Post Registration Protection of Geographical Indication (GI) in E-Commerce Ecosystem

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ABSTRACT

Not only does the swift growth of e-commerce complicate enforcement after Geographical Indication registration in India, but it also exposes gaps in current protections. Although the 1999 Act offers solid groundwork for registering GIs and assigning exclusivity, ongoing surveillance across online platforms remains weak by design. Instead of institutional checks, small producers often face detection duties alone despite their position under Section 2(1)(k) being undermined by opaque search systems, false tagging, and mass distribution via digital retail spaces. Looking at how famous geographical indications such as Darjeeling tea and Kanchipuram silk face online abuse reveals that legal actions after harm occurs are simply not enough. While Europe takes preventive steps through Regulation (EU) 2024/1143, focusing on adherence rather than penalties, Thailand builds strong legal foundations both offering lessons often missing elsewhere. Instead of waiting for disputes, systems could embed checks directly into digital marketplaces. One path forward combines updated laws with smart technology to track genuine items from source to sale. Automated registry links, built via Application Programming Interfaces (APIs), may help verify claims in real time. Rules around mixed origin products also need clarification to prevent misleading labels. Rather than burdening producers with lawsuits, responsibility shifts toward platforms hosting trade. This change supports farmers and artisans whose livelihoods depend on trust in authentic regional goods. When oversight becomes part of the marketplace structure, protection follows naturally. Not because someone sued but because safeguards were already active.

KEYWORDS

Post-Registration, Geographical Indication, E-commerce, Marketplace, Technology, QR Traceability.

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INTRODUCTION

One key role of geographical indications lies in their ability to safeguard both product legitimacy and consumer trust. Because they tie specific traits of goods to particular regions, confusion over provenance becomes less likely. Not only do these markers preserve cultural and regional distinctiveness, but also they discourage deceptive claims in trade. Found within India's legal system, such protections appear clearly in the 1999 legislation created for registration and enforcement. Although the law focuses on territorial links, its effect extends into market fairness. Where a good draws essential qualities from its place of origin, that connection gains legal recognition. Since reputation often grows alongside location based production, the system supports producers who maintain traditional methods.

Spurred by surging online trade, the system meant to safeguard geographical indications now faces intense pressure. With digital platforms allowing countless vendors to post items swiftly, oversight often lags behind. Sellers spread across regions frequently label goods with place related terms without prior review. This goes beyond isolated violations. Instead, there emerges a growing disconnect: legal protections built around formal registrations struggle to keep pace with dynamic markets where misleading names, lookalike products, mixed formulations, and automated visibility boosters erode GI significance long before owners intervene.

This work suggests the main flaw in India’s geographical indication system within digital marketplaces isn’t a lack of tools to respond to violations, rather a failure to maintain effective oversight after registration, ensure product origins can be tracked, or hold platforms responsible. Though laws grant legal powers and allow both civil and criminal responses, they operate mostly under the idea that owners will detect misuse themselves before taking legal steps. Such an expectation becomes harder to justify when online stores generate, alter, duplicate, and advertise items rapidly and in vast numbers.

Beginning with India’s legal setup for geographical indications, the discussion centers on how digital trade platforms open paths to misuse after registration. Instead of broad claims, attention turns to specific cases Darjeeling tea facing imitation, Kanchipuram silk losing authenticity, and fruits tied to regions appearing in mass produced goods without proper links. Moving forward, contrasts emerge when Indian rules are placed beside Europe’s updated system under Regulation (EU) 2024/1143, where oversight, checks in commerce, and platform roles are clearly defined. Alongside, Thailand’s laws appear as another benchmark, offering insight through different legislative choices. Toward the close, adjustments come into view: changes to existing acts, clearer guidelines issued by authorities, stronger scrutiny by online sellers, and tools using digital tracking to confirm origin.

STATEMENT OF PROBLEM

Though India's 1999 Geographical Indications law established registration protocols, it falls short in managing online markets after approval. Because of this, internet sellers exploit GI labels widely boosting fakes via search algorithms, similar packaging, or false origin statements. Oversight vanishes where it matters most: tracking violations on digital storefronts. Instead of shared responsibility, small craft groups and official rights holders must chase down fraud alone, despite limited means. Meanwhile, online marketplaces face little consequence for allowing misleading offers to remain visible.

