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# Developing indigenous knowledge databases in India

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# What is Indigenous Knowledge?

- Indigenous Knowledge is local knowledge
  - IK is unique to every culture or society.
  - Profound, detailed and shared knowledge, beliefs and rules with regards to the physical resource, social norms, health, ecosystem, culture, livelihood of the people who interact with environment both in rural and urban settings.
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# What is Indigenous Knowledge?

- IK is the basis for local-level decision making in:
    - agriculture,
    - health care,
    - food preparation,
    - education,
    - natural-resource management, and a host of other activities in communities.
  - IK provides problem solving strategies for communities
  - IK is commonly held by communities rather than individuals
  - IK is tacit knowledge and therefore difficult to codify, it is embedded in community practices, institutions, relationships and rituals
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- Often shunned by modern scientific knowledge

# Need for Indigenous Knowledge Database

- For any developing country like India, scientific/technical information is a critical national resource.
- Development of the country can be conceived of as being a continuum of problem-solving activities directed towards improving the quality of life through the utilization of existing resources.
- Planners, entrepreneurs, researchers and project administrators (problem-solvers) must have access to reliable IK to be able to identify needs, assess the impact of utilizing scarce sources with potentially competing users, or apply principles that determine choices to be made.
- As the IK stands on an equal footing with manpower, energy resources and usable natural resources, among others to it is also a strategic national resource.
- It can be argued that IK can be the basis of sustainable development.

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# IK Databases....

- The vast majority of databases and databases records are produced in developed countries. The contents of these databases consist, therefore, of data that are geared to the demand of users in developed countries, which is not necessarily always the same as that of users in developing countries.
  - Using online foreign databases produced by developed countries may not be cost-effective .
  - It is felt that IK databases available in developing countries provide a valuable source of information.
  - The convergence of humanitarian and scientific interests is leading to a scramble to document this knowledge in electronic databases so it can be firstly preserved and secondly, shared and utilized.
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# What are some roles of the ICTs?

- ICTs
    - Enable capturing, storing and sharing of indigenous knowledge
    - Support the incorporation of indigenous knowledge with modern scientific and technical knowledge
    - Create easily accessible indigenous knowledge information systems
    - Provide a platform for advocating for improved benefit of the poor from their intellectual property rights and indigenous creators
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# What are some roles of the ICTs?

- Multimedia technologies.
  - Digital documents are ideal for organizing into databases for searching and retrieval and transmission across the networks including the Internet.
  - A search, browse and retrieval interface to the collection has to be constructed using standard Web browser technologies for the user interface.
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# Initiation and emergence of IK databases in India

- National Institute of Science Communication and Information Resources (NISCAIR),
  - The Bhabha Atomic Research Center (BARC),
  - Indian Council of Agricultural Research (ICAR) ,
  - National Information System on Science and Technology (NISSAT),
  - Council of Scientific and Industrial Research (CSIR),
  - University Grants Commission (UGC),
  - Indian Institutes of Technology (IITs).
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# Efforts of NISCAIR

NISCAIR offers IK databases on its online host system for public access. The IK databases are as following:

- . Current contents of Indian Journals (online);
- . National Union Catalogue of Scientific Serials in India (NUCSSI) (online);
- . Indian patents (online);
- . Indian Science Abstracts (online);
- . National Science Library Catalogue (online);
- . Medicinal and Aromatic Plants Abstract (MAPA) Database (online).



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# Guidelines

- IK systems should be developed at regional level and established to promote the collection and preservation in member states.
  - IK databases in developing nations should stimulate and assist government in undertaking inventories of existing national information facilities, the dissemination of referral information to decision-making and decision-preparing agents so as to make aware of what exists, and the delivery at all levels of components of the capital stock that constitutes national information so that it can be fully utilized.
  - To promote the integration process of IK through the delivery of specific and technological information to foster and strengthen horizontal co-operative projects.
  - High-speed networks to distribute and access IK must be established.
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## Criticism:

- Highlight on the use of ICT in developing a database.
  - Issues regarding the IPR have not been dealt in detail.
  - Not enough examples of such databases are given.
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# Challenges in applying ICTs

- All IK does not require ICTs – can be captured on paper, books
  - Knowledge holder often do not volunteer their knowledge
  - IK databases and capturing process is laborious and time consuming
  - Significant unresolved intellectual property issues and challenges especially if the traditional knowledge leads to corporate gains
  - People who need IK may not have access to the technologies to make use of them
  - Those who read IK or access to databases are biased towards modern knowledge
  - Need to put in place and strengthen community structures that promote the flow of IK
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# An Example:

## ■ Honey Bee Network

- ❑ Gathered over 11,000 IK innovations in India
  - ❑ Provide venture funds to turn ideas and practices into product – enterprise development
  - ❑ Establish competition on recipes for women
  - ❑ Protection of intellectual property rights and rewarding innovators
  - ❑ Annual innovators meeting, market place
  - ❑ Promotion of changes into the educational systems
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# Conclusion

- IK is vital information which, sadly, is diminishing at an alarming rate.
  - There is an urgent need to collect it before it is irretrievably lost.
  - Role of efficient and relevant databases are of great significance.
  - ICT can be way to create and maintain these databases.
  - Focus on IK would help the poor to build on resources in which they are rich – knowledge.
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***THANK YOU...!!!!!!!***

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