



Beyond Gastronomic Traditions: Analysis of Foodstuffs GI in India

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Geographical indications (GIs) denote a strong link between product and place. The diversity of traditional knowledge, culture, geo-climatic factors and people skills are important to sustain GI in India. The *sui generis* legislation in India (GI Act 1999) recognises *foodstuffs* under the definition of ‘goods’. Foodstuff GIs in India are not only unique but are representative of the skill-set and practices associated with the rural communities. The aim of the present paper is to identify the common and specific challenges faced by the right holders of the selected processed foodstuff GIs in India. Further, the impact of foodstuff GIs registration on the product and community sustainability is analysed.

Keywords: Foodstuff GIs, Post-Registration Impact, GI Tourism, GI Promotion, Sustainable Rural Development

Food practices in India convey the social landscape, relations and human interactions. India’s own cultures, and her varied time periods in history also reflect the culinary and gastronomic choices and practices. The documentation of these aspects indicates not only the local, regional and cultural practices and the methods of preparations but also ancient culinary practices and the specialities. Foodstuffs hold the traditional knowledge attached to their preparations and also pertain to the geo-climatic features of the place. Few foodstuffs hold both spiritual and religious significance for the communities.

Indian food represents a blend of the ecological and traditional practices which include rural communities attached to them. The foodstuffs are the classic examples of products that have essential attributes, qualities and reputation of the geo-climatic features of the place of origin and the skills of the community. Geographical Indication is the first community based intellectual property rights (IPR) that were recognized. Socio-economic scholars opine that the concept of collectiveness in the right makes it stand apart from the other individual IP rights.¹ The collective actions of the producers set the stage for the protection of GIs.^{2,3} GIs are also known as club goods which have specific characteristics like (i) Only those producers who adhere to the specifications of the GI product are allowed to use the indication and (ii) The use of GI by one do not diminish the same for

another.⁴ The notion of GI for rural communities is more than just registration and economic gain. GIs serve as an identity. The product to place linkage provides a historical and cultural context as well.⁵

The relationship of food and people and place has been reviewed. According to Barthes’s Theory, food is a means of non-verbal communication than being just a mere commodity of consumption. The reason behind food being termed as a means of communication is that it has images, protocol of usage, taste and texture that represents its behaviour.⁶ Recent studies have linked food with identity. It is a symbolic message of one’s identity regarding the individual’s status, role, religion, race and nation.⁷ Studies highlight that traditional foods that represent a communities practice are always linked with four factors: time, place, knowledge involved and the cultural thread attached.⁸ Food traditions vary widely throughout and hence, there is a diversity of food that are specific to geo-climatic conditions and customary practices of a region.⁹ Some studies also indicate that traditional foods have attracted consumer markets since the industrialisation of food started.

The need for studies on the impact of GI registration in developing countries has been discussed.¹⁰ The agricultural and handicraft GI have been studied for the protection of traditional knowledge and local communities. Some of these studies are on Pokkali Rice and Navara Rice of Kerala, India¹¹, Jasmine Rice of Thailand, Gayocoffee, Toraja coffee of Indonesia¹², Indian handicraft products like

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AranmulaKannadi, Kondapalli Toys, Thanjavur paintings¹³, Chhau masks, Jamdani Saree of Bangladesh¹⁴ and Batik woven fabrics of Indonesia. The importance of state's intervention in GI protection was studied based on a comparison between Basmati and Rooibos tea in the developing countries. This work highlights the reasons for why state's intervention is important in order to make GI a local to global product.¹⁵ In some studies the regulatory framework for the evaluation of the effectiveness of the present GI legislations against GI counterfeiting in India has been discussed.¹⁶ The effect of GI registration of products has been studied in Japan for Miyagi Salmon, Jusankosan Yamato Shijimi, Yonezawa Beef, Maesawa Beef, Higashine Cherry, Aomori Cassis, Odate Tonbur.¹⁷ The impact of GI protection on the Mishima potato of Japan indicates the role the sustainable development.¹⁸ The post-registration impact studies in Indonesia¹⁹ are either with respect to general registered products or specifically the coffee sector.²⁰ Existing studies also emphasised on the importance of GI legislation and its significance with relation to handicraft products. The study also highlights how the GI handicraft products can contribute for the sustainable development of the communities in the developing countries like India, Thailand, and other South Asian countries.²¹ Organisations such as the Food and Agricultural Organisation (FAO) recognise GIs as one of the tools of sustainable development. FAO highlights GI sustainability strategies that include local community engagement, raising awareness, capacity building of the GI producers so that the 2030 Sustainable Development Agenda are achieved.²² A few studies from the states of Assam and Kerala discuss the significance of GI in tourism development. The Muga silk of Assam was analysed for the potential of handicraft goods to attract tourists. The study suggested that a Muga rearing farm can offer packages that involves tourists in all the steps of Muga manufacturing. This package can be offered during the Muga rearing period. The steps that can be enhance the craft tourism in Assam and how tourist attraction can lead to economic development and enhancement the livelihood of the communities was indicated.²³ Another study on the analysis of GI products of Kerala and tourism, defines the term 'Rural tourism' as any form of tourism showcasing the life, art, culture and heritage of a rural location. The study highlights that GI products can be utilised

as unique souvenirs for national and international tourists. Further, the significance of GI in protection of the traditional knowledge of the communities was emphasised.²⁴ Apart from handicraft products, the significance of enhancing growth of the local and rural gastronomic tourism has also been suggested.²⁵

