of e-catalogs, or machine-readable cataloguing. These two definitions have already been made familiar to anybody related to e-resources. Nowadays e-catalog is a library catalog, functioning on-line and accessible to the readers. Some experts characterize e-catalogs as bibliographic databases of the library: a unity of bibliographic and lexicographic databases with a set of software applications, which provide new possibilities of search to compare with traditional ways in the physical library.

A modern e-catalog (Union List of Serials serves as a good example of that) consists of three parts ranked in order of importance: bibliography, authority, and circulation data of the document.

The traditional card catalog developed at the end of the 19th century, has proved to lose up to 30% of the useful information for readers. After 150 years of using a card catalog librarians felt the need to change the format. It is relevant especially nowadays, when publishing even power point presentations on the web becomes very actual.

In this report we are going to analyze the possibilities of a library, participating in the development of the project, which will make us break the most conservative part of librarianship.

Currently the catalog includes 128 serial titles, stored in the physical archives of 20 marine libraries of Bulgaria, Latvia, Croatia, Ukraine, Russia, Estonia and Poland. Due to the fact that the project functions for a couple of years only 12 of the participating libraries have been operational so far.

At the present stage the partners are conducting the activities on addition of the new titles and identifying the existing ones in the e-catalog. The lists of new serials from each library will be checked by the site administrator, corrected if necessary and added to the system. A manual in English and Russian languages on how to work inside the catalog has been provided for the

work convenience and stimulation. There are still some issues to be discussed within the ODINECET Group:

1. Creating a unique inputting format; this will regulate the order of the input data (native title, English title if any, transliterated title, city, publisher etc). The format is recommended to meet the citation standards as far as possible.
2. Agreeing on the sole transliteration system (discrepancies in it may lead to unsuccessful search).

In YugNIRO the experience of workflow with the Union list of Serials is the following:

The librarian compiles the list of serial titles, which have not been added to the catalog yet. The range embraces both holdings in the rare collections, starting from the 1860s, and current subscriptions, collected during the independence period. The marine information manager is in charge of the inputting process, editing the titles present in the list, and dealing with the site administrator on various important issues.

The lists of three libraries from Ukraine, Croatia and Latvia have been prepared to be added to the e-catalog so far, they are at the final stage of check and soon the new titles will be visible on-line. On the whole, the activities results of each of the participating libraries can be assessed as satisfactory with the Ruđer Bošković Institute making the record number of inputs.

So, the mechanism of working with the Union List resembles the never-ending and circulating library process and consists of three stages:

1. Each library prepares its own list of the titles that lack in the system.
2. The site administrator updates the Union List each time the new list arrives.
3. The libraries-members edit the newly appeared serials with their holdings.

Thus, the system remains open for editing records and adding holdings almost all the time, which gives the participants an opportunity to change gradually from the library card format to the on-line cataloguing.

When the Union List is finished with the Pilot version, its advantages will be as follows:

1. It will unite scientific archives of 8 states, open access to information on holdings and collections of 20 libraries, which will make the reader refuse starting his search at random via the world popular search tools such as Yandex or Google.
2. Finding the same holding in several library archives, the reader can choose from where to request it, depending on the location.
3. There won't be neccessary to purchase costly software for e-cataloguing, which is only used within one institution.

To sum up, new data on our accessible holdings and archives can be open to any user, the Union List of Serials is on-line to serve for remote users. In future it is going to provide the most complete and accurate information on each collection item, but we have to contribute to a very scrupulous work. Being one of the leading library trends, this e-catalog will form conditions for the main information principle – open data for open community.

DIRECTION OF DEVELOPMENT OF THE ELECTRONIC LIBRARY AT THE RUSSIAN FEDERAL RESEARCH INSTITUTE OF FISHERIES AND OCEANOGRAPHY: INFORMATION TECHNOLOGIES IN CONTEXT OF LIBRARY SERVICES

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Abstract

The report is devoted to the stages of development of VNIRO electronic library and effective use of information technologies in service of users, as for example, virtual exhibitions. The report will touch upon a subject of creation of a museum of rare books not only on the basis of the library, but also in a mode of a virtual project. In addition, copyright and information security issues remaining still up-to-date will be discussed.

Nowadays, VNIRO library is a powerful information complex with its activities aimed at on-line information supply for all research processes. It has become a centre of knowledge distribution and intellectual communication.

For its contribution to science promoting in the field of fishery and use of creative methods and technologies the Scientific and Technical Library of VNIRO was awarded with a Diploma at the World Ocean 2012 exhibition.

There are five divisions in the library:

- service (reading hall and lending library);
- national and international book-exchange;
- library - information work and organization of catalogues and electronic library;
- scientific and bibliographic division;
- rare books collection (we are trying to organize a museum of rare books).

From the history of the library:

- 1933 – foundation of the library together with foundation of the first Marine Institute;
- 1976 – the library became a central depository of the Institute's scientific papers;
- 2001 – creation of library electronic catalogue;
- since 2002 – a member of EURASLIC/IAMSLIC and participation in international library projects regarding marine environment;

- 2008 – creation of electronic library;
- 2012 – beginning of transformation of the rare books collection into a Rare Books Museum.

The most important task of any library is to keep and lend the documents which are interesting to readers. Development of computer engineering and information technology has created prerequisites for development of new approaches to solution of this task, namely, the conversion of information in digital form, creation of new types of documents, provision of new ways of management and data exchange.

The VNIRO electronic library is integral part of the VNIRO holdings. Further development of the library improves the service of readers. Landing electronic copies of the most valuable editions of VNIRO and other fishery institutes prevents the originals from physical wear out. Creation of the electronic library allows raising the quality and efficiency of readers' service. Creation of a repository collection of electronic copies of printed originals has become possible.

From 2008 the Scientific and Technical Library of VNIRO has been developing a Russian field repository "RuFIR", containing a collection of Russian scientists' papers. At present the RuFIR repository has a database of full-text documents including more than 3655 copies.

In 2008 service equipment, software and hardware were purchased. Two options of programme shells were chosen. One of those options, the so-called working programme is used only for information introduction and administration work. The other option is a programme for distant service for users.

After authentication the respective fields such as bibliographic data, document type, key words and short review are offered for input of data. The program offers special fields for input of information in foreign languages. The final stage of data input is attaching a file of the electronic version of the document. The work with this programme is divided into several stages. At each stage there is a chance to return to the former stage to correct the data. At the final stage of work a complete verification of the input data and its correction is carried out.

Three persons are working on creation of the database for RuFIR repository: programme: administrator, operator-bibliographer and an operator on digitization. The programme shell Manakin as one of the DSpace versions is used as an interface for the users of the database. Monographs, collections of scientific papers of Russian leading research institutes, conferences materials, authors` abstracts of dissertations and the main branch journals in the VNIRO library holdings are presented in the electronic library database, RuFIR repository. All authors` abstracts of dissertations and scientific papers of VNIRO throughout the years

are included. From our point of view authors` abstracts are equivalent to the articles in journals regarding their scientific value.

At the moment we are working on input of rare book collection. The importance of this work is saving the old books as many of them are worn out due to their age. Moreover, some of these books are not available in the largest library of Russia – the Russian State Library (RSL). A decision on creation of a Rare Books Museum on the basis of our library was made in 2012. All rare books which are converted into electronic content will be stored in the Museum. Readers will be able to use the electronic copies of the rare books. Thus, we can preserve the rare books.

There are essential problems regarding authors` rights in Russia. Owing to the peculiarities of the authors` rights legislation (the 4th part of the Civil Code of the Russian Federation), a written agreement with the copyright owner is required for input of papers in the library. That is why the administrator must make sure that there is such a written agreement with all copyright owners before allowing open access to the articles. Acquiring of such an agreement is hard and difficult process since some authors` rights are owned by relatives. This issue has not been solved in Russia yet. Most of the libraries offer their documents only for reading to comply with the copyright. Our library also has such a problem. At present we have found a way out, it is possible to use electronic documents only in the form for reading (special functions of the programme have been set up). This means that a virtual reader cannot copy and print a given text in open access, but can only read it.

Since 2012 the staff of our library has begun organizing virtual thematic exhibitions and exhibitions of new acquisitions. Seven virtual thematic exhibitions were organized at the website of VNIRO, such as: “Knipovich Nikolay Mikhaylovich” (devoted to his birthday jubilee (1862-1939), “Fishery and science during the Second World War”, "The sea and the river respect the fisherman: an exhibition-excursion”, “Seascape and fisheries in painting”, "Yablonskaya Ekaterina Adamovna. Hydrobiologist. (Centenary)”, “The proceedings of VNIRO. Notes stories” and “Spoils of the Great war”.

The virtual exhibition “Seascape and fisheries in painting” took part in the internet exhibition at the annual international conference “EVA-2012 Moscow: Information society, culture and education”. Now the library is working on various projects, for instance, one of them will be devoted to ex-libris of the books in VNIRO library holdings. We are planning to create a virtual museum of rare books.

We would like to submit a proposal to include such or similar virtual projects to the association IAMSLIC/EURASLIC, for instance the recently organized digital library of cultural and scientific heritage "Europeana".

Europeana is a centralized catalogue of cultural heritage which keeps and presents the so-called “surrogates" of information objects to the users. The surrogates include a field with the main data of digital objects necessary for the search in the language, in which the information was presented by the supplier. The fields are followed by small display of an “icon” of the art work, book or document cover, some audio or video episode and reference to the main source – full description and full display of the picture or photo, the full text of the book, audio-file or digital film. The main "full text" resources remain on the sites of information sources – museums, libraries, archives. The user having a look at the surrogate take a decision whether he would apply to the site holder of the main resource and to have an access to the full text of the book, film, audio-record or to a large display of the picture, drawing, photo or document.

Thus, digitization of information resources is the prior trend in VNIRO library activities. Possible mutually efficient cooperation with CEEMaR and integration of scientific works can provide an open access to the scientific potential of VNIRO, promotion of scientific studies, wider distribution, growth of the index of scientific citing and scientists’ prestige respectively.

DEPLOYMENT OF A CURRENT RESEARCH INFORMATION SYSTEM (CRIS) FOR INTERNAL DISCLOSURE OF RESEARCH OUTPUT

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Abstract

In 2012, INBO decided to manage and disclose its research information by integrating its research output (papers, reports) with several other relevant data sources. To this purpose, an implementation project with Atira (Denmark) was started to deploy PURE as Current Research Information System (CRIS). This CRIS is based on the 'Common European Research Information Format (CERIF)' which allows a straightforward data exchange among European organizations. The system, however, also offers several useful services to INBO's own scientific and managerial levels. This paper describes the practical implementation of PURE at INBO, and its main characteristics.

Introduction

The research output of a scientific organization such as the Research Institute for Nature and Forest is diverse and encompasses scientific papers, projects, expertise and representations through networks and during scientific events. Next to that, it offers its researchers an array of external sources of scientific knowledge.

Until recently, separate systems were employed for each of those data sources. INBO's Information Centre adopted the Integrated Marine Information System (IMIS) to manage and disclose its own scientific papers as well as its journal and book collection. A procedure was operational for the deposition of each scientific paper by the researchers. Advisory reports are the output of a specific INBO business and the generation is supported by the INBO Advice Application (IAA). Metadata of projects, both administrative and scientific, are stored and managed in a Project Information System (PIS) based on JIRA. And people-related data is stored in the INBO People Application (IPA) and managed by the HR Department. Less attention has been drawn to information on the participation to networks and commissions, and to scientific events which was held in a local Excel file while information on the researcher's expertise was lacking all together.

This multitude of separate systems rendered a number of processes suboptimal, not in the least the time-consuming input of INBO's research output by the Information Centre's staff. Another critical drawback was the lack of an integrated disclosure of the above mentioned

information. In 2012, INBO looked out for a solution that tackled the above mentioned problems. In this process, we focused on implementing European standards such as CERIF in order to also enable an easy exchange of information internationally. For a number of reasons, both financial and functional, the application PURE (Publication and Research) of the Danish company Atira was selected.

