

ASFA NEWSLETTER

AQUATIC SCIENCES AND FISHERIES ABSTRACTS NEWSLETTER

**ISSUE
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Focus on Africa
ASFA has been active in Africa for many years, this article provides a concise history.

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Africa's Oceans of Opportunities
Mika Odido of IOC Africa provides an update following the Regional Consultative Workshop on the UN Decade of Ocean Science for Sustainable Development for Africa and the Adjacent Island States, held in January in Nairobi, Kenya.

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Fisheries and Aquaculture potentials in Africa
Zacharie Sohau, Director of the Institute of Fisheries and Oceanological Research in Benin, examines the role of libraries and information centres in developing fisheries and aquaculture potentials in Africa.



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The Editorial Board decided in November 2019 that this issue of the newsletter would focus on Africa. At the time, ASFA Partners had just returned from a successful meeting in Malaysia and were full of ideas generated by four days of lively discussions and events. Fast forward to June 2020 and the world feels very different. The physical meetings we had planned for 2020 have been cancelled, many Partners are now working remotely and we are all concerned about the impact of COVID-19. Despite these difficulties,

ASFA's work has continued and this newsletter is testament to Partners' hard work and commitment, featuring contributions from 13 authors from Benin, Guinea, Kenya, Nigeria, Tunisia and Uganda. One Partner in particular, Saida Messaoudi worked tirelessly to coordinate this work, and we look forward to closer collaboration between Afriamslic, of which she is chair, and ASFA. Already, this newsletter is a result of collaboration and partners' contributions have highlighted areas where ASFA can

improve its service - such as improving access to information products and providing training on information search and retrieval methods. The newsletter begins with an article remembering the life of our FAO colleague, Ms. Oumoulkhairy Ndiaye, also known as "**La Dame du Terrain**". We cannot be certain of what the future holds, however if we can learn to approach problems with the same integrity and character as Ms. Ndiaye, then we can be certain of making positive difference.

ASFA and AFRIAMSLIC: "Our unity is our success"

Remembering Madame Oumoulkhairy Ndiaye, Developer of FAO-Thiaroye Processing Technique (FTT)

“La Dame du Terrain”

The development of Africa will not be realized without the full involvement of women – this is the strong belief of Ms. Oumoulkhairy Ndiaye, also known as “La Dame du Terrain”. A key characteristic of Ms. Ndiaye is her relentless efforts to empower women and improve the well-being and livelihoods of various stakeholders in the fisheries and aquaculture sectors, especially the poorest, vulnerable and marginalized groups. She was a woman of strong character who had captured the hearts of the people she had worked with and the countless fishing communities she had helped.

Our colleague was a passionate technical worker and a resolute advocate for the development of inclusive small-scale fisheries. For several decades, Ms. Ndiaye played a pivotal role in small-scale fisheries research and development by developing gender-sensitive and climate-smart innovative solutions and disseminating good practices. She provided technical assistance to more than 20 coastal states from Mauritania to Angola by actively contributing to the deliberations of the gender working group that helped these communities.

She deeply believed that provision of technical assistance, research, innovation and creativity are key to improve the autonomy of women and to reduce poverty, leading to the social, economic and environmental development of Africa.

She is mostly associated with two technologies that she strongly promoted namely the fish drying racks initiated in 2004 in Mvugo, Burundi and the FAO-Thiaroye fish processing technique (FTT) designed in 2009. FTT is a technique drawn from the collaborative efforts research approach between FAO and the National Training Centre for Fish and Aquaculture Technicians (CNFTPA) in Senegal where she has been teaching fish technology since 1988. To date, FTT has been introduced and implemented in 16 countries in Africa and in Asia and the Pacific.

She is widely recognised for her excellent collaborative approach in working with African national stakeholders, as well as with international development institutions (not only FAO, but also AfDB, EU, UNIDO, UNDP, World Bank and JICA, to name just a few) and the private sector. She has been at the forefront of the implementation of tens of projects in Africa, a couple of which (Chad, Angola) won the **E. Saouma Award** while others were recognized for spurring the best practices in fish utilization and safe fish food production, women empowerment and decent working conditions. Her vision for a zero loss in fisheries in Africa is very well illustrated by the FTT kiln in a sentence she repeatedly hammered **“Rien ne se perd, tout est utilisé”**, meaning **“No waste, all is utilized”**.

Certainly, Ms Ndiaye’s death on 10 May 2020 is an immense loss for the post-harvest fisheries programme in Africa where she has been serving for several decades and for other regions that experienced the successful introduction of the FTT. She was the undisputed Guru of the FTT, and thus one cannot complete a true story of the technique without mentioning her name.

Author:

Yvette Dei Ouadi, Fishery Officer (FAOSLC), Food and Agriculture Organization of the United Nations

Omar Peñarubia, Fishery Officer (FIAM), Food and Agriculture Organization of the United Nations

Roxane Misk, Gender Consultant (FIAS), Food and Agriculture Organization of the United Nations.
Email: roxane.misk@fao.org



“ I lost one of my finest consultants, a selfless committed professional for unquestionable deliverables, generous in sharing her knowledge, a very good communicator and a woman of an indisputably high sense of ethical principles. I keep many admirable memories of her; one of them was during one of her missions in a West African country. She realized that the leader of a group of women fish smokers was trying to take advantage of her peers, and she insisted that integrity should prevail at all times.”

Yvette Dei Ouadi, Fishery Officer



Ensuring access to fisheries and aquaculture information during COVID-19

As an international network with partners in over 40 countries, COVID-19 has posed challenges to ASFA and its partners to continue their work of ensuring access to aquatic sciences, fisheries and aquaculture information. Many have worked from home, with travel restrictions and lack of physical meetings also impacting the work Partners would regularly perform. This article discusses the ways in which ASFA Partners around the world have adapted their work to ensure the flow of information continues and highlights some of the challenges to accessing information which ASFA must work hard to overcome.

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ASFA Secretariat: remote working as a catalyst for change

The ASFA Secretariat is provided by FAO and is based at the headquarters in Rome. With the need to prioritize staff health and wellbeing, teleworking arrangements were introduced, resulting in the ASFA Secretariat having worked remotely since March. Forced to work remotely, the adoption of technologies such as Zoom and Microsoft Teams has enabled the Secretariat to communicate more closely with Partners than ever before. Online trainings

and meetings have taken place at an accelerated pace, leading to developments in ASFA's partnership model and subject vocabulary. This new method of working will of course continue, and we hope grow, once we return to the office. However, having communicated more closely with Partners, we have uncovered not only successes but also problems with access to information and a clear role for ASFA to improve these issues has emerged.

ASFA Partners: accessing information whilst working remotely

With each country impacted to different degrees by the virus, measures introduced by governments to ensure safety and wellbeing have had different impacts at different times on ASFA Partners. Gabi Silvoni of INIDEP, Argentina, reported that despite remote working staff were able to access the main reference database, but that access to full text was problematic with only OceanDocs, AquaticCommons or MarAbierto repositories providing links to the full text. Without IP authentication, many researchers around the world are only able to access the full text of documents which are Open Access. ASFA must do more to ensure its information products are openly accessible and this is one of the points raised in more detail by Dr. Widién KHOUFI of the Faculty of Sciences of Gafsa, Tunisia, on page 24. Part of ASFA improving its services is enabling a web interface to create records and store records. This was mentioned by Mohd Shahrulnizam Zuraimi of University of Malaysia Terengganu who said that despite being able to remotely access a plethora of online sources to enable the library to continue servicing its fisheries and aquaculture

students, ASFA needed a web system that allows for the online and open storage of records. The ASFA Secretariat is working hard to develop such a system, a Virtual Research Environment, and we hope to have an update by the next issue of the newsletter in November, 2020.

COVID-19 impacts are felt differently in each country. Whilst this can be most obviously seen in the different number of cases affecting each country, its impact on delivering information services also differs drastically causing anything from only a slight disruption to services to meaning work has to cease altogether, the deciding factor often being access to technologies. For example, Shinichiro Oka of Japan Fisheries Research and Education Agency (FRA) reported that remote working had been enacted and, due to existing access to online resources, staff continued to have access to information needed to perform their roles. However in Viet Nam, Vu Hau of Centre of Information and Statistics said that searching for information and updating the library's databases were

difficult to continue in a remote setting at times having to use unstable connections, although email, phone calls and messaging were all being used to ensure researchers were kept up to date with news. Alice Endra of NaFFIRI, Uganda said that COVID-19 had affected the institution's work, and the lack of reliable wifi access at personal homes has obvious consequences on the ability to adequately perform research tasks – this is discussed in-depth on page 26.

Social apps including Whatsapp were mentioned frequently by Partners as a tool to ensure communication, Marco Antonio Montes Flores was among the Partners who has used Whatsapp to keep in touch with colleagues, and that thanks to virtual classrooms teaching activities of

Universidad Nacional Autónoma de México, Dirección General de Bibliotecas continued, but that research activities had 'almost stopped' - a point of concern if this is to continue. Whilst the adaption of personal social apps to continue work is to be applauded, it also highlights the importance of ensuring access to technologies for institutions around the world. ASFA has an important part to play in the equalizing of technologies for aquatic sciences, fisheries and aquaculture institutions around the world. We hope that the development of our VRE will enable better access and sharing of fisheries and aquaculture information, ensuring all our Partners are able to make their research well known.

Customer services and ensuring mental wellbeing

Of course, libraries and information centres are not only responsible for adopting technologies but for providing customer services in the form of literature searches, and often looking after staff wellbeing. Ian Pettman of the Freshwater Biological Association, reminded us that it is not only human resources but natural resources that needed care – despite the lockdown in the UK staff still needed to visit the site to ensure the pearl mussel hatchery continues to operate. Despite this, measure had been taken to ensure staff and customers could still access information and in Bangladesh, Md. Habibur Rahman of Chittagong Veterinary and Animal Sciences University reported that his institution was able to continue serving its patrons remotely despite lockdown measures being put in force.

Paula McCoy of ProQuest, an international company with offices around the world, said that her team's good sense of humour was helping them through the challenges of remote working, and over in Canada, DFO Systems Librarian Darlene Tan sent her staff a virtual hug as a way of keeping connected whilst all staff worked online. Here's how to do a virtual hug properly:

*Put your right hand on your left shoulder.
Put your left hand on your right shoulder.
Now squeeze - real hard!*

Darlene reported that some library services had to be adjusted whilst laptops were found for those staff working remotely, however the majority of library services could continue online, ensuring DFO staff members continue to

be able to access information despite not being able to visit the library.

