

Geographical Indications Associated Crops and Biodiversity in the Western Ghats, India.

Using market tools to foster best practices in agroforestry landscapes.

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Abstract

India has taken the lead in protecting Geographical Indications (GI)s, in accordance with WTO Agreement on TRIPS. Since the entry into force of the GI Act on 15th September 2003, it has been implemented with great dynamism, with more than 160 applications, out of which more than 100 have been effectively registered as of April 1st 2009. The first motivation to pass the GI Act was to protect Indian GIs against misuse following conflicts over misuse of well known products such as the Basmati rice and the Darjeeling tea. A second reason for passing the GI Act was to protect India's rich heritage of products originating from specific regions that were nurtured by knowledge and tradition built up by communities over the years. These geographical indications were vectors of national, regional and local cultural identities providing value addition to the products. At the international level, during the negotiations on the Convention of Biological Diversity (CBD), GIs were also seen as a way to protect biodiversity for products originating from biodiversity rich landscapes.

The paper will analyse two GIs registered for products originating from Kodagu District (Karnataka State), a major coffee-growing region located in the mountain range of the Western Ghats: Coorg Orange and Coorg Green Cardamom. In this district, over the last 30 years, in response to external market driven dynamics, intensification of coffee cultivation has led to the loss of 30% of the forest cover, essentially in the species rich wet evergreen belt of the district. The examples of GIs on Coorg Orange and Coorg Green Cardamom will give an understanding of whether GIs can be a useful tool for the management and the conservation of the cultural and biological diversity associated to the GI product itself and to the landscape where it is cultivated, while providing benefits to the producers.

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Introduction

A geographical indication identifies a good as originating, in a country, a region or a locality where a given quality, reputation or other characteristics of such goods is essentially attributable to its geographical origin.

GIs were started to protect consumers, offering reliable information about the goods they were buying. It was then thought that GI could equally afford protection to the producers, by fighting against unfair competition and “reputation riding”. Then, GIs were considered as useful to enhance rural development. It is only recently that the concept was extended to the protection of the environment through the protection of the cultural and biological diversity associated to said productions.

Legal Framework for the protection of GIs

India has taken the lead in protecting its origin based products and associated TK through the promotion of GI, with a *sui generis* protection system. Nationwide awareness of the importance of the protection of GIs followed conflicts over spotlight productions such as Basmati rice and Darjeeling tea. In accordance with WTO agreement on TRIPS (Trade related aspects of intellectual property rights), India has passed the Geographical Indication of Goods Act in 1999 which entered into force in 2003.

Until now, there have been more than 160 applications for GI, in the field of textiles, handicraft and agricultural products. More than 100 have been registered. Darjeeling tea is one of the best examples of agricultural products originating from a mountain area that had the required reputation and historical evidence to successfully apply for a GI.

The application must demonstrate the uniqueness of the product due to its geographical origin, a combination of human and natural factors. The application includes the detailed description of the product, the method of production, historical proofs and a map.

There are two types of stakeholders directly involved in a GI. The first one is the applicant; the second is the authorized user of the GI. The applicant can be any association of persons or producers or any organization or authority representing the interest of the producers of the concerned goods. Should the application be successful, the applicant will become the registered proprietor of the geographical indication. Since the registered proprietor represents the interests of producers, a GI is supposed to be a collective right. Any producer wishing to use the GI can register at the GI registry as an authorised user.

Kodagu district: a multifunctional landscape mosaic

Kodagu District in Karnataka State (75°25’-76°14’ E and 12°15’-12°45’ N) is a major coffee-growing region located in the mountain range of the Western Ghats. It produces nearly one third of Indian coffee, mostly in agroforestry systems under native

tree cover. The district name under British rule was Coorg, and it is under this name that reputation of product exists today. We will speak hereafter of Kodagu when we talk of the district, and Coorg Orange and Coorg Cardamom when we specifically address the products that has reputation and are the indications registered as GIs.

Forest represents almost 50% of the district. Central Kodagu is dominated by agricultural land, essentially coffee estates that cover 30% of the total area of the district. Coffee in Kodagu is grown under tree shade. The other crops associated to coffee are pepper, cardamom, orange and rice in the paddy fields. All together, forests and agroforests represent nearly 80% of the district (Ramakrishnan et al. 2000, Garcia et al. 2009).

In this human-dominated landscape of the coffee belt, forest fragments embedded in the landscape mosaic improve landscape connectivity, serving as corridors or stepping stones for numerous species. Together with the coffee plantations, they provide a series of environmental services, in terms of pollination, carbon sequestration and water recharge, that the scientific community is only now starting to assess. In addition, some of these fragments are sacred forests, and they play a crucial role in the village life and in the identity and ethos of the inhabitants (Muthappa et al. 2001).

