

Indigenous Knowledge and Education as a Transformative Agent for Sustainable Development

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Abstract

Countless studies indicate that the use of indigenous or traditional knowledge and education with regard to resource administration is an invaluable option for developing economies to decrease the impacts of drought and enhance sustainable development. Indigenous knowledge system is conscious of the adjustable skills of indigenous communities to their surroundings when confronted by any type of calamity. This knowledge is passed on by word of mouth down to generations to come. In acknowledgement and gratitude of indigenous knowledge, many nations are embracing it. It is a substantial and valuable knowledge system that is adjustable as well as aggressive and is founded on skills, potentials, and rational techniques that adjust over time depending on environmental circumstances. Several nations are beginning to recognize its worth, and efforts have been put into place through policy and legislative structures to integrate it with education.

Keywords: Community, education, indigenous knowledge, resources, sustainable development

Introduction

Globally, humans are facing exceptional challenges; drought, floods, storm, cyclones, climate change, intense and hateful ideologies, mass loss of biological diversity, new conflicts and violence and the risks of world pandemics just to name a few. Never before has the human race faced the convergence of such crises. *If traditional cultural practices and ceremonies had not been prohibited and had traditional stewards been listened to over the years, perhaps human beings would not find ourselves in the circumstances they are in today; with the deprivation, destruction and pollution they face as a worldwide community* (Sergon et al. 2022). *Indigenous knowledge (IK) is a valuable component of the ability to face not only the crises mentioned above, but also the conservation and safeguarding of all of our resources for sustainability.* Indigenous knowledge and education need to be customized to equip societies with the knowledge, education, values, and capacities to act as responsible individuals of an international society for the benefit of all people and the earth. Scholars have come to realize that there are a variety of ways of viewing the world we live in and acquiring knowledge about it. The scientific investigation or Western Epistemology is not the only and ‘right’ way of gaining knowledge but simply one way to acquire knowledge. Accommodating epistemological pluralism can lead to more successful consolidated knowledge (Mazzocchi, 2018).

Indigenous knowledge is about protecting a way of life that is at risk of extinction. Almost half of the human culture is fronting extinction. Therefore, it is imperative to bring indigenous knowledge onto the discourse. Currently, there is a serious threat of much indigenous knowledge being lost, and along with it, invaluable knowledge about ways of living sustainably both environmentally and socially. The role of colonialism in disregarding and sometimes defaming indigenous knowledge has been well documented by various authors. As a result of the impact of

unfavourable values and mind sets towards indigenous knowledge systems (Sillitoe, 1998), even during early postcolonialism, many academics considered indigenous knowledge systems as backward, primitive, simplistic and static. For instance, language is a main feature of an indigenous society and yet Indigenous languages are under serious danger. Approximately, one language disappears every 3 months or so, which means that by the end of the century, over three thousand languages will have died (Sillitoe, 1998; Bromham et al., 2022). When a language disappears from *a society that has not developed literacy*, that society also loses its identity and knowledge. Such a society recognizes speech not only as a means of everyday communication but also as a means of preserving *the wisdom of ancestors, which will not happen if languages die*.

The other reason for considering indigenous knowledge is recognition that when more forms of evidence are considered, better decision-making is the consequence. Acknowledgement and inclusion of indigenous knowledge in decision-making benefits all actors. Indigenous peoples have long appealed that indigenous knowledge be constantly and purposely included in decision making processes.

The Place of Indigenous Knowledge in Sustaining Development

Indigenous Knowledge has been defined by different authors to mean a body of awareness, unwritten and written knowledge, creative, applications, and beliefs developed by ethnic and indigenous people through intercourse and experience with the environment, Giorgia, 2016). Indigenous (local) knowledge is a time-honoured wisdom and cultural practices within groups, often passed on orally. This kind of knowledge is communicated in myths, folk tales, traditions, rites, songs and dance, artefacts, and even regulations. The application of these elements and beliefs promotes sustainability and responsible ownership and management of traditional and natural resources by interaction of humans and their environment.

As has been observe, the information revolution clearly upholds the predominance of technology and science knowledge over other types of knowledge such as indigenous knowledge, traditional knowledge, oral culture, daily learning and the like. The primary characteristic of these types of knowledge is the manner in which people produce, interchange and adjust their knowledge, in spite of their culture. What gives unification to this apparently differing assortment of knowledge is its almost tacit feature. These are the skills, ideas and experiences that people learn over time but are not graded and may not necessarily be easily expressed. The originality of traditional knowledge makes it most challenging to measure in an organised, precise way, as is normally done with science and techno-knowledge, as documented by articles in academic publications (Mazzocchi, 2006).

