

# *Whither Africa in the Information Age?*

**Many countries in Africa consider national policy on information as unimportant in comparison with other pressing problems; but the challenges arising from the Information Age create an urgent need for national information policies in all African countries.**

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## **INTRODUCTION**

The world economy is rapidly changing from the industrial age to what has come to be referred to as the information age, meaning human activities are increasingly being driven by the need for information: business, economic, cultural, and even political activities require information input to perform effectively. The need for information is being satisfied by the expansion of and new ways of handling information. It has become easier and increasingly cheaper to generate, store, transmit and access information and data remotely by application of a wide range of Information Communication Technologies (ICT).

In the wake of this global transition Africa cannot remain aloof or unaffected. Doing so would further widen the already existing divide between the information-rich western societies and the information-poor Africa. The role that information plays as an essential ingredient in the socio-economic development process of any society is now accepted in the developed as well as the developing countries. For information to be useful in this context it has to be systematically captured, recorded, processed and organized to ensure timely access to relevant and reliable information by decision makers, planners, managers, academics, executives, researchers and people at grassroots level involved in diverse ways in development-related activities in various sectors of the national economy.

The information personnel in Africa, while recognizing the role of information in national development, are also aware of the deficiency and ineffectiveness of existing information systems and services on the continent. In most African countries the lack of an overall national policy on information systems and services that could coordinate existing resources and systems and support the development of an appropriate and strong infrastructure is seen to be one of the causes of the deficiencies. To benefit from the knowledge age, Africa should be seen to participate in the changes that the world is going through because it is within this environment that she is struggling to develop her economies.

It is with this in view that this paper advocates that national information policies can play a crucial role with regard to the challenges brought about by the information age. These policies should address issues and problems in information needs and information flow and encourage the development of a strong information infrastructure that will access global information as well as input information into the global system. Throughout this paper, 'Africa' refers to Sub-Saharan Africa excluding the Republic of South Africa.

## **THE INFORMATION AGE**

The term 'Information Age' is used to describe a knowledge-based economy. Labour has become knowledge-based. In Western economies the majority of jobs are increasingly knowledge-based. More and more people are employed in collecting, handling and distributing information. In the light of these changes the decline in industrial jobs has already manifested itself (Devost 1995). The application of information in all human activities has become so critical that economic commodities such as land, labour and capital seem to be losing their status in the face of information power. Dyson and others (1994) write:

The central event of the 20th century is the overthrow of matter. In technology, economics and politics of nations, wealth in form of physical resources has been losing value and significance. The powers of the mind are everywhere in ascendance over the brute force of things.

New sets of rules that characterize the information age are mainly propelled by the combination of advances in information technologies and economic globalization. As human society developed information communication and its technology also developed. Today the technology employed to communicate information has developed to an appreciably sophisticated level. The information communication technologies of yesteryear, limited by time and space, have been overtaken. These technologies have given us the ability to access, manage, store and disseminate large volumes of information remotely, thus transcending the barriers of space and time that inhibited human activities for centuries. The Internet, e-mail, telefax, teleconferencing, digital document delivery, etc. are having a tremendous impact in every area of our activities. The world is witnessing an exponential growth of mobile communication, the increasing contribution of digital industrial growth and employment, the restructuring of businesses to make the most of the Internet,

and the rapid emergence of electronic commerce (Presidents and Prime Ministers, 2000).

## **INFORMATION AND DEVELOPMENT**

Development is the achievement of progress toward a desired direction, such as the increase in yields and better quality of crops produced by agriculture. In the case of a nation it means improved quality of life for the mass of the people, in terms of provision of the basic needs of life such as health facilities, food, shelter, education, etc. Development also implies that people are able to plan in advance, to shape and influence future events for the benefit of all. Development can be realized by the ability possessed by individuals, groups or nations to solve existing problems and replace them with desirable conditions, situations and products. To attain development, resources are required; one of these is information.

