



E-Government Approach to Management of Intellectual Property in Indian Folklore

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ABSTRACT

The protection of intellectual property in traditional knowledge against illegal ownership claims and unauthorised usage mainly due to socio-economic globalisation fostered by communication technology has attracted wide attention in the recent past. India has a vast treasure of knowledge in forms of folklore. The paper envisages looking at protection of folklore in India from unauthorised infringement. The efforts made by various regulating bodies and government of India are evaluated to find out their efficacy and sufficiency to protect the knowledge and benefit the society. As an outcome of this analysis two major proposals are made, firstly, use of e-government to collect, record and protect the intellectual property in folklore and secondly, to look at traditional knowledge as a source of economic growth. A model is suggested to develop e-government mechanism for the safety of folklore against illegal claims, protect the interest of social groups/tribes that have carried the folklore down the ages and at the same time provide them an opportunity to contribute to national economy.

Keywords: traditional knowledge, folklore, protection mechanism, e-government, economic growth

1. Introduction

The entire field of human endeavour is open to inquiry by traditional methods and all forms of human expression are available for its transmission. Traditional Knowledge is a multifaceted concept that encompasses several components; generally it is not produced systematically, it integrates a vast and coherent complex of beliefs and knowledge as representative of cultural values, transmitted orally from generation to generation and the control is vested in the community (World Intellectual Property Organisation, (WIPO) 2001). Intertwined with practical solutions, traditional knowledge often transmits history, aesthetics, ethics, and traditions of a particular people. World organisations and national governments have realised the need for evolving a mechanism to protect such knowledge but the biggest problem in this is the very indeterminate nature of traditional knowledge and the issues of ownership remaining unresolved (WIPO, 2001).

India, has the honour of hosting one of the oldest human civilisations of the planet, and has the heritage of all forms of traditional knowledge, such as literature, science, architecture, medicine, art and craft. Various forms of traditional knowledge such as medicine, healing, plants, food, agriculture and biodiversity are well known but a large volume of this knowledge is in the form of folklores which is an area not so well recognised for the issues of intellectual property rights. India's National Institute of Science

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Communication and Information Resources (NISCAIR) found that in 2000, almost 80 per cent of the 4,896 references to individual plant-based medicinal patents in the US Patents Office related to seven medicinal plants of Indian origin. In 2003, there were almost 15,000 patents on such medicines in the US, European and UK patent offices' registries. However, according to the director of NISCAIR, none of the 131 academic journals used by patent examiners for deciding the grant of a patent is from developing countries such as Brazil, China or India (Padma TV, 2004).

In this backdrop it is proposed to take up the case of folklore of India for protection against any kind of explicit or implicit threat of trespassing of intellectual property rights. An attempt is being made to look into the possibilities of taking e-government approach to managing intellectual property in traditional knowledge. By its very nature, the expression of folklore is the result of creative contributions of usually unknown members of a number of subsequent generations and this is why its protection could not be reasonably limited in time (www.wipo.org/academy). It includes styles and artistic productions such as music, dance, religious traditions and ceremonies, scientific and technical knowledge.

2. Conservation and Protection of Folklore

The globalisation and Information Technology (IT) revolution have paved way for opening of market and shrinking of boundaries. These have opened the flood gate of the information which was earlier limited by proximity and reach. The knowledge and Intellectual property in the form of folklore which were confined to a small section of the society have now reached all corners of the world; the world which is keen to explore and exploit. With the upsurge of media industry in India, the music companies and others within the country and abroad are now eyeing on soft target of Intellectual property existing in the form of folklore particular Ragas, folksongs and Talas, and crafts and artistry (Pricewater House-FICCI Report, 2006). The United Nations Educational Scientific & Cultural Organization has made "Recommendations on the Safeguarding of Traditional Culture and Folklore", adopted on 15th November 1989 by the General Conference, at its 25th Session held in Paris. It recommends that folklore as a form of cultural expression must be safeguarded by and for the group (familial, occupational, national, regional, religious, ethnic etc.) whose identity it expresses. The member States should encourage, for this purpose, appropriate survey research on national, regional and international levels for collecting the data as regards the institutions concerned with folklore and other material.