In this paper, the data models supporting PURE are explained, the implementation project described and the major functionalities of this tool discussed.

Models

CRIS and CERIF

Since 1991 the Common European Research Information Format (CERIF) has been developed with the support of the European Commission and has been recommended to EU members for the storage and exchange of current research information (Jörg, 2009). In 2000, the custodianship of the CERIF standard has been transferred to EuroCRIS (Current Research Information System), a non-profit organization that maintains and further develops CERIF, and promotes its use.

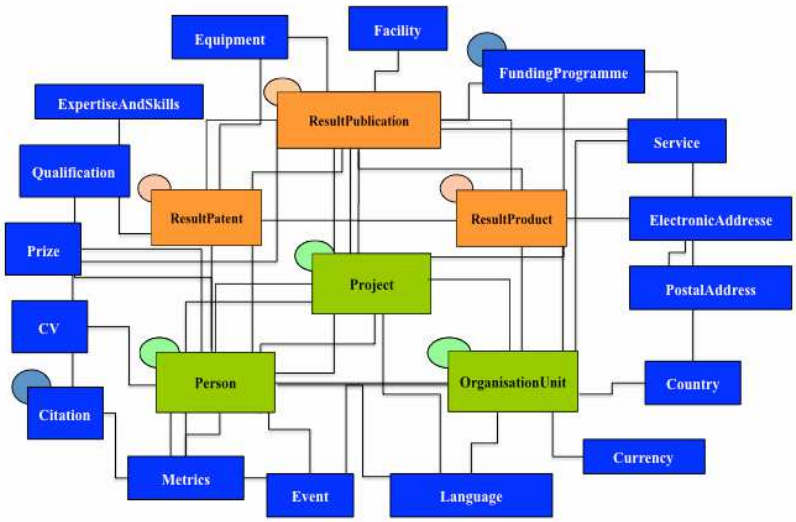

Fig. 1. CERIF entities and their relationships

Membership benefits of EuroCRIS are (i) professional contacts in the CRIS field and exchange of expertise, (ii) support in inquiries for expertise related to organizing and managing research information or building research information systems, (iii) the use of the

model for organizing scientific information, (iv) the opportunity to participate to Task Groups of one's interest, and (v) participation to conferences.

In recent years, the CERIF model has been implemented by some organizations for their own use. Other organizations developed a commercial CERIF-based CRIS such as PURE from Atira and Converis from Avedas (Russell, 2011).

CRIS activities and developments in Europe are tightly interrelated with CERIF. The physical CERIF model is a relational database model available as SQL scripts based on common ERM (Entity Relationship Model) constructs (Chen, 1976).

Research Information Systems (RIS) are built upon conceptual domain models to capture the meaning of the domain by structuring it into entities and their relationships (Wand & Weber 2002). The following entities make part of a traditional RIS: Person, Project, Organization, Publication, Patent, Product, Funding, Equipment, and Facility (see Fig. 1). An entity is represented by attributes and holds relationships with other entities. The relevant entities, their attributes and relationship descriptions as such, compose the model of the domain for setting up a particular information system (Jörg, 2009). In this business, *Current* Research Information Systems is preferably used to indicate their dynamics and timeliness (Jeffery & Asserson, 2006).

Atira and the open business model

Atira is a Danish software company, with a business domain in Research Information Management. It released PURE in 2003, now licensed for 47 900 research staff at 75 organizations (references) in 8 countries. (Atira, 2013)

Atira develops data models on three different levels, all based on CERIF: European, national and local (institutional). Local data models are based on the national one, and national data models are derived from the European one. Each of these data models is customized according to requirements specific of its level, although changes are usually minor. Costs related to the customization of a local data model are financed by the local institution, unless changes prove useful for the other organizations within the same country. In the latter case, costs are shared by the different organizations, or a central national organization. (Alroe, 2008)

At a national level, organizations that implement PURE are organized in a PURE User Community (PUC) that meets at regular intervals and discusses topics of mutual interest. This is also the forum to maintain and extend the national data model collaboratively. In Belgium, this PUC is moderated by the governmental agency Energy, Science and Innovation (EWI)

that also holds the licenses and maintenance contract (of all Belgian PURE users) with Atira. INBO is member of the Belgian PUC.

Belgian PURE data model

As mentioned before, any metadata model can be implemented in PURE: actually, an integral part of PURE's application architecture consists of a comprehensive technical framework. This allows a research institution to acquire PURE and still specify its own metadata model according to institutional needs and demands.

The High School of Ghent (HOGent) carried out the first implementation project of PURE in Belgium and consequently designed the Belgian data model. Of a larger number of entities, INBO uses the following: research output (publications), projects, activities, users, journals, publishers, organizations, persons, and events.

Implementation project and interfaces with other data systems

The PURE implementation project at INBO

Prior to an implementation project with Atira, a contract is generated based on requirements by the costumer gathered during earlier encounters. Both a (per day) price and planning are included and the project is started once the contract is signed by the costumer and returned to Atira.

The implementation project started with a two days start-up workshop at INBO. The purpose of this workshop was to discuss the major aspects and phases of the implementation project in order to make sure that both parties have a solid and common understanding of the project. During this workshop, PURE was selected as authoritative data source for some data, while authoritative data sources beyond PURE were identified. In the former case, a legacy import was worked out, in the latter a synchronization action.

The subsequent main part of the project was divided into iterations, each lasting two weeks exactly. Each iteration had a clear objective e.g. to get a specific part of the data integrations up and running. Each iteration started and ended with an online status meeting during which the past iteration was evaluated and the next one prepared.

A development server in Atira's secure hosting facility at Copenhagen was employed during development but the final application was moved to a final hosting facility in Belgium at the end of the project. Throughout the project INBO relied on a local PURE instance. INBO reviewed each iteration – for example parts of the data integration – in this private

environment. This offered the opportunity to reflect on data and functionality and to provide feedback.

Formal testing was done in two stages at the end of the project: an *Acceptance Test* confirmed that all functionalities were delivered as agreed upon by both parties in the contract, and a *Service Level* test confirmed that the system performed as agreed with full data loads, many simultaneous users, etc.

Integration with internal information systems

At INBO, PURE serves as integration platform for the institute's research output. As such, it would not replace extant businesses with an own management unit and possibly specific functionalities or e.g. administrative information that did not fit the PURE data model. In these cases, authoritative data sources were maintained but provide relevant data to PURE via regular synchronization actions (daily). Those data sources are:

- INBO People Application (IPA): data on employees of INBO (SQLserver database, Access front-end);
- Project Information System (PIS): project data (JIRA configuration);
- INBO Advice Application (IAA): data on advisory reports (SQLserver database, Access front-end).

On the other hand, as PURE only holds research output produced by INBO, it could not be used as repository for the (external) journal and book collection of the Information Centre. As a result, metadata on scientific publications were split into INBO papers that were imported into PURE (as a Legacy Import), and non-INBO publications that were further managed with Koha.

During a unique Legacy Import all INBO publication metadata were migrated from the IMIS application to PURE which thus takes over the exhibitor role of publicly available publication metadata records and possibly related full text documents. All imported content from the IMIS repository was properly related to other primary entities in PURE such as Persons and Organizational Units. Authors of publications were matched to the relevant Person records in PURE originated from IPA. Full person's names were synchronized into PURE. During name matching, we therefore used the last name of persons in PURE (from IPA) to retrieve a set of possible matches with the author's name. We screened the list of possible matches and created initials based on their first name. The initials created were compared with legacy data

initials. If one set of initials were found identical this was considered a match. If more than one set of initals were found identical, the match was considered unresolved.
Examples:
Van Waeyenberge, J. - Van Waeyenberge, John: match.
Stienen, E.W.M. - Stienen, Erhard Willhelm Max: match.
Van Waeyenberge, J. - Van Waeyenberge, Karen: no match.
Van Waeyenberge, J. - Van Waeyenberge, John and Van Waeyenberge, Jonas: no match.

All relevant data were added to a list with predefined fields (views) and Atira created a single run job based on the information we gave them to appoint the data from the view to the right fields into PURE. We also had to map the right views to the correct template types in PURE. The view PU1 holds all articles that appear in Web of Science, so they had to be mapped to template type 'A1: Web of Science article'.

The INBO PURE user application

The PURE application provides 5 tabs: Editor with the main data families (research output, projects, activities, etc.), Master data (holding lists of master data lists), Personal (with overview of personal achievements, and CV generator), Dashboard (not used yet), and Administrator (only accessible by the System administrator). Only one tab (Personal) is provided to the INBO employees, which contains all data families that are considered relevant (research output, projects, services, master theses, and activities).

Research output

At INBO research output holds the predefined templates "book", "contribution to book", "contribution to journal", "contribution to conference", "doctoral dissertation", etc. Each of those templates consists of template types that are created by INBO and correspond to the series or newsletters published by INBO (see Fig. 2).

Research outputs can be added manually or imported. Outputs are added manually by choosing the correct template. Users can change templates mid-submission if necessary, which avoids any unnecessary loss of data.

Full-text files are uploaded manually or imported when available in the source. The files are stored on the file server and can be set for available publicly, within the campus or not publicly available. Availability is set independently of the bibliographic metadata, which allows to be publicly available without the full text. The metadata in PURE is OAI (Open Access Initiative)-compliant. PURE incorporates both an OAI data providing mechanism and

an OAI data harvesting mechanism. The latter makes it possible to harvest metadata in bulk from external OAI sources, the former allows to harvest metadata by other systems from PURE. This is the case for INBO publications that will be harvested by DRIVER (Digital Repository Infrastructure Vision for European Research) Both the providing and harvesting mechanism of PURE provide metadata in Dublin Core format, CERIF-XML format and MODS.

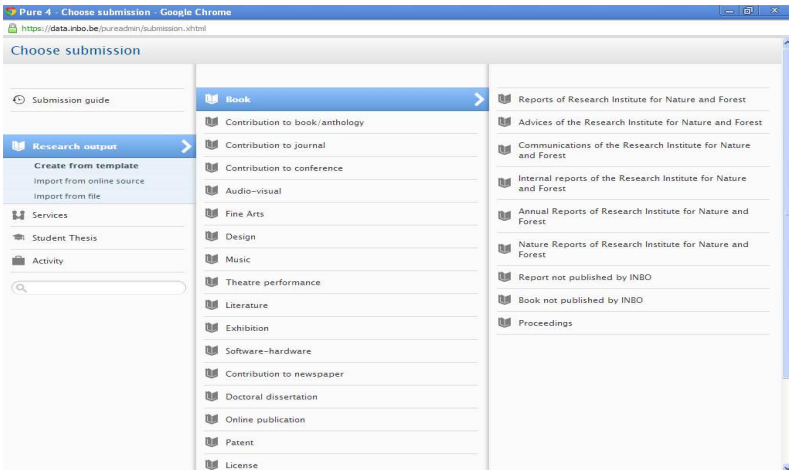

Fig. 2. Screen view of Research Output in PURE

Import of research output metadata can be carried out in three ways. A first type of import uses online sources like PubMed, Arxiv, Web of Science, etc. It must be taken into account that most of these sources require a license. Automatic author matching is part of this functionality; an algorithm analyses certain variables to make the right match between the authors in the imported record and the corresponding people's entree in PURE. Journals and publishers present in PURE are also matched, and if not yet in PURE, they are created automatically.

A second type of import can also be done from BibTex or RIS-files which are supported by a wide range of reference software (Reference Manager, Endnote, Refworks) and research databases (WoS, Scopus, etc).

A third way to a import output automatically is by author scanning. The scans are based on variations of the researcher's name and that of his organizational unit. This setting is made on the profile page of the researchers where variations of their name used per source can be modified.

