EXPERTS WORKSHOP ON INDIGENOUS KNOWLEDGE SYSTEMS IN AFRICA

SUMMARY REPORT UNESCO/UNITWIN CHAIR UNIVERSITY OF NAIROBI

VICE CHANCELLOR'S PARLOUR UNIVERSITY OF NAIROBI NAIROBI, KENYA

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INTRODUCTION

This report contains a summary of the proceedings of the regional workshop on Indigenous Knowledge Systems in Africa held at the University of Nairobi on 28th June to 1st July 2004.

The workshop was organized by the UNESCO/UNITWIN Chair at the University of Nairobi in collaboration with the Kenya National Commission for UNESCO and with financial support from Local and Indigenous Knowledge Systems Programmes and the University of Nairobi.

The workshop was opened officially by the Minister for Education, Science and Technology, Prof. George Saitoti. In his opening speech, the Minister noted that the outcome of this workshop would provide an inventory of the critical concerns over indigenous knowledge in the continent and the concerns in question will enable the experts chart out mutually beneficial directions for both research and policy. He observed that as a shared philosophy, Indigenous Knowledge is valid, time tested and dynamic. However, although there is adequate data to prove that indigenous knowledge systems provide solutions for sustainable development and the wealth of this knowledge in Africa is unmatched, this knowledge remains fragmented and largely undocumented. The challenge of this workshop therefore is to seek an interface where indigenous and modern knowledge can share for the common good (*Annex 1*).

The Minister's speech was preceded by opening remarks from the Vice- Chancellor, University of Nairobi. Prof. Crispus Kiamba extended a warm welcome to all participants to the University of Nairobi, the venue of the workshop. He acknowledged the keen interest in the subject area and observed that the workshop brought together leading experts from selected African countries to deliberate on the role of indigenous knowledge systems in sustainable development. The VC pointed out that the University of Nairobi is supportive of the deliberations and the follow up action, in line with the need for strategic links between communities and the university for purposes of sharing knowledge (*Annex 2*).

This opening session was also addressed by Prof. Jacob Kaimenyi, the Deputy Vice Chancellor, Academic Affairs; Prof. G.A.O. Magoha, the Deputy Vice Chancellor, Administration and Finance; and Dr. Mary Omosa, UNESCO/UNTIWIN Chair, University of Nairobi. Others were Mrs. Monica Kilonzo, Secretary General, Kenya National Commission for UNESCO; and Dr. Susan Nkinyangi, Senior Education Advisor, UNESCO Nairobi who also made a presentation on behalf of the LINKS programme (*Annex 3*).

Her Excellency Ambassador Prof. Judith Bahemuka, Kenya's Permanent Representative to the United Nations in New York gave the workshop's keynote address. In this address, she covered both the conceptual and the practical concerns in the area of indigenous knowledge. She noted that indigenous knowledge remains unappreciated and has often been maligned by modern science and demolished by policy makers. She then

recommended that there is need for universities to develop systems that can support indigenous knowledge and thereby build on past experiences for sustainable development *(Annex 4)*.

ENVRIONMENTAL CONSERVATION, WATER RESOURCE MANAGEMENT AND USE

KATHAMBI: Status Inversion, Ritual Inversion and Control Cyrus Mutiso, SASOL- Kenya

The paper underscores the importance of the *Kathambi* goddess and the *kathambi* cult in construction and management of all structures (especially water structures) deemed important for the overall development of the community in Kitui district. The *kathambi* women direct where sand dams are to be built. They have for a long time blocked water projects they considered as not useful to the community. Thus SASOL Foundation, a development agent in the area, had to negotiate with them in siting of sand dams.

The *kathambi* women are able to overrule the elite in the area because of their powerful cult. Administrators have to negotiate with them if their meetings clash. They are instrumental in raising funds for schools, hospitals etc. The dam committee affairs are female dominated even though the women may not be necessarily occupy top positions in leadership. Indeed, the *kathambi* women/cult is an institution of traditional organizing that is seen to utilize indigenous knowledge but has been ignored in development issues. This is a unique phenomenon in development theory. It may be very useful in combating problems associated with privatization of water in Kenya. In negotiations, the *kathambi* women force their perspective in place; they overrule committee/community decisions. This experience shows that women are in control of water and other development issues [*Annex 5*].