Over in Malaysia, WorldFish implemented arrangements for all staff to work from home to ensure safety and wellbeing. This newsletter is testament to how well the remote working plans have been enacted by staff – and we thank Florine Lim for continuing her high standards and help to ASFA by organising the design and publishing of this newsletter.

Author: Tamsin Vicary, Food and Agriculture Organization of the United Nations, Rome, Italy.
Email: Tamsin.vicary@fao.org

Links to COVID-19 updates from ASFA Partners

WorldFish update on impact of COVID-19 on fish and aquatic food systems: <https://www.worldfishcenter.org/pages/covid-19/>

FAO COVID-19 impact on food security: <http://www.fao.org/2019-ncov/en/>

COVID-19 updates from the UN Environment Programme: <https://www.unenvironment.org/covid-19-updates>

DFO COVID-19 – Information for industry and partners: <https://www.dfo-mpo.gc.ca/covid19/industry-industrie/index-eng.html>



Challenges of continuing aquatic sciences research in Africa during pandemic

In the present period, many institutions around the world are closed with staff working at home due to the Covid-19 pandemic. This pandemic has led to major disruptions in all forms of human endeavors, including research in aquatic sciences and fisheries. However, there are some striking differences between how researchers around the world are able to continue their work. This article highlights challenges faced by African researchers and librarians who are struggling to access information online, and therefore risk disruption to their work or studies.

Students and staff of aquatic institutions in Africa are required to work remotely, but access to digital tools (such as computer, internet connection, ASFA database, e-repositories, etc.) remain big challenges. Internet access is no longer a luxury; it is a necessity. However, Africa faces much higher costs in setting up its internet infrastructure, and this is one reason why accessing the database outside of an institution can be more difficult. Many African students and researchers lack internet access outside of their institution, although they have access to computers and smart phones. They therefore have to come up with alternate places to access internet, outside of the home, such as at institution laboratories, universities or libraries, many of which will be closed during pandemic.

A study¹ published in March 2020 (based on population Statistics and Facebook Subscribers) shows that 39.3% of Africans have access to Internet of some sort. As of that month, Nigeria had 126 million internet users. Second-ranked Egypt (had 49 million users) followed by Kenya (with 47 million users). Researchers and students frequently go online, but often do searches using data bundles on their phone, rather than on a laptop with WIFI connection. For instance in Nigeria, one of the countries with the biggest number of internet users worldwide, 74% of web traffic was generated via smartphones and only 24% via PC devices². This is related to the fact that mobile connections are much cheaper and do not require the infrastructure that is needed for traditional desktop PCs with fixed-line internet connections. However, it is not easy to work using smartphone.

It is important to note that ASFA partners or associates have access to the online database through the recognition of IP (Internet Protocol) address of their institutions. So, staff and students can only access the database when connecting using their institution's IP address, meaning even if partners have WI-FI or internet at home there are still barriers to accessing the database.

In addition to accessing the databases online, most partners in Africa are also entitled to receive copies of the ASFA CD or DVD which do not require internet connection. Generally, for most scientific staff, it is not possible to access ASFA from home as information resources are far too limiting for this possibility since CD or DVD are made available to readers in institute libraries only. In fact, it is not possible to make copies or borrow them.

As stated earlier, it is usually hard enough to use internet at work and low connection speed does not get any easier when working from home. Students' lack of resources presents a major challenge to access to ASFA. We hope that ASFA plays a greater role to support open science and increase visibility of research by providing free access to the ASFA database. Indeed, free access to ASFA at home or anywhere can help achieve studies by connecting researchers with information they need to get ahead in their work and career life. It is hoped as well that ASFA continues its support to institutions in Africa and work with them to ensure they are not left behind due to lack of access to information.

The COVID-19 pandemic illustrates major challenges for ASFA partners in Africa and the need for ASFA to embody open science principles. When so many around the world are working from home, internet access has never been more vital to ensuring access to information. Emerging research issues in fisheries and aquatic sciences must continue to be studied regardless of geographic location and cannot become the preserve of those fortunate enough to have personal equipment and internet access to be able to work from home as easily as in the office. We hope that through networks such as AFRIAMSLIC and ASFA regional difficulties can be addressed, in order to ensure all students, scientists and researchers with an interest in fisheries or aquatic sciences are able to fulfill their potentials.

Authors:



Saida Messaoudi, INSTM, Institut National des Sciences et Technologies de la Mer, TUNISIA.
Email: messaoudi.saida@instm.rnrt.tn

Aggrey Isabirye, NAFRRRI, National Fisheries Resources Research Institute, Jinja-UGANDA

Focus on Africa

Search 'Africa' on the ASFA database and 152,594 results are returned – spanning a date range of 1860 – 2020. Whilst this scientific literature on aquatic sciences, fisheries and aquaculture in Africa is of vital importance to those involved in research in the region, the database is only a small part of ASFA's involvement with many institutions in Africa. This issue of the newsletter is focused on the institutions that have contributed to ASFA during its fifty year history, as well as informing on new initiatives to broaden ASFA's reach and usefulness to institutions in Africa, such as the launch of the Associates scheme (page 8).

From CD-ROM to Open Access repositories

Looking at the history of ASFA's involvement uncovers the ways in which access to information has changed. In 1989, the ASFA database on CD-ROM was used to build a regional database by IOC who had established a regional centre in Kenya Marine and Fisheries Research Institute (Mombasa), to coordinate the Regional Cooperation in Scientific Information Exchange - Western Indian Ocean (RECOSCIX-WIO)

project. Over thirty years later, the goal of coordinating regional cooperation in scientific information exchange remains, however the technologies have developed rapidly. ASFA is striving to ensure that access to technologies is not a barrier for scientific exchange and as part of PESCAO project, ASFA will be providing participants in West Africa with the skills and technologies to digitise their research and deposit on an Open Access repository. Though online access is a vast improvement on the CD/DVD-ROM, we must not overlook that technologies to support open science are only beneficial to those with access – ASFA continues to support many institutions that are unable to access the database online by continuing to provide a DVD-ROM and will work with these institutions to ensure they are not left behind due to lack of access to information.

Extending ASFA's reach in Africa

This year has seen the launch of the ASFA Associates scheme. In many ways, this replaces ASFA's long running scheme to support institutions in Low Income Food Deficit Countries (LIFDC) access information by providing free access to the ASFA

database. Not only providing access to the database, ASFA is focusing on ensuring the people – librarians and information managers – have the necessary skills and access to technologies to store and disseminate their research. The Associates scheme will achieve this by providing training and access to ASFA's new software, a Virtual Research Environment (VRE) which will be used to store and export records to other platforms, including the ASFA database on ProQuest and Zenodo. ASFA Partners are also working to ensure the accessibility of information by making improvements to the ASFA Subject vocabulary – through alignment with AGROVOC (FAO's main vocabulary) the ASFA vocabulary is now available in multiple languages, including Arabic, French and Portuguese.

Our unity is our success – learning from Afriamslic and supporting an African Regional Network



Author: Tamsin Vicary, Food and Agriculture Organization of the United Nations, Rome, Italy.
Email: Tamsin.vicary@fao.org



¹ <https://www.internetworldstats.com/stats1.htm>

² <https://www.statista.com/statistics/505883/number-of-internet-users-in-african-countries>

ASFA is lucky to have Saida Messoudi as the ASFA National Partner of Tunisia, who is Chair of Afriamslic, the African branch of IAMSLIC. The table below shows the combined reach of ASFA Partners, Associates and AFRIAMSLIC, and through better collaboration we hope these two networks can support all aquatic, fisheries and aquaculture stakeholders to access the information needed to perform their roles.

Country	Institution Name	AFRIAMSLIC Member	ASFA Partner	ASFA Associate
Angola	I.I.M, Instituto de Investigcao Marinha			
Benin	CRHOB, Centre de Recherches Halieutiques et Oceanologiques du Benin			
Cameroon	IRAD, Institute of Agricultural Research for Development			
Congo	CCPM, Centre de Contrôle et de surveillance de la Pollution Marine			
Egypt	National Institute of Oceanography and Fisheries (NIOF)			
Gabon	Centre National de Données Océanographiques du Gabon, (Université Omar Bongo -IRSH, Institut de Recherche en Sciences Humaines)			
Ghana	Ministry of Fisheries. Marine Fisheries Research Division			
Guinea	Centre National des Sciences Halieutiques de Boussoura (CNSHB)			
Kenya	KMFRI, Kenya Marine and Fisheries Research Institute			
Kenya	Moi University			
Madagascar	Institut Halieutique et des Sciences Marines, Universite' de Toliara			
Malawi	LUANAR, Lilongwe University of Agriculture and Natural Resources			
Mauritania	IMROP, Institut Mauritanien de Recherche Océanographique et des Pêches			

Country	Institution Name	AFRIAMSLIC Member	ASFA Partner	ASFA Associate
Morocco	INRH, Institut National de Recherche Halieutique			
Mozambique	INAHINA, Instituto Nacional de Hidrografia e Navegação			
Namibia	NatMIRC, National Marine Information and Research Centre			
Namibia	SANUMARC, Sam Nujoma Marine and Coastal Resources Research, University of Namibia			
Nigeria	NIFFR, National Institute for Freshwater Fisheries Research			
Nigeria	NIOMR, Nigerian Institute for Oceanography and Marine Research			
Senegal	DPM, Direction des Pêches Maritimes			
Senegal	Direction des Industries de Transformation de la Pêche			
Seychelles	SEYCFMI			
Seychelles	Seychelles Fishing Authority			
South Africa	NRF South African Institute for Aquatic Biodiversity			
Togo	CGILE, Centre de Gestion du Littoral et d'Environnement			
Tunisia	INSTM, National Institute of Marine Science & Technologies			
Uganda	NaFIRRI, National Fisheries Resources Research Institute			
Uganda	National Environment Management Authority			
Uganda	Lake Victoria Regional Local Authorities and Counties Cooperation			

ASFA Associates

The ASFA Partnership is expanding and has launched a new scheme, ASFA Associates. The scheme is being implemented by the ASFA Secretariat in cooperation with the ASFA Publisher, ProQuest, and will provide **free access to the ASFA database for up to 200 institutions worldwide over an initial trial period of 2 years (2020-2021)**. The idea is to increase access to the database whilst providing opportunities for a wider number of institutions to participate in ASFA.

Launched in January, we are happy to welcome the first three institutions on to the scheme. These are: Moi University (Kenya), Dirección Nacional de Recursos Acuáticos (Uruguay), and Vietnam Institute of Oceanography (VNIO) (Viet Nam) - more detail about these institutions is below.

