

RESEARCH ARTICLE

## Information Managers as Change Agents in achieving Sustainable Development in the 21<sup>st</sup> Century

Bakare, Oluwabunmi.D<sup>1</sup>, Nosakhare Okuonghae<sup>2\*</sup>

<sup>1</sup>Department of Information Management  
Faculty of Communication & Information Sciences,  
Lead City University, Nigeria

<sup>2</sup>SamuelAdegboyega University, Ogwa, Edo State

Corresponding Author: Nosakhare Okuonghae, nosakhareokuons@gmail.com

Received: 01 March, 2022, Accepted: 02 April, 2022, Published: 01 May, 2022

### Abstract

The purpose of this paper is to examine the role of information managers and libraries in accomplishing Nigeria's sustainable development goals in the 21<sup>st</sup> Century. The paper explored the notion of sustainable development, examines the 17 Sustainable Development Goals (SDGs) including their respective targets. It identifies and discusses the role of libraries and information managers (librarians) in achieving SDGs, as well as the philosophy of information theory of communication as proposed by Claude Shannon (1948). Libraries all over the world offer a variety of products and services that support the accomplishment of all 17 SDGs. Libraries are secure, friendly spaces at the heart of communities, fostering reading and providing free access to information. Libraries are vital instruments in society, and they play a critical role in accomplishing long-term development goals. Citizens must be well informed if Nigeria's sustainable development goals are to be met and sustained. This can be accomplished by selecting, processing, organizing, and disseminating information based on the parameter of development as indicated in the Sustainable Development Goals (SDGs), and organizing training programs or forums where issues such education, environmental, climate change, gender inequality and health issues can be discussed, and so on.

**Keywords:** Information manager; librarian; library; information sustainable development Goals

### Introduction

Sustainability is a popular topic in most political and academic discuss but there is a dearth of it within the discipline of Library & Information Science. The concept enunciates a strong normative value towards equitable resource utilization in attaining intergenerational justice. This philosophy, entrenches the principles of conservation of natural environment as well as global equity. The world is changing and many scholars have had to grapples with the complications brought about by a fast-changing world where by the living pattern of the present generation consciously altered to a more beneficial way, to accommodate generations yet unborn (Lewis, Kenerson, Sorrentino & Rowse, 2019). The role of Information Managers also known as Librarians in this transition is essential, as Information Managers play a critical role in accomplishing long-term development goals through the provision of essential information services which has the capacity to enhance the quality of decision taken by

individual members of the society towards in achieving the set goals.

Expectantly, the drive of this new orientation of sustainability is being spearheaded by the United Nations through a framework known as the Sustainable Development Goals (SDGs). The SDGs are global in nature, taking into cognizance national realities, capacities and level of development. In Nigeria, like other nations, the expectation is that all hands must be on deck in attaining these goals. However, it appears from available records, that countries from third world nations especially from the Africa sub-region are lagging behind in the attainment of these global agenda. (Onyam & Benson, 2020).

Okuonghae and Igbinovia (2019) noted that one profession that may bring about the needed change in achieving these goals are those engaged in information management of which Librarians are core. According to them, each of the goals relies on the product – “information” for sustainability. The information Managers like other information professionals are squarely proficient in

information handling in satisfying the cognitive, psychological and affective needs for their diverse users. The fact remains that, proper information management affects information usability which might then translate to its sustainability when its essence has been felt positively. Conversely, information usability may be affected by information availability and accessibility. Thus, the role of Information Managers in information management dissemination is crucial for the achievement of the SDGs. Particularly because, the provision of information services stands to address the three aspects of the global agenda. More reason, there is the need to systematically examine information managers as change agents in achieving sustainable development in the 21<sup>st</sup> century knowing the significant role they play in the knowledge economy.

### **The Concept of an Information Managers**

To understand the concept of Information Managers, one need to examine the meaning of each term in phrase, ‘information’ and “Manager”. Basically, “Information” is often regarded as a processed data giving the user a meaningful insight. According to Buckland (1991) cited in Aina (2004) opined that information may be discussed under three heads; information – as- a process; information-as-knowledge as well as information- as - thing. According to the cerebral researcher, information is seen as a process when it performs the function of enlightening, that is, conveying information from a source to a recipient, it is a knowledge if it is performing the role of imparting knowledge to an individual, thus, reducing anxiety and uncertainty. Information as a thing represent data and documents recorded in written, printed or digitized formats, such as books, manuscripts, periodicals, databases artefacts, compact disc, etc.

