

## CHAPTER 2

### TRADITIONAL KNOWLEDGE

#### 2. 1. DEFINITION AND MEANING

The term ‘traditional knowledge’ has been the subject of many conceptualizations. The various expressions, viz, traditional knowledge (TK), indigenous knowledge (IK), and local knowledge are interchangeably used to refer to the matured long-standing traditions<sup>60</sup> and practices of certain regional, indigenous,<sup>61</sup> or local communities which are often expressed through stories, legends, folklore,<sup>62</sup> rituals<sup>63</sup> songs, and even laws.

TK is the information that people in a given community, based on experience and adaptation to a local culture and environment, have developed over years, and which is being continued to develop and evolve. It is the totality of all knowledge and practices, whether explicit or implicit, which are used in the management of socio-economic and ecological facets of life.<sup>64</sup> TK is generally described as information existing in the society which has been passed on by previous generations. This include, *inter alia*, the information regarding the product, its use, the manner of use and the method or manner of its manufacture. All these information were in use and majority are still being used by the

---

<sup>60</sup> Tradition refers to a set of information, customs, practices, or beliefs taught by one generation to the next, often orally.

<sup>61</sup> Any ethnic group who inhabit the geographic region with which they have the earliest historical connection

<sup>62</sup> Folklore is the body of expressive culture, including tales, music, dance, legends, oral history, proverbs, jokes, popular beliefs, customs, and so forth within a particular population comprising the traditions (including oral traditions) of that culture, subculture, or group. It is also the set of practices through which those expressive genres are shared.

<sup>63</sup> A ritual is a set of actions, often thought to have symbolic value, the performance of which is usually prescribed by a community because of the perceived efficacy of those actions.

<sup>64</sup> Mugabe J., “Intellectual Property Protection and Traditional Knowledge - an International Policy Discourse,” *Biopolicy International*, No. 21, 1999, p. 3.

members of the society.<sup>65</sup> This knowledge is used to sustain the community and its culture and to maintain the genetic resources necessary for the continued survival of the community.

TK is embedded in the local culture of indigenous communities. This knowledge constitutes crucial elements of the holistic approach towards both the natural and man-made livelihood of these peoples. TK embraces belief systems that play a fundamental role in people's livelihood, health care and sustainable development. Generally the term is employed to cover a broad range of indigenous subject matters including the communities' medicinal knowledge, folklore and various teachings. TK is also a term often used to denote indigenous knowledge, which is defined as a coherent system linking social behavior, human physiology and botanical observations.<sup>66</sup> It is a body of knowledge built up by a group of people through generations of living close to nature. It includes a system of classification, a set of empirical observation about the local environment and a system of self-management that governs use.<sup>67</sup>

Article 8(j) of the Convention of Biological Diversity, 1992 delineates TK as 'knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity.'

---

<sup>65</sup> N. S. Gopalakrishnan, "The Impact of Patent system on Traditional Knowledge", *Cochin University Law Review*, Vol. XXII, 1998, p. 220.

<sup>66</sup> Reid, Janice, *Sorcerers and Healing Spirit: Continuity and Change in an Aboriginal Medical System*, Australian National University Press, Canberra, 1983, p. 25.

<sup>67</sup> See, Johnson, (ed.) *Lore: Capturing Traditional Environmental Knowledge*, Dene Cultural Institute and International Development Research, Ottawa, Canada, 1992.

According to WIPO, traditional knowledge comprises tradition-based<sup>68</sup> literary, artistic or scientific works, performances, inventions, scientific discoveries, designs, marks, names and symbols, undisclosed information and all other tradition-based innovations and creations resulting from intellectual activity in the industrial, scientific, literary or artistic fields.<sup>69</sup>

Thus in the broader sense, the term refers to knowledge possessed by indigenous people, in one or more societies and in one or more forms, including, but not limited to, art, dance and music, medicines, expressions of culture, biodiversity, knowledge and protection of plant varieties, handicrafts, designs, and literature. It also embraces information on the use of biological and other materials for medical treatment and agriculture, production processes, rituals, and other techniques. TK is an encompassing notion which covers several, if not many, areas of human creativity.<sup>70</sup>

