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Challenges associated with the continued utilization and registration as authorized users by farmers of north east India with reference to geographical indication crops

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Abstract

Geographical indication tags protect and add value to agricultural products with a specific regional identity, yet in India registration of a crop as a geographical indication does not automatically translate into sustained utilization of the tag by producers or into new farmers coming forward to register. This gap between legal registration and practical utilization is particularly visible in the Northeast Hill Region of India, where several crops have received geographical indication status in recent years but levels of farmer participation and tag utilization vary widely. This study examined the challenges faced by authorized users (AUs) - registered farmers and Non-authorized users (NAUs) - unregistered farmers of four geographical indication crops, namely Khasi Mandarin, Memong Nareng, Naga Tree Tomato and Tripura Queen Pineapple, cultivated in Meghalaya, Nagaland and Tripura respectively. Data were collected from 612 respondents comprising 322 AUs and 290 NAUs across purposively selected districts, blocks and villages. Challenges were identified through a review of literature supplemented with open-ended field responses, pooled into a comprehensive list for each group and rated by respondents on a three-point severity scale. A weighted mean score was computed for every challenge and challenges were ranked accordingly. Results showed that mainly structural and institutional barriers challenge AUs with the absence of processing centres for value addition ranked as the most severe challenge, followed by inadequate incentives, guidance and market linkage. NAUs, in contrast are held back primarily by lack of awareness, with unfamiliarity about the benefits of geographical indication status and about their own crop's registered status ranking as the two most severe constraints. The findings suggest that policy interventions need to differ by farmers' group, with an emphasis on infrastructure and institutional strengthening for already registered producers and on targeted awareness campaigns for those yet to register.

Keywords: Geographical indication, authorized users, non-authorized users, northeast hill region, weighted mean score

1. Introduction

Geographical indications (GIs) are a form of intellectual property that identify a product as originating from a specific place where a given quality, reputation or other characteristic is essentially attributable to that geographical origin ^[1]. Beyond legal protection, GIs are increasingly promoted as instruments of rural development, since they allow producers to capture a price premium, safeguard traditional knowledge and strengthen the collective identity of a region's produce ^[1, 3]. The World Intellectual Property Organization (WIPO) recognizes GIs as one of the principal tools available to producers of agricultural and craft products for differentiating themselves in domestic and export markets ^[2].

India operationalized this recognition through its Geographical Indications of Goods (Registration and Protection) Act, 1999, and the number of agricultural, handicraft and food products registered under the Act has grown steadily since the first registrations were granted in the mid-2000s ^[4]. The Northeast Hill Region (NEHR) has emerged as a particularly active area of GI registration in recent years, with a wide range of horticultural and food crops

from the region now carrying the tag ^[5, 6, 7]. Despite this expansion in registrations, several assessments of India's GI regime note that registration alone does not guarantee sustained utilization. A considerable share of registered GI products see limited use of the tag relative to the number of producers actually cultivating the crop. Studies on the status of the country's GI system have repeatedly pointed to a persistent gap between the number of products registered and the extent to which registered producers use the tag in practice ^[8, 9, 10].

This utilization gap is qualitatively different depending on whether a producer or farmer has already registered as an Authorized User (AU) or remains outside the system as a Non-Authorized User (NAU). A producer who has already registered may find it difficult to sustain the requirements and benefits of the tag over time, whereas a producer who has not registered may face an entirely different set of barriers that keep them from entering the system at all. Yet policy discussions on the underutilization of GIs frequently treat the producer population as a single, undifferentiated group, offering common recommendations for spreading awareness

or simplifying procedures rather than addressing the distinct barriers faced by each group^[9, 10]. Against this background, the present study examines the challenges associated with the continued utilization and registration of GI tags among authorized and non-authorized producers of GI crops of the Northeast Hill Region (NEHR), with the objective of identifying and ranking the constraints reported separately by each group so that group-specific policy interventions can be recommended.

2. Materials and Methods

The study was carried out in three states of the NEHR of India. Four GI-registered crops were purposively selected using two criteria: the crop had received GI registration between five and ten years prior to the study, and it had more than 50 registered Authorized Users (AUs). On this basis, Khasi Mandarin and Memong Nareng (Meghalaya), Naga Tree Tomato (Nagaland) and Tripura Queen Pineapple

(Tripura) were selected for the study.