Over the last 30 years, in response to external market driven dynamics, intensification of coffee cultivation has led to the loss of 30% of the forest cover, essentially in the species rich wet evergreen belt of the district. Hence, massive landscape fragmentation, habitat loss and biodiversity depletion are continuing (Garcia et al. 2009).

Still Kodagu is reputed for its exceptional biodiversity. Then the question is how this reputation could be used to valorize origin-based products having quality owing to this high biodiversity. A possible strategy could be to use a GI for this, provided the specification of the GI application contains practices environmentally friendly and compatible with the maintenance of the landscape mosaic (Marie-Vivien et al. 2009).

Coorg Orange and Coorg Green Cardamom: GI, the State and the planters.

The Coorg Orange GI

The Coorg Orange (Kodagina kittale, *Citrus reticulata*) is an ecotype of mandarin. It is a small tree that grows well in evergreen, subtropical, hilly tracts of 600-1200 meter elevation from sea level. It requires annual rainfall of 80-200cm per annum and warm winter climate. Coorg Orange was a crop frequently associated with coffee, cultivated as an intercrop in coffee in the ratio of one orange plant for every four coffee plants. At present, the orange trees represent 1,5 % of the canopy and up to 10% of the understory. *C. reticulata* ranks the 20th most frequent species in the agroforestry system.

It featured predominantly in the landscape and the traditions of the locality, but diseases and marketing difficulties (poor remuneration, fast perishable crop) explain the lack of interest by the farmers more eager to involve themselves in more lucrative cash

crops (coffee and pepper). The Citrus die back disease, still without control today, almost entirely wiped out the crop over the last 50 years.

The Department of Horticulture (DoH) of the government of Karnataka filed an application for a GI “Coorg Orange”, which was registered in 2004 (application n°33). The GI application in itself is a nine pages long public document. It describes the fruit and provides information on what kind of soil and bioclimate the orange grows in. It has little or no mention neither of the landscape mosaic associated to the crop nor of the traditional knowledge associated to the cultivation of the crop. The map provided is not limited to Kodagu as it includes also the neighbouring districts of Hassan and Chickmagalur, which are also coffee production areas.

The Coorg Green Cardamom GI application

The Coorg Green Cardamom (*Elettaria cardamomum* var Malabar) is a variety of cardamom grown in Kodagu and the adjacent districts (Chickmagalur, Hassan and North Kanara in the State of Karnataka and in the Malabar region of the State of Kerala). In Kodagu cardamom is grown at elevations of >1000 meters, where the annual rainfall is greater than 100 cm. It is mostly grown on gentle or steep slopes having red loamy soil or mixed soil type with gravel land types.

Unlike the Coorg Orange, the cardamom is not generally grown in association to coffee. The strong shade requirements of the cardamom are not ideally suited to coffee and both crops are almost mutually exclusive. Cardamom in Kodagu is grown in *Kadu* (forest) regions, areas where it is difficult to take up coffee plantation. This particular crop demands no extensive care. Transportation of fertilizer and pesticides to the remote places suitable for cultivation is difficult, so is providing irrigation. So cardamom is cultivated under “organic by default” production practices.

While preparing the plot, the tree species considered favorable for cardamom are retained. The species so selected either provide shade or good humus and do not hamper the cardamom growth. Fifty to sixty percent shade is preferred for cardamom plantations. When choosing where to plant, the farmers are aware that rays of the setting sun negatively affect the plant growth, therefore the cardamom plants are planted facing east and north whenever possible, a practice described in the GI application.

Most of the planters use the Malabar variety, Kodagu Suvasini and other varieties developed at Cardamom Research Station of the Spices Board. The other commercial variety popularized is Nalliyani Gold variety because of its good yielding capability. But the farmers maintain that this variety needs frequent applications of pesticides, fertilizer and intensive weeding. The Malabar variety is therefore preferred.

The applicant for the GI “Coorg Green Cardamom” (application n°78) is the Spices Board (SB), a commodity board and agency under the Ministry of Commerce and Industry based in Cochin (Kerala).

The GI application is an 18 pages long public document in both Kannada and English. It describes the fruit, gives indications on how it is produced and a detailed account of the post-harvesting protocols, recognised as key in the quality of the final product. Only the variety Malabar is concerned by the application. It also mentions that cardamom plots are “left to natural forest” after 15 years. Like in the case of the Coorg Orange, the map provided encompasses the whole State of Karnataka.

