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Data-enabled Business Models and Market Linkages Enhancing Value Creation and Distribution in Mediterranean Fruit and Vegetable Supply Chains (MED-LINKS)

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Abbreviations

B2B	Business to Business
B2C	Business to Consumer
EOSC	Export Oriented Supply Chain
FV SCS	Fruit and Vegetables Supply Chain System
GPP	Green Public Procurement
ISEAL	International Social and Environmental Accreditation and Labelling Alliance
ITC	International Trade Center
NGOs	Non-Governmental organizations
SCS	Supply Chain System
SDGs	Sustainability Development Goals
SFSC	Short Food Supply Chain
TBL	Triple-Bottom-Line
TLBMC	Triple Layered Business Model Canvas
UNCTAD	United Nations Conference on Trade and Development
UNFSS	United Nations Forum on Sustainability Standards
VSS	Voluntary Sustainability Standards

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EXECUTIVE SUMMARY

This deliverable deals with the "Report on benchmark framework of optimized sustainability paths suited to local clusters" within task "Definition of a benchmark framework to conceptualize and select optimized sustainability paths suited for local clusters" in WP2 "Voluntary Sustainability standards and Paths" of MED-LINKS project.

A perception of the theoretical framework linking institutional theory to the conceptualization of a benchmarking framework for VSS was developed in order to enable a triple bottom line perspective for sustainability standards. This framework allowed us to conceptualize the benchmarking framework presented in this report through all its five phases leading to achieving the expected results: proposing 15 new VSS for the clusters recognized in the Med-Links project.

The main contributions to Sustainable Development Goals (SDGs) of the activities performed and the results obtained are outlined at the end of the report.

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1 Introduction

1.1 Aims of Task 2.2 and Deliverable 2.2.

The objective of this task is to define a benchmarking framework in order to conceptualize and select optimized sustainability paths suited to local clusters. The local clusters were identified in WP1 through Task 1.1. The methodology followed throughout this work allowed us to benchmark the most used and adopted sustainability standards within the three main Supply Chain Systems (SCS) of belonging in the clusters – Export Oriented Supply Chain (EOSC), Short Food Supply Chain (SFSC) and Green Public Procurement (GPP). The identified standards to undergo the benchmarking process were chosen in task 2.1 in the work package two. Based on the implemented benchmarking work, new adapted sustainability standards are proposed. This deliverable is a report on the benchmark framework developed following a certain theoretical framework, in order to conceptualize new sustainability standards prototypes.

1.2 Description of the methodology

The benchmarking framework proposed throughout the work is a tool to evaluate and benchmark entities such as Voluntary Sustainability Standards (VSS). In order to develop this framework, a theoretical framework is developed showing the linkage between institutional theory and the conceptualization of a benchmark framework in order to enable a Triple Bottom Line (TBL) perspective to sustainability standards.

The content of this work is based on the alignment of VSS with an international norm or guideline (in this case the Sustainable Development Goals - SDGs), in order to determine the SDGs targets we want to rely on in order to improve the standards as the purpose of this work is.

On another note, in order to improve the standards, an evaluation of these sustainability standards takes place through interviewing experts (structured questionnaires). This is grounded on criteria defined and selected relying on the Triple Layered Business Model Canvas (TLBMC) and then a survey to partners to assess these criteria based on their relevance to the supply chain of interest (SFSC, EOSC and GPP) on a Likert-scale from one to five. A desk-based SWOT analysis is then conducted in order to determine how these standards can be improved through the opportunities and threats.

This methodology is further developed throughout the report and the different phases of the framework conducted in order to conceptualize new improved and adapted Sustainability Standards.

2 Benchmarking Voluntary Sustainability Standards (VSS)

2.1 Introducing Voluntary Sustainability Standards

The United Nations Forum on Sustainability Standards defined Voluntary Sustainability Standards in its report entitled “Voluntary sustainability standards: today’s landscape of issues & initiatives to achieve public policy objectives, (2013)” 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,*

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including respect for basic human rights, worker health and safety, the environmental impacts of production, community relations, land use planning and others".

VSS seek to address a certain market failure i.e., the asymmetry of information existing between producers and consumers about the sustainability of the production process. In that sense, VSS are a tool or an innovative market-based approach to promote sustainable production and business practices aiming to cover all aspects of sustainability (economic, social and environmental). Yet, a number of VSS have a focus only on a specific aspect of sustainability.

Sustainability standards are conceptualized as a new regulatory form, at the intersection between market-based instruments, regulation by information, and voluntary private governance. VSS are differentiated between public and private. Non-Governmental organizations (NGOs), industry groups or multi-stakeholder groups implement Private VSS. These kind of VSS focus mostly on the social and environmental aspects of sustainability. While, public VSS' main source is from public initiatives.

The term voluntary for the sustainability standards is added because they are voluntary schemes that can be adopted, and no rule forces farmers and actors of the supply chain to implement these standards.

According to the UNFSS there exist almost 500 VSS around the world. The ITC Sustainability Map (2020) identifies more than 260 active VSS in more than 80 sectors and 180 countries.

It should be noted that VSS are sometimes also referred to as "sustainability standards", "ecolabels", "certification schemes", "eco-certification", or "voluntary market-based certification programs", so these words are used interchangeably.

Researchers have shown that adhering to VSS in the agricultural sector have potential benefits such as value addition, in the sense of increased crop productivity, increased the number long term contracts and permanent workers, also the ability to diversify market channels, and the increase of livelihood security (UNFSS 2015, 2018).

Yet, regardless of the high benefits that VSS adoption provides, a number of challenges face the sector (UNCTAD, 2020). Of these challenges, we can cite the high cost of gaining certification, potential environmental degradation caused by mono-cropping and deforestation, increasing precarity of the workforce, lack of transparency in the modus operandi of some VSS and lack of sufficient extension support (Krauss and Krishnan 2016).

2.2 Introducing the concept of benchmarking sustainability –VSS

Benchmarking sustainability means that the sustainability performance of voluntary standards and certifications, or other entities are assessed analytically. This is done through using a set of criteria used as a reference point for evaluation in order to obtain comparable information about the entities being benchmarked. This will allow users to recognize, support and improve the entities studied. Governments, Companies or business platforms and associations, and NGOs use benchmarking to better identify their sustainability performance.

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Benchmarking provides multiple benefits such as providing the beneficial parts of the process with certain evidence and information in order to gain an actual perspective on the entities benchmarked and support the user to achieve the sustainability objectives required. Benchmarking also promotes transparency about the operation and performance of the entities studied. It also provides certain awareness and guideposts for actors and stakeholders to recognize what and how acceptable practices look like.

When it comes to benchmarking Voluntary Sustainability Standards, we consider the measuring of sustainability performance in a three-folded way (Economic, Social, and Environmental). Yet, sustainability benchmarking is encountered with several challenges, one of the most challenging aspects of operating a sustainable supply chain is assessing the multi-dimensional nature of its impacts (Yakovleva et al., 2012). On another note, benchmarking in general lacks a clear methodology and process. In fact, according to ISEAL, a weak benchmark leading to a weak legitimacy of decisions based on the framework is the result of the lack of transparency, rigor, inclusiveness, impartiality and other credibility aspects (ISEAL alliance, 2018). Content wise, benchmarking frameworks must include performance expectations by a wide variety of stakeholders and these expectations should be aligned with certain national or international norms (SDGs) (ISEAL alliance, 2018). Each step and content of the benchmark should be well detailed and defined.

3 Theoretical framework linking Institutional theory to enabling a Triple Bottom Line perspective to VSS through the conceptualization of a benchmarking framework

3.1 Introducing Institutional theory

Institutional Theory is a theory considering the processes by which structures, including schemes, rules, norms, and routines, become established as authoritative guidelines for social behavior. The theory explains how pressures from the external social environment influence organizations' adoption of practices to obtain social legitimacy. This search for legitimacy promotes the institutionalization processes that eventually make the organizations more similar.

Kauppi (2013), Harrison (2008), and Rogers et al. (2007) proposed the use of Institutional Theory as an important theoretical contribution toward improving the understanding of events in operations and providing valuable managerial insights. In that sense, institutional theory could be used in the context of a supply chain. Subsequently, many works in the area have used this perspective as a basis for their analyses.

3.2 Introducing the Triple Bottom Line (TBL)

The Triple Bottom Line is a concept which considers and balances simultaneously economic, environmental and social issues from a micro-economic point of view (People, Planet, Profit) (Elkington, 1998). It suggests that positive financial gains can be made in the process of social and environmental responsible behavior (Gimenez et al., 2010). The Triple Bottom Line is perceived as a method of pushing social problems and pressures towards economics and changing corporate behavior through institutional pressure and self-regulation.

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3.3 The intersection between institutional theory, benchmarking and the TBL

We aim to evaluate the impacts of standards on the triple bottom line while applying institutional theory which seeks to understand practices of organizations and clusters i.e., the implementation of these new standards as the product of social rather economic pressure.

There is a belief according to McNair-Connolly and Watts (2006) that institutional theory provides processes, by which structures, including rules, norms and routines become established and authorized as acceptable business practices as the product of social rather than economic pressures which proves that this theory can provide a conceptual framework for benchmarking.

According to Djama et al., private voluntary standards were initially considered as an institutional response to address the need for regulation in a globalizing economy, which was also supported by the lack of international organizations that could meet this challenge (Djama et al., 2011).

Thus, from an institutional perspective, these standards are the norms that provide stability and meaning to social behavior (Bartley, 2007; Scott, 1999). This is done following the definition of a set of requirements that are desirable, proper, and appropriate and therefore, legitimate. However, for their legitimacy to be well defined, they should be set, implemented and governed by all concerned stakeholders and members of the supply chain.

The objective of the framework is to interpret VSS as an institutional response to achieve sustainability goals (Djama, et al., 2011). And, these standards are considered as the regulative or norm-like institutions that provide stability and meaning to social behavior (Bartley, 2007; Scott, 1999).

This theoretical framework consists on using institutional theory to conceptualize a benchmarking framework in order to enable a Triple Bottom Line perspective to sustainability standards.

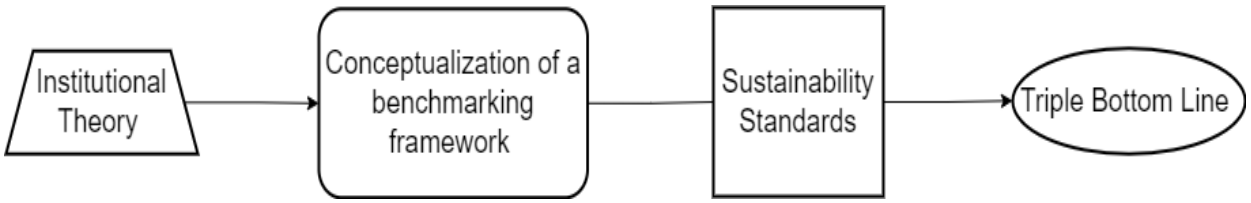

Figure 1: Theoretical Framework

4 Methodology

4.1 Development of a conceptual framework for benchmarking

The methodology followed initially consists of building a benchmark framework for the conceptualization of new adapted sustainability standards and certifications suited for the local cluster involved in the three supply chains systems studied in this project: Short Food Supply Chain (SFSC), Export Oriented Supply Chain (EOSC), and Green Public Procurement (GPP).

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The framework is developed based on several technical reports and literature search, we can cite the ISEAL alliance (2019), Sustainability Benchmarking Good Practice Guide and the UNCTAD (2020), voluntary sustainability standards assessment toolkit and Djama et al., (2011), Standard-setting, Certifying and Benchmarking: A Governmentality Approach to Sustainability Standards in the Agro-Food Sector.

Maintaining rigor, transparency, impartiality and improvement is key to obtain accurate and effective results through this benchmarking (ISEAL, 2019).

Rigor is the fact that all the content of the benchmark is well detailed and understandable. While transparency means that all information used or provided throughout this benchmarking process are accessible to all partners and stakeholders engaged in this kind of work. Moreover, through impartiality, no stakeholders, expert, or partner has any conflict of interest with the entities being benchmarked, and, thus, their engagement in the process will not be affecting the integrity of the results. Lastly, improvement is to be proven by the results provided by this benchmarking framework.

The framework is divided into five different phases starting with research in order to pinpoint the main key aspects of the framework, passing through determining the content and structure and finishing with implementation in order to obtain the results and identifying ways of improvements.