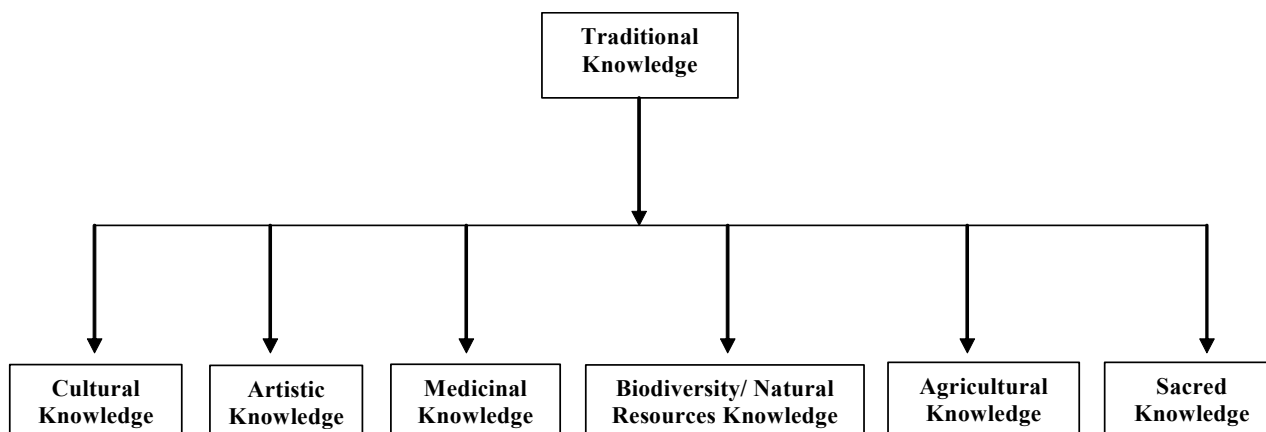
However, TK evolves and generates new information as a result of improvements or adaptation to changing circumstances. The figure below illustrates various components of TK.

---

<sup>68</sup> Tradition-based refers to knowledge systems, creations, innovations and cultural expressions which have generally been transmitted from generation to generation and which are generally regarded as pertaining to a particular people or its territory; and are constantly evolving in response to a changing environment.

<sup>69</sup> *Intellectual Property Needs and Expectations of Traditional Knowledge Holders*, WIPO Report on Fact-finding Missions on Intellectual Property and Traditional Knowledge (1998-1999) (WIPO Publication 768E), p. 25.

<sup>70</sup> WIPO/GRTKF/IC/7/6, Annex I, p. 21.



## 2. 2. NATURE AND CHARACTERISTICS

Traditional knowledge of the Earth is based on thousands of years' experience. It is developed and preserved by local and indigenous communities for centuries as a strategy for their survival in the biosphere. TK is often part of the social fabric and everyday life of a community, and is generally not seen as a distinct body of 'knowledge' separate from the community's culture, but rather as integral with the community's culture and its identity as a community. Most often, the TK is known to the entire community and remains exclusively within it though occasionally, knowledge of a special skill or art is limited to a few members of the community.<sup>71</sup> However, within the society, the knowledge is in the public domain. This knowledge and its components are normally required for a regular lifestyle within the society. It is passed down through generations while still retaining its original individuality. Since its generation, preservation and transmission is based on cultural traditions, TK is essentially culturally oriented or culturally rooted, and it is integral to the cultural identity of the social group in which it operates and is preserved.<sup>72</sup> TK is a means of cultural identification of the indigenous or local community. Moreover,

<sup>71</sup> *Ibid.*

<sup>72</sup> See, WIPO/GTRKF/IC/4/8, paragraph 28.

TK is seldom found in written form or expressed in any formal way, but it is transmitted orally and through practice. However, these aspects do not reduce either the validity or the value of this knowledge. TK is thus dynamic in nature and it is a system of constant evolution modifying and perfecting the existing knowledge in a unique traditional way.

TK does not always imply that this knowledge must be old. Recently established knowledge which is based on existing knowledge can also be traditional knowledge.<sup>73</sup> What is traditional about the TK is not its antiquity but the way it is acquired and used. The social process of sharing knowledge which is unique in each indigenous and local culture lies at the very heart of its traditionalism. Though TK may not be antique, it has a unique social meaning.<sup>74</sup>

Traditional knowledge is collective in nature and is often considered as the property of the entire community, and not belonging to any single individual within the community. It is transmitted through specific cultural and traditional information exchange mechanisms, for example, maintained and transmitted orally by elders or specialists such as breeders, healers, etc. and often to only a select few people within a community.

A few varieties of TK<sup>75</sup> is formalized or codified in some way. However, the lion share of TK<sup>76</sup> is non-codified and is being passed to successive generations through oral tradition. Yet, another category of TK, which is only with the ‘elder’ of the particular community, may be uncanny to the remaining world. TK may be thus possessed by certain

---

<sup>73</sup>However, WIPO/GRTKF/IC/7/6 suggests that traditional knowledge must clearly be traditional. See, WIPO/GRTKF/IC/7/6, Annex 1, p. 23.

<sup>74</sup> UNEP/CBD, Submission to the Executive Secretary from the Four Directions Council, Canada, January 15, 1996.