PURE is using the Sherpa RoMEO API to display Open Access information about journals in PURE's user interface. The journal's RoMEO colour is shown in the publication template as soon as the journal is added. The user is encouraged to add the full-text. If the colour is GREEN, the full-text will then go directly online. If the colour is not green the researcher can set the correct embargo date (Atira, 2013).

PURE's workflow engine allows different roles. At INBO the researcher has the role of personal user and is able to create and send research output for approval. The Information Centre staff has the role of validator of these inputs. This makes it possible to enrich the data and to check the outputs on data quality. A research output at INBO is only validated if it contains a full-text document.

The Information Centre staff is responsible for the handling of (potential) duplicate publications. Facilities are available to specify the search by certain fields, by entity, by time periods, etc. The application offers both references from which the user selects one to delete. Relationships to other contents from the deleted ones will be moved to the remaining one. When merging duplicates, the user is shown the duplicates set in a special user interface where he or she can choose which parts of each duplicate will be retained - i.e. the author list from one duplicate, the abstract from another. Upon executing the merge, all relations to other content from all former duplicates are placed on the one unique publication that is the result of the merge.

Activities

Participating to a network or scientific event is registered in the entity 'activities' of PURE. Each researcher registers his own activities. The relationship to the event or organization (network) is made by the researcher. This information can be used both by the HR department (e.g. funding of activities), the management (e.g. evaluation procedures, governmental reporting, etc.) and the individual researcher (CV).

Master data

Master data are managed by administrators. An administrator can be made responsible for the entire PURE application or for a certain part (administrator of organizations, administrator of persons, etc.). Most of the master data like journals and publishers are managed by the Information Centre staff.

Classifications in PURE are fixed values usually displayed in a drop-down dialogue. The term "Classification" also applies to the concepts of controlled vocabularies and other types of taxonomies to be used in PURE. An example of a classification could be 'employment state', 'type of organization', 'publication state', etc.

Persons are not equivalent to users. For a person to become a user, at least one role must be assigned to him. Roles can be added and modified by Administrators. They can also lock a user account, create temporary guest accounts, and do other user management.

Reports

Reporting applies to every entity in PURE. Numbers and percentages of research outputs by types, discipline codes, internal authors and author rankings, peer review status, relations to events, relations to projects, relations to grants and funding bodies, publishing status, etc. can be generated.

Each report can contain multiple lists, tables, analysis results and graphs. Reports can be scheduled to run at a specified date and time and can be shared.

One of the major features of PURE is the integration of the metadata by creating relationships between entities (such as publications, activities, projects, or funding) which, obviously, allows extended reporting.

Personal overview

Personal is the researcher's main screen. It offers an overview of all personal content of the researcher including publications, activities, and projects. This page also provides overview of tasks, messages, favorites, curricula and recent actions, and gives access to PURE's online help system. The individual researcher can decide to make his profile publicly available, entirely or in part.

The profile itself holds information such as names and coordinates, name variations, titles, job functions, profile photos, scientific areas (controlled keywords; see also Classifications, above), attached documents, etc. Most of the information is already available from the integration with the HR system. Only non-synchronized fields can be enriched.

CV

In the personal section a researcher can create and manage his own CV which comprise content from PURE about the researcher’s publications, projects, activities, co-authors, etc. He only needs to add a section specify what content it should display – e.g. publications – and chooses a specific setting for that section. In addition to such content sections, researchers can also add free text sections and headlines in order to form a complete CV.

Sections with content will automatically be updated whenever new content (e.g. a new publication) is added to PURE. This ensures that CVs are always up to date. CVs can be published online on the PURE Portal, again, with updated content.

Further, it is possible to make certain restrictions/adjustments for sections with content. A section showing publications, for example, can be set to only show specific types such as

peer-reviewed articles. Sections can also be set to "Static" if the researcher wants the section to show particular outputs.

Researchers can view all of their relationships to other content graphically (this view is available throughout the application).

Dashboards

The Dashboard is an empty space where users can add Widgets as they like from a wide selection.

A widget displays a small graph or text-based piece of information as the result of a preprogrammed query on the PURE database. Examples are "Top ten cited researchers", "Top 10 most cited research outputs", "Activity types by year", etc.

Data access rights are controlled per users in the same way as reporting. Users cannot use the dashboard to access data they do not have appropriate rights to.

Finally, widgets, which hold limited resume-style information, offer the unique option of turning into a report at the click of a single button. The report can then be set to include more details about the specific area.

Administrator section

In this section the global administrator can handle most system management tasks which include: integration between systems, auditing log files, controlling sessions, managing all user's interface text, system messages and field labels, running special jobs; supporting users remotely, etc.

INBO website and PURE portal

All content in PURE, with "public" status is available from a built-in Web-Service API. The API makes it possible to disclose PURE content in the INBO website. Even other INBO web applications can retrieve data from the Web Service API, which makes it possible to use PURE as an integral component of the local Service Oriented Architecture. For sustainability reasons, however, INBO decided to harvest each separate authoritative data source through web services to feed its corporate website, including PURE for e.g. research output.

The PURE portal will be deployed operational for internal use only i.e. as tool to assign the right person (research expertise) to new research projects/outputs or research questions on the basis of his expertise.

Conclusions

The implementation of a CRIS at INBO enabled INBO to optimize and to simplify the processes for generation of research output. Both the researchers and library staff will no

longer use different tools for deposition, management and disclosure of INBO publications. Input has been facilitated through clearly defined template types and the import jobs from external sources.

The integrated disclosure of research output, advisory reports, project information, activities and personal data gives the researcher the opportunity to create a global overview of all his performances.

Pure provides an accurate, single source of information on the researcher's performances and the extended reporting facilities make it a very interesting tool for research managers to make decisions on future research projects.

Since 2008, the FRIS (Flanders Research Information Space) research portal (EWI, 2013) maps information about scientific research in Flanders. The CERIF standard allows INBO to respond to the commitments to transfer INBO-data to the Flanders Research Information Space.

The implementation project did reveal some technical issues that did not fit INBO's IT architecture. Data from three external data sources (IPA, PIS, IAA) are retrieved in PURE by synchronizations (ETL via views) instead of web services. The deployment of the tool on the tree extant environments (development, test, production) also proved suboptimal, e.g. because intermediate new versions of the tool cannot be skipped during upgrading. These shortcomings, however, are compensated by a number of advantages such as the PUC which can work as a permanent forum to address issues and change requests to the company and the use of JIRA as ticketing system. And Atira managed the implementation project in a very professional and committed way. Overall, INBO thus still firmly believes in PURE as corporate CRIS.

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INTEGRYB – CREATING AN INSTITUTIONAL REPOSITORY

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Abstract

The aim of the presentation is to describe a huge program called INTEGRYB, which has been realized in the National Marine Fisheries Research Institute. The institutional repository, that constitutes an important part of the program is described as well as the importance of INTEGRYB for Polish and international marine science and economics.

Keywords: INTEGRYB, National Marine Fisheries Research Institute, repository, IT, digitization

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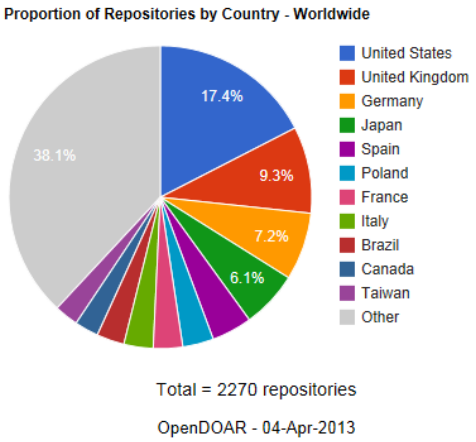
The term *repository* has become very popular lately and now is often used as a synonym of another definition – *digital library*.

Following the *Wikipedia* we can repeat that *repository* usually refers to a location for storage, often for safety or preservation.

Today *repository* is used also referring to various digital holdings, that is to a virtual space.

Repositories are usually divided into national, institutional, personal, data repository and subject ones.

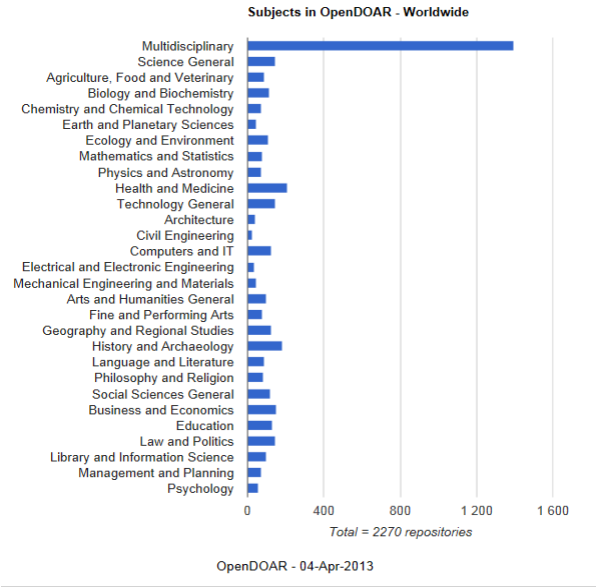
The following graph shows the world repositories by country in April, 2013



Most of repositories are registered in *ROAR – Registry of Open Access Repositories*.

The following map shows registered repositories worldwide and the programmes they were built with. (ROAR data for 2012) (Karwasińska E., M. Rychlik. 2012)

The repositories contain various subject collections of documents and the following graph presents them.



National Marine Fisheries Research Institute, the oldest scientific Institute dealing with fisheries, has just started to build its own repository, that will contain, in a digital form, the entirety of documents connected with scientific researches of the Institute, and also the library collections and all kind of administrative documentation created in our firm.

Since 2012 NMFRI has realized a huge program called *INTEGRYB (INTEGRFISH*). It will be an ICT and organizational system, which will improve research efficiency of NMFRI and enable to build a research platform for an ecosystem fisheries economics management. This

project is co-funded by European Union and consists of several tasks. It will be built with Oracle solutions as far as software is concerned.

Nowadays, fishery is a very dynamic branch of a national economy where changes are quick and all this demands very quick decisions. As a result of *INTEGRYB*, in NMFRI an efficient system of fisheries economics support will be introduced, by creating a new research platform, modernization of research devices and a quick exchange of research results in Poland and abroad.

The project will be realized by scientific departments of NMFRI, Scientific Information Center and our research vessel *Baltica*.

The direct beneficiaries of *INTEGRYB* will be, inter alia, researchers, students, pupils, Polish and other institutions of fisheries management, scientific institutions, fisheries administration and also fish consumers who will be able to get information on marine food safety.

INTEGRYB will be dedicated to such research fields like: Baltic, Vistula Lagoon, Pomeranian Bay, the areas of coastal fisheries, Oder Estuary and, last but not least, the areas of Polish deep sea catches (North Atlantic, Antarctic and South Pacific).

As a part of INTEGRYB project a new server room has been built this year. It consists of servers and disc storages of high efficiency parameters. The IT heart of INTEGRYB has two Oracle SPARC T4 servers working in a cluster system. It means that if one server is out of order the second one continues its tasks. The INTEGRYB software is a so-called *open architecture* that allows to process data originating from various sources.

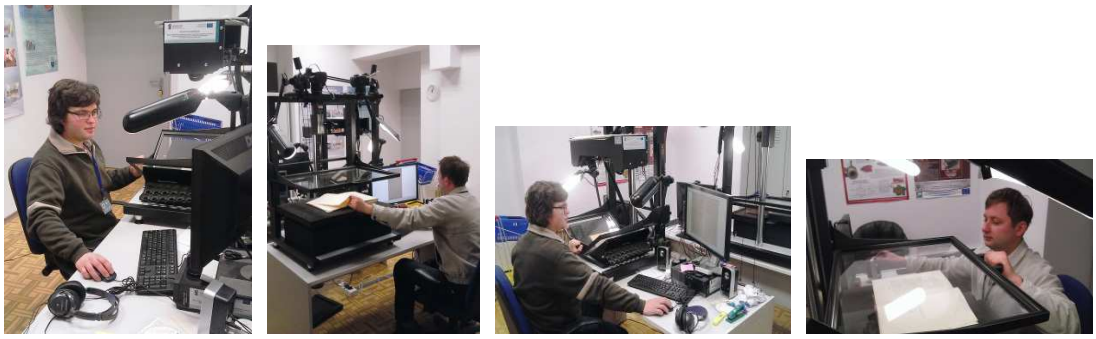
The second step of IT modernization will be introducing a new IT system to *Baltica* and creating new, very modern research stands.