SASOL leaves the community to negotiate with the landowners on whose land a dam site falls. Rules of ownership and use are set by the community and circulated to the provincial administration and SASOL is not part of these negotiations. If the SASOL-model is replicated elsewhere it can lead to a 'green revolution'. Thus there is need to communicate the Kitui/kathambi experience to the relevant bodies in order to improve the water policies of different countries.

Noteworthy is the fact that indigenous knowledge is to be found with the NGOs and CBOs working in the rural areas and not in the universities or other formal structures such as government ministries.

INDIGENOUS WATER KNOWLEDGE OF THE SAN Joram Useb, WIMSA ,Namibia

The paper notes that survival of the San of Namibia depended on carefully heeding to changes in the environment and any mistake could lead to starvation. Being in a very dry land, the San have their indigenous technology of getting water (e.g. sipping water) from the ground and leaving the stagnant one for the livestock. During the dry season, they get water from tubers, bulbs and melons. The San have knowledge of special water points where water is sipped from the sand and numerous hand dug wells. The San utilize open and far away bush-food areas during the rainy season.

The San have however lost their resources —water, food and game meat because their land has been converted into grazing land, and the water points are polluted. Grazing has reduced the supply of water which the bearing tubers and the melons are depleted. Bore holes have been dug and this has lowered the water table in the land of the san making it hard for them to access water, as many old water holes have dried up [Annex 6].

During discussion, a question was raised as to how hygienic and efficient the technology of sipping water from the sand is. Agreeably, there was a danger of contracting diseases through this technology, but it is the only available technology in the desert. It was observed that when bore holes are dug in an area, this technology denies other people water because the water table goes down. In addition the boreholes do not recharge the ground.

TRADITION AND CHANGE AMONG THE BORANA COMMONS OF SOUTHERN ETHIOPIA Aneesa Kassam

There are different perceptions about the term commons with some people associating it with common resources, while others associate it with unmanaged property. These thoughts overlook the fact that communities had their own institutions to manage natural resources. The Borana classified resources as water and pasture. And they had their own code of managing their water and pasture.

During wet seasons, they used pasture far away and in dry season they used the pasture near the water wells. Indeed water was seen as a tool for range management and elders fined those who tresspassed on grass that had been left to regenerate. The elders (government by assembly) have the responsibility of discussing management of resources. The Borana have environmental laws that govern the use of resources.

External interventions in the community have proved disastrous. The new water structures set up by NGOs have been privatized and elders consider this as out of custom. There seems to be a conflict between the traditional and the state system. The Borana are changing into farming and this has led to further land degradation. Bush is encroaching on the pastureland because it is now illegal to burn the grass as they used to do before. In

conclusion, controlled access system has degenerated into open access system leading to a tragedy of the Borana commons. This paper was said to be a typical case of indigenous knowledge in application and thus, there is need to borrow a lot from the Borana water councils before we constitute our water boards [Annex 7].

THE KAYA FOREST: COAST DEVELOPMENT AUTHORITY AND INDIGENOUS KNOWLEDGE

Mburu Wainaina and Abdalla A. Mnyenze

The Coast Development Authority (CDA) provides integrated development planning, coordination and implementation of projects. It has the vision as "sustainable utilization of the unique coastal resources". Such resources are the sea, delta, fisheries, and marine resources, exclusive economic zone of 200 miles into the sea, mangrove, the *Kayas*, coastal agriculture, and wildlife including the butterflies, hot water springs, range land, water catchments, coastal culture, historical monuments and tourism. CDA is documenting the local indigenous knowledge through ICAM (Integrated Coastal Area Management) established in 1994.