<sup>75</sup> For example, *Ayurveda*, *Unani*, *Sidha*, textile designs, etc.

<sup>76</sup> Folklores, tribal or indigenous medicine which is based on traditional beliefs.

individuals<sup>77</sup> or by some members of a group, or by all members of a group/indigenous community.<sup>78</sup> Indeed, the number of persons holding the knowledge does not affect the extent to which this knowledge is distinct and new to the outside world. However, traditional knowledge can also be spread widely around the world, connected, *inter alia*, to the spread of genetic resources.

Some important characteristics of TK can be identified as follows:

- i. it is transmitted from generations to generations
- ii. in many cases, it is transmitted orally for generations from person to person
- iii. it is being considered by the communities as gift of God and not as a private property
- iv. such knowledge typically distinguishes one community from another
- v. it is usually impossible to identify the original creator of the information
- vi. it is learned through continuous observation, experience and practice
- vii. it is inseparable part of communal and cultural life of its holders, and
- viii. it is usually associated with the biological resources.

Characteristically, traditional knowledge that knowledge that is

- i. traditional only to the extent that its creation and use are part of the cultural traditions of a community; it does not necessarily mean that the knowledge is ancient or static
- ii. representative of the cultural values of people and thus is generally held collectively

---

<sup>77</sup> As in the case of healing practices and rituals.

<sup>78</sup> For example, common knowledge of herbal-home remedies.

- iii. is not limited to any specific field of technology or the arts, and
- iv. is owned by a community and its use is often restricted to certain members of that community.<sup>79</sup>

TK, in its various forms, though initially developed in ancestral times got modified, improved and adapted owing to the contemporary demands of the ever changing society and is still continue to develop. Thus, TK is, in effect, of non-contemporary nature; it has been used for generations and in many cases collected and published by anthropologists, historians, botanists or other researchers and observers.<sup>80</sup>

TK expressed in various documented and non documented forms may possess commercial value depending on its potential or actual use. When TK can be used and understood outside its local/ communal context it acquires commercial value. Different industries make different use of traditional knowledge. In the pharmaceutical industry, traditional knowledge seems to be used mostly after an active compound has been identified to carry out subsequent research. In the seed industry, traditional knowledge is not often used directly but a lot of traditional knowledge is incorporated into the germplasm that companies acquire from other organizations.<sup>81</sup> When its application, and in particular the delivery of TK-based products, can be made through commercial channels TK can have commercial value. Knowledge that cannot be utilized beyond its communal

---

<sup>79</sup> See, Daniel Gervais, "Traditional Knowledge and Intellectual Property: A TRIPS Compatible Approach," *Michigan State Law Review* - Spring 2005.

<sup>80</sup> Ong Chui Koon, "Intellectual Property Protection of Traditional Medicine and Treatments in Malaysia," in Michael Blakeney (ed), *Perspectives on Intellectual Property - Intellectual Property Aspects of Ethnobiology*, Vol. 6, Sweet & Maxwell, London, 1999, p. 270.

<sup>81</sup> On this point, see generally Kerry ten Kate and Sarah A Liard, 'Bioprospecting Agreements and Benefit Sharing with Local Communities', in Michael Finger and Philip Schuler (ed.), *Poor People's Knowledge—Promoting Intellectual Property in Developing Countries*, Oxford University Press, Oxford, 2004, p.133.

context has little or no commercial value, despite the value that such knowledge may have for the life of the originating community.<sup>82</sup>

## **2. 3. SCOPE AND IMPORTANCE**

Traditional and indigenous knowledge has been used for centuries by indigenous and local communities under local laws, customs and traditions. It has been transmitted and evolved from generation to generation. TK has played, and still plays, an important role in vital areas such as medical treatment, food security and the development of agriculture. TK is also the cause of a great variety of artistic expressions, including musical works and handicrafts.

TK is a central component for the daily life of millions of people in developing countries. Traditional Medicine (TM) serves the health needs of a vast majority of people in developing countries where access to modern health care services and medicine is limited by economic and cultural reasons. It is often the only affordable treatment available to poor people and in remote communities.

TK constitutes the ancient knowledge of humanity, the deepest layer on which our science and culture have developed, the local solutions that have allowed the creation and management of ecosystems and cultural landscapes on the entire surface of the planet. It enables the development of solutions with a low energy and resource use that are able to adapt to environmental variability and to react to emergencies and catastrophes in flexible and multifunctional ways. Today, while entire planet systems risk ecological collapse, TK

---

<sup>82</sup> Martine Koning, "Biodiversity Prospecting and the Equitable Remuneration of Ethnobiological Knowledge: Reconciling Industry and Indigenous Interests," *Intellectual Property Journal*, No. 12, 1998, p. 265.



shows how to interact with the environment enhancing its resource potential without exhausting it.<sup>83</sup> In addition, it cannot be excluded that traditional knowledge might have an industrial application, even if the tangible object to which the intangible knowledge relates has not been subject to any scientific interference or modification.<sup>84</sup>

TK is thus a valuable source of knowledge. TK may help to find useful solutions to current problems, sometimes in combination with modern scientific and technological knowledge.