The Article 29 of the Constitution of India clearly says "Any section of the citizens residing in the territory of India or any part thereof having a distinct language, script or culture of its own shall have the right to conserve the same". Similarly Article 51 A (F) of the Constitution maintains, "It shall be the duty of every citizen of India to value and preserve the rich heritage of our composite culture" (www.indiaculture.nic.in).

Folklore is commercialized without due respect for the cultural and economic interests of the communities in which it originates. Abichandani, (2004) mentions an example (cited by Babacar Ndoeye, Former Director of the Copyright Office of Senegal), of an African Folklore Group's European Performance by a composer who arranged and registered the recording as his original work. The work was a phenomenal success, but all profits went to the composer without any compensation to the community from which the folklore originated. There is, therefore, necessity for stringent protection of expressions of folklore in light of current technological capabilities. The author suggested in his conclusion the creation of a regional agency with authority to institute infringement actions and to serve as the conduit for processing requests to use folklore as well as distributing compensation collected for the use of folklore.

There are laws and Acts to protect traditional knowledge from unauthorised trespassing but at the same time there are many dimensions of traditional knowledge especially folklore which need to be considered while making an action plan for the protection. WIPO in consultation with UNESCO has taken some

significant initiatives to protect 'expressions of folklore' and developed a set of model provisions which could be incorporated in national legislation to help protect 'expression of folklore'. Unfortunately nothing concrete came out of it and in 1997 WIPO and UNESCO were again requested to further take up the issue at regional levels. Since then four conventions have been held and some issues of importance have been identified.

3. Problems in Protecting Folklore

Traditional creations of a community, such as, folk tales, folk songs, folk music, folk dances, folk designs or patterns, may often not fit into the notion of literary and artistic works. Copyright is author-centric and, in the case of folklore, an author - at least in the way in which the notion of "author" is conceived in the field of copyright - is absent. The existing Intellectual Property Rights (IPR) Regimes are inadequate to address all of the issues involved in protection of traditional knowledge and folklore. Major issues and problems are identified as under:

Identification of folklore collectors of folklore need training not only in folklore itself but also in general semantics, cultural anthropology, psychology, and history. They must have extensive knowledge about the group who are the informants. The collector has to be extremely cautious in using such words as "folklore," "legend," "myth," "proverb," "fairy tale" or "superstition," since not only are these words often misunderstood, but they may be interpreted as an expression of the collector's doubt of the veracity of the item (Bynum, Joyce, 2001).

Indeterminate ownership: A serious challenge in case of folklore is that the ownership is not easily traceable; therefore unauthorised commercial exploitation becomes very convenient. Many such cases have been reported in past in different part of the world. Many cases of misuse or misappropriation of Maori traditional knowledge both in New Zealand and internationally can be cited, such as the use of Maori names and imagery by LEGO on toy products; the use of Maori names such as 'Rangatira' on rugby boots by Canterbury of New Zealand; the use of moko by a Danish restaurant to promote sale of "face food" which was against the norms of Maori traditions of mixing something of high value with that of low value and therefore appear offensive (WIPO,2007). In 1991, Mr Bethune, an Australian entrepreneur began importing hand knotted wool carpets into Australia using ten designs from reproductions of aboriginals artists paintings. The offence was great because designs incorporated sacred images only to be seen during special ceremonies.(http://ec.europa.eu/internal_market/copyright/docs/studies/ etd2000b53001e04_en.pdf)

In India too there have been cases of music composers lifting a folksong and/or tune without due authorisation. Once, such a folksong is lifted by a big commercial venture, a new situation arises. It is then owned by a fake composer and a wealthy director of the industry, and they acquire copyright and legal ownership. This has happened to hundreds of folk songs in the long history of recorded music. The issue is being raised by developing countries as their micro-level cultures are being exploited by the developed world through its superior technology of informatics. It is now recognized that the cultural material of any community, tribe, group, ethnic, region or nation should be respected and legally protected. The financial gain should go to the different institutional organizations who are devoted to the subject concerned. This type of cognisance is now known as 'class action' (Kothari, 2004).

Regional Common Heritage: Many countries share common heritage and common traditional knowledge due to geographical/ethnic proximity. India's NISCAIR has prepared and circulated a practical guide for classification of traditional knowledge to other South Asian countries.