The next step will be connected with creating one, efficient and coherent database from various historic resources (biological, oceanographic, meteorological etc.). This database will be constantly supplied with new data.

A very important matter will be the introduction of the Institute management supporting system – an electronic document circulation.

The most important part of INTEGRYB for our Scientific Information Centre is creating an Institute repository. At the end of last year two digitizing posts were organized. Each of these posts consists of an archetype device for scanning AERIOS DuoScan and a computer. Its software controls scanning and saving scans onto disc. AERIOS DuoScan enables scanning of different materials (also big, thick books) without destroying them. The scanning process is supported by AERIOS software that makes possible framing, positioning, colour correction and saving files as JPEG, TIFF, PDF. Canon digital reflex cameras provide colour and white-

black scanning with 200-600 dpi resolution. AERIOS DuoScan is adjusted to various sizes (max A-3).



Digitization must go on.... (Photos: M. Grabowska-Popow)

An emerging institutional repository, besides digitized library collections, will hold all kinds of documents created in the Institute, not only scientific, but also administrative ones. The documents will be described with 150 different metadata. Regarding library collections the metadata will be described by Dublin Core.

Presently, the library collections are being digitized. We have started from the oldest, Polish and foreign books and series. First of all, the books and periodicals edited by our Institute are scanned. With such materials there is no problem with copyright laws. Scientific studies of our researchers, written recently, are digitized obligatory and the researchers have signed an agreement with the Institute directorate, which transfers proprietary copyrights to our Institute. That is why we can also digitize their older studies, conference materials, edited by the Institute and all kinds of documents created during their institutional work.

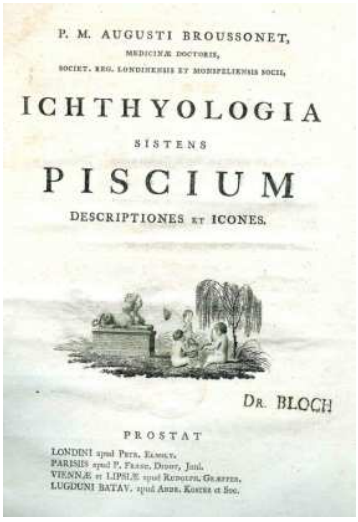
The digitized materials are saved in JPEGs and later Oracle program will change them into searchable PDF.

An access to the repository will be limited by a definite protection level, depended on a document type. As far as library collections are concerned, unlimited access will be possible to such documents with clear copyright laws. In the same way so-called *orphan works* will be made accessible. According to *European Parliament legislative resolution of 13 September 2012 on the proposal for a directive of the European Parliament and of the Council on certain permitted uses of orphan works* publicizing and digitizing of *orphan works* is possible only for non-commercial public institutions of culture and only after diligent verification if there are not any owners of copyright laws.So, in our repository the readers will have an open access only to a part of the library collections. All doubtful matters connected with copyrights laws will be solved by the Institute solicitors.

The digitizing works in our Institute have lasted for several months. So far, over 150 000 pages have been digitized.

We have started with our two oldest books dated to XVIII century.

The first dates to 1782 and is entitled *Ichthyologia*. It is written in Latin and was published in London. It describes flatfish, gobies, clupeids and other kinds of fish. The text is accompanied by beautiful copperplate engravings.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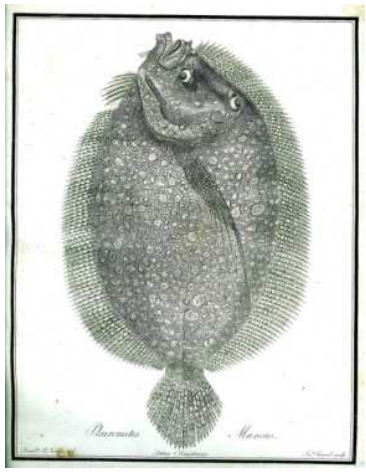
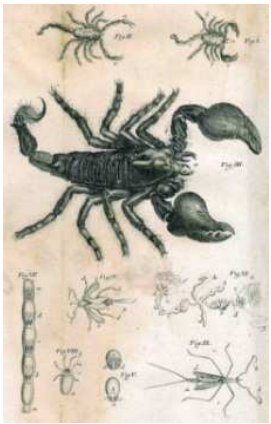
LONDINI apud PETR. ELMSLY.
PARISIIS apud P. FRASC. DIDOT, Junl.
VIENNÆ et LIPSIÆ apud RENGGER, GRAEFFER.
LUGDUNI BATAV. apud ANDR. KOECHE et Soc.



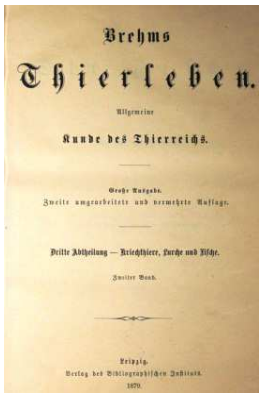
The second book dates from 1752 and is the oldest volume in the library.

It is entitled *Bibel der Natur worinnen die Insekten in gewisse Klassen vertheilt, sorgfältig beschrieben, zergliedert, in saubern Kupferstichen vorgestellt, mit vielen Anmerkungen über die Seltenheiten der Natur erleutert, und zum Beweis der Allmacht und Weisheit des Schöpfers angewendet werden* and contains descriptions from the animal kingdom with a focus on insects. It is also illustrated with wonderful copperplate engravings, just as the previous volume.



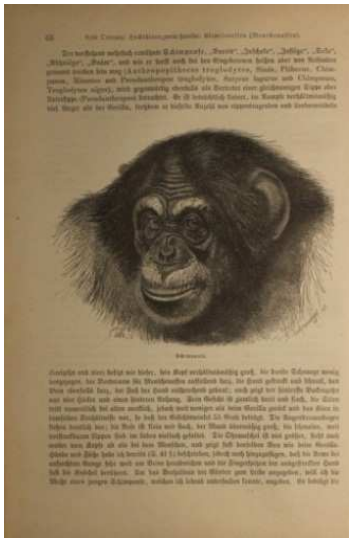
Next came digitizing of so-called *keys*, very important for students and researches.

We started from voluminous work of well known German zoologist, Alfred Edmund Brehm, entitled *Brehms Tierleben*. Owning to it Brehm got a nickname *Animal Father Brehm* (*Tiervater Brehm*). The following pictures show the author, a title page and one of many illustrations.



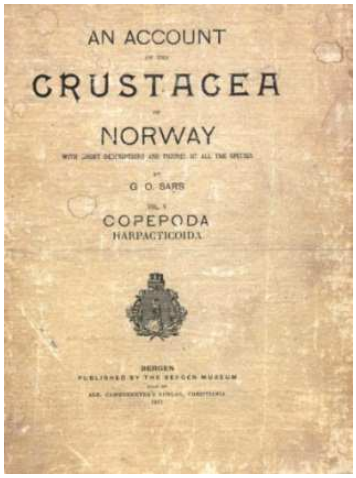
The next key to digitize was *Das Tierreich*, edited in Berlin in 1897-1929.

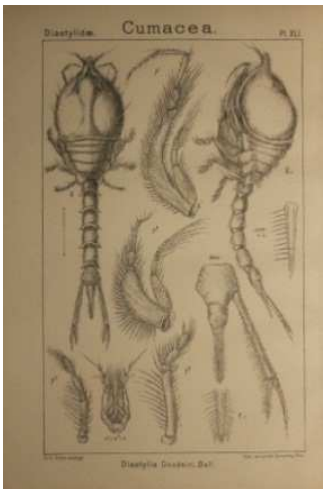
51 volumes were digitized, each of them illustrated.



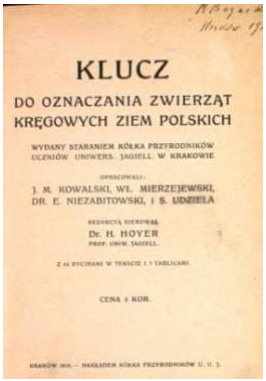
Describing all of the interesting digitized keys from our library's collection would require too much time and space, so I'll restrict myself to just one more foreign example and two Polish ones.

The first is the study of Georg Ossian Sars, Norwegian hydrozoologist, one of the first crustacea researchers, entitled*: An account of the crustacea of Norway*, from 1903.

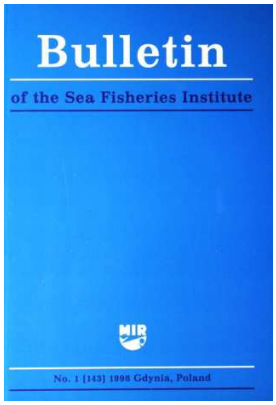




The second ones are: *Fauna słodkowodna Polski (Polish freshwater fauna*) from 1936 and *Klucz do oznaczania zwierząt kręgowych ziem polskich* (*Key for Polish vertebrates identification*) from 1910 (see below).



As I have mentioned above, digitization includes all Institute publications, starting from the earliest ones, the periodicals of the NMFRI precursor, The Marine Station in Hel, which published two periodicals, *Prace* and *Biuletyn* (*Papers and Bulletin*), during the Interwar Period. Later this publishing effort was continued under the title of *Bulletin of the Sea Fisheries Institute in Gdynia*.



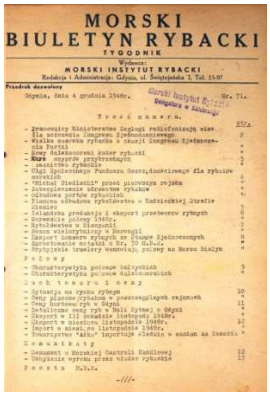
The scientific articles published by the Marine Station in Hel in *Prace* (1932-1938) appeared in various languages – English, French, German, and Polish (always accompanied by a summary in French). The large number of students who request to view them or order photocopies of them attests to the value of the articles published in it.

Equally as popular is the station's second publication – *Biuletyn*, which, in addition to scientific notes and communications with summaries in foreign languages, contains annual reports for the station. The *Biuletyn* was published in 1937-1938, and was continued after the Second World War – 1949-2005.

The other digitized periodicals also date to Interwar Period or to the postwar years and they were edited by our Institute or belong to the *orphan works*.

One of these was *Ryba* (Fish) which first appeared in 1929 (from 1932 it was the journal of the Sea Fisheries Institute Association).

The others you can see below:



Exceptionally interesting in our library apears the collection of German periodicals and series, that we can and should digitize.

The leading holding in the collection is the annual reports of the *Commission zur wissenschaftlichen Untersuchung der deutschen Meere in Kiel*. This series from the late nineteenth and early twentieth centuries includes not only descriptions of marine organisms

and research devices, but it is also a rich source of illustrations and unique maps of the Baltic and North seas. For example, the article by Hensen from 1875 presents a variety of maps that depict German marine fisheries from this period. Details include all of the localities, even the smallest, inhabited by fishermen, the number of vessels deployed, and fishing grounds.


Wissenschaftliche Meeresuntersuchungen

herausgegeben

von der

Kommission zur wissenschaftlichen Untersuchung

der deutschen Meere in Kiel

und der

Biologischen Anstalt auf Helgoland.