“Managers” on the other hands, denotes someone who administers or supervises a business, office, or other organization (Gardner,2019).

Therefore, Information Managers are information professionals that specializes in organizing, coordinating, and supervising relevant resources including human and capital resources within an information system. Information Managers are significantly responsible for the gathering, preservation and dissemination of information within an organization. Aina (2004) posits that a librarian, archivist, and a record manager may all be regarded as information professionals because, they are involved with the following information handling activities such as purchase and processing of information; preservation of information sources, services and system and delivery of information to users, either directly or through intermediaries. However, the most notable information managers among these groups are the librarian as they deal directly with a lot of information resources and the user in public or private setting including academic environment;

more reason the nomenclature information managers within this discourse is weaved round them.

Nagarkar (2017) while clarifying the roles of librarian in Digital era, noted that librarians are information professionals that works as information managers in academic organization. He equally noted that, like the business managers, who markets and promotes their goods and services, the librarian objective is to promote and market information service delivered in the library to users. Accordingly, while Information Managers may work in any organization that collects and utilizes information, Librarians are essentially Information Managers because they are principally involved with information users, and also, with the management of information.

Okuonghae and Abimbola (2019) agree that Information Managers are gateway to knowledge management and are specially trained to aid information availability and sustainability through effective mechanism for gathering, storage, distribution, and conservation of information. The study also posits that the performance of these roles, will allows other stakeholders to concentrate in utilizing their time appropriately.

### **Sustainable Development: A Conceptual Clarification**

Sustainable development is a philosophy that has its origin in the report published by Brundtland commission in 1987. The report which was titled “Our Common Future” made extensive reference to the term ‘sustainable development’, which the report defined as “development that meets the need of the present without compromising the ability of the future generation to meet their own needs” (WCED,1987). Unarguably, this notion appears simple as it advocates for the equitable use and distribution of natural resources across different generations of users. In essence, the aim of sustainable development is for society to maintain balance between the drive to pursue or secure economic development and the need protect the environment through international framework, putting in perspective the fusion of environmental policies and viable developmental plans. According to Asemah and Imafidon, (2021), the notion of Sustainable Development is better understood within the three pillars of, ‘development’ which entails socio-economic development in line with environmental considerations; the second, focus on the principle of ‘needs’ which advocate for the reorganization of natural resources to ensure the quality of life for all, and last pillar which is weaved around the principle of ‘future generations’ which advocates that resources should be utilize in such a way that will not undermine the quality of life for future generation. Basically, sustainable development involves the ability to sustain human, material and socio-economic progress without endangering the ecosystem over a long period of time.

In the words of Dernbach (2011: 617), "the core idea of sustainable development is the integration of

environmental protection with development, rather than development at the expense of the environment or environmental protection instead of development, the idea is to achieve both development and environmental protection at the same time." Because sustainable development modifies development, development is important to the definition of sustainable development."

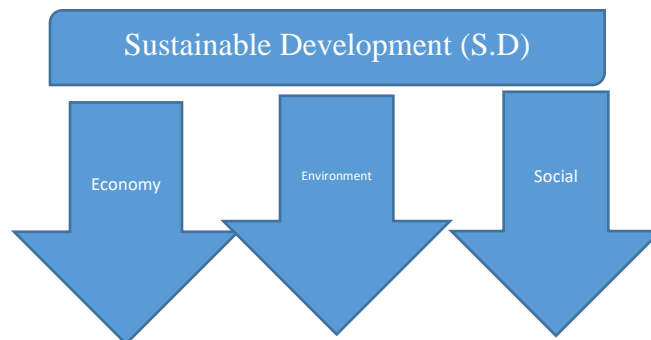
Several scholars have criticized this concept on the grounds that it lacks objective practicality. Thus, many of its critics' harp on the inability to maintain socio-economical equilibrium within the social ecosystem. This argument evidently advances the view that the practical implementation of the concept is elusive. Again, it is argued that the principle attempts to oversimplify a complex concept like sustainable development. Jacobs (1991) cited in Elliot (2013) posit that sustainable development, like other concepts such as 'equality' and 'democracy' all have basic definition which everyone can relate with. However, conflict always arise when there is need to implement or interpret it. Bakari (2013) in his critical remarks found it difficult to apply the idea because of the challenge of determining how certain natural resources should be sustained. According to the study, "what exactly should be sustained in sustainable development"?

