

Introduction

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INTRODUCTION AND BACKGROUND

Knowledge is a term with many meanings depending on the context, but (as a rule) closely related to such concepts as meaning, information, instruction, communication, representation, learning and mental stimulus. A common definition of knowledge is that it consists of justified true beliefs. This definition derives from Plato's *Theaetetus*. It is considered to set out necessary, but not sufficient, conditions for some statement to count as knowledge. What constitutes knowledge, certainty and truth are controversial issues.

Knowledge is the awareness and understanding of facts, truths or information gained in the form of experience or learning. Knowledge is an appreciation of the possession of interconnected details, which, in isolation, are of lesser value. Knowledge refers to what one knows and understands. Knowledge is some-times categorised as unstructured, structured, explicit or tacit. What we know is explicit knowledge. Implicit knowledge is knowledge that is unstructured and understood, but not clearly expressed. If the knowledge is organised and easy to share, then it is called structured knowledge. To convert implicit knowledge into explicit knowledge, it must be extracted and formatted (DSS Resources, 2005).

Knowledge is distinct from simple information. Both knowledge and information consist of true statements, but knowledge is information that has a purpose or use. The study of knowledge is called epistemology. Through experience, observation, and inference, individuals and cultures gain knowledge. The spread of this knowledge is examined by diffusion. Diffusion and innovation theory explores the factors that lead people to become aware, try, and adopt new ideas and practices.

Several studies have pointed to the increasing significance of knowledge and indigenous knowledge systems (IKS) in sustainable development (SD) in Africa and the developing world in general. According to Dewes (1993), two main categories of knowledge systems can be distinguished – indigenous knowledge systems

(IKS) and western knowledge systems (WKS). While WKS are made universal through western education, which is entrenched in many world cultures, IKS are confined to specific areas and are being suppressed in most parts of the world. Moreover, IKS content and development in Africa are not adequately researched and documented.

INDIGENOUS KNOWLEDGE

Indigenous knowledge in Africa is an embodiment of different modes of thought and "epistemology". It is an appropriate avenue for appraising development paradigms being implemented in the continent. Indigenous knowledge refers to traditional and local knowledge existing within and developed around specific conditions of women and men indigenous to a particular geographic area in contrast with knowledge generated within the international system of universities, research institutes and private firms (Warren, 1991). The Convention on Biological Diversity (UN, 1992) calls on all the contracting parties to the Convention to respect traditional indigenous knowledge with regard to the preservation of biodiversity and its sustainable use. For the World Bank (2003), indigenous knowledge refers to the large body of knowledge and skills that have been developed outside the formal educational system.

For many countries in the developing world, the basic component of their knowledge system is indigenous knowledge, which is also often referred to as traditional knowledge (World Bank, 2005). It includes the skills, experiences and insights people apply to maintain or improve their livelihood. Indigenous knowledge also encompasses local environmental knowledge (i.e.: knowledge of plants, animals, soils and other natural elements) with practical applications but also clearly associated with environmental philosophies and world-views.

IKS constitute an important driving force for SD in Africa. The indigenous people of Africa and the world at large have a rich repertoire of knowledge based on their cultures, environments, natural resources, political, social and economic institutions that may be the key drivers for poverty

reduction, livelihood improvement and attaining sustainable development. The culture and knowledge systems of indigenous people and their institutions provide useful frameworks, ideas, guiding principles, procedures and practices that can serve as a foundation for effective endogenous development options for restoring social, economic, and environmental resilience in many parts of Africa and the developing world in general. It is therefore essential that traditional knowledge systems in the continent should not be subsumed by the domination of cultures that notoriously foster inequality and materialism.

IKS can foster a rethinking of development methods in sectors like politics and governance, agriculture and food production, health, natural resource management, commerce and industry, and the arts and entertainment. These knowledge systems are not simply the result of accumulated passive observations. They often include years of analytical and experimental approaches to sustainable development.

INDIGENOUS KNOWLEDGE SYSTEMS

Indigenous knowledge systems (IKS) are an important part of the lives of the poor. It is the basis for decision-making of communities in food security, human and animal health, education, and natural resource management. IKS point to how indigenous people manipulate their knowledge, which has accumulated, evolved and practised for generations. They epitomise the relationship and interaction between indigenous peoples and their natural surroundings.

Indigenous People: The Source of Indigenous Knowledge Systems (IKS)

The International Year for the World's Indigenous People (1993) was proclaimed by the General Assembly of the United Nations (UN) in Resolution 45/164 of 18 December 1990. According to the International Labour Organisation (ILO, 1989), indigenous communities consist of those people having a historical continuity with pre-invasion and pre-colonial societies that developed on their territories or part of them. At present, they form non-dominant sectors of society and are determined to preserve, develop, and transmit to future generations their ancestral territories and ethnic identity as the basis of their continued existence as peoples and in accordance

with their cultural patterns, social institutions and legal systems. Principle 22 of the Rio Declaration underlines the role of indigenous people in SD in these words:

“Indigenous people and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in sustainable development.”