The review of the literature indicates lack of in-depth studies on the impact of GI registration on processed foodstuffs, especially with a developing countries perspective. Further, there are no impact studies of registration on GI foodstuffs. In 2008 the first GI foodstuff was registered in India. Since then even after a decade there are no research studies on the impact of GI registration and sustainability in India. The existing literature relevant to Indian GIs is about the significance of GI protection, the statutory challenges and implementation studies on handicraft GIs.

The present study the analyses the implementation of the GI registered processed foodstuffs in India. In the first part of the paper the methodology adopted for the research is provided. In the second part, the findings are discussed related to the common and specific challenges faced by the producers and the authorised users' post GI registration. Various promotional events that include tourism related and specific events were also analysed to identify approaches for promoting the foodstuffs GIs in India. In the final part of the paper, the impact of GI registration on sustainability of the products and the communities are discussed to identify steps for achieving sustainability through GI protection.

Materials and Methods

In this study, two research questions are addressed; *first*, what are the challenges faced by the producers and authorised users post registration of GI foodstuffs and *second*, to what extent existing policies assist in their promotion and marketability. The study is qualitative in nature. The research design involves the use of *phenomenology*. Phenomenology is a type of research design where the individuals experience a phenomenon and share their narrative about the impact of such phenomenon.

The phenomenological research started with selection of the sample for the study. In order to appreciate the implementation of GI registration 17 registered Indian GI foodstuffs were selected for the analysis. This includes the first one, Dharwad

Pedaand those registered till the year 2022. GI whose registration is pending are not considered for the study. The selected GI foodstuffs belong to different states of India such as West Bengal, Madhya Pradesh, Karnataka, Tamil Nadu, Telangana, Odisha, Goa, Andhra Pradesh, Rajasthan and Gujarat. Dharwad Pedha that has a 175-year-old practice is the first foodstuff to attain the status of registered GI in 2008. All the selected GIs have a specific uniqueness like traditional knowledge, religious importance, cultural factors and natural resources. The responses shared by the authorised users of the selected GI foodstuffs was collected. Questionnaire based interviews of the authorised users/the producer communities were conducted at their respective work sites to obtain their experiences post registration. Based on the responses shared the impact of GI registration on the sustainability of the selected GI foodstuffs and the communities was analysed.

The statement of case (from Part A of the GI-I form) that is available from the product registration at the GI registry website has been identified. The information about the geographical place of origin, uniqueness of the product, collection of information related to regio-cultural aspects and historical proof of origin, information on the type of bio-resources used, people skill, quality maintenance and quality check were analysed to identify the nature and scope of the documentation process. A pilot study was undertaken with respect to three GI foodstuffs that include BardhamanSitabhog (opined as a favorite of Goddess Sita from the Ramayana), BardhamanMihidana and Joynagarer Moa (started as an early 18th century offering to Goddess Lakshmi during Lakshmi festival), the GI foodstuffs from the state of West Bengal. The site visit included the rural villages involved in the processing and production of the GI foodstuffs, units where the proprietors marketed their products. Individual queries were posed to the proprietors and the producers and follow up visit was undertaken to gain further insights.

Based on the pilot study, the final questionnaire with five modules for interview analysis of the remaining GI foodstuffs was prepared. The questionnaire utilised in the study was an open-ended questionnaire as this is the first such explorative study on the GI. The first module of the questionnaire dealt with the basic details with respect to a category of stake holders (the proprietors/authorised users/producers/agencies) of the relevant GI foodstuffs. The second and the third module dealt with the

production and marketing details of the GI foodstuffs and the process of application for GI registration of the products respectively. The post registration expectations from the proprietors and the users was analysed utilising queries of the fourth module and the queries about the future challenges and the perspective of the future generation with regard to the product and its market were analysed based on the responses for the fifth module.

Field visit and interviews were undertaken between the four-year period of 2019- 2023. Eighty right holders were interviewed across the seventeen GI foodstuffs. The data collection and the fieldwork included authorised users, producers and proprietors. The interview sites include different cities, towns and villages in India. Each field visit was for a span of two-three days so that the collection of responses allows the time for respondents to interact. All the right holders were interviewed during their non-working hours. Limited interaction was also undertaken during the production, manufacturing and packaging to understand the challenges. Due to COVID-19 outbreak follow up was done by telephonic and online mode. Field survey was undertaken to analyse how promotional events impact foodstuffs GIs. The survey was conducted at the World Mithai and Namkeen Convention, 2021 at Jaipur, trade fairs, rural exhibitions and workshops. All the interviews and field visit interactions were conducted in the vernacular languages that had helped the stakeholders to interact and share their experiences as well.

