# SMETA STANDARD AS A TOOL TO SUPPORT SUSTAINABLE DEVELOPMENT GOALS AND FOOD SAFETY. A CASE STUDY

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**Abstract**

The purpose of this paper was to analyze the essence of the SMETA standard and identify the extent to which the selected food supply chain organization, by complying with the standard's requirements, fulfills the goals of sustainable development and supports systemic food safety management, in practice. Critical literature analysis, case study analysis, secondary data analysis, comparative analysis, synthesis method, and logical inference were used as research methods. The analyzed company contributes to the implementation of 16 out of 17 SDGs. Furthermore, the management standards contribute to compliance with 12 out of 13 SDGs supported by the SMETA standard. Twelve SDGs are supported parallelly by SMETA and ISO 14001, followed by IFS and BRCGS contributing to the implementation of four SDGs, next ISO 9001 and ISO 45001 supporting two SDGs each, and finally, MSC CoC supporting one SDG.

***Key words:*** *Voluntary Sustainable Standards, SMETA, Sustainable Development Goals, Food Safety*

## INTRODUCTION

Companies involved in the food supply chain, through their operational activities, have a significant impact on the state of the environment, climate change, and the social dimension of the functioning of the country's and the world's economy. Studies conducted worldwide confirm that this undeniable impact, most in the case of the environment, which is notably negative. The European food and beverage industry climate impact was detailed in the report produced by Cameron et al. [2021]. At the same time, basic directions for decarbonizing this industry to net zero by 2050 are outlined. This is particularly important because the global food chain generates 690 Mt of carbon dioxide equivalent annually. This equates to one-third of global emissions of this gas (and 30% of EU emissions). Most decarbonization interventions in Europe will be related to the modernization of existing food plants, due to the technological obsolescence of many companies and the environmentally unfriendly way sourcing methods [https://www.pfpz.pl/dekarbonizacja... 2020] On the other hand, climate change has direct consequences for food safety and food security. According to Codex Alimentarius [2020], food safety is an „assurance that food will not cause adverse health effects to the consumer when it is prepared and/or eaten according to its intended use". Food security, in turn, is when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life" [Food Security 2006]. For example, extreme weather events, such as floods and droughts, can contaminate soil, farmland, water and food, and animal feed by introducing various pathogens, chemicals, and other hazardous substances from wastewater, agriculture, and industry [Tirado et al. 2010]. This situation places dual responsibility on food industry organizations to ensure that the product delivered to the market, meets increasingly stringent requirements. Market expectations are causing many food industry organizations, in addition to the need to operate according to quality, food safety management systems or environmental management systems, to comply with other requirements embedded in Voluntary Sustainability Standards (VSS). The SMETA (Sedex Members Ethical Trade Audit) standard is among the most important of these standards.

A research gap in the literature makes it difficult to recognize the experiences of different organizations in implementing VSS. While institutional commitments to use VSS to meet sustainable procurement policies have grown rapidly over the past decade, there is still relatively little understanding of the direct environmental benefits of large-scale VSS adoption, potential perverse indirect impacts of adoption, and implementation pathways [Smith et al. 2019; Dietz et al. 2021]. This gap also extends to food related entities. For this reason, the research problem is as follows: Whether and to what extent, does the selected organization using VSS meet the various sustainability goals? The purpose of the research is to analyze the essence of the SME-

TA standard and identify how, and to what extent and in what areas in practice the selected food supply chain organization, by complying with the requirements of the standard, fulfills the goals of sustainable development and supports systemic food safety management. The research methods used in this article include critical literature analysis, case study analysis, secondary data analysis, comparative analysis, synthesis method, and logical inference.

