



BROAD LANDSCAPE OF INDIGENOUS KNOWLEDGE: A STRONG BASE FOR SUSTAINABILITY AND INCLUSIVE DEVELOPMENT

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ABSTRACT

India has a great deal of diversity. This diversity is found not in a single area but in many aspects, be it language or clothing, food culture or traditional Sanskrit, agriculture or festival, it is found everywhere. In fact, this variety is the biggest source of indigenous knowledge in our country. Indigenous knowledge is also known as local knowledge, traditional knowledge, folk knowledge, traditional ecological knowledge. The knowledge which is transmitted from generation to generation in the form of belief, culture, rituals and festivals and has been the foundation for agriculture, food preparation and conservation, health care, education, and the extensive range of other activities that withstand a society and its environment in many parts of the world for many centuries. Present paper focused on understanding the idea of indigenous knowledge in broader sense, significance of indigenous knowledge in modern and ancient era, Sustainable development goals stated by the united nation and concept of sustainable development, how by using this local knowledge we can achieve sustainable development in various aspects. The present paper has intention to prove helpful to policy makers and academia and other significant factors from society to address inclusive development through indigenous knowledge. Data has been collected from literature review.

Key Words: - *Indigenous knowledge, sustainable development goals, Inclusive development, implementation of Indigenous Knowledge*

INTRODUCTION: Humans evolved thousands of years ago and this human race was born in different parts of the world. Gradually he progressed to live life and make it bearable, human gaining knowledge through experience. For the survival and development purpose this knowledge was gathered by human being. His knowledge was enriched by his experience and this knowledge was passed from one generation to another in different form such as in oral form, sometimes through culture, religious traditions, this knowledge is indigenous knowledge. Because of above reason indigenous knowledge differs according to geographical area, climate and as per many more reasons. Before moving ahead with indigenous knowledge in depth understanding of the idea of indigenous receives significance.

Indigenous word denotes to native, inborn, aboriginal people, those who has common pattern of life in their geographical areas. United Nation defined the term indigenous as “Group of people whose social, cultural and economic condition distinguish them from other Sections of the national communities and whose status is regulated wholly or partially by their own customs or traditions or by special law or regulations. People in independent countries who are regarded as indigenous are considered as descent people who inhabited geographical region to which belongs, at the time of colonization or establishment of present state boundaries.” Modern understanding of this concept has been developed by the UN system on the basis of some criteria such as -

- Historical steadiness with pre-colonial and/or pre-settler civilizations.
- Strong link to territories and nearby natural resources.
- Distinct social, economic, or political structures.
- Distinct linguistic, culture and beliefs.
- Form non-dominant group of society.
- Resolve to maintained and reproduce their ancestral environments and systems as distinctive people and communities.

Concept of Indigenous Knowledge- Indigenous knowledge is like a communal asset for deprived people from the society. This asset they use in the struggle for existence, for providing food and shelter and to gained control over their own life. Intrusion of Modern and western technology is the greatest reason for destruction of indigenous knowledge. The word indigenous knowledge has gained popularity in recent world however this concept is enrooted in antiquity, and interpreted differently at different places generally named as local or traditional knowledge.

In 1991 Warren defined Indigenous knowledge as the knowledge used by local people to make a living in a particular environment. Johnson 1992 defined the term as, “A body of knowledge built up by a group of people through generations of living in close contact with nature.” In 1998 World Bank defined IK as situational knowledge which is unique to every culture of society. The totality of all knowledge and practices established on past experiences and observations that are held and used by people is called indigenous knowledge defined by Masango in 2010. It is considered as a systematic body of knowledge which is acquired by locals through the accumulation of experiences, informal experiments and intimate understanding of the environment in a given culture in 1993 by Rajasekaran. Actual knowledge of given population is considered as indigenous knowledge by Haverkort and de Zeeuw in 1992 and according to them this knowledge reflects the experiences based on traditions and includes more recent experiences with modern technologies.

There are number of definitions which explain the nature of indigenous knowledge. From the above extracting Indigenous knowledge as traditional, spiritual, cultural, commonly practiced, practical as well as situational knowledge, native people’s knowledge which are based on community practices.