After the information was collected, the data was assembled into three aspects; common, specific challenges and the information regarding various promotional strategies and events pertaining to the selected GI foodstuffs. The respondents shared a wide array of information. Along with the common challenges, for each selected GI foodstuffs the specific challenges were identified. Likert scale analysis was applied to each of these aspects to determine the impact of GI registration. The variables used in the Likert scale expectations for the authorised users/ the communities of the selected GI foodstuffs were numerically assigned according the Likert scale i.e., 1: Strongly Effective, 2: Effective, 3: Neutral, 4: No effect, 5: Strongly having no effect. The analysis was utilised to map the relevant parameters of sustainable development goal (SDG) [as proposed by the United Nations (UN)]. The parameters corresponding to the product sustainability

and community sustainability vis-à-vis corresponding individual SDGs were considered.

Results and Discussion

Nature and Scope of Right Holder

GI registration is recognition for the collective rights in a socio-economic context. Hence, any analysis of GI has to be realized in the context of community rights. So, the impact study on GIs is not only limited to the recognition of the producers under the law but also extends to the community as well. Proprietor of GI is a necessary term that needs to be understood from the post-registration perspective. Section 2(n) of the GI Act defines a registered proprietor *as an association of persons, or of producers or any organization*. Hence, the ambit of statutory definition includes proprietorship of the community itself or any organization that represents the community’s interest (according to the definition of ‘applicants’ under Section 11(1) of the GI Act, 1999). However, a joint proprietorship of the association of producers and any organization that represents the community’s interest and also recognized by the government can be there in practice. GI foodstuffs like Odisha Rasagola, BardhamanSitabhog and BardhamanMihidana have joint proprietors i.e., the Association of the producers and an administrative organization recognized by the state. GI foodstuffs like Joynagar Moa, Hyderabad Haleem, GoanKhaje, RatlamiSev, BikaneriBhujia, KovilpattiKadalaiMittai are all registered with proprietor as the association of producers. Dharwad Pedha is recognized under the proprietorship of a Trust that mainly represents a Hindu Undivided Family (HUF). The members of the family hold the traditional knowledge of the foodstuff and protect

it as a trade secret. The proprietorship for PalaniPanchamritham and TirupathiLaddu belongs to the temple deity and the temple trust respectively. These are religious products and all their corporate addresses are registered in the same way, hence the GI registration also took place considering the trust and the deity to be a juristic person. Even government bodies are registered proprietors in India like BanglarRasogolla. The understanding about variation of proprietorship of GI foodstuffs is necessary to distinguish it from authorized users. It is observed that the promotional events positively impact the registration of authorized users of the community.

Post Registration Challenges: Proprietors and Authorised User Community

The producers and the authorized users face a wide range of challenges such as ecological and environmental changes, resource deficiencies and the market economics. The common challenges identified are *lack of awareness among the consumers, counterfeit, lack of skilled human resources, and conservation and sustenance of GIs*. The specific challenges identified are *shelf life of the products, shortage of raw materials, seasonal employment of the producers, challenges arising due to weather conditions, no value addition and high maintenance cost of the product and lack of promotion and marketing strategies*. Figure 1 is a schematic representation of the challenges faced. The specific challenges are analysed elaborately followed by the analysis of the common challenges.

Raw Material and Shelf Life Considerations

The insufficient availability of raw materials and environmental factors in the rural areas are a specific challenge for the production of foodstuffs GIs. “*In the*

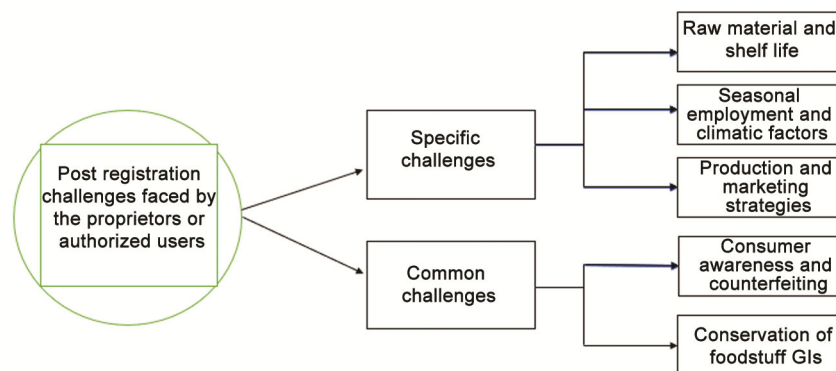


Fig. 1 — Schematic diagram showing categorisation of challenges faced by the proprietors and authorised users post registration of Foodstuffs GIs

next few years there will be winters in West Bengal without *Nolen Gur* and *Joynagar Moa*”, claimed by a 59-year-old *Joynagar Moa* authorised user during the group discussion. This was endorsed by the other producers and authorised users as well. There is a shortage of *Nolen Gur*, the main ingredient for *Joynagar Moa*. *Joynagar Moa* is made of *Khoi* (puffed rice made from a specific variety of rice known as *Kanakchura Rice*), ghee, cardamom powder, dry fruits and the molasses made from date syrup vernacularly known as *Nolen Gur*. *Nolen Gur* and *Khoi* are the two prime ingredients of *Joynagar Moa*. The *Gachhis* and the *Moa* producers mentioned that over the past two decades they observed the disappearance of date palms and exceptional reduction in the date syrup production.