Throughout the five phases of the framework, we were careful to maintain the key aspects to make this benchmarking work effectively.

The following diagram shows a brief identification of the different phases of the framework. In the next section, a detailed explanation of each phase is developed.

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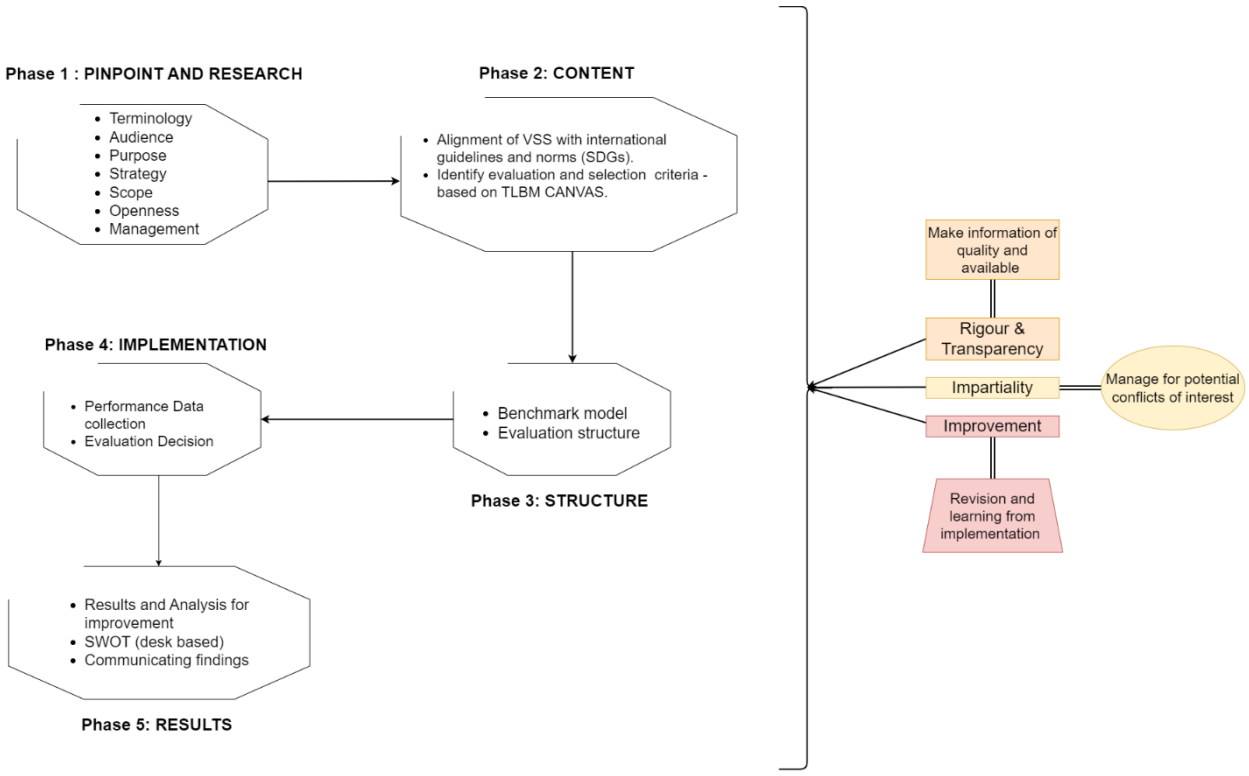

Figure 2: Benchmarking Framework

4.2 Phase 1: Pinpoint and Research (Defining the 7 aspects of the framework)

In this primary phase of the framework, a definition of all key aspects of the framework for further developing the benchmarking program was realized. In that sense, seven key aspects were defined and described.

1- Terminology

First, it is important to have an obvious differentiation between the terminologies used in the literature. Since terminology related to standards and certifications and others is usually used interchangeably without distinguishing between the actual terms, this step serves to define the different terminology used in order to get a better comprehension of the benchmarking framework.

- Sustainability standards: Instruments to improve social and environmental practices in their supply chains and to communicate these sustainable sourcing practices to their customers (Krishnan and Maxwell, 2020).
- Standards: A documented contract or agreement comprising technical specifications or other accurate criteria that are consistently used as rules, guidelines, or definitions to ensure that a product, process, or service is fit for its purpose (Krishnan and Maxwell, 2020).
- Certifications: Certification is the process by which a third party guarantees in writing that a product, process, or service meets a certain list of standards (Krishnan and Maxwell, 2020).
- Labels: A symbol, which indicates that the compliance with a certain standard has been verified (Krishnan and Maxwell, 2020).

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- VSS: '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).

2- Audience

In the second step of phase 1, the audience to which this benchmark framework is addressed, is determined. Pinpointing the audience is important when developing this sort of work because it will help guide the objectives and content of the benchmark, in the sense of determining who will be benefiting from the results of this work. Knowing the audience will allow the deliberation of the work in a specific way that fits the audiences' needs. It will be a tool of guidance to determine, first, which information should or should not be included in the framework, second, the order of arrangement of these information, and third, what are the necessary data or details needed to support the given information. In that sense, the target audience of this benchmarking framework are the actors of the supply chain and the executors of the methodology.

3- Purpose

As for the third step of phase 1, it is important to identify the purpose of the benchmark framework in order to help determine the structure of the framework and the benchmarking model to be used later in phase 3 of the framework. It will also help in setting the performance level of the benchmark and be a way to communicate about the benchmark with others. As the Med-Links project guidelines state, the goal of developing this benchmark framework is to be able to conceptualize and select optimized sustainability paths suited to local clusters defined. In this case, optimize sustainability paths with regard to voluntary sustainability standards suited to actors/producers engaged in the three supply chains of interest in the project.

4- Strategy

Step 4 is related to determining why the choice of a benchmarking program is optimal for the elaboration of this work. Benchmarking provides comparisons and distinctions between certain entities studied. It is for a fact that benchmarking is crucially and well embodied in the world of sustainability standards by different organizations. So when it comes to attain the purpose stated in step three, it is clear that this sort of framework through its specific structure and the benchmarking model of the framework will help meet part of the articulated goal.

5- Scope

In step 5 of phase 1, the scope of this benchmark is well defined, because the scope if related to any of the following: "Sector - geography - type of entity - supply chain scope - market segmentation" will help in adjusting the context of this framework.

When it comes to determining the scope of the benchmark framework, the sector or commodity is related to the fruit and vegetables supply chain activities through all the stages from farm to fork in the different clusters identified previously in task 1.1. The zone in which the benchmark is conducted is regional per cluster depending on the country partner. The type of entity studied

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in the benchmark is Sustainability Standards, Voluntary/Mandatory, Private/Public (VSS in particular). With regard to the market segmentation, this benchmark involves all stakeholders and actors involved in the three different supply chains involved in the Med-Links project (SFSC, EOSC, GPP).

6- Openness

Step 6 is considering the openness of the framework, i.e., if there are any specific initiatives being targeted in this framework. The main entities targeted by this benchmark are the most used and adopted certification schemes and new proposed voluntary sustainability standards. In that sense, does this framework allow any entity to be evaluated? Definitely not, because there exists a certain number of evaluation and selection criteria associated with certifications and VSS related to specific supply chains in clusters that were chosen previously in task 2.1 of the work package 2. Thus, not all VSS can be benchmarked if not related to the scope of the benchmark and supported by its audience.

7- Management

In order to comprehend if there is any kind of impartiality or conflict of interest, it is important to understand who is developing and managing the benchmark framework. The usual case is that when a certain institution; organization; company; or research centers are expecting to use the result of a benchmark framework, they are the one developing and managing it. Or else, organizations or institutions on behalf of the user could manage benchmarking frameworks. In the case of the MED-LINKS project, project partners have no formal affiliation to the entities being benchmarked, thus, respecting impartiality, manage the benchmarking process. The management of the benchmark framework is done to fit the supply chain of interest in order to use the results to understand which used and adapted standards are most relevant for the clusters' supply chain systems.

4.3 Phase 2: Content

4.3.1 Alignment with the SDGs

In phase 2 of the framework, certification and VSS are aligned with an international norm or guidelines. The guidelines chosen to align the entities with, are the Sustainable Development Goals (SDGs). This step is a tool to identify the real objectives of sustainability standards, in that sense, knowing how standards can assist or contribute to the achievement of SDGs; it will be easier to propose new standards and schemes that can fit into these objectives. The choice to align standards with SDGs is based on the fact that the United Nations identifies the private sector as a vital and important partner towards the achievement of the SDGs.

First things first, SDGs are a pathway provided to progress towards the 2030 sustainability agenda (United Nations, 2015). There are 17 sustainable development goals and for each there are targets assigned (169 targets).

Table 1: The 17 Sustainable Development Goals

Goal 1	End poverty in all its forms everywhere

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Goal 2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture
Goal 3	Ensure healthy lives and promote well-being for all at all ages
Goal 4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
Goal 5	Achieve gender equality and empower all women and girls
Goal 6	Ensure availability and sustainable management of water and sanitation for all
Goal 7	Ensure access to affordable, reliable, sustainable and modern energy for all
Goal 8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
Goal 9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
Goal 10	Reduce inequality within and among countries
Goal 11	Make cities and human settlements inclusive, safe, resilient and sustainable
Goal 12	Ensure sustainable consumption and production patterns
Goal 13	Take urgent action to combat climate change and its impacts
Goal 14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development
Goal 15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Goal 16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
Goal 17	Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

The literature searches conducted show that the private sector in general can contribute to the completion of SDGs and their targets through the implementation of certification schemes in general and taking on voluntary sustainability standards in particular. Yet, the private sector if not taking the right initiatives can contribute to breaking the SDGs (WWF, 2017). This is due to the fact that there exists an overlap between the requirements or to be more precise the objectives of existing VSS and the targets of SDGs. Yet, through VSS, some SDGs could be achieved as promoting trade, granting access to international markets, providing diversification of opportunities and supporting knowledge and technology transfer.

On this note, several studies have aligned VSS and SDGs. The results of two studies, the first done by the International Trade Center (ITC) in collaboration with UNCTAD and several European institutes and universities in 2020 and the second published by the World Wide Fund for Nature (WWF) in 2017 are going to be outlined in the following section.

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The first report "Linking Voluntary Standards to Sustainable Development Goals (2020)" studied the interlinkages existing between around 232 private VSS and the 17 SDGs and their targets (knowing that according to the UNFSS there exist almost 500 VSS around the world). The goal was to link the achievement of sustainable development targets throughout the adoption of voluntary sustainability standards. It was deemed that a VSS is linked to a sustainable development goal target if the requirements/criteria of the VSS issued by the ITC Standards Map are relevant in achieving a SDG target. After completing the link, they assessed the quality of the connections made based on precision (content of the VSS requirement should be described in a very precise way) and correspondence (content of the VSS requirement should correspond to the basic content of the SDG target).
The second report was published by the WWF in 2017 "SDGs Mean Business: how credible standards can help companies deliver the 2030 agenda". Through an illustrative approach, this report demonstrated how credible standards can contribute to achieve the SDGs. In that sense, for each SDG, the report includes an overview of how a standard can enable a business to contribute to the goal, it also includes good practices examples of how actual standards are contributing to the goal.

In summary, it seems that VSS contributes to the sustainable development goals through respecting many aspects considering each SDG. Thus, standards can comply with each SDG in a certain manner. The alignment done by the two reports showcase the following results.

In order to obtain the results, we draw an excel sheet with following aspects:

WWF 2017					ITC 2020		
			Alignment	RELEVANT SDG			
VSS contributing to SDGs	HOW ?	SUSTAINABILITY ASPECT			Aligning VSS to SDGs	HOW?	SUSTAINABILITY ASPECT
SDG 2 - Zero Hunger	Combining food production and ecosystem conservation	Environmental	The applied standard respects human rights	SDG 1	SDG 1 - No Poverty	Eradicating Extreme poverty	Social
	Increasing agricultural productivity	Economic	The applied standard works in the direction of diminishing poverty			Reducing the number of people living in poverty	Social
	Increasing food safety	Social				Implementing social protection systems	Social
	Ensuring access to natural resources	Economic	The applied standard ensures agricultural productivity	SDG 2		Providing equal rights to economic and natural resources	Social
	Increasing farmers' incomes and opportunities	Economic	The applied standard ensures access to natural resources			Reducing poors' exposure to climate-related extreme events	Social
	Enabling sustainable sourcing and food labelling, enhancing traceability and demonstrating transparency	Governance	The applied standard ensures and increase food safety and access to nutritious and sufficient food				
			The applied standard is not compliant with GMO		SDG 2 - Zero	Agricultural productivity	Economic
	Occupational health and safety	Social	The applied standard enhance traceability			Doubling the productivity and incomes of small-scale food producers	Economic

Figure 3: A display of the alignment methodology

This alignment allowed us to choose the main targets on which we want to rely upon for the improvement of the standards based on the evaluation in phase 4.