Indigenous people and their communities have a historical relationship with their lands and are generally descendants of the original inhabitants of such lands. Indigenous people and their communities represent a significant percentage of the global population. They have developed over many generations a holistic traditional scientific knowledge of their lands, natural resources and environment. Their ability to participate fully in sustainable development practices on their lands has tended to be limited by factors that are economic, social and historical in nature.

The Vienna Declaration and programme of action emerging from the 1993 World Conference on Human Rights recognises the dignity and unique cultural contributions of indigenous peoples, and strongly reaffirms the commitment of the international community to the economic, social and cultural wellbeing of indigenous peoples and their enjoyment of the fruits of sustainable development. Clearly, there is an urgent need to recognise, accommodate, promote and strengthen the role of indigenous people and their communities in sustainable development at the national, regional and international levels. In order to establish a partnership with indigenous people for fostering sustainable development, the first important step is to study and understand their culture and to recognise and accept their conception of the environment, nature and development.

Indigenous Knowledge and Natural Resource Management

IKS is a pluralistic approach to conserving and managing natural resources. It is a subjective understanding of the social, political and the natural reconstruction process, which consists of cosmos, corpus, customs, beliefs, taboos,

religion and institutions to guide human behaviour by adaptive processes. IKS are dynamic - new knowledge is continuously added. Such systems innovate from within and will also internalise, use and adapt external knowledge to suit the local situation (IDRC, 1998). However, it is erroneously assumed that indigenous knowledge is not confined to tribal groups or the original inhabitants of an area or to rural people. In deed, every community possesses indigenous knowledge, whether rural or urban, settled or nomadic, original inhabitants or migrants.

PROBLEMS UNDER INVESTIGATION

Despite the serious erosion of IKS over the decades in many communities in Africa, they are still most relevant and appropriate for promoting SD of the continent. Far from being anachronistic in the contemporary world, these knowledge systems have much to offer development policy-makers, environmental managers, administrators, and stakeholders. The integration of IKS in policy formulation and the execution of development programmes and projects will be critically debated during the conference. The conference aims to catalyse a positive change in the minds of development cooperation policy-makers, administrators and stakeholders in both Africa and the developed world about the importance of IKS in sustainable development and poverty reduction.

Although indigenous peoples constitute one of the largest vulnerable segments in contemporary society, they and their knowledge systems have been marginalised mainly because of the craze for modernity and globalisation. The distinct culture of indigenous people and their identity, their economic activities, religious beliefs, notions, and traditional ways of managing natural resources are often regarded as backward and superstition. They are considered to be absolutely incompatible with modern society and development.

The oral and rural nature of IKS in Africa has made them largely invisible to the development community and global science. Indigenous knowledge has often been dismissed as unsystematic and incapable of meeting rapid economic growth needs of the modern world. Historically, modern societies have regarded indigenous people and traditions as less progressive, and as a result many groups of indigenous peoples, especially their younger generations, are influenced to devalue

their native cultures and to adopt new lifestyles and technologies. Consequently, IKS have not been captured and stored in a systematic way and are therefore endangered with extinction. The lust for modernity and new technologies are threatening the loss of a great store of knowledge held by native people. A good number of indigenous groups in Africa and elsewhere in the world have suffered from long-term discrimination, inequity and exclusion from the planning and execution of development programmes and projects.

CONFERENCE GUIDING PREMISES

The Conference debated and analysed the following fundamental premises:

- In the rapidly globalising world and evolving knowledge systems, the ability of African countries to build and mobilize appropriate and adequate knowledge capital is imperative for attaining sustainable development (SD).
- The commonest denominator of IKS all over the world is that they do less harm to the environment and natural resources than do modern technologies and development models. Conventional development paradigms have greatly contributed to the apparent neglect of indigenous institutions and knowledge, which have the potential to contribute to the global efforts towards attaining SD.
- Indigenous knowledge systems (IKS) have much to offer for biological and cultural diversity and resource management. Indigenous people are an integral part of the ecosystem and are therefore the best guarantee for the survival of nature.
- Is it possible to further the integration of indigenous knowledge in the work of scientists as a complementary contribution to efforts of science and technology in the search for solutions and strategies to combat poverty and to generate sustainability in the development process?
- Is it possible to modernise Africa without renouncing local customs, culture or traditional values?
- Are IKS an important tool for promoting the participation of local people in SD?
- How willing and prepared are the donor nations and organizations to properly identify successful indigenous knowledge systems and practices in Africa and to promote their

application for a more efficient and sustainable management of natural resources and poverty reduction?

PURPOSE AND OBJECTIVES OF THE CONFERENCE

General Objectives

The conference analysed how IKS can help Africa to accelerate her SD process. The main objective of the conference was to facilitate research on IKS, a systematic documentation of information on the subject, and the exchange and sharing of information.

Specific Objectives

The specific objectives of the conference were:

- to provide a platform for discussing and generating a heightened understanding of the role of indigenous knowledge systems in SD of Africa.
- to raise adequate awareness on the importance of IKS in the SD process.
- to analyse the major constraints hindering an effective development and use of traditional knowledge systems in promoting SD in Africa.