Preference for scientific knowledge in place of local knowledge would have devastating consequences for humanity, and in particular for developing countries, because scientific knowledge is not enough to protect certain kinds of critical knowledge and information. Optimizing production while still respecting the environment for future generations is what sustainable development is all about. These human actions and behaviour are informed by indigenous knowledge that often times proves vital.

It is impossible to separate indigenous knowledge from the people inevitably connected to that knowledge. It relates to phenomena across physiological, communal, traditional, and supernatural systems. Indigenous peoples have cultivated their knowledge systems over thousands of years, and persists based on proof attained through direct contact with the environment, lifelong experiences, large scale observations, learning, and techniques. This ancestry bonding with nature facilitates the ability to uncover often faint, minute changes in order to base decisions on insight of patterns and procedures of change in the environment which people are a part of. The facts and

cumulative historical and traditional ecology contained deep within indigenous languages, applications, attitudes, naming, dances, and narratives hold information and knowledge that are pertinent today.

It has been assessed that presently, across the planet, indigenous peoples and long-established communities bound together, are stewards of over 24 percent of territory. This territory accommodates roughly 40 percent of all environmentally intact topography and sheltered areas left on earth. This constitutes an impressive 80 percent of the global biological diversity (Emilie et al., 2021). All indications, therefore, are that the most intact ecological systems on earth rest in the hands of human communities who have remained closest to the environment. The world has officially acknowledged indigenous knowledge as one of the many crucial bodies of knowledge that gives back to the research base, practical and the social-economic development of our collective understanding of the environment.

The term ‘sustainable development’ was first presented in a Global Commission (Brundtland Commission) in 1983 that set to address the issues of global warming (Jacobus, 2006). It was described as meeting the needs of the current generation with no negotiations that may harm the ability of tomorrow’s generations to meet their own needs. Additionally, sustainable development pursues issues of poverty to create impartial quality of life and to provide the basic needs of humanity, devoid of irreparable destruction to our environment. Nevertheless, this description centres only on the way development should nurture and nourish human needs. It gives a black out to the needs of other categories (Jacobus, 2006).

Indigenous communities’ ability to protect natural ecological systems is obvious worldwide. Their regard for and acknowledgement of their homeland has implied the preservation of the countless animal species that live within their ancestral land. For example, in the Rift valley, indigenous territories have lower rates of de-forestation than most forests; they are protected regions (Njiraine & Onyancha, 2011). This is largely due to traditional peoples’ knowledge and competence with forestry and avoiding pursuits that generally threaten forests such as illegal logging and cattle grazing. Protecting forest ecological systems is critical to the continuance of numerous animal varieties that would not survive outside of this natural environment. A good number of the world’s populace depended on these sectors for their sustenance. Therefore, indigenous knowledge remarkably contributes towards sustainability of trillions of people globally.

As the original administrators of the environment, indigenous communities have competence critical to identifying solutions to the climate change and protecting our ecological systems. Government needs to provide guidance to help ensure that voices of indigenous communities are included across regions for the collective good of our communities and planet earth. Decision making is outstanding when enlightened by all forms of knowledge. This kind of guidance will help actors integrate indigenous knowledge in their work from research base, to environmental norm setting, to control and organization of land and waterbodies included for sustainable development. Indigenous communities have long sought recognition of the worth of their knowledge and practices (Haruna & Raphael, 2020). With guidance, indigenous knowledge can be better acknowledged, recognized, and included in relevant discussions.

Globally, as societies we are at a turning point. Though indigenous knowledge and education are the foundation for restoration and transformation, world disparities, and a pressing need to reconsider why, how, what, where, and when we get the knowledge implies that education is yet to fulfil its promise to shape peaceful, just, and sustainable development. In our pursuit for growth and development, we have overloaded our natural environment, undermining our very existence. Currently, high standards of living coexist with widening imbalances. Increasingly, more people are

involved in public life, but the basic structure of civil society and democracy is eroding in many places around the world (Tom et al., 2019). Rapid technological advancements are transforming many aspects of our lives, but these innovations are not sufficiently directed at justice, incorporation and participative democracy. That is the reason we must reimagine indigenous knowledge and education.