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The following tables demonstrate the main targets chosen for each SDG that will serve as a tool for the improvement model for the sustainability standards.

Table 2: The targets chosen for each SDG

SDG	TARGET
SDG 1	Mobilization of resources from a variety of sources, including enhanced development cooperation
	Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility
SDG 2	Double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment
	Ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality
	Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round
	Maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed
SDG 3	Substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
	Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all
SDG 4	Ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development
SDG 5	Legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex
SDG 6	Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally
	Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

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SDG 7	Ensure universal access to affordable, reliable and modern energy services
	Expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States and landlocked developing countries, in accordance with their respective programs of support
	Increase substantially the share of renewable energy in the global energy mix
SDG 8	Substantially reduce the proportion of youth not in employment, education or training
	Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labor-intensive sectors
	Achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value
SDG 10	Empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status
	Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard
SDG 11	Strengthen efforts to protect and safeguard the world's cultural and natural heritage
	Expenditure on the preservation, protection and conservation of all cultural and natural heritage, by source of funding (public, private), type of heritage (cultural, natural) and level of government (national, regional, and local/municipal)
SDG 12	Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the Possible adverse impacts on their development in a manner that protects the poor and the affected communities
	Substantially reduce waste generation through prevention, reduction, recycling and reuse
	Ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature
SDG 13	Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
	Integrate climate change measures into national policies, strategies and planning
	Adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030
SDG 15	Ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements
	Promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

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	Combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world
SDG 16	End abuse, exploitation, trafficking and all forms of violence against and torture of children
	Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements
	Ensure responsive, inclusive, participatory and representative decision-making at all levels
SDG 17	Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships
	Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favorable terms, including on concessional and preferential terms, as mutually agreed

4.3.2 Identification of evaluation criteria - Questionnaire selection of criteria

Next, based on the Triple Layered Business Model Canvas (TLBMC) (Joyce and Paquin, 2016), we lay down criteria related to the three dimensions of sustainability – Economic, Social, and Environmental – As a result we obtain a number of 27 criteria (9 for each aspect).

Briefly, according to Joyce and Paquin (2016), the TLBMC is "a practical tool for coherently integrating economic, environmental and social concerns into a holistic view of an organization's business model".

Throughout the development of the two additional layers other than the economic one, each layer provides a horizontal coherence within itself, but also there is a creation of connection across layers which provides a vertical coherence on value creation. In that sense, the TLBMC is a tool to develop in a creative manner a broader perspective into the actions intended. Knowing that the TLBMC provides a concise framework to support visualization and communication around innovation of sustainable models, for each dimension, it was used as a tool for the evaluation of VSS. In that sense, the technical approach followed, enabled us to define nine criteria for each aspect of the business model.

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The following table illustrates the nine identified criteria based on each aspect of the TLBMC.

Table 3: Identification of the criteria based on the TLBMC - part 1

Economic		**Social**		**Environmental**	
Value proposition	The sustainability standard allows the given product/service to meet customer needs.	Social Value	The sustainability standard strengthens the social function (role) of the given product/service.	Functional Value	The sustainability standard strengthens the environmental function (role) of the given product/service.
Customer relationship	The sustainability standard improves B2B and B2C relationships.	Societal Culture	The sustainability standard provides beneficial claims (e.g., messages as in how to protect cultural and natural heritage) for society.	End-of-Life	The sustainability standard contributes to extending the end of life of the product by reducing waste and disposal.
Customer segments	The sustainability standard allows addressing desired target customers.	Scale of Outreach	The sustainability standard, concerning its positive impacts on the society, outreaches a geographical scale that is relevant to the supply chain system's range of activities.	Distribution	The sustainability standard contributes to the reduction of the environmental impacts from logistics and distribution.
Channels	The sustainability standard improves access to market channels.	End User	The sustainability standard improves the quality of life of the consumers.	Use phase	The sustainability standard involves consumers to directly manage how the given product is used (e.g., water and energy consumption).
Partners	The sustainability standard fosters upstream private-private and/or public-private partnerships.	Local communities	The sustainability standard is based on agreements within local communities.	Supplies and Outsourcing	The sustainability standard reduces the environmental impact of non-core materials and supplies used for the creation of the given product (e.g. water and energy).

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Table 4: Identification of the criteria based on the TLBMC - part 2

Economic		**Social**		**Environmental**	
Activities	The sustainability standard improves the efficiency of the main economic activities needed for the given product/service creation.	Governance	The sustainability standard promotes transparent, fair/equitable and traceable engagement with partners.	Production	The sustainability standard promotes the reduction of GHG emissions and carbon accounting.
Resources	The sustainability standard implies efficient use of resources (natural, institutional, infrastructural and intellectual) for the given product/service creation.	Employees	The sustainability standard improves life conditions of people working within the supply chain system's key activities.	Materials	The sustainability standard fosters the use of low environmental impacting materials and reduces the quantity used for the given product.
Costs	The sustainability standard implies financial costs to be supported e.g., cost of the certification, cost of maintenance of certification...	Social Impacts	The sustainability standard implies negative social impacts (on employees, consumers, value chain consumers).	Environmental Impacts	The sustainability standard has an ecological cost (e.g., soil degradation and erosion, deforestation…).
Revenues	The sustainability standard contributes to the increase of revenues (from sales).	Social benefits	The sustainability standard provides to some extent social benefits (e.g., resilience to climate related hazards and natural disasters, awareness on sustainability practices among citizens).	Environmental Benefits	The sustainability standard has ecological benefits (e.g., protecting biodiversity, climate change mitigation…).

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The project partners for each supply chain system of belonging assessed these 27 criteria in a Google form. The assessment was based on measuring the relevancy of each criterion with regard to the supply chain of belonging on a Likert scale from one to five. One being none relevant and five being very relevant to the supply chain system of the cluster of belonging. The partners responding to the form were also asked to provide us with additional suggested criteria.

For the choice of criteria, we chose to do it per supply chain per country in order to differentiate between countries of the north and the countries of the south. Because, it is important to indicate the context in which the evaluation of standards is conducted.

Once all the results are collected, the final set of criteria was identified based on the higher means (average/supply chain/country) and supported by any additional suggestions provided by the respondents that were classed under the initial identified criteria. A display of the methodology used for the data analysis in the final selection of the evaluation criteria and their transformation into questions is shown in the following figure.

Short Food Supply Chain

EGYPT:

Economic

1- ECO_4 "The sustainability standard improves access to market channels."

The average rating of this criterion is **5/5**, non-supported by any suggested criteria.

➔ ***Does "the sustainability standard" improve product access to different market channels?***

2- ECO_2 "The sustainability standard improves B2B and B2C relationships."

The average rating of ECO_2 is **4.67/5**, supported by "Empowerment of Farmers/producers through involvement in decision-making process."

➔ ***Does the "sustainability standard" improve B2B and B2C relationships throughout for example the empowerment of farmers/producers through involvement in the decision-making process?***

3- ECO_6 "The sustainability standard improves the efficiency of the main economic activities needed for the given product/service creation."

The average rating of this criterion is **4.67/5**, non-supported by any suggested criteria.

Does the "sustainability standard" improve the efficiency of the main economic activities needed for the given product creation?

Figure 4: Display of the methodology used to choose the set of criteria

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The final sets of criteria for each supply chain in each country partner are the following:

Table 5: Final set of criteria (Italy-SFSC)

Italy – SFSC		
ECONOMIC	**ENVIRONMENTAL**	**SOCIAL**
Fostering upstream private-private and/or public-private partnership and improving the relationship built between producers and consumers.	Encouraging consumers to adopt specific behaviors for the use of the products (e.g., reducing water and energy consumption, waste, etc.).	Providing beneficial claims (e.g., messages as in how to protect cultural and natural heritage) for society.
Implying efficient use of intellectual resources such as providing training on farm documentation and record keeping systems or other resources (natural, institutional, infrastructural…).	Promoting the reduction of GHG emissions and carbon accounting.	Improving consumers' quality of life by ensuring stability and food security and providing a high energy and micronutrient intake.
Allowing the given product to meet customer needs (differentiation and quality) at a reasonable price.	Fostering the use of low environmental impacting materials, reducing the quantity used for the given product, and implying a better management of agro-chemicals.	Encouraging communication and building agreements within local communities.
Addressing desired target customers.	Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	Improving life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.
Implying financial costs to be supported e.g., cost of the certification, cost of maintenance of certification.		Providing social benefits such as resilience to climate related hazards and natural disasters, awareness on sustainability practices among citizens.
Contributing to guarantee sales for the certified product and thus the increase of revenues.		

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Table 6: Final set of criteria (Italy-EOSC)

Italy – EOSC		
ECONOMIC	**ENVIRONMENTAL**	**SOCIAL**
Allowing the given product to meet customer needs (differentiation and quality) at a reasonable price.	Strengthening the environmental function (environmental role positive/negative) of the product.	Improve life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.
Improving B2B and B2C relationships throughout for example the empowerment of farmers/producers through involvement in the decision-making process.	Contributing to the reduction of environmental impacts caused as consequences from logistics and distribution.	Strengthening the social function (social role positive/negative) of the given product.
Improving product access to different market channels.		Improving consumers' quality of life by ensuring stability and food security and providing a high energy and micronutrient intake.
Addressing desired target customers.		Implying any negative social impact on employees or consumers.

Table 7: Final set of criteria (Greece-SFSC)

Greece – SFSC		
ECONOMIC	**ENVIRONMENTAL**	**SOCIAL**
Improving product access to different market channels.	Strengthening the environmental function (environmental role positive/negative) of the product.	Promoting transparent, fair/equitable and traceable engagement and practices with partners.
Implying financial costs to be supported e.g., equipment cost, cost of the certification, cost of maintenance of certification.	Reducing the environmental impact of non-core materials and supplies used for the creation of the given product (e.g. rationalizing water and energy use in production).	Providing social benefits such as resilience to climate related hazards and natural disasters, awareness on sustainability practices among citizens.
Improving B2B and B2C relationships throughout for example the empowerment of farmers/producers through involvement in the decision-making process.	Promoting the reduction of GHG emissions and carbon accounting.	Improving life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.
Addressing desired target customers.	Having any ecological benefits such as protecting biodiversity, and	Improving consumers' quality of life by ensuring stability and food

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	raising awareness on climate change mitigation.	security and providing a high energy and micronutrient intake.
Implying efficient use of intellectual resources such as providing training on farm documentation and record keeping systems or other resources (natural, institutional, infrastructural…).	Contributing to the circular economy and to extending the end of life of the product by reducing waste and disposal.	

Table 8: Final set of criteria (Greece-EOSC)

Greece – EOSC		
ECONOMIC	**ENVIRONMENTAL**	**SOCIAL**
Improving product access to different market channels.	Contributing to the reduction of environmental impacts caused as consequences from logistics and distribution.	Promoting transparent, fair/equitable and traceable engagement and practices with partners.
Addressing desired target customers.	Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	Improving consumers' quality of life by ensuring stability and food security and providing a high energy and micronutrient intake.
Contributing to guarantee sales for the certified product and thus the increase of revenues.	Reducing the environmental impact of non-core materials and supplies used for the creation of the given product (e.g. rationalizing water and energy use in production).	Improving life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.
Allowing the given product to meet customer needs (differentiation and quality) at a reasonable price.	Fostering the use of low environmental impacting materials, reduces the quantity used for the given product, and implying a better management of agro-chemicals.	Strengthening the social function (social role positive/negative) of the given product.
Improving B2B and B2C relationships throughout for example the empowerment of farmers/producers through involvement in the decision-making process.	Encouraging consumers to adopt specific behaviors for the use of the products (e.g., reducing water and energy consumption, waste, etc.).	Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.
Implying financial costs to be supported e.g., cost of the certification, cost of maintenance of certification.		