Interested in joining ASFA Associates? To be eligible to join the ASFA Associates scheme, an institution must have an aquatic sciences, fisheries or aquaculture focus, and produce scientific or technical literature. ASFA Associates will not have the same responsibilities as Partners, however they will be expected to explore contributing to ASFA, either by adding ASFA records, permitting their institutional repository to be harvested, or by participating in one of ASFA's working groups. In addition, all Associates will be asked to complete a quarterly online survey on usage of the ASFA Database in order to provide feedback. The ASFA Associates will collaborate with ASFA Partners in their countries or in the region who will provide an assistance and training in usage of the database.

The scheme is aimed at institutions who would otherwise be unable to afford a subscription. Preference to joining ASFA Associates will be given to small institutions in low and middle income countries, but institutions from high income countries can also apply. To find out how to join, please contact Maria.kalentsits@fao.org.

ASFA Introducing, new ASFA Associate: Dirección Nacional de Recursos Acuáticos (Uruguay). We are pleased to welcome on board Dirección Nacional de Recursos Acuáticos (Uruguay). We caught up with Aida Sogaray to hear her hopes and expectations of joining ASFA. Ms Aida Sogaray graduated in Library Science from the University of the Republic, Uruguay. Since 2004, Aida is in charge of the Documentation Center and Library of the National Directorate of Aquatic Resources (DINARA) affiliated with the Ministry of Livestock, Agriculture and Fisheries (MGAP). Prior to that, she worked as a library assistant for MGAP. Earlier this year she received an invitation to apply for her Institution to become ASFA Associate and, upon serious consideration, has decided to join the scheme.

“ I am firmly convinced that such cooperation contributes to the visibility of the services offered in libraries and provides new opportunities for integration with colleagues from the marine, fisheries and aquaculture areas. I look forward to the exchange of experiences and technical cooperation. I aspire to enable visibility to what was produced by DINARA researchers. I appreciate the opportunity to become an ASFA Associate and welcome the addition of more colleagues. ”

Author: Maria Kalentsits, ASFA Acting Editor in Chief, Food and Agriculture Organization of the United Nations. Email: Maria.Kalentsits@fao.org



AFRIAMSLIC, the African Association of Aquatic and Marine Science Libraries and Information Centers

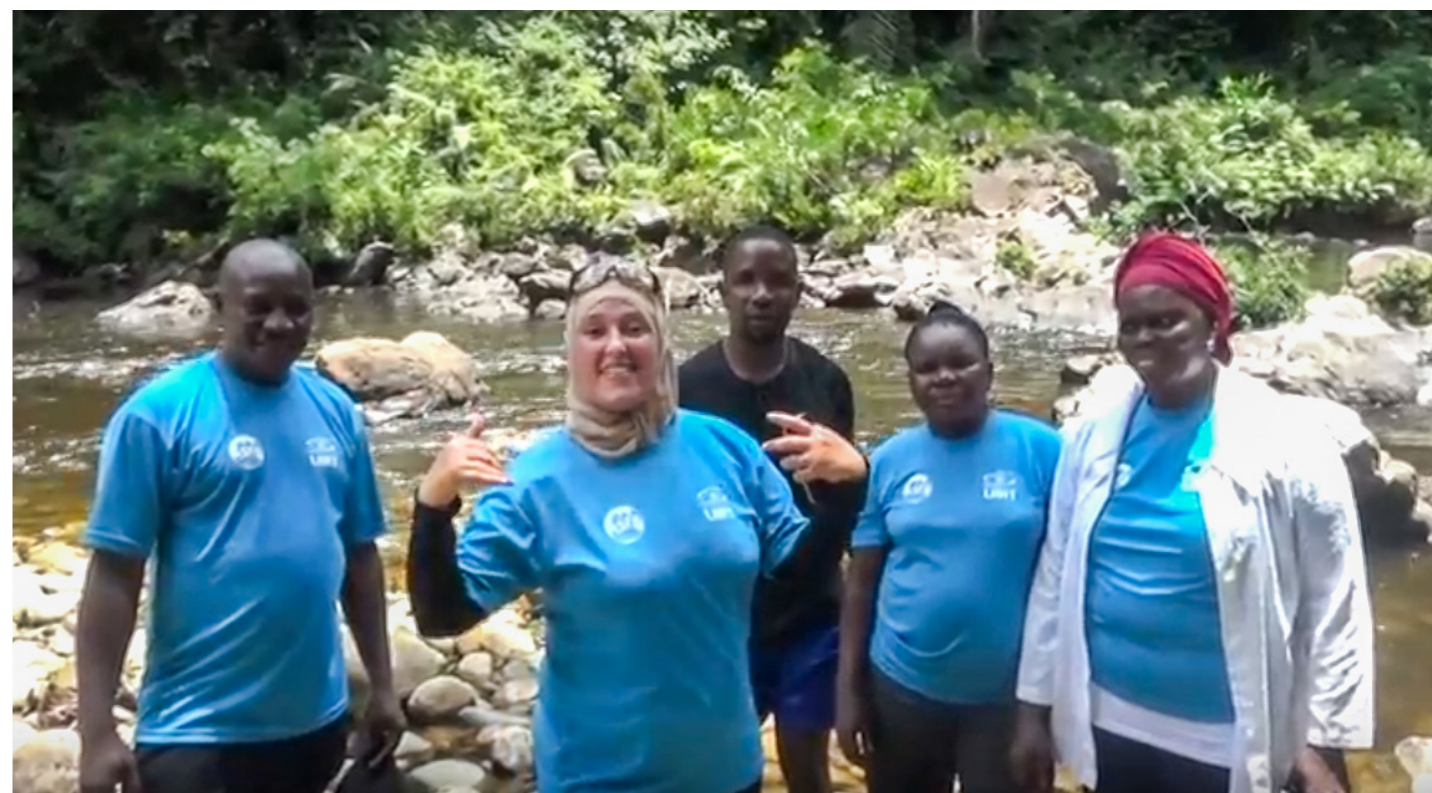
“AFRIAMSLIC” is the African arm of the International Association of Aquatic and Marine Science Libraries and Information Centers (IAMSLIC), and has been in existence since the 1980s. It is the only regional organization which cares passionately about libraries, information centers and institutions involved with Aquatic sciences information management and is essential for sharing skills and knowledge in these fields. This article introduces AFRIAMSLIC and explains why joining or contributing to its objectives could benefit your institution.

“Our unity is our success”
– benefits of AFRIAMSLIC membership

Today, AFRIAMSLIC has members in over 20 countries across the African continent, (see pages 6-7 for full details) – this is a number which we hope to grow in coming years. Members benefit from networking opportunities, access to digital content and resource sharing, and professional advancement, as described below.

AFRIAMSLIC coordinates the efforts of African institutions' library and information centers (marine and freshwater), to efficiently manage their knowledge, increase the dissemination and visibility of their research, and ensure researchers have access to the information needed. As well as being able to request articles they do not have access to, members can receive guidance in accessing and using central repositories such as OceanDocs and Aquatic Commons. By promoting participation with global initiatives such as ASFA, IOC-IODE programme, AFRIAMSLIC functions as a regional gateway to global knowledge sharing technologies, with the aim of making research sustainably stored

and access to all. AFRIAMSLIC's work to promote research conducted by institutions across the African continent is currently vital in ensuring its long term accessibility and use. Without access to research conducted in the area, aquatic environments and species in Africa cannot be effectively managed, and as much research conducted in the region and in fisheries and aquaculture in general, does not make its way into primary journals this vital research risks being overlooked. This is why the work of AFRIAMSLIC, who work directly with information managers and librarians in the region, is so important in delivering sustainably managed and healthy aquatic environments across Africa.



Goal orientated: focus on delivery

In order to ensure AFRIAMSLIC fulfills its objectives, short and medium term goals have been agreed, with specific activities for the Board and members to work towards. In the short term, restructuring the AFRIAMSLIC Board, committees and sub-regional committees is the priority for increasing members and providing opportunities to create equitable and lasting outcomes. Below, we list the short, medium and long-term goals for the network:

Marketing and Promotion (Short term goal). Crafting a brand identity for AFRIAMSLIC is necessary to increase visibility and improve communication, not only with members but also with the aquatic community. A number of activities have already been completed, not least of which was agreeing the full name of AFRIAMSLIC! The acronym was created as a regional variant of the international IAMSLIC, however members have agreed that it stands for: African Association of Aquatic and Marine Science Libraries and Information Centers – the first step in forming a distinct identity for our regional network. Other activities include the AFRIAMSLIC logo which is now in use on the website and on communications, the launch of a new-look website: <https://www.iamslc.org/afriamslc> in October 2019 which is used to keep members and non-members alike up to date with work; a mailing list has also been created to establish better communication and help with Inter-Library loans (ILLs). Furthermore, social media accounts have been set up with a Facebook and Whatsapp group widely used by members, and more recently a Twitter account set up to highlight work. Members are also currently working on a AFRIAMSLIC handbook, with the first draft completed. The handbook will provide information to members and assist the Board and Committees with managing the organization – look out for its publication on our website!

AFRIAMSLIC Directory Project (Medium term goal). We would like to specifically mention that AFRIAMSLIC is surveying institutions with the aim of compiling a

“ Directory of Africa Aquatic Institutions, Libraries and Professionals Involved with Aquatic Science (Marine, Brackish & Freshwater). ”

This directory will provide an effective way to identify and document African institutions active in the field of aquatic sciences and will provide useful information not only for the association and Africa region but also for the world wide aquatic community. It is worth mentioning that the IOC-UNESCO has encouraged this initiative and kindly promised to support the association towards achieving the directory project.

Aquatic institutions in Africa are so many and could be considered as potential members. If they become a member, AFRIAMSLIC would be stronger. Indeed, the regional group needs members to commit to common projects in order to ensure success. If you would like to participate in this project, or would like to discover more about it, please visit: <https://www.iamslc.org/afriamslc/projects>

Other, long-term, goals include:

- **Provide Multilingual Information:** our long-term goal is to provide all of our information in the the languages used in Africa (including English, Arabic, Portuguese and French).
- **Regional and/or sub regional meetings:** we are seeking funding to hold meetings in Africa, ideally every two or three years, in order to exchange ideas and experiences and also plan our work. Online meetings can be difficult due to connection problems, and we still believe that physical meetings are important to help integrate members in the regional association, strengthen identity and reinforce the feeling of belonging in a specialized community.
- **Strengthening the AFRIAMSLIC membership and consolidation of the regional network:** we hope to concentrate on raising awareness among new and existing members on the regional association which provides valuable services to a wide community.