## 1. THE GENERAL ESSENCE OF VSS AND THE SMETA STANDARD

Sustainability standards, particularly voluntary sustainability standards (VSS), have become integral to facilitating green consumerism and promoting a green economy and growth [Hoffmann and Bhutani 2021]. Voluntary standards have become a promising mode of governance for promoting sustainable production and consumption in global value chains [Iweala and Soon 2022]. The United Nations Forum on Sustainability Standards (UNFSS) defines VSS as "standards specifying requirements that producers, traders, manufacturers, retailers or service providers may be asked to meet, relating to a wide range of sustainability metrics, including respect for basic human rights, worker health and safety, the environmental impacts of production, community relations, land use planning, and others" (UNFSS 2013: 4). According to the United Nations Conference on Trade and Development, VSS are norms and standards designed to ensure that a product is produced, processed, or transported sustainably to contribute to specific environmental, social, and economic targets [https://unctad.org...]. In turn, selected researchers define this phenomenon this way: "Voluntary sustainability standards (VSS) are stakeholder-derived principles with measurable and enforceable criteria to promote sustainable production outcomes" [Smith et al. 2019]; "a significant private, market-based transnational governance instrument to pursue sustainable development" [Marx et al. 2022]. VSS, although not required by law, play a significant role in organizations, making them into entities concerned not only with their profits but above all with the welfare of the general public and future generations.

The world's largest VSS database, The Standards Map of the International Trade Centre (ITC), contains detailed information on more than 300 voluntary sustainability standards applicable to nearly 60 different sectors, such as agriculture, textiles and apparel, consumer products, forestry, mining, and services. The standards are implemented in 192 countries and are classified according to 1,650 criteria. Examples of food industry standards included in the database cover the BRC Global Standard for Food Safety, International Featured Standard (IFS Food), and Marine Stewardship Council (MSC) standards [https://www.standardsmap.org...].

One of the most popular standards is BRCGS - Global Standard for Food Safety, adopted by over 22,000 sites in more than 130 countries, and accepted by 70% of the top 10 global retailers, 60% of the top 10 quick-service restaurants, and 50% of the top 25 manufacturers [https://www.brcgs.com...]. Now in its 8th edition with the 9th

edition to be published in 2022, the standard has evolved to meet the industry's needs and to protect the consumer [Lambert and Frenz 2021]. The standard is owned by BRCGS, a British trade organization that represents the interests of retailers. BRCGS standards consist of a set of recommendations and guidelines for companies operating in the food industry, especially retail chains and companies supplying private-label products. BRCGS - Global Standard for Food Safety, developed with input from the industry, provides a framework to manage product safety, integrity, legality, and quality, and the operational controls for these criteria in the food and food ingredient manufacturing, processing, and packing industry [https://www.brcgs.com…]. The standard's requirements are related to the quality management system, the HACCP system, and relevant prerequisite programs, including GMP (Good Manufacturing Practice) and GHP (Good Hygiene Practice) requirements [https://www.dnv.com…]. Part II of the standard, defines the basic requirements to which organizations must adhere to, those are: Senior management commitment; The food safety plan; Food safety and quality management system; Site standards; Product control; Process control; Personnel; High risk, High-care and ambient high-care production risk zones; and Requirements for traded products.

A standard similar to the BRCGS is the IFS (International Featured Standards) Food, (current Version 7). It was developed in 2003 by the German Retail Federation - Handelsverband Deutschland (HDE) – through collaboration with members of its French counterpart, the Fédération des Entreprises du Commerce et de la Distribution (FCD) [IFS Food…2020]. Like BRCGS, the IFS Food Standard is internationally recognized by the Global Food Safety Initiative (GFSI). IFS Food is built on the general aspects of a food safety and quality management system. However, its primary focus is on instilling confidence in products and processes. This means that safety, quality, legality, and compliance with the customer's specific requirements are ensured through on-site assessment and documentation review/inspection and inspection. The main differences between the two standards relate to the procedures for conducting a final assessment of a food manufacturer and the guidelines relating to each requirement. In both standards, there are specific requirements tailored to the organization's specific operations in the supply chain. For example, if an organization is involved in distribution, then in the case of BRCGS, the appropriate standard for it is BRCGS, BRC Storage & Distribution, while in the case of IFS it is IFS Logistics.

Also there are noteworthy industry-specific VSS standards. For example, standard such as MSC has been developed for the fishing industry, among others. The MSC (Marine Stewardship Council) Sustainable Fisheries Standard is used to assess fisheries in terms of their impact on wild fish populations, their impact on the marine ecosystem, and their overall management. The standard reflects the latest scientific developments in fisheries and international best practices in fisheries management. It was developed in consultation with a wide range of experts including: fishermen, scientists, fishing industry representatives, and representatives of conservation orga-

nizations [https://www.msc.org...]. The standard is based on the three fundemental principles: the sustainable use of exploited fish stocks; ecosystem maintenance on which fisheries depend; and effective and responsible management. To ensure that only seafood from MSC-certified sustainable fisheries bears the MSC eco-label, all companies in the supply chain must be certified to the MSC Chain of Custody Standard [https://www.dnv.pl...].

