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INDIGENOUS KNOWLEDGE ON TRADITIONAL AGARBATTI MAKING OF SUTRADHAR COMMUNITY, ASSAM

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ABSTRACT:

A case study was carried out in Dhupdhara area of Goalpara district, Assam during 2014-2016 to document knowledge base applied in production of traditional agarbatti by Sutradhar Community. Elderly persons including women of Sutradhar Community involved in making traditional agarbatti were interviewed. Traditional process of making agarbatti was documented. The bark of two plant species locally known as Laham [*Litsea glutinosa* (Lour.) C.B.Rob. syn : *Litsea sebifera* Pers.] and Makhunda (*Croton roxburgii* Balakr.) are main constituent of the agarbatti made traditionally by the community. The resin extracted from *Shorea robusta* Geartn. and *Boswellia serreta* Triana & Planch., is utilized as Sal Dhuna and Dhuna as the source of fragrance for preparation of traditional agarbatti. This agarbatti is specially utilized by local communities in puja and other festivals and have a local demand. The traditional agarbatti produce by Sutradhar community may be a viable livelihood option with technology support.

KEYWORDS: Traditional agarbatti, Sutradhar Community, livelihood.

INTRODUCTION:

Indigenous knowledge(IK) are a wide variety of practices confined to a locality and developed by the people through their activities that have been done for generations and also presently knows to do and evident to have enough flexibility to manage through adjust(Freemen, 1992; Melchias, 2001). IKs are prevailing in the traditional societies like a network of knowledge, beliefs, and traditions projected to conserve, communicate in context of indigenous interaction with culture and landscape. IKs reveal symbiotic response to geographical, genealogical, biological, and other indications of the people's relation with flora and fauna, land and water etc over time (Bruchac, 2014). Depending on the cultural traditions, values, beliefs, and world views of indigenous people, uniqueness in IKs may be observed and this uniqueness become more expressive while passed on within a group of people or a community into subsequent generations. Thus IKs facilitate indigenous people to survive, switch their natural resources to livelihood and the ecosystems adjoining to them. As such IKs are integral and useful part of the traditional communities to adopt and determine activities with natural environment and govern the economic, cultural and political organization (Briggs, 2005; Hoppers, 2001). Most importantly, IKs of the ethnic communities are still determining factor for their development activities and organizational structures. To them, IKs are the basis for fundamental management of community level problems through indigenous organizations.

Indigenous knowledge is also an important natural resource that can facilitate the development process in cost-effective, participatory and sustainable way (Warren, 1992). IKs have a continuous involvement in management and utilization of such bio-resources in several operational area of traditional societies such as, agriculture, medicine, art and architecture, music, folklore, etc. (Venkataraman and Swarna Latha, 2008). The basic component of any country's knowledge system is its indigenous knowledge. It encompasses the skills, experiences and insights of people, applied to improve their livelihood. As such role of IKs is almost pivotal to ensure development (Brokensha, 1980). Many researchers advocated the need of indigenous knowledge for development and also suggested to collect and document in a rational and systematic approach (Brokensha, 1980; Warren et al, 1993). Presently many of such traditional knowledge were going to be perished with time due to the entrant of scientific knowledge and therefore need for documentation (Choudhury, 2015; Hazarika et al, 2018). This study is also done to document such a traditional knowledge belong to Sutradhar Community of Goalpara district, Assam as the community is involve in production of agarbatti with their indigenous knowledge and resources. Agarbatti is burnt in temples and widely used during temple activities in Asia including India. The industry although has great market potentiality still remain at cottage level. No scientific works has

so far been done to promote incense sticks industry at regional or national level. Therefore, there is a need of scientific investigation to explore such Indigenous Knowledge (IK) among the ethnic communities of the states. It was said that traditional knowledge (TK) of the ethnic communities can also be explored for adhesive material used for making agarbatti (Hazarika *et al.*, 2018). The Sutradhar community people of Dhupdhara, Assam have been utilizing few plant species of making traditional agarbatti. Keeping this view, conducted field survey on the traditional agarbatti and natural plant based adhesive that are used to prepare traditional incense stick and utilized by Sutradhar Community of Dhupdhara.

MATERIALS AND METHODS:

Geographically, Goalpara district, Assam has occupied land area of 1,824 Km^2 including 36, 91527 ha forest lands. It is situated in between 25º53′-26º39′N and 90º7′- 91º5′ E. It is in the 30-50 meters elevation range. It is hot in summer with highest day temperature between 28 ° C to 40° C. Goalpara district is sharing border with Bongaigaon district to the North, Dhubri District to the west. In 2006 the government of India named Goalpara as one of the country's 250 most backward districts (out of a total of 640). It is one of the eleven districts in Assam currently receiving funds from the Backward Regions Grant Fund Programme (BRGF).