The study further postulates: "it has been argued that there is no such thing as a sustainable use of a non-renewable resource, since any positive rate of exploitation will eventually lead to the exhaustion of earth's finite stock. This perspective renders the industrial revolution as a whole unsustainable"

Although the idea has been subject of fierce debate and contention amongst scholars due to the high degree of impossibility in ensuring equilibrium in some resource utilization, it has no doubt gain widespread popularity in the global political arena, and has wedged into the consciousness of relevant stakeholders the need to pursue every act of exploration of natural (environment) resources for economic development within the prism of long-term sustainability. It has been noted that oftentimes, political debate and scientific discussions on the notion of sustainable development either informally or formally have been carried out with the hope of winning more votes or to score political point or better still by business organizations to sell their products which is deemed to be environmentally or ecosystem friendly. Such activities lend credence to the uncontroverted fact that the concept has a universal application and the idea behind of sustainable development is applicable in almost every sphere of life (Elliot, 2013)

Klarin (2018) asserted that the modern pursuit of man in achieving social fairness, environment protection, social justice, climate change and cultural diversity are enshrined in the principle of sustainable development which aimed at combating some of the most basic needs of man. For better understanding, the concept is usually fitted into three

pillars; economy development, environment protection, and social justice. This division envisages an inter-relationship between these three major aspects in achieving the needed sustainable development.



**Fig 1:** Three pillars of Sustainable Development (Adopted from Elliot, 2013:20)

As shown above, the three pillars of Sustainable Development are economy, environment, and social pillars (Imafidon & Ogbaisi, 2021). Information Managers as knowledge facilitators play a significant role in achieving these three pillars. Firstly, it must be noted that the main stay of the 21<sup>st</sup> century economy is information which is core to the Librarianship profession. Several terms such as information age, information economy as well as the knowledge economy emphasises this fact where information is rated as the medium of exchange. The result therefore is that, economic growth is a factor of the amount of the quality of information available to a nation or organization through research and development which are effectively communicated by Information Managers. Similarly, Information Managers through information dissemination, are instrumental in achieving the environmental, social and economic aspect of the SDG. This is achieved through the platform of education (Osunwusi,2020) and information literacy. The provision of information resources to the users, help to empower them with necessary knowledge, skill, values, promote new orientations, attitude and ideals in addressing any of the crucial challenges facing the world today such as loss biodiversity, environmental degradation, climate change or issues such as gender inequality and poverty. In essence, the insight gained from the learning process is extremely useful in the shaping users' perception, attitude and prepares him or her in making informed decision in solving any environmental or social problems confronting the nation (Igbinovia, 2017).

In summary, Information Managers are agents in achieving sustainable development in the 21<sup>st</sup> Century in view of the fact that they are engaged in information management and as a result, provide quality information which helps users and indeed members of the public in exercising better judgement. Okuonghae and Abimbola (2019) citing

Lehman Brown (2018) identified eight reasons for information management in the achievement of the SDGs;

1. It supports the creation, control and development of records
2. It facilitates seamless exchange of useful information
3. It facilitates the integration new records management technologies
4. It provides mechanism for protecting vital information from loss and ensure data integrity are maintained
5. It helps to anticipate information needs together with the needed resources
6. it helps in collecting and analyzing primary and secondary records of SDGs.
7. It ensures in information flow processes and communication are controlled

8. The insight gained from information management provides user with the necessary tool to prepare and plan for the future.

**The Contribution of Information Managers to the Actualization of Sustainable Development in the 21<sup>st</sup> Century.**

As already noted, the objectives of the SDGs, is geared toward combating some of the most crucial challenges confronting humanities by the year 2030. The 17 SDGs is specifically aimed at promoting systemic change on earth (Kalu, Kalu, Okidi & Abigail, 2020). Accordingly, the table below indicates each goal and their targets.

