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ITK



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An African proverb says:

"When an old knowledgeable person dies, a whole library dies"

indicating the importance of ITKs.



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- ❑ The Indigenous Technical Knowledge (ITK) is regarded as **the information gained over a period of time passed on from generation to generation by the word of mouth.**
- ❑ ITK is the information base for a society, which facilitates communication and decision making.
- ❑ Indigenous information systems are dynamic, and are continually influenced by internal creativity and experimentation as well as by contact with external systems.



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ITK is stored in people's memories and activities, and is expressed in the form of stories, songs, folklore, proverbs, dances, myths, cultural values, beliefs, rituals, community laws, local language and taxonomy, agricultural practices, equipment, materials, plant species and animal breeds.

Wang (1988) defined ITK as:

“the sum total knowledge and practices which are based on people’s accumulated experiences in dealing with situations and problems in various aspects of life and such knowledge and practices are special to a particular culture.”



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Indigenous technical knowledge (ITK) refers to the unique, traditional, local knowledge existing within and developed around the specific conditions of women and men indigenous to a particular geographic area (**Grenier, 1998**).

As a summary of various definitions, the term ITK may be denoted mainly as **a tacit type of knowledge** that has evolved within the local (grassroots) community and has been passed on from one generation to another, encompasses not only local or indigenous knowledge, **but also scientific** and other knowledge gained from outsiders.



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Literature in related fields uses various terms interchangeably to designate the concept of:

- ❖ Traditional knowledge (TK)
- ❖ Traditional ecological knowledge (TEK)
- ❖ Traditional ecological knowledge and management systems (TEKMS)
- ❖ Local knowledge (LK)
- ❖ Indigenous knowledge (IK)
- ❖ Indigenous technical knowledge (ITK)
- ❖ Community knowledge
- ❖ Rural peoples' knowledge (RPK)
- ❖ Farmers' knowledge (FK)

While certain distinctions can be made, these terms often refer to the same thing.



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The special features of indigenous technical knowledge are (World Bank, 1998) as follows.

- ❑ It is 'local', as it is rooted in particular community and situated within broader cultural traditions;
- ❑ It is a set of experiences generated by people living in those communities. Therefore, **separating** the technical from the non-technical, the rational from the non-rational **could be problematic**.
- ❑ When transferred to other places, **there is a potential risk** of dislocating indigenous technical knowledge. It is tacit knowledge and, therefore, not easily modifiable. Codifying it may lead to the loss of some of its properties.
- ❑ It is transmitted orally, or through demonstration.
- ❑ It is experiential rather than theoretical knowledge.



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Strategies for integration of ITKs into scientific research process

Today it is widely accepted among agricultural scientists throughout the world that the reassessment of indigenous technical knowledge is an indispensable part of the introduction of new agricultural technology.

It is recognized that the knowledge of farmers must be taken into account before any new technology is developed and disseminated.

This view is based on the assumption that:

- Farmers have a wealth of knowledge pertaining to their own environment;
- Farmers have developed specific skills designed to make the best use of that environment.



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The four important steps in inclusion of the ITKs in technology generation, reassessment and adaptation process are:

- Documentation**
- Validation**
- Refinement**
- Integration.**



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IPR and ITKs

The potentials of ITK, both for expanding scientific technical knowledge and for empowering its owners, are overwhelming.

Within farming systems, ITK embraces people's knowledge of tools and techniques for the assessment, acquisition, transformation, and utilization of resources that are specific to a particular location.

ITKs with proper scientific potential may be registered under IPR (Intellectual Property Right).



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ITK can encompass:

- ❑ **Vernacular:** technical knowledge held by all or most individuals in a specific locality, e.g., knowledge of crop rotation, or pest and weed control;
- ❑ **Specialized:** the technical knowledge of certain skilled 'resource persons', e.g., plant protection, varietal testing;
- ❑ **Controlled:** knowledge held by dominant groups in society, such as skills in animal breeding, hunting or water divining;
- ❑ **Social:** knowledge belonging to the group (caste or tribe) or community, e.g., grazing rights, fishing controls and tenure regulations.