As mentioned in the introductory section, the SMETA standard is also in the group of VSS standards covered by the VSS database. SMETA (Sedex Members Ethical Trade Audit) aims to reduce the duplication of effort in ethical trade auditing, thus benefitting retailers, consumer brands, and their suppliers [Gurzawska 2020]. It is Sedex's audit methodology and social auditing standard that businesses can use to assess a supplier's working conditions, across the areas of labour, health and safety, environment, and business ethics [https://www.sedex.com...]. SMETA is "not a code of conduct, a new methodology, or a certification process". It is an audit procedure reflecting the compilation of good practices in ethical audit techniques [Gurzawska 2020]. Sedex (Supplier Ethical Data Exchange) is a non-profit organization founded in London in 2004 as an initiative of Marks & Spencer, Tesco, Walmart, Carrefour, and Metro [Marques 2019]. It is a global platform developed to share information on ethical production standards within the supply chain. The Sedex database allows its members to reduce the risk of their business by sharing information about meeting ethical requirements. Suppliers that undergo SMETA audits share information through the Sedex database and can prove to their customers that they have met ethical and social standards. Customers, on the other hand, can manage their suppliers through this tool, thereby reducing risks [Kubasiński and Sławińska 2021]. Sedex's platform allows suppliers to share one set of data with multiple customers, thereby combining auditing resources and harmonizing standards among companies. Organizations that join Sedex are first asked to complete a questionnaire on their labor, health and safety, environmental, and business ethics policies and practices. This information is then shared with multiple buyers and third-party auditors. Companies benefit since they do not need to undergo discrete audits for each customer, thereby saving themselves time and resources. By serving as a mechanism for sharing audit data, Sedex's platform incentivizes suppliers to become members so that they can not only share information with multiple buyers but also link their data to other underlying suppliers [Sarfaty 2021]. Audits are conducted based on the SMETA audit guide, which was developed by the Sedex Associate Auditor Group (AAG) [https://dqs.pl...]. SMETA consists of four core documents: SMETA Best Practice Guidance; SMETA Measurement Criteria; SMETA Audit Report; and SMETA Corrective Action Plan Report (CAPR). SMETA uses the Ethical Trading Initiative (ETI) Base Code and the local law as its monitoring standards [Sedex Members… 2019]. The SMETA Best Practice Guidance describes the key steps of planning, executing, and documenting a SMETA Audit against the following auditing pillars [Sedex Members… 2019]:

- A SMETA 2-Pillar audit comprises: Labour Standards; Health and Safety; Additional Elements, such as Universal Rights covering UNGP (The UN Guiding Principles on Business and Human Rights), Management Systems, Entitlement to Work, Subcontracting and Homeworking, Environment (shortened);
- A SMETA 4-Pillar audit in addition encompasses Environment (extended); and Business Ethics.

Base Code, but the audit result is presented in the form of a report prepared using a template provided by SEDEX. Additional post-audit documentation is a completed non-compliance and corrective action form. The report provides a picture of the state of the required ethical principles at the plant on the day of the audit [https://www.dnv.pl...]. The overall structure and share of each criterion in the SMETA standard are presented in Table 1.

**Table 1. SMETA 4-Pillar standard criteria**

| Criteria | Subcriteria | Number of requirements (%) |
|---|---|---|
| Environment | Water<br>Biodiversity<br>Forest<br>Input<br>Waste<br>Energy<br>Climate | 50 (21%) |
| Social | Human Rights<br>Labour rights<br>Local communities | 142 (60%) |
| Management and Ethics | Sustainability management<br>Supply chain responsibilities<br>Ethics | 43 (18%) |
| Quality | Manufactured products quality, technical and environmental specifications<br>(Criteria on environmental management instruments like EMAS or ISO 14001; Criteria non-food production: Workers/staff protective clothing) | 2 (1%) |