If indigenous knowledge is going to be transformative, it must involve the education geared to inspire and empower communities to take conscious choices and behaviours at a personal, community and overall levels. If it is going to be transformative, we are going to have to use previous interpretations of indigenous knowledge to construct a revised or a new interpretation of their meaning in order to guide future behaviours that will preserve our environment. What does transformative mean in our context? It means a substantial structural shift in the foundational assumptions of mental, emotional and behaviours to support sustainability. A shift of awareness that changes our way of being in the world; understanding ourselves, our self-locale and our interpersonal relationships in the world (Knopf, 2015). It means comprehending power relations in the interconnected structures of social inequality as experienced by members of collective social groups, and/or their convergence, at the personal, communal and structural level. This calls for a paradigm shift, i.e., a revolution in our view as a society of how things work in the world; how indigenous knowledge works in the world. It means beginning to critically examine and reflect on our societal predetermined premises and beliefs so that we are more accessible, inclusive, thoughtful and willing to embrace change is the way to go.

Indigenous knowledge is considered an important source of information for society's, occurrences, establishments and culture, among many. It has also been shown beyond doubt that this knowledge system has an important role to play in designing formal and well organised extension services (Rebeka et al., 2018). In the world, indigenous communities are continually struggling to sustain their rights, their culture, their traditions, and their knowledge, in a network yet led by Euroscepticism; a Western perspective. They experience the problem of a double life at the same time, the indigenous and foreign, the modern one, in continual pressure and strain with one another, with the non-indigenous overpowering in shaping the indigenous. For hundreds of years, indigenous communities have had to bear with aggression and imposition, and periodically they have witnessed their knowledge surpassed by non-indigenous knowledge, forced on them by western societies. Still, indigenous societies have survived for decades modifying in a variety of ways to unfavourable weather patterns and created sustainable maintenance.

Different types of knowledge, with deep roots in their linkages with the environment and also in cultural cohesiveness, have enabled many of the communities to handle natural resources, to safeguard their surroundings and to increase their persistence. Their observation, adaptation and mitigation has assisted many indigenous populations face unfamiliar and disturbing conditions that have oftentimes severely affected their way of live and their regions. Indigenous knowledge and education /technologies which are economical, result in a sustainable economy among other dimensions. It is decisive therefore to exhibit and further these applications/ technologies in the territories (Justice & Sandra, 2019). These exhibitions, their circulation and their reproduction by indigenous communities will symbolize as evidences for enlightened knowledge. Based on these evidences, the indigenous community members will advocate that these practices should be advanced by County and National governments in their plans and programs and cater for them in their budget. The mutual encouragement from a large number of target audience will be necessary for influencing strategies.

Method, Scope and Limitation of the Study

This study was purely based on existing data. Data was collected from different relevant writings, journals, the web and print media. There was a lot of relevant and pertinent data in the web and a huge amount of raw data, but only the most important were incorporated in this paper. Experience and knowledge got by the author in the process of this research is also incorporated.

As reported by many researchers' works there is little doubt that when indigenous or local knowledge is excluded from the strategizing and policy constructing process of any territory, the results are such that growth is either doomed or occasionally adverse (Kangalawe et al., 2014). This is because non-indigenous approaches alone are (in and of themselves) inadequate reaction to today's interconnected elements of social, administrative and economic climate concerns (Desta et al., 2010). The positioning of indigenous knowledge has been acknowledged recently by numerous research bodies and Non-Governmental Organizations. But many impediments such as ecological deterioration, lack of effective strategies and economic development make safeguarding and advancing indigenous knowledge a challenge.

This study was conducted from 30th November, 2017 to 27th January, 2018 and time was a challenge. This was desk research that relied on already existing information since field survey was not feasible at the time. **The objectives of the study were to:** review the role of indigenous knowledge in sustainable development; establish gaps in utilization of indigenous knowledge for climate change; and identify the spheres of contribution of indigenous knowledge.

Indigenous Knowledge Systems in Sustainable Development

A particularly interesting example with regard to indigenous knowledge in development that is sustainable came from a village in Central Province, Nyeri County in Kenya which has embraced a model to alter their procedures to forest safeguarding and control especially against illegal logging. Recently, from 2001 through to 2004, Communities numbering 1,885 in the County finished putting together their community regulations of forest administration under the County guidelines. As a result, there exists numerous grounds for a lucrative community forest control and safeguarding. It is noticeable that the community forest is achievable due to its relevance to local traditions of the Agikuyu; distinctive of collective property, their self-control, founded on their indigenous knowledge in vegetation and biological diversity as well as the function of the local government. Due to the regulations and collective benefits, all indigenous members are guided by the local adjustments during the forest ecosystem sustainability. In summary, the linkage of traditions and the environment in general and biological diversity in particular, mirrors the cultural traits of this ethnic group through their actions and accommodation of nature for sustainable development.