Success of the programme depends on multi-sectoral involvement and commitment. CDA conducts research on the *Kaya* forests for purposes of preserving it, documenting traditional conservation practices, and documenting the traditional uses of the plants in the *Kaya* forests

There are many *Kaya* forests at the Coast, numbering about 46 such as Kinondo, Diani, Bombo and Fungo. Kaya is a Mijikenda name for a sacred traditional homestead. The most sacred spot of the *Kaya* is called "fingo" and this is where a virgin boy and a girl were buried alive while standing and a stone placed on their heads as a way of consecrating the place. It is also in the *Kaya* where the most feared traditional charms are buried.

The *Kaya* was a safe haven to hide from enemies such as the Maasai. It was a place to intercede for the community problems through offering of sacrifices especially during calamitie. It is where cleansing rituals are carried out. The *Kaya*s were also hiding places for those wanting to evade colonial taxes.

The forests are a source of medicine for the community. Ecotourism has been started around the *Kaya*s to raise funds to maintain them. The *Kaya* elders have a responsibility to ensure that the youth do not forget the community's customs. However, there is very little assistance for the elders to motivate them in management of the *Kayas*. For example, The Kinondo Eco-tourism Project.

Indeed, some *Kaya*s have been sold to foreigners and others are threatened by land grabbing. Most of them have been taken for speculation purposes and none has been developed. There is logging going on in the *Kaya*s and some administrators are collaborators in this. There is grazing in the *Kaya*s and this is destroying tree seedlings.

The youth in the area have little interest in the *Kaya*s and this is a major challenge for the continuity *[Annex 8]*.

Only a few Kayas have been registered with the help of the national museums of Kenya. The elders are appealing to the government to assist in the return of grabbed Kayas. Modern equipment like metals, cameras etc are not allowed in the Kayas and this is challenging because there is still need to popularize the Kayas through the media.

THE MAASAI AND THE ENVIRONMENT Phillip Kishoiyian.

Recent history of the Maasai begins at the Kerio Valley. They have many groups, which spill over national boundaries. They have age set groupings and this is meant to ensure there is always leadership in the community. This also wards away any confusion or confrontation in the leadership.

Maasai traditions and customs ensure a peaceful co-existence with their immediate environment. The Maasai do not eat wild game as this is seen as mixing meat (game) and milk (livestock), which will "fight in the stomach". When Warriors eat meat at designated places called Olpul, even the stick used in roasting of meat is never destroyed when the people leave. It is well kept for another time, as the Maasai never want to cut trees unnecessarily. The Maasai never cut slow growing trees, they only cut fast growing ones to pave way for grass and livestock.

In war, the Maasai never kill female lions and women. Those animals, plant parts and humans who replenish the earth are preserved. The Maasai graze cattle in Olokeri- a practice where a portion of pasture is used for grazing at a time. They move a head of the cattle to slow their speed since fast moving livestock destroys the environment.

They use certain trees for medicine, food (fruit), tooth picks, and boys wear certain berries to signal they are ready for rituals and rites of passage into adult hood. They used to burn grass to kill ticks and eliminate diseases.

Currently, forest resources are being taken away from the Maasai. Other challenges to the transhumance life of the Maasai include the emergence of urban centres, commercialization of land, pollution of the ecosystem and pouching of their livestock. It is a pity that the media portrays them as part of wild game and people who have refused to change [Annex 9].

INDIGENOUS KNOWLEDGE: THE PERSPECTIVE OF A PRACTITIONER Grace N. Thitai and Margaret W. Mbugua

The paper underscores the fact that indigenous knowledge has been used in food, medicine and in conservation of biodiversity. Such knowledge is passed on through songs, rituals, folk beliefs, stories and proverbs. Application of indigenous knowledge in any part of the world is found to preserve ecosystems.

The case of Kajiado district is a good example. Here certain sites are secured because they are said to be sacred and the trees therein are preserved. The community in the area has used trees in ceremonies, for peace, to predict weather, and in lighting fire. Some birds indicate where there is honey or danger, and they are never killed. Others are used to tell when it is dawn while some insects are used to foretell when the rain season is near.