Other Issues: There are various For instance, South Asia shares a common heritage in traditional medicine; Bangladesh, India and Pakistan share the *Unani* system of medicine, whereas *Ayurveda* is used in India, the

Maldives, Nepal and Sri Lanka. categories of expressions of folklore that are possible subjects of a copyright type - but sui generis - protection. Some of them, such as, folk arts in drawings, paintings, carvings, sculptures, pottery etc. obviously cannot enjoy indirect protection by means of “neighboring rights” or “related rights”. However Folk tales, folk poetry, folk songs, instrumental folk music, folk dances, folk plays and similar expressions actually live in the form of regular performances. If the protection of performers is extended to the performance of such expressions of folklore, the performances of such expressions of folklore also enjoy the statutory protection. The same can be said about the protection of the rights of producers of phonograms and broadcasting organizations in respect of their phonograms and broadcasts, respectively, embodying such performances.

4. Efforts at International Forum

The WIPO and UNESCO convened a working group in Geneva in 1980, followed by another in Paris in 1981, to study the Draft Model Provisions intended for national legislation prepared by WIPO, as well as possible international measures for the protection of works of folklore, and, the outcome of those meetings was submitted to a Committee of Governmental Experts convened by WIPO and UNESCO, at WIPO Head Quarters in Geneva in 1982, which adopted “Model Provisions for National Laws on the Protection of Expressions of Folklore Against Illicit Exploitation and Other Prejudicial Actions” (<http://www.wipo.int/edocs>).

Illicit exploitation of an expression of folklore is understood in the Model Provisions (section 3) as any utilization made both with gainful intent and outside the traditional or customary context of folklore, without authorization by a competent authority or the community concerned.

Other prejudicial actions detrimental to interests related to the use of expressions of folklore are identified by the Model Provisions, as four cases of offenses subject to penal sanction (i) Any unauthorized utilization of an expression of folklore where authorization is required, (ii) Using expression of folklore beyond the limits, or contrary to the conditions of an authorization obtained (iii) Creating the impressions that what is involved is an expression of folklore when, in fact, such is not the case (iv) Expressions of folklore are distorted in any direct or indirect manner “prejudicial to the cultural interests of the community concerned” (para 39 to 42 of the WIPO document on Model Provisions, section 6).

The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore as an outcome of Eleventh Session of WIPO held at Geneva in June, 2007 is currently considering the protection of traditional cultural expressions/ expressions of folklore (TCEs/EoF) through two related and complementary processes:

- consideration of an agreed List of Issues concerning the protection of TCEs/EoF; and
- consideration of a draft set of “Revised Objectives and Principles for the Protection of Traditional Cultural Expressions/Expressions of Folklore” .

India although a signatory member of WIPO still has been slow in responding to the need of protecting traditional knowledge.

5. Steps by India for Protection of Traditional Knowledge

As a beginning India is making special effort toward fostering relation with other countries for the exchange of information related with traditional knowledge of medicines. India has cultural agreement with more than 88 countries, political confederation and cultural forums (Annual Report, 2005-06, Ministry of Culture). As per the Annual Report, 2001 of Indian Systems of Medicine & Homoeopathy, 6500 folklore which are related with local Medicare, medicinal plants have been identified. The Council during the reporting period has developed a database of folk information collected during ethno-botanical surveys.

National Innovation Foundation (NIF) was set up in March 2000 with a corpus of US dollar 5 million by Department of Science and Technology of India. NIF would develop a national register of inventions and innovations, link innovation, investment and enterprise, connect excellence in formal and informal sciences, set up incubators and help in changing the mindset of the society to ensure respect, recognition and reward for the grassroots innovators (Gupta, 2001).

Budget Allocation: Government has allocated funds to promote and support documentation, research and survey, to record and to assist the preservation and development of the artistic and craft heritage and manifestations of tribal and rural India, that face the threat of extinction as a consequence of rapid development; of tribal art and crafts and other facets of tribal culture by all other means. The budget outlay and projected outcome for year 2006-07 is given in Table 1. Fund Allocation for the purpose is Rs 15 Crore.