There could be various factors for the dwindling of date palm trees. The *Gachhis* and the *Moa* producers attribute environmental changes as the only cause for reduced date syrup production. Delay in the commencement of winter, sudden rainfall during the winter season, deforestation are the identified reasons. The *Moa* producers are sceptical about the continuation of the production process. The molasses made from the date syrup is the most important ingredient for the binding of the *Moa*, whose absence or variation in the quantity leads to the change of taste of this winter delicacy.

A very popular ingredient of Indian foodstuffs i.e., the *chickpea flour* (*Besan*) is used for production of various kinds of foodstuffs GIs like *GoanKhaje*, *RatламиSev*. The local supply chain in rural areas for the raw materials is becoming less. The traditional process of *GoanKhaje* involves the use of chickpea flour grown in North Goa that has a specific texture. In the interview analysis producers revealed that the low yield of chickpeas in Goa is affecting their manufacturing units. In the last 15-20 years Goa has seen a drastic change in the climatic conditions and has become hotter with less rainfall. The shortage or unavailability of the raw materials is not the only challenge faced by the producers. Poor and limited shelf life of the product or the raw materials is a hurdle for the expansion of the market. It is relevant to note that the documentation of people’s biodiversity register under the Biological Diversity Act 2002 is a comprehensive documentation of not just the resource but also cultivation condition and livelihood aspects.²⁶ The PBR could be a good mechanism of documenting the practices associated with GI. In this way there is a possibility of

specifically protecting the gastronomic traditions. Such documentation has helped India in preventing biopiracy.²⁷

Shelf life of the food products is a key factor necessary to increase market value of GI. The communities incur huge loss and a shrink in the market demand. The primary issue of limited shelf life period is essentially due to the raw materials (few of the ingredients) used. The product by itself can also have a low shelf life. The shelf life of the product or its raw materials is dependent on various factors as illustrated in the Fig. 2.

The majority of the foodstuffs of this study are traditional Indian sweets. ‘*Milk*’ as a key ingredient in the conventional cuisines. *Chhena* (cottage cheese) or *khowa*, the derivatives of milk, are typically used. *Chenna* is the key ingredient common to *Bardhaman Sitabhog*, *BanglarRasogolla* and *Odisha Rasagola*. All these foodstuffs have a market demand across the year that increases during the regional festivals and associated events. The *Odisha Rasagola* has a huge demand during the famous *Chariot festival (Rathayatra)* of Lord *Jagannatha* where, a day is also celebrated as *Rasagola day* that forms a part of the rural folklore. Similarly, for *BanglarRasogolla* and *BardhamanMihidana* the demands get multiplied during the famous *Durga Puja* of West Bengal. The link of these foodstuffs GIs with the festivals does not limit their significance just with their gastronomic values but also binds emotions. The events such as the *Rathayatra*, a religious festival in Orissa, brings several lakhs of people from several countries and this forms the basis of recognition of foodstuff GI. This serves as an example of how tourism can positively impact foodstuff GI.

SrivilliputturPalkova is another milk-based foodstuff GI registered from Tamil Nadu. It is

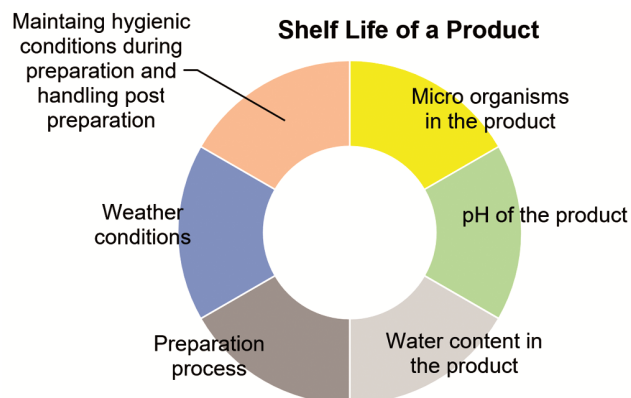


Fig. 2 — Factors affecting shelf life of a product

noteworthy to mention here that, Palkova loses its' shelf life sooner if packed in an air tight container. The shortage of air within the air tight container leads to the growth of mould on the foodstuffs. Hence, Palkova wrapped around butter papers are finally packed and sold in paper boxes. The limited shelf life of the product and the packaging issues hinder its export. While many commercial enterprises have started online business of Palkova there are challenges in increasing the shelf life and thereby the packaging of the product.

The producers of BardhamanSitabhog, Bardhaman Mihidana and BanglarRasogolla expressed that during festival events the demand for these sweets is higher compared to other times. This requires more units of production but within a fixed time. The workers face a tremendous challenge on estimation of numbers and precision. Hence, maintaining the consistency of the texture of these sweets remains a severe constraint due to lack of technological support. Lack of precision and estimation during bulk production is also another factor leading to less shelf life of the product.