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Table 9: Final set of criteria (Morocco-SFSC)

Morocco – SFSC		
ECONOMIC	**ENVIRONMENTAL**	**SOCIAL**
Improving product access to different market channels.	Strengthening the environmental function (environmental role positive/negative) of the product.	Improving consumers' quality of life by ensuring stability and food security and providing a high energy and micronutrient intake.
Implying financial costs to be supported e.g., cost of the certification, cost of maintenance of certification.	Fostering the use of low environmental impacting materials, reduces the quantity used for the given product.	Strengthening the social function (social role positive/negative) of the given product.
Allowing the given product to meet customer needs (differentiation and quality) at a reasonable price.	Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	Providing beneficial claims (e.g., messages as in how to protect cultural and natural heritage) for society.
Improving B2B and B2C relationships throughout for example the empowerment of farmers/producers through involvement in the decision-making process.	Contributing to the reduction of environmental impacts caused as consequences from logistics and distribution.	Outreaching a geographical scale that is relevant to the supply chain system's range of activities and positively affecting the society.
Addressing desired target customers.	Promoting the reduction of GHG emissions and carbon accounting.	Improving life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.
Fostering upstream private-private and/or public-private partnership and improving the relationship built between producers and consumers.	Contributing to the circular economy and to extending the end of life of the product by reducing waste and disposal.	
Improving the efficiency of the main economic activities needed for the given product creation.		

Table 10: Final set of criteria (Morocco-EOSC)

Morocco – EOSC		
ECONOMIC	**ENVIRONMENTAL**	**SOCIAL**
Implying financial costs to be supported e.g., cost of the certification, cost of maintenance of certification.	Having an ecological cost such as soil degradation, erosion or deforestation.	Promoting transparent, fair/equitable and traceable engagement and practices with partners.

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Contributing to guarantee sales for the certified product and thus the increase of revenues.	Strengthening the environmental function (environmental role positive/negative) of the product.	Improving consumers' quality of life by ensuring stability and food security and providing a high energy and micronutrient intake.
Improving B2B and B2C relationships throughout for example the empowerment of farmers/producers through involvement in the decision-making process.	Contributing to the reduction of environmental impacts caused as consequences from logistics and distribution.	Encouraging communication and building agreements within local communities.
Improving product access to different market channels.	Encouraging consumers to adopt specific behaviors for the use of the products (e.g., reducing water and energy consumption, waste, etc.).	Improving life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.
Fostering upstream private-private and/or public-private partnership and improving the relationship built between producers and consumers.	Promoting the reduction of GHG emissions and carbon accounting.	Implying any negative social impact on employees or consumers.
Implying efficient use of intellectual resources such as providing training on farm documentation and record keeping systems or other resources (natural, institutional, infrastructural…).		

Table 11: Final set of criteria (Egypt-SFSC)

Egypt – SFSC		
ECONOMIC	**ENVIRONMENTAL**	**SOCIAL**
Improving product access to different market channels.	Contributing to the reduction of environmental impacts caused as consequences from logistics and distribution.	Outreaching a geographical scale that is relevant to the supply chain system's range of activities and positively affecting the society.
Improving B2B and B2C relationships throughout for example the empowerment of farmers/producers through involvement in the decision-making process.	Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	Promoting transparent, fair/equitable and traceable engagement and practices with partners.
Improving the efficiency of the main economic activities needed for the given product creation.	Reducing the environmental impact of non-core materials and supplies used for the creation of the given product (e.g. rationalizing	Improving life conditions such as the rights and benefits of the workers, improving labor

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	water and energy use in production).	conditions within the supply chain system's key activities.
Implying efficient use of intellectual resources such as providing training on farm documentation and record keeping systems or other resources (natural, institutional, infrastructural…).	Promoting the reduction of GHG emissions and carbon accounting.	Providing social benefits such as resilience to climate related hazards and natural disasters, awareness on sustainability practices among citizens.
Contributing to guarantee sales for the certified product and thus the increase of revenues.	Fostering the use of low environmental impacting materials, reduces the quantity used for the given product, and implying a better management of agro-chemicals.	Strengthening the social function (social role positive/negative) of the given product.
	Strengthening the environmental function (environmental role positive/negative) of the product.	Improving consumers' quality of life by ensuring stability and food security and providing a high energy and micronutrient intake.

Table 12: Final set of criteria (Egypt-EOSC)

Egypt – EOSC		
ECONOMIC	**ENVIRONMENTAL**	**SOCIAL**
Improving B2B and B2C relationships throughout for example the empowerment of farmers/producers through involvement in the decision-making process.	Promoting the reduction of GHG emissions and carbon accounting.	Promoting transparent, fair/equitable and traceable engagement and practices with partners.
Implying efficient use of intellectual resources such as providing training on farm documentation and record keeping systems or other resources (natural, institutional, infrastructural…).	Strengthening the environmental function (environmental role positive/negative) of the product.	Improving life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.
Allowing the given product to meet customer needs (differentiation and quality) at a reasonable price.	Reducing the environmental impact of non-core materials and supplies used for the creation of the given product (e.g. rationalizing water and energy use in production).	Strengthening the social function (social role positive/negative) of the given product.
Fostering upstream private-private and/or public-private partnership and improving the relationship	Fostering the use of low environmental impacting materials, reduces the quantity used for the	Encouraging communication and building agreements within local communities.

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built between producers and consumers.	given product, and implying a better management of agro-chemicals.	
	Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	

Table 13: Final set of criteria (France-GPP)

France – GPP		
ECONOMIC	**ENVIRONMENTAL**	**SOCIAL**
Improving product access to different market channels considering minimum production volumes.	Strengthening the environmental function (environmental role positive/negative) of the product.	Outreaching a geographical scale that is relevant to the supply chain system's range of activities and positively affecting the society.
Allowing the given product to meet customer needs (differentiation and quality) at a reasonable price.	Contributing to the circular economy and to extending the end of life of the product by reducing waste and disposal.	Encouraging communication and building agreements within local communities.
Implying financial costs to be supported e.g., cost of the certification, cost of maintenance of certification.	Contributing to the reduction of environmental impacts caused as consequences from logistics and distribution.	Promoting transparent, fair/equitable and traceable engagement and practices with partners.
Addressing desired target customers.	Promoting the reduction of GHG emissions and carbon accounting.	
	Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	

Upon choosing the final criteria, we jump into the implementation phase of the benchmark based on the structure to be chosen. In the implementation phase, we ask experts of the supply chain (identified through the milestone of task 2.2) to evaluate the most used and known standards of the three supply chains of interest in each cluster. These standards were identified in the previous task 2.1, where an identification of the existing and most used standards was done. The chosen standards are:

Table 14: Standards identified in task 2.1.

SFSC	**EOSC**	**GPP**

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EGYPT	Economy of love	**EGYPT**	Organic EU	**FRANCE**	Agriculture Biologique – France
	Demeter PGS				
GREECE	Traditional Specialty Guaranteed	**GREECE**	Organic EU		Label Rouge
	Fairtrade				
ITALY	AIAB Organic	**ITALY**	Grasp		Haute Valeur Environnemental
	ISO 22000				
MOROCCO	Système Participatif de Garantie	**MOROCCO**	Morocco Foodex		
	Saveurs du Maroc				

4.4 Phase 3: Structure (Evaluation model)

Phase 3 of the framework focuses on determining the structure. The structure is divided between deciding on first, the benchmark model to be used whether depending on a threshold approach, a ranking system, peer comparison or the improvement model. In addition, in the second step, the evaluation structure to be used which can be based on mandatory vs aspirational criteria, a scoring system, or progress models. It is very important to determine the structure of the benchmark while maintaining transparency about the procedure i.e., what is the exact model and what is the established methodology in full.

4.4.1 Benchmark model

In this step of phase 3, we choose the benchmark model. According to ISEAL, 2019, the four used benchmark models are:

- Threshold: in which we have to establish a common baseline for qualifying the entities chosen based on that baseline.
- Ranking: in which we measure the performance of the chosen entities relative to each other based on selected evaluation criteria in the previous phase.
- Peer comparison: in which we aim to understand how the entities are performing in relation to peers.
- Improvement: in which there is a creation of motives to improve in the chosen entities. In this model, there is a provision of a map for an improved future performance.

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Based on all the data and information we have, and based on the scope and purpose determined in phase one, the benchmarking of the standards is to be achieved through peer comparison, i.e., an evaluation of the three chosen standards for each of the SCS: EOSC, SFSC and GPP is done by minimum three different experts of the supply chain.

Another benchmark model is associated with this work, which is the improvement model, which is of course the main aim of this work is to improve and adapt sustainability standards.

4.4.2 Evaluation structure

In the second step of phase 3, we chose the evaluation structure of the benchmark. According to ISEAL, 2019, the three existing evaluation structures are:

- Mandatory vs Aspirational Criteria: This structure is usually used in a threshold benchmark model where a differentiation should be made between the criteria that are required to be met and those that help in the adding value process to the certification or standard.
  - Scoring: Scoring (even when all criteria are mandatory), could be applied for example by requiring that (percentage) of the criteria are met in order to qualify. Alternatively, 100% of core criteria are met and (percentage) of advanced are also met.
  - Progress models: Progress Models in which the benchmark is regularly revised and developed while also increasing the number of mandatory criteria as good practices are improving (Improvement benchmark model).

The simplest evaluation structure usually used and most advised to be utilized dictates that all criteria are equally weighted and mandatory.

4.5 Phase 4: Implementation

The content of the framework – evaluation criteria – and the structure being decided; it is now time in phase 4 to decide how the benchmarking will be implemented.

4.5.1 Performance Data Collection – Questionnaire evaluation of standards

In the performance data collection step, the aim is to collect information about each standard out of the three chosen ones in each country. That information is key to determine the performance of each standard with regard to the criteria selected and, thus, construct an evaluation of their performance. This evaluation as already mentioned is decided to be done throughout peer comparison, conducted through interviews with experts based on a structured questionnaire. The questionnaire is divided into 3 sub-sections for each standard. Each sub-section relates to criteria of one dimension of sustainability to achieve a multi-dimensional evaluation. The questions asked were built based on the criteria that were developed and chosen in phase 2. In that sense, the questionnaire contained the three main standards, and an average number of five questions per dimension. For each question, the experts had to answer with YES or NO. If their answer was YES, they had to provide us with how this sustainability standard answers the specific criteria (this step was not mandatory). However, if the answer was NO, experts had to provide us with specifications on why the sustainability standards did not answer the specific criteria (this step was mandatory).

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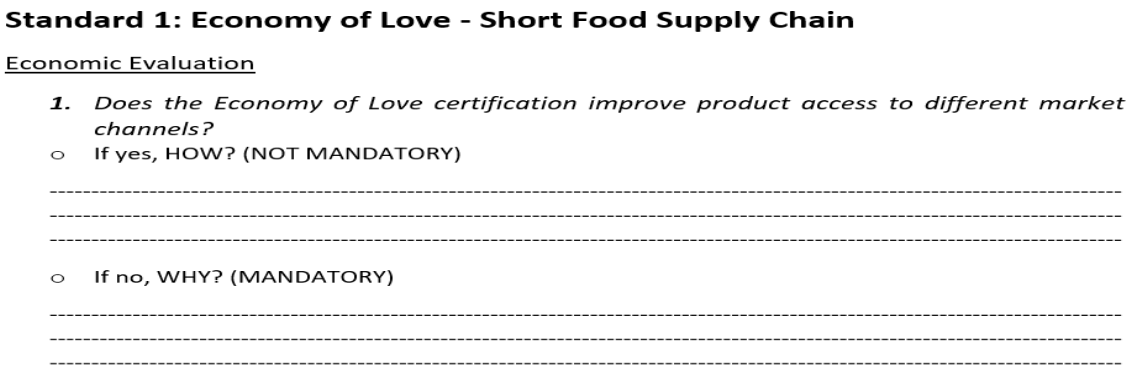
This figure shows a display of the way the questionnaire was structured, and how the criteria chosen in phase 2 were converted into a question.



Standard 1: Economy of Love - Short Food Supply Chain

Economic Evaluation

1. *Does the Economy of Love certification improve product access to different market channels?*
   - If yes, HOW? (NOT MANDATORY)

   - If no, WHY? (MANDATORY)

Figure 5: Display of the questionnaire

4.6 Phase 5: Results and SWOT analysis

The final phase of the framework, phase 5 consists on finalizing the results of the benchmark and determining how they will be communicated

5 Results and Analysis

In phase 2, we cited the final sets of evaluation criteria for each supply chain per country. Therefore, the following tables represent a three dimensional evaluation of VSS. This evaluation is a synthesis descriptive analysis of the answers provided by the experts for each evaluation criterion associated with each standard chosen in every supply chain.

