

Article

The Potential of Geographical Indications (GI) to Enhance Sustainable Development Goals (SDGs) in Japan: Overview and Insights from Japan GI Mishima Potato

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Abstract: Geographical indications (GIs) have recently become an important tool for Japanese agricultural policy, particularly after the adoption of a “sui generis” certification system in 2015. In the same year, the United Nations proposed a common agenda with 17 Sustainable Development Goals (SDGs). The present paper addresses the potential of GIs to enhance SDGs in Japan. First, we examine existing knowledge on GI inception, which consists in both government reports and research surveys. We show that these studies mostly focus on SDGs related to economic growth, and on social issues raised by the registration process. Then, as an exploration of potential impacts of GIs on the full set of SDGs, we study the case of Mishima Bareisho Potato GI, on the basis of interviews and participatory observation. From local stakeholders’ point of view, Mishima Potato GI can contribute to at least nine SDGs at all the production, transformation and commercialization stages. The SDG framework is useful to reveal some contributions seldomly considered in GI studies but which matter for local people, for example, the employment of disabled people or nutritional education. Finally, we discuss how these new insights can contribute to the debate on the potential role and limits of GIs for sustainable development in Japan.

Keywords: geographical indication; sustainable development goals; certification; rural development



Citation: Kimura, J.; Rigolot, C. The Potential of Geographical Indications (GI) to Enhance Sustainable Development Goals (SDGs) in Japan: Overview and Insights from Japan GI Mishima Potato. *Sustainability* **2021**, *13*, 961. <https://doi.org/10.3390/su13020961>

Received: 28 November 2020

Accepted: 13 January 2021

Published: 19 January 2021

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1. Introduction

Geographical indications (GIs) correspond to the labelling of products referring to their geographical origins. GIs have been described as a promising device to foster sustainable rural development [1]. In both scientific literature and political discussions, two contrasted conceptions of GIs have been intensively debated: On the one hand, GI as a “trademark” correspond to a collective property, using a registered geographical name (US position); On the other hand, “sui generis” GI refers to a delimited and protected area, associated to a stronger state intervention (UE position). GI are increasingly used worldwide in both developed and developing countries, variably referring to “trademark” or “sui generis” conceptions [2,3]. The case of Japan is particularly interesting. After firstly adopting the “trademark” system in 2006, the country changed its perspective in 2015 to adopt a “sui generis” conception [4,5]. Subsequently, the number of product certifications in Japan has been growing very fast (in January 2021, after five years and a half, 105 products are registered). Certified products in Japan have some specifics compared to other countries. Particularly, there is a high proportion of fresh non-processed products (kaki, pears, etc.) and bovine meats (nine certified products in January 2021) [5]. This very fast expansion is partly due to a Japan–EU Economic Partnership Agreement (EPA) that came into force on February 2019, and which specified mutual protection of Geographical Indication (GI) products [6,7]. These recent political changes can be interpreted as part of what Bestor [8] calls Japan’s “gastrodiplomacy”, i.e., the efforts “to promote, protect, and prove

the essence of culinary authenticity, internationally and domestically”. From these different perspectives, Japan offers a unique case of a recent introduction of sui generis GI followed by a very fast expansion in a developed country, with a rich and specific food culture [7,9].

Concomitantly with the inception of a sui generis GI system in Japan, 2015 was also the first time in history that world leaders unanimously agreed on a common vision for the future of humanity: The 2030 Agenda for Sustainable Development [10]. After an exceptional deliberative process, the agenda articulated a universal and integrated plan for action, through a set of 17 Sustainable Development Goals (SDG) and 169 targets [9]. The 17 SDGs integrate all three interrelated dimensions of sustainable development (economic, ecological, social): #1: No Poverty; #2: Zero Hunger; #3: Good Health and Well-being; #4: Quality Education; #5: Gender Equality; #6: Clean Water and Sanitation; #7: Affordable and Clean Energy; #8: Decent Work and Economic Growth; #9: Industry, Innovation and Infrastructure; #10: Reduced Inequality; #11: Sustainable Cities and Communities; #12: Responsible Consumption and Production; #13: Climate Action; #14: Life Below Water; #15: Life on Land; #16: Peace and Justice Strong Institutions; #17: Partnerships to achieve the Goal [10]. SDGs were created to overcome the limitations of pre-existing Millennium Development Goals (MDGs), with some major inflections in the sustainability debates: (1) The idea of the SDGs is to consider a global cooperation system, rather than the support from the North to the South that the MDGs advocated (130 out of 169 targets relate to developed countries); (2) SDGs try to address issues comprehensively. They are not a solution to one problem, but a system that responds to issues of economic, social, political, peace and security, environment, gender, etc., as a whole; (3) Civil society and corporate activities, not the state, have come to the fore as the main actors of the international community as expert groups and NGOs played an important role in the negotiation process of SDGs [11].

To enhance the contribution of food systems to SDGs, Caron et al. (2018) insist on the key role of territorial approaches and the importance of “vibrant rural territories” [12]. From this perspective, GIs seem to have an interesting potential for sustainability, as they are typically associated to a territorial approach (by definition). However, to date, most studies on the link between GIs and rural development have given emphasis to the economic dimensions. For example, in a worldwide comparative study in nine countries in four continents, Vandecastelaere et al. (2020) show that GIs generate positive economic impacts in all nine case studies, in terms of price, income for producers and market access [1]. These positive economic effects have been well explained in the literature by several factors, such as specific value-chain governance and institutional frameworks in GI systems [13,14]. In another recent important book with worldwide case studies, Bonnano et al. (2019) indicate that GIs might have rather mixed effects, depending on local contexts and many factors and drivers, especially when considering issues of social equity and power relationships [15]. In both these references, the environmental dimension of sustainability is often considered as a background element, not directly assessed. Particularly, Vandecastelaere et al. (2020) assume that GIs generally have positive ecological effects, as they are based on local resources and traditions [1]. However, as shown by Baritoux et al. (2016), the relationships between localized food systems and environmental performances is more complex as it may seem, depending on the multiple possible configurations of “ecological embeddedness” [16]. Vandecastelaere et al. (2020) conclude their study by stressing the importance of considering possible trade-offs between economic development, environmental preservation and social welfare, as a perspective [1]. Recently, some GIs studies consider sustainability in a broader sense, such as in the European project Strengthen2Food [17] and several papers in this special issue [18–20]. To our knowledge, most of these studies are based in Europe, where GIs have been established for quite a long time [17–19]. These European studies are performed in the context of a recent inflection in EU and national policies toward greener or more agroecological practices (i.e., “Farm to Fork”, green deal, etc.), which gives an important role to food certification [18,20].