Table 1: Outcome Budget 2006-07

Name of Scheme	Objective/outcome	Projected Outcomes
Zonal Cultural Centre	Projecting culture kinships, which transcend territorial boundaries and to deepen awareness of local culture	
National Culture Exchange Programme	Exchange of artists, musicians, performers& Sculptors etc. between different regions	Strengthen and promote National integration
Documentation	Documentation of various folk & tribal arts forms particularly the vanishing art forms for their perseverance	Preservation of folk traditions and possible creations of IPRs

Source: Budget (2006-07) of Ministry of Culture, Government of India

As per the summarised outcome budget, it is clear that government has taken cognizance of the importance of conserving the cultural heritage and protecting the interests of the folk artists and folk traditions. However keeping in view the magnitude of the task the outlay of RS 15 crore may not be sufficient. Still a small beginning is being made.

Traditional Knowledge Digital Library: As a major step toward the protection of traditional knowledge and folklore, National Institute of Science Communication and Information Resources (NISCAIR) India, has developed Traditional Knowledge Digital Library.

A National Register of Grassroots Technological Innovations and Traditional Knowledge has been developed for the purpose by National Innovation Foundation. Alongside, there would also be a separate people's knowledge database (PKD) which would act as repository of knowledge with direct inputs from Peoples' Biodiversity Register (PBR) as well as directly from knowledge holders or through collaborators. Even those practices, which are not considered acceptable for national register, may be kept in the PKD so as to understand and benchmark the way society thinks about various issues. It will also help in targeting certain specific beliefs, which may even need to be questioned and changed (http://nifindia.org/nif_update.rtf). The Union Cabinet (Government of India) approved a proposal to sign an agreement with patent offices across the world to allow patent examiners to access (Hindu June 30, 2006), the Traditional Knowledge Digital Library (TKDL) created by the on India's traditional medicine systems. Once the pact is signed, the patent offices across the world will be obliged to refer to the TKDL to assess whether the remedy is new or is based on knowledge already available in the Indian systems of medicines, as and when scientists apply for such patents.

NISCAIR has collected data on 65,000 formulations in Ayurveda, 70,000 in Unani and 3,000 in Siddha and put in the TKDL database. The data relating to only 7,000 formulations each in Unani and Siddha, and 1,500 postures has to be included in the data base. The focus so far had been on formulations known to the

traditional systems of medicine; efforts are now under way to have similar digital libraries for other types of traditional knowledge such as traditional architecture, food practices, biodiversity and folklore. Work has recently begun on putting together the digital libraries on architectures and food practices. (Hindu June 30, 2006).

The Indian library contains information on 36,000 formulations used in *Ayurveda* — India's 5,000-year-old system of traditional medicine. The information presented in English, French, German, Spanish and Japanese was created in a format accessible by international patent offices to prevent the granting of inappropriate patents. The TKDL set up in India has already documented the public domain knowledge on Ayurveda (36,000 slokas) in a digitised format and the information is available in English, Spanish, German, French and Japanese (Padma, 2004). The digital library also contains detailed information about other forms of traditional knowledge such as painting, textile, craft, dance, music, architecture, design. In 2001, India developed a system for classifying resources used in traditional knowledge. International Patent Classification (IPC) has agreed to include the Indian system in its own classification, which will be expanded to include about 200 sub-groups of drugs derived from Indian medicinal plants. The Indian digital library of traditional knowledge has also attracted attention from other regions. Representatives from South Africa, the Commonwealth West African Education Delegation, the African Regional Industrial Property Organization and International Property Office in Singapore have discussed with India the possibility of creating similar databases (Financial Express, Jan 4, 2005).

6. Research Design

The review of the measures taken by the government of India, WIPO and UNESCO as mentioned in previous sections, clearly shows that government of India and world bodies have centred their attention on one dimension, i.e. recording and publicising the traditional knowledge. The present research has following twin objectives:

- To take e-government approach for management of IPR issues in folklore
- to propose a model for converting folklore into source of economic growth

It may be noted here that to the knowledge of authors, no research has been conducted on managing intellectual property vested in traditional knowledge through e-government approach. Hence much of our research here is in form of propositions. The analysis is basically qualitative and the paper is conceptual in nature.