Any development effort requires data and information to enable planners to select the best options in a given context. A major application of information is in resolving uncertainties in decision-making and problem solving. For example, if a farmer wants to embark on the cultivation of a new crop being introduced in his country, he will need information such as the maturing period of the crop, the amount of rainfall required, the types of pests and diseases that are likely to attack the crop, the availability of seeds and their cost, prevailing market prices, etc. On the basis of this information he will decide whether he has the capacity to grow the crop or not. In terms of a nation it could be any situation that causes or threatens a deterioration in, or the stagnation of, the standard of living. To solve such problems requires clear understanding of them and their causes. This requires the timely availability of reliable and adequate information about the elements of the problems and how to solve them. With available information alternative solutions can be weighed and pursued.

Everybody in society needs information – decision makers, planners, researchers, teachers, professionals and semi-professionals, technicians, and the population at large. All these categories of people need and use information in one way or the other in their daily lives, in both official and private endeavours. For example, decision makers need information on the available natural resources and the means to exploit them, such as sources of finance, manpower, equipment, etc., in order to make the right decisions and control their exploitation. No effective and meaningful planning can take place except on the basis of adequate, accurate and timely information.

However, this does not mean that information is an end in itself. It is rather an essential component for the development process to succeed. As much as the provision of information is indispensable to create sustainable development, information as a resource may not lead to

desired development if other resources are absent and if the social and economic conditions are not conducive for development.

## **INFORMATION: AN AFRICAN PERSPECTIVE**

From independence to date, countries in Sub-Saharan Africa, like other developing countries of the world, are endeavouring to develop their poor economies and to improve the quality of life of their people. After four decades of political independence, economic development is nowhere near the desired goal. Since the mid-1970s the performance of the subcontinent has been particularly poor. The major socio-economic indicators show a general slowing down of the economy. The quality of life of the mass of the people is deteriorating further, with the majority living in extreme poverty. Economists and other professionals have put forward various reasons for this state of affairs.

It has been argued the world over that one of the many causes of underdevelopment in the developing countries, and in particular in Africa, is the lack of reliable and timely information and data to support development planning, programming, and plan implementation and evaluation. This implies that decision making in development planning is done with very little or even without relevant and timely information, resulting in inaccurate and wrong decisions, and consequent wastage of financial, human and other resources (Mosley, 1992).

If relevant and timely information is unavailable, the implication is that the existing information systems and services are deficient and thus ineffective. A survey of the literature on information systems and services in Africa confirms this. For example, Adeyemi identifies (according to the UNESCO classification) five different categories of information systems and services namely:

1. libraries and bibliographic systems
2. referral centres and services
3. clearing houses
4. information analysis centres, and
5. data banks.

Among these categories the library has received the main development emphasis in Africa. The available evidence is sufficient to generalize on the underdeveloped state, or even the absence of, the other four categories (Adeyemi, 1991). The reasons for this state of affairs are many. Neelameghan (1981) points out one main reason that most African countries have not addressed the issue of information provision as an integral part of the national development planning process. African governments have seen information largely as a propaganda instrument, and their control over the mass media has acted as a deterrent to the growth of private media and the publishing industry as a whole. Not much has been done in gathering, processing and disseminating technical and

specialized information as a resource needed to support development planning and processes. This has resulted in situations where decision makers, planners, managers, executives, researchers and the general populace have little appreciation of the value of information and in some cases remain unaware of the potential of information as a resource in national development.

### **THE NEED FOR INFORMATION**

The need for information is ubiquitous, meaning that there is no sector or economic activity that can function effectively without information. The effective planning, allocation and utilization of all types of resources requires information on such issues as balance of payments, gross domestic product (GDP), sectoral development indicators, national debt, natural resources, etc. This information has to be timely and reliable in order to support decision-making and reliable forecasting in socio-economic development planning (Neelameghan, 1981).

The recognition of information as an essential ingredient in the development of any human society has long been realized by developed countries and gave impetus to deliberate efforts to create information systems and services through public policies (Marghalani, 1987). Hill (1989), writing on the evolution of information policies in industrialized countries points out:

In all the industrialized countries, the range of information policies currently under operation owes much to a long evolution as well as to specific events and new technological developments.

Van Rosendaal (1984) also commenting on the European Union policy situation observed,

information is one of the few non-scarce raw materials for the economy of Western Europe. The timely and inexpensive availability of information makes it a motor for innovation and therefore, a driving force for economic and social development.