LITERATURE REVIEW

1. Geographical Indications in the Digital Marketplace: Legal Challenges and Enforcement in India[2], by Gauri Singal examines the interaction between online commerce and traditional GI-protected goods. Digital markets open new doors for Indian geographic indications, yet bring hidden risks. Instead of fair opportunities, fake versions flood the space Darjeeling Tea becomes a common target. With sellers hard to trace, buyers often get misled without knowing. Real producers lose income, their work undermined by unseen actors behind screens.

What makes Singal's analysis stand out is how clearly it shows real world cases of geographical indication abuse across digital platforms. Because small scale producers face financial damage, the discussion gains weight emphasizing uneven accountability when laws fail to protect them fairly. Economic costs fall heavily on those least equipped to respond, shifting responsibility without support.

2. The Law and Economics of Geographical Indications: Introduction to Special Issue of the Journal of World Intellectual Property[3], by D. Rangnekar talks about that is rooted in community heritage, geographical indications rest on shared legal and economic principles. Because they reflect place based practices, these designations resist imitation through

[2] Gauri Singal, Geographical Indications in the Digital Marketplace: Legal Challenges and Enforcement in India, 14 J. Intell. Prop. L. & Prac. 345 (2025).
[3]Dwijen Rangnekar, The Law and Economics of Geographical Indications: Introduction to Special Issue of The Journal of World Intellectual Property, 13 J. World Intell. Prop. 77 (2010).

collective ownership models. One reason for safeguarding such traditions lies in preventing market dilution by unrelated producers. Instead of treating location names as open terms, protection reinforces authenticity shaped over time. Through case examples, the analysis shows how value emerges when origin matters more than branding.

Foundations for the legal discussion emerge here. When online marketplaces weaken links between product and place, the shared worth of a geographical indication erodes that idea gains weight from this section. Oversight shaped by policy, not case by case lawsuits, becomes necessary to preserve group based entitlements; such an approach finds grounding in these arguments. What results is a framework where public authority plays a central role in defending origin linked identity.

3. Issues and Challenges to Geographical Indications in the Era of E-Commerce[4], by Nittu, examines tensions emerging when conventional geographical indication systems meet current ecommerce rules. Digital availability creates notable challenges to verifying origin claims here, attention turns to how Indian legislation engages with internet based trade practices.

Though Nittu's work predates recent policy debates, its core insight fits neatly alongside emerging legal updates. Where the 1999 GI Act falls short in online marketplaces, the article examination draws attention to blurred responsibilities. Because of these mismatches, stronger oversight of platforms gains weight. Such a shift lines up with measures like mandatory checks before product listings appear. Linking verified geographical indication records directly to e stores becomes a logical step forward.

RESEARCH AIM AND OBJECTIVE

The main aim of this paper is to examine how Geographical Indications get misused online. Hidden by algorithms, certain listings rise despite false claims. Presentation tricks blur authenticity especially for Darjeeling tea, Kanchipuram silk, or Alphonso mangoes. These cases expose weak follow up after registration under India's 1999 GI law. Unlike that model, Europe acts earlier; its Regulation (EU) 2024/1143 demands prevention, not reaction. Thailand, too, built stronger checks into their 2003 system. When contrasted, India's gaps become visible. Instead of waiting, rules could require platforms to verify before listing. Tracking each item

[4] Nittu, Issues and Challenges to Geographical Indications in the Era of E-Commerce: An Analysis, 11 Int'l J. Innovative Rsch. in Tech. 418 (2024).

digitally might also help. Reform ideas here focus on timing one step ahead beats playing catch up later.

RESEARCH QUESTION

How can India's existing legislative and regulatory framework for Geographical Indications be structurally reformed to ensure effective post registration oversight, technological integration, and ecommerce platform accountability against digital misuse?

