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# Sustainable Development initiatives in Libraries based on the COVID 19 experience: A future plan

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## Abstract

The 2030 Agenda for Sustainable Development, adopted by the UN General Assembly in 2015, is working around the world to achieve the 17 goals. Governments and other institutions are preparing action plans to implement sustainable development ideas. Libraries are also developing and implementing various schemes to support sustainable development initiatives. It was at this juncture that the COVID-19 pandemic struck in 2020, shaking the social, economic, cultural, educational and healthcare sectors. In this context, sustainable development ideas are of great importance. The situation is such that in the post-COVID-19 era, more and more sustainable development activities have to be undertaken by all. This paper examines what libraries can do to achieve the 17 Sustainable Development Goals after COVID 19.

Keywords: *United Nations (UN), Sustainable Development Goals, COVID-19 pandemic, Post- COVID-19, Library and Information system*

## Introduction

September 20, 2015 the UN General Assembly approves the 2030 agenda for sustainable development, which includes 17 Sustainable Development Goals and 169 targets and 232 indicators. The Sustainable Development Program for 15 years is planned in line with the transition from the Millennium Development Goals. The goal of sustainable development is to bring in new investments in the private and public sectors. This agenda, which has been ratified by all member states of the United Nations, provides a roadmap for UN member states for sustainable development, social inclusion and equality. At the same time it protects our planet and leaves no one behind. All countries share the responsibility to contribute to it (UN, 2015). The 1987 report of the UN World Commission on Environment and Development (WCED) was entitled "Our Common Future". According to this, sustainable development is envisioned as a solid approach based on economic, social and environmental progress. The report states that sustainable development is the balance of social equality, economic development and environmental thinking. Sustainable development aims to meet the needs of the present without compromising on the needs of future generations (WCED, 1987). This paper is an endeavor to outline post-COVID 19 activities of libraries to realize the Sustainable Development Goals (SDG). This is often a fully-fledged concept able to outline library work

into the broader and far-reaching scope of the 2030 Agenda for Sustainable Development. It aims for long-term economic growth. At this juncture too, the library activity should be turned into an investment for the socially excluded, minorities, children and immigrants. This is likely to get great recognition. Libraries that are fully committed to implementing SDGs can go much further and provide detailed descriptions of policies and indicators. Encouraging reading and organizing information literacy activities is one of the most important activities of libraries in today's context. However, libraries are also forced to take on new responsibilities in this situation. Therefore, libraries need to be prepared to pursue sustainable development goals. Rich countries have a moral responsibility to support poor countries. Libraries also have a responsibility to ensure that ideas and information are shared equally with all people in the community.

## Review of Literature

Library and information scholarly papers related to Sustainable Development began to appear in the 1990s. Some of them are added here. Manning (1990) argue that progress is needed to connect geo-information systems in a way that is visibly understandable to decision makers, with knowledge of environmental opportunities and limitations for a sustainable economic and environmental future. The paper, published by Spink (1995), outlines two-dimensional perspectives on sustainable development. This paper discusses the impact of information science as an alternative to global industrialization and modernization. Spink's (1999) paper analyzes the relevance of information science research based on local self - sufficiency to protect humanity in order to address the inequalities and imbalances that have arisen in society in the wake of global industrialization. In literatures on sustainable development and industrialization, this paper also addresses the contradictions.

The UN General Assembly adopted and implemented the Millennium Goals with the goal of sustainable development in 2000. Related studies and papers began to come from the library sector as in all other fields. Melville (2010) argue that the sustainable development perspective and functioning of organizations need to be transformed in shaping environmental thinking by understanding environmental awareness and the relationship between nature and man. The information system can play a crucial role in this. The aim of this research is to upgrade the information system or achieving the sustainable development goals. The academic community has been slow to bring a sustainable development perspective to the issue of environmental development. Information system researchers, educators, journal editors, and association leaders can help improve environmental sustainable development by strengthening information system functions. This article by Watson, et al. (2010) sheds light on that. Nathan (2012) put forward the concept of information practice in the field of information science based on information obtained from the study of two eco-villages. The information was gathered through observations and interviews. Problems between community values and their practices related to sustainability have been analyzed.