Climatic and Seasonal Factors

The foodstuffs are restricted to a particular season due to cultivation and availability of the raw materials. Environmental and climatic changes can affect the harvest leading to the shortage of the raw materials. The shortage of raw materials is raising a concern of sustenance of the foodstuffs itself. TheBanglarRasogolla, Odisha Rasagola, Bardhaman Sitabhog, BardhamanMihidana, RatlamiSev, Goan Khaje, and JhabuaKadakhnath Black Chicken Meat are the foodstuffs GIs that are facing challenges due to climatic conditions. High moisture content in the air during the rainy season affects the quality of the milk-based foodstuffs GIs. This is also the case for RatlamiSev and GoanKhaje which become damp and moist. The authorized users, hence, prefer to stop production of GoanKhaje in the monsoon months. The proprietors of Banglar Rasogolla, Odisha Rasagola, BardhamanSitabhog, Bardhaman Mihidana indicate that the shelf life of *chenna* decreases and due to drastic change in the climate, the preservation of the foodstuffs is becoming tougher following the traditional practices. The events such as World Sweet and Namkeen Festival highlight the need for technological interventions and strengthening the rural linkage for the sustenance of GI. Further, the

promotion of seasonal employment for foodstuffs GIs has been identified as an important aspect. Hyderabad Haleem is a foodstuff that is traditionally consumed in the month of *Ramzan* due to its' nutritional value. It is significant after fasting for the whole day. Hence, the shops of the authorised users only produce Haleem in the month of *Ramzan*. From the first day of *Ramzan* till a day before *Eid* these authorised users produce Haleem involving huge number of people. The authorised users mention that except for this time, there are no livelihood means for them during the remaining part of the year. Promotion of a sustainable model could help in tiding over the non-production times.

Promoting Marketing through Various Events

As the production is limited to the boundaries of the place of origin there is a need for greater promotion at the appropriate events to increase the marketability of the foodstuffs GIs. The high maintenance cost and no value addition of the product is a specific challenge to JhabuaKadakhnath Black Chicken Meat. Regardless of the GI tag, this challenge is a hurdle for the sustainability of the community. The high maintenance cost or the high production cost of the foodstuffs is expected to bring good returns for the communities that are sufficient for their sustenance. The producers or the authorized users rely largely on the state for the promotional activities and implementing feasible marketing strategies to obtain a proper remuneration. There is a need for more prominent promotional events for domestic use as well as export to other countries. *The proprietors and the authorized users mentioned that there is a growth of counterfeit products in the market, riding on the goodwill of the registered foodstuffs GIs. Due to remoteness of the location, the marketing strategies and facilities are very poor. Post 2016, i.e. after the National IPR Policy came into force, there have been initiatives for promotion of the GIs. Interview analysis with the proprietors and authorized users revealed that there is a benefit of such initiatives. Our analysis revealed that the ongoing promotion of GI at the national level such as the GI store at the Goa International Airport at Dabolim in 2018-19²⁸, World Mithai and Namkeen Convention conducted annually help improve their business.*

The common challenges identified for all the GI foodstuffs that mainly affect the market and

sustainability of the GIs are consumer awareness and presence of counterfeit products and issues with conservation of GIs

Consumer Awareness and Counterfeiting

The sustenance of GIs is dependent on the market demand and consumers play a significant role. GI market is a symmetric market and consumers make an informed choice due to the defined characteristics of the product. Product reputation and proper information of a product helps to achieve a successful market. The protection of reputation on one hand is contributing for consumer welfare (by providing authentic products with proper information and allowing them to make informed choices in the market) and on the other hand it is protecting communities' or producers' interests.

Majority of the foodstuff GIs belong to either rural or mohfussils (semi-urban) areas where the economic growth of the region is slow. Therefore, people prefer the same product with lower price for their daily consumption. The authorized users or the producers who are part of the proprietor organization lose their customer base if cheaper products are selected. For example, GI tagged BanglarRasogolla costs Rs. 25 per piece if the quality is maintained according to the specifications in the application form. It is an GI for the whole of West Bengal except the district of Darjeeling. In a state like West Bengal where 72.03% of the total population belongs to the rural landscape, it is infeasible to expect consumers to pay such a high price. Some producers and the authorized users have also taken few initiatives to improve consumer awareness. These include packaging of the foodstuffs the GI logo (specific for the product). This is similarly also being practiced for RatlamiSev, Banglar Rasogolla, GoanKhaje, Joynagar Moa, and BardhamanSitabhog and BardhamanMihidana. For BardhamanSitabhog and BardhamanMihidana, SilaoKhaja, and few among BanglarRasogolla, Bandar Laddu, it was observed that the GI certificate is being displayed in their shops or stores. While these initiatives at the individual level or at the community level are important there is a need to build awareness among a large number of consumers. The proprietors of different GI foodstuffs had emphasized repeatedly that state's intervention is necessary to attract the attention of the consumers regarding the significance of GIs and its' premium pricing. Counterfeit of GIs is another market related challenge faced by the proprietors in the recent times. A case

of merchandising a foodstuff GI with false representation at a place that is 100 km away from the place of origin is a real challenge that the producers face. Proprietors mentioned that official events of the government and other promotional events help them in some ways to protect their products and helps distinguish from counterfeit.