Im Auftrage des

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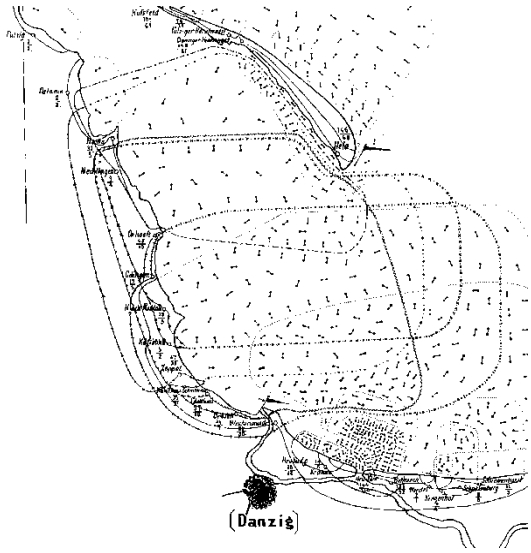
Państwowy Instytut Naukowy Gospodarstwa Wiejskiego w BYDGOSZCZY Morskie Laboratorjum Rybackie w HELU

Kiel und Leipzig.

Verlag von Lipsius & Tischer.

1902.



Describing all of the interesting digitized materials from the library's collection would require too much time and space, so I'll restrict myself to just a few sentences summarizing the works connected with an institutional repository.

Digitization will last at least till the end of 2019 and as far as library collections are concerned, we will still digitize the oldest, the most interesting publications and those with clear copyright laws. The scientific and administrative departments will enlarge the repository stocks with archival and current documents.

I do hope that our contribution to the repository improve INTEGRYB project, and by this way will widen the knowledge on sea, fisheries and environmental sciences.

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Karwasińska E., M. Rychlik. 2012. Budowanie repozytorium instytucjonalnego. (w:) Zarzadzanie treścia w bibliotekach cyfrowych – ryzyka prawne, problem prawa autorskiego. Warszawa 2012, s. 29-51

Grabowska-Popow M.2009. Biblioteka Naukowa Morskiego Instytutu Rybackiego w Gdyni – rys historyczny i wybrane przykłady cennych kolekcji (w:) Polskie biblioteki i ośrodki informacji naukowej z zakresu rybactwa oraz ich udział w międzynarodowych systemach informacji I stowarzyszeniach. Olsztyn, IRŚ, s. 9-29.

THE BLACK SEA BIODIVERSITY. IFR'S ACTIVITIES AND PROJECTS

Elitsa Petrova, Daniela Klisarova

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Abstract

Pollution leads to changes in the natural conditions of marine water through introduction of non-sea substances - increasing concentration of natural components above the permissible limits, increasing the concentration of radioactive waste, transportation and distribution of harmful organisms and others.70% of the pollutants are imported from the six Black Sea countries and the remaining 30% are imported in Black Sea via the Danube. Large amounts of pollutants flowing into the Black Sea, the lack of strong currents and poor water circulation deteriorate extremely the environmental conditions. Eutrophication of water affects negatively all organisms and leads to a drastic reduction of biodiversity. Since the 50s of the last century, the activity of the Institute of Fish Resources (IFR) in Varna has been focusing on studying the Black Sea ecosystem, the dynamics of fish species considered valuable from economic point of view and biodiversity. In this regard, IFR is working on a number of national and international projects.

Keywords: Black Sea, marine biodiversity, activity

Institute of Fish Resources is a governmental research Institute, established in 1932. Since the early 1950s IFR has been the only marine Institute operating regularly in the Bulgarian Black Sea waters. Currently the accumulated data gives possibility to conclude on major shifts of the Black Sea ecosystem in the long-term run.

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70% of the pollutants are imported from the six Black Sea countries and the remaining 30% are imported in Black Sea via the Danube. Large amounts of pollutants flowing into the Black Sea, the lack of strong currents and poor water circulation deteriorate extremely the environmental conditions.

Eutrophication of water affects negatively all organisms and leads to a drastic reduction of biodiversity. Water pollution, which is the main reason for massive phytoplankton blooms in the sea leads to a drastic reduction of biodiversity of benthic organisms.

Eutrophication together with the emergence of predatory snail *Rapana venosa* in the Black Sea in the 50s of the last century irreparably damaged the population of bivalve mollusks

along the Bulgarian coast. The most affected is the black mussel *Mytilus galloprovincialis*, whose stock in the 70s-80s was almost completely destroyed as a valuable reserve and sea water bio-filter.

Distribution and development of the invasive ctenophore *Mnemiopsis leidyi* in the Black Sea at the end of 80s caused catastrophic reduction in the stock of industrially important fish species.

Since the 50s of the last century, the activity of the IFR has been focusing on studying the Black Sea ecosystem, the dynamics of fish species considered valuable from economic point of view and biodiversity.

IFR consists of Aquarium, Laboratory complex, R/V *Prof. Al. Valkanov* and Library.

The Aquarium is the oldest one at the Balkan Peninsula established in 1932. The official opening of the museum take place on July 17, 1932 and from that day on it has been a center for promotion of the Black Sea flora, fauna, its hydrological and hydrochemical properties and peculiarities. The Aquarium consist of two parts: living exposition and two halls with exhibits and stuffed animals, herbariums, shells, fossils, pictures and tables.

IFR carries out constant monitoring in the coastal and open sea area along the Bulgarian Black Sea coast. Monitoring is performed all the year-round with the R/V *Prof. Al. Valkanov*.

The library owns more than 30 000 scientific books, manuals and periodicals in the field of marine biology, hydrochemistry, oceanography, ichthyology, fishery, fish industry, mariculture, aquarium matters, etc. The library keeps unique old books and maps, published in the XIX century. It receives new journals and proceedings from other marine institutes in Europe, America and Asia. The library works with an electronic catalogue, which is a part of the united librarian net of Bulgaria.

The first edition of the IFR *Proceedings of the Marine Biological Station in Varna* was issued in 1933. It continues to be issued so far as *Proceedings of IFR*.

As a member of EURASLIC in 2006 our library received a grant to purchase a computer equipment to further develop its activity. That helps us to be a part of the national and international library networks.




RESEARCH ACTIVITIES OF IFR 2000 – 2012:

1. **Agricultural Academy Projects – 11**
2. **Projects of various ministries – 5**
3. **International projects – 11**

Agricultural Academy Projects:

- Dynamics of the trophic base and commercial fish stock in the Black sea – monitoring;
- Population dynamics of the fish species in the Black Sea monitoring;
- Genetic investigations on commercial fish species (sturgeon, turbot) in connection with their use and biodiversity;
- Investigations on ballast water of research vessels for determination of the presence of invasive species;
- Impact of pollution on the biodiversity of marine organisms along the Bulgarian Black Sea coast;
- Investigations on non-fish marine living resources with economic importance.

Projects of various ministries:

- Conducting expert survey for establishment of national network for monitoring of the Black Sea dolphins in Bulgaria and elaborating adequate measures for mitigation of the adverse fishing impact during their feeding and reproduction migrations. 2008-2009, Ministry of Environment and Water;
- Hydrobiological monitoring of marine water as a part of the national program for monitoring of surface water. 2011, Ministry of Environment and Water;
- Ensuring access and adaptation to cultural history and sports facilities with international, national and regional significance. Ministry of Labor and Social Policy;
- Identification of sturgeons in the Danube and Black Sea. EAWAG, IAD and IFR;
- Improvement of the scientific background for ensuring sustainable development in the Black Sea coastal zone – pre-feasibility study. BSEC project;
- Building a high-tech research infrastructure for carrying out complex researches in the Black Sea, using R/V *Prof. Valkanov*. Ministry of Education and Science;

- Utilization of marine biological resources and derived products as ecological supplements to nutrient blends for birds and ruminants. Ministry of Education and Science.

International projects:

- daNUbs – Nutrient management in the Danube basin and its impact on the Black Sea (V FP);
- EUROGEL (2003-2005) – EUROpean GELatinous zooplankton: Mechanisms behind jellyfish blooms and their ecological and socio-economic effects (VI FP);
- Black Sea Scene – Black Sea Scientific network (VI, VII FP);
- IASON-International Action for Sustainability of the Mediterranean and Black Sea Environment;
- SAFE-SME Action for the Environment in New Member States and Associated Candidate Countries;
- ComFish – Strengthening the impact of fisheries related research through dissemination, communication and technology transfer (VII FP).

In recent years the management of IFA has given priority to the application of theory into practice. The majority of IFR scientists participate as consultants in projects under the Structural Fund "Fisheries and Aquaculture". A lot of our experts are included in working groups of different ministries and organizations exploring biodiversity, invasive species, etc.

ANCIENT COASTLINES OF THE BLACK SEA AND CONDITIONS FOR HUMAN PRESENCE

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Abstract

The subject of ancient coastlines of the Black Sea and the conditions for their habitation, also known as the theory of geo-catastrophic events in the newest history of the basin, is very topical and has triggered lots of discussions. Convincing evidence was obtained at the beginning of the 1980s of the presence of an ancient coastline in the Black Sea, located at depths of 90-120 m and aged about 8 thousand years BC. There is undisputable geologic and archeological evidence, provided by the research work of the Institute of Oceanology, of the catastrophic events that took place about 8000 years ago. The Bulgarian and the European scientific communities were surprised by the theory of geo-catastrophic events in the Black Sea. Their initial reaction was a complete rejection of the hypothesis, however after the publishing of the book of the American geologists William Ryan and Walter Pitman *"Noah's flood"* and later on the book of the Bulgarian researchers P. Dimitrov and D. Dimitrov *"The Black Sea, the Flood and the ancient myths"* the turmoil calmed down. The arguments in favour of the theory were very convincing to be shortly rejected. It should be taken into account that the new scientific discoveries are pioneering and their purpose is to change history and disprove the centuries-old ideas of the place of the most ancient human civilization.

Keywords: geocatastrophic events; stratigraphic scale; sea level; geo-catastrophic events; the Flood

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The subject of ancient coastlines of the Black Sea and the conditions for their habitation, also known as the theory of geo-catastrophic events in the newest history of the basin, is very topical and has triggered lots of discussions.

Convincing evidence was obtained at the beginning of the 1980s of the presence of an ancient coastline in the Black Sea, located at depths of 90-120 m and aged about 8 thousand years. BP. It was also established that more than 8000 years ago the Black Sea was a freshwater lake. There is undisputable geologic evidence, discovered as a result of the scientific research work of the Institute of Oceanology, of the catastrophic events that took place about 8000 years ago. It is also complemented by archeological evidence:

- An old coastline of the basin, located at modern depths of 90-120 m and aged more than 8000 years, was discovered.
- A direct consequence of the catastrophe was the formation of deep water organogenic – mineral sediments – sapropels on the Black Sea bed as a single and continuous horizon over a large area of the basin space about 7500 years ago BP.

- The hydrogen sulfide contamination of the basin occurred about 7500 years ago BP.
- The presence of Neolithic and Eneolithic necropolises along the coast as well as the oldest crafted gold in the world (necropolis of Varna) is evidence of the human habitation of that region.
- Discovery of ruins of an ancient settlement and artifacts pointing to human presence along the old coasts in the valley of Paleo-Provadijska River.
- The genetic investigations show that an ancient human population originated in our lands and migrated about 7800 years ago to Europe and Asia. The time of the settlement of these people in different places coincides with the time of the occurrence of the geo-catastrophic events in the Black Sea.
- The analyses of the spore and pollen spectra of the studied region show presence of cereals during the mentioned period evidencing the beginning of agriculture in the region.