RESEARCH METHODOLOGY

This study adopts a doctrinal methodology, combining close reading of laws with comparative examples. Through careful review, Section 21, 22, and 25 of India's 1999 Geographical Indications Act come under scrutiny especially how they apply when goods appear online. Instead of broad assumptions, attention turns to actual wording within statutes shaping rights and limits in digital marketplaces. Drawing lessons from elsewhere, the EU's 2024/1143 rule forms one point of reference, while Thailand's system since 2003 offers another. From such cases emerges a clearer sense of who must act after registration, particularly platforms hosting products. Rather than inventing new concepts, existing rules guide suggestions tailored for India's evolving environment. Building on those foundations, ideas take shape not as isolated fixes but connected changes across policy, tools, and law.

HYPOTHESIS

Implementing mandatory e-commerce verification duties for ecommerce platforms and integrating automated traceability technologies with the official GI registry will significantly reduce digital infringement and alleviate the disproportionate enforcement burden currently placed on traditional GI producers.

THE LEGAL STRUCTURE OF GI PROTECTION IN INDIA

Created under the 1999 law, India's GI system centers on registering indicators, listing eligible producers, and handling violations via legal responses. This act sets up a public record specifically for geographical indications, keeps another list for approved individuals allowed to use them, while giving those users sole rights tied to particular products. Clearly laid out in Section 21, entry into the registry allows both owners and permitted parties to seek remedies when misuse occurs; at the same time, authorized persons hold distinct access to apply the geographic name only to designated items.

Section 22(1)(a) provides casts a wide net in legal principle. Anyone who isn't approved but still applies a protected geographical indication when labelling or showing products may breach rights, especially if such use implies incorrect geographic source; alternatively, harm arises through practices resembling unfair market tactics like imitation. Misleading conduct whether stirring uncertainty among buyers, harming rival reputation, or distorting facts about how items are made, what they offer, or how much exists is likewise framed as improper rivalry. On paper, this framework adapts well to various digital abuses[5].

Although the law focuses mostly on responding after issues arise. Provisions cover legal actions for violations, remedies available, criminal charges, punishments, and confiscation of goods. However, once a geographical indication gets registered, there exists no special mechanism to monitor products in the marketplace. Checking online platforms or tracking supply chains lacks formal support under current rules. Administrative efforts instead center on listing new indicators, handling objections, correcting entries, and court related processes. Continuous oversight of how indications are used commercially receives little emphasis within this framework.

Back then, it worked well when sales relied on stores, since copying stood out and stayed local. Now, online markets face risks not at storefronts but in how items appear through sneaky titles, rigged searches, or site layouts shaping visibility. When laws require creators to find violations first and go to court afterward, protection lags behind speed of digital trade. Craft makers and buyers alike lose under such slow rules amid rapid virtual exchanges.

WHY E-COMMERCE CHANGES THE GI ENFORCEMENT PROBLEM

Despite their design, ecommerce sites reshape geographic indication abuse in multiple distinct forms. One way involves lowering hurdles for new vendors to join. Visibility expands rapidly due to algorithmic sorting instead of manual browsing. Shoppers interact with products remotely, never touching them directly before purchase. Information gaps grow wider when

[5]The Geographical Indications of Goods (Registration and Protection) Act, No. 48 of 1999, INDIA CODE (1999), §§ 21–22.

buyers cannot verify origin claims firsthand. Such shifts amplify issues that geographical indication laws originally aimed to control.

A shopper in a real world market might judge goods through feel, how they are packed, who sells them, or insights picked up locally. Instead, choices on digital platforms tend to rely heavily upon item names, small images, where results appear in searches, paid ad spots, how price cuts are shown, along with feedback left by others. When terms like "Darjeeling,", "Kanchipuram silk," or "Alphonso" show up in listings suggesting authentic geographic ties, buyers could already believe it's true long before checking facts. At that point, the page displaying the product acts as the main source of truth.

This point holds weight since Section 22 of the Indian Act addresses improper uses in how goods are labelled or displayed. Digital product posts clearly fit into this category when viewed through a legal lens. Yet what stands in the way isn't principle it's proof and process. Web based labels shift rapidly, span borders, and exist in huge numbers. Changes like revised titles, removed ads, reappearances under different shop names, or wordings that skirt the boundary of violation yet still borrow from geographic indication goodwill are common tactics[6].