*Source: Own elaboration based on: https://www.standardsmap.org/en/home*

Cross-sectional studies conducted by Lambert and Frenz [2021] identified the effects on organizations resulting from the implementation of the VSS. Their studies confirm their high usefulness and a range of benefits associated with VSS adoption . As the researchers highlight in the report, the empirical evidence indicates that certification to VSS generates extensive and positive business impacts for suppliers, on a scale greater than might have been expected in the light of previous research. This is more notable since these standards have primarily been developed to ensure the production and distribution of safe food, with the objectives not explicitly focused on

business growth, profitability, operational efficiency, and innovation. According to the report, 55% of respondents experienced increased sales having gained certification to VSS, and 70% of respondents stated that changes in production methods had resulted in greater efficiencies and productivity. A key finding from the research has shown that e.g. BRCGS standards, which do not in themselves include innovation as a purpose, act as a determinant of broad-based innovation, including product innovation, operational efficiency, and business expansion. Many companies reported that they had undertaken changes in business practices or production resources, including upgrades to the factory, equipment, and facilities, as well as the technology and product development processes. These changes, in turn, contribute to more efficient use of material resources, a reduction in waste and improved of energy consumption. Most importantly, from a food safety perspective, the implementation of BRCGS standards has resulted in a 40% reduction in food recalls since achieving certification. Researchers worldwide have recognized the benefitial role of the VSS. Many benefits are recognized as a consequence of its implementation, ranging from the typically organizational and managerial ones [Paunescu et al. 2018], to the reduction of mistakes, errors, and waste [Kafetzopoulos and Gotzamani 2014; Carmona-Calvo et al. 2016], and those related to ethics and social responsibility [see e.g.: Rincon-Ballesteros et al. 2019; Rincon- Ballesteros et al. 2021]. Of course, its important to consider the limitations of implementing and maintaining these systems. A paper by Barbancho-Maya and López-Toro [2022], based on a literature review, highlights two major barriers. The first, and most important, is resistance to change, while the second is the belief in the high cost of implementing and using the system, coupled with a belief in the difficulty of implementation. Nevertheless, VSS implementation fosters compliance with sustainability goals (see Figure 1) and other standards in this regard, which, among other things, was highlighted in the 5th Flagship Report of the United Nations Forum on Sustainability Standards [2022].

**Figure 1. United Nations Sustainable Development Goals**


*Source: https://www.un.org/development/desa/disabilities/envision2030.html*

The implementation of the SMETA dSedex platform every year is similarly favourable for companies [https://www.sedex.com...]. When Sedex first launched the SMETA methodology, 90% of the audits uploaded onto the platform were based on company codes for audits whereas now 90% of the audits are performed against SMETA, demonstrating the success of the initiative [Gurzawska 2020]. The positive impact of adhering to the requirements of this standard is also confirmed by scientific studies [Marques 2019; Suthavivat 2019; Gurzawska 2020]. Nonetheless, there is a large research gap in this area.

## 2. METHODOLOGY

In our research, in the empirical part, the main research method employed is a case study, supported by a secondary data review. The study was conducted in November 2022.

A case study generally covers the "how", "what", and "why" questions, focusing on real-life context [Halkias and Neubert 2020]. According to Creswell [2009] a case study is when the "researcher explores in-depth a program, an event, an activity, a process, or one or more individuals". The structure of a case study encompasses the problem, the context, the issues, and the lessons learned [Creswell 2014]. According to Simons [2009] a case study involved an in-depth exploration from multiple perspectives of the complexity and uniqueness of a particular project, policy, institution, program, or system in a real-life setting. Additionally a secondary document analysis was employed for this study. Secondary data examined included the organization's system documents, which the paper's authors obtained with the organization's permission on the condition of anonymity. For this purpose, we utilised the READ approach: R (Ready) - make the materials ready; E (Extract) - extract data, A (Analyze) - analyze data; D (Distill) - distill the findings [Dalglish et al. 2020].

The institution covered by our study operates in the northern region of Poland. Its key activities provide logistic services; handling and storage of packed frozen food products; cross-docking; documentation flow; value-added logistics services; etc. The company employs 24 staff and has seven operational, tactical, and strategic divisions.