**Table 1: SDGs goals and their targets**

S/N	Goals	The Target
Goal 1	No Poverty	To end poverty in all its forms everywhere
Goal 2	Zero hunger	To end hunger, achieve food security and improved nutrition, and promote sustainable agriculture
Goal 3	Good health and well-being for people	To ensure healthy live and promote wellbeing for all at all ages
Goal 4	Quality education	To ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
Goal 5	Gender equality	To achieve gender equality and empower all women and girls
Goal 6	Clean water and sanitation	To ensure availability and sustainable management of water and sanitation for all
Goal 7	Affordable and clean energy	To ensure access to affordable, reliable, sustainable and modern energy for all
Goal 8	Decent work and economic growth	To promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
Goal 9	Industry, Innovation and infrastructure	To build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation
Goal 10	Reducing inequalities	To reduce income inequality within and among countries.
Goal 11	Sustainable cities and communities	To make cities and human settlements inclusive, safe, resilient, and sustainable
Goal 12	Responsible consumption and production	To ensure sustainable consumption and production patterns using eco-friendly production methods and reducing the amount of waste
Goal 13	Climate action	To take urgent action to combat climate change and its impact by regulating emissions and promoting development in renewable energy
Goal 14	Life below water	To conserve and suitably use the oceans, seas, and marine resources for sustainable development
Goal 15	Life on land	To protect, restore and promote sustainable use of terrestrial ecosystem, sustainably manage forests, combat desertification, and halt and reserve land degradation and halt biodiversity loss
Goal 16	Peace, justice and strong institutions	To promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institution at all levels.
Goal 17	Partnership for the goals	To strengthen the means of implementation and revitalize the global partnership for sustainable development.

Okuonghae and Igbिनovia (2019) rightly noted that a common thread among these agenda is information. They

further conceived that suitable and accurate information is necessary for the actualization of these targets. This assertion is corroborated by Igbिनovia and Osuchukwu

(2018) when they emphasized that information professionals are in better stead to boost the attainment of SDG through proper dissemination of information and knowledge sharing. Therefore, it will seem that there is an inextricable nexus between the activities of information management and the actualization of the SDG. Then, it goes without saying that the role of Information Managers is essential for the realization of the set goals since the discipline is weaved round information which is core to the achievement of the SDGs. In a world where information increases at an exponential rate, the information manager is expected to adopt any efficient means like new technology to manage this vast pool of information. A large chunk of the Information Manager's time and energy is spent processing information and developing the proper system for processing it efficiently. The role of information manager emerges from his normal every duty of collecting, processing and providing avenue for the utilization of processed data to give the user insight to previously unknown knowledge.

Again, one of the salient pursuits of sustainable development is the attainment of quality education, peace and justice. The attainment of these goals in the 21<sup>st</sup> century, requires the contributory role of information managers who through their skillful approach, facilitates knowledge impartation, by making available quality information using ICT tools. According to the UN, the growth of ICT as well as global interconnectedness, have great potential to advance accelerated human development meant to connect the digital divide and to foster the growth of knowledge-based civilizations (Kalu et al, 2020)

Proper information management in the 21<sup>st</sup> century will ensure that information is easily available to achieve knowledge sustainability. The information manager has the arduous task of planning, collecting, evaluating information from different sources and providing same to the end user. As information experts they ensure that quality information is accessible to relevant stakeholders for informed decision making (Owojuyigbe & Owojuyigbe, 2021).

### **Roles of Libraries in Supporting the Achievement of the Sustainable Development Goals**

Libraries are important component of an informed society and appear in various forms and sizes to serve variety of audience. Ayaowei, Memory & Mercy (2021); and Igbinoia & Osuchukwu (2018), aver that library are platforms for information dissemination and knowledge sharing. This fact, demonstrates that libraries play a vital role as well, in realizing the SDGs (Gani, Kasa & Allahmagani, 2016). The SDGs rely heavily on libraries providing the requisite information in achieving their objectives which is hinged on the principles of the five laws by Ranganathan, the laws are summarized as follows (information are for use; every information has its user;

[www.jescae.com](http://www.jescae.com)

every user his/her information resource; do not waste the time of the user; the library is a growing organism). Information are for use; every user his/her information; every information its user; the time of the library user is not wasted as requisite information is readily available; the library is a growing organism as information can be presented in different format to different categories of users.