Not every challenge fits neatly into boxes take how mixed or hinting terms spread easily online. Phrases such as "blend," "style," or "inspired by" pop up across digital shops, quietly calling to mind protected names without copying them outright[7]. Though India's law strengthens safeguards under Section 22(3) for certain labelled items against words like "kind" or "imitation," it only works where authorities have clearly listed product types[8]. That legal option stands ready, yet enforcement lacks structure. Tools may exist in theory; putting them into practice remains uneven.

A third issue arises when online shopping turns search queries into forms of misleading promotion. People enter geographical indication terms expecting genuine items. Yet platforms often deliver cheap copies, mixed goods, or unauthorized offers without proper checks. This weakens the meaning behind those labels. Legal systems might classify such outcomes as

[6] The Geographical Indications of Goods (Registration and Protection) Act, *supra* note 5, § 22.
[7] The Geographical Indications of Goods (Registration and Protection) Act, *supra* note 5, § 22.
[8] The Geographical Indications of Goods (Registration and Protection) Act, *supra* note 5, § 22(3).

violations or unjust practices. Damage happens earlier though during visibility and placement not just at purchase[9].

Ending here, platform based trade introduces uneven oversight. Monitoring online spaces like Amazon, Flipkart, Meesho, Myntra, or standalone shops demands steady digital tracking something most GI producers, craft collectives, or certified small users cannot manage. Detection duties shift onto those the GI structure should shield. At present, this imbalance marks the core weakness after registration within India's setup.

ILLUSTRATE PATTERNS OF MISUSE IN ONLINE MARKETPLACES

What makes Darjeeling stand out lies in its global recognition as an Indian geographical indication. Tied closely to elevation, soil conditions, and traditional methods, its worth grows from precise rules about where and how it's made. Misuse begins when labels say "Darjeeling blend" or mention "second flush Darjeeling," even without meeting authenticity standards. Not every product labelled this way comes from approved farms or uses 100% local leaves. Though sellers may claim these are mixtures, the name alone carries weight shoppers often notice that before any disclaimer. Because attention sticks to prominent terms, confusion spreads easily, blurring what the label should mean.[10]

Looking at things through the lens of the GI Act, what matters legally is if a usage implies wrong origins or acts unfairly by confusing people regarding source or traits. Instead of focusing only on single terms, the real test lies in how information shows up online. Presentation features like small images, search rankings, shortened titles on phones, ads mixed with results, and whether the seller has approval all shape understanding. Even when fine print seems accurate, the overall impression delivered by the site might still lead buyers astray. The platform's actual layout can distort meaning regardless of textual precision.

A closer look at Kanchipuram silk saris uncovers a separate yet related issue. Searching online for "Kanchipuram silk" frequently brings up items priced well under what genuine versions usually cost[11]. Though low pricing does not automatically mean fraud, a large gap often hints

[9]Traditional Kanchipuram Silk Saree, Off-White with Border, Temple Design, Amazon.in, https://www.amazon.in/Traditional-Kanchipuram-Off-White-Border-Temple/dp/B0FJYLVMQB (last visited Apr. 25, 2026).
[10] Tea Board of India, *Darjeeling*, Ministry of Commerce & Industry, Government of India (describing the protection of the "DARJEELING" word and logo as geographical indications and the certification scheme governing genuine Darjeeling tea).
[11]*Id.*

at blends, fake materials, or misleading labels. While some experienced shoppers check for authenticity tags or reputable sellers, others depend heavily on titles and platform reputation signals. As a result, people might end up buying something they assume is real Kanchipuram silk when it actually isn't.[12]

This case illustrates how geographical indication safeguards differ fundamentally from certification labels, yet require alignment in real world application. While origin based identity falls under the GI's scope, product characteristics like fabric makeup often belong to certification systems instead. Digital marketplaces blur such distinctions, merging both types of information into one simplified user perception. When sellers can insert terms such as "Kanchipuram silk" into online listings unchecked without verification or documented source the safeguarding purpose of GIs begins to weaken. Without enforced boundaries on platform content, consumer trust erodes gradually.