A similar example is an agricultural method system of the same ethnic group. Efforts by a certain Aid group to introduce unfamiliar crop variety seedlings into this area in an effort to raise production, have not borne fruit because the unfamiliar variety neither fits into the farming method nor the traditions of these indigenous people. In addition, the inputs required to realize the expected increased production cost far too much for the local people. For example, it is a given that the indigenous maize type has minimal yield than the unfamiliar varieties. However, advantages include among the following: it is organic and fertilizers are unrequired; it does not attract many insects; it will mature and dry in the field till harvest; its product is such that the flour is without moisture, nut-like flavoured and sweet scented; it can be made into a thick type; it tastes better than the unfamiliar types; it has a long shelf life and it is less prone to worm contagion. The experience gained from this region is that the indigenous maize variety has evolved, improved and been used for years and it is appropriate in terms of being accommodated in the indigenous physical conditions

and tradition. As such, any external interference may not work if elements are not considered. It is worth noting that the limitations and benefits of indigenous knowledge is that it is local (Giorgia, 2016).

Indigenous Knowledge and Re-Forestation

For many years, regional and nonregional support to re-forestation has aimed at planting of varieties of exotic species. Tropical pines, American conifers, eucalyptus, acacia, all these species have been planted, partly because they are drought-resistant and also because non-indigenous planters knew nothing to do with indigenous trees. The eucalyptus, which was used extensively, has been attacked and damaged by fungal infection. In addition, it did not succeed in countering soil erosion on sloppy areas. Conscious of the critical importance of forests in the indigenous ecology, the indigenous people finally agreed that with the current situation of their region, the only option was to plant indigenous species, few that still grew in the native forest, to re-forest the barren sloppy areas.

Within three years of launching the re-forestation programme, the indigenous people have counteracted myriad of problems of wood for fuel as well as water challenges. The indigenous people also sowed other higher value hard wood tree species such as mangroves as inter-cropping. Currently, a good portion of an entire region in the central part of Kenya; Nyeri is covered with forest, and indigenous agricultural yields have improved significantly since then. Generally, re-forestation results have improved due to local people knowing which indigenous tree species to use at what time.

On the contrary, the government and other Aid groups have attempted to use exotic tree species which are not suitable to the local circumstances. There is an inclination of the government wanting to find a 'quick Fix' for all indigenous communities and in all areas in the sloppy areas instead of considering the diversity of the mountainous region in terms of the social natural environment.

Indigenous Knowledge and Traditional Medicine

According to an evaluative review of therapeutic and medicinal herbs of Kenya, there are 105 of them belonging to 43 family types. It is foreseen that the number can could go higher. They are all over in the region and the communes know how to use most of them for several medicinal purposes (Odongo et al., 2022). Most of the people and families in the region can use most of the therapeutic and medicinal herbs which are available in the communities to treat normal illnesses such as headache, diarrhoea, fever, vomiting, stomach aches. Multiple studies have demonstrated that there are herbalists in every indigenous community in various nations. They are the people who hold indigenous knowledge and experiences in identifying and using medicinal herbs for curing and healing in their communities.

The plant-based medicine both preserves public health and also adds to hunger extermination and poverty alleviation in homes. These plants have been considered as special goods in many homes of Kenya. Numerous communities in the area are involved in gathering, refining and selling plant-based medicine. With many benefits and huge demand, a large amount of wild plant-based medicine has recently been gathered to supply local pharmacies and also sell out of the country. It is predicted that a substantial quantity of species of plant-based medicines have been gathered in a manner that cannot be sustained. Some species have been overutilized and are therefore worn out (Bouvier, 2016). Undoubtedly, the consequent biological diversity loss means destruction of indigenous knowledge which is a critical issue.

Indigenous Knowledge and Ecologically Responsible Tourism

As stated previously, indigenous communities have their own actuality of sustainable development, which is different from the idea of the one attached to the current societies. Indigenous knowledge adds value to the sustainable management of territories, safeguarding biological diversity and lessening carbon emissions, yet it is demeaned and secluded from decision-making and areas of policy.