5.1 Data Italy

5.1.1 Evaluation of the AIAB ORGANIC certification – SFSC

Economic Criteria	**Descriptive analysis of answers provided by 2 experts**
Fostering upstream private-private and/or public-private partnership and improving the relationship built between producers and consumers.	AIAB organic improves the relationship between producers and consumers because this certification meets consumers' high request of security, traceability, naturalness and sustainability of the products.
Implying efficient use of intellectual resources such as providing training on farm documentation and record keeping systems or other resources (natural, institutional, infrastructural…).	AIAB organic implies an in-depth knowledge of the farm and the entire productive process.
Allowing the given product to meet customer needs (differentiation and quality) at a reasonable price.	AIAB organic valorizes quality of the produce and implies price control.

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Addressing desired target customers.	AIAB organic addresses target customers looking for transparency, security and sustainability of the product and production phase.
Implying financial costs to be supported e.g., cost of the certification, cost of maintenance of certification.	For AIAB implementation, high costs correspond to farm support and representativeness at trade level.
Contributing to guarantee sales for the certified product and thus the increase of revenues.	AIAB organic cannot guarantee higher revenues, but it allows producers to reposition their farms' produce as attractive segments of the market.

Environmental Criteria	**Descriptive analysis of answers provided by 2 experts**
Encouraging consumers to adopt specific behaviors for the use of the products (e.g., reducing water and energy consumption, waste, etc.).	Conscious shopping, products' seasonality and waste reduction, and packing materials are promoted by the AIAB organic certification.
Promoting the reduction of GHG emissions and carbon accounting.	Productive processes having low environmental impacts are promoted by the AIAB organic since the production mode has naturally low environmental impact. No information on carbon accounting.
Fostering the use of low environmental impacting materials, reducing the quantity used for the given product, and implying a better management of agro-chemicals.	AIAB Organic certification fosters the use of low environmental impacting materials, reduces the quantity used for the given product, and implies a better management of agro-chemicals. Yet this aspect was not elaborated by the experts.
Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	The AIAB organic preserves in an indirect manner the biodiversity (e.g., insects) since it has great respect for environmental resources and has positive effects on the ecosystem.

Social Criteria	**Descriptive analysis of answers provided by 2 experts**
Providing beneficial claims (e.g., messages as in how to protect cultural and natural heritage) for society.	AIAB organic ensures the valorization of farmers' work and effort in preserving their rural territories and sends messages on prioritizing less aggressive production.
Improving consumers' quality of life by ensuring stability and food security and providing a high energy and micronutrient intake.	AIAB organic focuses on food security and the control on the use of pesticides and chemical inputs.
Encouraging communication and building agreements within local communities.	AIAB organic encourages communication and building local community agreements through the Bio districts officially recognized in Italy including producers, citizens and food-tied supply chains.
Improving life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.	AIAB organic encourages virtuous behaviors and does recognize workers' efforts and support them to preserve the environment.

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Providing social benefits such as resilience to climate related hazards and natural disasters, awareness on sustainability practices among citizens.	The answers do not relate to the actual question. Sustainable consumption is encouraged but no information on social benefits are provided.

5.1.2 Evaluation of the ISO 22000 certification – SFSC

Economic Criteria	**Descriptive analysis of answers provided by 2 experts**
Fostering upstream private-private and/or public-private partnership and improving the relationship built between producers and consumers.	ISO 22000 helps through encouraging dialogue between producers and consumers to increase trust on food security.
Implying efficient use of intellectual resources such as providing training on farm documentation and record keeping systems or other resources (natural, institutional, infrastructural…).	ISO 22000 works on upgrading farmers' knowledge on regulations and their application throughout the various steps of the production phase.
Allowing the given product to meet customer needs (differentiation and quality) at a reasonable price.	The ISO 22000 certification does not relate to meeting consumers' needs with regard to differentiation and quality for a reasonable price but it mostly focuses on aspects related to food security.
Addressing desired target customers.	Consumers' requests on food security are met through this certification.
Implying financial costs to be supported e.g., cost of the certification, cost of maintenance of certification.	ISO 22000 has no financial costs to be supported with reference to the services offered to the farm.
Contributing to guarantee sales for the certified product and thus the increase of revenues.	ISO 22000 helps build customers' loyalty to the product and represents an added value and thus consumers are oriented to their food preferences and choices and therefore guaranteeing sales and increasing revenues.

Environmental Criteria	**Descriptive analysis of answers provided by 2 experts**
Encouraging consumers to adopt specific behaviors for the use of the products (e.g., reducing water and energy consumption, waste, etc.).	Consumers are not interested in adopting any specific behavior for the use of the products certified with ISO 22000.
Promoting the reduction of GHG emissions and carbon accounting.	Reducing GHG emissions and carbon accounting do not take part of the certification's objectives.
Fostering the use of low environmental impacting materials, reducing the quantity used for the given product, and implying a better management of agro-chemicals.	The use of low environmental impacting materials and reducing and managing agro-chemicals used during production do not concern the objectives of the ISO 22000 certification.

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Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	ISO 22000 is not centered on any environmental or ecological benefits.

Social Criteria	**Descriptive analysis of answers provided by 2 experts**
Providing beneficial claims (e.g., messages as in how to protect cultural and natural heritage) for society.	Providing beneficial claims related to protecting cultural and natural heritage for society is not an objective of this certification.
Improving consumers' quality of life by ensuring stability and food security and providing a high energy and micronutrient intake.	ISO 22000 certification improves consumers' quality of life because it raises the question of food security.
Encouraging communication and building agreements within local communities.	Communication and building agreements with local communities is not one of the ISO 22000 certification objectives.
Improving life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.	ISO 22000 improves the life conditions of workers because it provides training and initiatives on securing hygiene and safety standards on a personal and organizational structure.
Providing social benefits such as resilience to climate related hazards and natural disasters, awareness on sustainability practices among citizens.	Social awareness on sustainability and resilience to climate hazards and natural disasters is not addressed through this ISO 22000 certification.

5.1.3 Evaluation of the GRASP certification – EOSC

Economic Criteria	**Descriptive analysis of answers provided by 5 experts**
Allowing the given product to meet customer needs (differentiation and quality) at a reasonable price.	The certification ensures customers' needs with regard to workers' conditions as in protecting and safeguarding workers involved in the agricultural processes.
Improving B2B and B2C relationships throughout for example the empowerment of farmers/producers through involvement in the decision-making process.	The GRASP certification ensures that big retailers get access to obtain products and thus improving some B2B and B2C relationships.
Improving product access to different market channels.	The GRASP certification improves access to different market channels, because it is mandatory for entering the retailing systems.
Addressing desired target customers.	GRASP can be addressing target customers only in terms of social sustainability with regards to workers' conditions because it is has no correlation with product quality.

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Environmental Evaluation	The GRASP certification is not related and has no correlation with any aspect of the environmental function of the products, and thus no environmental evaluation was provided by the experts.

Social Criteria	**Descriptive analysis of answers provided by 5 experts**
Improve life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.	GRASP certification has a main objective, which is to improve workers' conditions such as the rights and benefits, and when there is no compliance with this objective, it is mandatory to solve the problem.
Strengthening the social function (social role positive/negative) of the given product.	The certification deals with workers' life conditions throughout the process of production, thus it strengthens the social role of the product positively. Yet, experts did not provide any further elaboration on this aspect.
Improving consumers' quality of life by ensuring stability and food security and providing a high energy and micronutrient intake.	There is no commentary on how the certification improves consumers' quality of life. It indicates that GRASP cannot reach this objective; this is more directed towards global GAP.
Implying any negative social impact on employees or consumers.	GRASP strictly should imply positive impact on employees, as in stimulating workers or farmers to work better and more safeguarded.

5.2 Data Greece

5.2.1 Evaluation of Traditional Specialty Guaranteed standard (TSG) – SFSC

Economic Criteria	**Descriptive analysis of answers provided by 3 experts**
Improving product access to different market channels.	TSG improves market access of produce through stores that specialize in selling traditional products.
Implying financial costs to be supported e.g., equipment cost, cost of the certification, cost of maintenance of certification.	For TSG Implementation, maybe low consultancy costs are supported if there are any supported costs.
Improving B2B and B2C relationships throughout for example the empowerment of farmers/producers through involvement in the decision-making process.	In order to reinforce B2B and B2C relationships while implementing TSG, including farmers and producers in the decision making process gives a competitive advantage.
Addressing desired target customers.	TSG allows addressing targeted customers because consumers know the difference between traditional and non-traditional techniques and their consumption of traditional produce is higher.
Implying efficient use of intellectual resources such as providing training on farm	For the application of the TSG standard, training is not compulsory but can serve as an added value.

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documentation and record keeping systems or other resources (natural, institutional, infrastructural…).	

Environmental Criteria	**Descriptive analysis of answers provided by 3 experts**
Strengthening the environmental function (environmental role positive/negative) of the product.	TSG can strengthen the environmental function of the product but it is not directly connected to environmental performance indicators.
Reducing the environmental impact of non-core materials and supplies used for the creation of the given product (e.g. rationalizing water and energy use in production).	TSG reduces environmental impact because it is based on the use of traditional equipment and it encourages avoiding the usage of plastics and other materials. Rationalizing water and energy use in production could be part of the traditional ways of production.
Promoting the reduction of GHG emissions and carbon accounting.	TSG as it uses traditional ways of production and process; it has lower environmental impacts in the sense of reducing GHG emissions. No information on carbon accounting.
Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	TSG makes use of traditional breeds and cultivates certain plants only in specific areas.
Contributing to the circular economy and to extending the end of life of the product by reducing waste and disposal.	TSG is based on the circulation of resources and thus contributes to a circular economy.

Social Criteria	**Descriptive analysis of answers provided by 3 experts**
Promoting transparent, fair/equitable and traceable engagement and practices with partners.	It seems according to the short answers of experts that TSG promotes good governance, in the sense that transparency, fairness, equitability and traceability does exist between the several steps of the supply chain.
Providing social benefits such as resilience to climate related hazards and natural disasters, awareness on sustainability practices among citizens.	TSG works on promoting local, cultural traditions and keeping people closer to their roots. In that sense, it does provide social benefits related to climate hazards and natural disasters but moderately. It focuses more on the cultural aspect of social benefits.
Improving life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.	Knowing that traditional food production techniques require more labor and work and they are more demanding, yet TSG offers fair opportunities to traditional artisans making a living.
Improving consumers' quality of life by ensuring stability and food security and providing a high energy and micronutrient intake.	TSG ensures food stability and security and provides high energy and micronutrients intake through the produce. The way that TSG does that is not mentioned by the experts.

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5.2.2 Evaluation of the Fairtrade certification – SFSC

Economic Criteria	**Descriptive analysis of answers provided by 3 experts**
Improving product access to different market channels.	Fairtrade is a certification that improves product access to different market channels.
Implying financial costs to be supported e.g., equipment cost, cost of the certification, cost of maintenance of certification.	To be a producer for Fairtrade it is definitely more expensive than producing conventionally especially because compliance with the rules may have a cost.
Improving B2B and B2C relationships throughout for example the empowerment of farmers/producers through involvement in the decision-making process.	Fairtrade replies to its objective of empowering producers and does involve farmers in the decision making process.
Addressing desired target customers.	Fairtrade addresses consumers who care about fairness of trade and ethical marketing who actually support the Fairtrade movement, in that sense, it addresses young educated consumers who are willing to pay for fairness and ethical attributes.
Implying efficient use of intellectual resources such as providing training on farm documentation and record keeping systems or other resources (natural, institutional, infrastructural…).	Fairtrade certification provides training on farm documentation and record keeping systems, which implies an efficient use of intellectual resources.

Environmental Criteria	**Descriptive analysis of answers provided by 3 experts**
Strengthening the environmental function (environmental role positive/negative) of the product.	Fairtrade certification strengthens the environmental function of the product. It is not mentioned whether the environmental role is positive or negative, nor how it does strengthen the function.
Reducing the environmental impact of non-core materials and supplies used for the creation of the given product (e.g. rationalizing water and energy use in production).	It can be the case where Fairtrade reduces the environmental impact of non-core materials and supplies used for the creation of the given product but it is not directly linked.
Promoting the reduction of GHG emissions and carbon accounting.	Promoting the reduction of GHG is a component of fairness. And small scale producers producing lower emissions contribute to the reduction of environmental impacts. No information on carbon accounting.
Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	The correlation between Fairtrade and implying ecological benefits is not clear to experts.
Contributing to the circular economy and to extending the end of life of the product by reducing waste and disposal.	. The experts do not mention the way on how Fairtrade contributes to the circular economy.