Sometimes, products tie themselves to geographical indications through fruit names take Alphonso mangoes showing up in drinks or snacks. Though the actual origin might be uncertain, blurred, or blended, slogans about their unique quality or flavour can still bring that protected image to mind. What makes this legally tricky isn't just mention it's whether such hints mislead when the real content is transformed or minimal. When a named ingredient becomes more suggestion than substance, boundaries grow fuzzy. Without firm rules on how clearly brands must disclose origins, shoppers browsing online could easily assume they're getting something primarily made from authentic Alphonsos.

This issue matters greatly within online retail, where web based descriptions often shrink intricate origin concerns into simplified brand narratives. Because India's present geographical indication system lacks clear guidelines after registration, uncertainty grows about applying GI labels to composite goods sold digitally. Without specific direction, businesses find room to leverage protected terms without openly breaching regulations. Ambiguity allows brands to benefit from reputation while maintaining a legal shield.

[12] Geographical Indications Registry, *Kancheepuram Silk*, Application No. 15, Intellectual Property India (registered geographical indication for handicraft goods originating in Tamil Nadu).

THE MISSING LAYER: POST REGISTRATION OVERSIGHT

What matters most lies in seeing post registration safeguards as separate not just from first time approval, but also from later court disputes. Getting registered determines if a name deserves legal status at all. When violations come up, courts handle them case by case. What happens afterward unfolds differently: ongoing supervision keeps the system working, checks how terms are used, confirms rules are followed, while shielding the geographic sign's meaning from weakening over time.

Though India's law includes a registry, rules for approved users, enforcement tools, criminal penalties, and legal procedures, it fails to embed systematic checks beyond these basics[13]. What stands out is how the framework skips regular marketplace monitoring, compulsory online oversight, scheduled reviews for sensitive geographical indications, or built in methods on platforms to validate legitimate users during product posting. Despite acknowledging that only certified parties may legally apply a GI to specified products, the legislation offers no structured process to verify usage in real world trade. Missing are automated safeguards, recurring audits, or integration points where authorisation could be confirmed before sale. This gap persists even though exclusivity rests solely with recognised rights holders under current statutes.

Out here, before digital tools arrived, people thought local groups and market watchers could spot most rule breaks. That idea falls apart online. Listings pop up from distant places, images repeat everywhere, written details move from seller to seller without change, while those who break rules vanish before legal steps begin. So, what once looked like fairness in law now shows cracks in its frame.

Heavy costs fall unfairly on GI communities because of this gap. Searching for violations takes time artisanal groups gather screenshots, store proof, send warnings, start lawsuits. Each step drains limited funds. Platforms grow larger without paying these prices; so do those who exploit them. Enforcement duties shift quietly onto small producers. Fairness demands a change: liability should reflect who truly gains. Reversing this imbalance must become central to online GI rules.

[13] *Supra* note 5.

THE EUROPEAN UNION MODEL

Starting with control systems, the European Union's present setup offers insight. Instead of just handling registrations or fixes, it builds clearer rules for digital markets. Under Regulation (EU) 2024/1143, selling products under protected names online means following strict product criteria[14]. Compliance requires oversight through an established monitoring structure. This shift matters moving from reacting to violations toward preventing them shapes better accountability.

Although consumer trust drives expectations, GI systems must rely on strong checks. Where a product meets defined standards, access to EU markets including online trade becomes possible provided oversight applies. Instead of viewing audits as add-ons, the law now treats ongoing scrutiny as part of valid usage. Supervision follows registration, built in, not bolted on.

What stands out most here is how the rules spell out clear steps for checking if geographic labels are used correctly in commerce, along with follow up actions when they are not. Instead of relying only on standard legal cases to handle violations, the framework builds in checks tailored to digital spaces. Online platforms must meet defined responsibilities, showing a shift from passive oversight to active monitoring. This design reflects an understanding that internet based breaches need more than courtroom fixes they demand real time vigilance built into marketplace operations.

