Editorial

This Special Issue on *African Indigenous Knowledge Systems for Environmental Management* is based on the argument that colonization, including its educational system, in Africa disregarded indigenous knowledge systems (IKS) that were, and are still important in the conservation of the environment and associated biodiversity in local communities. In pursuit of colonial exploitation of local resources, there was little consideration for the cultural belief systems of the local communities. This led to the rampant destruction of natural resources and environment which had cultural significance for the indigenous people. This has been compounded by recent experiences of biodiversity loss due to rapid industrialisation, urban expansion and population pressure on land. As indigenous cultures disappeared, there was also a loss of associated knowledge systems.

The various papers which comprised this Special Issue, focus on a range of topics and perspectives on environmental management in the context of IKS. The papers critically explore the implications of IKS on environmental conservation in terms of research, science, technological development and policy formulation. This approach is trans-disciplinary. However, there is an overall acknowledgement that culture and associated community-based knowledge systems are important elements in inspiring and mobilising people to actively participate in environmental conservation.

The authors of *Energy Resources and Environmental Conflicts in Africa: Implications on Indigenous Knowledge Systems, Environmental Policy* argue that despite Africa's rich endowment with a wealth of energy resources for peace and sustainable development, the countries with these resources are characterised by both poverty and conflict. It was advocated that a hybrid of policy strategies which include indigenous knowledge values and culturally-specific environmental ethics be included in future policy strategies to mitigate these challenges. The paper offers examples on the use of indigenous knowledge approaches for conflict transformation that acknowledge all stakeholders in policy formulation.

The paper on *African Indigenous Knowledge Systems and Natural Disaster Management in North West Province, South Africa* centres on the strategies used by the Batswana people. The paper emphasizes the need for development and protection of indigenous natural disaster management through curriculum development, policy formulation and communication strategies for sustainable development, and community livelihood.

Using cases from a rural and marginalised community in the Eastern Cape Province, South Africa the paper on *A Pragmatic ICT4D Approach to Environmental Ethics for Rural and Marginalized Areas (RMAs): The Perspicacity of Dwesa Community* discusses the benefits of local e-services on the environment. It is recommended that a pragmatic ICT for Development approach is needed as an aid to environmental preservation. The value of community-based ICT centres is two-fold as it facilitated access to essential services while interfacing with modern information technologies/systems that are environmentally conscious.

The authors of *Indigenous Knowledge in Governance of REDD+ for Climate Change Mitigation in Tanzania: Opportunities and Challenges* argue that the role of various IKS stakeholders has met a number of challenges due to inadequate incorporation of indigenous peoples' organisations. There is need for a more robust REDD policy, legal and institutional framework which takes cognisance of national priorities to inform implementation of programmes.

The paper on *Environmental Security, Indigenous Knowledge Systems and Implications for Food Security in South Africa* argues that in spite of the extensive involvement of the national government in environmental policy formulation, the role of IKS research and cultural-specific environmental ethics is yet to be fully incorporated in South African policy development.

The Yoruba Indigenous Knowledge System of Orisa and its implications for peace, gender equity, and natural and environmental resource management is examined in *Sacred Space of African Indigenous Forces of Nature: Environmental Ethics for the African Diaspora*. It is argued that across the African diaspora, all elements of Orisa are the same and are manifested in the same way as in the environment in Yorubaland and across the African diaspora. Concepts

explored include Orisa as forces of nature; Orisa and gender complementarities; and Orisa and environmental ethics with recommendations for policy development that honour forces of nature for peace, well-being and sustainable development.

The role of African indigenous knowledge systems, especially the contribution of rural women is critically discussed in *Indigenous Knowledge and Bio-Diversity for Sustainable Food Security in South Africa*. Using cases from KwaZulu-Natal (KZN) province in South Africa the emphasis is that rural women's indigenous knowledge of biodiversity conservation and postharvest for food security tend to be undervalued in research and policy development. It was therefore suggested that in designing food security strategies and policies, this limitation be duly considered. The author encouraged more interdisciplinary research on issues related to IK, women and biodiversity for sustainable food security and nutrition.

The paper, *Indigenous Knowledge Systems and Formal Scientific Research for Climate Change* proposes a model to improve the quality of complex ecological systems such as the contiguous forest of Eastern Ghats in India. The concept model offers a synergistic approach to indigenous knowledge systems and modern ecological methods to strengthen the socio-ecological resilience of the region.

The paper, Ubuntu *is Not Only about the Human! An Analysis of the Role of African Philosophy and Ethics in Environment Management* looks at the inherent challenges of an urbanised society where an intimate relationship with nature is lacking. This results in a lack of empathy and respect for the environment. The authors advocate for the inclusion of *Ubuntu* in environmental management practices and ethics, by drawing on traditional environmental conservation strategies contained in taboos, totems, clan names, folklore and proverbs to expound on the African ideologies.

The paper on *Traditional Knowledge in the Use and Management of Forest Ecosystem for Livelihoods and Food Security in Nigerian Savanna* discusses the use of natural resource management strategies that incorporate local knowledge systems to mitigate environmental challenges for food security and health.

The authors of *African Indigenous Languages and Environmental Communication* make a critical analysis of the role of African indigenous languages in environmental communication. They advance the argument that environmental conservation can only be achieved if the information appeals to the cultural values of the recipients.

Using cases from South Africa, the paper on *African Indigenous Languages and the Millennium Development Goals in South Africa* interrogates the role of African indigenous languages in the attainment of MDGs in Africa. It emphasizes the view that there is strong relationship between language and sustainable development. The role of ICT is also articulated as a powerful tool for sharing information.

Mayashree Chinsamy
Chief Editor
University of KwaZulu-Natal,
South Africa

November 2015