In Japan, the recent and rapid development of GIs has generated a significant academic interest and a number of reports and studies. In the first section of this paper, we present an overview of these studies, which show mixed effects of GI inception in Japan. Most of these existing studies are based on economic and social perspectives, corresponding to a limited number of SDGs. We found no study considering the full set of SDGs. In the second part, we present a survey performed in the Mishima Potato GIs case study, taking explicitly the SDG as underlying analysis framework. Although limited in scope, this survey provides original insights on the potential positive contribution of GIs to SDGs in Japan. Finally, these insights are relativized in light of the existing literature, in order to identify some general perspectives.

2. The Effects of GIs Inception in Japan: An Overview

As the introduction of a sui generis GI system has become a significant feature of the national food policy, the Ministry of Agriculture, Forestry, and Fisheries (MAFF) has produced several reports and communication documents on its development. The key principles of GIs in Japan are presented in Figure 1, which is taken from a MAFF pamphlet on GIs protection systems. This figure clearly illustrates the basic principles of the sui generis approach, with explicit relationships between both natural and human factors of a producing area and the characteristics of the products in terms of quality and reputation (Figure 1).

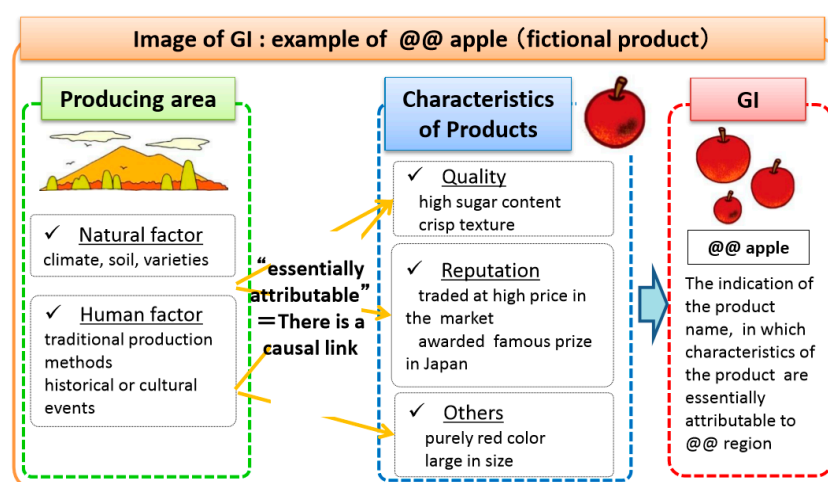


Figure 1. General principles of GI certification in Japan. (Source: Ministry of Agriculture, Forestry and Fisheries Communication pamphlet).

The general expectations of the government in implementing the new GI system are made explicit in Figure 2, also from the MAFF communication pamphlet. As we can see, the general aims of introducing GIs (orange boxes on the right) are broadly related to some aspects of sustainability (revitalization of rural villages, inheritance of traditional culture, and protection of consumer benefits). However, the expected benefits (middle of Figure 2) are expressed uniquely in economic or marketing terms (pricing, overseas expansion, protection against illicit use, etc.). Consistently, in the subsequent evaluation reports, MAFF emphasizes indicators such as the elimination of counterfeit products, expansion of transactions, increase of bearers and price increase [21]. From this perspective, MAFF surveys suggest that a significant number of registered products have been effective [21]. For a specific example, the unit sales price of Yame Dentou Hongyokuro GI tea has increased by 11% compared to the previous year before GI registration, partly as a result of improved quality control and clarification of the cultivation method (Food Marketing Research & Information Center, 2019). For Tottori Sakyu Rakkyou/Fukube Sakyu Rakkyou GI onions, the sales amount has increased by 30% compared to the previous year before registration, due to good newspaper coverage and a change in design after registration. In regard to

the elimination of counterfeit products, an example of a positive impact of the implementation of the new GI system for Japanese producers was the interdiction of the use of the prestigious name “Yubari melon” by a business operator based in Thailand [22]. Finally, MAFF also performs regular studies on the consumption side, notably on the recognition of the GI label in Japan and consumers’ willingness to pay [21].