Hassan, et al. (2013) conducted a bibliographic study of research projects around the world on sustainable development. China is at the forefront of sustainable development and related

areas of learning. This study shows that countries need an inter-disciplinary approach to achieve sustainable development. Many aspects of sustainable development are interrelated, so a proper research agenda needs to be prepared separately. This paper by Chowdhury (2013) suggests that integrated research efforts are needed to develop and manage sustainable digital information services. Models of various factors for achieving socio-economic and environmental sustainability of information services are also suggested here. The main purpose of this paper, written by Townsend (2014), is to examine how LEED certified libraries create awareness among consumers about environmental sustainability. To this end, 24 Canadian LEED certified libraries were included in the survey. The vast majority of certified libraries have found that users have the envisioned environmental awareness. This paper, prepared and published by Chowdhury (2014), aims to develop an ideological model and research framework for the study of the economic, social and environmental sustainability of digital libraries. Supports users' personal, organizational and social culture as well as discusses environmental sustainability and measures. In 2010, the Association for the Advancement of Sustainability in Higher Education published "Sustainability curriculum in higher education: A call to action" with the aim of incorporating and promoting sustainable development topics in the teaching and research of universities. Following this, the concept of sustainable development has been introduced in libraries and information science schools as part of learning and research activities. Jankowska, et al. (2014) is introducing such research through this paper. Cuadrado-Ballesteros, et al. (2014) discuss in this paper the diversion of local governments from more attention-grabbing issues such as environmental issues by focusing on extraordinary and hostile political news under excessive pressure from the media. This paper describes the impact of such media pressures on local governments.

Since the enactment of the 2030 Agenda for Sustainable Development, envisioned and implemented by the UN in 2015, articles in the field of Library and Information Science with a focus on sustainable development have begun to appear. In this article, Chowdhury (2015) deals with the energy and environmental costs involved in operating digital libraries and information services. This article highlights the need for environmental sustainability digital information systems and services. This paper reviews the published literature on Knowledge Management in the environmentally sustainable development activities of logistics service providers. 38 research papers have been analyzed by Evangelista and Durst (2015). The aim of this study is to identify the areas for future research in logistics knowledge management by understanding the nature and scope of existing research papers. This article has been prepared by Navarro-Galera, et al. (2016) with the view that transparent information online through the website will help in sustainable development. This paper recognizes that website developers and managers play an important role in making local governments transparent about sustainable development. In this article Chowdhury and Koya (2017) argues that the sustainable development agenda adopted by the UN General Assembly 2015 is being adopted by the nations of the world and efforts are being made to achieve the goals, for which financial and other resources as well as access and use of information are essential. The iSchools play an important role in connecting the community and people with the information they need. This paper assesses that linking it to SDG can extend its impact to the academic level. This study was conducted by Li in 2017 to understand what sustainable learning activities are at the UC Merced Library. By pursuing a sustainable perspective in its design

and operation, it can be understood that this library is instrumental in achieving active and sustainable economic and social goals. The aim of this study is to explore the impact of librarians' involvement in cross-disciplinary research on achieving sustainable development goals. Igbinovia (2017) conducted the study online. This study shows that it is important to know more about sustainable development and that library marks can contribute more to cross-disciplinary research. Fiorini and Jabbour (2017) are here to find articles that support sustainable development ideas and make them a subject of study. The information system is very supportive of delivering sustainable development ideas to the organization, information distribution network and users. The purpose of this study is to understand this and make an effort to improve performance. This study by Okuonghae and Igbinovia (2019) explores the impact that academic libraries can have on realizing the United Nations development agenda. A survey was conducted for this purpose. This study showed that academic libraries are contributing to the sustainable development goals of Nigeria. These show that the Library and Information System have always collaborated with sustainable development activities around the world.