CONFERENCE DISCUSSION MODEL

The discussion model of the conference was very participatory, interactive, sharing-oriented and learning re-enforcing. The discussions were organised at two levels - plenary and parallel sessions. All the participants joined the plenary sessions while the parallel sessions were attended by small groups of participants. The main purpose of the plenary sessions was to introduce the grand lines of the debate. The parallel sessions on the other hand offered the participants the possibility to choose to attend the sessions most appropriate to their needs. These sessions enabled more in-depth analysis of pertinent issues and the recording of results for presentation at the plenary sessions held during the second and third days of the conference. The objective of the adopted discussion model was to enable a maximum exchange of experiences amongst the participants and the resource persons.

The discussions during the conference were led by experts and highly qualified researchers,

policy-makers and practitioners of IKS from Africa. In order to facilitate a cross-fertilisation of information and experiences on the subject, experts and researchers from Asia, Latin America and the developed countries also spoke at the conference. The resource persons were drawn from appropriate research institutions, universities, government departments, international organisations, the private sector and civil society organisations.

SIGNIFICANCE OF THE CONFERENCE

The UN Conference on Environment and Development (UNCED) in 1992 sparked the interest in the contribution of indigenous knowledge to a better understanding of SD. It stressed that indigenous peoples and their communities have developed over many generations a holistic traditional knowledge of their lands, natural resources and environment. The Plan of Implementation (PoI) of the World Summit of Sustainable Development (WSSD) emphasised the importance of indigenous people in the attaining SD. They show a deep knowledge of their environmental surroundings and a high interaction with natural resources through planting, collecting and management of resources. As Maurice Strong (1990) rightly points out:

“Indigenous peoples have evolved over many centuries a judicious balance between their needs and those of nature. The notion of sustainability, now recognized as the framework for our future development, is an integral part of most indigenous cultures. ...Indigenous peoples are thus indispensable partners as we try to make a successful transition to a more secure and sustainable future on our precious planet.”

IKS can play an important role in local sustainable development process of many communities in Africa. Indigenous knowledge is an important part of the lives of the poor. It is a key element of their social capital and their main asset for investing in the struggle for survival, producing food, providing shelter or achieving control of their own lives. The particular ways in which IKS are applied in agriculture, farming, fishing, hunting, trade, industry and construction are largely based on the principle that humans should keep equilibrium with nature.

Genuine development has to be people-centred and enable them to take charge of their own lives. Participatory approaches to develop-

ment allow people to define their needs from their perspectives. IKS can form the base for such a development strategy and generate information for development in at least 3 ways by facilitating:

- the design and implementation of appropriate development policies, programmes and projects;
- the introduction of appropriate and accessible technologies in surrounding communities and adjacent regions
- an effective basis for self-sufficiency and self-determination in rural African communities.

CONFERENCE ORGANISATION AND PROGRAMME

The conference was organised in plenary and parallel sessions as follows:

- A plenary session on the first day discussed seven topics on “Indigenous Knowledge Systems: Key Concepts, Theories and Trends”, followed by questions and contributions from the floor and synthesis.
- A plenary session on “Contemporary Comparative Cultural Studies: Theory, Contexts and Trends” took place in the morning of the second day and was immediately followed by parallel sessions on sectoral case studies.
- The afternoon was devoted to parallel sessions on sub-regional case studies in Africa.
- A plenary session at the end of the second day enabled the reporting of the results of the discussions at the parallel sessions.
- In the morning of the third day, parallel sessions on international case studies and the experiences of a number of international organizations were held.
- A plenary session scheduled in the afternoon of the third day facilitated the reporting of the results of the parallel sessions and the presentation of the conference memorandum.

ORGANISATION OF THE BOOK

The book comprises four parts. The first part presents the introduction, the keynote address of the conference and a discussion of eight key issues on IKS. Sectoral case studies on IKS and sustainable development are presented in Part Two. The sectors covered include agriculture and

water resources. Part Three of the book deals with African sub-regional case studies: Central Africa, East Africa, Southern Africa and West Africa are covered. The final Part presents a number of international case studies on IKS and sustainable development in Brazil, Peru, Philippines, Vietnam, the IUCN and UNEP.

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KEYWORDS Indigenous people; indigenous knowledge systems; natural resource management; sustainable development

ABSTRACT Knowledge is the awareness and understanding of facts, truths or information gained in the form of experience or learning. It is an appreciation of the possession of interconnected details, which in isolation, are of lesser value. Several studies have pointed to the increasing significance of knowledge and indigenous knowledge systems (IKS) in sustainable development (SD) in Africa and the developing world in general. Despite the serious erosion of IKS over the decades in many communities in Africa, they are still most relevant and appropriate for promoting SD in the continent. A key aim of the conference was to catalyze a positive change in the minds of development cooperation policy-makers, administrators and stakeholders in both Africa and the developed world about the importance of IKS in sustainable development and poverty reduction.

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