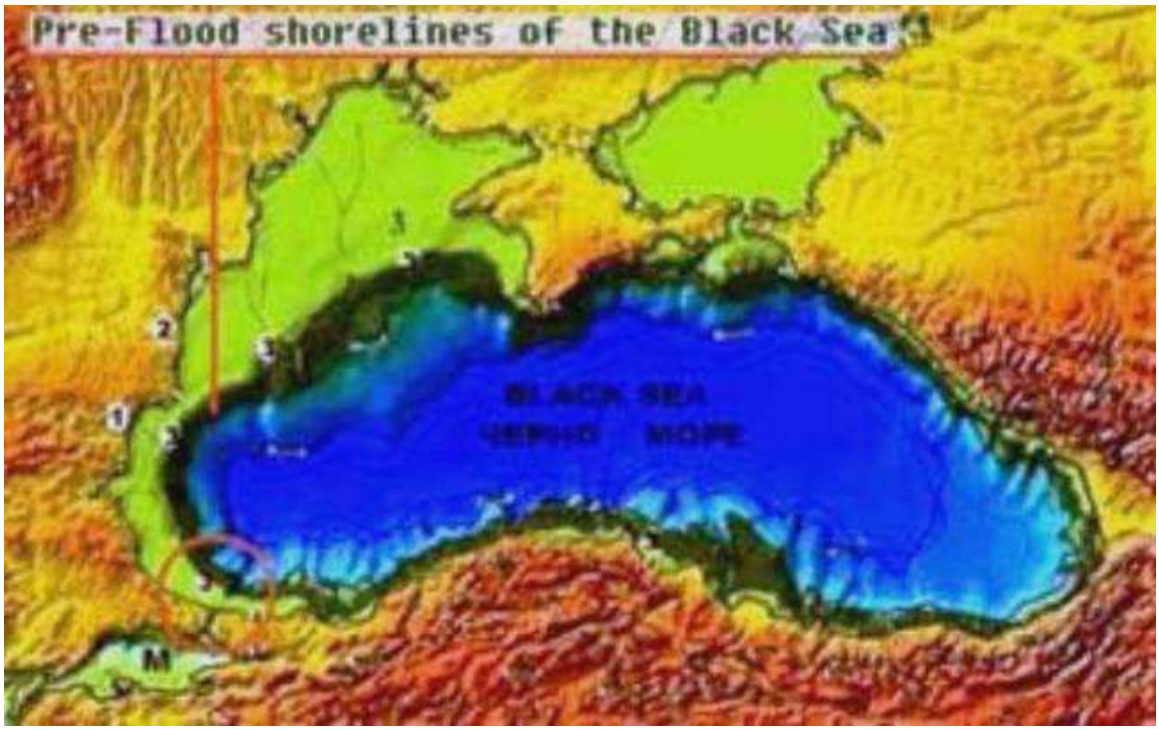
The above arguments allow us to presume that the areas of the ancient coasts were inhabited by people who laid the foundations of an ancient civilization.

The Bulgarian and the European scientific communities were surprised by the theory of geo-catastrophic events in the Black Sea. Their initial reaction was a complete rejection of the hypothesis, however after the publishing of the book of the American geologists William Ryan and Walter Pitman “Noah’s Flood” and later the book of the Bulgarian researchers P. Dimitrov и D. Dimitrov “The Black Sea, the Flood and the Ancient Myths” the turmoil calmed down. The arguments in favour of the theory were very convincing to be categorically rejected. Numerous expeditions were performed in the Black Sea and in the Mediterranean Sea to revise the theory. An international project IGCP-521 (UNESCO), uniting the efforts of European scientists, was created to carry out a critical analysis of the existing arguments in support of the theory of the geo-catastrophic events in the Black Sea. Unfortunately, apart from the Bulgarian-American expeditions performed in 2001 and 2002 to search for remains of ancient settlements and necropolises in the region of the old coasts under the NOAH Project, most expeditions were intended to refute the existing geologic and oceanographic evidence of the geo-catastrophe in the Black Sea.

It should be taken into account that the new scientific discoveries are pioneering and their purpose is to change history and disprove the centuries-old ideas of the place of the most ancient human civilization.

The sites examined fall within the region of the paleo-valley of Provadijska River and Bay of Burgas. There are numerous rock banks which might be possible sites of ancient metallurgy

and salt production. They are poorly studied at the present stage. Especially interesting is the Cocketrice sand bank which was probably formed over the centre of an ancient Neolithic settlement; Chimovo bank, from the surface of which was extracted copper slag – an evidence of metallurgic activity. Further studies will lead to a re-assessment of the role of Proto-Bulgarian and ancient European civilization in the world culture and heritage. Basics of a theory able to change the existing concepts of the most ancient human history and civilization, which originated along the banks of the ancient Pontic Lake will be laid using a complex of interdisciplinary research tools in the sphere of oceanography, geology, geoarchaeology, archeomythology and genetics.



INFORMATION SUPPORT TO FISHERIES AND AQUATIC SCIENCES IN LATVIA: RECENT DEVELOPMENTS

Natalja Kondratyeva

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Abstract

The report describes the recent activities of the Scientific Library at the Fish Resources Research Department of the Institute of Food Safety, Animal Health and Environment „BIOR" in Riga, Latvia. Nowadays the Scientific Library is one of 45 subject libraries in Latvia. The Library's collaboration with the Institute of Library Development of the National Library of Latvia has been developed in the recent years. The Library's activities within Ocean Data and Information Network for European Countries in Economic Transition (ODINECET) projects are presented. Participation of the Library in Central and Eastern European Marine Repository (CEEMAR) e-Repository in 2008-2012 in order to perform storage and global access to scientific publications and abstracts of Thesis of the Department's (the former Baltic/Latvian Fisheries Research Institute) researchers resulted into creation of two digitized collections. The Library continues to develop an information support to researchers, aquaculture specialists and students using its own holdings, open access Internet resources, national and international interlibrary collaboration.

The history of the Scientific Library at the Fish Resources Research Department of the Institute of Food Safety, Animal Health and Environment „BIOR" is closely linked with the history of institutions conducting fisheries research as well as marine and inland water investigations in Latvia. The Library was founded in 1945 within the Latvian Department of the All-Union Research Institute of Marine Fisheries and Oceanography (VNIRO, Moscow). Since 2010 accordingly the latest changes in affiliation the Library is Department's library within the Institute "BIOR". Library's collection includes books, serials and periodicals devoted to fisheries and aquatic sciences, as well as scientific reports of the Department (the former Baltic and Latvian Fisheries Research Institutes) by 1948. Nowadays the Scientific Library is one of 45 subject libraries in Latvia. Unfortunately, like other subject libraries within the institutions not associated with Universities and the Academy of Science of Latvia, the Library of BIOR until now has had no opportunity to join the information system and electronic catalogue available online. In 2012, in order to introduce our Library's value to the community and to ensure the possibility for specialists to find useful information, the Library's profile was set up within the Latvian Libraries Portal (www.biblioteka.lv). The Latvian Libraries Portal, launched in 2008, includes profiles of all libraries in Latvia, both

public and special ones. The work of the Library was presented in the Annual Reports of the Information and Data Division of the Department in 2010 and 2011. Changes in holdings and statistics on the main Library's services are annually reflected in the Information System "Culture Map" (www.kulturas.karte.lv). In 2011-2012 the Library continued its current work on organizing library collections (rearranging old books and periodicals on the shelves, removing valuable materials from archival room to other premises) and creating electronic lists of new books and periodicals. In 2012 a very good news for the Library was the acquisition of new foreign monographs (on fish biology, fisheries and aquaculture) as a result of participation in the project based on the financial support of the Fish Fund of Latvia (9 books, 1020 €). In 2012 the Library also participated in FAO organized exhibition sending three books devoted to fishing and fishing gears and manuals for fishermen, edited in Riga, Latvia.

During the last two years the Library has increased its access to electronic journals (in 2011 and 2012) and databases (ScienceDirect and Scopus have been available in the Institute since 2012). The WebPages devoted to the Scientific Library and open access resources on marine and aquatic sciences have been regularly updated on the website of the Institute "BIOR" (www.bior.gov.lv). The most valuable materials in electronic format are placed on the Department's server to be available to researchers through the local network (as the materials of Annual Science Conferences of International Council for the Exploration of the Sea (ICES).

In 2012 the second digitized collection of publications was completed and put into CEEMAR (Central and Eastern European Marine Repository) e-repository. Unfortunately, at present taking into account the limited staff and budget the Department has no opportunity to set up its own repository, and we are grateful for the opportunity to increase access to digital collections due to the participation in ODINECET network and CEEMAR e-repository. For the time being we have deposited two collections: "Abstracts of Doctoral Thesis of the Baltic Fisheries Research Institute's researchers (1956-1985)" and "Publications of the Baltic Fisheries Research Institute's researchers (1975-1990)", in joint serial edition "Fischerei-Forschung/Fischereiliche Untersuchungen der DDR und der UdSSR in der Ostsee".

In 2012, the above mentioned subject digital collections ("Abstracts of Doctoral Thesis of the Baltic Fisheries Research Institute's Researchers (1956-1985)" and "Publications of the Baltic Fisheries Research Institute's Researchers (1975-1990)") were deposited to the database "Digital collections of memory institutions in Latvia". In 2011-2012, in order to arrange Library's own list of rare editions to be digitized for the proposed project ECETRA, the

Library participated in searching for digitized resources available online, as well as for the rare books in ODINECET region libraries. The Library's old edition collection consists of about 700 issues (mostly serials and periodicals in German, and also some valuable serials in Latvian). In order to participate in the Project a list of 29 rare editions in German and Latvian (1896-1939) was prepared. Unfortunately, in 2012 the Project did not start, but in any case this work such as exploring the collection, shelving and re-shelving of old and rare books, serials and periodicals was important. We should continue with the creation of the complete electronic list of these editions. In coming years it is necessary to establish priorities and continue with the digitization of scientific publications and other Library's materials, including "grey literature". For example, the serial edition "Statistical Bulletin of Marine Fisheries of Latvia" (1925-1936, edited by V. Miezis) is of great priority to be digitized next as it consists of valuable data for the researchers analyzing population dynamics of Baltic fishes in middle- and large-scale.

In order to improve professional qualification in 2011 and 2012, the librarian participated in a number of workshops organized by the Training Centre of the National Library of Latvia. We are very grateful that the librarian had possibilities to participate in IODE OceanTeacher Academy Training Courses in Marine Information Management that have brought an important contribution for the improvement of the Library's work. As a result of attending the course "Preservation of Books and Other Media" in 2012, a "Preservation Plan for the Scientific Library for 2012-2016" was developed. We are still sorry about the lack of human resources necessary to do fundamental work, such as the creation of an electronic catalogue of complete Library's holdings.

The Library continues developing an information support to researchers and students using its own holdings, national and international interlibrary loans and searching the Internet resources, including open access repositories.

The Library is an institutional member of EURASLIC since 2002. Many requests of our scientists have been fulfilled with the kind assistance of EURASLIC members using the Interlibrary Lending Service through the Discussion List. This great benefit of the membership in EURASLIC has been highly appreciated by the researchers of the Department in the recent years.

2010-2012 REPORT OF THE SCIENTIFIC LIBRARY INFORMATION GROUP, THE ODESSA BRANCH OF THE A.O. KOVALEVSKY INSTITUTE OF BIOLOGY OF SOUTHERN SEAS (OBIBSS), NATIONAL ACADEMY OF SCIENCES OF UKRAINE

Olena Mykhalechko

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mey@mail.ru

Being incorporated into the scientific information group in 2005, the library of the OBIBSS is not an individual structural unit. Our creative team unites a junior research associate (MIM training participant), a librarian and two leading engineers who maintain the equipment. Two of them speak English, Spanish and Italian, and three graduated from the I. I. Mechnikov Odessa University which helps them to cope with the scientific information flow.

Presently, the group develops several trends:

- Arrangement of an effective scheme for registration, stocking and use of scientific and scientific and technical information (research reports, reprints, etc.).
- Preparation of bibliographic publications and informative advertisements promoting the scientific achievements of OBIBSS.
- Offering assistance in translation of scientific papers to be submitted abroad (e.g., international forums, conferences, meeting and periodicals) and communication aid during workshops and international conferences convened by OBIBSS.
- Providing timely notice about the dates and terms of upcoming conferences, symposia, meetings, etc.
- Exercising centralized supervision of paper work related with licenses, expert examination certificates, cover letters and other endorsing documents released under the aegis of OBIBSS.
- Offering technical support for visualization of biological material (mounts, preparations, etc.) and the conditions underlying industrial process technologies by means of digital photography and microscopy.