## Sustainable Development goals and COVID-19 Pandemic

Sustainable Development initiative in the post-COVID 19 situation is a laborious task before every country. International organizations, institutions, leaders of nations and different policymakers seriously thinking about post-COVID 19 rebuilding of nations. Corona virus shook the entire areas of development of countries. It greatly affected the economic, social, educational, health and political stability of every country. The United Nations has described it as the biggest test since its inception. Libraries played a considerable role in all fields of human developmental activities. But unfortunately, due to the coming of COVID-19, the users of the libraries cannot reach the libraries and use the collection of libraries. So the huge collection of documents underutilized. The library staff also could not do their service. All these things resulted in the utilization of libraries. Modern libraries have a very good collection of print as well as electronic resources. Some libraries started to facilitate their electronic resources like e-books e-journals, e- theses and dissertations, etc. Many libraries around the world are working biologically to implement SDG. Countries such as France and Germany are organizing exhibitions and events related to sustainable development to implement the 2030 Agenda. In Spain as well, there are 6 goals of sustainable development, namely 3 (Good health and well-being), 4 (Quality education), 5 (Gender equality), 8 (Decent work and economic growth), 10 (Reduction of inequality), 11 (Sustainable cities and communities, 16 (Peace and justice and strong institutions) have been linked to change in library activities, however, because libraries are not financial agents, and there are many limitations to the libraries' ability to organize a library-centric activity, including individual skills, abilities, representation, and behavior. Comparing these measures with SDG indicators is a practical problem, as they are difficult and costly in terms of public health and the strengthening of democracy, as well as the economy, investment income, and commercial life of a city or region. Vlimmeren (2020).

## Sustainable Development Goals and Libraries

IFLA (2017) confirms with the following statement that there is a strong connection between libraries and development:

- ➢ Libraries provide opportunities for everyone
- ➢ Libraries empower people for their own self-development
- ➢ Libraries offer access to world knowledge
- ➢ Librarians provide expert guidance
- ➢ Libraries are part of a multi-stakeholder society
- ➢ Libraries must be approved in development policy frameworks

During the COVID-19 period, many libraries were threatened with closure. Italian libraries have made inroads into digital library services and online library services. Attempts have been made to bring library services to users through different technologies of social media. Tammaro (2020). Now the services of libraries are mainly focused on the users associated with any institution. There is no context for direct contact with the community. But in the new social context, libraries need to be directly involved in achieving their cultural, educational and social goals. COVID-19 is a global epidemic. Various forms of preventive action and control are taking place around the world. In this case, Panle, et al. (2020) state that the librarians have  definite role to play in many aspects of the epidemic, its new stages, accurate statistics, vaccine development information, and methods of infection. In a paper, Mehta and Wang (2020) describe the problems faced by university libraries since the outbreak of the COVID-19 epidemic in March 2020. This paper analyzes new initiatives and applications made by libraries to facilitate online learning and teaching. Thus libraries need to be consciously involved in the work of helping each other understand their goals and their objectives in order to enable the dissemination of knowledge to achieve sustainable development goals. Our libraries need to be transformed into a "social library" to achieve sustainable development goals.

Libraries are a social organization that adheres to the motto 'Right information to the right users at right time with least cost'. It serves all sections of the people as an information dissemination center and as a public space. Ranganathan (1931) formulated the "Five Laws of Library Science" in 1931, which are:

1. Books are for use
2. Every reader his [or her] book
3. Every book its reader
4. Save the time of the User
5. The library is a growing organism.

Libraries and information systems based on these 5 laws can wake up and work after the COVID-19 pandemic, to achieve the 17 Sustainable Development Goals in a very powerful way.

## 1. No Poverty

Sustainable Development Goal 1 (The global goals) aims to end poverty everywhere. In addition, it aims to eradicate extreme poverty and reduce overall poverty by 50%. The 2015 agenda and its MDGs made significant strides in poverty, halving the number of people living in extreme poverty. However, 46 percent of workers in Southeast Asia work in poor conditions, rarely receive decent work-related benefits, and often stay a step away from falling into extreme poverty. The vulnerable employment rate for women in Southeast Asia is 10 percent higher than for men. As a result, the international community is pushing the issue to the forefront of the 2030 agenda, urging countries to step up further. Poverty in a country can only be eradicated with the help of various agencies. A situation can only be resolved if the authorities, the administration and the people consciously intervene. Many institutions have come forward to raise awareness of this state of affairs in the country at all times. Libraries are one of the most important institutions. Libraries have books, journals, periodicals, statistics and other up-to-date information that must be brought to the attention of the authorities first and foremost in the post-COVID period. Libraries can play a major role in bridging the gap between rich and poor and creating an egalitarian social environment. Literacy activities, access to rights for the poor, employment assistance and educational assistance will all contribute to the goal of poverty alleviation. Similarly, the important task undertaken during this period is to formulate and implement information literacy activities to educate the citizens about poverty alleviation schemes and to make them aware of their rights.