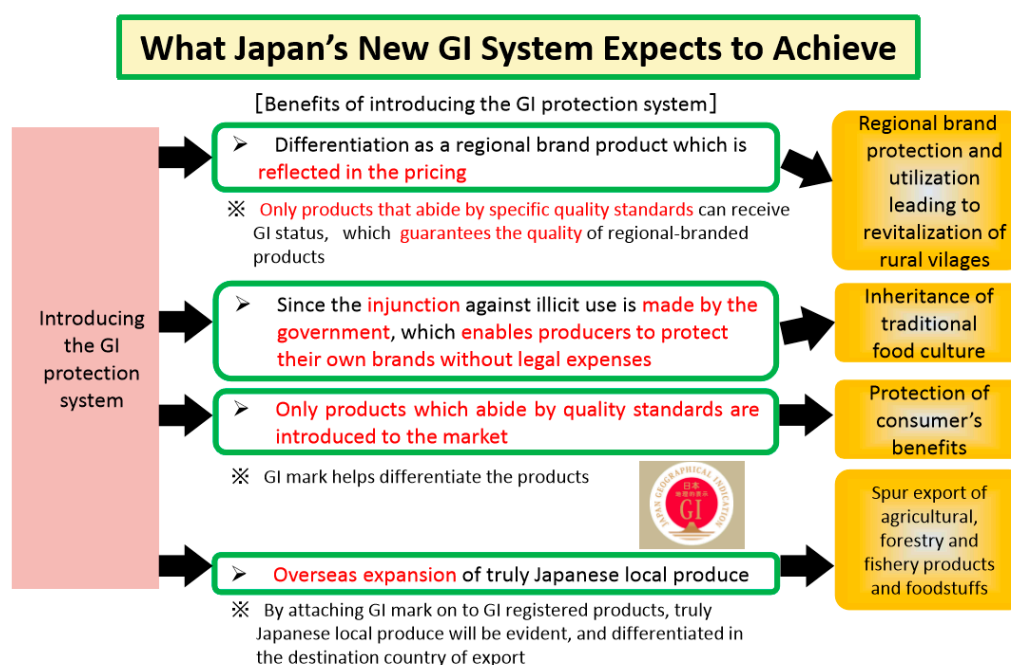


Figure 2. Japanese government expectations for the new GI system. (Source: Ministry of Agriculture, Forestry and Fisheries Communication pamphlet).

Several academic studies have investigated the process of GI certification in different case studies in Japan, since the adoption of the trademark system in 2006. For example, Augustin-Jean and Sekine (2012) have compared the construction of quality in the two emblematic GIs productions of Kobe and Matsusaka Beef [23]. They showed how social actors, networks and institutions have generated different pathways in the creation of these two GIs, notably resulting in different specifications in the codes of practices. In some cases, the construction of quality can generate important controversies. Particularly, trade-offs might exist between the inclusion of a large number of stakeholders and the preservation of the more traditional stakeholders and their know-how, as developed elsewhere [24]. This is typically exemplified by the case of miso (a traditional food made from fermented soybeans), for which the introduction of GI certification has raised important issues and discussions [4,25]. Sekine (2019) stresses that the sui generis GI system has not replaced the previous GI trademark system [26]. In fact, both sui generis and trademark systems actually coexist, also with several other quality signs, which is sometimes confusing for the consumer. Particularly, Japanese alcohol products such as sake have a specific GI system, which is managed by the Ministry of Finance (whereas non-alcoholic beverage are managed by MAFF) [5]. According to Sekine (2019), the sui generis GI system shows a higher potential to guarantee a better quality of GI products, but it does necessarily contribute to the democratization of the existing power relationships [4]. Matcha green tea powder is a typical example of processed food industries which can be dominated by export-oriented oligopolistic firms [4], in a similar way as the well-documented case of Tequila in Mexico [27]. After the inception of Mishio Matcha GI in March 2017, complex actors’ interactions have finally led to a cancelation in February 2020, which was the first case of withdrawal of a GI registration.

In another study, Tashiro et al. (2018) have investigated the internal processes and the effects of GIs registration in seven GI case studies in the Tohoku region (north Japan) [28]. The seven products were salmon, shellfish, two beef meats, two fruits and one processed vegetable called (tonburi). This study shows that motivation of GI applicants to get the certification in Japan are diverse (i.e., to improve management methods, to raise producers' revenues, after direct recommendation) [21]. The registration process can be burdensome and the subsequent effects (after registration) are mixed. Interestingly, the study concludes that the more complex and time-consuming the registration process, the weaker the subsequent satisfaction of stakeholders in regard to the effects of certification, compared to their initial expectations [29]. In a subsequent study, the same authors show that GI registration has the potential to positively contribute to the sharing of traditional knowledge between farmers, taking the tonburi GI as a case study [29]; on the contrary, there are also arguments that this positive contribution to maintain traditional knowledge is not always actualized [4]. To conclude this overview, existing studies correspond, on the one hand, to government reports focusing on economic indicators, and on the other hand, research surveys with a social dimension, which are generally more critical about GIs inception in Japan. In terms of SDGs, these studies are mostly related to SDG #8 (Decent Work and Economic Growth) and somehow to SDG #10 (Reduced Inequality), respectively. To our knowledge, there is yet to be a study proposing a comprehensive sustainability investigation of GI inception in Japan, explicitly considering the full set of SDGs.

3. Materials and Methods

Mishima Bareisho potato is a variety of May Queen produced in Mishima City and the Kannami-cho area of the Tagata District in Shizuoka Prefecture, which is located about 130 km south of Tokyo, at the western foot of Mount Fuji (Figure 3). The potato is characterized by a "beautiful glossy surface with no skin scratches, a creamy texture which does not easily disintegrate like that of the May Queen, and soft, flaky mouthfeel with a sweet flavor like that of the Danshaku (baron) variety" (information website on Japan's geographical indications, 2020, <https://gi-act.maff.go.jp/en/outline.html>). Mishima Bareisho has been granted the 18th GI products certification under the new sui generis system in Japan in 2016. There are several local human and natural factors contributing to Mishima Bareisho distinctiveness. For example, the potatoes are harvested carefully one by one so as not to damage the potato skin. They are then stored by drying in a cool, dark place with good ventilation to mature for one to two weeks after harvesting. This gives the potatoes sweetness and a flakey texture, and a longer storage life. In regard to the natural factors, the volcanic soil in the production area has excellent water permeability, breathability and water retention, and the south-facing slopes of the fields in the area facilitate the long daylight hours and good drainage [30]. In November 2017, the GI registration application group, JA (Mishima Kannami), developed a GI collaboration croquette in partnership with another GI registration group, (The Tagonoura Fishery Cooperative Association, Tagonoura Shirasu GI), in the same prefecture. The croquette was called "Tamiko-chan", (TA for TAgonoura shirasu, MI for MIshima potato, and KO for CROquette in Japanese).

