UNIT-I INTRODUCTION TO TRADITIONAL KNOWLEDGE

1. Define traditional knowledge

Traditional Knowledge

Traditional knowledge (TK) is knowledge, know-how, skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity

- TK in a general sense embraces the content of knowledge itself as well as traditional cultural expressions, including distinctive signs and symbols associated with TK.
- TK in the narrow sense refers to knowledge as such, in particular the knowledge resulting from intellectual activity in a traditional context, and includes know-how, practices, skills, and innovations.

Traditional knowledge can be found in a wide variety of contexts, including: agricultural, scientific, technical, ecological and medicinal knowledge as well as biodiversity-related knowledge.

Traditional knowledge (TK) is a living body of knowledge passed on from generation to generation within a community. It often forms part of a people's cultural and spiritual identity. WIPO's program on TK also addresses traditional cultural expressions (TCEs) and genetic resources (GRs).

Traditional knowledge, indigenous knowledge and local knowledge generally refer to knowledge systems embedded in the cultural traditions of regional, indigenous, or local communities. Traditional knowledge includes types of knowledge about traditional technologies of subsistence (e.g. tools and techniques for hunting or agriculture), midwifery, ethno botany and ecological knowledge, traditional medicine, celestial navigation, craft skills, ethno astronomy, climate, and others. These kinds of knowledge, crucial for subsistence and survival, are generally based on accumulations of empirical observation and on interaction with the environment.

In many cases, traditional knowledge has been passed for generations from person to person, as an oral tradition. Some forms of traditional knowledge find expression in culture, stories, legends, folklore, rituals, songs, and laws. Other forms of traditional knowledge are expressed through other means.

Traditional knowledge refers to:

- Knowledge or practices passed down from generation to generation that form part of the traditions or heritage of Indigenous communities
- Knowledge or practice for which Indigenous communities act as the guardians or custodians

The type of knowledge that is considered within this scope includes:

- Knowledge about the medicinal properties or effects of flora and fauna
- Knowledge about hunting or fishing techniques



2. Nature and characteristics

Nature:

- Is generated within communities
- Is location and culture specific
- Is the basis for decision making and survival strategies
- Is not systematically documented
- Concerns critical issues of human and animal life; primary production, human and animal life, natural resources management
- Is dynamic and based on innovation, adaption, and experimentation
- Is oral and rural in nature

When discussing TK protection, one must first grasp the special characteristics of TK, in order to create the best type of protection system for TK. For this, a comparison of TK and modern science will help explain the special characteristics of TK.

I. The creation of TK is collective and holistic

Science relies on an abstract conceptual framework to interpret phenomena. The description of phenomena is usually quantifiable by scientific experiments, and follows a step-by-step scientific deductive process. In order to figure out the conceptual relationship of complex phenomena of the world, scientific inquiries always involve reduction process. Cause and effect between certain factors are easier to be found by standardizing and leaving alone, as far as possible, all other factors that the inquirer do not looking for. Even with ecology as a science of complex interactions among living and non-living matters of the whole ecosystem, it is inevitable for the research process to be somewhat reductionist.

On the other hand, indigenous peoples or local communities live their lives with vast knowledge formed over the centuries during their daily life interacting with the environment. Epistemologically, this type of knowledge is holistic in nature and cannot be dissected. For example, a festival after the taboo month celebrating the beginning of the hunting season should avoid the breeding season of the animal, a form of TK that assures sustainable hunting. TK is an articulation of phenomena. Instead of step-by-step deduction, TK uses the repeated verification of an idea that a person or group of people deduce from facts.

However, TK is not necessarily a collective creation. Individual creation is also possible. On the other hand, modern science and technology do not exclude collective creation for innovations; although usually only one or more trained individuals own the technology as a small, definite group of individuals.

II. Oral transmission of TK from generation to generation

Traditionally indigenous peoples have no writing system. Indigenous people would transmit knowledge by oral language or by body language. On National Research Program for Genomic Medicine Searching for The Rationality of Post Genetic IPR Legal System the other hand, the transmission of scientific information relies on written records and publications, and a teacher simply accelerates the transmission of this knowledge orally.

However, not all TK lack the written records. For example, the distribution of classics on Chinese and Indian traditional medicine disseminated TK on Chinese and Indian traditional medicine. WIPO considers both forms of medicine as model forms of TK. Today, indigenous peoples may also use writing to transmit their TK, whether new or old.

III. TK is changeable, and may evolve because of changes in the social environment

—Traditionall does not just mean knowledge of the past, but rather that the method of creation of this knowledge is in the —traditionall way. Since people's interaction with the environment produces TK, TK is by no means static, but rather dynamic, because of environmental changes. Since, in the past, the environment changed very slowly, TK also changed in a very slow and continuous way.