Libraries are widely regarded as a research centre and a source of information empowerment, a role that cannot be overstated because the general public benefits much from them. The traditional responsibility of the library is to evaluate, select, purchase, process, arrange and preserve of materials in various formats for the benefit of the users. Nicholas and Perpetual (2015) defined a library as an information hub that collects, organizes, stores, retrieves, and disseminates information to users.

Issa (2018) stated that libraries are the mind of the societies, a live depository of cultural past and sustainer of the intellectual activities that anticipates the future. They are connected with the culture of continual learning and reading, which instils the culture of reading in students. Thus, Okuonghae, Ijeh & Erhabor(2018) asserted that libraries are custodians of knowledge and the most dependable information institution whose activities revolves around the acquisition, organization, dissemination, and protection of information resources for the purpose of achieving cultural.

The information Managers (librarians) with the following activities can help libraries in support of the SDGs:

### **Aiding Research Development**

Librarians play a key role in facilitating research development. According to Gani, Kasa & Allahmagani, (2016) librarian, through the supply of literatures, literature mining and acquisition of information resources, could be of help to other researchers in their research process and development. Thus, Achieving SDGs, will necessitates librarians to articulate each of the goals and provide relevant information resources to researcher in their research activities

### **Provision of Guidance to Literature**

Librarians by their training, are skilful in providing guidance to patrons' in the choice of available publications in the library. Often times, the patron may be unaware about the existence of a particular information resource available for use. Through proper guidance, patrons are able to locate useful resources (Gani, Kasa & Allahmagani, 2016). The library gives the patron the platform to bring to the knowledge of the patron relevance literature concerning SDGs.



### **Reduces Patrons' Uncertainty:**

According to Kuhlthau, (1991) information seeker often approaches an information system with the feeling of uncertainty and apprehension in conducting research. However, with the active guidance of librarians, information seekers are able to retrieve relevant information. This feeling of uncertainty gives way to a feeling of clarity, satisfaction and a sense of relieve. Thus, librarians' services to patrons, help to reduces uncertainty and enhance awareness of possible cause of action to take in solving any of the identified problems under the SDGs.

### **Promoting Information Literacy:**

Librarians' role in promoting information literacy is perhaps one of the most important functions in librarianship. Information literacy has been defined as an intellectual ability for an individual to personally identify, evaluate, comprehend and utilize information (Ojo, Odunlade, & Adedokun, 2020). Supporting SDG will entail that the librarian equips library patron with the necessary skills in accessing information effectively, as well as evaluate information and its sources. In the end, the patrons are able to navigate the myriad sources of information available today for personal development. Ojo, Odunlade, & Adedokun, (2020) equally noted that proper identification of information and use are prerequisite for objective decision making.

### **Sustainable Development Goals and Librarians**

Librarians are important collaborators in accessing quality information for the attainment of the SDG. Information as an important variable in achieving SDGs is critical for information user for different reasons. Some use it for taking health decisions, other for politics, agriculture, and investment decisions. However, others use it for the advancement of knowledge (Ayaowei, Memory & Mercy, 2021). The International Federation of Library Association (IFLA) (2013) while noting the unique role of the library in supporting sustainable development, called on other stakeholders to recognise libraries all over the world as partner in contributing to sustainable development agenda. According to IFLA, libraries:

- Provide opportunities for all
- Inspire people to improve and develop themselves
- Provides a platform for patrons to have access to the world's knowledge
- Provides librarians the avenue to offer expert assistance to patrons
  - Constitutes an integral part of a multi-stakeholder society.

As a result of the library's inclusion, librarians' tasks extend beyond organizing resources, but now involves taking the responsibility of providing appropriate

[www.jescae.com](http://www.jescae.com)

information to patrons in order to actualize long-term developmental goals (Gani, Kasa & Allahmagani, 2016). Consequently, librarians must provide well-articulated services that are targeted towards specific goals based on the library's mandate and the population they serve.