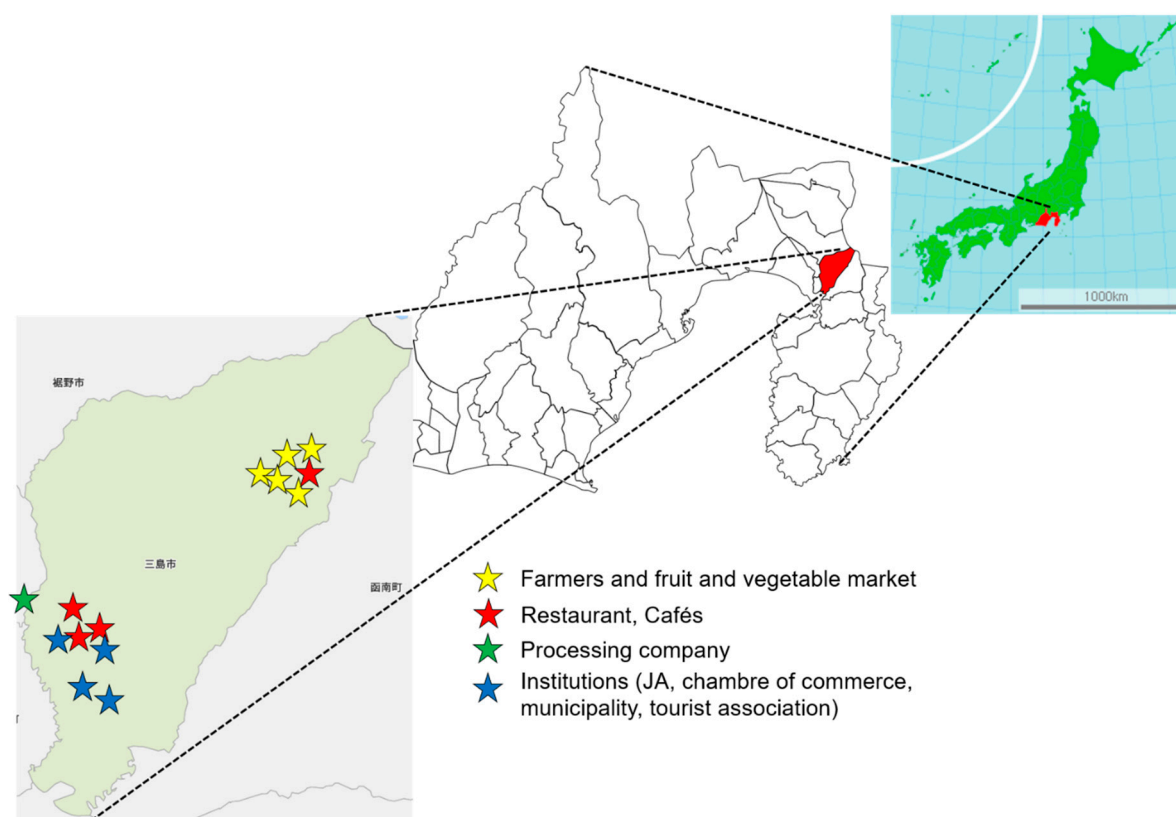


Figure 3. Localization of study area (Mishima city in Shizuoka prefecture) and stakeholders interviewed.

From 2016 to 2018, just before and after the GI product registration, one of the authors (Junko Kimura) conducted interviews and fieldworks based on participatory observation in the Mishima Bareisho area. In total, 19 stakeholders have been interviewed. These include (i) farmers and one fruit and vegetable market; (ii) One processing company (which produces Mishima croquette) and two retail stores; (iii) four local institutions (Japan Agricultural Cooperative (JA), the Mishima municipality, the Mishima Tourism Association, the Mishima Chamber of Commerce and Industry; (iv) four restaurants and cafés (including one bakery, one national chain café developing Mishima croquette burgers only for the store, and one restaurant using zero-kilometer vegetables) (Figure 3). The Mishima local fruit and vegetables market is located in the middle of the production area. Potatoes are distributed to the processing company 9 km away in a plain field. Many of the cafés, retail stores, and HoReCa (hotels, restaurants and caterings) are located in the western part of the city near the Mishima train station. The farms and the fruit and vegetable market are located in the eastern rural area of the city, and the processing company, café, restaurants, and retail stores are located on the western urban side of the city (Figure 3). Interviews were semi structured, with questions covering stakeholders' relationships and all aspects of Mishima potato and GI certification value creation by stakeholders' activities. The authors applied an interpretive approach, and all interviews were recorded and documented for interpretation. The relationships between stakeholders are presented in Figure 4. Finally, the SDG framework has been used to identify all potential contributions of Mishima potato GI to sustainability of product origin. The potential contributions were divided into the production stage and the transformation and commercialization stages, and related to corresponding individual SDGs as proposed by the UN (2015).