The proprietors also highlighted that for handicrafts GIs, government owned emporiums are selling the product, for agricultural products also government is taking measures through organizations like Agricultural and Processed Food Products Export Development Authority (APEDA). These initiatives have helped the consumers to make a choice for the authentic products. The analysis of the interview responses and the field study indicates that counterfeiting is a serious challenge that is faced by the community.

Sustainability of Foodstuff GI: Respondents Expectations and the Way Forward

GI protection in India has a socio-economic basis. Hence, fostering GI products and the community is relevant. The analysis of the effects of GI registration on the expectations of the producers interviewed was categorized into various parameters. These parameters include reputation, enhancement of the product, premium pricing, awareness among the consumers (in domestic market), increase in market potential (export market), actions against counterfeiting, state's support for the livelihood of the producers and registration of the authorized users. The qualitative data gathered from the phenomenological study was used to identify numerical parameters by the Likert scale as shown in Table 1. The qualitative information collected from the interviews has been useful to study the effects of GI registration. This is first approach to utilize this scale to analyse the impact of GI registration in India. This method had been implemented successfully in a study on GIs in Japan.²⁹ In the previous section of this paper the challenges faced by the communities' post GI registration have been discussed elaborately. On the basis of both the quantitative and the qualitative data this section analyses the sustainability of foodstuff GI.

The Likert scale analysis in Table 1 indicates that among the products GoanKhaje showed a greater reputation enhancement. The authorized users highlighted that this is due to the tourism industry in Goa. Goa's tourism industry attracts foreign tourists mainly from the European Union or other European

Table 1 — Effects of registration on the selected GI foodstuffs in India

REGISTERED GI FOODSTUFFS	EXPECTATIONS AND EFFECTS OF GI REGISTRATION						
	Reputation enhance- ment	Premium Pricing	Awareness among consumers in India	Increase in Market Potential (Export)	Less Counter- feiting	Livelihood support by State	Part B Registration
Dharwad Pedha (80)	4	4	3	3	3	4	Yes
TirupathiLaddu (121)	4	4	3	4	3	4	No
BikaneriBhujia (142)	3	4	3	2	4	5	Yes
Hyderabad Haleem (193)	3	4	3	2	2	5	Yes
JhabuaKadaknath Black Chicken Meat (378)	3	3	4	2	4	5	No
Joynagar Moa (382)	2	2	4	2	5	4	Yes
SrivilliputturPalkova (403)	3	4	5	4	3	4	No
Bandar Laddu (433)	3	3	3	2	3	4	Yes
RatlamiSev (434)	4	4	5	3	4	4	Yes
KovilpattiKadalaiMittai (486)	4	4	3	2	4	4	Yes
BardhamanSitabhog(525)	4	4	5	5	4	5	Yes
BardhamanMihidana (526)	4	4	5	5	4	5	Yes
BanglarRasogolla (533)	2	4	4	3	4	4	Yes
PalaniPanchamirtham (550)	4	4	3	4	4	4	Yes
SilaoKhaja (584)	5	4	4	4	3	4	No
Odisha Rasagola (612)	4	4	3	3	4	4	No
GoanKhaje (655)	1	2	4	2	5	4	Yes

Data Source: Information collected from the interview.

Reference: Likert scale: 1: Strongly Effective, 2: Effective, 3: Neutral, 4: No effect, 5: Strongly having no effect.

countries. The consumer base in Goa apart from the domestic population has immigrant tourists who are attracted towards the reputation and origin-based products. Hence, post GI registration, the market demand for GoanKhaje has strongly increased. Similarly, for BanglarRasogolla, Srivilliputtur Palkova, Joynagar Moa and JhabuaKadaknath Black Chicken Meat reputation has enhanced with some demand in the international markets as well. The authorized users or the producers from the proprietor community strongly asserted that post registration; there is a need for greater support from the state. The effect of GI registration for Dharwad Pedha in majority of the parameters highlighted that the foodstuff already has a strong consumer base, but it is also facing the threats of counterfeit issues. As discussed above awareness among the consumers are still low even after GI registration of the foodstuffs, has been enunciated in Table 1 where majority are indicating there is no larger effect (Scale 4) or it is neutral on the market of the GI foodstuffs (Scale 3). Despite registration, counterfeit has been flagged as a major issue in the case of Joynagar Moa (Scale 5).

