



POLICY BRIEF

SUSTAINABLE DEVELOPMENT GOALS – A WAY FORWARD THROUGH INDIGENOUS KNOWLEDGE BASED TRADITIONAL WISDOM



Preamble

Sustainable development has gained fresh impetus as a result of world governments including Sri Lanka unanimously agreeing to give effect to the UN 2030 Agenda on Sustainable Development Goals. The SDGs are intended to carry forward on a broader platform what was achieved through the Millennium Development Goals which covered the period 2000 to 2015. The SDGs Agenda was formally inaugurated in 2016. The Government of Sri Lanka initiative in supporting SDGs is seen in the setting up of the Sustainable Development Division (SDD) at the Ministry of Sustainable Development and Wild Life Conservation (MoSDW) (msdw.gov.lk/divisions/sustainable-development-division/). An Expert Group has been appointed to advice the SDD on the formulation of appropriate institutional mechanisms, policies, strategies, and an Action plan.

In support of SDD actions a ‘Work Wheel’ has been developed incorporating 10 ‘Work

Tracks’ viz. capacity building and partnerships; sustainable development platform; sustainable development road map; SDGs facilitation mechanism; sustainable development data and information portal; sustainable development response mechanism; sustainable development indicators, guidelines and standards; sustainable development policy, regulatory and institutional framework, strategy and action plan; national SDGs review, monitoring, evaluation and reporting; and sustainable development demonstrations.

This policy brief prepared by the NSF Working Committee on Indigenous Knowledge is intended to present the case for utilizing indigenous knowledge to support State initiatives launched by the SDD aimed at achieving sustainable development goals, and provide policy recommendations for action. The importance of traditional wisdom is implicit in the Presidential pronouncement at the inauguration of the SDGs Agenda that highlighted the importance of ‘creating our own pathways within the global vision’ in achieving its objectives.

Development Crisis and Sustainable Development

Positivist science has contributed to the development, transformation and advancement of the world in no uncertain terms. It has also ushered in the human driven age of development which Nobel Laureate Paul Crutzen has termed the Anthropocene Age. But human advancement on an un-paralleled scale

has also led to a development impasse as reflected in the bipolarity of world development, over exploitation of natural resources including non-renewable resources, loss of biodiversity, climate change and attendant consequences, poverty and human degradation, social unrest and social iniquities and large scale human displacement which has become an all too manifest tragedy in the modern world. In all this Sri Lanka too has its own share of problems. Hence global initiatives for the search of alternative pathways to development to overcome the present impasse.

Sustainable development as a development concept came into prominence in the wake of the UN World Commission on Environment and Development (WECD) report titled Our Common Future (also known as the Brundtland Report) published in 1987. It defined sustainable development as development which “meets the needs of the present without compromising the ability of future generations to meet their own needs”. Since then ‘sustainable development’ has become a catch phrase of development theorists and analysts. There is no explicit reference in the Brundtland Report to Indigenous Knowledge but it is worth noting that sustainability has been of the essence in indigenous knowledge and cultures which characteristically upheld the symbiotic relationship between man and environment.

Sustainable Development Goals

The United Nations 2030 Agenda recognizes 17 SDGs and 169 targets to realize its vision of sustainable development which may be enumerated as 1) No Poverty; 2) Zero Hunger; 3) Good Health and Well-Being; 4) Quality Education, 5) Gender Equality; 6) Clean Water and Sanitation; 7) Affordable and Clean Energy, 8) Decent Work and

Economic Growth, 9) Industry, Innovation and Infrastructure, 10) Reduced Inequalities, 11) Sustainable Cities and Communities, 12) Responsible Consumption and Production, 13) Climate Action, 14) Life Below Water, 15) Life on Land, 16) Peace, Justice and Strong Institutions, and 17) Partnership for the Goals.

The above goals (which are more comprehensive than MDGs) fall within three main domains namely, Economic (growth, efficiency, and stability); Social (equity, social cohesion, social mobility, participation and cultural identity); and Environmental (green environment, rational use of renewable resources, and conservation of non-renewable natural resources). It is, therefore, inferred that development could be sustained by establishing synergies across these domains. NSF Working Committee is of the view that this process could be greatly facilitated through Indigenous knowledge based interventions.