AFRIAMSLIC has achieved several goals, however, important challenges remain in the region. The level of geographical coverage of AFRIAMSLIC network in the continent is at present, quite modest, and it will require more involvement and commitment from members, partnership, support and funding. If you are an African institute and considering joining us, or simply would like to know more about our network, we'd love to hear from you:

Email: afriamslc-officer@iamslc.org
Website: <https://www.iamslc.org/afriamslc>
Twitter: @afriamslc

Author: Saida Messaoudi, AFRIAMSLIC Chair.
Email: messaoudi.saida@instm.nrnt.tn,
afriamslc-officer@iamslc.org

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We are very grateful to IAMSLIC, IOC and ASFA for their continuous support. Special thanks go to the AFRIAMSLIC friends for their support to the association, in particular Mr. Ian Pettman (FBA-UK) and Mr. Ian Stewart (Inter-Research-Germany) who have provided funding for members to attend meetings or paid membership fees. If you are interested in contributing to the work of AFRIAMSLIC, please contact us by email: afriamslc-officer@iamslc.org Finally, huge thanks must go to all AFRIAMSLIC members for their voluntary and invaluable participation in our new initiatives.

AFRIAMSLIC objectives

1. Improve **access** to aquatic information by promoting **resource sharing** among members and encouraging the use of repositories for the purpose of contributing to Aquatic Sciences at the regional level;
2. Collaborate with other institutions with similar objectives and promote **cooperation** with African aquatic libraries;
3. Enhance **communication** with **information networks** for the advancement of a strong aquatic librarianship at national, regional and international levels taking into account the priorities of members from Africa;
4. Increase **support** for aquatic libraries and information centers by sharing of expertise, knowledge transfer and capacity building and strengthening their relevance to increase their visibility in a positive context;
5. Provide a **forum** of exchange and explore ideas on issues of communal interest and mutual concern for aquatic library and information professionals across the African continent;
6. Seek sponsors to fund the association activities, help members attend meetings and conferences and for capacity building.



Africa's Oceans of Opportunities

The oceans are Africa's new frontier for development. The continent is endowed with vast ocean territories, providing opportunities for fisheries, aquaculture, shipping, coastal tourism, offshore oil and gas and other blue economy related activities. However natural processes and human activities are increasing pressures on the ocean ecosystems, leading to coastal erosion, pollution, ocean acidification, natural disasters and other negative impacts.

The United Nation's Decade of Ocean Science for Sustainable Development (2021-2030) will provide an opportunity to structure and boost scientific efforts through a global collective research and investment framework to close the knowledge gaps. The *Regional Consultative Workshop on the UN Decade of Ocean Science for Sustainable Development for Africa and the Adjacent Island States* (27-29 January 2020, Nairobi, Kenya) was hosted by the Government of Kenya as part of a series of regional workshops aimed at consolidating regional positions and recommendations.

The workshop emphasized the need to strengthen and build upon existing mechanisms and frameworks, and align with the African Union's Agenda 2063, which recognized the Blue Economy as a major contributor to continental transformation and growth, and the 2050 African Integrated Marine Strategic Plan of Action (AIMS2050), which provides a road for increased wealth creation from Africa's oceans and seas by developing a sustainable thriving blue economy.

Capacity development was identified as a priority, in particular the improvement of infrastructure and facilities for research, provision of training for scientific and technical staff, as well as translation of science to policy. Other issues highlighted include the role of youth and job creation, marine spatial planning, climate change impacts on the coastal zones, land-sea interactions and pollution, and innovative financing models for the ocean economy.

The following are some of the key messages from the workshop:

- (i) Solutions need to originate from Africa, building on existing projects and programs, mechanisms, frameworks and strategies and aligning with African Union initiatives. The various African Commissions and Conventions already in place need to be harnessed to ensure smooth coordination and uptake of Decade-related activities, especially at a regional level.
- (ii) Blue economy is a major priority for the region – but how can we better define what it means for governments, communities

and scientists? What are the major data and knowledge needs for a true blue economy? How can we move past the concept and get to the practical application of blue economy?

- (iii) Youth are the future, hence the need for sustained and continued investment in the next generation. Youth need to be encouraged to want to engage in ocean science. Jobs need to be created and practical obstacles need to be overcome.
- (iv) There are examples of innovative financing models that exist or that could be developed. We need to engage with a range of different actors – traditional donors, private sector, banks and others – to make these innovative financing models a reality. We need to send unified messages to donors about the type of support we need, and especially for the different regions of Africa.
- (v) There is capacity in the region but it is unevenly spread between countries and between types of institutions and actors. Capacity development should be structured and inclusive and

there needs to be monitoring and follow-up. Opportunities for south to south capacity development should be explored.

- (vi) Poor governance and policy are constraints to effective management of marine resources. The 'science' of governance and policy has been neglected. To ensure that the science is used for action, the science-to-policy-to-practice nexus needs to be fostered through strengthening existing science to policy mechanisms (e.g. Science to Policy Platform of the Nairobi Convention).
- (vii) Ocean literacy and communications should be a priority and targeted strategies will be needed for different groups. We need to encourage all people to care about the ocean.
- (viii) Data is a sensitive issue. "Fly in fly out" research is not acceptable and better systems for curating and managing African data in Africa need to be developed while still maintaining connectivity to the global data landscape.
- (ix) Modeling was identified as an important tool for prediction and forecasting of the behavior of ecosystems, in support of management and policy decisions.

The recommendations of this workshop will be incorporated into the Implementation Plan for the Decade which will be presented to the UN General Assembly towards the end of 2020.



The Intergovernmental Oceanographic Commission of UNESCO in collaboration with the Government of Egypt are planning a conference for launching the Decade in the region in Egypt in February 2021.

Author: Mika Odido, IOCAFRICA, UNESCO Regional Office for Eastern Africa, Nairobi, Kenya.
Email: m.odido@unesco.org



ASFA database and its beneficial effects on the Fisheries and Aquatic Sciences Students in Nigeria

In this article, Veronica Sado of the Nigerian National Institute for freshwater fisheries Research (NIFFR) discusses the unique benefits of the ASFA database to fisheries and aquatic science students in Nigeria.

The ASFA database contains over 3,700,000 bibliographic references to the world's aquatic Sciences literature accessioned since 1970. Access to the ASFA database is available through subscription to ProQuest, the ASFA Publishing Partner. Participating Institutions and organizations such as NIFFR all have free access to the database as an entitlement for their efforts for preparing and submitting records to the ASFA database, which now has over 3.7 million records covering the world's scientific literature on aquatic sciences, fisheries and aquaculture.

Aquatic and Marine Sciences Libraries and Information provision

To librarians and information providers, user satisfaction is paramount in every information process. System quality, information quality, service quality, technological quality, infrastructure quality and user's information efficacy are regarded as the factors that influence a user's satisfaction; and the librarian must ensure that these factors are present in the information system for effective information service delivery.

The advent of ICT in the early 1990s revolutionized global information growth. This revolution came to be what the Librarians and Information Scientists referred to as "Information Explosion" leading eventually to what many people experience today - "Information overload"! As the amount of available data grows, the problem of managing information has become more difficult and cumbersome. However, this process has opened a new window for the librarian/information specialists to redesign and redirect new methods of gathering literature published in specific fields of knowledge and condense them into a manageable format for ease of access. This gave birth to the indexing and abstracting service of the library profession. Indexing and abstracting service provides direct

access to bibliographic details and cited references. This is an essential process that ensures that information contained in documents is easily accessed and retrieved to satisfy the information need of users. The need to find specific and relevant information has meant that, according to a series of surveys, the ASFA database is the main database used by aquatic and marine science librarians.

ASFA partnership and NIFFR

The National Institute for freshwater fisheries Research (NIFFR) is a parastatal under the Federal Ministry of Agriculture and Rural development. The activities of NIFFR are coordinated by the Agricultural Research Council of Nigeria (ARCN). The mandate of the Institute centred on Lake Kainji, the first man-made lake in Nigeria and other water bodies both artificial and natural water bodies.

NIFFR is charged with the responsibility to conduct research into the Fisheries and Aquatic Sciences in the areas of: Genetic improvement of freshwater fishes and other aquatic resources in rivers and lakes; The abundant distribution and biological characteristics of freshwater fishes and other aquatic resources; Hydrological behaviour of natural and man-made lakes; Limnology of surface and ground water and natural and man-made lakes; Rational exploitation and utilization of freshwater resources; Ecological and Socio-economic effects of the development of man-made lakes; Aquaculture and any other matter relating to the above. NIFFR officially became an ASFA partner with the signing of membership agreement with FAO in 2003. As an ASFA partner, NIFFR has the responsibility to identify, index and abstract all publication relating to Freshwater, Marine and brackish water environment in Nigeria and send records to ASFA database. NIFFR receives on a quarterly basis a copy of the ASFA database

and other areas of world fisheries on DVD. They also have online database access as an entitlement for efforts in preparing records for inclusion in the database. Currently, NIFFR has over 3,000 literature records in the ASFA database.

Student's Industrial work Experience (SIWES)

The Student's Industrial Work Experience (SIWES) is a skill acquisition programme of most tertiary Institutions in Nigeria. It is a skills training programme designed to expose and prepare students of university and other tertiary institutions in Nigeria for the industrial work situation they are likely to meet after graduation. It is part of the approved minimum academic standard in the various degree programmes for Nigerian Universities and other tertiary institutions. Between 2016 to 2019, thirty-four (34) Institutions sent their students to NIFFR on SIWES programme. A total number of 5,815 students visited the institute during the reporting period and used ASFA database to access information.

Under the SIWES program, NIFFR is gradually becoming a training Institute for Nigerian students offering fisheries courses in our Nigerian Universities. The benefit the students derive from the practical exposure cannot be overemphasized, as the course content of most universities is more theoretical with little or no practical courses. The period for industrial attachment therefore exposes them to



DVD Practical session

the practical aspects of their courses that will enable them to function properly in their field upon graduation. The period is usually three, four or six month's duration. The library of NIFFR houses information resources for teaching and research. The library provides information services to the students on the SIWES program. The training of these students is carried out by NIFFR scientists in their specialized subject fields of aquaculture/biotechnology, capture fisheries, gear technology, hatchery management, fish nutrition, and limnology and environmental studies, fisheries technology and processing and other fields relating to the mandate of the Institute.

At the Institute's library, students are exposed to ASFA project. The ASFA inputting officer gives a brief history of ASFA to the students in form of short briefing/lecture. They are later organized to search and view the ASFA DVD in groups. Different search terms of author, title, subjects/keywords, geographic terms, taxonomic terms and other searchable terms in the database are introduced to them. At the end of the lecture, they are encouraged to give comment on the benefit they derived from the search/ how the lecture / search has impacted on them as fisheries students.