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Social Criteria	Descriptive analysis of answers provided by 3 experts
Promoting transparent, fair/equitable and traceable engagement and practices with partners.	Fairtrade includes by nature the governance elements that promote fairness, equitability, and traceability.
Providing social benefits such as resilience to climate related hazards and natural disasters, awareness on sustainability practices among citizens.	Social benefits exist throughout the implementation of Fairtrade and awareness on sustainability practices among citizens is the driving force.
Improving life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.	One of the most obvious benefits of Fairtrade as a certification is improving labor life conditions such as the rights and benefits of workers.
Improving consumers' quality of life by ensuring stability and food security and providing a high energy and micronutrient intake.	Fairtrade ensures consumers' quality of life because it offers better and high quality products, and in an indirect manner to farmers by contributing to the sustainability of small-scale farming.

5.2.3 Evaluation of the ORGANIC EU certification – EOSC

Economic Criteria	Descriptive analysis of answers provided by 2 experts
Improving product access to different market channels.	Organic EU certification improves product access to different market channels.
Addressing desired target customers.	Consumers seek organic produce and thus Organic EU allows addressing these target customers.
Contributing to guarantee sales for the certified product and thus the increase of revenues.	Organic EU certification ensures the increase of revenues through guaranteeing sales for the certified product based on the actual demand by customers.
Allowing the given product to meet customer needs (differentiation and quality) at a reasonable price.	According to Greek experts, Organic EU certification allows the product to meet customer needs at a reasonable price. No elaboration of this idea was provided.
Improving B2B and B2C relationships throughout for example the empowerment of farmers/producers through involvement in the decision-making process.	Organic EU empowers farmers' involvement in the decision making process through giving them the opportunity to negotiate on the prices.
Implying financial costs to be supported e.g., cost of the certification, cost of maintenance of certification.	Conversion cost from conventional agriculture to organic agriculture is very high.

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Environmental Criteria	Descriptive analysis of answers provided by 2 experts
Contributing to the reduction of environmental impacts caused as consequences from logistics and distribution.	Organic EU contributes to reducing environmental impacts caused from logistics and distribution but not directly.
Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	It is indeed the role of the Organic EU certification to have ecological benefits such as protecting biodiversity through its production practices and raising awareness on climate change mitigation as consumers are more aware of the importance of consuming organic over conventional. Experts did not provide any answer on how this is done.
Reducing the environmental impact of non-core materials and supplies used for the creation of the given product (e.g. rationalizing water and energy use in production).	Reducing the environmental impact of non-core materials and supplies used for the creation of the given product is the central concept of Organic EU.
Fostering the use of low environmental impacting materials, reduces the quantity used for the given product, and implying a better management of agro-chemicals.	Organic EU certification fosters the use of low environmental impacting materials, reduces the quantity used for the given product, and implies a better management of agro-chemicals.
Encouraging consumers to adopt specific behaviors for the use of the products (e.g., reducing water and energy consumption, waste, etc.).	Organic EU encourages consumers to adopt specific behaviors for the use of the products but not directly.

Social Criteria	Descriptive analysis of answers provided by 2 experts
Promoting transparent, fair/equitable and traceable engagement and practices with partners.	Organic EU certification promotes good governance. But it is not further elaborated by the experts.
Improving consumers' quality of life by ensuring stability and food security and providing a high energy and micronutrient intake.	Organic EU offers higher quality of produce and thus improves consumers' quality of life.
Improving life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.	Organic EU can improve life conditions but it is not directly linked.
Strengthening the social function (social role positive/negative) of the given product.	The social function of a product is strengthened by the Organic EU certification because products are ambassadors of environmentally friendly practices.

5.3 Data Morocco

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5.3.1 Evaluation of the Système Participatif de Garantie (SPG) standard – SFSC

Economic Criteria	**Descriptive analysis of answers provided by 2 experts**
Improving product access to different market channels.	The SPG makes it possible to reassure producers and distributors of the agri-food system that their production will access different market channels.
Implying financial costs to be supported e.g., cost of the certification, cost of maintenance of certification.	The SPG implies financial costs to be supported through the implementation of the certification.
Allowing the given product to meet customer needs (differentiation and quality) at a reasonable price.	The Système Participatif de Garantie allows the given product to meet customer needs (differentiation and quality) at a reasonable price.
Improving B2B and B2C relationships throughout for example the empowerment of farmers/producers through involvement in the decision-making process.	The SPG certification stimulates closer ties between upstream and downstream actors in the chain.
Addressing desired target customers.	The system was developed in collaboration between producers and consumer protection organizations. Thus, it requires the involvement of customers in the decision-making process. But, the intermediary (distributors) sometimes doesn't make all the necessary information available to the end-customer, in that sense, desired target customers are not always addressed.
Fostering upstream private-private and/or public-private partnership and improving the relationship built between producers and consumers.	The SPG fosters upstream private-private and/or public-private partnership and improves the relationship built between producers and consumers.
Improving the efficiency of the main economic activities needed for the given product creation.	The system improves the efficiency of the main economic activities needed for the given product creation

Environmental Criteria	**Descriptive analysis of answers provided by 2 experts**
Strengthening the environmental function (environmental role positive/negative) of the product.	The Système Participatif de Garantie strengthens the environmental function of the product.
Fostering the use of low environmental impacting materials, reduces the quantity used for the given product.	The Système Participatif de Garantie fosters the use of low environmental impacting materials and reduces the quantity used for the given product.
Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	The Système Participatif de Garantie have ecological benefits e.g., protecting biodiversity, and raising awareness on climate change mitigation.
Contributing to the reduction of environmental impacts caused as consequences from logistics and distribution.	The SPG contributes to the reduction of environmental impacts caused as consequences from logistics and distribution.

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Promoting the reduction of GHG emissions and carbon accounting.	The SPG promotes the reduction of GHG emissions and carbon accounting because it requires the use of energy that does not have an impact on the environment.
Contributing to the circular economy and to extending the end of life of the product by reducing waste and disposal.	The principles of the circular economy in Morocco are at the stage of development and recognition, especially among large companies.

Social Criteria	**Descriptive analysis of answers provided by 2 experts**
Improving consumers' quality of life by ensuring stability and food security and providing a high energy and micronutrient intake.	The Système Participatif de Garantie improves consumers' quality of life by ensuring stability and food security and providing a high energy and micronutrient intake.
Strengthening the social function (social role positive/negative) of the given product.	The SPG strengthens the social function of the product to the extent that the manufacture and distribution of the product transmits social and even cultural values throughout its journey from the idea of the product to its final consumption.
Providing beneficial claims (e.g., messages as in how to protect cultural and natural heritage) for society.	The SPG provides beneficial claims such as messages on how to protect cultural and natural heritage for society through actors who try to publicize the actions carried out in this area (on their websites...).
Outreaching a geographical scale that is relevant to the supply chain system's range of activities and positively affecting the society.	The system does not outreach a certain geographical scale relevant to the supply chain system's range of activity. Its impact is not notable for this purpose.
Improving life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.	The Système Participatif de Garantie improves life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities since committed producers try to distinguish themselves from their competitors in that manner.

5.3.2 Evaluation of the Saveurs du Marroc certification – SFSC

Economic Criteria	**Descriptive analysis of answers provided by 2 experts**
Improving product access to different market channels.	The access of the products to different market channels implies additional charges and continuous efforts, which are likely to make the products more expensive. Thus, the Saveurs du Maroc does not guarantee this access.
Implying financial costs to be supported e.g., cost of the certification, cost of maintenance of certification.	The certification implies financial costs to be supported such as the cost of certification and maintenance.
Allowing the given product to meet customer needs (differentiation and quality) at a reasonable price.	The certification allows differentiation but the prices are deemed to exceed the purchasing potential of a large population.
Improving B2B and B2C relationships throughout for example the empowerment of	The Saveurs du Maroc improves B2B and B2C relationships because the main objective of this certification is to promote products made in Morocco,

farmers/producers through involvement in the decision-making process.	which concerns all actors of the chain. Also, among the founding organizations of this standard were the consumer protection associations.
Addressing desired target customers.	The certification allows target audience and customers to be addressed.
Fostering upstream private-private and/or public-private partnership and improving the relationship built between producers and consumers.	The certification fosters upstream private-private and/or public-private partnership and improves the relationship built between producers and consumers since each actor tries to collaborate with partners adopting this standard to realize possible synergies.
Improving the efficiency of the main economic activities needed for the given product creation.	The Saveurs du Maroc standard improves the efficiency of the main economic activities needed for the given product creation

Environmental Criteria	**Descriptive analysis of answers provided by 2 experts**
Strengthening the environmental function (environmental role positive/negative) of the product.	Strengthening the environmental function of the product is not a priority objective of the Saveurs du Maroc certification.
Fostering the use of low environmental impacting materials, reduces the quantity used for the given product.	The use of low environmental impacting materials is also not of the priority objectives of this certification.
Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	Enhancing ecological benefits is not a priority objective of the Saveurs du Maroc label. This label certifies that the product is a product of Moroccan origin and superior quality, produced under controlled sanitary conditions on the primary production, processing, packaging, labeling and nutritional information.
Contributing to the reduction of environmental impacts caused as consequences from logistics and distribution.	The certification has no role in contributing to the reduction of environmental impacts caused as consequences from logistics and distribution.
Promoting the reduction of GHG emissions and carbon accounting.	Promoting the reduction of GHG emissions and carbon accounting are not a priority objective of the Saveurs du Maroc label. This label certifies that the product is a product of Moroccan origin and superior quality, produced under controlled sanitary conditions on the primary production, processing, packaging, labeling and nutritional information.
Contributing to the circular economy and to extending the end of life of the product by reducing waste and disposal.	Circular economy is not mentioned in the implementation of the certification.

Social Criteria	**Descriptive analysis of answers provided by 2 experts**

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Improving consumers' quality of life by ensuring stability and food security and providing a high energy and micronutrient intake.	The priority of the Saveurs du Maroc label is to confirm the origin of the products while ensuring a level of quality, hygiene and sanitation, thanks to the specification standards and operating rules on which it is based. Thus, it can provide food security to a certain point.
Strengthening the social function (social role positive/negative) of the given product.	The consumption of Moroccan products improves the performance of companies and has an impact on investments, employment and the well-being of the inhabitants, and thus, has a positive social role.
Providing beneficial claims (e.g., messages as in how to protect cultural and natural heritage) for society.	The Saveurs du Maroc provides beneficial claims such as messages on how to protect cultural and natural heritage for society.
Outreaching a geographical scale that is relevant to the supply chain system's range of activities and positively affecting the society.	The Saveurs du Maroc standard outreach a geographical scale that is relevant to the supply chain system's range of activities and positively affects the society.
Improving life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.	The certification improves life conditions such as the rights and benefits of the workers and labor conditions. Also, the consumption of locally produced food increases the country's Gross National Product.

5.3.3 Evaluation of the Morocco Foodex certification – EOSC

Economic Criteria	**Descriptive analysis of answers provided by 2 experts**
Implying financial costs to be supported e.g., cost of the certification, cost of maintenance of certification.	The Morocco Foodex certification implies financial cost to be supported as the cost of certification and other. Sometimes the state can bear these burdens for newly created small businesses.
Contributing to guarantee sales for the certified product and thus the increase of revenues.	The certification allows for recognition at the national and international levels, which promotes product acceptance and the expansion of markets. Which could be an opportunity to increase revenues.
Improving B2B and B2C relationships throughout for example the empowerment of farmers/producers through involvement in the decision-making process.	Morocco Foodex provides technical support (procedures, information on foreign markets...) for exporters in order to help them access the main export markets. This forms a B2B and a B2C relationship between actors of the chain, and helps improve sales.
Improving product access to different market channels.	As mentioned, the certification allows recognition of the products not only on a national market level but also internationally.
Fostering upstream private-private and/or public-private partnership and improving the relationship built between producers and consumers.	The certification fosters upstream private-private and/or private-public partnerships and improves the relationship existing between consumers and producers specifically at the international level, because this public body aims to coordinate efforts and guide exporters in their development on international markets.
Implying efficient use of intellectual resources such as providing training on farm documentation and record keeping systems or	The applicants for this certification are expected to recruit qualified human resources, particularly in terms of international trade procedures, and acquire the necessary infrastructure to meet the desired requirements.