The first objective is attempted at with the proposed model in the background and efforts made by various authorities. The hypothesis is that there is need to protect and promote traditional knowledge in folklore and that major threat of infringement on traditional knowledge is due to information and communication technology (ICT). We propose that to combat the threat the governments should use IT as a strong shield and a weapon which will also help in protecting and promoting the traditional knowledge. For purpose of analysis the protection of IPR in folklore has been looked at from following dimensions:

- Conservation of folklore: this will involve two major activities, (i) collection of information and (ii) Proper Recording of information collected.
- Protection of folklore: this will involve documentation and dissemination of information about folklore and traditional knowledge contained in them. Government of India is already seized with this aspect as is clear from the establishment of Traditional Knowledge Digital Library.
- Promotion of folklore: this will involve establishing ownership claims at the right forum and framing action plan for commercial utilisation of the knowledge by the government.

These three dimensions ultimately will converge into generating major gains to the two major stakeholders, the societal groups as well as to the national economy.

7. E-Government Approach

It is at this point that we propose the adoption of e-government application in effective and efficient implementation of all the activities involved. E-government is an opportunity to take advantage of the increased productivity at low costs by using information technology. E-government can enhance the citizen's access to government information and services and can provide new ways to increase citizen participation in the democratic process. Implementation of e-government requires provision of hardware, networking, software, and re-engineering of the procedures for better delivery of services (Geetika, Pandey, 2006). The most common areas of e-government applications are electronic commerce and business regulations, taxation and revenue, law enforcement and courts, digital democracy, agriculture, health, transport and education. IPR is still an unexplored area as for as advantages of e-government in a holistic manner is concerned. We propose here that IPR management will be very effective and productive with the introduction and implementation of e-government in this area. Even the *National e-governance Programme (2006)* views e-government as an application of Information Technology in the processes of Government functioning in order to make it Simple, Moral, Accountable, Responsive and Transparent (SMART) Government.

Therefore it is strongly recommended here that government includes management of IPR in the ambit of e-government programme.

- (i) *Collection of folklore* : This is the first major task and a gigantic one. It will involve two aspects, one, identification of folklore to be collected and two, identification of source of information, which will further require segregating them category wise, i.e. medicine, culture, methods, art, history, etc. and ensuring that information is not duplicated since multiple source may carry same folklore. Sometimes more than one community may carry the same folklore, may be in different local language therefore it will be desirable to search for all possible informants. This will require specialised kind of professional and personal skills on part of the investigators (Bynum, 2001, Kothari 2002). So far this task is being done by and large manually but that makes is excessively time consuming and slow. It is proposed that use of web based sources may be made to speed up the process of identification and segregation of information.
- (ii) *Recording and documentation*: IPR procedures necessarily require complete documentation of information claimed/to be claimed under IPR. This should incorporate clear information about the original source of the folklore so as to determine the list of real beneficiary of the gains accruing from utilisation of this information. This is one area where IT is most useful for quick creation of large and complex databases. Government of India has recognised this aspect as is evident from the establishment of Traditional Knowledge Digital Library.
- (iii) *Dissemination of the information*: the utility of IT based tools in dissemination of information can not be over emphasised. In fact the threat to traditional knowledge has become more evident due to this very characteristic of information technology. Hence it is essential to disseminate the information regarding IPR aspects of folklore. That may include the efforts like creation of websites, digital library, encyclopaedia and the like. The information should be disseminated through multiple sources so as to extend the reach.
- (iv) *Establishing ownership claims*: the proper documentation and ease of dissemination of these databases makes the claim easy and fast. The communities, tribes and societies who have traditionally held and maintained the folklore can be benefited only when a system is evolved in the IPR regime to accord ownership rights to the nation. This will minimise any possibilities of unlawful aggression and commercial exploitation by individuals and it will be possible for the country to extend the rewards to the communities for carrying the folklore over the generations. Here one thing may be noted that we are talking in terms of collective rights, cultural heritage and traditional knowledge hence, ownership can not be individual it is by very nature collective. We propose that ownership should be with the government of the country and not with the small societal groups who

have been identified as source of carrying this knowledge. The logic is that same information/folklore may be carried in different parts of the country, in various languages, therefore ultimately the government should be given the prerogative of ownership in the interest of the societal groups as well as country. This is also necessary to ultimately achieve the objective of converting this knowledge into an economic resource.