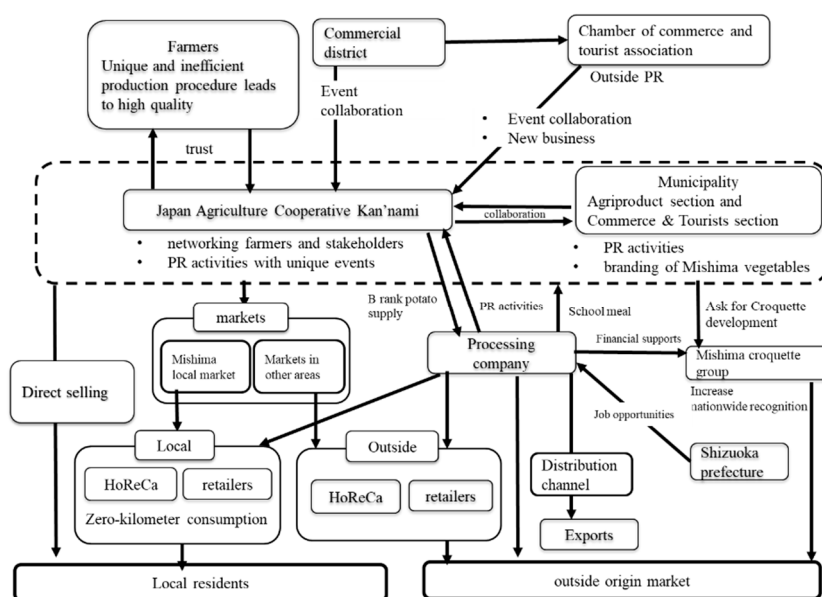


Figure 4. Networks and interactions between stakeholders (from the authors based on research).

4. The Contribution of the Japan GI Mishima Bareisho Potato to SDGs

The contribution of the Mishima potato GI to sustainability is presented in Table 1 for both the production stage and for the transformation and commercialization stages. Some illustrations are given in Figure 5. At the production stage (Table 1), stakeholders indicate that the Mishima potato contributes to the employment of women and disabled people (Figure 5b). For example, a manager in an agricultural cooperative reported that people with Asperger's who are not good at communication grow potatoes in the field and are able to become economically and socially independent (SDG #1 and #5). In regard to the social dimension, education farms are used to promote the product to children as the next generation of consumers (SDG #4). Young farmers are forming the group “Nomins” and working together to make higher quality products by exchanging information and encouraging one another (SDG #8). As the Mishima potato is air dried in the production process, it has become a potato with higher nutritional value, potentially useful for nutrition issues of the elderly (SDG #3). Agriculture in mountainous areas is hard work, but in Mishima, potato GI contributes to maintain young farmers, both those who inherited from fathers and those newly entered into agriculture (Figure 5a). All lands are still cultivated, which maintains the landscape and sound soil (SDG #15), and prevents the invasion of wild boar and deer. Moreover, as potatoes are grown in mountainous areas, farmers cannot use machines but only their hands to harvest including digging the soil. This does not consume petroleum resources nor pollute the air (SDG #7 and #13).

At the transformation stage (Table 1), the processing company which produces Mishima croquettes employs local people. By purchasing B-class potatoes without lowering the price from the farmers, it contributes to economical support for the farmers (SDG#1). The company retails their product to public schools for lunches and teaches food balance and safety while the products become familiar with children (SDG#4). It has also developed new non-fried products to meet consumer needs (SDG#8). The local restaurant offers a menu with Mishma croquette and other local meats and vegetables (Figure 5c). The National Croquette Festival held by the Mishima Croquette Association and the Mishima Croquette Contest held by the Mishima municipality are attracting tourists to visit the region (Figure 5d). In regard to the environment dimension, interviewed stakeholders highlight that processing within the production area realizes “zero kilometers” and reduces the environmental impact. Moreover, processing B class potatoes has achieved zero waste (SDG #7 and #12).

Table 1. Potential contribution of Mishima potato to SDGs at the production, transformation and commercialization stages.

| SDGs Goals | Production Stage | Transformation and Commercialization Stages |
|--|--|---|
| #1 No Poverty | -Young generation newly become farmers -Disabled employment | Local employment |
| #3 Good health and well-being | Consumers more conscious on zero-kilometer vegetables and its freshness | Product development solving metabolic disease (non- fried croquette) |
| #4 Quality Education | Educational farm for the next generation (harvest experience) | School meal menu of GI product and children learn terroir-based products |
| #5 Gender Equality | GI registration encourage female farmers | |
| #7 Affordable and clean energy #12 Responsible Consumption and production | Small environmental load in traditional production process including harvest by hands without using machines and dry by wind for 1–2 weeks | -Zero kilometers due to local production for local consumption -Zero waste by utilizing B-class products |
| #8 Decent work and economic growth | -Mutual cooperation in a young farmers' group NOMINS -Highest may queen potato in Japan | Local tourism resources (National croquette contest) |
| #15 Biodiversity | Motivate farmers to preserve local specialties | Land use in mountainous and cold regions |
| #17 Partnerships | JA works networking with different subjects and stakeholders (other GIs) | Buy raw materials from farmers without lowering prices |

**Figure 5.** Illustrations of some contributions of Mishima potato GI to SDGs at production stage (a,b) and at transformation and commercialization stages (c,d). (Source: (a) Father and son producers in the JA Mishima Kannami PR magazine EYE; (b) Family farming in the Mishima City magazine. July 2017 issue; (c) Chained bakery's local specific menu using Mishima potato taken on 26 October 2017 by authors; (d) Poster for a nationwide event taken on 26 October 2017 by authors).