- Supervision and maintenance of the operational regime of the showing equipment facilities of OBIBSS.
- Hard- and software maintenance of the information engineering in OBIBSS.

Besides, our staff periodically offers consulting service to the scientists of OBIBSS interested in performing independent information search in Internet.

Our group is equipped with 4 computers, 2 printers, a scanner and a paper-binding apparatus. Access to Internet and to local network is available.

Along with the traditional paper catalog and printed works the library of OBIBSS offers an electronic catalog to researchers, graduate students, teachers and students showing interest in various aspects of marine biology and other aquatic sciences.

Since 2010 we have been systematizing the collection of electronic documents and books scanned earlier, namely 452 e-books, 55 synopses, 416 articles, altogether. The accumulated amount of e-literature and the continuous scanning required taking urgent measures, therefore a database was devised as a C/S application using web interface. In creating the e-catalog for OB IBSS advanced Internet technologies are used, underpinned by MySQL databases, PHP, HTML and JavaScript languages. The resulting product is ready for publishing on the Internet.

Presently, our e-catalogue offers text documents as 242 pdf files. For gaining general information about content, the user makes a search by using 1-2 key words. Searching through the catalogue is based on the author's name or the title of the book/paper. Results appear as a list attached to full-text files, which, on request, can be opened for browsing or downloading. The access to the catalog through the web directory interface of the institute's internal server facilitates the search.

In 2007 the library of OBIBSS joined the ODINECET project aimed at creating an institute's database (repository) of scientific articles and books written by researchers of the institute. After many years of input into the repository, 417 publication are available at www.ceemar.org.

In 2011 the scientific information group of OBIBSS took part in a preliminary to the project digitization of rare literature. Knowing that our library holds about only 20 rare books issued during the late 19th-the early 20th century, we explored other libraries, including Gorky Odessa National Science Library. Our efforts were rewarded by discovering 103 rare editions which discuss various aspects of the biology, chemistry and physics of sea. Regrettably, the project has not been launched for some reasons. Nevertheless, we go on digitizing the most

valuable and interesting publications because delivering the e-books to thirsty remote readers is a pleasure.

As a member of the international associations of libraries (EURASLIC and IAMSLIC) OB IBSS has got access to an international database, and a good chance to participate in the international duplicate exchange and interlibrary loan programs. For a year we have cooperated with the libraries of other marine research institutions, including those abroad, by exchanging the scientific information.

OBIBSS has a long term experience in implementing projects supported by the European Union. Since 2012, the scientific information group has been actively contributing to projects offered by the 7th European Framework Program, namely “Research and Restoration of the Essential Filters of the Sea REEFS”, “Development of a common intraregional monitoring system for the environmental protection and preservation of the Black Sea ECO-Satellite”, “Towards COast to COast NETworks of marine protected areas (from the shore to the high and deep sea), coupled with sea-based wind energy potential” (CoCoNet).

Providing a good working conditions for our users is also our ambition. Therefore, in the first half of 2012 the library premises were reconditioned; our personnel did its best to preserve the library stock intact. Over the second half of the year we returned the books to their place, arranging them in the alphabetic order and according to other library-specific criteria.

The library stock enlarges thanks to the acquisitions contributed by a variety of institutions, in particular “Naukova Dumka” – the publishing house in Kiev, by private contributors, and through the book exchange with the Institute of Biology of the Southern Seas (IBSS) in Sevastopol. Each year the library is subscribed to scientific periodicals funded by the state budget. A small part of new issues, some of them valuable and some of minor importance, are the publications presented by their authors working in the research institutes. New periodicals and books are regularly exhibited to readers in the library.

We intend to continue scanning of scientific literature in popular demand and to update and widen the electronic catalog and repository. Also, we welcome invitations to further promising and exciting projects.

RUĐER BOŠKOVIĆ INSTITUTE LIBRARY
INSTITUTIONAL REPORT 2011 – 2013

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Summary of Library activities from 2011 to 2013:

2011

During 2011 the Library had twice organized books exchange under the title "Take it or leave it". RBI employees could bring their used books which they don't need any more and exchange them for other books. During that action about 500 books were exchanged, and the rest of the books were offered as a donation to other libraries. This activity was very well accepted and liked by RBI staff.

The Library also continued to organize RBI Library Colloquia. Colloquia topics were broaden and chosen to be of interest not only to librarians, but also to RBI staff and the general public. During that year seven lectures were organized.

Library members participated actively in EURASLIC and IODE activities. Sofija Konjević and Marina Mayer attended the 14th EURASLIC Annual Conference in Lyon, France. Marina Mayer attended joint ODINECET/ODINBlackSea Workshop, September 12th-14th, 2011 in Sevastopol, Ukraine. Bojan Macan attended IODE MIM education course in Oostende, Belgium in November.

We also continued with KEKS educational seminars. Twenty one seminars were held in 2011 with 98 participants, altogether. Because of the great interest in KEKS seminars among Croatian librarians and research staff from other institutions, the Library is planning to offer KEKS seminars in future as a service for non RBI staff for a symbolic fee. Before doing so, new Library legislation should be accepted.

Work on Koha continued: we finished with barcoding of books which are not on loan.

In order to connect more closely and directly with online users, the Library launched a new service on its website called "Live chat" where users could contact librarians via chat software.

In 2011 a new Library Board of RBI was assembled. We have a good cooperation and communication with all members of the Board, which will help us solve some problems. In

coordination with the Board a proposal for new Library legislation was written which was sent to Institute's management for further processing.

Citation and bibliographic databases Web of Science, Scopus, Google Scholar, SPIRES and Current Contents were used for bibliometric analysis and in 2011 a total of 94 citation certificates for the advancement purposes were issued to RBI scientists.

In 2011 Library became a partner in its first FP7 project called *2nd Generation Open Access Infrastructure for Research in Europe – OpenAIREplus.* This project will build a 2nd Generation Open Access Infrastructure by significantly expanding the outcomes of the OpenAIRE project and, in addition, generically harvesting and indexing the metadata of scientific datasets in selected diverse OA thematic data repositories. The Project officially started on November 1st 2011 and would last for 30 months.

2012

In the period from May to the end of December the Library continued with books inventory (books on loan). During the inventory all books were marked with a barcodes that would ensure faster and automated process of books circulation in future. A total of 466 books were written off therefore 24 319 books remained in the library holdings. Due to Koha library integrated library system the inventory was carried out much easier than the one in 2006.

In 2012 the Library put the main emphasis on finishing the Institutional digital repository (FULIR) which was officially launched in October. It is still necessary to animate RBI scientists to input their work.

The Library continued to organize RBI Library Colloquia. During that year five colloquia were organized. Two of them had a special program:

- Jubilee 100th colloquium on June 13th – Since 1999, the Library has been hosting lecturers from Croatia and abroad, covering topics from information sciences, computer sciences, web and informatics, scientific communication and popular science. 100th colloquium was celebrated with special program which included ten short lectures. The main topic was new library services for new generations of library users, which attracted both colleagues from other libraries and RBI staff. RBI also supported and helped with organization of the colloquium.

- 102nd colloquium during the International Open Access Week on October 25th Program included a short lecture about Open Access in scientific publishing and official presentation of RBI institutional repository FULIR (Full-text Institutional Repository of the Rudjer Boskovic Institute) for the RBI staff.

The Library actively participated in the event "The Bošković – Tesla Synergy", organized by RBI in December to mark the 70th anniversary of Nikola Tesla's death. In parallel with a sculpture exhibition in RBI, the Library organized a small exhibition of books about or written by Nikola Tesla and Ruđer Bošković which were part of the Library's fund.

We continued with KEKS educational seminars. A total of twelve seminars with 83 participants were held.

The Library organized books exchange two times. The exchange in July was organized in the open (on the lawn in front of the first wing) and that idea was very well accepted.

2013

Due to technical problems with an old computer server, SEND (Electronic Documents Acquiring System) – our ILL online application has crashed down and we had to substitute it with temporary online ILL system with only basic functionality. It speeded up the beginning of work on new SEND, which had been planned and postponed for a few years due to time and informatics staff shortage.

The Library was able to get three new young employees for a period of one year. Two of them are working with our system engineer and one is working on library tasks. More library staff will enable us to finish more planned projects (for example, new SEND) and improve our services.

This year the manifestation called "RBI Open Days" was held on April 18-20. RBI Departments and laboratories presented their activities on 18 presentation points. Among them was the Library which participated by demonstrating library projects, activities and interesting educational online resources at the presentation point called "Pirates in the Library". The main topics of our presentation were copyright, Open Access, online piracy, Creative Commons… Besides this presentation of library activities, the Library was actively involved in organisation of the whole manifestation.

Library members are actively participating in EURASLIC activities: Sofija Konjević and Marina Mayer are attending the 15th EURASLIC Annual Conference in Varna, Bulgaria. In April Bojan Macan attended an IODE MIM education course in Oostende, Belgium. Perhaps there will be more meetings and activities to attend during the year.

This year we must try to push new Library Working Regulations, which should be accepted and confirmed by the RBI director, and should allow us to better organize Library's work and broaden its activities. Some of our services could be offered as library services for the public. Usual library activities will continue during this year (KEKS seminars, colloquia, book exchange, etc.).

INSTITUTE OF OCEANOGRAPHY AND FISHERIES IN SPLIT, CROATIA
LIBRARY REPORT

Ingrid Čatić

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The period between the previous EURASLIC Conference in Lyon and this one in Bulgaria was successful for the Institute of Oceanography and Fisheries in Split. Let me mention, as an example, our Institute becoming a member of the European Science Foundation – that is of the European Marine Board, and being nominated the Marine Reference Centre by the Environmental Protection Agency, by the decision of the Croatian Government. Belonging to the Institute our Library had a successful period, too. More details are available in the new Yearbook of the Institute that can be downloaded at the web site of the Institute.

So, I am going to give a short review of our previous activities and future plans. First of all, the Library has improved in the sense of collection development; then it was active in developing ILL activities, our web-page improvement; developing our activities in preparing data for bibliographic data entry in ASFA database; participation in the training organized by the Ministry of Science, Education and Sports in Zagreb, for operating with WOS and SCOPUS databases for obtaining and processing data required by the scientists of the Institute, and for presenting the scientific results of the Institute as a whole (bibliometric services in the library).

As a matter of fact our Library is an OPL library (one person library), but I am happy to be able to point out herewith that I can always ask for and get any kind of help I need in my work from the employees in our Institute, colleagues in other libraries in Split, in the whole country (for example members of the Natural Sciences Project, from National and University Library in Zagreb, from my dear friends from the Library of the Ruđer Bošković Institute in Zagreb, and from the numerous international ones (EURASLIC/IAMSLIC co-operation to be pointed out as the most important). The co-operation helps a lot in our efforts to achieve the goals and to perform the planned activities. The demanding but extremely interesting role of the librarian in this kind of library is to be available always and actually for everything, of course, most of the time doing the librarian professional work and providing information services to support researchers and other users. One of the interesting activities was the

participation in creating the Institute Yearbook; then there was the promotion of the new editions of our Institute (there are many excellent new titles published by our scientists and we are all proud of them), so for example we are proud to announce the new Edition of Monograph Series no. 4 issued by academician Prof. Frano KRŠINIĆ "Tintinnids (Tintinnida, Choreotrichia, Ciliata) in the Adriatic Sea, Mediterranean"; then preparing the great celebration of our scientific journal Acta Adriatica, celebrating its 80th Anniversary; there were a lot of translation and proof-reading activities, preparing various workshops and meetings in the Library, and so on...

Of course, it could always be better, and it is the future time that we are all looking to, hoping to be able to do much more for our Library and our users.