Like GoanKhaje, Hyderabad Haleem also shows effectiveness of GI registration for counterfeiting issues. In India, Part A registration is followed by Part B registration, i.e. registration for authorized users, under Section 17 of the GI Act, 1999. Part B registration authorizes the producers of the community to register them individually to use the GI tag on their product as a part of the value and supply chain for the registered GI. Part B registration in India is not only a subsequent process to Part A but also has significance like constraining others from unauthorized use of the GI tag. Apart from TirupathiLaddu, JhabuaKadaknath Black Chicken Meat, SilaoKhaja, Srivilliputhur Palkova and Odisha Rasagola all other selected foodstuffs GIs have authorized user’s registration. The least counts as one authorized user for Dharwad Pedha to the maximum number of 152 authorized users for Joynagar Moa. The limitation of this study is the heterogeneity in the foodstuff GIs. Hence, each GI is unique and it is often difficult to draw references based on other GI. The need for local language translation poses challenges in data collection. Due to the COVID-19 pandemic few

interviews had to be conducted online. The foodstuff GIs have the maximum market during the festival time. Hence, sometimes for long periods of time authorized users were not available for the interviews.

Protection and recognition of GIs are important but fostering the GI is equally important for the conservation of GIs. This includes the cultural heritage and traditional practices of the community. Some studies on sustainability of GIs have highlighted the impact of GIs in achieving the sustainable development goals (SDGs) for various GIs in Japan, Indonesia and in EU.²⁹ The current study is probably the first of its kind, particularly for foodstuff GI, in India where the effect of post-registration challenges on the sustainability of foodstuffs GIs in Indian context is discussed. In the present study, the SDGs that were used as a parameter are No Poverty (SDG#1), Good health and wellbeing (SDG#3), Decent work and Economic Growth (SDG#8), Sustainable Communities ((SDG#11). The Fig. 3 represents relevance of the impact of registration on the relevant SDGs.

The impact of GI registration on the sustainability of the products and communities as indicated in Fig. 3 shows that the registration of 88% of the selected GIs has less than 83% impact (on a scale of 6 at unit leach scale) on the product and communities' sustainability. With no or neutral effect on the expectations like (reputation enhancement, premium pricing, and demands in the export market) 77% of the selected GIs are yet to achieve socio-economic independence of the communities leading to no impact on SDG#1, SDG#3 and SDG#8. One the other

hand GI registration of four foodstuff GIs i.e. 23% of the total selected GIs has a strong effect on reputation enhancement, and market potential as shown in Table 1. This led to pathways to deal with poverty (SDG#1) and identify ways towards economic growth, wellbeing (SDG#3, and SDG#8). The Likert scale analysis shows that except GoanKhaje, Hyderabad Haleem, Dharwad Pedha, and TirupathiLaddu other selected GI foodstuffs as yet do not show effect on economic development through GI registration. It is interesting to note that the Likert scale analysis shows that livelihood support by the State is not yet steady for the selected GI foodstuffs. Hence, on a scale of 6 all the selected GIs depict that the post registration contribution for sustainable community goal (SDG#11) is not realised until now. Distress migration has been identified as an alarming scenario.³⁰ This in the case of the producers or the future generation of the producer community creates a hindrance in the fostering of GI foodstuffs as well. The existing studies indicate that in European Union SDG#4 (Quality Education) and SDG#8 (Decent economic growth) is quite easily achieved through GI registration. The skill-based education provided to the producers support in the achievement of SDG #4 and various trade fairs, events, practices mentioned in the code of specification helps to attain SDG#8.³¹ In order to encourage developing nations the FAO had identified that the main reason of failure of GIs in the contribution of sustainable development of the community is due to lack of awareness.³² Lack of awareness is a challenge that was also highlighted by all the respondents of the survey in the present study.

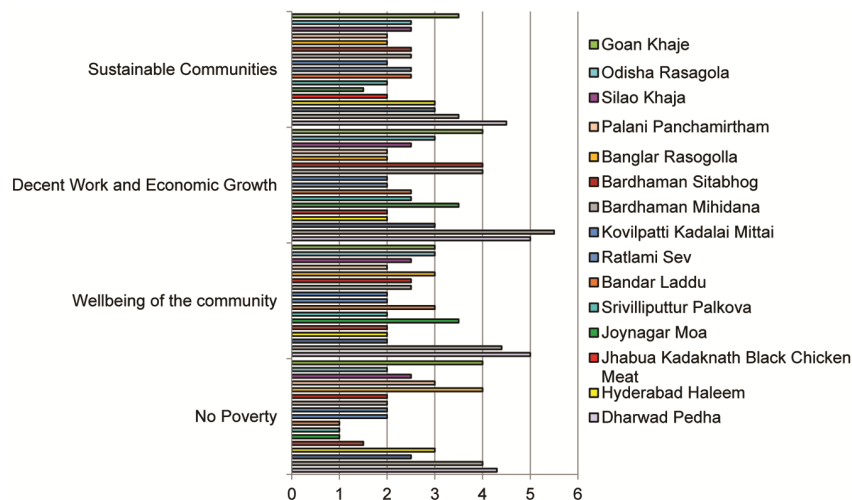


Fig. 3 — Impact of GI registration of the selected foodstuffs GIs on the SDG parameters to assess their contribution on the sustainability of the community and the product