5. Discussion

The Mishima potato case study clearly illustrates some potential contributions of GI to a diversity of Sustainable Development Goals (SDG), beyond those directly related to food (such as #2: Zero Hunger) or those considered in government reports (#8: Decent Work and Economic Growth) or in some previous research studies (#10: Reduced inequalities). From our survey based on interviews with stakeholders and participatory observation, we can identify original contributions to a least nine other SDGs, at both the production stage, and the transformation and commercialization stages (#1 No Poverty; #3 Good health and well-being; #4 Quality Education; #5 Gender Equality; #7 Affordable and clean energy; #8 Decent work and economic growth; #12 responsible production and consumption; #15 Biodiversity; #17 Partnerships). In our case study, the SDG framework appears to be useful to reveal some contributions seldomly mentioned in existing literature but which matter for local people, for example, the employment of disabled people or nutritional education. To some extent, the Mishima potato can be seen as a relative “success story” in the context of Japan, where GI registration has fostered positive relationships between stakeholders. In our understanding, four key factors can explain this relative “success story”: (1) Bottom-up endogenous development; (2) Collaborative activities and close networks within and outside the value-chains (for example, with the municipality); (3) Altruistic attitude; (4) Innovation and open mind. As a particularly interesting illustration, according to one interviewed stakeholder, “Tamiko-chan” croquette is the very first GI collaboration product in Japan (with the Mishima potato and Tagonoura Shirasu fish as raw materials). The Mishima case study could be inspirational for other GI products and more generally for GI development policy in Japan. After the adaption of the sui generis GI system in 2015, many products certifications have been in fact directly solicited by MAFF, following rather a “top-down” approach. A consequence is that the first GIs products have often been the “easier” to certify, such as raw or minimally processed products, rather than more traditional products, such as sake, tea or soy sauce [5]. Moreover, MAFF emphasizes elimination of counterfeit products, expansion of transactions, increase of bearers and price increase. These are very important effects, but our study shows that GIs can contribute more generally to SDGs when following a terroir-oriented approach, as proposed by [31] in a European context. In order to develop terroir-oriented agriculture that can contribute to SDGs, it is necessary to create an organizational system in which all relevant parties involved in the product can cooperate and create value. In this perspective, the concept of “social capital” can be used as a theoretical framework to better understand the capacities of GI value-chains to adapt to sustainability challenges [32]. Particularly, it is essential to understand how trust between various actors can develop, particularly in regard to the trust of consumers toward food certification labels such as GIs [33].

An obvious limitation of the proposed case study is that it focuses on the positive contributions of the Mishima potato to SDGs, from the perspective of local stakeholders (which is obviously biased). Therefore, it is important to stress that the case study has to be considered in combination with the proposed overview of the effects of GIs inception in Japan, based on both official reports and academic studies, to get a fuller and more nuanced picture. In some cases, like miso and matcha (cancelled) certification, the GI system has important limitations [4,26]. Clearly, not all certified GIs in Japan contribute equally to SDGs, and it is important to consider also potentially negative contributions (to our knowledge, there is no important controversies or environmental issues in this case study). To get a fuller and more “objective” picture, other methodologies and frameworks could be used. For example, in the context of European GIs, Arfini and Bellassen (2019) proposed a framework based on the SAFA methodology (Sustainability Assessment of Food and Agriculture Systems) developed by the FAO (2013) [17,34]. This methodology consists of a list of indicators grouped by contributions made to environmental, social, economic and governance dimensions of sustainability. As a SAFA methodology is originally primarily focused on processing firms, Arfini and Bellassen (2019) have proposed an adaptation to integrate five main components of GI systems: (1) the quality dimension; (2) the structure of

the value chain; (3) the role of local agro-food systems; (4) The creation of public goods; (5) The governance model. The expanding international literature is also helpful to understand the diversity of possible pathways to sustainability [17]. For example, Owen et al. (2020) discusses how GIs can serve as levers for sustainability transitions, under certain conditions [19]. To understand the contribution of GIs to sustainability, these authors refer to the “ten elements” of agroecology, as defined by the FAO: (1) diversity; (2) co-creation and sharing of knowledge; (3) synergies; (4) efficiency; (5) recycling; (6) resilience; (7) human and social values; (8) culture and food traditions; (9) responsible governance; (10) circular and solidarity economy [19]. In some cases, e.g., the Corsican grapefruit, specifications in the GI code of practices can clearly compromise the sustainability of the system, as when expectations for visual quality lead to high levels of food waste [18]. In some Japanese GIs, e.g., beef meat products, it is possible that GI certification can contribute to “lock-in” environmentally unsustainable practices, such as animal diets based on large amounts of imported feed [23]. To get a more dynamic understanding of pathways for change, the theoretical framework of a sociotechnical transition theory adapted to the context of GIs could be very useful [35]. In this perspective, historical differences between European and Japanese contexts should be considered [36].

Finally, in the context of Japan especially, issues of coexistence of GIs with conventional agriculture and other alternative agri-food alternatives must be considered [37]. For example, the development of GIs can have interesting synergies with the idea of “sixth-order industrialization” put forward by the government [38]. This term refers to the vertical integration of primary, secondary, and tertiary industries ($1 \times 2 \times 3 = 6$) to achieve greater value added in products and services. The Mishima potato is a good example of how value can be added to farm products not just by producing (primary industry), but also through processing (secondary industry), and marketing and linking their resources with various services (tertiary industry), such as farmers’ restaurants and agri-tourism [38]. The links between GI development and organic farming [39] or locally based Community-Supported Agriculture initiatives (Teikei) are important research questions and perspectives [40]. The implications of the Japanese context and institutions on collective action [41], as well as the cultural aspects of stakeholders’ worldviews in GI systems should also be considered [42]. Comparative studies between Japan and other agricultural contexts will also certainly be very useful to develop a more general understanding of the complex pathways to food system sustainability [43,44].

As a conclusion, the fast expansion of sui generis GIs since 2015 can be seen as a significant and ambitious evolution in Japanese agricultural development policy. On the other hand, the observed “rush” in products’ registration might also raise perplexity as regard the meaning of GIs in Japan and their sustainability outcomes. The Mishima potato case study illustrates how the close connections of GI products to their local environment (natural and socio-cultural) can translate into positive contributions to several SDGs. To enhance the potential of GIs for sustainable development (in synergy with other agricultural policies), the SDG framework can be considered as a useful tool, among others, to support decision making and to align local action with the context of global priorities.

Author Contributions: J.K. contributed conceptualization of the paper and case study, methodology, data gathering, funding acquisition, writing, and C.R. contributed conceptualization of the paper and literature review, writing and editing. All authors have read and agreed to the published version of the manuscript.