In addition to the mentioned activities, in the Institute we have some plans for the activities to be taken in the forthcoming period concerning the Library, as follows: reconstruction of the present capacities, implementation of the new software for our online library catalogue, establishing the repository of scientific works of our scientists in the Institute, development of the complete process of taking care of the library holdings, perhaps starting to develop a digitisation project… and many, many more... if we get the necessary financial support, i.e., if the forthcoming period appears to be better for all of us!

I am really sorry that I am prevented from being with you in Bulgaria this year. Anyway, I am with you in my thoughts and I herewith send my best wishes and greetings to all of you my dear EURASLIC friends!!!!!

The photo is made by my colleague Ante Žuljević. Our research vessel BIOS II (Greek word Bios/βίος for life), that I am especially connected to, as we “joined the fleet” of the Institute together in 2010.

IRSTEA PUBLICATIONS: WHAT KIND OF EVOLUTION AND WHAT PURPOSES FOR A SCIENTIFIC AND TECHNICAL PUBLICATIONS DATABASE?

Anne Laure Achard, Emmanuelle Jannes Ober

Irstea, France
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This poster deals with the evolution of a scientific and technical publications database called “Irstea Publications”. It has changed in parallel with the evolution of technologies and different needs over the last 20 years: full web, open access development, need of full text, research evaluation, bibliometrics. All these factors have influenced the way publications are inventoried and have provided new opportunities for the institute and researchers. In this context, scientists and librarians have a role in the workflow in order to signal, control and validate information relative to Irstea publications, for internal or external needs. Depending on the type of document and author rights, these publications will be visible thanks to different open archives: thematic, institutional, national or international open-access bases. Considerable efforts have been made, but which are real benefits for researchers and the institute? Valorisation, visibility, communication, conservation are principal benefits for each of these actors in a “open” global and digitalised context.

CemOA publications

Irstea's institutional repository

Irstea Publications / CemOA: what future for a scientific and technical database?

The « Irstea publications » database provides access to 27 500 scientific and technical publications written by scientists and researchers from Irstea. The workflow allows the authors to register and upload their publications into the system. Since 2009, the database has become an institutional repository named CemOA and connected with HAL, the national repository in order to improve the visibility of Irstea's scientific production.

1. Historical background

1990: creation of Irstea Publications

1992: obligation for all Irstea's authors to register their publications into the database

1995: first web access to the database

2004: full web and workflow

2005: first PDF online, intranet access

2006: signature of Berlin declaration by Irstea

2009: creation of CemOA, Irstea's institutional repository

2010: HAL platform feeding

2011 and next years: services' improvement (RSS, exports, statistics,...)

2. Repository process

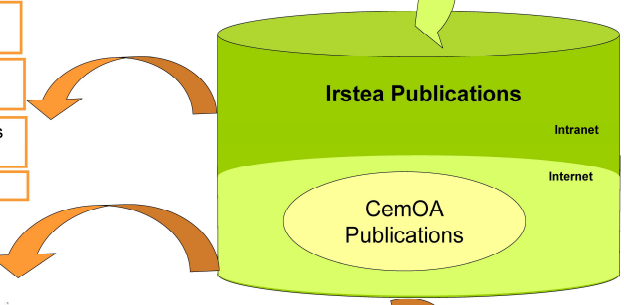
Publication feeding by the author
- Connect with a web portal
- Fill in a web form
- Add the full text in PDF
- Provide information about document access depending on associated rights
- Available imports from existing databases (WOS, Scopus,...)
- A unique interface, a unique repository

Controls, corrections, compliance, indexing, validation by the local librarian
- Control metadata
- Add keywords
- Control affiliations' writing
- Control access rights
- Control attached document
- Validate the form

Information, awareness of copyright issues and affiliations, Frequently Asked Questions, user guides, instructions, toolbox,..

3. Services

- Word, EndNote, Bibtex exports, RSS
- Production of indicators/ internal or external evaluation tools
- Production of bibliographical lists (for web…)
- Statistical analysis



A posteriori quality control + HAL metadata

Thematic and institutional OAI harvesters, search engines

French national repository

Key figures

- 28 200 publications into Irstea Publications
- 2760 publications in open access
- 610 publications fed into HAL
- 2000 authors who register and upload their publications into the database
- 10 librarians in charge of information validation
- 1 librarian in charge of the quality and the repository into HAL database
- an IT support team

Flashcode of Irstea Publications / CemOA

Benefits for the researchers and for Irstea:
- Increased visibility of publications, direct access to full text
- Improved accessibility, indexing by search engines (thematical, academic, thematic, generalist, national or international…); multiplication of access points
- Long term files archiving, institution memory, perennial URI addresses
- Compliance with policies of funding agencies: European Research Council, PCRD, ANR (French National Research Agency) projects,…

www.irstea.fr

Contact : Anne-Laure Achard, anne-laure.achard@irstea.fr, **Scientific and Technical Information, Lyon**

DP2Vist
Direction de la Prospective, de la Veille et de la valorisation de l'information scientifique et technique

FULIR – FULL-TEXT INSTITUTIONAL REPOSITORY OF THE RUĐER BOŠKOVIĆ INSTITUTE

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Although Mr. Fulir is main character from a cult Croatian movie (*One Song a Day Takes Mischief Away, 1970*) and in slang is a synonym for dandy, it is also acronym for Full-text Institutional Repository of the Ruđer Bošković Institute (RBI).

The idea was initially born in 2006. Several software solutions were tested and Eprints 3, free software developed by the University of Southampton, was chosen for the repository. RBI Library has implemented the repository, maintains and develops it, as well as provides all support to RBI staff which uses it.

Based on the RBI needs RBI digital repository will include three different types of archived content: scientific output of RBI staff, documentary materials and press clipping materials.

In order to establish an institutional repository at the RBI, the Library has already digitized collection of old photographs, which are available in the Library photo gallery, as well as collections of *Annual reports RBI*, *Annual Report* – shorter version of reports in English and *Scientific newsletter of RBI – Rudjer*. So far a certain number of full-text scientific articles have been also archived.

The main goals of the repository are: gathering of all scientific output (published and unpublished) produced by RBI scientists allowing them self-archiving of full text documents into the repository in accordance with the copyright; archiving and preservation of digital content of the RBI; creating a digital archive for archiving of documental and press clipping materials about the RBI; increasing visibility of the RBI scientific work in the worldwide scientific community; promoting of the OA initiative at the RBI and in Croatia.

15th Biennial EURASLIC Conference, 13-15 May, 2013, Varna, Bulgaria

Marina Mayer, Sofija Konjević
Ruđer Bošković Institute, Zagreb, Croatia

FULIR – Full-text Institutional Repository of the Ruđer Bošković Institute

http://fulir.irb.hr

FULIR is institutional repository in which RBI employees can store the full text of all types of documents produced on their scientific research (full-text articles published in scientific journals, papers published in conference proceedings, graded papers, book chapters, monographs, various reports, presentations and posters presented at conferences), as well as audio-video material and original research data (datasets).
Main goals:

- gathering of all scientific output (published and unpublished) produced by RBI scientist allowing them self archiving of full text documents into the repository in accordance with the copyright
- archiving and preservation of digital content of the RBI
- creating a digital archive for archiving of documental and press clipping materials about the RBI
- increasing visibility of the RBI scientific work in the worldwide scientific community
- promoting of the OA initiative at the RBI and in Croatia

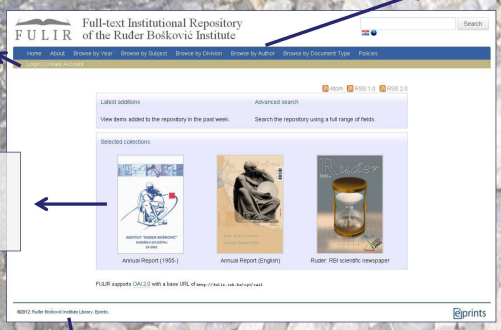
Developement phases:
- 2006 – firts project idea
- 2007 – official support from the RBI
- 2008 – softwers evaluation; documentary materials digitalization; photo gallery setup
- 2009 – first Eprints implementation; configuration and adjusting of Eprints
- 2010-2012 – work on metadata, formats, copyright issues…
- official presentation on October 25th, 2012, during International OA Week

Plans for the future:
- interoperability with CROSBI database
- education for RBI staff – how to input data
- promotion of Open Access and self-archiving

Logging in with Croatian Academic Authentication and Authorization infrastructure (AAI@EduHr)

Browsing by year, subject, division, author or document type

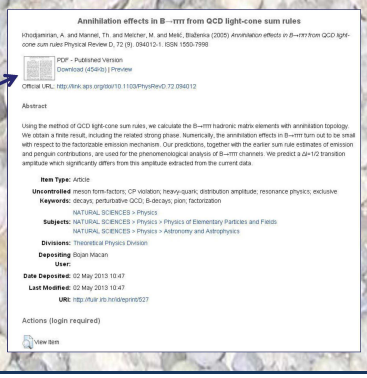
Homepage



Collections of RBI Annual Report and Rudjer (the Institute's newsletter)

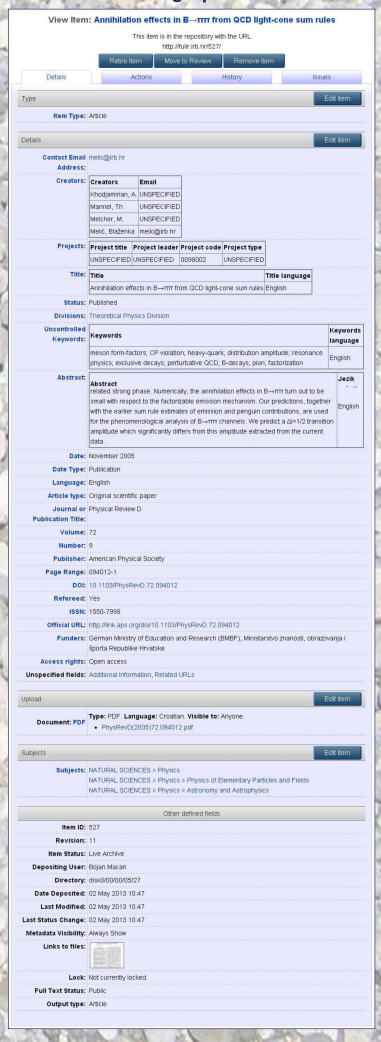
Supports OAI 2.0 (Open Archives Protocol for Metadata Harvesting)
Listed in OpenDOAR (Directory of Open Access Repositories) and ROAR (Registry of Open Access Repository)

Copyright issues for scientific content – checking in SHERPA/RoMEO database
- records can be visible to everyone/only registered users/only system administrators (according to copyright)



Record view

Bibliographic details



List of Participants

ACHARD, Anne Laure, Irstea, France

AKIMOVA, Olga, Institute of Biology of the Southern Seas, Ukraine

BACHEVA, Snejina, Institute of Oceanology, Bulgaria

GOOSSENS, Bart, Research Institute for Nature and Forest, Belgium

GRABOWSKA-POPOW, Malgorzata, National Marine Fisheries Research Institute, Poland

GRIBLING, Armand, Food and Agriculture Organization of the United Nations, Italy

KANEVA, Tsvetanka, Institute of Fishing Resources, Bulgaria

KONDRATJEVA, Natalja, Institute of Food Safety, Animal Health and Environment, Latvia

KONJEVIĆ, Sofija, Ruđer Bošković Institute, Croatia

KRASENKOVA, Irina, Russian Federal Research Institute of Fisheries and Oceanography, Russia

KULAKOVA, Kateryna, YugNIRO, Ukraine

MASSONNEAU, Agnes, Station marine d'Arcachon, France

MAYER, Marina, Ruđer Bošković Institute, Croatia

MYKHALECHKO, Olena, Odessa Branch, Institute of Biology of Southern Seas, Ukraine

PETROVA-PAVLOVA, Elitsa, Institute of Fishing Resources, Bulgaria

ZDANOWSKA, Jadwiga, Inland Fisheries Institute, Poland