Throughout production, processing, and distribution, oversight mechanisms now include geographical indication safeguards. Especially online, where selling involves visibility, platform access, and digital navigation, such control matters more than before. Far beyond packaging labels, these names function as data tags, keywords, promotional phrases, even tools shaping how results appear.[15]

One key aspect of EU policy involves how ingredients are handled in finished goods. Because confusion can arise, guidelines stress transparency when a geographical indication appears in a product's market name. To protect value, usage must follow honest trade standards, avoiding harm to the indication's standing. Cases like drinks named after Alphonso mangoes show why

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[14] Regulation (EU) 2024/1143 of the European Parliament and of the Council of 11 Apr. 2024 on geographical indications for wine, spirit drinks and agricultural products, 2024 O.J. (L) 1143, arts. 42–43.

[15] World Intellectual Property Organization, *Geographical Indications: What Do They Specify?* (explaining that a geographical indication identifies goods as originating in a particular place and that the qualities, characteristics, or reputation of the goods are essentially attributable to that geographical origin).

this matters. Without clear boundaries, misuse becomes more likely. India might gain much by adopting comparable clarity in its own system.

Despite similarities, moving the EU system directly into India would not work. Different institutions, ways farmers organise, rules already in place, and how markets operate stand in the way. Still, using it as a reference shows alternatives to relying only on individual legal action after recognition. Oversight mechanisms can make a difference. Producer associations with official status play a role. Public listing of rights helps. Checking products in commerce matters. So does requiring online platforms to act responsibly.

THAILAND MODEL: A COMPARATIVE STUDY

Though less detailed than today's European rules about internet trade, Thailand's 2003 law on geographical indications offers insight when viewed alongside similar systems in Asia[16]. Its value lies in showing how certain nations write protections into law based on origin linked traits like quality or renown. Starting from local context, the framework ties safeguards directly to where items are made. Much like India, it sees location as key to identity, building rights around registered links between name and source. Such approaches center enforcement on official recognition rather than broad consumer perception.

Looking at the Thai law in its existing English versions, it serves better as a point of comparison for legal structure rather than a plug in system for online trade enforcement. While many Asian nations still center their geographical indication frameworks on registration alone, Thailand's example shows digital oversight hurdles exist beyond just India. What stands out is not how fully Bangkok has resolved these issues, but how New Delhi could step forward by clearly writing digital protections into law after initial registration.

This stance holds clear importance when examined closely. With many geographical indications tied deeply to culture yet exposed in commerce, India faces distinct challenges. Its digital marketplace grows fast. Craft based livelihoods support countless workers across regions. Revising rules after registration becomes more urgent here unlike places where such products play only a minor part in trade

[16] Geographical Indications Protection Act, B.E. 2546 (2003) (Thai.)

THE INDIAN GI ACT FOR DIGITAL MARKETPLACE

Right now, legal updates might not be required because judges can apply the current Indian GI Act to modern tech. Though laws lag behind innovation, Section 22 mentions use "by any means," which opens doors for digital contexts. Online product is plays, for instance, fall under that phrasing just like physical labels would. Search engine outputs, miniature images shown during purchases, even virtual shop fronts on retail sites fit within its scope. Promotions by social media figures tied to sale links also count when they shape how items appear to buyers. Advertising popups embedded in apps or websites? Those too align with what the wording allows. There is little reason to see internet trade as separate from legislative reach the language already stretches that far. Interpretation matters more than rewriting rules.

One way to look at it: Section 22's idea of unfair competition must cover tactics like loading pages with keywords, twisting product names, deceptive auto complete results also how GI labels get used behind the scenes in search tricks. If people wind up confused on where something comes from, what it really is, or how it was made, then those actions fall clearly into what the law describes as unfair play. Trouble isn't whether the rules apply it's whether systems exist to make them stick.

Exclusive rights under Section 21 could see stronger enforcement through better use. When it comes to online trade, regulators might start by asking one clear thing does the seller have authorisation or show they obtained goods from someone who does? Without that, listings may undergo closer review, lose certain terms, or get temporarily removed until verification arrives. Such a shift turns the registry from just a record keeper into something active a working part of oversight.