Funding: This work was supported by JSPS KAKENHI Grant Number 19H01544 and 19KT0014. CR acknowledges funding from INRAE GloFoodS metaprogram to conduct interviews with GI experts in Japan, which provided a basis for the literature review.

Acknowledgments: The authors wish to thank Masahiro Tonooka at J.A. Mishima Kannami for his excellent research support and assistance during the collection of data. J.K likes to appreciate Ministry of Education, Culture, Sports, Science and Technology in Japan for the Grant for publication of the article. C.R. wants to thank the GingKo research network on GIs led by INRAE ACT division and the French government IDEX-ISITE initiative 16-IDEX-0001 (CAP 20-25) for stimulating discussions on GI and sustainability, as well as experts who gave their time to explain the GI context in Japan.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Vandecastelaere, E.; Teyssier, C.; Barjolle, D.; Fournier, S.; Beucherie, O.; Jeanneaux, P. Strengthening sustainable food systems through geographical indications: Evidence from 9 worldwide case studies. *J. Sustain. Res.* **2020**, *4*. [CrossRef]
2. Marie-Vivien, D.; Biénabe, E. The multifaceted role of the state in the protection of geographical indications: A worldwide review. *World Dev.* **2017**, *98*, 1–11. [CrossRef]
3. Feuer, H.N. Geographical indications out of context and in vogue: The awkward embrace of European heritage agricultural protections in Asia. In *Geographical Indication and Global Agri-Food: Development and Democratization*; Routledge: London, UK, 2019; pp. 39–53.
4. Sekine, K.; Bonanno, A. Geographical indication and resistance in global agri-food: The case of miso in Japan. In *Resistance to the Neoliberal Agri-Food Regime*; Routledge: New York, NY, USA, 2017; pp. 106–119.
5. Baumert, N. Les indications géographiques alimentaires made in Japan. Une nouvelle orientation géopolitique et une évolution des critères de définition de la qualité. *Ebisu. Études Jpn.* **2019**, *56*, 163–189. [CrossRef]
6. Huysmans, M. Exporting protection: EU trade agreements, geographical indications, and gastronomical nationalism. *Rev. Int. Political Econ.* **2020**, 1–28. [CrossRef]
7. Morisaki, M.; Suda, F. Patrimonialisation of foods and agriculture in Japan. In *Colloque SFER*; Université de Reims Champagne Ardenne: Reims, France, 2017.
8. Bestor, T. Most favored nation status: The gastrodiploacy of Japan's global promotion of cuisine. *Public Dipl. Mag.* **2014**, *11*, 57–61.
9. Kimura, J. The Act on protection of the names of specific agricultural, forestry and fishery products and foodstuffs (Geographical Indication (GI) Act). In *World Food Culture Encyclopedia*; Maruzen Publishing Company: Tokyo, Japan, 2015. (In Japanese)
10. UN. Transforming Our World: The 2030 Agenda for Sustainable Development. 2015. Available online: http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E (accessed on 10 June 2020).
11. Takahashi, K. Ideological background and real challenges of Sustainable Development Goals: Development, environment and security. *Interdiscip. J. World Peace Educ.* **2016**, *47*, 1–8. (In Japanese)
12. Caron, P.; Y de Loma-Osorio, G.F.; Nabarro, D.; Hainzelin, E.; Guillou, M.; Andersen, I.; Bwalya, M. Food systems for sustainable development: Proposals for a profound four-part transformation. *Agron. Sustain. Dev.* **2018**, *38*, 41. [CrossRef]
13. Belletti, G.; Marescotti, A. Monitoring and evaluating the effects of the protection of Geographical Indications. A methodological proposal. In *The Effects of Protecting Geographical Indications Ways and Means of their Evaluation*; Swiss Federal Institute of Intellectual Property: Bern, Switzerland, 2011; pp. 31–122.
14. Barjolle, D.; Jeanneaux, P. Raising rivals' costs strategy and localised agro-food systems in Europe. *Int. J. Food Syst. Dyn.* **2012**, *3*, 11–21.
15. Bonanno, A.; Sekine, K.; Feuer, H.N. (Eds.) *Geographical Indication and Global Agri-Food: Development and Democratization*; Routledge: New York, NY, USA, 2019.
16. Baritoux, V.; Houdart, M.; Boutonnet, J.P.; Chazoule, C.; Corniaux, C.; Fleury, P.; Tourrand, J.F. Ecological embeddedness in animal food systems (re-) localisation: A comparative analysis of initiatives in France, Morocco and Senegal. *J. Rural Stud.* **2016**, *43*, 13–26. [CrossRef]
17. Arfini, F.; Bellassen, V. (Eds.) *Sustainability of European Food Quality Schemes: Multi-Performance, Structure, and Governance of PDO, PGI, and Organic Agri-Food Systems*; Springer Nature: New York, NY, USA, 2019.
18. Marescotti, A.; Quiñones-Ruiz, X.F.; Edelmann, H.; Belletti, G.; Broscha, K.; Altenbuchner, C.; Scaramuzzi, S. Are protected geographical indications evolving due to environmentally related justifications? An analysis of amendments in the fruit and vegetable sector in the European Union. *Sustainability* **2020**, *12*, 3571. [CrossRef]
19. Owen, L.; Udall, D.; Franklin, A.; Kneafsey, M. Place-based pathways to sustainability: Exploring alignment between geographical indications and the concept of agroecology territories in Wales. *Sustainability* **2020**, *12*, 4890. [CrossRef]
20. Millet, M.; Keast, V.; Gonano, S.; Casabianca, F. Product qualification as a means of identifying sustainability pathways for place-based agri-food systems: The case of the GI Corsican grapefruit (France). *Sustainability* **2020**, *12*, 7148. [CrossRef]
21. MAFF Website. 2020. Available online: https://www.maff.go.jp/e/policies/intel/gi_act/index.html (accessed on 10 November 2020).
22. Food Marketing Research & Information Center. *Case studies of Geographical Indications*; Tokyo, Japan, 2019.
23. Augustin-Jean, L.; Sekine, K. From products of origin to geographical indications in Japan: Perspectives on the construction of quality for the emblematic productions of Kobe and Matsusaka beef. In *Geographical Indications and International Agricultural Trade*; Palgrave Macmillan: London, UK, 2012; pp. 139–163.
24. Gangjee, D.S. Proving provenance? Geographical indications certification and its ambiguities. *World Dev.* **2017**, *98*, 12–24. [CrossRef]
25. Muramatsu, K. Le problème de l'IG Hatcho miso vu comme processus de construction d'un bien commun territorial. In *Symposium International from Local to Global, the Challenge of Geographical Indications. International and Japanese Perspectives*; Nagoya University: Nagoya, Japan, 2020.