- (v) *Commercial Utilisation*: Hence in the (V) leg it is recommended that provisions should be made to utilise the folklore and other forms of traditional knowledge as other national resources. Just like trade in minerals, plants, products, software, trade in folklore should also be allowed; while the ownership due to specialised character of these resources should rest with the nation and not any individual. This activity will also include identification, exploration, creation and exploitation of market, within the country as well as abroad.

The process through which e-government approach facilitate these five activities to support the collection, protection and promotion of folklore is illustrated in model given in Figure 1. The model shows what gains are likely to accrue and how this gain will occur to all the stakeholders.

Major Gains can be divided in three broad categories:

- *Financial*: Once the government establishes ownership claims the two major stake holders, the communities carrying the traditional knowledge through the folklore mode and the nation as unit shall be sufficiently rewarded in terms of financial gains, increased revenue generation by conversion of a cultural resource into economic resource. Government will be in a strong position to safeguard the interests of these communities or societal groups against any unauthorised commercial or any other type of exploitation of the folklore. Beside the fact that there betterment will naturally add to the wealth of the country, royalties on authorised use may also be generated through export of this knowledge.
- *Recognition*: Keeping everything aside the recognition that will entail the process itself is a great achievement. We may keep on boasting of our rich cultural/social heritage but in modern times when information and communication technology (ICT) is so advanced, the need of hour is to make it known with proper authentication. E-government approach to managing, conserving, protecting and promoting IPR will go a long way in this direction.
- *Growth*: The use of ICT in IPR will thus contribute to social-economic growth of the country in its own capacity. For overall economic development of a country it is imperative that its people are developed and get an equal opportunity to contribute to the growth of the economy. Therefore strategically designed IPR system for protection and utilisation of traditional knowledge in folklore is bound to contribute to national economy.

8. Model for converting folklore into economic resource

The model is proposed to have five legs and ultimate objective being national growth through growth of the community with the ideology of conserving, protecting, promoting the traditional knowledge in folklore. The model starts with leg (I) that is collection of folklore and converges at the proposal to treat folklore as national resource which can be utilised like all other natural / human made resources to generate revenue for the community and the country, besides protecting the national heritage. The five activities, i.e. collection, recording, dissemination, ownership claims and commercial utilisation have been shown in a sequential manner as five legs of the process because the primary relationship among these activities is sequential but it is important to understand that once the process begins all the activities will have be carried out simultaneously.

The documentation of information in folklore indeed is a very initial step although very important one. Mere documentation of the information is not sufficient as it safeguards against unauthorised use but it does not provide any leverage to the owner community. In the matters of cultural heritage, the

concentration of governments has been on conservation, preservation, protection and promotion of the same. The model presented here proposes a different outlook. The cultural heritage should be developed for the development of the nation and should be made a source of national income. There is a need to evolve mechanism and methods for commercialisation of this knowledge not with a view to exploit the same but to utilise the same in the interest of the humanity as a whole and nation in particular. We propose that application of e-government tools can significantly help in achieving this objective.

As has been discussed all these five activities can be carried out with greater efficiency in a cost effective manner with the help of ICT. Folklore being the object has been shown in a octagon because its management is proposed to have five legs. The direct relationship between two processes/activities is shown through continuous lines, whereas indirect relationship through dotted lines. Different lines are used to show how these activities are connected to the three major dimensions of conservation, protection and promotion. Outcome is shown by a different box and beneficiaries in circles.