## **2. 4. THE NEED FOR PROTECTING TRADITIONAL KNOWLEDGE**

Protection of indigenous knowledge is essential in many aspects. Lack of proper legal and policy frameworks for the protection of TK in the developing countries provides a vacuum for the developed and industrialized nations to exploit the traditional knowledge and resources of indigenous communities. Protection of indigenous knowledge will stop the multi-national pharmaceutical companies from the North, who purport to discover herbal medicines owned and used by the indigenous communities for thousands of years, from patenting the medicinal plants and its derivatives at the expense of the indigenous communities.

Since, TK incorporates information and know-how on a variety of matters, including resources management, traditional medicines, crafts, artistic designs and cultural assets, its adequate protection is essential to preserve the cultural values of aboriginal communities.

---

<sup>83</sup>Traditional Knowledge World Bank, available at <[http://www.tkwb.org/web/?page\\_id=4 &language =i.t](http://www.tkwb.org/web/?page_id=4 &language =i.t)>, visited on December 18, 2008.

<sup>84</sup> See, G. Dutfield., "Indigenous Peoples, Bioprospecting and the TRIPS Agreement", in P. Drahos and M. Blakeney (ed.), *Perspectives on Intellectual Property: IP in Biodiversity and Agriculture*", Sweet and Maxwell, London, 2001, p. 146.

It is a cultural heritage property right which must be protected and shared equitably in the interest of all humankind.

The need to protect indigenous knowledge is more relevant now than ever before in the IP global market. It has been revealed that commercial interests very often violate indigenous intellectual property rights. Although such violations do not formally constitute a breach of written legal standards, as neither national legislations nor international standards acknowledge the rights of indigenous people, these violations are still accountable to indigenous customary law.

The underlying principles for granting protection to TK, inter alia, are equity considerations, conservation concerns, preservation of traditional practices and culture, promotion of its use in modern developments, prevention of appropriation of components of TK by unauthorized parties, facilitating access to TK, etc.

#### **2. 4. 1. Equity Considerations**

The argument for protection of TK is principally based on equity considerations. TK generates value for new industries especially in the field of pharmaceuticals, plant breeding, food preservation etc. The current system of appropriation of TK for the new lines of modern industries neither recognizes TK adequately nor does it compensate satisfactorily the TK holders. For example, the farmers are not being compensated for the germplasm they create and the value they contribute for the new industry. Similarly, the traditional medicinal practitioners and healers are not being compensated for the information they impart to the bioprospectors regarding the use of medicinal plants found in their surroundings. The holders of TK usually do not charge for the herbs, seeds etc. they

deliver or vital information they pass on. Generally there is no compensation or sharing of benefits by the inventors with the TK holders. While the inventors of TK derived products earn in dollars through adequate IPRs, the protection of traditional knowledge would, therefore, be necessary to bring equity.

#### **2. 4. 2. For Stimulating Conservation**

Another factor underlying the claim for protection of traditional knowledge is based on the importance of such knowledge for conservation purposes. It is an undisputed fact that TK involves vital information highly useful to modern science and health care. However, protection of TK against loss and misappropriation and adequate compensation to traditional knowledge holders are core elements to stimulate the broader use of TK. Since the indigenous population inhabit the world's most useful biological diversity, the preservation of the same would be important for the future use. Principle 3 of the Rio Declaration on Environment and Development, 1992 also states that the right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.

An encouragement to preserve and conserve the biological diversity through adequate means is necessary to stimulate the activities of indigenous and local communities. The recognition of rights would encourage them to conserve the natural resources. If fairly compensated, they would have more incentives to conserve and preserve the same not only for the existing generation, but for the generations to come.

### 2. 4. 3. Preservation of Traditional Practices and Cultures

The preservation of TK is not only a key component of the right to self-identification and a condition for the continuous existence of indigenous and traditional peoples; it is also a central element of the cultural heritage of humanity.<sup>85</sup> The crisis affecting the world's diverse cultures and languages is, according to some estimates, far greater than the biodiversity crisis. The recognition of their culture would raise the profile of that knowledge and encourage respect for it, both inside as well as outside the knowledge holding communities. This will make the learning and development of such knowledge a more attractive prospect for the younger members of such communities, thus perpetuating its existence and continuing its traditional lifestyles and cultures.<sup>86</sup> The possibilities of economic returns for the use of that knowledge by third parties acts as a further incentive for community members to respect their knowledge and continue to engage in practices in which that knowledge is used and generated.