In addition, Gani, Kasa & Allahmagani (2016), in their study, proposed that the Librarian Council of Nigeria (LRCN) as well as the Nigerian Library Association (NLA) with its various sub-sections could collaborate to ensure that the SDGs are achieved, through the formulation of policies and action plan. These scholars further suggested that, through policy formulation, advocacy programmes, collaborations with NGO, training programs, promotion of open access initiative, promotion of literacy campaigns for citizens, motivations and evaluation, library and librarian can support the actualization of sustainable development goals.

### **Theoretical Underpinning: Information Theory**

Information theory was formulated by Claude Shannon (1948). The theory which arose out of mathematical process describes how signals ("message or information"), such as written language, spoken words, and body motions, are transmitted from source, to the receiver in various formats. The receiver, reviews the information and communicate back to the sender, through a process of feedback to inform him of any gap in communication process. The feedback mechanism therefore assists the communicator in correcting the subsequent output.

Information Managers in transmitting information to the user within the library, solves different societal problems. The library is a platform for sharing enduring knowledge, values, attitude, and skills for promoting economy, environmental and social sustainability (Osunwusi, 2020). In addition, Issa (1997) cited in Ayaowei (2021) asserted that information resources provide the impetus for social, cultural, spiritual, political and scientific advancement of achieving social-political equity. Thus, the Information Manager carries out a fundamental duty in promoting the sustainable development goals, which cut across all aspects of human life. The significance of this theory to the study is that, it emphasized how Information Managers through the transmission of information from the source (Government, Writers, Researchers and Agencies such as the United Nations) to the users within the library community, imparts knowledge. This unique service rendered by the Information Manager help to minimize the uncertainty, disorganization, promote good perception by the user towards the SDGs and its overall attainment. It must be said that the impartation of knowledge of SDGs, sharpens individual's attitude and disposition towards the actualization of these universal goals. Similarly, with the mechanism of feedback as postulated by the theory by interfacing with the users, Information Managers are able to fill the gap in the individual's knowledge through

further research and clarification using various channels such as social media in meeting the users' needs (Bakare, 2018). In sum, the Information Manager carries out a fundamental duty of promoting SDG through information service delivery in Nigeria.

### **Summary**

It is important to note that information is a vital tool and a common thread that cut across each of the SDGs. In view of this fact, it is correct to state that accurate information is necessary for the actualization of these goals. Consequently, Information Managers with their skill-set, as information professionals, are in better stead to boost the attainment of SDG through proper dissemination of information and knowledge sharing. By so doing, they promote new orientations, ideal, and values necessary for securing, economic, environmental and social sustainability. According to Ayaowei, Memory & Mercy (2021), without dissemination of information, end user would not be informed about current issues and policies of government. The orientation gained from the service function, enhances better decision making, foster societal awareness for combating the challenging outlined under the SDGs.

### **Conclusion**

Libraries are vital institutions in society, and they play a critical role in accomplishing long-term development goals. Citizens must be well informed if Nigeria's sustainable development goals are to be achieved. This can be accomplished by selecting, processing, organizing, and disseminating information based on the development indicators raised in the Sustainable Development Goals (SDGs), and hosting local forums where people can discuss issues such as community health, education, environmental issues, climate change, and so on. The truth is that Information Managers and libraries are critical components in achieving the SDGs. The International Federation of Library Associations (IFLA) believes that increasing access to information and knowledge across society supports sustainable development and improves people's lives, just as it has declared that unrestricted

### **References**

- Adesoji, F.F (2007). Need for Re-Introduction of Reading Corners in Primary School Libraries in Nigeria: A Cursory Look at Non-Conventional School Libraries. *Niger. Sch. Libr. Journal*.6:73-83.
- Aina L.O. (2004). *Library and Information Science Text for Africa*, Ibadan, Nigeria: Third World Information Service Limited.

access to knowledge is essential in any developmental process for individuals and nations. (International Federation of Library Associations and Institutions, 2017). This is, without a doubt, the information Managers' area of competence, as well as the exclusive responsibility of any library.