Section 25 works similarly, blocking trademark applications that include misleading geographical indications for products not from those regions. While focused on trademarks, this principle extends to online platforms and store branding[17]. Names used by digital sellers or private labels using protected GIs can mislead just like registered marks. The law's wider aim of preventing deception backs regulatory action in such cases.

[17] *Supra* note 5, §25.

A REGULATORY AGENDA FOR E-COMMERCE PLATFORM

Right now, what matters most is building oversight systems aimed at digital platforms. When online marketplaces let third party vendors operate within searchable, profit driven environments especially where algorithms boost visibility they can no longer claim passive status. Especially if geographic indicators are involved. Current legal frameworks already acknowledge legitimate right holders and their exclusivity. Given that, rules for ecommerce ought to demand proof of authenticity tied to geographical indications. This check must happen either just before or right after product listings go live. Applies only to clearly defined types of products, though.

One possible approach involves five clear duties. Starting with platform responsibility, systems must link live to the official GI registry alongside verified user data. When vendors list items featuring registered GI names whether in product titles, branding sections, or main features they need to provide evidence of approval or traceable supply records. Instead of hiding information deep within lengthy texts, notices about mixed products, components, or stylistic nods to GIs ought to appear upfront in designated spots on the listing. When violations occur, faster removal processes ought to follow especially for verified creators and acknowledged industry groups. Over time, those caught repeatedly breaking rules might see their listings pulled, then lose access entirely.

Because geographical indications aim to maintain authenticity, support regional makers, and shield buyers from false claims, these duties make sense. Their reason lies in what they’re meant to achieve. Online, access depends on platforms shaping how things appear. When those controlling visibility gain from confusing naming but avoid answerability, the law's goal fails anyway. What matters gets lost even if rules exist.

Although the EU has introduced provider duties in digital markets, its approach backs similar efforts elsewhere. Not every detail of Regulation (EU) 2024/1143 must be copied by India to follow the core idea[18]. Instead of mirroring laws exactly, changes to the GI Act might work well when paired with joint standards set by agencies handling tech and consumer issues. When such updates link up with agreed practices among online platforms, enforcement gains strength without new legislation.

[18] Regulation (EU) 2024/1143, *supra* note 14, arts. 42–43.

TECHNOLOGY AND TRACEABILITY

Not meant to replace legal frameworks, technology works better when it strengthens them. For online sales of geographical indication products, certain tools stand out through practical impact. Linked registries that confirm seller authenticity offer one path forward. Digital markers enabling product tracking appear effective too. Automated systems watching ecommerce platforms bring another layer of oversight.

When a seller offers goods tagged with a geographical indication, automated checks could confirm if they're listed in official registries. Such verification uses secure digital pathways like APIs to cross reference seller details against approved databases. Since the current law already separates permitted sellers from others, adapting it becomes straightforward. A marketplace displaying "Darjeeling tea" might delay visibility of the offer until confirming the vendor's status. Without permission recorded in the system, listings tied to terms like "Kanchipuram silk" would not appear when shoppers search those names. Authority stems from existing legal distinctions, making execution less complex than creating new rules. Matching claims to registry entries acts as a filter before products show up online. What stops misuse isn't heavy oversight but alignment with structures already on file.[19] Approval records become checkpoints every time someone tries selling under protected labels. The process runs quietly behind searches, only allowing legitimate references into results. Before ranking appears, validation occurs silently through linked data systems.

A fresh level of oversight might come from digital tracking methods. Starting with unique Quick Response (QR) coded origin records, moving to blockchain secured shipment histories, or relying on sealed batch markers, these systems allow buyers and regulators to link goods to verified grower groups or approved middlemen. Though such solutions do not automatically comply with laws, they often carry high costs or face spotty uptake. Even so, when rolled out via farming collectives or public GI authorities, fraud drops while trust in authenticity grows.