Economically about 90 percent of the population depends for their livelihood on agriculture. The important crops of the district are paddy, wheat, maize, oil seeds, pulses, cash crop like jute, vegetables etc. The district is also known for its production of areca nut and banana. A big market of banana has come up at Darangiri to which businessmen from all over India come. The agro climatic conditions of the district are conducive for various agricultural activities. Total population of Sutradhar Community in Assam was 62,032 as per population census 2001and were only 3.4 per cent of total population of Assam with a sex ratio of 1000:938. Average literacy is 67.2 (Census of India, 2001).

Dhupdhara area of Goalpara district was surveyed to explore traditional agarbatti making practices of the Sutradhar community during 2014-2015.The area namely Rangjuli, Sutarpara, Adarshapara, Kotha Kuthi of Dhupdhara and surrounding area were surveyed for traditional agarbatti making practices as livelihood option of Sutradhar community. Elderly persons including women involved in making traditional agarbatti were interviewed. A demonstration of entire process of making agarbatti starting from processing of materials was also recorded and video-graphed. Local name of plant species used for making agarbatti were recorded and identified by consulting the local flora (Kanjilal and Das, 1934).

RESULT AND DISCUSSION:

During the survey it was observed that women of Sutradhar community were mostly involved in making of their traditional agarbatti. This traditional agrarbatii is inevitable for local puja archana by the people of nearby areas and Goalpara, where the agarbatti makers traditionally use to produce agarbatti by utilizing phyto resources like Laham (*Litsea glutinosa* (Lour.) Roxb.) and Makhunda (*Croton ruxburghii*), Sal (*Shorea robusta*), Dhuna(*Bowselia sereta*) (Fig 2). *Bambusa tulda* (Roxb.) is use for making agarbatti sticks. The Sutradhar community of Dhupdhara, Goalpara produces incense sticks (Dhupbati) traditionally and sells them in the local market. Incense sticks they produce are organic and composition is also unique because they do not use charcoal powder and artificial perfume as is done by the other agarbatti industries. They consider it as their main livelihood option. The business among them is still continuing in an unorganized sector. More than 100 households of Sutradhar & Rabha community alone of Ranjuli, Sutarpara, Maslam and Kotha kuthi of Dhupdhara and some other people of Rabha community make traditional dhupbatti (agarbatti). This business creates job opportunity directly to more than 1000 people of the vicinity. A few new clusters are also now working with obsolete tools and techniques for production of hand rolled agarbatti in unorganized way. Presently, the agarbatti makers have to face problems of scarcity of Jigat. However, the status of this livelihood option of the community is now under threat because of their poor economic status, lack of exposure to the modern tools and techniques and proper guidance to compete the market with the established commercial agarbatti brands. Now a day's these agarbatti makers have to lose the local market demand as the commercial agarbatti are more attractive and cheaper in price.

The photographs of demonstration of the whole process of making traditional agarbatti, collection of raw materials and method of processing and preparation of agarbatti and sun drying and machining bundle and selling in the local market etc presented in Fig 3. One of such lady Mrs. Bhanu Sutradhar of Sutarpara Village of Dhupdhra demonstrated the whole process (Fig 3). The bark of the plant species are collected from the nearby area such as Boko and Chayagaon and sun dried bark are grinded in Ural. The powdered form of the bark after grinding in Ural is sieved through steel seive. Thus they produce laham from *Litsea glutinosa* bark and Makhunda from bark of *Croton ruxburghii*. Laham is nothing but a binder material of agarbatti and Makhunda is a mild arometic powder. Sal dhuna (Rasin) is also collected by exposing resin duct of the cambial layer of sal and dhuna plant in a cane from standing crop of the forest and plantation. The sal dhuna (resin) grinded in to powder. Makhunda and sal dhuna act as fragrance matrials for the agarbatti prepared by them. They do not use any charcoal powder for making agarbatti. Of all the constituents they use to mix Laham: Mukhunda: sal dhuna in a ratio of 1:2:1 and make a paste with

water. The paste is thereafter hand rolled over a wooden board into the bamboo stick to make agarbatti. The agarbatti thus prepared is sun dried pining onto banana stem sheath (Musa sp.). Sun dried agarbatties are made into bundle of ten by using bamboo thread known as 'tamal'. They do not use to pakage their agarbatti and sold to the local market. It was observed the locally prepared traditional agarbatti are sold in the shops and also the weekly markets of the vicinity and available in the Dhupdhara market. Shopkeepers sold a bundle of ten agarbatti at Rs 20.00 only and they purchased from the agarbatti maker at Rs. 10.00 for a bundle of ten agarbatti. An agarbatti maker could make 500 hand rolled agarbattis in a day as per information obtained from the interviews. And by selling the agarbattis could earn Rs. 500 in a day. However, in a week one can use two man days only for agarbatti making, the other days of the week he/she has to collect and process the raw materials for agarbatti making. Therefore, the economically the families involve with the agarbatti making are poor.