In Sub-Saharan Africa it was not until the 1980s that this realization began to take root.

### **FORMULATING NATIONAL INFORMATION POLICIES IN AFRICA**

It is difficult to pinpoint precisely when deliberate efforts toward developing coherent national information systems in Sub-Saharan Africa began. There has long been concern at the state of information systems and services in Africa at national, regional and international levels. Perhaps this can be seen at the national level in the establishment of library associations in the 1970s with the aim of fostering librarianship as a profession as well as promoting the library system as an important component of national development. At the sub-regional level, efforts

were initiated in such groupings as the Standing Conference of Eastern, Central and Southern African Librarians (SCECSAL), with visions of creating avenues for cooperation in librarianship in the region. These early efforts relate to the field of librarianship because libraries have been viewed as the traditional providers of information.

Of particular importance, however, is the role played by UNESCO. Since its inception in 1946, one of its aims has been to promote the development of information capabilities within and between the Member States. Out of these efforts UNESCO established various departments and programmes, particularly the UNISIST programme and the concept of National Information Systems (NATIS). The former was more concerned with the improvement in the flow of scientific and technological information and the latter with the development of libraries and information services for national development. NATIS was more of a reaction to the perceived bias of UNISIST towards science and technological information. Both of these programmes were absorbed by the General Information Programme (PGI), established in 1977 (Kisiedu, 1988).

In particular UNESCO's efforts have been directed to encouraging developing countries to establish coherent and effective national information systems and to formulate national policies on information. For this purpose UNESCO has been organizing and sponsoring seminars, workshops, and consultancy missions in the field of library and information services in various countries, particularly in developing countries. This gave rise to the drafting of national information policies in various countries in the late 1980s. A survey of six countries in Eastern and Southern Africa to find out whether they had national information policies and to examine the steps taken toward formulating them revealed that all of them – Botswana, Ethiopia, Malawi, Tanzania, Uganda, and Zambia – had drafted proposals by 1991 as a result of UNESCO's campaign (Yumba, 1992). A recent follow up showed that except for Ethiopia, none of these countries had progressed beyond the draft stage.

Other international agencies and regional bodies that have contributed toward the effort to improve information systems deserve mention here.

The International Development Research Centre (IDRC), through its Information Sciences Division, had various programmes dedicated to enhancing information and informatics capabilities in developing countries. Notable among its projects in Africa were its support to the Pan African Development Information System (PADIS) and the establishment with UNESCO of information science programmes at masters level at Addis Ababa University in Ethiopia and the University of Ibadan in Nigeria in 1990. PADIS was established in 1982 as a project for the United Nations Economic Commission for Africa on the regional development of biblio-

graphic information resources, networking and databases, and has thus been closely involved in information development in Africa.

The German Foundation for International Development (DSE) has also played an important role in enhancing the development of information systems in Africa. It has organized and sponsored numerous workshops and seminars in the field of information and library services. In Eastern and Southern Africa, Botswana, Malawi, Kenya, Lesotho, Tanzania, Uganda, Zambia and Zimbabwe have all benefited from the DSE programmes.

## ***SOME QUESTIONS ARISING FROM THE TREND***

Several questions may be raised about the general trend of national information policy proposals in the sub-region. National information policy seminars were held in several countries between 1987 and 1991 and policy proposals were drafted during the same period. Until now none of these policies has been implemented. Why is it taking so long? Do the information personnel involved really believe in the value of national information policies, or did they go into policy formulation just because UNESCO was ready to help – or is it because they lack the political will? On the other hand, taking into account what has been done, the difficulties experienced in building sound information systems and services cannot be entirely due to a lack of political will or to ignorance of what should be done, but due also to insufficient expertise to translate desired intentions into reality. The political instability that characterizes most countries in Africa also affects policy formulation. Many programmes are subject to political instability and change with each change of government. Information programmes are taken in isolation as ad hoc measures to meet particular needs and hence are liable to be withdrawn by the next administration. The inability to implement sound national information policies thus begins to seem logical given the inadequate financial resources, lack of qualified information manpower and many other pressing problems Africa is facing.