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Constraints in scouting for ITK

- Difficulty in **finding persons** who possess ITK.
- Availability of **ITK in a village is limited** by the extent of modernization.
- Local people might be **prejudiced against officials** dealing with land records or income tax and hence might be wary of ITK researchers too.
- Researches may be **unable to understand the dialectical nomenclature** used by local people to describe plant species.



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- ❑ The **local language** used by resource persons to describe ITK can at times be incomprehensible to researchers, and hence, it can be difficult to document ITK.
- ❑ Researchers at times **do not have adequate information on the strategies** required to scout ITK.
- ❑ Many **local people refuse to divulge ITK**, and hence it is difficult to scout for it.
- ❑ Some local people find it difficult to understand the concept of ITK as perceived by researchers.



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Strategies to facilitate scouting for ITK

1. Conducting peripatetic **group meetings** in order to promote awareness and to motivate local people to share ITK often works well. **Appropriate counseling** ensures availability.
2. Using extension teaching methods and aids helps **educate local people** about the Importance of ITK and hence documentation.
3. Arranging **scouting competitions** for local people (women, farmers, and children etc) and selecting winners for awards for aiding scouting of ITK.
4. Informing local people well in advance regarding the **rewards/incentives** for outstanding innovators could motivate local people to share ITK.



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5. Holding **public ceremonies to honor innovators** by a reward/award could be useful. This could inspire local people to share ITK.
6. Informing local people about **publishing documented innovations of local people** in newsletters/journals acknowledging the identity of the innovator(s) and popularizing their innovations.
7. Communicating to the community the possibility of obtaining **intellectual property right (IPR)** for ITK and equitably sharing the benefits accrued through commercialization with the resource person /community holding the knowledge.
8. Conducting location specific peripatetic group meetings, demonstrations, and farm and home visits in order to address local people's problems and priorities (eg. insects, disease) could oblige local people to reciprocate by sharing their ITK.



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Reasons for refusal to share ITK

1. Owing to exclusive ownership, they prefer not to share the benefits of their knowledge.
2. They are reluctant to disclose their ITK owing to competition in business.
3. They may feel that others will exploit the shared ITKs.
4. The belief that ethno-medicines become ineffective when shared.
5. There is a practice of sharing ITK only with legal heirs and not with outsiders.
6. They may feel insecure, fearing the loss of social respect once their shared ITK becomes common knowledge.



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7. They do not share ITK if the researcher is unfamiliar or native.
8. They may suspect the researchers.
9. They may perceive researchers as a hindrance to their commitments and chores.
10. They may make the assumption that a fully informed researcher is testing their knowledge.
12. There may be no incentives or rewards for revealing ITK.
13. They may be shy to speak about ITK, fearing that they will be considered uncivilized in these modern days.



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14. They may be unaware that their contribution is noteworthy and respectable.

15. They may place no special importance on ITK, treating it as a part of the life and farming.

16. They may fear that others may adopt their innovations by slight modification.

17. They may fear being penalized or prosecuted by authorities since their ITK is unapproved or unlicensed or any negative results come.

18. They may wish to prevent the researchers from “wrongly” using the practices.



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Protection for ITK in Indian Acts

Some of the India's new laws have implications for ITK and bio-resources which are given below.

1. The Geographical Indications of Goods-Registration and Protection Act 1999.
2. The protection of Plant Varieties and Farmer's Rights Act 2001.
3. The Biological Diversity Act, 2002.
4. The patent (Second Amendment act, 2002).



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Traditional Knowledge Digital Library (TKDL)

TKDL is a collaborative project between National Institute of Science Communication and Information Resources (NISCAIR), Council of Scientific and Industrial Research (CSIR), Ministry of Science and Technology and Development of AYUSH and Ministry of Health and Family Welfare, which is being implemented at NISCAIR.

An inter-disciplinary team of Traditional Practices Experts, Patent Examiners, IT Experts, Scientists and Technical Officers are involved in creations of TKDL.

The project TKDL involves documentation of the knowledge available in public domain on traditional knowledge from the existing system.



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