Lack of motivation in the younger generation to learn the tradition is another reason cited for the protection of TK. There is a fear that TK will suffer extinction with the death of the elders of the community. TK is generally viewed with disdain and as being inferior since it does not confirm to the accepted scientific methods of learning in the context of the modern reductionist approach of science.<sup>87</sup> Only by concerned efforts to protect it and accord it due respect can this trend be stopped.<sup>88</sup>

---

<sup>85</sup> Carlos M Correa, *Traditional knowledge and Intellectual Property, Issues and Options Surrounding the Protection of Traditional Knowledge*, Quaker United Nations Office, Geneva, 2001, p. 7.

<sup>86</sup> *Ibid.*

<sup>87</sup> See, *Intellectual Property Needs and Expectations of Traditional Knowledge Holders*, WIPO Report on Fact finding Missions on Intellectual Property and Traditional Knowledge (1998-1999), Geneva, Switzerland, April 2001, pp. 214-15.

<sup>88</sup> Surinder Kaur Verma, "Protecting Traditional Knowledge, Is a Sui Generis System an Answer?" *The Journal of World Intellectual Property*, Vol. 7. No. 6. Nov. 2004, pp. 769-70.

#### 2. 4. 5. For Indigenous Peoples' Participation in Development Process

TK is a significant resource which contributes to the increased efficiency, effectiveness and sustainability of the development process. Since efficiency, effectiveness, and sustainability are key determinants of the quality of development work, integrating TK with modern developments has a strong case for successful development.<sup>89</sup>

TK, owing to its close association with bio diversity, is a crucial factor for sustainable development. Indigenous institutions, indigenous technology, and low-cost approaches can increase the efficiency of development programs because TK is a locally owned and managed resource. Building on TK would be an effective means to reach the poor since TK is often the only asset they control and are familiar with. Utilizing TK helps to increase the sustainability of development efforts because the TK integration process provides for mutual learning and adaptation, which in turn contributes to the empowerment of local communities. Hence empowerment of local communities is a prerequisite for the integration of traditional knowledge in the development process.

There is also a need to preserve TK as a component of a strategy for sustainable human development. TK, like any other knowledge, needs to be constantly used, improved, and further adapted to the evolving local contexts. Proper support to holders of TK and

---

<sup>89</sup> Musoke, M. describes a strong case for development through integration of TK into modern health care services in his work titled *The Challenge and Opportunities of Information and Communication Technologies (ICTs) in the Health Sector* prepared for the African Development Forum (ADF) (1999). The leveraging traditional knowledge systems with simple and appropriate modern communications helped the Iganga district of Uganda, to reduce high maternal mortality rates to 50 percent in three years. The modern health service delivery system used to reach less than half the population in the district. Hence, to address the high mortality rates, the local communities and the officials built on the local traditional institutions to improve the reach and impact of modern prenatal and maternal healthcare services. The local initiative used and leveraged a system known as 'the traditional birth attendant' (TBA) trusted by Ugandan women. The project provided the TBAs with walkie-talkies to communicate with public health service workers from their outposts. In cases of emergencies, the TBA could call in the modern mobile unit. This enabled the TBAs in remote areas to become the referral system to modern healthcare.

indigenous communities' knowledge exchanges can help to disseminate useful and relevant TK. It would enable communities to participate more actively in the development process. Several TK based practices and techniques can successfully be integrated into local, national, regional, and global development efforts. Thus, rather than “protecting” traditional knowledge in a way that limits access to it, governments can aim to promote the use of traditional knowledge, complementing this with measures to prevent misappropriation. TK is an underutilized resource in the development process. Legal protection may help to exploit the opportunities of TK based products and services.<sup>90</sup> TK is a critical resource for strengthening local innovation, and innovation is important for reinforcing or even rebuilding local cultures. Therefore, there is also a need to enable these communities to harness TK for their economic uplift and growth.<sup>91</sup>

#### **2. 4. 6. To Facilitate Access**

A guarantee of protection of TK, as in the case of IP, may create the basis of trust required for the local/indigenous communities to part with their knowledge and improve their position to obtain value from it. Adequate protection would in turn work as a tool for facilitating access to traditional knowledge. If some rights were recognized, knowledge holders may be more prepared to provide access to their knowledge.