## 3. RESULTS AND DISCUSSION

The company has implemented various food quality and safety management systems, those include: ISO 9001 (Quality Management), ISO 14001 (Environmental Management), and ISO 45001 (Occupational Health and Safety), and is complying with IFS Logistics, BRCGS Storage & Distribution, MSC CoC - Chain of Custody standards, and SMETA 4-pillar norm. With the research problem and purpose this study, a comparative analysis of each of the standards and norms was carried out in terms of compliance with the sustainable development goals (SDGs).

The analysis carried out confirmed that through the implementation of ISO 9001 the organization had gained the ability to operate in accordance with the two SDGs (8

and 9). This is because the systemic approach to ensuring the quality of core services leads the company to increase the effectiveness of the company's assets and development of sustainable and resilient production infrastructure. In addition, the constant development of service quality, based on the PDCA cycle, supports economic and social growth on both micro and macro scales, ensuring stable working and production conditions [Surisetti et al. 2021].

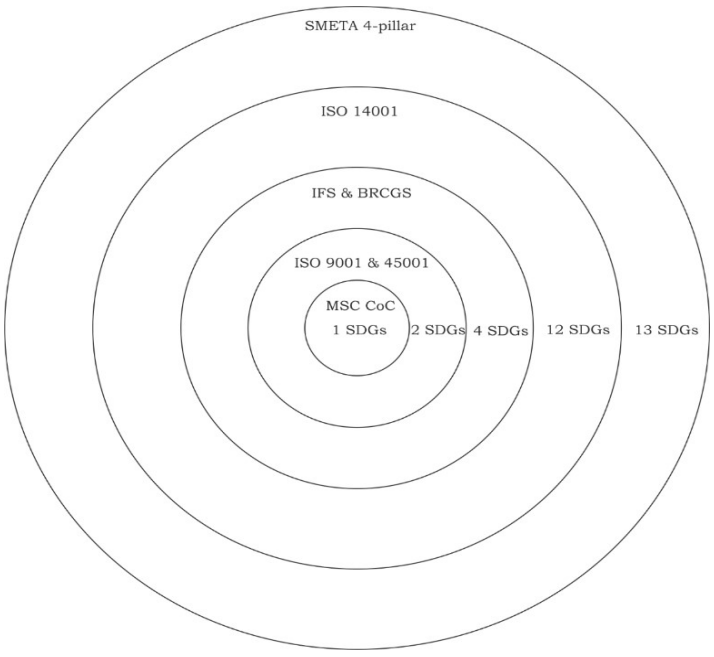
With regards to ISO 14001, it should be noted that the organization , through its environmental policy, helped the company achieve defined goals aimed at innovative and sustainable approach to the core production process. Furthermore, the monitoring of environmental aspects supports optimization of negative influences on the natural environment, therefore contributing to improved work and living within the vicinity of the facility. Implementation of safe, comfortable, non-polluted industrial working conditions supports gender equality and inclusion of people with disfavored social minorities. Other researchers, also found a clear link between the use of ISO 14001 and an organization's ability to meet the SDGs, as presented in the works by Hasanah and Suripto [2022] and Horry et al. [2022]. By analyzing the specificity of the organizations operations and its compliance with the ISO 14001 standard, it is possible to confirm its compliance with the following SDGs: 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, and 13.

Another management system implemented in the company is ISO 45001, dedicated to occupational health and safety. In this case, it allows the organization to comply with two SDGs, such as 3, and 8. This is because safe and healthy working conditions enable the stable performance of the company's human capital at work, as well as lead to a more balanced after-work life. Systemic mitigation of work hazards and risks establishes a sustainable system for providing the desired quality of service, food safety, as well as professional development of the company's employees [Jacob-John et al. 2022].

Other important systems in the organization required by retail chains are BRCGS and IFS, representing food safety management systems (FSMS). The implementation of FSMS supports the maintenance of a hygienic, secured, and monitored production environment aimed at optimizing the use of natural resources (water, energy), implementation of innovative service solutions of Industry 4.0 allowing to optimize workflow, and the reduction of production waste, including food waste. The comprehensive FSMS also supports the building and development of a food safety culture (FSC) which empowers the company in decreasing the negative impact of the food supply chain on the natural environment and climate change. The positive impact of implementing the BRCGS standard on the realization of sustainable development has been described by Jones and Comfort [2019], and Osmundsen et al. [2020], among others. Their research confirmed that in the analyzed organization, this applies with the following SDGs: 6, 9, 12, and 14.