## 2. Zero Hunger

Sustainable Development Goal 2 (The global goals) aims to end hunger, achieve food security and better nutrition, and promote sustainable agriculture. It gives a more comprehensive approach to the problem of hunger. It aims to ensure that everyone has a safe, nutritious and adequate diet at all times. Although famine is on the international development agenda and there has been a significant improvement in hunger and malnutrition in recent years, the goal of reducing the malnutrition ratio to less than 12 percent has not been achieved. The international community is urging countries to step up their efforts to address the plight of millions of people. One of the areas that need to be taken care of in order to create a hunger-free society is agriculture. Many reforms need to be planned and implemented in the post-COVID 19 agriculture sector. To create awareness among the people about various schemes in the field of agriculture, agricultural subsidy, various projects in the agricultural sector libraries should concentrate on agricultural information system.

## 3. Good Health and Well-being

Sustainable Development Goal 3 (The global goals) ensures a healthy life and promotes the well-being of all ages. There are 9 general targets, 3 implementation targets and 26 indicators. Its goals include broader mortality rates, infection numbers for many diseases, tobacco use, suicide rates, road deaths, access to essential health services, and family planning. The corona virus that shook the world is now going to be a part of our lives. All we have to do now is fight the corona and live with the corona. Therefore, fundamental changes need to be made in the post-COVID 19 health sector. We need to pursue some new habits that were not part of our lives. Wearing masks, using sanitizers and gloves is becoming our habit. The library should take the responsibility of conducting information literacy programs, follow-up training programs and health discussions to create awareness about such new habits.

## 4. Quality Education

The main objective of Sustainable Development Goal 4 (The global goals) is to ensure comprehensive and equitable quality education and to promote lifelong learning opportunities for all. Educational advancement is essential for the empowerment of women, the attainment of gender equality and the creation of environmental restoration. It has 7 general objectives, 3 implementation objectives and 11 indicators. Education can enhance innovation, increase productivity and ultimately provide benefits such as improved economic conditions. Education faced a major crisis during the COVID period. It was a situation where children and teachers could not reach the schools and engage in learning and teaching activities. However, libraries have made great strides in delivering electronic information to users through online technologies. If such services are carried out more efficiently in the post-COVID 19 period, it will be of great benefit to this community. Today a variety of information sources are available in various formats like audio, video, pdf, multimedia, etc. E-books, e-journals, e-theses, video classes, records and online databases of all subjects are available on the Internet. Libraries also have the responsibility to collect these and deliver them to the library users. To promote this, libraries can implement information literacy, digital literacy, and orientation programs to reach out to the public through websites, blogs and other social media platforms. In addition, we need to work more efficiently by taking on new activities and services that reach out to the people.

## 5. Gender Equality

Sustainable Development Goal 5 (The global goals) was launched to achieve gender equality and empower all women and girls. It contains 9 targets and 14 indicators. The goals of SDG 5 are to achieve gender equality at the local and national levels. Equality and empowerment of women will have a significant impact on sustainable growth and holistic development, which is essential for the success of the 2030 Agenda for Sustainable Development. The COVID 19 crisis is an issue that seriously affected everyone but it was the women and children who suffered the most. As for women, they had to take on the total responsibility of a family. Therefore, an action plan based on gender equality should be formulated considering such

categories. For that, libraries as a public space need to become centers of gender equality. Library services, library systems, etc. need to be redesigned.

## 6. Clear Water and Sanitation

Sustainable Development Goal 6 (The global goals) focuses on the universality of proper management of water and sanitation water resources. It has 8 targets and 11 indicators. Hygiene has become a basic human right that sustainable water management goes beyond providing a safe water supply. It also focuses on water quality and wastewater management, water scarcity and usability, water resource management, and conservation and restoration of water-related habitats. Clean water and hygiene are essential to prevent the spread of the disease, which is transmitted by the corona virus. Libraries need to be role models in achieving this goal. Similarly, libraries can make a positive contribution to the work of conveying its importance to the people. Libraries can organize important day celebrations, debates, seminars and classes on this topic.

## 7. Affordable and clean energy

SDG 7 (The global goals) focuses on ensuring reliable and sustainable access to modern energy services. It aims to increase the proportion of renewable energy sources used for distribution and double the rate of energy efficiency improvement globally. Energy availability is critical to achieving all sustainable development goals, from poverty alleviation to advancing health, education, water supply and industrialization to tackling climate change. Libraries should pay attention to the following matters in order to achieve these goals in the post-COVID 19 era;

a) Reduce energy consumption,
b) Significant utilization in energy supply,
c) Adjust the interior of the library to allow for adequate sunlight,
d) Make adjustments to avoid environmental damage.