Science and technology change frequently, and at a rate that is faster than the rate at which TK changes. However, this does not mean that the speed of innovation of modern "TK" is slow. Today, indigenous peoples and tribal inhabitants may exchange new ideas very quickly. Nevertheless, TK changes are not typically revolutionary; unless outside influences affect such TK. Traditional Chinese medicine still maintains the concepts of the five elements and the principles of Yin and Yang from the Chin and Han Dynasty, a good example to illustrate the nature of the TK.

IV. The innovator is often unidentifiable

Many peoples accumulate TK as a collective creation without a written record. Therefore, the innovators are often unidentifiable. Modern technology, by contrast, has written records as a rule, and places great emphasis on the importance of determining the original creator. Nevertheless, since, in modern times, indigenous peoples can invent some TK quickly, their innovator usually is identifiable.

V. Residents of specific areas share TK

Often a closed society creates and preserves its TK. The dissemination of TK is limited and nonsystematic. One individual, a small group of individuals, or even an entire community may all share TK. The indigenous peoples usually do not have the same concept of private property as in mainstream society. Modern technology, however, spreads in a broad and systematic manner, and mainstream culture embraces science by granting the specific individuals who create technology individual rights through the IP system.

A report of the International Council for Science (ICSU) Study Group on Science and Traditional Knowledge characterizes traditional knowledge as:

"A cumulative body of knowledge, know-how, practices and representations maintained and developed by peoples with extended histories of interaction with the natural environment. These sophisticated sets of understandings, interpretations and meanings are part and parcel of a cultural complex that encompasses language, naming and classification systems, resource use practices, ritual, spirituality and worldview."

Traditional knowledge typically distinguishes one community from another. In some communities, traditional knowledge takes on personal and spiritual meanings. Traditional knowledge can also reflect a community's interests. Some communities depend on their traditional knowledge for survival. Traditional knowledge regarding the environment, such as taboos, proverbs and cosmological knowledge systems, may provide a conservation ethos for biodiversity preservation. This is particularly true of traditional environmental knowledge, which refers to a "particular form of place-based knowledge of the diversity and interactions among plant and animal species, landforms, watercourses, and other qualities of the biophysical environment in a given place". As an exemplar of a society with a wealth of traditional ecological knowledge (TEK), the South American Kayapo people, have developed an extensive classification system of ecological zones of the Amazonian tropical savannah (i.e., campo / cerrado) to better manage the land.

Some social scientists conceptualize knowledge within a naturalistic framework and emphasize the gradation of recent knowledge into knowledge acquired over many generations. These accounts use terms like adaptively acquired knowledge, socially constructed knowledge, and other terms that emphasize the social aspects of knowledge. Local knowledge and traditional knowledge may be thought of as distinguished by the length of time they have existed, from decades to centuries or millennia.

Indigenous knowledge or techniques (ITKs) are the treasure troves of ancient wisdom and are developed through trial-and-error, experiences gained over the centuries, and are time tested but, generally not substantiated by any scientific evidences. However, most of the ITKs were known to be scientifically effective and valid.

Scholarly studies in the naturalistic tradition demonstrate that traditional knowledge is not a natural category, and may reflect power struggles and relationships for land, resources and social control rather than adherence to a claimed ancestry or heritage.

On the other hand, indigenous and local communities themselves may perceive traditional knowledge very

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differently. The knowledge of indigenous and local communities is often embedded in a cosmology, and any distinction between "intangible" knowledge and physical things can become blurred. Indigenous peoples often say that indigenous knowledge is holistic, and cannot be meaningfully separated from the lands and resources available to them. Traditional knowledge in such cosmologies is inextricably bound to ancestors, and ancestral lands. Knowledge may not be acquired by naturalistic trial and error, but through direct revelation through conversations with "the creator", spirits, or ancestors. Chamberlin (2003) writes of a Gitxsan elder from British Columbia confronted by a government land-claim: "If this is your land," he asked, "where are your stories?"

Indigenous and local communities often do not have strong traditions of ownership over knowledge that resembles the modern forms of private ownership. Many have clear traditions of custodianship over knowledge, and customary law may guide who may use different kinds of knowledge at particular times and places, and specify obligations that accompany the use of knowledge. For example, a hunter might be permitted to kill an animal only to feed the community, and not to feed himself. From an indigenous perspective, misappropriation and misuse of knowledge may be offensive to traditions, and may have spiritual and physical repercussions in indigenous cosmological systems. Consequently, indigenous and local communities argue that others' use of their traditional knowledge warrants respect and sensitivity. Critics of traditional knowledge, however, see such demands for "respect" as an attempt to prevent unsubstantiated beliefs from being subjected to the same scrutiny as other knowledge-claims. This has particular significance for environmental management because the spiritual component of "traditional knowledge" can justify any activity, including the unsustainable harvesting of resources.