Indigenous Knowledge and Sustainable Development

The National Science Foundation Working Committee on Indigenous Knowledge uses the term ‘Indigenous Knowledge’ to mean both locally derived knowledge, as well as knowledge externally derived but indigenized through adoption and adaptation over a long period of time. As such indigenous knowledge is an integral component of a people’s cultural heritage.

Indigenous knowledge is built on a synthesized value system combining the spiritual, socio-technological and environmental values which lead to sustainability. Furthermore, Indigenous knowledge represent a time tested, diverse and heterogeneous corpus of knowledge, skills, techniques, technologies and processes, often combined and tempered

with cultural expressions of societal significance.

Hence, mobilizing indigenous knowledge would be highly facilitative of achieving SDGs. Moreover, it is a means of activating the inherited knowledge capital of especially the rural communities that constitute the bulk of the population in developing countries including Sri Lanka.

Perspectives on the Applicability of Indigenous Knowledge to Sustainable Development

International organizations are increasingly linking global sustainability to a greater awareness of indigenous knowledge. This is made evident by some of the initiatives launched by agencies such as the World Bank, IUCN and UN based agencies such as UNESCO. At the Global Knowledge Conference held in Toronto in 1997 it was recognized that Indigenous Knowledge allows the poor to participate both as users of and contributors to knowledge. In 1998 the World Bank launched the Indigenous Knowledge for Development Programme with focus on African countries to illustrate the importance of indigenous knowledge for development with reference to a series of case studies. UNESCO Science Report for 2015 states that the Scientific Advisory Board to the UN Secretary General has decided to prepare a policy brief recognizing the importance of indigenous and local knowledge for sustainability development. The policy brief was also to include recommendations for enhancing the synergies between Indigenous and Local Knowledge and Science.

It is also relevant to briefly discuss the applicability of Indigenous Knowledge to sustainable development of Sri Lanka. Noted for its eco-cultural diversity Sri Lanka is a rich repository of indigenous knowledge. There have been some initiatives to link indigenous

knowledge with the development process particularly in the agricultural and health sectors as demonstrated by the introduction of new paddy varieties by the Agriculture Department to suit varying ecological conditions on the basis of traditional farmer knowledge, while the Ministry of Indigenous Medicine had implemented a Medicinal Plants Project (1998-2004) with the participation of local communities. The private sector too has attempted to combine indigenous knowledge with modern technology as seen in the pharmaceutical, and the perfume and cosmetic industry.

In 2002 NASTEC in collaboration with IUCN convened a workshop to develop a strategy to incorporate traditional knowledge and practices in mainstream development. Although a strategy was worked out it had not been followed up with any seriousness of purpose. Subsequently in 2004 a draft National Policy on Traditional Knowledge and Practices had been prepared by the Centre for Endogenous Research and Development (CERD) under the aegis of the Bio-Diversity Secretariat of the then Ministry of Environment and Natural Resources but this too had not been implemented.

A more recent initiative had been the draft National Policy and Strategies on Indigenous Knowledge and Practices prepared by the Biodiversity division of the Ministry of Environment and Renewable Energy. It appears that so far no action had been taken to give effect to the proposed policies and strategies.

It is worth noting that the National Research and Development Investment Framework prepared by the Ministry of Technology and Research for the period 2015-2020 has identified Indigenous Knowledge as one of ten proposed interventions to bridge the gap between Research and Development (R&D).

Therefore, the time is opportune to make use of traditional wisdom embedded in indigenous knowledge to give effect to the SDGs.

Relating Indigenous Knowledge based Traditional Wisdom to SDGs in Sri Lanka

It is evident that Indigenous Knowledge is of direct relevance to 11 of the 17 goals included in the 2030 Agenda as shown in Table 1. The applicable indigenous knowledge components are also shown against each goal. However, this list is by no means complete and awaits further research.