## 8. Decent Work and Economic Growth
SDG 8 (The global goals) aims to promote sustainable, comprehensive and sustainable economic growth, complete and productive employment and decent employment for all. It has 10 general goals and 2 ways to implement them. This is an important area to be ensured after COVID 19. By making education universal and free, better living conditions can be created for poor children. As well as upholding the greatness of the work for doing all kinds of work. As well as modernize all occupations. Modernize all sectors of employment. Provide job training at the government level. Thus a sustainable economic environment can be created. Libraries can do a lot for educational advancement. Libraries can also assist candidates in competitive examinations. Libraries should come forward to provide higher jobs and other vocational training, such as in the civil service.

**9.  Industry, Innovation, and Infrastructure**

SDG 9 (The global goals) focuses mainly on small enterprises and infrastructure and industrial development. It facilitates scientific research and the technological advancement of industries. It includes access to information and communication technology and affordable internet access. The target has 5 general targets, 3 compliance targets and 12 indicators. Industrial growth and infrastructure development is essential to overcome the post-COVID 19 situation. Innovative and creative ideas for progress should be brought forward. Students, youth and the general public must come forward to overcome this situation. Libraries can enable them to do this. Debates, discussions and seminars should be organized on industrial potential and infrastructure development.

**10.  Reducing Inequality**

Although the international community has been able to lift people out of poverty as a result of sustainable development measures, there is still great inequality in the areas of health and education services and property. More inequality has been reported in developed and developing countries and between countries. Sustainable Development Goal 10 (The global goals) addresses inequality from a broader perspective. Its 10 targets and 11 indicators consider social, institutional and economic factors to ensure comprehensive growth, equal representation and opportunities. Inequality is rooted in a variety of factors, including environmental degradation, poverty, persistent unemployment, conflict, violence, and political instability, as well as structural issues such as poor representation, discrimination, and the lack of adequate wages, and social and monetary policies. This is a major problem facing countries after COVID 19. This has happened as part of the COVID 19 expansion between countries and within countries. Libraries can play a big role in meeting this challenge. Arrange library services in a way that is accessible to all citizens. Libraries can take on the task of strengthening the mobile library system, bringing online services to all, launching and implementing information literacy programs, organizing activities to inculcate the idea of equality in the human mind, delivering library services in backward areas, and so on.

**11.  Sustainable Cities and Communities**

The goal of SDG11 (The global goals) is to "make cities, human settlements, safe, vibrant and sustainable." Its purpose is to improve housing, transportation, public spaces and urban environments to enable them to cope with disasters and climate change. It has seven targets and three ways to implement them. Most of the targets and indicators are in areas controlled by the countries themselves. Another feature of SDG 11 is that it supports developing countries by providing financial and technical assistance in construct sustainable and sustainable buildings using local materials. COVID 19 had a huge impact on all the densely populated cities. Therefore, sustainable development is possible only by addressing the problems faced by cities and urban dwellers. Libraries have a lot to do in this area. Many

important libraries are located in cities. Due to COVID 19, the operation of these libraries has come to a standstill. Their function should be restored. In addition, heritage libraries and museums should be restored. Cultural centers need to be effectively reorganized. Cultural centers or public spaces should be strengthened for the overall progress of the society.

## 12. Responsible Consumption and Production

One of the main goals of the 2030 Agenda is to promote sustainable consumption and production (The global goals), promote resource and energy efficiency, and reduce economic, social and environmental costs. This not only achieves the goal of sustainable development but also leads to better economic competitiveness and poverty alleviation. Given population growth and improved living conditions in developing countries, personal growth and purchasing power are increasing the pressure on already regulated natural resources. Governments and nations have an important responsibility to keep our land clean, hygienic and free from environmental problems. This epidemic continues to challenge even our natural habitat. Therefore, conscious interventions like conducting debates, seminars, exhibitions and other awareness programs to create awareness among the people, etc. are needed to overcome these problems. Libraries are responsible for conducting discussions, seminars, exhibitions and other awareness programs to raise awareness among the people, and to provide them with up-to-date information as projects and studies emerge against deforestation, pollution, unsustainable construction and land exploitation.