Indigenous Knowledge is derived from the traditional way of life of people, it’s accumulated knowledge, which gives understanding of the human place in relation to the universe. This is dynamic, systematic and universal in principle. This knowledge is developed collectively that’s why only whole community can claim it, not any single individual can. It is an integral part of bio-cultural heritage of that particular local community. Along with these characteristics few more characteristics are stated by The World Bank Report in 1998 they are as follow-

- Indigenous knowledge is unwritten and known through the oral traditions.
- It is practical common sense, based on teaching and experience passed on from generation to generation.
- It is holistic- it cannot be compartmentalized and it is rooted in the spiritual health, culture and language of the people.
- It set out the rules governing the use of resources- respect; an obligation to share. It is dynamic, cumulative and stable
- It is a way of life- wisdom is using knowledge in good ways. It is using the heart and the head together. It comes from the spirit in order to survive.
- It gives credibility to people.

- It is based on experience, acquired from observations over time- it is argued that it may be most useful for local scale decision-making.
- It can show an understanding of the complex relationships between these individual components and the dynamic ecosystems within which they act.
- It is frequently linked with the sustainable use of local resources.
- It describes the health of the local environment, wildlife, etc. promotes consideration of the relationships between human and biological systems.
- It often describes these symbiotic relationships and provides the basis for life-sustaining decisions about how to relate to the environment.

Though Indigenous knowledge has various features but most of the knowledge is disappearing with the expansion of modernisation and western culture.

Human has achieved greatest progress, growth, development in the modern era using modern technology, however with the use of modern technology and modern science it is leading to irreparable wear and tear. Number of issues raised such as urbanisation, pollution, global warming, life threatening diseases, and many more. So as a solution on the above stated issues sustainable development concept came up in UN. Now a day the term growth or development has become synonym to economic growth in terms of gross domestic product or the per capita income of the nation, however this definition of development has created rat race amongst the nation to attain and retain development goal. The idea of preservation or sustenance of environment are going contradictory to these development goals. The United Nation has stated campaign to have sustainable development to re-create harmonious relationship among man and nature.

Sustainable Development: - “Sustainable Development is the development that meets the needs of the present (people) without compromising the ability of future generation to meet their own needs.” This frequently used definition of sustainable development has been given by Brundtland Report. In simple word, improving the quality of existing generation by avoiding extreme use or abuse of natural resources, with the purpose of preserving it for future generations is sustainable development.

UN conference on Human Environment at Stockholm in 1972 first tossed the term, however the significant portion of writing on the said topic is included in WCED (World Commission on Environment and Development, 1987) entitles as “Our

Common Future.” Along with this, 170 countries signed many significant papers on Sustainable development in 1992 and took pledge on preservation of environment.

Economic development without compromising the ecological balance can be achieved by rigorous policy change, taking action and altering practices. Sustainable development has following aims

- Economic- to attain balanced growth
- Ecological- to preserve the eco system
- Social- guaranteeing equal access to resources to all human communities

2030 Agenda for Sustainable Development included set of 17 SDGs in September 2015. Those SDGs are as follow -

Sustainable Development Goals-

Goal 1	End poverty
Goal 2	End hunger, achieve food security
Goal 3	Provides better education
Goal 4	healthy lives
Goal 5	gender equality
Goal 6	Ensure sustainable management of water and sanitation
Goal 7	Ensure affordable, reliable, sustainable energy
Goal 8	decent work, economic growth, productive employment for all
Goal 9	infrastructure, promote inclusive and sustainable industrialization
Goal 10	Reduce inequality
Goal 11	Make sustainable cities and human safe
Goal 12	sustainable consumption and production
Goal 13	climate change
Goal 14	sustainably use the oceans, and marine resources
Goal 15	sustainable use of ecosystems, and land degradation
Goal 16	access to justice and build effective, accountable and inclusive institutions
Goal 17	Implementation of global partnership

Source: www.un.org/sustainabledevelopment/sustainable-development-goals/

To restraint or prevent the environmental degradation, to warrant a safe human life, to check the exploitative technology and find alternative sources, to check the over exploitation and wastage of natural resources and to regenerate renewable energy sources sustainable development is required.

Implementation of Indigenous Knowledge in various field to achieve sustainable development: Indigenous knowledge can be used in the following fields and can achieve sustainable development.

Indigenous knowledge and Conservation of Natural Resources: Natural resources are materials which we get from the earth, that are used to support life and meet people's requirements such as oil, coal, natural gas, metals, stone and sand, water, sunlight and air. In modern era human has started exploiting these resources to full fill his own thrust of development and progress and to make his own life comfortable, Non Indigenous people are destroying the equilibrium of ecosystem, however indigenous people with indigenous knowledge are using natural resources without depleting it. With the use of intimate indigenous knowledge of plant, animal, climate, soil and seasons local people co-exist with nature without deploying it. This includes careful management of natural resources, the use of less quantities but an extensive diversity of plants and animals, minimum wastage etc.