Respect for the environment including its preservation as well as collective-based management of earth and its organic matter are key to the indigenous ideas of welfare. Organic matter or natural resources are not commercialised and the community is the support upon which indigenous peoples structure their lives (Reed, 2022). Regions are vital for indigenous communities because it is in these spaces that indigenous groups can perform their social-cultural, economic, traditional and environmental duties. These duties include sustainable management and utilization practices as well as resource preservation and administration strategies, most of which are based on traditional/indigenous knowledge and local systems of governance (Townsend et al. (2020).

Indigenous Knowledge and the Environment

Indigenous communities live in the most susceptible ecological systems and environments, which vary from visible ice cold, high mountainous areas, Coastal plains, jungle rainforests, tropical woods, desert areas, minute islands to lowland zones. Indigenous regions are directly afflicted by the present environmental crisis accounting for issues such as global warming and loss of biological diversity. Amid the environmental crisis threats, indigenous communities from a variety of countries have experienced the worsening of major storms, seasonal strong winds and flooding, rise of sea level and accumulation of salts in soil (Giorgia, 2017). Indigenous people have suffered the effects of erosion, extreme drought and rainfall shortages (Lambert, 2014; Gyampoh et al., 2009). Similarly, other authors such as Goh (2012) identified scenarios such as thawing of icebergs, the intensity of hurricanes, the budding of the water levels in the sea and changes in patterns of rainfall among so many more.

As a consequence, and in order to step up climate action, indigenous peoples must be considered as dynamic actors of change, and thus granted access to secure work chances and the opportunity to engage in the development, execution and assessment of sustainable procedures and usages which are aimed at tackling climate crisis. Concurrently, it is also of essence that the issues which make indigenous peoples especially vulnerable to climate issues be addressed in an apparent and clear manner.

Indigenous Knowledge and Impacts of Hazards Related Disasters

The consideration of indigenous knowledge in hazard related disaster concerns has not received adequate attention in comparison with other fields of study. In fact, only recently, research on impacts on disaster related issues has evidenced the worth of indigenous cultural knowledge in deterring and alleviating the consequences of natural and manmade disasters, and also red alert systems, readiness, retaliation and resilience (Nnamdi, 2016; Zulfadrim et al. 2019). Indigenous communities worldwide embrace differing techniques depending on the environmental hazards they have to deal with. Therefore, indigenous communities worldwide who also experience the same weather conditions, use the same (common) techniques at times.

Among the techniques that have been detected by investigators, are preservation techniques dependent on weather predictions and the adjustment of what farmers undertake to control damages to plants and other interpositions to preserve the people and the animals from an array of dangers.

Dube and Munsaka (2018) in their analysis of indigenous communities in developing countries, identified some of the areas that in the last few years, have been the most damaged by natural calamities. The authors have grouped these techniques into general classifications that encompass land management schemes, construction design, **humanitarian** and food security, social support, and climate resilience.

Education for Climate Change

In accordance with most traditions, values and ethics of indigenous societies in Africa, they define education as a process of gaining knowledge and transformation of the land. It actually concentrates on awakening the gifts and purpose of creation and also awakening the giant within the learner. Basically, education was aimed at initiating, awakening the higher consciousness of a human person, awakening the mental and spiritual understanding of the universe and how the world is like. This awakening plays a role in forecast the weather, comprehending climate threats, managing climate effects, informing and boosting responses to climate alteration and volatility, and establishing adaptation choices. Therefore, education in traditional societies was seen as a cyclical process of initiation and transformation.

The Acquisition of Knowledge in Indigenous Societies

Indigenous knowledge is acquired quite differently from the way other forms of knowledge are acquired. The process of finding out about the world is far more empirical experimental which indigenous knowledge is about. First-hand experience is considered the best and at some times the only way to properly learn. To understand a thing, one must use one's sense of perception, and also language to express and experience it. The requirement to walk on the land in order to know and understand it is a different approach than the single dimensional, literate approach to knowing and understanding.

Senior members of indigenous societies mind the learning process. They transmit knowledge to younger individuals by sharing stories. This storytelling provides wide-ranging information to their listeners, such as the origin of the Earth, the way animals and plants came about, reasons certain moral rules endure within the society and the like. This way of acquiring knowledge has two important implications: firstly, the need to use own imagination means that listeners or learners develop a close bond with the environment in which they live. Secondly, the storytelling, song learning, or ritual dancing helps to reinforce community bonds, with the younger generation learning from the much older, and building respect for their knowledge and positioning in society (Senanayake, 2006). This is the reason many indigenous societies consider written knowledge to be subordinate to spoken language.