### **Recommendations**

In the light of the finding from this study, it is recommended as follows'

- 1.The Government at different level should establish and encourage the establishment of libraries (and other information centres) in strategic parts of the country.
- 2.Government at all levels should partner with Information Managers as important stakeholder in the drive to achieve the sustainable development goals. This can be achieved by giving recognition to deserving member of the profession.
- 3.Government should refrain from any act that may hinder the Information Manager from performing their role effectively. For instance, the conversion of State library or information centres to a shopping mall without alternative arrangement should be discouraged
- 4.Given the fact that education transfer global values to individuals, LRCN and NLA should ensure that members of the profession are brought to speed with the latest practice and knowledge. This can be done through organizing useful workshops and seminars.

### **The Significant of the Study**

- 1.The study reveals that beyond the provision of information services, for educational purposes, Information Managers are change agents needed for the attainment of the SDGs.
- 2.When Information Managers play their role effectively with respect to the social, economic or environmental aspect of SDG, we have an informed society that can make meaningful decisions.
- 3.It will inform Government policy in knowing that the discipline of librarianship plays a key role for creating an informed society and in achieving SDGs in Nigeria

Aliero, S. A. (2016). *Reading Culture and National Development in Nigeria*. Paper Presented at Nigerian Library Association Conference/AGM, Funtaj Academy, Abuja.

Anyaoku, E. N. (2016). *Medical Libraries and Achieving Sustainable Development Goals in Nigeria: Issues and Problems*. Paper Presented at Nigerian Library Association Conference/AGM, Funtaj Academy, Abuja.

Asamoah-Hassan, R. H. (2003). *Information: The oil in the wheel of national development*. An inaugural lecture