Below are a few comments from SIWES students on ASFA databases:

- AS we search the ASFA database, we saw work done in all aspects of aquatic and marine sciences and their allied discipline. This really interests us as we saw a lot of work done by some of our lecturers.
- The ASFA database covers aquaculture, limnology, aquatic pollution and lots more. This database is useful for us. We could view completed research work, which helps to avoid duplication. We can also choose our project topic using the ASFA database.
- ASFA database is used in the fisheries and aquatic sciences discipline for research, we were taught the meaning and use of database, but we want ASFA to include the full text article in ASFA database.
- We learnt how to use the database to search materials.

It can be useful to me in the literature review of my project work. In a nutshell, ASFA database has lots of benefits and holds conference once a year and have representatives from all over the world. The conference we are told allow the partners to meet, interact and discuss how to improve on the database.

Benefit of ASFA DVD to Nigerian SIWES students

The need for improved access to information and prompt dissemination of information in the Nigerian fisheries sector prompted NIFFR to join ASFA in 2003. This can be achieved through



Lecture session.

improved production, organization, management and dissemination of information produced in the fisheries sector by the Nigerian scientists and other scientists globally.

Due to their regular visits to NIFFR, Nigerian fisheries students benefit greatly from access to the training they receive to access and use the ASFA database. The coverage of research from Nigeria, in particular Grey Literature, makes the ASFA database of special use to the students. The NIFFR grey literature coverage found on the ASFA database is of great interest to the student as they can easily request for the full text article within the library after the database search. ASFA's coverage of inland and freshwater environments also benefits students, as these areas are of particular relevance to those studying at NIFFR. The ASFA database on DVD allows information/data sharing through database server, allowing the sharing of information through multiple files. Students can access the database using different fields and search terms introduced to them.

Overall, the ASFA database helps to increase the user's productivity. By improved access to research, students are able to increase their productivity

to help with their school assignments and projects. Information contained in the ASFA database provides an opportunity for the students and other users to interact with information producers (authors/publishers) on certain topics that needs clarification, making it important to have records of local and regional research recorded in the database. Students can contact authors to request the full text of an article or ask further questions about their research. ASFA database improves data access through the use of host and query language.

Conclusion

In conclusion, ASFA database has gained global recognition in contribution to the advancement of the fisheries and marine science sector. The data security, consistency and other features of ASFA makes it unique and the most sort after database in the fisheries and marine sciences discipline. Current innovations to improve and expand ASFA products and activities, such as better incorporation of full text articles, will make the platform a more robust database of world fisheries literature.

Authors:



Veronica Sado, NIFFR, Nigeria.
Email: vera_sk2001@yahoo.com



Introducing the The Ocean InfoHub Project



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The IOC Ocean InfoHub Project (OIH) is a new initiative to streamline access to ocean science data and information for management and sustainable development. The project is global in scope, and it intends to anchor a network of regional and thematic nodes that will improve online access to and synthesis of existing global, regional and national data, information and knowledge resources.

The project is global in scope, and it intends to anchor a network of regional and thematic nodes that will improve online access to and synthesis of existing global, regional and national data, information and knowledge resources. The project will center on an openly accessible web platform designed to support interlinkages and interoperability between distributed resources including existing clearinghouse mechanisms. Funded by the Government of Flanders (Kingdom of Belgium), the project started in April 2020 and will run for three years. The OIH is coordinated by the IOC Project Office for IODE (Oostende, Belgium).

The OIH will first consolidate IOC-associated online resources -

including OceanExpert, OceanDocs, the Ocean Best Practices System, the Ocean Biodiversity Information System (OBIS), the World Ocean Database (WOD) and Ocean Data Portal (ODP) – extended by partnerships with EurOcean, Marinetraining.eu, EMODNET, and other sources in the IOC ODIS Catalogue of Sources (ODIScat). The initial focus of OIH will thus be on (i) experts, (ii) institutions/ organizations, (iii) research data and information infrastructures and their capabilities and services offered, (iv) projects, (v) research vessels, (vi) education and training opportunities, (vii) funding programs and other opportunities, (viii) documents and publications, (ix) manuals, guidelines, standards

and best practices, (xi) metadata catalogue for specific variables and (xii) access to data sets and/or data products relevant to particular program priorities (e.g. the SDGs and Essential Ocean Variables).

The project responds to requests by the IOC's Sub Commission for Africa and the Adjacent Island States (IOCAFRICA) at its fifth session (25-27 March 2019, Nairobi, Kenya) for the establishment of a regional hub for the Clearing House Mechanism for Transfer of Marine Technology, and similar recommendations from other regions such as the Caribbean and the Pacific Islands. The initial focus of the project will be on responding to requests for data products and services from three regions: IOCAFRICA, LAC and the Pacific SIDS to meet their unique user community (thematic and language) requirements. The initial priorities for the Project will be to develop communities of practice for the three pilot regions. Thus, one of the first regional nodes will be piloted by African institutions, and be responsive to priority needs for data and information products in Africa.

A global ODIS (Ocean Data and Information System) architecture

will enable a digital ecosystem where users, from any entry point, can discover content and services that they require, while also having opportunities to become content creators themselves. Matchmaking services would be an additional function of the OIH, particularly in support of the IOC Capacity Development strategy. Services would allow study and training or vessel survey opportunities to be identified, a peer-to-peer service would support scientific collaboration, and an automated/self-serve service would allow the search for specific human or institutional expertise. The project will also focus on the transfer of local knowledge, on supporting early career scientists, and on remedying gender disparity by increasing access to information, technologies and opportunities, in line with the IOC's Capacity Development strategy.

Ultimately, the OIH intends to meet the knowledge needs of national and regional requirements for sourcing marine data and information, as well as to assist countries in their reporting requirements for the Sustainable Development Goals (particularly goals 4,9, 14 and 17), contribute to key aims of the UN

Decade of Ocean Science for Sustainable Development, the Paris Agreement, the Sendai Framework for disaster Risk Reduction and Marine Biological Diversity of Areas Beyond National Jurisdiction. The OIH will also assist IOC member states to report on ocean science capacities through the Global Ocean Science Report (GOSR).

The OIH Project requests that expressions of interest in participating in this project (or to receive updates) be sent to Lucy Scott, Ocean InfoHub Project: L.Scott@unesco.org.

For more information, please see the provisional website <https://www.iode.org/oih>

Authors:



Lucy Scott, Project Manager for the IOC/UNESCO Ocean Info Hub.
Email: l.scott@unesco.org

Fisheries and Aquaculture potentials in Africa: The role of Libraries and Information Centers

Fisheries and Aquaculture potentials in Africa is one of main topics which help countries to contribute to food security. Fish contributes 19% of animal protein intake to Africans (Chan, 2018), however in order to create awareness and ensure the sustainable growth of the fisheries and aquaculture sector, enhancing the capacity of governments and institutions is key (NEPAD, 2016). In order for this to happen, access to, and management of, aquatic sciences information is key. Luckily, there are several long-standing programmes that have delivered capacity building services in this area. This article discusses the ODINAFRICA project which has played a key role in the development of an African network for oceanographic data and information sharing in Africa.

What is ODINAFRICA?

A project of the IOC-IODE, the Ocean Data and Information Network (ODIN) Africa programme can trace its origins back to 1989 when a project on Regional Cooperation in Scientific Information Exchange in the Western Indian Ocean was implemented, limited to the participation of 7 Eastern African member states. The project used information sources from the ASFA database on DVD, showing that cooperation between the two networks goes back a long way. Through a series of evolutions, ODINAFRICA has expanded and is now a network of 40 marine related institutions from twenty-five countries across Africa.

ODIN's capacity building strategy was developed by IOC to link training to infrastructure and data centre operations, making use of IODE National Oceanographic Data Centres which are one of three IODE structural elements (the other two being IODE Associate Data Units and the IODE Global Data Assembly Centres). The Ocean Teacher system also plays an important role in this strategy, providing an internet-based training and self-study tool for ocean data and information management and also for self-training and continuous professional development. The on-line version is available at www.OceanTeacher.org, and a CD-ROM

version, for off-line viewing, can be ordered from IOC.

Accessing data and information on Africa's oceans

ODINAFRICA provides a number of information and data products, including a directory to search for experts in a particular country, and an African Marine and Coastal atlas: <http://www.africanmarineatlas.org/> The project has made a number of library catalogues available locally at institutions, and the OceanDocs-Africa repository (<http://www.oceandocs.net/handle/1834/1337>) now has more than 1,800 records from Africa, including books, journal articles, technical reports and theses.

ODINAFRICA also supported the development of an African Union list of Journals from information centers. The list, which currently has nearly 800 serial holdings, can be accessed through the IAMSLIC website: <http://www.iamslc.org/unionlist/africa/index.php>

Several ODINAFRICA Marine Information Centres, including IRHOB, are currently ASFA Partners and contribute to its database. The ASFA database has over 150,000 records on Africa, indexed by geographic, taxonomic and subject keywords.

Benin's role in ODINAFRICA

The NODC in each member country of ODINAFRICA network is well placed to play a significant role in sharing oceanographic data and information in their country and sub region. All librarians are trained in how to manage and organize resources.

The Benin NODC is held by "Institut de Recherches Halieutiques et Océanologiques du Bénin (IRHOB) and has many success stories in its library. The Centre was established in 2002 and the librarian completed a number of training courses. Unfortunately, the librarian trained in this period left for another job so it's now necessary for the new librarian to receive training. However, IRHOB library contributes to many activities for capacity development, itself providing training courses to

researchers according to their need and area of interest, and ensuring research is well organized and accessible.

Understanding and meeting regional CD needs

ODINAFRICA has been a success thanks to its work to understand the different CD needs. IOC's '*Baseline Study for an Assessment of National Capacities and Needs in Marine Research, Observation and Data/Information Management highlighted differences in capacity development requirements for which interventions are needed. It stated that in member states in Africa: 'the affairs of the oceans and seas are still an emerging concept, their capability to conduct ocean sciences is still limited. The scientific and technical capability to make the best use of transfer of marine technology is still lacking due to the low level of resources and priority given to ocean research.'*

Whilst concepts such as the Blue Economy have helped to create incentives for countries to focus on the exploitation and management of marine, thus being effective at national levels, programmes such as ODINAFRICA are necessary to ensure institutions have the capacity to effectively develop and maintain the human resources to follow these plans. It is only by working at national, regional and international levels that we can ensure the necessary data and information is available for all countries to play a role in the sustainable use of the world's oceans, a shared, global resource for everyone.

Conclusion

As noted in a 2015 study (Mchombu, 2015), a number of factors have driven change in African library development, notably improving ICTs, better internet connection and partnerships between government leaders and partner agencies. Whilst we have witnessed the improvements these changes have enacted, we believe that capacity building in marine oceanographic data and information management remains a major challenge. We have seen

a new generation of professionals enter the library profession; providing training and access to technologies is essential to ensure those beginning their careers acquire the necessary information skills to lead and deliver marine sciences library services now and in the future.