## ***NATIONAL INFORMATION POLICY***

Policies are statements of intent and obligation, formulated as guidelines for desired goals and actions. Policies evolve as a result of a government or an organization's activities. A policy of any kind and at any level is designed to give direction to the desired activities and at the same time to be compatible with the organization's objectives.

A policy is a set of principles and strategies which guide a course of action for the achievement of a given goal. Policies may be developed at the

organization, national, regional or international levels. (Montviloff, 1990).

Policies are derived from the prevailing situation because that is where the factors that necessitate policy are found. Such factors include political stability and the availability of financial, human and other resources. Constraints to the objectives are identified. This is why the emphasis and content of policies, though having the same objectives, differ from country to country or from organization to organization.

Further, policies are designed to define the roles of the different parties involved in a given activity or activities and in so doing provide the bases for accountability. The essence is to have a systematic way of approaching and solving problems. Policies thus help to minimize ad hoc actions in solving fundamental problems pertinent to the overall objectives of a government or an organization. Policies are embedded in declarations, laws, decrees, acts of parliament, ordinances and directives by authoritative bodies with the aim of influencing the behaviour and work of society or any substantial section of it.

An information policy will, therefore, have the above characteristics to provide guidance and strategy for the development and use of information resources, systems and services.

## ***THE ROLE OF NATIONAL INFORMATION POLICY IN THE KNOWLEDGE AGE***

Some fundamental reasoning on which an overall information policy is advocated have been identified by Neelamegham (1990):

- The fundamental premise (based on experiences of the past decades) of an overall national policy on information systems and services is that any economic, social and political system will perform more efficiently and effectively if a mechanism is provided which will ensure that decision makers, planners, managers, executives, researchers, and the people at large at various levels involved in diverse ways in socio-economic development in government and private sectors, have timely access to relevant and reliable data and information.
- With the realization of the above there is an increasing concern in many countries of the world with the coordination of their various information systems and services so that the available and mobilizable information can be channelled into a national information system that can respond to the information needs of every one.
- Mechanisms (constitutional acts, legislation, and policies of various kinds) relating in various degrees to the provision of information already exist in many countries. But what is lacking is the interrelationships that may exist between issues concerning in-

formation communication, information technology, information economics, information management, information privacy and confidentiality, and the right to information. The interrelationships between these issues can best be addressed and enhanced by an overall policy dealing with them. This approach should take into account the implications of information communication technologies which have revolutionized information-handling activities and the needs of information networking at regional and international levels.

- There is a growing trend in the globalization of national issues and a corresponding interdependence among nations, accelerated by, contributed to and strengthened by developments in information technology, regional alliances of nations, and regional or international information systems and networks. The effective participation of a country in the development of and deriving benefits from such regional or international systems depends in a large measure on the existence of a strong national information infrastructure. The development of such an infrastructure and ensuring its participation and contribution to regional and international cooperative information systems and programmes will be facilitated by the formulation and implementation of appropriate policies in the participating countries.
- Thus an overall national policy on information systems and services, fully incorporated into the national socio-economic, political, technological, cultural, development policies and plans, is conducive, if not a pre-requisite, to national socio-economic development.

The removal of restrictive practices in relation to information which have evolved over time, or efforts to stimulate the supply of information to under-provided areas or groups of people, need to be guided by policy. Hill (1989) writes

in such cases policies have to be formulated because there are conflicting interests and the balance between them has to be clarified.

When new situations arise or are created, as is the case with the knowledge age, so that old practices can no longer meet the requirements, the need for policy arises. For example, legal deposit laws in most Sub-Saharan African countries have not changed with time, as is evident in the literature reviewed. Materials to be deposited are limited to printed publications. New information carriers such as CD-ROMS, videotapes, electronic books and journals and many other machine readable formats that are emerging as a result of rapid developments in information technology, are not covered.