Watching automatically forms the third support beam. Tools based on learning machines might check online markets, spotting odd pricing patterns, unapproved vendors often using guarded geographical indication terms, stolen photos of goods, or ads combining GI labels with vague tags like "type," "style," "blend," or "inspired." These setups won't take over court decisions,

[19] World Intellectual Property Organization, Geographical Indications: An Introduction (2017).

yet they'd sharply boost how fast issues are found. What matters most: India's present system for GIs does not require creating or applying any follow up tracking ability at all.

LEGISLATIVE REFORM PROPOSAL

A well-directed update to the Indian GI Act backed by clear implementing rules could significantly strengthen enforcement after registration within online marketplaces. While current gaps persist, targeted legal adjustments may close vulnerabilities exploited in digital trade. Such changes might align oversight more closely with how goods move today. Without broader reform, precision fixes could still deliver measurable gains. Where systems falter now, revised provisions may introduce needed clarity. Online platforms often lack consistent checks; updated guidelines might impose firmer obligations. If crafted carefully, these measures would respond directly to emerging transaction patterns. Not every flaw requires overhaul one path lies in narrow, functional improvements. Over time, even limited revisions could reshape accountability.

Right off, the law ought to add a clear part about what happens once registration finishes focusing on follow up rules and watching markets closely. Instead of leaving oversight undefined afterward, it could set up dedicated teams for GI adherence. These units might run regular online checks to spot misuse. Working alongside groups that guard consumers, handle border controls, or tackle internet crimes would strengthen results. Without something like this, the system stays quiet on how to keep watch long term.

It begins with clarity: the law ought to spell out that digital use of a geographical indication covers entries like product descriptions, behind the scenes data tags, paid ad placements, promoted links, vendor profiles, commercial hashtags, plus any suggestion engines on online marketplaces. Though, Section 22 could stretch that far under current wording, putting it plainly helps shrink legal guesswork while sharpening oversight for platforms. Ends there.

Starting differently, lawmakers ought to establish a legal duty for digital commerce platforms handling specified GI affected items to carefully monitor claims tied to geographical indications. One possibility: requiring alerts followed by removals, or sustained blocking when breaches happen again. Confirming vendor identities might be part of it, along with keeping records of sales to help authorities act later. Evidence from European laws suggests checking marketplace accuracy and assigning platform responsibilities fits well within updated GI safeguards.

Clearer rules are needed on how blended items, components, and suggestive names get handled under the law. When a GI protected item appears in a processed food or drink, details like its amount, origin, and role must appear shared digitally in a fixed layout. Useful especially for tea, soft drinks, sweets, and ready packed meals, where nods to geographic reputation tend to rely on vague or fractional claims.

Later on, the list of approved users ought to become a database that works well across platforms, easy to search and ready for machines to process. Right now, even though the law acknowledges these users, their status isn't fully effective if people or services online cannot check it instantly.

Notifying key product types for enhanced safeguards under Section 22(2) remains a necessary step. When it comes to online spaces, enforcement through Section 22(3) could take firmer shape. Terms like "style,", "kind," or "imitation" along with similar digital labels often weaken well established geographical indications. In high risk e commerce areas, such wording ought to face stricter control. Protection mechanisms may fail if loosely defined terms go unchecked. Stronger GI status demands clearer boundaries around descriptive language used online.

CONCLUSION

What happens after registration reveals a key flaw in how India handles geographical indications online. Although the 1999 law establishes ownership, recognises legitimate producers, while also offering legal responses to violations, it lacks ongoing systems to manage digital storefronts, mixed origin statements, search algorithms, or vast numbers of internet sellers. Without organised oversight in virtual marketplaces, missing checks do more than expose bureaucratic shortfalls instead they erode core goals behind protecting place based products.

One useful insight comes from how Europe handles geographic indications. When selling online, EU law ties the right to use a GI label directly to meeting strict production standards checks happen regularly, oversight exists. Online platforms must verify claims, confirm who sells what, act when rules are broken. India could build something similar: routine audits after registration might help, alongside digital tools that track approved users automatically. Clearer guidelines on mentioning origin within recipes or mixtures would reduce confusion. Responsibility placed on digital storefronts ensures accountability spreads beyond producers alone. Authenticity rooted in place stays intact this way, handcrafted work gains stronger backing, buyers regain trust in labels they see while shopping online.