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other resources (natural, institutional, infrastructural…).	

Environmental Criteria	**Descriptive analysis of answers provided by 2 experts**
Having an ecological cost such as soil degradation, erosion or deforestation.	This certification doesn't have an ecological cost, on the contrary it seeks to reduce it for certain products as part of the coordination of export-oriented activities.
Strengthening the environmental function (environmental role positive/negative) of the product.	The environmental function of the product is not a priority to the Morocco foodex certification.
Contributing to the reduction of environmental impacts caused as consequences from logistics and distribution.	Morocco Foodex contributes to the reduction of environmental impacts caused as consequences from logistics and distribution because some foreign markets require compliance with these standards to authorize importation from Morocco.
Encouraging consumers to adopt specific behaviors for the use of the products (e.g., reducing water and energy consumption, waste, etc.).	Consumers adopting specific behaviors for the use of the products (e.g., reducing water and energy consumption, waste, etc.) is not among the missions of the certification but is encouraged by it.
Promoting the reduction of GHG emissions and carbon accounting.	Carbon accounting is not among the missions of the certification. However, exporters are provided with the necessary information when foreign partners are demanding GHG reduction issues to allow the export of some products.

Social Criteria	**Descriptive analysis of answers provided by 2 experts**
Promoting transparent, fair/equitable and traceable engagement and practices with partners.	Morocco Foodex promotes good governance in terms of transparency, fairness, equitability and traceability.
Improving consumers' quality of life by ensuring stability and food security and providing a high energy and micronutrient intake.	This certification also improves the quality of life of consumers through food stability and security.
Encouraging communication and building agreements within local communities.	The Morocco Foodex certification encourages communication and building agreements within local communities.
Improving life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.	This certification also improves the life conditions of workers through ensuring their rights and good conditions of labor.
Implying any negative social impact on employees or consumers.	In general, the criteria required in the certification are in favor of employees and consumers. Although, at times, a certain increase in the price of products is to be paid by consumers which could be a negative social impact.

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5.4 Data Egypt

5.4.1 Evaluation of the Economy of Love (EoL) certification – SFSC

Economic Criteria	**Descriptive analysis of answers provided by 3 experts**
Improving product access to different market channels.	Knowing that EoL certified products are not currently accessing different market channels because the system is still new and not widely spread in Egypt, yet, through the economy of love certification, farmers will be able to access different market channels, specifically international markets.
Improving B2B and B2C relationships throughout for example the empowerment of farmers/producers through involvement in the decision-making process.	The Economy of Love certification allows regular round tables where producers, processors, distributors and consumers come together and discuss all kinds of aspects related to their needs and the challenges they are facing. These meetings are mandatory and ensured by the certification body at least once per month in the agricultural sector and once per quarter with other stakeholders.
Improving the efficiency of the main economic activities needed for the given product creation.	The certification requires production following certain organic standards, in that sense; the certification holder should improve efficiency of production through the reduction of several tools and machines that require electricity or fossil fuel and encouraging the use of renewable energy for example. In addition, an Economy of Love fund (a gift for farmers) and a microcredit system "microloans" (with low interest rate) are developed. These initiatives enable the farmer to increase production, to implement tools and elements that would improve efficiency as well. Benefits of these initiatives could be focused on carbon avoidance and carbon sequestration, which means installation of renewable energies, the purchase of trees and the production of more compost… The important thing is that farmers improve/implement actions in a way that align with EoL value and improve efficiency. The certification body who reviews the efficiency of governance and resource management of farmers and companies inspects this.
Implying efficient use of intellectual resources such as providing training on farm documentation and record keeping systems or other resources (natural, institutional, infrastructural…).	There exists an Economy of Love education program, which is responsible to provide training and improve knowledge and awareness related to different aspects of the EoL certification. This system is implemented with all economies of love licensees, farmers, companies and actors of the value chain.
Contributing to guarantee sales for the certified product and thus the increase of revenues.	Being an EoL certification holder does not guarantee sales. This is because this certification is still new and not widely known in the market. Awareness is a main factor in order to channel certified produce into specific targeted audiences. Matchmaking between customers and producers is very essential in order to guarantee sales.

Environmental Criteria	**Descriptive analysis of answers provided by 3 experts**
Contributing to the reduction of environmental impacts caused as consequences from logistics and distribution.	The EoL certification includes an impact assessment to determine whether the environmental impact is negative or positive and how big, the impact in general is on the environment throughout the production and processing steps and logistics. The certification does encourage producers to reduce

	food miles from transportation and distribution, but this is not mandatory. Yet, there is a huge will from the certified institutions to compensate for all their environmental emissions like CO2 emissions caused by logistics.
Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	The Economy of Love certification has a high impact on the ecological sphere in terms of the biodynamic agriculture approach implemented, as well as regenerative agricultural approaches that are related to long-term enriching of the soil, increasing soil fertility, increasing soil biodiversity, as well as ecosystem strength through certain habitats that are protected. Farmers are motivated and financially supported to integrate e.g., beehives on their farms. The certification has also implemented the Economy of Love Carbon credits, where not only investing financially but also with the know-how so farmers can improve their production activities in order to mitigate climate change e.g., increasing the number of trees on each farm, increasing the compost production which help avoiding CO2 emissions, methane emissions, and increasing the use of renewable energies. With regard to raising awareness, the EoL developed an educational program, which includes many ecological topics covering climate change mitigation on farms and in companies. This program is offered to the licensees and is available online on the web page under the education part.
Reducing the environmental impact of non-core materials and supplies used for the creation of the given product (e.g. rationalizing water and energy use in production).	Through the efficient use of all available resources, water and energy in particular, the EoL certification ensures a lower environmental impact. Also, all certification holders are required to make a full carbon footprint assessment. Throughout this assessment, actions are executed to reduce the environmental impact in all parts of the chain, i.e., not only in production but also in packaging.
Promoting the reduction of GHG emissions and carbon accounting.	The EoL certification plays a consultancy role for farmers with the help of the carbon footprint center in order to give recommendations on where to reduce GHG emissions and using which techniques and tools (e.g., promoting hedges planting, compost production, efficient waste management...). The more the farmer reduces the farm's emissions, the better the net carbon balance and the more he will earn on the carbon credit side.
Fostering the use of low environmental impacting materials, reduces the quantity used for the given product, and implying a better management of agro-chemicals.	The EoL certification forbids the use of any chemical inputs or any synthetic agrochemicals. All agricultural inputs are organic.
Strengthening the environmental function (environmental role positive/negative) of the product.	Through the different requirements of the EoL certification, the certificate has a positive environmental role. It is important to be fully transparent with the environmental impact and function of the product. Through transparent communication, consumers get to have a fair buying decision.

Social Criteria	**Descriptive analysis of answers provided by 3 experts**
Outreaching a geographical scale that is relevant to the supply chain system's range of activities and positively affecting the society.	The certificate has a positive impact on the society, in the sense that it provides a fair income for people, fair labor rights and living wages, also it has a positive social and economic impact on their surrounding locality (e.g., through education, services, good environment, etc.,)

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Promoting transparent, fair/equitable and traceable engagement and practices with partners.	The economy of love certification promotes and applies transparency, traceability, and fairness. It also requires these governance practices along the supply chain between different partners. The regular meetings and round tables between producers and partners, where all aspects are agreed upon between them, ensure these kinds of practices. Certification bodies through the assessment of available documentation also inspect this. ImpacTrace is a tracing toolkit developed to transparently communicate the impact of each production phase and postproduction phases. All partners have access to this tool, which also provides communication on how the final price was set and how much of the revenue goes to the farmers.
Improving life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.	With regard to life conditions and the social aspect, the EoL certificate has specific requirements that could be equivalent to the FairTrade certification. These requirements include a long list of social and fair criteria that needs to be applied in production sites and in processing companies (ensuring good and safe working for the laborers as providing transportation and meals). Also, through the Economy of Love Education Program, managers and supervisors are regularly informed about labor rights and improving conditions for laborers and workers in companies and firms.
Providing social benefits such as resilience to climate related hazards and natural disasters, awareness on sustainability practices among citizens.	The certification does not provide any insights, requirements or rules on how to act upon any climate change related risks or natural disaster.
Strengthening the social function (social role positive/negative) of the given product.	The EoL certification has a positive social function such as providing a fair income to people, fair labor rights and living wages, and promoting education for workers.
Improving consumers' quality of life by ensuring stability and food security and providing a high energy and micronutrient intake.	The certification aims to reduce the price of certified products, them being healthy, organic, and biodynamic, in order to ensure that consumers with lower income will have access to these produce, and thus, some sort of food security. Yet, the certification is not yet capable of covering this feature.

5.4.2 Evaluation of the Demeter PGS certification – SFSC

Economic Criteria	**Descriptive analysis of answers provided by 3 experts**
Improving product access to different market channels.	The Demeter PGS improves access to different local market channels because this certification has a relatively lower price, and thus products are cheaper and can compete with conventional production. The certification does not allow access to international markets on a wide scale due to the relatively young age of the certificate and the system.
Improving B2B and B2C relationships throughout for example the empowerment of farmers/producers through involvement in the decision-making process.	The certification encourages exchange and communication between producers and processors and marketers. The certificate empowers farmers to effectively participate in the decision making processes. Furthermore, customers play a big role in decision making due to the possibility of being involved in the cross-inspection committee, which leads to increasing the credibility of the product and building trust. Thus, B2B and B2C relationships

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	are well valued through this certification process which is necessary to ensure that a good product is developed, and a good market access takes place.
Improving the efficiency of the main economic activities needed for the given product creation.	The Demeter PGS certification can improve efficiency on the farm level but not on the processing level. Since it is a PGS system, it requires farmers to help each other with the different operations and share tools needed for the production process, which would also lower costs. On the other hand, the certificate requires the reduction of non-renewable energy sources and the reliance on renewable ones which are less costly in the long run.
Implying efficient use of intellectual resources such as providing training on farm documentation and record keeping systems or other resources (natural, institutional, infrastructural…).	The certification does not require any sort of training and has no comprehensive tool for intellectual resources. But farmers who are interested in the system receive training in the different aspects of the certifications according to their needs.
Contributing to guarantee sales for the certified product and thus the increase of revenues.	The certification does not guarantee sales for farmers, but it can help farmers to access different market channels due to the provision of high quality produce with affordable prices, which will allow an improved income.

Environmental Criteria	**Descriptive analysis of answers provided by 3 experts**
Contributing to the reduction of environmental impacts caused as consequences from logistics and distribution.	The Demeter PGS does not require the reduction of environmental impacts caused as consequences from logistics and distribution in a mandatory way, and does not focus on these aspects in its scope. Mainly, this is because the certification focuses on local distribution, and considers that there are not high operations of logistics and distribution in place.
Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	Since the Demeter PGS is a derivative of the Demeter standard which is a biodynamic standard, this means that there are a series of requirements directed towards the protection of nature and biodiversity
Reducing the environmental impact of non-core materials and supplies used for the creation of the given product (e.g. rationalizing water and energy use in production).	The certification does not require focusing on non-core materials and supplies for the creation of produce in an environmental perspective. Yet, it can lead to the reduction of environmental impact because farmers are encouraged to use renewable energies (e.g., use of solar energy to generate electricity).
Promoting the reduction of GHG emissions and carbon accounting.	Carbon accounting is not required in the Demeter PGS requirements. But, GHG emissions are reduced through the practices involved in the production process: the use of natural and environmentally friendly inputs (e.g., compost, biodynamic preparations, etc.,).
Fostering the use of low environmental impacting materials, reduces the quantity used for the given product, and implying a better management of agro-chemicals.	The certification prohibits the use of pesticides and chemical fertilizers and demands the use of natural and environmentally sound inputs and practices.
Strengthening the environmental function (environmental role positive/negative) of the product.	Demeter PGS has a positive environmental impact, applying the highest standard of organic agriculture principles

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Social Criteria	Descriptive analysis of answers provided by 3 experts
Outreaching a geographical scale that is relevant to the supply chain system's range of activities and positively affecting the society.	The geographical scale to which the certification can outreach is not as big; the current focus is on the Minia region to pilot test Demeter PGS on farms.
Promoting transparent, fair/equitable and traceable engagement and practices with partners.	Demeter PGS requirements do not shed the light on the governance dimension, i.e., transparency, fairness, equitability and traceability.
Improving life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.	Social requirements are not indicated in the Demeter PGS certification; the focus is on the economic conditions of the farmers.
Providing social benefits such as resilience to climate related hazards and natural disasters, awareness on sustainability practices among citizens.	Social benefits such as resilience to climate related hazards and natural disasters, awareness on sustainability practices among citizens are not mentioned in the requirements of the Demeter PGS requirements.
Strengthening the social function (social role positive/negative) of the given product.	The certificate promotes solidarity between farmers as they participate together in the cross-inspection committee and the sharing of common interests in the production process. Also, it improves the living conditions of small-scale producers.
Improving consumers' quality of life by ensuring stability and food security and providing a high energy and micronutrient intake.	Due to the relatively young age of the certification, there are currently no agreements or contracts that allow the large-scale production of certified products in a way that covers the needs of the market or the consumers and hence covering food security.