Encouragingly, there are treaties at global, regional and national levels to conserve biodiversity such as; the Chiang Mai Declaration; convention on biodiversity (CBD); the convention on international trade in endangered species of fauna and flora(CITES);WHO strategy for traditional medicine; WHO guidelines, standards and policies relating to herbal therapies, safety and efficacy; AU decade for African traditional medicine; environmental management and coordination act; forest policies and national biodiversity strategies and action plans.

The greatest challenge to environmental conservation and conservation of indigenous knowledge is poverty. Other challenges include inadequate finances, lack of incentives, population growth, overgrazing, deforestation, lack of harmonization of policies, outdated policies, secrecy surrounding the indigenous knowledge, failure to domesticate international treaties, insufficient research capacity and failure to recognize indigenous people as stake holders.

The paper suggests that there is need to recognize customary laws regarding conservation, motivate traditional and other conservationists, document indigenous knowledge and the outcome of indigenous technologies, develop collaboration and linkages among practitioners to avoid duplication of efforts, share information and identify market for indigenous products *[Annex 10]*.

In the discussion session, it was noted that the paper identifies pitfalls in the conservation of Indigenous Knowledge.

The following questions emerged: How do we pass on Indigenous Knowledge if it is surrounded by secrecy? What is the Kenya wildlife service doing as an institution to conserve forests? What key political issues need to be addressed to protect indigenous knowledge in Kajiado? What will happen to people who want to get herbs from the Aberdares after a fence is erected around the forest?

It was explained that IK has a secrecy component as a way of preserving it. In addition KWS was working in partnership with NGO and the forest department to conserve forests and wildlife. It is also reviewing the Wildlife Act of 1976 to involve more actors. Regrettably, the KWS has not thought of the plight of the herbalists after fencing off the Abadares.

HEALTH AND FARMING SYSTEMS

INDIGENOUS KNOWLEDGE AND HEALTH Prof. Kihumbu Thairu.

All societies had their own heath systems. In some societies such as the Agikuyu, there were only two categories of diseases: the supernatural and the natural. The supernatural diseases were cleansed while the natural ones were treated by herbalists. There were surgeons who treated fractures and tumors. Suturing of wounds was more or less done as in modern medicine and depended on the age of the wound. Alcohol was used to dull the pain.

There were midwives who could carefully turn the baby during birth and caesarians have been reported by some tribes. Immunizations for small pox and lung diseases, anthrax and craniotomy have been reported by various tribes. Hypertension was controlled through diet and bubonic plague was controlled by burning homesteads, which had such patients.

African metallurgy was quite developed and the scientific processes used then are still the ones applied today but only in refined forms.

The Agikuyu only cleared the space they needed and left trees to represent the original species. Even in war they didn't burn houses or kill women. Any captured women were taken as sisters of the captors since slavery was a sin. Territory was bought and not taken by force [Annex 11].

The challenge of researching on traditional medicine is that of patent. If the elders release the knowledge, they loose the patent. This knowledge needs to be taught in schools in the mother tongue and should be examinable.

In the discussions it emerged that there is a lot of biochemistry data on traditional medicine but the major problem is that of ownership of the product after it is analyzed. Even if we want to process traditional medicine into capsules, western governments are not willing to give financial assistance because of fear of competition. It was also felt that modern medicine has been blended with spiritual healing and this has produced fantastic results.

It was suggested that it only takes a political will to patent our processes in such as in health and iron smelting. In addition, forbidding children from speaking their mother tongue is slowly leading to cultural genocide and this must be stopped. We need to assist in the development of our children's brains through promotion of tonal languages.

INDIGENOUS FOOD SYSTEMS FOR ADVANCEMENT OF HUMAN RIGHTS: Food Security, Traditional Knowledge and Sustainable Livelihoods Asenath J. Sigot

The paper explains that indigenous food systems have been developed in different geographical areas. A food system needs a context and such is based on culture as a heritage. Each culture has a value system that affects the foods that are available for use. The paper looks at food security as a human right.