Partnerships such as ODINAFRICA and ASFA have benefitted both me personally and the work of IRHOB in working towards this goal, however many libraries in Africa now face restricted working practices due to COVID-19, meaning access to data and information is now more than ever dependent on remote access to technologies. We hope that programmes and networks such as ODINAFRICA and ASFA can continue to work to meet regional needs and thereby ensure the work of library and information centres continues despite crises, pandemics or other regional difficulties that may be ahead of us – only by managing the information and data on our oceans can we ensure their sustainable management and use of resources.

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Authors:



Zacharie Sohou, Director of the Institute of Fisheries and Oceanological Research in Benin (IRHOB / CBRSI).
Email: zsohou@yahoo.fr



The Surefish consortium launches its activities on fish traceability and authenticity

Fishing is one of the largest industries in the Mediterranean area, providing a relevant income and trade opportunities in many coastal countries, however the industry can be inefficient and wasteful, particularly if unregulated activities occur. Illegal fishing happens every second in our seas, including overfishing, human rights abuses, and frauds.

As a result, fisheries face declining trust among consumers. At the same time, companies practicing environmental and social responsibility are often not fully recognized by the people.

The SUREFISH project entitled "Fostering Mediterranean fish ensuring traceability and authenticity," funded by EU through PRIMA Initiative (PRIMA Call 2019 Section 1); is designed to address these issues, both for industry advantages and consumer safety, by strengthening authenticity and enabling full traceability in the Mediterranean fish market. In particular, the main goal of SUREFISH is to valorize Mediterranean fish by i) deploying innovative solutions to achieve unequivocal traceability of traditional Mediterranean fish and to confirm their authenticity, thus preventing frauds; ii) fostering the supply-chains innovation and consumer confidence of Mediterranean fish.

SUREFISH will develop and implement a global solution integrating safety, traceability and authenticity for the Mediterranean fishery supply chain made up by two technological solutions for safety and traceability, as well as developing and validating 12 harmonized analytical protocols to detect fish geographical origin, species and other fraud issues. Our solution will be validated through pilot cases located in 4 Mediterranean countries, each one focusing on a representative Mediterranean fish: Anchovy, Grouper, Tilapia and Bluefin tuna.

SUREFISH consortium is an integrated strategic eco-system with 13 partners from both shores of the Mediterranean Sea (Egypt, Italy, Lebanon, Spain and Tunisia), which put together infrastructures and expertise (ICT, blockchain, intelligent labelling, innovative analytical and sensory methods for fish evaluation), supply chain stakeholders and project managing, dissemination and exploitation of results know-how.

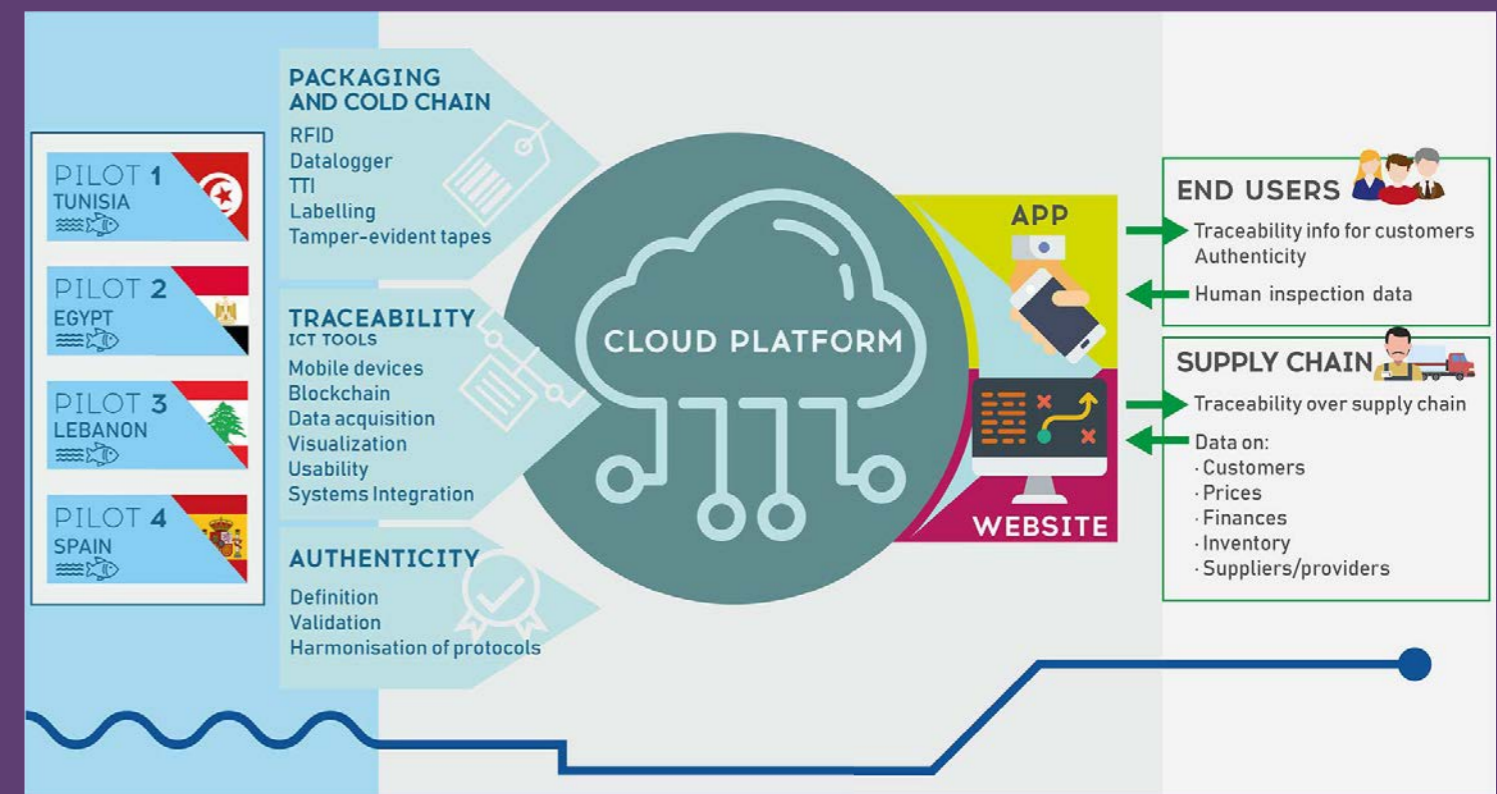
Following the kick off meeting organized via Webex the 25th of March 2020, the INSTM group has launched its activities to establish a thorough literature survey on the various aspects related to anchovy attributes in terms of biochemical and nutritional characteristics, quality, processing and traceability. This survey was based on research found on the ASFA database, which provides international publications and Grey Literature including technical guidelines, training materials, dissertations on the related subject of interest. Being a partner of ASFA, the INSTM through its focal point Saida Messaoudi, will contribute to disseminate knowledge and news from the SUREFISH consortium.

With the approval of the project coordinator: Marco de la Feld- ENCO –Italy (www.enco-consulting.it)

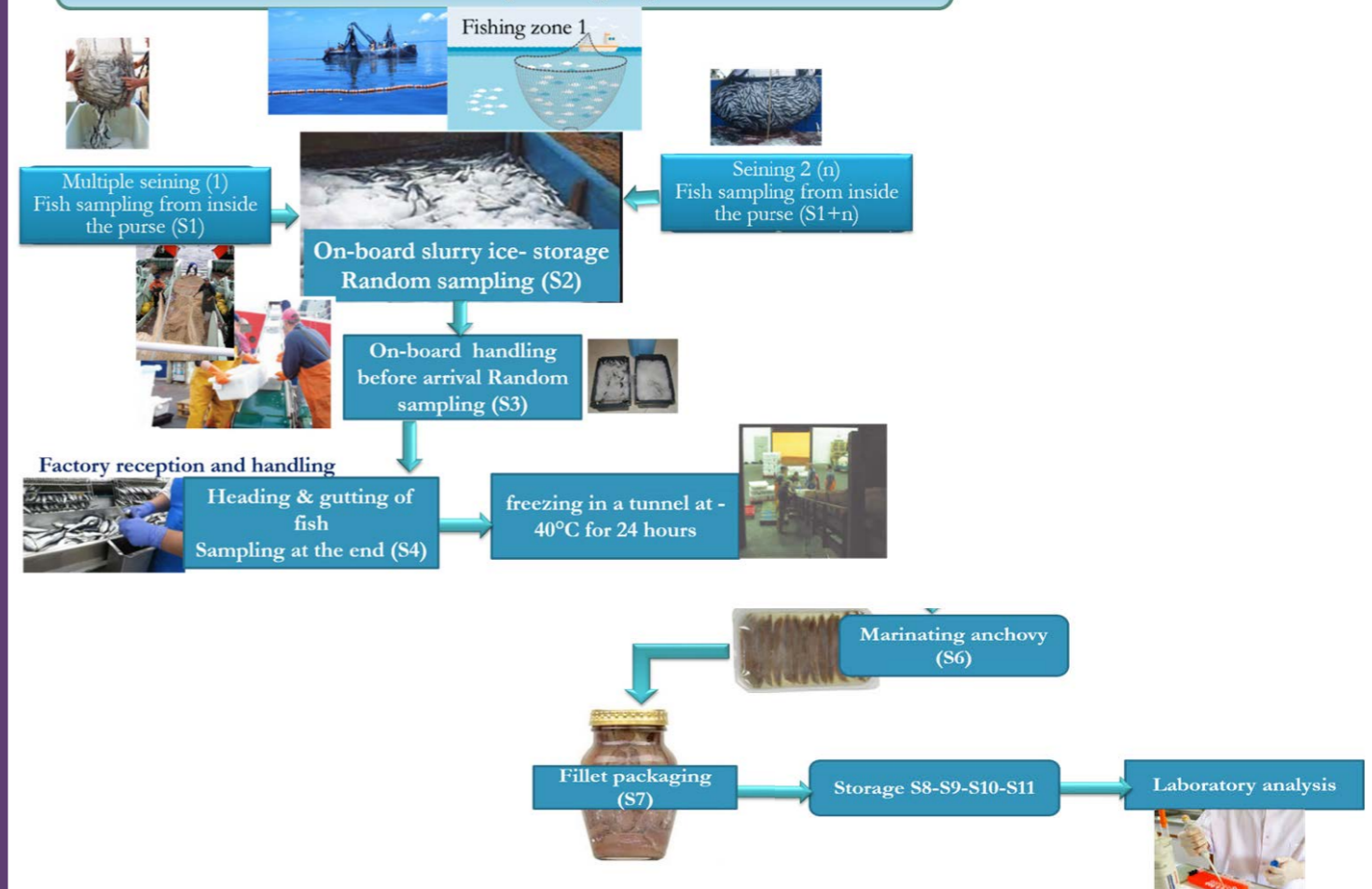
Authors:



Prof. Saloua Sadok, Head of the National Laboratory, Blue Biotechnology and Aquatic-products, Institut National des Sciences et Technologies de la Mer (INSTM), Tunisia.
Email: salwa.sadok@instm.rnrt.tn



Monitoring fish quality during post-harvest handling From net-packaging



Survey on the use ASFA database in Benin Republic

Last year the Benin Institute for Fishery and Oceanography Research (IRHOB) became an ASFA Partner. As a Partner, we are entitled to complimentary access to the ASFA Database - this is a great opportunity for researchers, scholars, students and other actors in the field in Benin to access international scientific publications.