Two categories of respondents were surveyed for each crop: AUs, i.e., farmers formally registered as GI users and Non-Authorized Users (NAUs), farmers cultivating the same crop who had not registered. For Khasi Mandarin, Naga Tree Tomato and Memong Nareng, complete enumeration of AUs was carried out. For Tripura Queen Pineapple, where a considerably larger number of AUs stood registered in West Tripura district^[12], Yamane's (1967) formula for finite populations was applied to determine an appropriate AU sample size^[11]. NAUs for each crop were selected through proportionate random sampling. As a GI tag applies only to a defined geographical area, the districts, blocks and villages covered for each crop were purposively selected to correspond to that area. In all, 612 respondents were surveyed, comprising 322 AUs and 290 NAUs, distributed as shown in Table 1.

Table 1: Selected crops, states, districts, blocks and sample distribution

State	GI crop	District	Blocks	No. of AUs	No. of NAUs	Total
Meghalaya	Khasi Mandarin	East Khasi Hills	Mawkynrew	62	60	122
	Memong Nareng	West Garo Hills	Samanda	63	60	123
Nagaland	Naga Tree Tomato	Phek	Phek	71	70	141
Tripura	Tripura Queen Pineapple	West Tripura	Hezamara, Mandai	126	100	226
Total				322	290	612

AUs and NAUs encounter qualitatively different problems and were therefore studied separately: AUs were assessed on the challenges they face in maintaining continued utilization of the GI tag after registration, while NAUs were assessed on the challenges that keep them from registering as authorized users and thereby accessing GI-related benefits.

For each group, the relevant set of challenges was compiled in two stages. First, a set of likely challenges was drawn from the review of literature and from the researcher's familiarity with GI crop cultivation and the registration process. This preliminary list was then supplemented with challenges volunteered directly by producers through open-ended field questions, allowing respondents to report difficulties that had not been anticipated. The two lists were pooled, and duplicate or overlapping items were merged to arrive at a comprehensive, non-redundant list of challenges for AUs and a separate list for NAUs.

Respondents were then asked to rate every challenge on their group's list according to its perceived severity, on a three-point ordinal scale (Very challenging, Challenging, Not challenging), rather than being asked to freely list or rank only the difficulties that came to mind unprompted. This ensured that every respondent evaluated the full set of listed challenges and that even infrequently mentioned constraints were captured with a measured severity rather than being omitted altogether. The severity ratings collected from respondents were converted into a single composite measure for each challenge using the Weighted Mean Score (WMS) technique, and challenges were ranked in descending order of this score:

$$WMS = \sum (W_i \times F_i) \div N$$

where W_i is the weight assigned to the i -th severity category of the rating scale, F_i is the number of respondents who rated

the challenge under that severity category, and N is the total number of respondents.

3. Results and Discussion

The challenges associated with continued utilization and registration of the study's GI crops were evaluated separately for AUs and NAUs because the two groups face qualitatively different problems. AUs, having already registered, encounter difficulties in maintaining and continuing to utilize their GI status, whereas NAUs face barriers that prevent them from registering in the first place and thereby accessing GI benefits at all. For each group, a comprehensive, non-redundant list of challenges was built in two stages, comprising a pre-listed set drawn from the literature and the researcher's familiarity with the GI registration process, supplemented with constraints volunteered by producers through open-ended field questions, with the two sets pooled and duplicates merged. Respondents then rated every challenge on their list individually on an ordinal severity scale (Very challenging, Challenging, Not challenging) rather than freely ranking only the ones that came to mind, so that even infrequently mentioned challenges were captured with a measured severity rather than being omitted.

3.1 Challenges associated with the continued utilization and registration by the authorized users of the GI crops

The findings in Table 2 reveal that the single most severe challenge reported by AUs is the absence of processing centres for value addition (WMS 2.94, Rank I). The second and third ranked challenges, namely absence of incentives for production and conservation (2.66) and absence of guidance and facilitation (2.65), together with individualism in the business (2.59, Rank IV) and the sense that the importance of GI is unfelt (2.51, Rank V), indicate that the most severe difficulties for AUs are structural and institutional rather than

personal shortcomings. Producers do not feel supported by the surrounding ecosystem of incentives, extension guidance

and collective organisation needed to sustain GI status more than they feel individually unable to meet its requirements.