Initiatives by APEDA in exporting GI tagged products as well as their promotion through events like GI Mango Promotion Programme and Tasting Event in Belgium and Copenhagen in association with Embassy of India on June 17th, 2022 and July 21st, 2022 respectively is also a noteworthy step for promoting GIs. APEDA's initiatives also include exportation of various agri-food GIs to Bahrain and Qatar.³³ The MoCI had started the initiative of One District One Product (ODOP) where the aim is to launch the districts as export hub and enable the socio-economic growth of all the regions fostering balanced regional developments across the country. The ODOP initiative does not provide financial assistance to the products but provides a platform for promotion and export training. DPIIT and Department of Commerce (DoC) are the main stake holders of ODOP initiative. The stakeholders engaged with the Indian embassies in Nigeria, Croatia, and Argentina for the fulfillment of the promotional activities of the ODOPs.³⁴ Majorly the ODOPs identified are agricultural goods and foodstuffs GIs. Unlike agricultural goods such as grapes, mango, banana, there is generally no specific correlation whether foodstuff GI also command high prices. Our study revealed that in the foodstuff category there are limited sales abroad.

Although this initiative does not mention the name of the products, but the list mentions broader classification based on the dominant raw materials of the foodstuffs of that district, for example *milk based products*, ginger based products and many more. The ODOP foodstuffs must be linked with specific foodstuffs GIs digitally with an interface between two websites, so that the consumers are well informed about the qualities and reputation of the product that are essential attributes of the geographical place of origin. The G20 Empower along with the Ministry of Women and Child Development had organized the inception meeting on 11th and 12th February 2023, at Agra. The event provided a platform through an exhibition: "Products and Services by Women at the Grass Roots" – showcased various GIs and handicrafts by women craft persons and entrepreneurs.

Various campaigns like '*Gift a GI*' during festive season, '*Spot a GI*' to spread awareness on GIs through interesting factoids, among others were some promotional strategies to encourage the Indian GI market. DPIIT has also organized various fairs such as the "India Geographical Indications (GI) Fair

2022" in month of August in 2022. This attracted more than 11000 visitors from India and abroad. The first edition of GI fair was followed by the second edition in 2023 in the month of July, 2023. Both these fairs were organized through Export Promotion Council for Handicrafts (EPCH).³⁵ The GI fairs have been promoted through the websites of the Indian embassy in various countries like Budapest³⁶, Brazil³⁷, Jakarta.³⁸ The initiatives of DPIIT are not limited only at domestic level, rather the department also attempts for an international platform for the GI products and hence, had set up a pavillion for GI products in India International Trade Fair, Delhi, from 14th to 27th November, 2022. Promotional videos covering Indian GIs in various TV channels, various contests on World IP Day in 2022 capturing various aspects of Geographical Indications and their uniqueness, diversity, and artistry were all initiated by DPIIT for the promotion of GIs.³⁹ All these attempts are made to justify the attainment of the selected SDGs with respect to the foodstuff GIs.

An enhancement of governmental attempts further is required for the sustainable development of the communities through GI foodstuffs. In view of the common and specific challenges identified in this study, it is observed that there is a greater need for integration of the efforts and also enhance local participation. Strategies to promote and build awareness on GI in several countries can foster their marketing across the globe. Establishing the value chain and enhancing communication in the production system are important aspects for consideration. Studies indicate that identifying stakeholders in the value-chain at the first level and the communication between the consumers (local and global) and other players of the value-chain at the second level is essential.⁴⁰ Instead of a top-down model approach, the reverse approach i.e. local to central level may help in the greater participation and involvement in the governance with regard to the entire GI foodstuffs system.⁴¹ Such policies can contribute positively in the promotion of the GI foodstuffs and sustainable development of the communities.

Conclusion

The current study on the implementation of GI foodstuffs in India provides a comprehensive analysis of the current challenges involved in protection. GI Foodstuffs are diverse and have a great potential to become a product of tourism thus help preserve and enhance community identity and local development.

The transaction of GI products through tourism holds the potential to elevate the relevance of both the place and the people through a multiplier effect. Studies that establish a connection between GI protection and tourism, in the Indian context indicate the role of government to aid the promotion and marketing of the GI products. The identification of common and specific challenges in the real-time conditions aids in developing mechanisms for fostering them. The study also identified resource limitations which threaten the future of these GI requiring an immediate need for support mechanisms. Analysis of the common challenges indicates to the need for adoption beginning from the resource to market to livelihoods. A significant highlight of the study is the analysis of the particular SDGs by pairing with those utilized to analyse the challenges. A FAO report clearly states that GI is an effective instrument that can be used by the respective communities to create an endogenous sustainability pathway towards the 2030 Sustainable Development Agenda.⁴² The correlational analysis, first of its kind for these GI, in the present research study provides an impetus for enhanced policy initiatives for better local sustenance of GIs. Typically, these GIs have been promoted through festivals and events. Enhancing their promotion with better tourist experience, greater promotion in festivals and associated events will assist in their sustenance and thereby livelihoods. The methodological support that has been utilized in the study can be applied in future for other GI studies. There is a considerable scope in the future to analyse impact of climatic factors on foodstuff GIs. These foodstuff GI are also part of the known traditional foods. Studies on the consumer awareness about their general health benefits as well as nutritional quality will be helpful for increasing their marketing.

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