This is also an occasion for them to showcase their research results by contributing to ASFA activities. But this will not be possible if ASFA database is not known to the field's actors in Benin. To raise the awareness of ASFA database among scientific in Benin, a survey has been conducted by the library of IRHOB.

Methods and results

The survey has been conducted from April 20th to 27th. Only twenty individuals have been reached due to COVID 19 pandemic. Out of 20, 10 gave their feedback giving a response rate of 50%. The aim of this survey is to evaluate the level of awareness of ASFA database as well as its use by Benin researchers. About the awareness of the ASFA database, we got 10 reactions from researchers, students and other category of professional of the domain. Among these respondents, 1 student out of 3 knew of the ASFA database. 5 respondents belonging to lecturer and researcher's category did not know about the database (1 had heard of it). 1 respondent, an engineer, also knew of the existence of the database. Given the lack of awareness, it is not surprising that when asked about use of the ASFA database, only the student responded that they used it. ASFA is a useful tool for those



beginning their careers in aquatic sciences, fisheries or aquaculture, so we are pleased they find the database useful.

Conclusion and Next steps

The survey revealed that researchers in the domain of marine sciences in Benin do not use the ASFA database – as they do not know of its existence. Therefore, the library of Benin Institute for Fisheries and Oceanographic Research (IRHOB) will promote and disseminate knowledge of ASFA, to meet the growing information needs of Beninese researchers. Accessing this database will positively impact the quality of their works. We are pleased to note that materials will be provided by the ASFA Secretariat to help with promotion and raising awareness of the database, and perhaps a survey conducted in the future will show greater awareness and use of the database at IRHOB.

Authors:



Coffi Ferdinando Rock GBEDO, Librarian, Institut de Recherches Halieutiques et Océanologiques du Bénin/Centre Beninois de la Recherche Scientifique et de l'Innovation (IRHOB/CBRSI). Email: rockderstein@gmail.com

ASFA outreach at the Sub-regional workshop on Artisanal Fishery in the Maghreb (North Africa)

The FAO was organizing the North African workshop on Artisanal Fishery in the Maghreb held from 28 to 30 November 2019 in Tunis, Tunisia. The Maghreb is a sub-region of North Africa that is effectively a Western part of the Arab world that's why it is also known as the Arab Maghreb. The region includes 5 countries which are Morocco, Algeria, Tunisia, Mauritania and Libya from which delegates were present at the workshop. The languages used were Arabic, French and English and target audience was various composed mainly by researchers, fishermen and professional in the field.

The purpose of the North African workshop on Artisanal Fishery (AF) is to identify the needs of Maghreb countries for data collection and information specific to Artisanal Fishery and to validate a questionnaire that will be used to launch an inventory of the sector in 2020. Data collected through the inventory will serve the countries to identify main emerging issues and to better manage the sector. Among the outcomes of the inventory, FAO would envisage to identify a series of sustainable fishing methods to be promoted in the region and areas allocated to Artisanal Fishery.

As the ASFA National Partner for Tunisia, I was invited to attend the

Workshop and represent ASFA at this meeting. Otherwise, among the 60 participants in the workshop, there are only few people (mainly from Tunisia) who know about ASFA and had experience in using the database.

So, it was important to explain ASFA to the workshop participants and the role that it could play in answering their needs in specific information related to aquatic field since ASFA is a database which disseminates aquatic sciences, fisheries and aquaculture information including Artisanal Fishery and ensures its accessible to all.

For more information about ASFA, copies of an overview of ASFA's coverage of Artisanal Fishery and also Small Scale Fisheries (SSF) were disseminated to meeting attendees. This bilingual document (English and French) is a very good mix of promotion and ASFA fact sheet, client oriented. Many participants appreciated it because it contains relevant and useful information such as contact information, the numbers of records (8,503) relating to Artisanal Fishing on the ASFA database.

Furthermore, Researchers were encouraged to contribute to increasing knowledge on Artisanal Fishery in the Maghreb region by sending Artisanal Fishery Research to ASFA Partners

(actually, in the Maghreb there are only 3 ASFA Partners in Morocco, Mauritania and Tunisia) who are able to create bibliographic records for their research, to include it on ASFA and make it searchable on the database.

I report with pleasure the wide interest in ASFA expressed by most of researchers participating at this meeting who were updated on ASFA's developments and invited to join as ASFA Partner, Collaborating Centre or Associate. The workshop was an opportunity not only to promote ASFA but also to forming networks and effective relations with new partners would be possible.

Authors:



Saida Messaoudi, ASFA National Partner for Tunisia, Institut National des Sciences et Technologies de la Mer (INSTM, Tunisia). Email: messaoudi.saida@instm.nrnt.tn





ASFA and SSF: Aquatic Sciences and Fisheries Abstracts (ASFA) is a network of over **100 institutions** around the world who monitor research and publications for inclusion on the ASFA database. The ASFA database contains over **3.7 million** records on all aspects of aquatic sciences, fisheries and aquaculture. The ASFA Secretariat is hosted by FAO, and INSTM is the National Partner for Tunisia.

There are 4,257 records relating to SSF on the ASFA database – we would like your help to increase this number!

Source type of SSF materials:

- **2,945** Academic publications
- **1,096** Books
- **4** Dissertations and Theses
- **3** Magazines
- **55** Reports

- There are **484** SSF records relating to Maghreb, as well as:
- **195** records on artisanal fishing
- **69** records on socioeconomic aspects
- **87** records on sustainable fishing

The ASFA database also has...

- **119,823** records on the Mediterranean Sea
- **8,503** records on artisanal fishing
- **4,874** records on sustainable fisheries

Help ASFA to support Small Scale Fisheries in the Maghreb region by:



1. **Join ASFA** - ASFA Partners monitor research relating to all aspects of SSF and create bibliographic records which are made searchable on the ASFA database
2. **Send SSF Research to ASFA Partners** - there are ASFA Partners in Morocco, Mauritania and Tunisia who can include your research on ASFA
3. **Promote ASFA** - ASFA provides its Partners with training, technologies and knowledge sharing opportunities to enable promotion and dissemination of research

How to join ASFA:



Depending on the level of involvement you want, there are **three ways** to join ASFA. If you want to create records of your institution's research on the ASFA database, you can join as a **Partner** or **Collaborating Centre** (if a Partner already exists in your country). If you are unable to contribute to the database, you could join as an **Associate** which would enable free access to the database.

Want to contribute research to the database?

ASFA Partner

If you are located in Algeria or Libya you can join ASFA as a Partner. You will monitor the research in your country for ASFA, and in return you will benefit from: free access to the ASFA database; participation in the ASFA Advisory Board; eligible to bid for funding for projects from the ASFA Trust Fund; option to participate in ASFA Working Groups.

ASFA Collaborating Centre

If you are located in Mauritania, Morocco or Tunisia, you can join ASFA as a collaborating centre. You will be responsible for contributing the research of your institution to ASFA and in return will receive free access to the database and the option to participate in ASFA Working Groups.

Want free access to the database?

ASFA Associate

If you are unable to commit to becoming a Partner or Collaborating centre, your institution may be eligible to be an ASFA Associate. You would receive free access to the ASFA database in return for providing feedback on the database and exploring ways your institution could contribute to ASFA.

The ASFA database, tool for the selective information dissemination on fisheries and aquaculture in Guinea

The Information and Promotion Service (SIVA) was created in 1995, with the main mission of ensuring the collection, processing and dissemination of all kinds of information that can be used to carry out the missions of the National Centre National des Sciences Halieutiques de Boussoura (CNSHB) in Guinea. The SIVA is responsible for:

- Organize and ensure the functioning of the documentation services and publications at the CNSHB;
- Facilitate the flow of scientific information among research staff;
- Support CNSHB researchers in the search for scientific information;
- Prepare a periodic bulletin and all other publications likely to publicize the work and research results of the CNSHB;
- Ensure the institutional distribution of CNSHB publications in Guinea and abroad.

The Internet has brought major technological changes in the production, diversity and management of information resources. The development of open archive systems has revolutionized scientific publications by allowing researchers to make their publications freely available on dedicated servers. Thus, documentary resources have become more and more available online, thereby improving the supply of scientific information and, moreover, raising a question of competence to master the techniques of documentary research to access this wealth of knowledge. Scientific watch and Selective Information Dissemination (SID) are technical responses from scientific and technical information professionals. It is in this context that the ASFA database is integrated into the documentary service offer as a tool for information monitoring and selective dissemination of information at the CNSHB. The ASFA database allows users to locate documentary resources online and to disseminate them to researchers and other users (students, trainees, experts, etc.). According to their research profiles, researchers and experts receive (secondary) information in their mailboxes in the form of alerts and information feeds (RSS). Thus,

in addition to the documentary collection available at the SIVA of the CNSHB, this monitoring and SID service allows researchers to have access to information (primary and secondary) with global coverage, of recent publication and available online. This facilitates the access and exploitation of scientific information to improve the quality of scientific research work in aquatic sciences and fisheries in Guinea.

Objectives: The objective of this Selective Information Dissemination (SID) service is to identify research profiles, students, trainees, Research Assistants and Teacher-researchers, CNSHB technicians, and to provide them with secondary information and primary documents relevant to carrying out their scientific research. From the ASFA database, the relevant information and documentary resources collected on different documentary sites and portals are disseminated in real time and electronically to researchers. This scientific support service enables researchers to receive relevant information and documents electronically.

Scientific fields covered: This service primarily covers the field of aquatic sciences and fisheries, as well as related sciences (geography,

sociology, anthropology, economics, medicine, history, mathematics, information science, communication, political science, law, etc.) likely to interest researchers in carrying out research work. The ASFA database is the most relevant for covering the CNSHB's research areas. Thus, thematic profiles are created according to identified needs.