Food systems are changing from traditional to contemporary ones, which do not allow for practical learning as was the case in traditional food systems. The indigenous food systems enabled people to survive harsh environmental conditions. Such food system is collective wisdom and is relevant to the household economy.

Indigenous food knowledge is being lost as food species are also disappearing. The Indigenous Food Security lacks funding for development, and there is the threat that modernization may lead to depletion of indigenous plants while commercial interests may reduce diversity of these foods. Genetically modified foods are a threat to indigenous foods. Other threats include urbanization and globalization.

The paper proposes that there is need for indigenous food policy and such knowledge should be passed on from generation to generation. For sustainable food security, we need to preserve indigenous food systems [Annex 12].

During the discussions, it was highlighted that there are neither laws nor policies on indigenous foods. These foods have not been popularized even in learning institutions. Indeed there is no research centre for indigenous foods.

There is therefore a need for legislation on indigenous foods but the dilemma is that those who should pass such legislation do not know about these foods.

The questions that arose are: how do we capture the knowledge about indigenous foods before it disappears? How can our chefs make our African foods a delicacy all over the world just like the Kathmandu chicken? If Kenya was given genetically modified foods when there is hunger, will such be accepted or rejected?

The faculties in the Universities need to teach all history – of food, language etc without being selective. The thinking of our children on indigenous foods needs to be changed from the homes so that in school we only reinforce it. Our culture and values need to be popularized through the media.

FOUNDATIONS OF INDIGENOUS WAYS OF KNOWING: A Look at Mythic Roots Lungie Goduka

The paper advances the argument that as Africans, we have lost our indigenous means of knowing because we pursue knowledge following the white mans ways. The truth is that all groups have their ways of knowing be they English, White, Black or Asian. These indigenous ways of knowing are pegged on a philosophy. No matter where people are, their worldview does not change. This is what has kept the Africans in the Diaspora intact.

Aping other ways of learning is cultural genocide. Science in the west excludes our [African] ways of learning. There is no objective way of learning and objectivity is not possible and is neither desirable. Oral tradition serves as a legitimate tool of knowing, and teaching is through myths, legends and folk tales. These ways are not from outsiders; they are rooted in our ancestral land [Annex 13].

The question is "how do we develop a future instead of mourning?" The answer lies in an all inclusive school curriculum to tell the young people the truth.

INDIGENOUS KNOWLEDGE TRANSMISSION AND EDUCATION

INDIGENOUS KNOWLEDGE AND EDUCATION: THE CHALLENGE FOR CURRICULUM RELEVANCE IN PRIMARY EDUCATION IN AFRICA Daniel Sifuna

The paper postulates that indigenous African education inculcated very important skills. Its content, curricula and relevance were specific. However critics see it as theoretical. Most of the teaching in the primary school is not relevant because it is western based. Teachers cannot teach local history because they believe in written materials. It is important that we start with the more relevant indigenous education, which is more revealing and in touch with the environment. Primary education has to be relevant because it is accessible to many people.

The paper asserts that after independence educational relevance was ignored because politicians were concerned with human resource development. As a result control of relevance was left to the institutions of the North *[Annex 14]*.

We are lamenting that the curriculum is not relevant yet we are doing nothing about it. We are moving towards a global village yet the indigenous languages are not seen as part of the global village. African indigenous education was based on functionalism because it prepared people to live in their environment. It prepared children to appreciate society and not to despise it.

The use of foreign language is leading to a collapse in the indigenous education and language. The children are not even competent in these foreign languages and do not benefit from them. They complete class eight when they cannot converse in the foreign language, which is the medium of instruction in school.

The point of encouragement is that African indigenous education has not disappeared wholly even under modernization. The plays, folktales and games are still in existence. These can be integrated in the school curriculum with the support of parents.

SCHOOLING, EDUCATION AND UNDERDEVELOPMENT IN AFRICA: The Paradox of Western Oriented Education in Africa Okwach Abagi and Anyango Okwach

This book distinguishes schooling and education. The point made is that we have invested a lot in school yet we are still underdeveloped. This is a challenge to scholars to re-educate children through African indigenous education system.