Table 1: IK Relevant SDGs

Goal	Description	Applicable Indigenous knowledge component (s)
1	No poverty	Synergistic interaction of indigenous knowledge components listed in relation to goals 2,3,4,5,6,9;10; 12; 13; and 15
2	Zero Hunger	Traditional methods of extensive and intensive cultivation; mixed cultivation as a form of simultaneous crop rotation; forest harvesting; traditional practices that maximise on scarce water resources in agriculture such as kekulan, bethma, and water conveyance and distribution systems in village tank irrigation; rituals and beliefs with socio-ecological significance; methods of food processing, preparation and storage; traditional knowledge of edible fruits, plants and herbs, nutritional practices in food preparation; practices relating to riverine, lagoon and fresh water lake fishery; methods of exchange and sharing of food resources.
3	Good Health and Well Being	Traditional healing practices and methods of treating physical and physiological ailments; traditional health care methods and practices; knowledge on the medicinal value of plants and herbs found in different ecological niches; traditional snake bite treatment; spiritual healing; techniques and methods of spiritual development
4	Quality education	Cognitive development through traditional teaching and learning processes; folk drama and folklore as a medium of knowledge transfer; experiential learning, life skills development through the traditional learning process; martial arts based physical training
5	Gender equality	Traditional knowledge of women in producing and procuring materials to sustain family health and livelihoods; positive features of gender based division of labour which strengthened the contribution of women to the household economy.
6	Clean water and sanitation	Traditional methods of rain water harvesting; traditional methods of ground water extraction and utilization; methods of water purification; traditional knowledge on personal hygiene.
7	Industry, innovation and infrastructure	Traditional technological knowledge in its varied forms-arts and crafts, low cost building materials, techniques pertaining to fabricating metals such as gold, silver, copper, brass and iron.

8	Reduced inequalities	Synergistic interaction of indigenous knowledge components listed in relation to goals 2,3,4,5,6,9;13; and 15
9	Sustainable Cities and Communities	Principles of traditional architecture; environmental friendly building techniques; principles and methods of traditional landscaping.
10	Responsible consumption and production	Synergistic interaction of indigenous knowledge components listed in relation to goals 2,3,4,5,6,9;10; 13; and 15
11	Climate action	Indigenous methods of weather forecasting; methods of forest conservation and restoration; methods of forecasting natural hazards and disasters; traditional techniques of drought mitigation
12	Life on land	Participatory natural resource management; traditional practices relating to biodiversity conservation on land and riverine, fresh water lakes and lagoon habitats

Table 1 clearly demonstrates the relevance of indigenous knowledge to SDGs. It had been inferred above that development could be sustained only by establishing synergies across the three domains- Economic, Social and the Environmental. From Table 1, it is evident that for greater effect there has to be synergy across the different indigenous knowledge components as well. Hence application of indigenous knowledge to SDGs has to be undertaken within an interactive framework. It is also found that some of the SDGs have no direct relevance to indigenous knowledge and have been left out of Table 1. For example Goal 14 'Life below water' identifies the need 'to conserve and sustainably use the world's oceans, seas and marine resources'. However, indigenous knowledge is rich in information relating to the use of coastal and riverine habitats and inland water resources but gets excluded in terms of the above definition. Therefore, it would be necessary to redefine goal related targets, to 'create our own pathways' to achieve SDGs.

The potential inherent in Indigenous Knowledge to support SDGs is indicated in several scientifically validated case studies on indigenous knowledge which have been included in the Proceedings of the Workshop on a National Strategy for Incorporation of Traditional Knowledge into Development Practices convened by the IUCN – NASTEC in 2002. A few of these case studies are itemized here viz. i) A cost effective indigenous method for cultivation of paddy; ii) Pest and disease management in paddy through traditional methods; iii) Indigenous pest control measures for vegetable cultivation; iv) Integrated crop-livestock farming systems; v) Traditional technology in food processing and storage; vi) Ritualistic traditions in participatory natural resource management; vii) Ingenuity in the traditional single plant treatment of Hepatitis; viii) Indigenous system of disease diagnosis in cattle; ix) Indigenous methods for biophysical medication of cattle; and x) Indigenous knowledge in weather forecasting. These studies point to the usefulness of incorporating components of indigenous knowledge for the purpose of achieving SDGs.