Presently, the area has become deficient in plant species used for adhesive (Jigat) in village patch forest and homesteads (Hazarika et al, 2019). Therfore, they need to purchase the materials from nearby area such as Boko & Chhaygaon at a high price and transportation cost needs to be born additionally. As such, the production cost of incense sticks has risen and ultimately may lead to failure of the market. Apart from this, they have to depend on sun to dry their agarbatti. Therefore, production has to be stopped during the long spell of rains. At this stage, they need support to continue this occupation as livelihood option.

In Tawang district of Arunachal Pradesh, a traditional technique of Agarbathi production has been developed by the people of Monpa community. They collect the plant bark of *Cinnamomum* spp, *Aquilaria malaccensis*, leaf and bark of *Juniperus recurva* and rhizome of *Veleriana jatamanshi* from the surrounding natural forest and make the Agarbatti as per their traditional techniques. These incense sticks are very much used in monasteries/ Gonpa (Singh & Saha, 2013).

CONCLUSION:

The traditional knowledge involves in making traditional agarbatti by the Sutradhar community of Assam need to be conserved and intellectual property right to be given to the community. The entire business can be augmented as viable livelihood option to them with application of modern tools and techniques.

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REFERENCES:

Briggs, J. (2005). The use of indigenous knowledge in development: problems and challenges. Prog. Dev. Stud. 5(2) :99-114. http://eprints.gla.ac.uk/1094/1/JBriggs_eprint1094.pdf

Brokensha, D (1980). Indigenous Knowledge Systems and Development", University Press of America, Lanham, USA

Bruchac, M. (2014). Indigenous Knowledge and Traditional Knowledge. In: Smith, C. (Ed.), Encyclopedia of Global Archaeology, 3814-3824. New York: Springer.

Census of India (2001). Assam Data Highlight: The Schedule Castes. Office of the Registrar General, India.

Choudhury, B (2015). Science in society: challenges and opportunities for indigenous knowledge in the present-day context, *Global Bioethics*, 26:(2):78-85, DOI: 10.1080/11287462.2015.1037140.

Freeman MMR (1992). The nature and utility of traditional ecological knowledge. Northern Perspect 20: 7–12 www.carc.org/northern_perspectives.php [Google Scholar] [Ref list]

Hazarika, P., Hazarika Protul and D Dutta (2018). Traditional knowledge for using plant resources as tooth brushing stick (datun) by the indigenous communities of Assam, India. *International Journal of Herbal Medicine*, 6(6): 22-34. http://dx.doi.org/10.22271/flora

Hazarika, P., Nibedita B. Dutta, S.C. Biswas, R.C. Dutta & R.S.C. Jayaraj (2018). Status of Agarbatti Industry in India with special reference to Northeast *Int. J. Adv. Res. Biol. Sci.* **5**(1): 173-186 DOI: http://dx.doi.org/10.22192/ijarbs.2018.05.01.024.

Hazarika, P., Das, D and S.C. Biswas. (2019). Jigat Production Potential of Few Cultivated Plant Species for Agarbathi Industry. *Int. J. Adv. Res. Biol. Sci.* 6(12): 93-101. DOI: http://dx.doi.org/10.22192/ijarbs.2019.06.12.012.

Kanjilal UN, Kanjilal PC, Bor NL, Das A.(1934). Flora of Assam. Avon Book Co., Delhi, 1934-1940, I-V.

Melchias, G. (2001). *Biodiversity and Conservation*. Enfield: Science Publishers, Inc.

Odora Hoppers, C. (2001). Indigenous knowledge and integration of knowledge system: Towards a conceptual and methodological framework,HSRC, Pretoria, South Africa.

Singh S. P. and Saha D. (2013). Status of aromatic plants and their prospects in incense sticks industries of Arunachal Pradesh, India. *Journal of Natural Sciences* Vol. 1(1), 53-65.

Venkataraman K and Swarna Latha S. (2008). Intellectual Property Rights, Traditional Knowledge and Biodiversity of India. Journal of Intellectual Property Rights, 13: 326-335.

Warren, D. M. (1992). Indigenous knowledge, biodiversity conservation and development. Keynote address at the International Conference on Conservation of Biodiversity in Africa: Local Initiatives and Institutional Roles, 30 August-3 September 1992, Nairobi, Kenya.

Warren, D.M., G.W. von Liebenstein and L. Slikkerveer (1993). 'Networking for indigenous knowledge', *Indigenous Knowledge and Development Monitor* 1(1):2-4.

Fig. 1. Location Map of Dhupdhara, Goalpara, Assam

Sal: *Shorea robuta*

Makhunda Plant
(*Croton roxburghii)*

Laham Plant
(*Litsea sebifera*)

Fig-2. Three plant species used for making of Traditional Agarbatti by Sutradhar Community, Goalpara, Assam

Different ingredients for making Agarbatti

Process of making of traditional Agarbatti

A moment of sun drying of the ingredients

The final product of traditional Agarbatti

Fig 3. Mrs. Bhanu Sutradhar of Sutarpara Village of Dhupdhra demonstrated the traditional agarbatti making process