The role of the State

In response to the conflicts over Basmati rice, the Government of India had incited its administrations to identify and protect local varieties and local products, in a push towards protection against biopiracy. Both GIs on Coorg Orange and Coorg Green Cardamom were filed by the respective government bodies, in a top-down, pro-active approach. Since they represented the Government, it was rationalized that they would stand in for the producers. The DoH perception of the orange producers was that they were too few and unorganized to bear the costs of drafting the GI application.

We are not the owners of the GI, we are the guardians. We will hand over the ownership to the producers. DoH

The two main objectives pursued by the DoH were to protect and revive a traditional crop variety and to provide high quality (disease free) plant material, bringing economical development to the region. There was no issue about protecting against “reputation riding” since no case of misuse has been encountered so far. A third objective appeared later, once the GI had already been registered: the GI could be used to protect the ecosystem where the orange is grown. Both agencies, the Spices Board and the Department of Horticulture have registered many other GIs each in their own field.

Transferring the GI to the producers

To be successful, a GI should be used by the producers, located in the area. The main challenge faced now by the Department of Horticulture and the Spices Board is successfully transfer the GIs to the producers, and for this, they need to create awareness.

Between February and May 2009, we surveyed 60 producers (30 producers of cardamom and 30 producers of orange) distributed across the entire Kodagu district. Only one was aware of the existence of the GI for their respective productions. There is a total lack of awareness on the part of the producers of what a GI is, and how they can benefit from it. Even more worrying, the staff of the local office of the Spices Board themselves were unaware of the existence of the GI on Coorg Green Cardamom.

The GI on Coorg Orange is meant as a tool for marketing the orange. The strategy of the Department of Horticulture is to “educate” the farmers about the GI and then try to gather them in a registered society to whom the ownership of the GI could be transferred. The DoH will retain the GI till they feel the planters have organized themselves and adopted good practices. The farmers are expected to produce a commercial development plan (fruit/juice/brand name?) and give publicity in local papers on the product and the GI legal aspects.

But there are several challenges that may impair successful transfer of the GI. First, as discussed previously, there is a serious lack of awareness among the planters on what a GI is. Second, the relations between the producers and the current owners of the GI are shaky at best.

They sit somewhere and tell us to do things. I know more things than many of them [agronomists, horticulturists] about the problem. AP, Mallur village.

The link with biodiversity

The issue of the possible use of GIs for the management and the conservation of cultural and biological diversity is different in both cases.

The Coorg Orange, as an associated crop, could be used to foster diversity within the production system, securing livelihood options for the growers. Per se, it is not specifically associated with practices that will have an impact on the biodiversity of the coffee plantation.

The situation with the cardamom is different. Since cardamom and coffee are not grow in association, a successful GI on cardamom would contribute to maintain diversity at the landscape scale, ensuring all the available lands are not turned to coffee plantations and preserving a higher percentage of native tree cover in the private lands.

But to this day farmers do not use the GI to market their oranges or their cardamom and the supply chain for both products is very limited. In addition, the specifications of the GI applications do not necessarily accurately portray the methods of production. As an example, taken to the letter, only the cardamom plantations facing north or north-east could use the GI.

Not surprisingly, given the level of awareness we found among the producers, no stakeholder has yet come up with a proposal to actually amend the GI specifications so as to include environmentally sound practices even though this possibility is clearly provided under the Indian GI act.

Conclusion

The examples of the Coorg Orange and of the Coorg Green Cardamom provide the opportunity to discuss how a GI can be successfully used by the local producers and what are the conditions needed for it to have a positive impact in the landscape and the conservation of both biological and cultural diversity.

As things stand today, the GIs on Coorg Orange and on Coorg Green Cardamom may have prevented local varieties from disappearing, which is already a major contribution from GI registration for the conservation of genetic resources. But GIs are a marketing tool and not only a registry of traditional ecotype and should be used by the producers.

Several factors make it doubtful that they will have an impact on the larger biodiversity and landscape dynamics of Kodagu. These are

- the top-down approach adopted to draft the application via government agencies speaking on behalf the producers rather than the producers themselves
- the fact that the specification were not drafted with the objective of maintaining and fostering multifunctionality within the landscape,
- and the lack of local awareness on the GI tool itself

A GI should be drafted by considering the knowledge of the producers and the cultural practices which should be embedded in the specification. Only then can the cultural and biological diversity eventually associated to the product be maintained in the area, by their possessors.

For a GI to be successful it needs to secure income for the producers, and for this it needs to be appropriated by the producers. For a GI to be successful in protecting biodiversity, the environmentally sound practices identified need to be embedded in the specification of the GI. But choosing environmentally sound practices brings opportunity costs that need to be taken into account lest the GI becomes not profitable and therefore defeats its purpose.

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