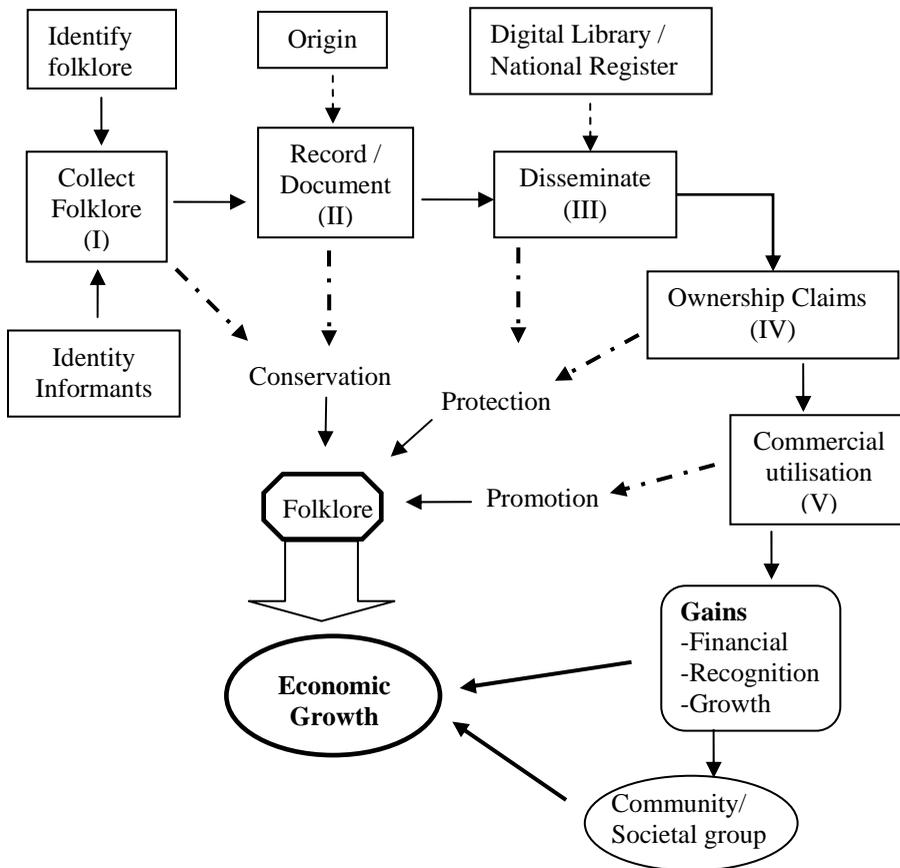


Figure 1: E-Government Approach to Management of Intellectual Property in Folklore

This will create multiple gains for all stakeholders. The utilisation of the accumulated knowledge will generate revenue, which can be further utilised for the benefit of the tribal groups and communities who carried the folklore with them. These five legs can be seen to be restrengthening the conservation, protection and promotion of folklore. Besides it will also add to the National Income and national growth.

4. Recommendations

The need for protecting traditional knowledge and especially those which is not documented like vested in folklore cannot be overemphasised. It has to be made an issue of national importance and should not be confined to only conservation and protection of cultural heritage. Government of India has already taken measures to collect and record the information in folklore but the speed is slow and in modern high-tech world, time is value. Secondly, the efforts so far are only guided toward protection from unauthorised use with some sporadic schemes to promote folk artists but this is not at all sufficient and will not give the desired results. A more concrete and comprehensive plan is required.

The dissemination of information regarding folklore should not be merely guided by cultural-socio-historical interests. They should be seen as significant source of economic interest. Although it may appear out of context to attach revenue generation capacity to cultural heritage but it is strongly recommended here to take it up at international level. Since individuals are already reaping profits out of unauthorised exploitation of this heritage hence the need is to do it by national bodies duly authorised to do so. It is strongly recommended here that proper utilisation of e-government be made to facilitate the country to be accepted as owner of the intellectual property vested in folklore and it should be duty of the governments to pass on the benefits accruing from this ownership to the development of the societal group or community which has been identified as the source/carrier of this knowledge. The model (Figure 1) proposed here can serve as broad guideline for the decision makers to not only safeguard the folklore and nurture them as sources of intellectual property by taking e-government approach but also utilise them for betterment of the tribes/communities who have carried them forward and to help them contribute to national growth.

5. Concluding Remarks

There are several instances of aggression on traditional knowledge in all parts of the world. Such aggressions create various kinds of losses not only to the owner community but also to the nation as a whole. India has a very rich heritage of traditional knowledge in the forms of folklore which if tapped properly may open a new source of foreign exchange for the nation and increase the number of copyrights and patents owned by the nation. This would definitely require a huge volume of concentrated effort at national, regional and world levels. Fortunately world bodies have already taken cognizance of the matter and the government of India has also taken certain initiatives on this account with neighbouring countries. Further, it is the responsibility of the governments to develop and put in order the mechanism for ensuring no conflict of individual, social and national interests. The procedures, rules and regulations will have to be framed; various missing links will have to be filled up; and moreover international acceptance on the issues will have to be earned. India may take a lead in this and pave way for a new IPR regime. It is to conclude that effective use of e-government mechanism may be made to facilitate the process.

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