Guiding Principles for Policy

- Indigenous knowledge has the potential to play a significant role in achieving SDGs and should, therefore, be given its due place;
- It has to be mainstreamed into all programs and projects that has to do with SDGs.
- Synergistic link of Indigenous knowledge components has to be recognized.
- More adaptive research on indigenous knowledge components of relevance to SDGs is necessary.
- As indigenous knowledge comprise the knowledge capital of the poor a participatory approach to planning would be useful to mobilize community involvement in SDGs.
- All actors in the development process (communities, politicians, policy makers and frontline officials) are required to be conversant with the conceptual basis and practice of indigenous knowledge.
- Indigenous knowledge is not intended to supplant but support existing interventions on SDGs.
- The SDD of the MoSDW is expected to play the pivotal role in promoting the incorporation of indigenous knowledge components in achieving SDGs.

Policy Recommendations

- 1) Incorporate an 'Indigenous Knowledge Platform' in the 'Work Track' of the SDGs Work Wheel formulated by the SDD.
- 2) Set up 'Task Force' to formulate Indigenous Knowledge Platform

activities and develop synergies and procedures for incorporating indigenous technology and knowledge based practices in the Work Track of the SGD Work Wheel particularly with reference to its strategy and action plan.

- 3) Take action to strategize the indigenous knowledge components in the manner suggested in Table 1 and within an integrated framework.
- 4) Redefine and reinterpret SDG targets to provide more space for indigenous knowledge based interventions.
- 5) Opt for participatory approaches in designing and formulating indigenous knowledge based interventions for sustainable development to give the communities a sense of ownership of the interventions.
- 6) Establish close liaison between the Task Force and the Expert Group on SDGs of the SDD.
- 7) Make it obligatory for the Task Force to interact with relevant Government Ministries, Departments, Authorities, Institutions and Universities in implementing indigenous knowledge based interventions in SDGs.
- 8) Make it binding for the Task Force interact with national and international NGOs to support indigenous knowledge based interventions to achieve SDGs.
- 9) Provide support to universities and research institutions to undertake adaptive research on indigenous knowledge with reference to SDGs.
- 10) Encourage universities and research institutions to develop methodologies to validate IK based practices of relevance to SDGs.

- 11) Create awareness among all front line officials on the relevance of indigenous knowledge to SDGs.
- 12) Revive indigenous knowledge awareness among local communities through the medium of community based organizations (CBOs).
- 13) Promote awareness among local communities on the relevance of indigenous knowledge to SDGs through appropriate demonstrations.
- 14) Sensitize students and teachers through specially designed programs to create an awareness of the unique features of indigenous knowledge and practices and their relevance to SDGs.
- 15) Set up appropriate mechanisms to evaluate and monitor proposed Indigenous Knowledge Platform initiated activities of the SDD Work Track on a regular basis.

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Prepared by the
Science and Technology Policy Research Division (STPRD) and the
NSF Working Committee on Indigenous Knowledge(WCIK)

Science and Technology Policy Research Division of the National Science Foundation
“Science Indicators for Policy Development”

The NSF also function as a research arm in the area of S&T Policy by providing evidence based policy recommendations for the policy formulation and addressing the gaps in the existing policies, aiming towards rapid socio-economic development in the country through Science Technology and Innovation.

The main focuses made on these directions are:

1. Undertaking science, technology and innovation (STI) policy research in the areas of importance to make recommendations towards policy formulation.
2. Developing various databases relevant to all sectors of STI that will be useful for decision making.
3. Undertaking public awareness programmes and public discourses on nationally important issues related to the areas of STI.
4. Investigating, collecting, researching and securing Indigenous Knowledge (IK) that exists and being practiced in Sri Lanka.
5. Undertaking capacity building of human resources especially in the areas of Social Sciences and Indigenous Knowledge.

Few activities of the Division:

1. National Research and Development (R&D) Survey
2. Science and Technology Management Information System (STMIS)
3. Study on Social Science Research in Sri Lanka
4. Study on employability of Science and Technology Graduate and Postgraduate passed out from local universities
5. Research and relevant activities under the areas of STI Policy and Social Sciences
6. Data collection, documentation , investigation and research in the areas of Indigenous Knowledge

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