#### **2. 4. 7. For the Conservation of Environment and Management of Biodiversity**

The protection of TK is important for the conservation and sustainable development of the environment as much of the world's crop diversity has been conserved and preserved

---

<sup>90</sup> UNCTAD, *Systems and National Experiences for Protecting Traditional Knowledge, Innovations and Practices*, TD/ B/ COM.1/ EM.13/2, Geneva, August 22, 2000.

<sup>91</sup> Daniel Gervais, *TRIPS, Doha and Traditional Knowledge*, *Journal of World Intellectual Property*, Vol. 6. No. 3, May 2003, pp. 403-19. He opines that one reason for an increasing demand for protection of TK is the new information technology which has made several indigenous communities politically active, vocal and assertive about their rights.

by indigenous/local peoples, which has helped in the protection and conservation of biodiversity. Their knowledge is central to the conservation and preservation of genetic resources (GRs) and other bio-resources.<sup>92</sup> Most of these communities live in areas where the vast majority of the world's plant genetic resources (PGRs) are found. There is also a danger that the biological resources increasingly subjected to IPRs and patents are likely to be plucked to extinction, which raises concerns over their exhaustibility and loss of habitat besides the loss of lifestyles and livelihoods to indigenous communities that have nurtured and used these resources for generations. This may also ultimately affect food security. International recognition and protection of TK would help in the protection/ conservation of the environment<sup>93</sup> and in the management of biodiversity.<sup>94</sup> The movement of traditional communities from their natural habitat and their increasing assimilation with modern society would lead to its extinction and prejudicially affect biodiversity. This also raises concerns about the protection of TK.<sup>95</sup>

## 2. 5. TRADITIONAL KNOWLEDGE *VIS-À-VIS* FORMAL KNOWLEDGE

TK differs from formal knowledge in several aspects such as

### (i) ways of acquisition

---

<sup>92</sup> Paragraph 26 (1) of Agenda 21, adopted at the Earth Summit in 1992, accepts the link between indigenous peoples and the world's need for environmentally sensitive development, and states: "In view of the interrelationship between the natural environment and its sustainable development and the cultural, social, economic and physical well-being of indigenous people, national and international efforts to implement environmentally sound and sustainable development should recognize, accommodate, promote and strengthen the role of the indigenous people and their communities."

<sup>93</sup> "Protecting Traditional Knowledge— The International Dimension", India's presentation at the International Seminar on Systems of Protection of Traditional Knowledge, organized jointly by the United Nations Conference on Trade and Development and the Department of Commerce of the Government of India, 3-5 April 2002, New Delhi, p. 2.

<sup>94</sup> *Supra* note 26.

<sup>95</sup> See A. Gray, *Between the Spice of Life and the Melting Pot: Biodiversity Conservation and its Impact on Indigenous Peoples*, IWGIA Document 70, International Work Group for Indigenous Affairs, Copenhagen, 1991 wherein he observes, "the world biodiversity crisis is matched by a world 'cultural diversity' crisis. Indigenous peoples live predominantly in areas of high biodiversity while at the same time comprise 95 percent of the cultural diversity in the world."

- (ii) storage and
- (iii) transmission

As per UNDP, TK is acquired by past experiences and observation. It is usually a collective property of society. Many members of the society contribute to it over time, and it is modified and enlarged as it is used. This knowledge is transmitted from generation to generation.<sup>96</sup> TK is holistic in nature and is passed down through generations. It is evolved from both personal and collective innovations.

On the other hand, formal knowledge is that type of knowledge that is produced and generated through formal institutions of learning including schools, colleges, universities and research institutes. TK does not have a special institution to administer it whereas formal knowledge is administered through various institutions of learning and practices. However, various modern developmental processes either marginalize or integrate indigenous communities, making them abandon their unique traditional or indigenous knowledge acquired over years.

## **2. 6. KINDS OF TRADITIONAL KNOWLEDGE**

There are several categories of traditional knowledge. It could include agricultural knowledge, ecological knowledge, medicinal knowledge including related medicines and remedies, biodiversity-related knowledge, expressions of folklore in the form of music, dance, song, handicrafts, designs, stories and artwork, scientific knowledge, technical knowledge etc. With respect to its nature and holders TK can broadly be classified as

---

<sup>96</sup> United Nations Environment Programme, Convention on Biological Diversity. See <[www.Biodiv.org](http://www.Biodiv.org)>, visited on December 20, 2008.