Schooling is seen as western formalized learning and inculcates the African child with western values. It alienates Africans from their indigenous knowledge systems. It is disempowering the African and hence it is de-humanizing. On the other hand, education is a cultural process that is humanizing and empowering.

In brief, the schools in Africa have failed the Africans. They have eroded the African values and norms. There is need to re-organize our libraries and replace the old books which have negative views about Africans with new ones. Importantly, there is need to revolutionalize the schooling system *[Annex 15]*.

During the discussion period the following questions were raised: What is new in the book since many authors have written on the same issues? It was argued that there is a danger of producing what the rest of the world does not need! What are the program (programmatic) issues in the book? Africa has developed the west, our resources have been taken to the west, the African brain has been taken to the west, our scientists are in NASA; is this contribution acknowledged?

It was clarified that the issues in the book are not new and thus a lot of literature has been reviewed and acknowledged. The aim of the book is to reach others and explain the difference between education and schooling. It also brings out the importance of indigenous knowledge. The book is important because it will be read by the new generations who have not had the chance to read Franz Fanon.

FIELD VISIT TO A COMMUNITY WATER PROJECT IN KITUI

FEEDBACK FROM THE FIELD TRIP

Participants were delighted at the fact that they found communities participating in dam construction in total with men, women, artisans and children observing. This was singled out as key to project sustainability. Some participants were able to understand why the dams are known as sand dams and not water dams.

It was concluded that the participatory aspects of the dam need to be documented because the project is replicable in other ASAL areas. People were learning by observing the artisans lay the stones and this was the African way of learning. Those who do not participate are finned and the k*athambi* cult is strict on these issues. This kind of fining is also indigenous!

The sand dam project was seen as a challenge to the 1962 projects and was seen as better than boreholes and earth dams. However, there is need to address the question of pollution of the dams.

It was noted that there was nothing new in the sand dam technology. What is new is building dams in cascades and designing for the future. Indigenous knowledge is seen in organizing and sitting of dams [Annex 16].

THE WAY FORWARD

In the discussion on the way forward, it was noted and agreed as follows:

- The workshop proceedings shall be synthesized and attached as annex of the workshop papers.
- Research is needed on the various issues of IK and hence there is need for financial support to the UNESCO chair.
- There is need for lobbying so that ideas on IK can be included in policies.
- There is need to involve the media and the provincial administration in lobbying for adoption and promotion of indigenous knowledge.
- There is need for the UNESCO Chair to document IK and have a digitalized library once adequate material has been collected.
- There is need to document the CBOs and NGOs which have and are utilizing IK in development.
- There is need to introduce African foods in the market and improve the technology relating to preparation of such foods.
- There is need to mainstream the various aspects of IK in the curricular (language, history food, medicine, conservation, water issues, etc) and not necessarily changing it.
- UNESCO will commission a paper to look into the use of mother tongue in schools to improve the quality of education.

CONCLUSION

By way of concluding, participants put forward what they saw as the emerging issues and the way forward. It was observed that the workshop had identified the various segments of indigenous knowledge and their practical value. It was also observed that there is an interplay between these segments, making indigenous knowledge systems a way of life. It was, however, noted that there are several conceptual concerns and diversity in the theoretical underpinnings.

The final question was, what next? Participants felt that there was need to work towards adopting a practical orientation in exploring the field of indigenous knowledge. This would entail identifying applicable indigenous technologies and working towards reclaiming lost ground. The first in these steps is the dissemination of the workshop proceedings. This would be followed by the development of a programme to explore, document and make available information on indigenous knowledge for the benefit of communities.

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- **Annex 2:** ADDRESS BY PROF. CRISPUS KIAMBA, Vice Chancellor, University of Nairobi
- **Annex 3:** REMARKS BY DR. SUSAN NKINYANGI, (Senior Education Adviser, UNESCO Nairobi)
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Annex 16: Field Visit to Community Water Project in Kitui

Annex 17: List of Participants