## 13. Climate Action

SDG 13 (The global goals) aims to take immediate action to reduce the effects of climate change by developing the capacity of each country to mitigate climate change and reduce its impact. Collective global approaches are needed as the impact of climate change extends beyond national borders and often has severe repercussions. When epidemics appear, they are accompanied by problems such as climate change, which can cause serious human problems. Therefore strong library services can be done against it by addressing the factors that may be contributing to climate change. Reach out to the public with meteorological studies and reports and develop the conditions for implementation of ISO Standard 14001:2004: Environmental Management System first.

## 14. Life below Water

Sustainable Development Goal 14 (The global goals) aims to protect and manage the use of oceans and marine resources for sustainable development. The Earth's surface, global climate and climate systems affect everyone's livelihood. Even people living in the hinterland are affected by changing rainfall and temperature patterns. SDG 14 has 10 targets and 10 indicators. Seven of these are regular targets, which are 1. Reducing marine pollution, 2.

Protecting marine and coastal ecosystems, 3. Addressing the impacts of ocean acidification, 4. Regulate ocean harvesting and ending overfishing, 5. Conserving at least 10% of coastal and marine areas, 6. Prohibiting certain types of fishing subsidies, 7. Increasing benefits to small island developing states and least developed countries. There are many interrelated factors in the life of the earth and therefore the conservation of aquatic life is a responsibility before us. Putting forward a sustainable development perspective is one such message. Libraries and other research institutes need to work together to bring this message to the masses.

## 15. Life on Land

SDG 15 (The global goals) aims to ensure the sustainable use of land-based biodiversity and ecosystems by interacting with freshwater systems and protecting and restoring their ecological function. The focus here is on applying sustainable land and forest management practices to minimize damage to biodiversity and minimizing habitat damage. Sustainable development aims at the survival of other species as well as humans. Libraries can do a lot of things in collaboration with organizations and individuals who put forward such ideas in the work of creating this ecological balance. The conditions for that should be prepared after this Covid period.

## 16. Peace, Justice, and Strong Institutions

The full title of Sustainable Development Goal 16 (The global goals) is "To promote peaceful and integrated communities for sustainable development, to bring justice to all and to build effective, responsible and inclusive institutions at all levels." It has a monitoring framework of 23 indicators of 12 targets. Peaceful co-operation between nations and within nations is essential if sustainable development is to be possible. An atmosphere of peace can only be created if there are strong governments to implement it. Libraries can also do a lot during this period. Libraries should take on the responsibility of promoting discussions and seminars focusing on cultural heroes and their writings as well as political leaders and their activities and individuals, and educating citizens on reconstruction.

## 17. Partnership for the Goals

Another important goal is to achieve sustainable development through partnership. SDG 17 (The global goals) on the 2030 Agenda, "Strengthening the Ways to Implement and Revitalize Global Partnership for Sustainable Development", is to bring governments, civil society, the private sector and other agencies together to help achieve this. There are 19 global targets and 25 indicators. There must be mutual cooperation to overcome this period. People need a partnership to visit each other's countries and other regions, to exchange ideas, to do research, to go and work in different countries, and to organize cultural events. This will make big developments in the world. Mutual cooperation and partnership are essential if any progressive goals are to be achieved. Progress can only be achieved if there is this cooperation between institutions, between states, between countries and between individuals. Libraries can

follow this path. By building a partnership based on mutual cooperation between libraries affiliated with different institutions and libraries in different countries, it can alleviate to some extent the barriers to information exchange and collection. Right information is the 'life blood' of the progress of a society. It will lead to revolutionary change if the systems, media and channels that bring it to realisation are based on the idea of sustainable development as a common agenda.

## Conclusion

Library and information professionals around the world are cooperating in the fight against the COVID 19 pandemic. But all these activities are short term. Marked by world history, the pandemic had a major impact on education, politics, culture, economics, healthcare and society. We live in a new situation where the concepts of 'Safe Living' and 'Safe Future' have to be combined with the concept of Sustainable Development. The world is witnessing a growing trend of health care. In order to carry out this operation efficiently, a precise preventive measure has been taken because the data and information have reached the people and the authorities through a variety of media. To achieve this, the potential of information and communication technology has been exploited through social media, internet facilities and mass media. Library and information systems therefore have to take on new responsibilities in the new post-COVID era in order to formulate a new sustainable development perspective.

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