- of the President Elect of the Ghana Library Association held at GNAT Hall, Accra, 16p.
- Australian Library and Information Association (ALIA) (2014). Future of the Library and information science profession: Special libraries Canberra ACT. Available online at [www.alia.org.au/futureoftheprofession](http://www.alia.org.au/futureoftheprofession), 20p.
- Ayaowei, I. T., Memory, D. & Mercy, U. (2021). Information Preservation and security in Bayelsa State College of Health Technology, Otuogidi-Ogbia Town. Lagos Journal of Library & Information Science (LJLIS) Vol. 10 (1/2) 125-137.
- Bakare, O. D. (2018). Social Media Use for Service Delivery in Academic Libraries. Bull. IEEE Tech. Comm. Digit. Library 14(1) 1-8
- Bakari, M. E. (2013). Globalization and Sustainable Development: False twins. New Global Studies 7(3), 23-56.
- Dernbach, J.C. (2011). Creating the Law of Environmentally Sustainable Economic Development. Pace Environmental Law Review Vol. 28. No. 3
- Ekere, J. N., Benson, O. V., & Amaechi, N. (2016). Areas of Partnership between Non- Government Organization, Private Sector and Libraries towards Actualization of Sustainable Development Goals in Nigeria. Paper Presented at Nigerian Library Association Conference/AGM, Funtaj Academy, Abuja.
- Elliot, J. A (2013). An introduction to sustainable development (4<sup>th</sup> ed). Routledge, Taylor & Francis Group.
- Flugstad, M. & Farmer, T. (2010). Technology news: Monitoring the Heartbeat of the modern library. Arkansas Libraries, 67(3), 4 – 6.
- Ford, S. (2002). Old problems for new reasons: Overcoming the challenges presented by mentally ill library users. In: Helping the difficult library patron: New approaches to examining and resolving a long-standing and on-going problem. Kwasi Sarkodie-Mensal (Ed.) The Haworth Information press, pp. 83 -90.
- IFLA (2013). The Role of Public Libraries in the Attainment of Botswana's Vision 2016 <http://library.ifla.org/258/1/201-radijeng-en.pdf>
- Gani, E., Kasa, M.G. & Allahmagani. K. (2016). Roles of Library in Supporting Sustainable Development Goals. Paper presented at the 3<sup>rd</sup> Conference of Certified Librarians in Nigeria, National Space Research and Development Agency, Obasanjo Centre, Airport Road, Abuja.
- Garner, B. A (2019). Black's Law Dictionary (11<sup>th</sup> Ed.). Texas: West Publishing Co. p. 1149
- Gupta, Sangita (2015). Role of Libraries in Knowledge Society. International Journal of Management and Applied Science, Vol. 1, issue 6, 66- 68.
- Iginovia, M. O (2017). Librarians' Involvement in Cross-Disciplinary Research and its Implication for Sustainable Development Goals (SDGs): the Nigeria Experience. Library Review Vol. 66 No. 4/5, 2017 251-265.
- Igbinovia, M. O & Osuchukwu, N. P. (2018). Predictors of Knowledge Sharing behaviour on Sustainable Development Goals among Library personnel in Nigeria. IFLA Journal, 44(2): 119-131. Available at <http://dx.doi.org/10.1177/0340035218763445>
- Imafidon, K. & Ogbaisi, S. A (2021). Small and Medium Scale Enterprise for Sustainable Development in Nigeria. Multidimensional Approaches to Sustainable Development in Nigeria, (Enugu, GO University Press P. 11-28).
- Issa, A.O, (2018). The role of public libraries in communities and National Development: the big issues. Paper presented at the conference of Directors and Chairmen of States Public Library Board in Nigeria. Odeleye, D.A(n.d). Repositioning Nigerian education for relevance in the 21<sup>st</sup> century. Ibadan. university Press.
- Klarin, T. (2018). The concept of sustainable development: from its beginning to the Contemporary issues. Zagreb International Review of Economics and Business, 21(1), 67-94.
- Kalu C.O, Kalu, E.I, Okidi, I.A.A, Mafe, T.A (2020) ICTs Tool for Achieving Sustainable Development Goals (SDGs): A Conceptual Overview. Journal of the Nigerian Library Association Vol. 53 No. 2. 11-22
- Lewis. R. A, Kenerson M.J, Sorrentino & Rowse T. H (2019). Experiencing Sustainability Education Insight from a Living and Learning Programme SAGE publication Vol. 13(1) 24-44.
- Nagarkar, S. R (2017). Roles of Librarian as Information Manager in Digital Age. Sinhgad Institute of Business Review. Conference Issue 16<sup>th</sup> and 17<sup>th</sup> Feb 366-370.
- Nicholas, M.T & Perpetual, A.E (2015). Library and Education: Panacea for Sustainable Development in Nigeria. Asian Journal of Information Science and Technology, 5(2), 28-31
- Ojo, J.O., Odunlade, R.O. & Adedokun, T.O. (2020). Information Literacy for Sustainable Agricultural Development in Nigeria: A Case of Farmers in Lagos-State. Nigerian Libraries, Journal of the Nigerian Library Association. Vol. 53 No. 2, 23-36
- Okuonghae, O. & Abimbola M.O (2019). Information Management in Herbal Research: Nexus of Trends and Application of Emerging Technologies, International Journal of Knowledge Content Development & Technology Vol. 9, No. 3, 63-74.



- Okuonghae, O. & Igbinoia M. O (2019). The Role of Academic Libraries Towards the Attainment of Sustainable Development Goals: The Nigerian Perspective. *Covenant Journal of Library & Information Science (CJLIS)* Vol. 2 No.2 51-68
- Okuonghae, O., Ijeh, C. I & Erhabor, J. O. (2018). User Delinquency as a Factor Affecting Effective Service Delivery in University Libraries in Ekiti and Ondo State, Nigeria. *Library Philosophy and Practice* (e-journal). Retrieved from <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?Article=4842&context=lipphilprac>
- Onyam I. D & Benson V.O (2020). Achieving Sustainable Development Goals in Nigeria: Library and Information professionals As Catalysts, *The Information Technologist: An Information Journal of Information and Communication Technology (ICT)* Vol. 17. No. 1 205-215.
- Osunwusi, A.O. (2020). The Nigerian Education Milieu in the SDG Era: The Roles, Values, Challenges and Prospects of ODL and Lifelong Learning. *International Journal of Learning and Development* Vol. 10. No. 1 140-158
- Owojuyigbe A. A & Owojuyigbe P. F (2021). Archival Digitization: A Vibrant Education and Research Tool for Sustainable Development. *Lagos Journal of Library & Information Science (LJLIS)* Vol.10 No. ½ pp14-27
- World Commission on Environment and Development. (1987). *Our Common Future*. Oxford: Oxford University Press.