Indigenous worldviews that inform our every thought and action see the whole person (physical, emotional, spiritual, and intellectual) as intertwined to land and in relationship to others such as family, communities, and nations. This is a holistic view, which is an important dimension of supporting indigenous education. Indigenous philosophies are supported by a worldview of close relationships among the spiritual, the natural and the self, forming the foundation or beginnings of indigenous ways of knowing and being. On an individual level, it encompassed total preparation of the total person for living a total life (Shelley, 2022). Indigenous knowledge and education need to be custom-made to equip societies with the knowledge, education, values, and capabilities to perform for the good of all people and the earth, as responsible individuals of an international community.

Knowledge Systems and the its Implication for Sustainable Development

For several years, the perspective of indigenous knowledge has been set side by side with research-based knowledge, positioning the latter as privileged in comparison to the former. Nevertheless, since it is uncommon for advancement of knowledge systems to occur in seclusion, viewing indigenous knowledge and empirical or research-based knowledge as two different and confined entities fails in its description of the reality (Agrawal, 1995).

Furthermore, writings on the topic have reinforced the fact that the divide between the two is blurred, and that the incorporation of indigenous and research-based knowledge is critical, as one knowledge system may be useful in sealing gaps. This is what Njiraine and Onyancha (2011) defines as multiple paradigms being a more sustainable way of life.

Obstacles in Protecting and Advancing Indigenous Knowledge Systems

Pluralism of the African tribal people in the nation mirrors the variation of indigenous knowledge, which is one obstacle with respect to designing of projects on the one hand. On the other hand, many studies have pointed out that locals are oftentimes excluded from managerial and processes of planning (Arlinghaus et al. (2002). As a matter of fact, many policies and projects tended to force the same national development action on locals without considering the heterogeneity of ethnic tradition and natural circumstances. Those involved in planning lean towards focusing on new automations that have been imported from other regions instead of banking on indigenous knowledge, since it is thought of as backward. The consequence is a corrosion of indigenous knowledge and a deprivation of a crucial fall back for sustainable development (Romer et al.2009).

Conclusion and Recommendation

The traditional knowledge and proficiency, deeply seated in the connection of indigenous peoples with the earth and community, is undeniably effective in responding to sustainable development; nevertheless, it is hardly adequate. Trapped between the dangers of the environmental on the one hand and development pursuits on the other, if some remedies are not considered immediately there is likely to be unfavourable repercussions for the sustainability of this populace in addition to the knowledge systems.

It is critical that the regional and international communities start acknowledging indigenous peoples and their competence as important support in the issue with environmental and sustainable development threats and in sustaining global biological diversity. Synergy is to advance and execute appropriate initiatives to entitle indigenous communities to advocate and ascertain their rights and be engaged in the managerial processes, therefore being active participants of this transformation. From the foregoing, there is clarity that Indigenous Knowledge plays a significant role in advancement of several categories, including forest management, cultivation, and medical remedies.

Indigenous Knowledge is ecologically sustainable and it is a significant source of local subsistence and food resilience. Indigenous Knowledge Systems have been swept away by many social economic and ecological reasons. All things considered, we have worked inside and with governments at the clan, indigenous, regional, national, and international positional levels, and we have seen manifestation of achievement when knowledge systems are integrated.

Respectful incorporation of Indigenous Knowledge at all phases within the administration can result in decisions that are founded on a more holistic and all-inclusive understanding of the planet. Ultimately, advancing wise policies and efficient, unbiased programs to improve the lives of all humanity and the health of the environment is what drives the work of individuals and the administration.

As such, it is imminent to put the Indigenous Knowledge Systems back on track by considering certain recommendations. It is thus recommended that indigenous knowledge should be gathered, recorded and circulated. There should be conserving and revitalising of Indigenous Knowledge by affirming local people and reclaiming the values of the knowledge. There is need to reconstruct and reinforce regional institutions regarding indigenous knowledge. There is also a necessity to popularize Indigenous Knowledge in regional development planning especially poverty alleviation and biodiversity preservation programmes, in addition to advancing and reinforcing Indigenous Knowledge through partnering and key stakeholders. Different deliberate steps should be taken up in this region for publicizing and enlarging biodegradable indigenous agricultural praxis for sustainable development.

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