1. Community traditional knowledge
2. Publicly known traditional knowledge
3. Individual traditional knowledge
4. Documented traditional knowledge
5. Vocal traditional knowledge
6. Sacred traditional knowledge
7. Secular traditional knowledge
8. Indigenous knowledge<sup>97</sup>

*Community TK* indicates information that is not known to all but known only to a small group of people. Eg: Tribal Knowledge. This knowledge is generally being transmitted verbally only to the members of the community. *Publicly known TK* refers to the information commonly known and used by the people with or without documentation. The medicinal use of *Neem*, *Tulsi* etc. provides examples of this class. *Individual TK* is available only with an individual or certain member of a family. Usually this information is handed over orally from the elder to his successor. *Documented TK* means information that is well documented and available to the public Eg: *Ayurvedha*. *Vocal TK* covers knowledge which is unwritten but preserved and handed over through generations orally. *Sacred TK* consists both sacred tangible as well as sacred intangible rights. Sacred tangible rights suggest *the* property rights in tangible objects used as part of or pertaining to something sacred. Community's right over sacred sites is an example for this category. There are also sacred intangible rights which include intellectual property and other intangible rights

---

<sup>97</sup> Daniel J. Gervais, Spiritual but Not Intellectual? "The Protection of Sacred Intangible Traditional Knowledge," *Cardozo Journal of International and Comparative Law*, Vol. 11, Summer 2003, p. 474.

applicable to the costume, choreography and photographs etc. of traditional sacred dance belonging to the community. *Secular TK* refers to the communities' right over arts and crafts. In this context, it includes material proper for commercial exploitation – items such as the family crests used in ceremonial occasions on clothing, masks, dance screens, etc. It also includes rights in photographs, choreographies, music or audiovisual productions used in non-sacred events and ceremonies.

*Indigenous Knowledge (IK)*: The indigenous groups all over the world have peculiar cultural belief systems which demonstrate their immense knowledge and respect for the earth. These systems contain rules that define how the environment should be treated. Their various rituals, ceremonies and prohibitions regulate the use of natural resources and resource management aiming at a balanced ecosystem. Indigenous people are the custodians of the invaluable biological and genetic wealth on the earth. To entitle certain knowledge as indigenous, it must possess certain characteristics, namely,

- i. communal ownership and attribution of knowledge
- ii. sharing of knowledge through specific consent of the relevant group
- iii. right to use and deal with knowledge <sup>98</sup>
- iv. collective rights and interests held by indigenous people in their knowledge
- v. close interdependence between knowledge, land, and other aspects of culture in indigenous societies
- vi. oral transmission of knowledge in accordance with well understood cultural principles, and

---

<sup>98</sup> Janke T., *Biodiversity, Patents and Indigenous People*, <[http://www.wacc.org.uk/publications/md/md1999-2/janke\\_article.html](http://www.wacc.org.uk/publications/md/md1999-2/janke_article.html)>, visited on January 02, 2009.

- vii. management of knowledge through specific rules including rules regarding maintaining secrecy and sacredness of knowledge.<sup>99</sup>

## 2. 7. TRADITIONAL KNOWLEDGE *VIS-À-VIS* INDIGENOUS KNOWLEDGE

The word, ‘*indigenous*’ ordinarily means ‘belonging to’, or ‘specific to’, or ‘a particular place’. Dictionaries define the term *indigenous* as “originating or occurring naturally in a country or region. In this sense, the terms “traditional knowledge” and “indigenous knowledge” may be interchangeable.<sup>100</sup> WIPO also states that TK and IK would be interchangeable if we consider the term indigenous to mean, ‘belonging to’, or ‘specific to’, or ‘a particular place’.<sup>101</sup>

Indigenous knowledge is that knowledge that is held and used by people who identify themselves as indigenous to a place based on a combination of cultural distinctiveness and prior territorial occupancy relative to a more recently arrived population with its own distinct and subsequently dominant culture.<sup>102</sup> It is the unique traditional local knowledge existing

---

<sup>99</sup> Davis, M., “Biological Diversity and Indigenous Knowledge”, Research Paper 17, *Science, Technology, Environment and Resources Group*, 1997-98 at <<http://www.aph.gov.au/library/pubs/rp/1997-98rp17.htm>>, visited on January 02, 2009.

<sup>100</sup> Article 1 of ILO Convention No. 169 concerning Indigenous and Tribal Peoples in Independent Countries, adopted on 27 June 1989 defines indigenous population as follows: (a) Tribal peoples in independent countries whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations; (b) Peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonisation or the establishment of present State boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions.

<sup>101</sup> WIPO, *Intellectual Property Needs and Expectations of Traditional Knowledge Holders: WIPO Report on Fact-Finding Missions on Intellectual Property and Traditional Knowledge* (1998-1999) (WIPO, 2001 Report) at p. 24. Also see, Natalie P. Stoianoff, Biological Resources and Benefit Sharing: “The Intersection between Traditional Knowledge and Intellectual Property” in S. K. Verma & Raman Mittal (ed.), *Intellectual Property Rights A Global Vision*, Indian Law Institute, New Delhi, 2004, p. 43.