Table 2: Challenges associated with the continued utilization and registration by the authorized users of the GI crops (n=322)

S. No.	Challenges	Mean Score	Rank
1	Absence of processing centres for value addition	2.94	I
2	Absence of incentives for production and conservation	2.66	II
3	Absence of guidance and facilitation	2.65	III
4	Individualism in the business	2.59	IV
5	Importance of GI is unfelt	2.51	V
6	Absence of separate market only for selling GI related products	2.49	VI
7	Lack of unity among the authorized producers/farmers	2.37	VII
8	Inability to adhere to quality standards	2.30	VIII
9	Perishability of the produce	2.27	IX
10	Inability to meet bulk demand on order	2.17	X
11	Absence of storage facilities	2.08	XI
12	Farmers are not aware that they are authorized users	1.95	XII
13	Non-conformity and malpractices inside the territory	1.84	XIII
14	Fruit is not widely commercialized	1.39	XIV
15	Unavailability of enough skilled manpower to meet Code of Practice (CoP) norms	1.02	XV

Challenges that stop the non-authorized users from registering as GI authorized users so that they can use the GI benefits

For NAUs (Table 3), the challenges are significantly different from those of AUs and centre overwhelmingly on awareness rather than administrative or financial barriers. The two most severe challenges are lack of awareness about the benefits and functions of GI (WMS 2.70, Rank I) and, closely behind it, farmers not even being aware that their crop carries GI status at all (2.69, Rank II). Neilson *et al.* ^[13] and Moudgil ^[14] reported similar findings. These two awareness-related items sit well ahead of every other challenges in the table. Limited institutional support (2.38, Rank III) and a narrow price difference or absence of a premium price (2.32, Rank IV) follow next, indicating that even where NAUs are aware of GI status, they perceive too little institutional backing and too small a market reward to justify the effort of registering. The findings strongly suggest that any policy response to the

underutilization of GIs would fail to address the actual self-reported challenges of this group if NAUs are not made aware that GI registration exists, what it involves, or what their crop's own status already is.

Limited institutional support, the third-ranked NAU challenge (2.38), converges with the AUs' own second- and third-ranked challenges of absent incentives (2.66) and absent guidance and facilitation (2.65) discussed above, suggesting that institutional weakness is a cross-cutting challenge affecting producers on both sides of the registration divide rather than one confined to the pre-registration stage. The persistence of this concern even among AUs who have already navigated the certification process indicates that strengthening institutional support is likely to be a prerequisite for both improving downstream utilization and encouraging further registration among the currently unregistered pool of producers.

Table 3: Challenges that stop the non-authorized users from registering as GI authorized users so that they can use the GI benefits (n=290)

S. No.	Challenges	Mean Score	Rank
1	Lack of awareness about benefits and functions of GI	2.70	I
2	Farmers are not aware of the GI status of the crop	2.69	II
3	Limited institutional support	2.38	III
4	Narrow price difference / absence of premium price	2.32	IV
5	Consumer's preference of price over quality	2.26	V
6	Market uncertainty	2.11	VI
7	Complex registration process	1.96	VII
8	Technical compliance gap	1.62	VIII
9	High registration cost and fee	1.00	IX

4. Conclusion

The challenges encountered by AUs and NAUs reveal a clear and policy-relevant asymmetry in what holds back GI utilization at two different stages of the producer journey. For AUs, who have already cleared the registration hurdle, the dominant challenges are downstream and structural: absence of processing infrastructure, weak incentive and guidance systems and the lack of a dedicated GI market are problems that call for public investment and institutional strengthening rather than farmer-level intervention. For NAUs, who have not yet registered, the dominant challenges are upstream and

informational: simply not knowing that GI status exists, what benefits it confers, or that their own crop already carries the tag are challenges that call for targeted awareness and outreach campaigns, rather than simplifying the registration process itself, since procedural and financial barriers were rated as the least severe constraints by this group. Overall, the findings demonstrate that the GI system faces a transition gap between legal registration and effective producer-level utilization, requiring interventions that address awareness and registration at the entry stage, and infrastructure, collective action, market linkage and institutional facilitation

at the post-registration stage.

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Declaration

The authors declare no conflict of interest.

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