Perspective for the CNSHB (Guinea): Digital scientific information has become the standard of use for professionals as well as users (researchers), and the ASFA database covers all information relevant to our scientific information environment. Faced with the explosion of online information, the documentary processes have followed technological upheavals (production and access) so that no information and documentation service can claim to satisfy all the needs of their users while remaining in its classic approach. The establishment of an information watch and CIO service at the CNSHB is in line with an innovative approach, which is that of improving the fluidity of access to information and the quality of scientific work. This service intends to develop by offering thanks to the ASFA database, new possibilities of access to information and to connect to the great world systems of documentary information through the Internet.

Authors:



Fodé Karim KABA, Centre National des Sciences Halieutiques de Boussoura (CNSHB), Conakry, Guinea. Email: kbafodekarim@gmail.com

To find out more: about participating in ASFA, contact ASFA-Secretariat@fao.org.

ASFA and the next steps

Nowadays, many platforms are used by scientists for their knowledge consumption and knowledge presentation. However the majority of these infrastructures are typically lucrative.

One among these databases is known as ASFA- a database that was and still is playing a great role by helping aquatic scientific communities gain time using accurate information and allowing the covering of more than 3.7 million bibliographic references, provided freely to Partners since 1971.

In fact, ASFA is the fruit of the hard work on the document digitization of different librarians in different institutes and research centers, under the supervision and the financial contribution of FAO, besides the cooperative effort of the international network of ASFA Partners, who are tasked with abstracting and indexing the aquatic science literature published in their own countries. This database of disseminating bibliographic reference is composed of 3000 serial publications, books, report, conference proceedings and with a particular focus on grey literature. For low income countries and in front of the increase of the hard currency, and the difficulty to subscribe on lucrative platform these last years, ASFA was the solution to know about the last research via abstract

and full text. Knowing, that only 40 % of all work were accessible; generally through electronic archives and grey literature.

This is the ASFA present, how it will be the future and mainly after the covid19? The world is changing, socio-economically and geo-politically. Will open research reach another level in front of scientists' pressure and passion, besides the requirements of science in the future for all domains?

What is the next step?

ASFA's role is getting the information, but the most important, is that this data will be free and accessible everywhere for everyone; for all staff of institutions which are and not partners, associates or collaborating centers. This is the main role of science. Otherwise, the indexation of the data published and even of the grey literature will be essential, without forgetting about the bibliometry because of the interest of such data for all scientists.

As we say, the best is yet to come...

Authors:



Dr. Widiem KHOUFI, Fisheries sciences, Contractual assistant (biology of the animal), Faculty of Sciences of Gafsa, Tunisia

Gender in Wholesale Fish Marketing Chain of Kainji Lake Basin, Nigeria

For the full text of this article, please email juliusomeje@gmail.com.

The study investigated gender in wholesale fish marketing chain of Kainji Lake Basin, Nigeria. A multistage sampling technique was used to select 60 respondents from 7 communities; whereas primary data were collected from wholesale smoke-fish marketers with a questionnaire through face-to-face interview. Data were analyzed using descriptive statistics and net profit margin. The result shows that 55% of the marketers were men, 30% were youths and 15% were women; thus, exposing an unequal gender representation. However, the youths perform about 60% of the task in value chain activities such as sorting and grading, arrangement in cartons, loading and offloading and transportation to market centers. Key perceptions to gender participation in the marketing chain indicates that most of the activities requires one with masculine disposition (2.7) and the

marketers perceive that the value chain is capital intensive (2.63), thus limiting the participation of women. Total estimated sum of N 432,247,066.08 worth of processed fish was distributed in a year from the lake basin to other market centers in the country by men, women and youth. Also, the study found that there was no wide gender gap in terms of value of fixed assets, revenue, employment and wage for the men, women and youths involved in wholesale smoke-fish marketing. The net profit margin was 1.95% for the men, 1.92% for the women and 1.94% for the youths, indicating the ability of the enterprise of the fish marketers in converting revenue into profit. It is therefore recommended that short-term loans should be made available to women and youths involved in fish marketing to enable them upgrade to wholesale fish marketing.

Key words: gender, fish, marketing, Kainji Lake Basin

Authors:



Professor (Mrs) Anthonia Ifeyinwa Achike. Department of Agricultural Economics, University of Nigeria, Nsukka



Professor Chukwuemeka J. Arene. Institution: Department of Agricultural Economics, University of Nigeria, Nsukka



Omeje, Julius Emeka Omeje, National Institute for Freshwater Fisheries Research, New Bussa, Niger State, Nigeria. Email: juliusomeje@gmail.com



NaFIRRI improves French Fisheries and Aquaculture collections to become regional centre of excellence

As The National Fisheries Resources Research Institute, (NaFIRRI) gears up to becoming a regional centre of excellence in Fisheries and Aquaculture Research within the African Union, its Library, Information and Data centre has not been left behind.

The Library is keeping abreast with the requirements of being a regional centre of excellence by improving its French collections. English being the major National Language spoken in addition to Swahili, up until now, the centre has been purchasing and stocking information materials in English and Local Languages. The French speaking group had not been taken into consideration because requests the library received from scientists were in English, and yet the Library receives requests from different users across the globe. Despite the Library having in stock some French documents donated by well-wishers and some early scientists, it had not established a dedicated French section. The Library has now begun establishing the French section, with the main purpose of meeting the information needs of readers from French speaking countries and within Uganda who have adopted French as one of the African union languages.



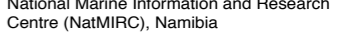

Within the Library and the African section which will hold the French section

Why the French Section?

As a regional centre of Fisheries and Aquaculture Research in Africa, the centre is expected to receive scientists from French speaking countries who come for training and will make use of the library. Types of information within the French collection will include books, papers, magazines and historical information. We look forward to building the French section with more books and publications as we prepare for a regional centre of excellence in Fisheries and Aquaculture research in Africa, and as staff of the NaFIRRI Information management group we look forward to the challenge of learning French so as to meet the information needs of French users.

Author: Alice Endra, National Fisheries Resources Research Institute (NaFIRRI), Uganda.
Email: aendra2000@yahoo.co.uk

The ASFA Partners are:

 National Marine Data and Information Service (NMDIS) China, People's Republic	 Institut de Recherches Halieutiques et Océanologiques du Bénin (IRHOB) - Benin	 Russian Federal Research Institute of Fisheries and Oceanography (VNIRO), Russian Federation	 Institut National des Sciences et Technologies de la Mer (INSTM) - Tunisia
 WorldFish, Malaysia	 ProQuest, USA	 Universiti Malaysia Terengganu (UMT), Malaysia	 Direction des Pêches Maritimes, Senegal
 Intergovernmental Oceanographic Commission (IOC), Belgium	 UN/DOALOS	 UN Environment	 Food and Agriculture Organization of the United Nations (FAO)
 FAO- AdriaMed Project	 International Commission for the Conservation of Atlantic Tunas (ICCAT)	 Indian Ocean Tuna Commission (IOTC)	 IUCN, The World Conservation Union
 Northwest Atlantic Fisheries Organization (NAFO)	 Pacific Islands Marine Resources Information System (PIMRIS)	 Southeast Asian Fisheries Development Center/Secretariat	 Secretariat of the Pacific Community (SPC)
 Western and Central Pacific Fisheries Commission (WCPFC)	 Instituto Nacional de Investigación y Desarrollo Pesquero (INIDEP) – Argentina	 Chittagong Veterinary and Animal Sciences University (CVASU) - Bangladesh	 Okavango Research Institute, Botswana
 Universidade de São Paulo Instituto Oceanográfico (IO/USP), Brazil	 Fisheries and Oceans Canada (DFO) / Pêches et Océans Canada	 Instituto de Fomento Pesquero (IFOP), Chile	 Marine and Coastal Research Institute "Jose Benito Vives de Andreis" (INVEMAR), Colombia
 Centre de Recherches Océanologiques (CRO), Cote D' Ivoire	 Centro de Investigaciones Pesqueras (CIP), Cuba	 Instituto Nacional de Pesca (INP), Ecuador	 Egyptian National Institute of Oceanography and Fisheries (NIOF), Egypt
 Institut Français de Recherche pour l'Exploitation de la Mer (Ifremer), France	 Hellenic Centre for Marine Research (HCMR), Greece	 Marine Research Institute (MRI), Iceland	 National Institute of Oceanography (CSIR-NIO), India
 Centre for Scientific Documentation and Information Indonesian Institute of Sciences (PDI-LIPI), Indonesia	 Iranian Fisheries Science Research Institute (IFSRI), Iran	 Marine Institute, Ireland	 Società Italiana di Biologia Marina S.I.B.M. ONLUS, Italy
 National Research Institute of Fisheries Science (Fisheries Research Agency, FRA), Japan	 Kenya Marine and Fisheries Research Institute (KMFRI), Kenya	 Korean Institute of Ocean Science and Technology (KIOST), Korea	 Living Aquatic Resources Research Center (LARReC), Lao, People's Democratic Republic
 Universidad Nacional Autónoma de México (UNAM), Mexico	 Institut National de Recherche Halieutique (INRH), Morocco	 INAHINA - Instituto Nacional de Hidrografia e Navegação, Mozambique	 National Marine Information and Research Centre (NatMIRC), Namibia
 National Institute for Freshwater Fisheries Research (NIFFR), Nigeria	 Institute of Marine Research (IMR), Norway	 Instituto del Mar del Perú (IMARPE), Peru	 University of the Philippines Visayas, Philippines
 Instituto Português do Mar e da Atmosfera (IPMA), Portugal	 National Marine Fisheries Research Institute (NMFRI), Portugal	 Instituto Español de Oceanografía (IEO), Spain	 Institute of Marine Sciences (IMS), Tanzania
 Chulalongkorn University, Thailand	 Central Fisheries Research Institute – Trabzon, Turkey	 National Fisheries Resources Research Institute (NaFIRRI), Uganda	 Budgetary Establishment "Methodological and Technological Centre of Aquaculture", Ukraine
 Freshwater Biological Association, United Kingdom	 Universidad de la Republica, Fac. Vet. Instituto de Investigaciones Pesqueras (IIP), Uruguay	 National Oceanic and Atmospheric Administration (NOAA), USA	 Ministry of Agriculture and Rural Development of Viet Nam,



OUT & ABOUT WITH THE ASFA SECRETARIAT (AKA ASFA PINGUINI)

The FAO-ASFA secretariat have nicknamed themselves the ASFA pinguini – why?
Because, just like real penguins, ASFA is always in pole position!

For more information, Email the ASFA Secretariat: ASFA-Secretariat@fao.org

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