Health care and Medicine: As we all know that there are number of different species of plants, animals in the world depending on the local climate. There are number of species of plant, animals and insects which are still not known by the world's botanists and entomologists. Most of them have healing properties which is well-known by the local people. There are many examples found in ancient history of the medicinal use of plant. In Ramayana hanumana brought sanjiwani plant for Laximana. Today also while playing if child gets hurt he take leaf of one specific plant which is called Tuntuni smash it on hand and apply it on that wound. for stomach ache primitive people eats ajwain seeds. Different parts of plants such as flower, root, fruit, steam use as a medicine by the medical practitioner. Khetwa Village in Jhhajjar district of Hariyana Nath community has distinct knowledge of medicine on snake bite and other types of diseases. In this village from 200 families at least one person is involved in traditional healing. They knew 57 medicinal plants species that belonged to 51 genera and 35 families. They use 19 plants belonging to 13 plant families for snake bites. These healers have in-depth knowledge of identification of medicinal plants, use of various parts of the plant, drug preparation, whether it should mix with water or ghee or honey or method of administration.

The world bank report on Indigenous knowledge 1993 mentioned in its report that "The Hanunoo people of the Philippine, for example, distinguish 1600 plant species in their forest, 400 more than scientist working in the same area. Of the estimated 250,000 to 500,000 plant species in the world, more 85% are in environments that are the traditional homes of local people. Nearly 75% of 121 plant-derived prescription drug used worldwide were discovered following

leads from indigenous medicine. Globally, local people use 3000 different species of plant to control fertility alone. Some scientist now believes that indigenous knowledge may prove helpful to them to discover medicine on many life threatening diseases.

Food and Agriculture: Food is the basic need of every human being and local food is different in every region. Farming is the main source of food all over the world. However, in most of the countries traditional farming method or agriculture is in use, Traditional farming is a farming system which is developed over the period of time with particularly developed cropping pattern based on an indigenous cultivation knowledge. This knowledge is transmitted from one generation to another. This agricultural system creates vibrant equilibrium with environment. But recently it is observed that agriculture in various countries such as India is influenced by chemical farming. To get more and more production farmers started using chemical fertilizers such as Urea, and chemical pesticides at large scale. Contamination of soil and water, killing insects and other living organisms such as birds, insects and fishes etc. causes cancer like diseases and other health issues in human is a result of chemical farming, these results created need of organic farming once again and indigenous knowledge of local people will be helpful in organic farming. In India intercropping method is used for farming, Agroforestry, terracing and crop rotation are few indigenous methods of agriculture in India. To pest control neem water, salt these kind of organic methods were used by local people. A mixture of rice powder and some roots in small bundles with the help of leaf is tied in the bamboo sticks placed randomly in the paddy field. The pest eat this and don't harm the plants. Compost or worm fertilisers were used by indigenous people. To avoid the future loss using indigenous knowledge in agriculture system to achieve sustainable development is the need.

Climate change and disaster risk reduction strategy: There are many advanced technology instruments are available to study climate change but the local people have amazing knowledge to understand and recognise the change in atmosphere. By observing the colour of sky direction of wind they could predict about the rain. By observing the animal and birds behaviour indigenous can predict about the natural calamities such as earthquake, Tsunami, flood etc. When flood came in Kerala (India) indigenous people on the basis of their indigenous knowledge were predicted about tsunami. There are many examples that illustrate the resource fullness of indigenous people in applying traditional knowledge to lessen the impact of disaster – Use of strips of mangrove forest to absorb the force of tidal surges and tsunamis.

Water resource management: Water is essential and significant natural resource. Living organisms in waterbodies should be protected. Today's development and the industrial

discharge is creating threat to living organisms of water. Local people avoids fishing during rainy season as it is a reproduction period of fish.

Architecture – Indigenous knowledge also found beneficial in construction, for example in India in Kerala people's houses are built with sloping roof as there is heavy rain fall, in Rajasthan there is sand and heavy air flow and hot climate is found that's why people of Rajasthan built their houses with soil to maintain their in-house temperature. They use soil refrigerators to keep their food fresh and water cool.

Conclusion-Indigenous knowledge is knowledge of local people and the issues and problems of local level can be understood by local people very well as it is understood by the long-time experiences and that's why the remedies suggested or implemented by using indigenous knowledge proves sustainable which will create harmony with nature. This indigenous knowledge proves helpful in various areas such as agriculture, health and medicine, climate change and disaster management, natural resource management and many more. The aim of inclusive development can be achieved with the effective implementation of indigenous knowledge in various fields of human life.

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