Related to the above, and an issue which calls for immediate action in terms of information policy, is the massive volume of new information created by the new in-

formation and telecommunication technologies such as the Internet. If this is not taken into account it may disadvantage different groups of individuals, organisations, or even state interests in information access and provision. Economies in the developed world are increasingly dependent upon the generation, repackaging, dissemination and consumption of information. To remain competitive in this era of economic globalization, corporate bodies and governments should be able to disseminate as well as access universal information. The rapid growth of electronic information services for commercial or reference purposes cannot be overemphasized. Information policy is needed to provide guidance to ensure the maximum benefits from these new technologies.

Policies on information in Africa should therefore include the following main elements:

- mechanisms of national and international level co-ordination of information systems and services
- generation and capture of local information
- provision of universal access to information
- application of wide array of information communication technologies
- human resources development, and
- resource allocation for information infra-structure and development activities.

## CONCLUSION

In Sub-Saharan Africa, the poor performance of national economies and the need for timely and reliable information in the development process point to the need for defining the role of information in national development and the restructuring of poor and ineffective national information systems and services. This need has become more crucial than ever before as a result of the challenges ushered in by the advent of the Information Age.

In most African countries, national policy on information is often regarded as unimportant in comparison with the many other pressing problems facing these countries. This assumption arises from the non-existence of such policies. In some cases there is hardly any government agency that plays an important role planning and monitoring developments in this area. Where such bodies exist they are not integrated into the top-level decision-making structures. Yet given the considerable potential information has for accelerating development and the challenges arising from the emerging Information Age, a strong case can be made for the view that there is a need for national policies on information in all African countries.

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## Abstract

Outlines a general overview of the information situation in Sub-Saharan Africa and argues that to survive and develop, Africa, must as a matter of necessity participate in all activities relating to the information age. Given the deficiency and ineffectiveness of existing information systems and services on the continent it becomes imperative to develop information policies at national level that could co-ordinate existing resources and systems and support development of an appropriate strong information infra-structure.

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**MORE ON AFRICA IN THE INFORMATION AGE****Information technology and the dialectics of poverty in Africa.**

S. W. Jimba. *New Library World*, 101 (1158) 2000, p.253-262. tbls. refs.

Developments in computer and telecommunications technology have pushed information into the forefront of business. Information is now considered the most important factor of production in a world economy that is gradually becoming globalized. These developments are also the principal pillars upon which the change from an industrial age to an information age hinges. Spells out the role of information in the new 'information society' and how it affects the fortunes of a nation. Undertakes a historical approach to underdevelopment and poverty and applies it, by analogy, to the call for African countries to use electronic formats to solve the continent's myriad problems. Suggests a gradual approach to implementing IT.

**Challenges of the new millennium: African libraries in the electronic information age.**

A. M. Oyinloye. *Information Management Report*, Mar 1999, p.12-13. tbls.

Discusses factors militating against the spread of Internet use in African countries, in particular the lack of telecommunications infrastructure. The contribution of Africa to world knowledge is hampered by inadequate access to information in the first instance and the lack of dissemination of the results of African research and scholarship. The United Nations Development Programme (UNDP) Internet Initiative for Africa (IIA) is a 3 year project to introduce or improve Internet access in 12 African countries. Also considers the crisis facing many libraries in Africa as a result of the effects of the economic downturn on their parent institutions.

**The challenge to Africa of globalization and the Information Age, Addis Ababa, 24-28 October 1999.**

*African Research and Documentation*, (81) 1999, p.75-76.

Reports 'The Challenge to Africa of globalization and the information age' held in Addis Ababa, Ethiopia, 24-28 Oct 1999, under the auspices of the United Nations Economic Commission for Africa as the first in a series of African Development Forums. Focuses on African engagement with the global economy and the harnessing of information and communication technologies towards development.

**Mapping Africa's initiative at building an information and communications infrastructure.**

A. P. N. Thapisa; E. Birabwa. *Internet Research: Electronic Networking Applications*, 8 (1) 1998, p.49-58. refs.

Explores Africa's initiative in building a regional plan for the formulation and development of a National Information and Communication Infrastructure in every African state. Also examines the challenges and opportunities confronting Africa in its bid to launch itself into the information age. Emphasizes the role of information, communication and knowledge in accelerating African socioeconomic development. Challenges the Organization of African Unity to provide funding for the project if it is to succeed.

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