In the MSC CoC system, a typical industry standard used by the organization, in the seafood sector,, compliance with this standard allows the organization to achieve SDG 14. The MSC CoC standard ensures that products from MSC-certified sustainable fisheries are traceable and separated from non-certified products [Mohamed and Malayilethu 2021]. Ensuring the traceability of sustainable seafood products within the food supply chain ensures the trustfulness of efforts undertaken to protect the natural sea environment. Furthermore, involvement in the farm-to-fork approach supports the company's share in ensuring the sustainable use and growth of natural sea resources as well as the entire blue economy sector [Baker et al. 2023].
In summary, when adhering to the previously mentioned systems, the analyzed company contributes to the implementation of 16 out of 17 SDGs. In addition, according to a comparative analysis involving the SMETA 4-pillar standard, the above-mentioned standards contribute to compliance with 12 out of 13 SDGs supported by the SMETA standard. Most of the 12 SDGs, are supported parallelly by SMETA and ISO 14001, followed by IFS and BRCGS contributing to the implementation of four SDGs, ISO 9001 and ISO 45001 supporting two SDGs each, and finally, MSC CoC supports one SDG. The aforementioned structure of mutual overlapping is illustrated in Figure 2 and Table 2.

**Figure. 2. Structure of mutual interaction between SMETA and other norms and standards.**




*Source: Own elaboration*

Thus, it is evident that standards focused on system management, both general and industry-specific, recognized as VSS, are in synergy with the SMETA standard, making it easier for an organization to meet most of the SDGs. This confirms that VSS

can be a tool that supports the achievement of the SDGs, both directly and indirectly. At the same time, SMETA standards support the organization in achieving the right level of food safety, as required by VSS.

**Table 2. Links between management systems standards and norms and the SMETA 4-Pillar standard**

| Norm Standard | SMETA Requirements | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0. A. Universal Rights covering UNGP | 0. B. Management Systems & Code Implementation | 1. Freely Chosen Employment | 2. Freedom of Association | 3. Health and Safety | 4. Child Labour | 5. Wages and Benefits | 6. Working Hours | 7. Discrimination | 8. Regular Employment | 8A. Sub-Contracting and Homeworking | 9. No Harsh or Inhumane Treatment is Allowed | 10. Other Issues | 10B4. Environment 4-Pillar | 10C. Business Ethics 78 | 11. Community Benefits |
| **ISO 9001** | X | X | X | | | X | X | | X | X | | | X | | | |
| **ISO 14001** | X | X | | | X | | X | | | | X | | | X | X | |
| **ISO 45001** | X | X | X | X | X | X | X | X | X | X | X | X | X | | | |
| **BRCGS** | X | X | | | X | | | X | | X | X | X | | X | X | |
| **IFS** | X | X | | | X | | | X | | X | X | X | | X | X | |
| **MSC CoC** | | X | | | | | | | | | | | | X | X | |

*Source: Own elaboration*

## CONCLUSIONS

The analyzed organization plays an important link in the seafood supply chain. For this reason, it is a subject to several different system requirements set by the market and demanding institutional customers. Quality and food safety management standards, the implementation of which has been validated by relevant certificates, play an important role in this case. These standards, as well as the SMETA standard under which the organization operates on, fall under the category of Voluntary Sustainable Standards.

The SMETA standard is used to strengthen B2B relationships and assess the extent to which an organization's current or potential suppliers meet expectations in the ethical, social and environmental areas. It is designed in the form of audit questions, with the majority of questions dealing with social aspects, followed by environmental

and ethical considerations. Achieving compliance with the SMETA standard requires an assessment of all stages of an organization's operation. Due to its characteristics, the surveyed organization belonging to the food supply chain can demonstrate compliance with sixteen out of seventeen sustainable development goals. Furthermore, the analysis revealed how SMETA compliance contributed directly to the organization's fulfillment of thirteen sustainable development goals. In addition, the implementation of SMETA promotes better compliance with various system standards for environmental management and food safety, the implementation of which also supports these goals. Indeed, the analysis of the documents makes it possible to confirm the synergistic effect between the SMETA standard and other management systems implemented by the organization. This fact contributes to the improvement of food safety and food security, both on the studied organization and on the environment and climate change, by not only benefiting the food supply chain actors but also having positive effect on a macro scale.

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