26. Sekine, K. The impact of geographical indications on the power relations between producers and agri-food corporations. In *Geographical Indication and Global Agri-Food: Development and Democratization*; Routledge: London, UK, 2019; pp. 54–69.
27. Bowen, S.; Gaytán, M.S. The paradox of protection: National identity, global commodity chains, and the tequila industry. *Soc. Probl.* **2012**, *59*, 70–93.
28. Tashiro, A.; Uchiyama, Y.; Kohsaka, R. Internal processes of Geographical Indication and their effects: An evaluation framework for geographical indication applicants in Japan. *J. Ethn. Foods* **2018**, *5*, 202–210. [[CrossRef](#)]
29. Tashiro, A.; Uchiyama, Y.; Kohsaka, R. Impact of geographical indication schemes on traditional knowledge in changing agricultural landscapes: An empirical analysis from Japan. *J. Rural Stud.* **2019**, *68*, 46–53. [[CrossRef](#)]
30. Information Website on Japan's Geographical Indication. 2020. Available online: <https://gi-act.maff.go.jp/en/register/entry/18.html> (accessed on 5 July 2020).
31. Casabianca, F.; Sylvander, B.; Noel, Y.; Beranger, C.; Coulon, J.B.; Roncin, F. Terroir et Typicité: Deux concepts clés des Appellations d'Origine Contrôlée, Essai de définitions scientifiques et opérationnelles. In *Colloque International de Restitution des Travaux de Recherches sur les Indications et Appellations D'origine Géographiques*; INAO: Paris, France, 2005; pp. 199–213.
32. Rigolot, C. The social capital of value chains: A key dimension of their adaptive capacities. Illustration with the “comet” cheese value chain. *Cah. Agric.* **2016**, *25*, 45007. [[CrossRef](#)]
33. Rupprecht, C.D.; Fujiyoshi, L.; McGreevy, S.R.; Tayasu, I. Trust me? Consumer trust in expert information on food product labels. *Food Chem. Toxicol.* **2020**, *137*, 111170. [[CrossRef](#)]
34. FAO. *SAFA. Sustainability Assessment of Food and Agriculture Systems Indicators*; FAO: Rome, Italy, 2013; ISBN 978-92-5-108486-1.
35. Belmin, R.; Casabianca, F.; Meynard, J.M. Contribution of transition theory to the study of geographical indications. *Environ. Innov. Soc. Transit.* **2018**, *27*, 32–47. [[CrossRef](#)]
36. Gugerell, K.; Uchiyama, Y.; Kieninger, P.R.; Penker, M.; Kajima, S.; Kohsaka, R. Do historical production practices and culinary heritages really matter? Food with protected geographical indications in Japan and Austria. *J. Ethn. Foods* **2017**, *4*, 118–125. [[CrossRef](#)]
37. Gassel, P.; Hostiou, N. What do our research friends say about the coexistence and confrontation of agricultural and food models? Introduction to the special issue. *Rev. Agric. Food Environ. Stud.* **2020**, 1–18. [[CrossRef](#)]
38. Hisano, S. Food security politics and alternative agri-food initiatives in Japan. In *Working Paper*; Graduate School of Economics, Kyoto University: Kyoto, Japan, 2015; p. 131.
39. Miyake, Y.; Kohsaka, R. History, ethnicity, and policy analysis of organic farming in Japan: When “nature” was detached from organic. *J. Ethn. Foods* **2020**, *7*, 1–8. [[CrossRef](#)]
40. Kondoh, K. The alternative food movement in Japan: Challenges, limits, and resilience of the teikei system. *Agric. Hum. Values* **2015**, *32*, 143–153. [[CrossRef](#)]
41. Quiñones-Ruiz, X.F.; Penker, M.; Belletti, G.; Marescotti, A.; Scaramuzzi, S. Why early collective action pays off: Evidence from setting Protected Geographical Indications. *Renew. Agric. Food Syst.* **2017**, *32*, 179–192. [[CrossRef](#)]
42. Cayre, P.; Michaud, A.; Theau, J.P.; Rigolot, C. The coexistence of multiple worldviews in livestock farming drives agroecological transition. A case study in French Protected Designation of Origin (PDO) cheese mountain areas. *Sustainability* **2018**, *10*, 1097. [[CrossRef](#)]
43. Plieninger, T.; Kohsaka, R.; Bieling, C.; Hashimoto, S.; Kamiyama, C.; Kizos, T.; Yoshida, Y. Fostering biocultural diversity in landscapes through place-based food networks: A “solution scan” of European and Japanese models. *Sustain. Sci.* **2018**, *13*, 219–233. [[CrossRef](#)] [[PubMed](#)]
44. Kimura, J. Contribution of Geographical Indications (GI) onto Sustainable Development Goals (SDGS): Cases of Italy and Japan. *Food Syst. Res.* **2019**, *26*, 62–73. (In Japanese) [[CrossRef](#)]