<sup>102</sup> *Supra* note 5 at pp. 2-3.

within and developed around the specific conditions of women and men to a particular geographic area.

Van Vlaenderen gives a working definition of IK as follows:

A collection of ideals and assumptions which tends to emphasize the knowledge internal to a particular setting differing from local knowledge which focuses on the locality in which the knowledge is used and embraces exogenous knowledge that has entered the local community over time.<sup>103</sup>

Brush and Stabinsky define IK as culture specific whereas formal knowledge as decultured. They further define IK as the systematic information that remains in the informal sector, usually unwritten and preserved in oral tradition rather than texts.<sup>104</sup>

*Lugeye* describes IK as the sum of experiences and knowledge of a given ethnic group that forms the basis for decision-making in the face of solving familiar problems.<sup>105</sup> It is a mixture of knowledge created endogenously within the society and that which comes from outside but is then integrated within the society, and this knowledge is continuously changing and has an inherent capacity for absorbing relevant new knowledge from outside.

*Grenier* treats traditional knowledge and indigenous knowledge interchangeably and defines it as the unique traditional, local knowledge existing within and developed

---

<sup>103</sup> Van Vlaenderen, "Local Knowledge, What is it, why and do we capture it?" in Kauzeni A. A. (ed.) *Selected Papers from the First National Workshop on Gender and Biodiversity and Local Systems*, Report No. 2, Morogora, Tanzania, 22- 23 June 1999, p. 1.

<sup>104</sup> See, Brush S. B & D. Stabinsky (eds), *Valuing Local Knowledge- Indigenous people and Intellectual Property Rights*, Island Press, Covelo, California, 1996.

<sup>105</sup> Lugeye, S., *The Role of Farmers' Indigenous Knowledge in Natural Resource Management*, Sokoine University of Agriculture, Convocation Workshop, Morogoro, Tanzania , 1994, p. 2.

around the specific conditions of women and men in a particular geographical area.<sup>106</sup> According to *Warren* the terms traditional knowledge and indigenous knowledge are synonymous used to differentiate knowledge developed by a given community from the international knowledge system as generated through universities, government research centers and industrial sectors.<sup>107</sup>

WIPO considers indigenous knowledge as a subset of traditional knowledge and defines it as ‘knowledge held and used by communities, people and nations that are indigenous’. Indigenous communities are “those which, having a historical continuity with ‘pre-invasion’ and pre-colonial societies that developed on their territories, consider themselves distinct from other sectors of the societies now prevailing in those countries, or parts of them. They form at present non-dominant sectors of society and are determined to preserve, develop and transmit to future generations their ancestral territories and their ethnic identities as the basis of their continued existence as peoples, in accordance with their own cultural pattern, social institutions and legal systems”.<sup>108</sup>

All definitions of IK refer to people existing under relatively disadvantageous conditions, who are crippled economically and socially. They live in small societies and may not have access to formal education. For indigenous people, nature and culture are inseparable. For them the concept of private property has no meaning and they hold the view that all resources belong to the community as a whole. They are generally unaware of the worth of the knowledge they possess. Such communities are often found in developing

---

<sup>106</sup> Grenier, Louis, *Working with Traditional Knowledge: A Guide for Researchers*.

<sup>107</sup> Warren Michael, *Indigenous Knowledge and Development Monitor*, Vol.6, Issue 3, 1998, p. 3.

<sup>108</sup> As Mr. J. Martínez, Special Rapporteur of the United Nations Sub-Commission on Prevention of Discrimination and Protection of Minorities, Cobo, describes it in the *Study of the Problem of Discrimination against Indigenous Populations*.

and underdeveloped countries where there is a concentration of ethnocentric societies. Usually, their cohesiveness as communities is damaged or threatened and the integrity of their cultures undermined.

In this sense, indigenous knowledge would be the traditional knowledge of indigenous peoples. Indigenous knowledge is therefore part of the traditional knowledge category, but traditional knowledge is not necessarily indigenous.<sup>109</sup> That is to say, indigenous knowledge is traditional knowledge, but not all traditional knowledge is indigenous. Indigenous knowledge is also used to refer to knowledge that is itself 'indigenous'.

---

<sup>109</sup> John Mugabe, "Intellectual Property Protection and Traditional Knowledge, an Exploration in International Policy Discourse," <[http://www.wipo.int/export/sites/www/tk/en/hr/panel\\_discussion/papers/pdf/mugabe.pdf](http://www.wipo.int/export/sites/www/tk/en/hr/panel_discussion/papers/pdf/mugabe.pdf)>, visited on January 02, 2009.