5.4.3 Evaluation of the Organic EU certification – EOSC

Economic Criteria	Descriptive analysis of answers provided by 2 experts
Improving B2B and B2C relationships throughout for example the empowerment of farmers/producers through involvement in the decision-making process.	Along the supply chain, the relationships B2B are not improved by the Organic EU certification but it is considerable for the B2C relationships since consumers' needs related to the environment and health allows producers to have an idea on how to operate in a way that responds to these needs. Furthermore, following the requirements of the certification does improve producers' ability of decision-making. An important part of producing a high-quality certified product is the ability of the producer to take effective decisions and his awareness of the repercussions/consequences of these decisions.
Implying efficient use of intellectual resources such as providing training on farm documentation and record keeping systems or other resources (natural, institutional, infrastructural…).	Documentation and record keeping are important aspects for the certification as compliance to rules cannot be verified without proper documentation. However, training is not provided for this certification in any area.

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Allowing the given product to meet customer needs (differentiation and quality) at a reasonable price.	The certification does not imply "differentiation", but it does meet consumers' needs in terms of quality, because the Organic certification can be considered as a quality standard. Regarding meeting needs at a reasonable price, this is a relative aspect and cannot be evaluated without setting a reference point or benchmark.
Fostering upstream private-private and/or public-private partnership and improving the relationship built between producers and consumers.	Fostering upstream private-private and/or public-private partnership are ensured by the certification between producers and consumers since it helps building trust. Yet, the nature of relationships existing between partners is determined by partners themselves and not by the certification's requirements.

Environmental Criteria	**Descriptive analysis of answers provided by 2 experts**
Promoting the reduction of GHG emissions and carbon accounting.	Carbon accounting is not included in the certification. Being certified does not automatically mean the reduction of GHG emissions since there exists certified companies that have significant emissions. And while the certificate ensures good practices and certain products that can be used, the aim of these requirements is to ensure a high-quality product rather than reducing emissions. Hence, applying the certification requirements can lead to positive outcomes, but these outcomes are not mandatory and not achieving them will not lead to the withdrawal of the certificate. In fact, these benefits can be attributed to the producer's active engagement and awareness.
Strengthening the environmental function (environmental role positive/negative) of the product.	The environmental function of the products is ensured by the certification because it prohibits the use of pesticides and chemical fertilizers, and requires the use of natural and environmentally friendly products such as compost, etc.
Reducing the environmental impact of non-core materials and supplies used for the creation of the given product (e.g. rationalizing water and energy use in production).	Nothing can prove the reduction of the environmental impact caused by non-core materials, because this is not required in the implementation phases of the certification. Because the main concern of the certification is to ensure a high-quality product rather than reducing emissions, and thus not the reduction of environmental impact. Yet, the Organic EU certification promotes usage of renewable energy (solar) and the usage of efficient water resources. But the environmental impact whether positive or negative is the result of the decisions and actions of the producers, not the requirements of the certification.
Fostering the use of low environmental impacting materials, reduces the quantity used for the given product, and implying a better management of agro-chemicals.	It is for a fact that the Organic EU certification relies on good agricultural practices such as the usage of compost, prohibiting pesticides and chemical fertilizers and substituting them with natural alternatives. This leads to lower emissions and thus lower environmental impact compared to conventional agriculture.
Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	The certification promotes crop rotation and the cultivation of plants that attract insects which improves biodiversity at the farm level. In addition, afforestation plays a role in reducing emissions that helps mitigate climate change. These are the results of producers' actions and not mandatory in the requirements.

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Social Criteria	Descriptive analysis of answers provided by 2 experts
Promoting transparent, fair/equitable and traceable engagement and practices with partners.	The certification ensures a traceability system that follows every step of the production (from farm to consumer), which ensures transparency. But this does not mean that it allows fairness and equitability throughout these steps.
Improving life conditions such as the rights and benefits of the workers, improving labor conditions within the supply chain system's key activities.	The certification focuses on the quality of production of the products and the way they are produced, but some specific conditions regarding workers' rights e.g., working hours, salary, working conditions on the job are required in the Organic EU.
Strengthening the social function (social role positive/negative) of the given product.	The Organic EU certification has no role and no requirements in the social dimension. But should be included in the standard soon.
Encouraging communication and building agreements within local communities.	The certification improves continuous communication between all parties in order to have a high-quality certified product. In addition, Organic is a system that relies heavily on partnerships and collaboration either through knowledge sharing and problem fixing. This will ultimately lead to the development of tight-knit local communities.

5.5 Data France

5.5.1 Evaluation of the Agriculture Biologique certification – GPP

Economic Criteria	Descriptive analysis of answers provided by 4 experts
Improving product access to different market channels considering minimum production volumes.	AB is not restrictive; all clients are able to buy AB. Yes, the assessment is different depending on the marketing channels: - The direct front: direct relationship between the producer and the final consumer. This forms an asset for the producer: direct contact with consumers, which creates a bond of trust between them. And then the producer can choose whether or not to highlight the AB label. The variables affecting the choice of producer are, for example: wanting to stand out and differentiate themselves in a market where there are many sellers, most of whom are not in organic production mode. - Organic groceries (e.g., Bio-Coop): Having the AB label is mandatory (can only be certified as an organic distributor only if it purchases organic produce worth more than 10000 euros). - Large distribution: the AB label has tended to increase rather than decrease. - Improved access to public procurement due to the fact that AB is one of the SIQOs encouraged by the Egalim law and the Climate law.

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Allowing the given product to meet customer needs (differentiation and quality) at a reasonable price.	Organic farming is a certified production method well recognized by the general public, and it leads to healthy food in the sense of absence of pesticides and chemicals in the finished product, which meets customer needs. It is a reasonable price for customers once they have purchased which does not mean that the prices are expensive or not too expensive. But it is obvious that the AB label is in big trouble as we notice a drop in prices and there are problems in the market.
Implying financial costs to be supported e.g., cost of the certification, cost of maintenance of certification.	There are costs to be implied (certification, an additional cost in production skills, training, administration costs related to traceability and monitoring, and therefore in exchange time with other producers). However, thinking through a commercial approach, it is necessary that there will be a price because we notice what it pays: the turnover of organic producers increases due to the higher prices. Also, the results of these costs could be translated into a management tool in the future for flow analysis and improvement.
Addressing desired target customers.	If the target clientele means people with money, then the objective has been achieved. Compared to access to organic in a democratized way, this objective has not yet been achieved. If the objective is for the target to be a very large audience, the relationship will have to be direct with the producers or to reinforce second-category products.

Environmental Criteria	**Descriptive analysis of answers provided by 4 experts**
Strengthening the environmental function (environmental role positive/negative) of the product.	Public markets require organic fruits and vegetables or equivalent. And if the product is not organic, it will be necessary to prove the environmental virtue of the production method (Biodiversity protection, limitation of contaminants, eliminating plastics, and over packaging...). So, AB strengthens the environmental function and that is what consumers are looking for.
Contributing to the circular economy and to extending the end of life of the product by reducing waste and disposal.	The AB certification does not require any specification with regard to circular economy. While the integration of these elements will be a state of mind of the producer. For example, a producer who does not sell his products, whether AB, HVE or conventional, often re-digs them when he prepares his soil, which is in a way an aspect of the circular economy.
Contributing to the reduction of environmental impacts caused as consequences from logistics and distribution.	The AB certification does not require any specification with regard to logistics and distribution. It also depends on the state of mind of the producer, then on the SIQO itself. Because the official sign of quality corresponds to a mode of production and not necessarily to a mode of marketing. A producer engaged in organic farming must have a significant environmental awareness, so this is also an asset, and he tries to rationalize his logistics costs. Overall, the producer thinks of reducing its economic impact, and therefore rationalizing its logistics, and consequently there will be an environmental impact.
Promoting the reduction of GHG emissions and carbon accounting.	Overall, the AB certification promotes the reduction of GHG emissions. But, no farm-by-farm calculation, while the results can be very different by farm compared to another and region compared to another. And, carbon is not counted.

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Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	Agriculture biologique certification has ecological benefits such as reducing the use of fertilizers and pesticides, and through rotation. But, the objective criteria for biodiversity are rather found in the HVE certification. Awareness on climate change among the general public could be raised through the mode of production itself.

Social Criteria	**Descriptive analysis of answers provided by 4 experts**
Outreaching a geographical scale that is relevant to the supply chain system's range of activities and positively affecting the society.	In Occitanie, there are quite small organic farms and there is confusion between peasant agriculture and organic. Organic farms and their surfaces must be increased. There are not enough standardized and calibrated organic products.
Encouraging communication and building agreements within local communities.	The AB certification encourages communication and building agreements within local communities, specifically in the case of territorial food projects (PAT) which are carried out by common communities, metropolises… It is because of the Egalim law (integrating 50% of sustainable products, 20% of which are organic at the end of January 2022).The integration of organic farming is a national concern, so there is a strong desire to achieve this objective (the installation of organic farms).
Promoting transparent, fair/equitable and traceable engagement and practices with partners.	The AB certification promotes transparency and traceability on the production mode where an external certification body confirms every 2 years that the farmer is producing correctly in line with the AB specifications. With regards to fair and equitable, it may not be indicated that the producer must receive the best revenue, the farmer should be able to set its prices and work in the market to ensure its profitability. Once the product goes to the market, it is not clear if it's good governance.

5.5.2 Evaluation of the Label Rouge standard (LR) – GPP

Economic Criteria	**Descriptive analysis of answers provided by 3 experts**
Improving product access to different market channels considering minimum production volumes.	Label Rouge is the second SIQO well known to consumers after the Agirculture Biologique, also encouraged by the Egalim Law, thus it secures different sectors and has access to different market channels.
Allowing the given product to meet customer needs (differentiation and quality) at a reasonable price.	Taking into account the success of LR, which is, very well positioned (large distribution). For example, LR free-range chickens guarantee reasonable prices (higher than the unlabeled), and guarantee assured quality in the production method. With regard to public procurement, it is well positioned because it is encouraged by the Egalim Law and the Climate law.
Implying financial costs to be supported e.g., cost of the certification, cost of maintenance of certification.	LR implies financial costs to be supported because of the external control to certify a superior taste quality which is necessarily paying due to the tests that must be conducted. And the producer has to bear these costs. In addition, these costs bring added value and that is why producers accept them, and they are usually reflected in sale prices.

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Addressing desired target customers.	The Label Rouge addresses target customers of public purchasing because the Egalim law integrated the label in the obligations of sustainable purchases of collective catering for example. Also, target customers are those who are attached to the well-being of animals.

Environmental Criteria	**Descriptive analysis of answers provided by 3 experts**
Strengthening the environmental function (environmental role positive/negative) of the product.	Environmental criteria are not taken into account in the Label Rouge. Because LR is a production method ensuring superior quality, and it is not related to the environment.
Contributing to the circular economy and to extending the end of life of the product by reducing waste and disposal.	The LR doesn't include elements of the circular economy. The integration of these elements will be a state of mind of the producer. So, it depends on the production and distribution processes of the actors in the sector.
Contributing to the reduction of environmental impacts caused as consequences from logistics and distribution.	The LR specifications say nothing about logistics and distribution. But a time-saving approach and an economical approach are put in place to streamline logistics and distribution. When logistics are rationalized for economic purposes, there will be environmental impacts but indirect ones.
Promoting the reduction of GHG emissions and carbon accounting.	The specifications of LR don't mention anything related to GHG emissions and carbon accounting. This is because the main purpose of LR is superior product quality and animal welfare. Indirectly, if it's a short circuit without intermediaries, it is indeed that GHG is reduced.
Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	Knowing that LR doesn't include environmental criteria, it doesn't provide any ecological benefits, but it facilitates awareness on climate change mitigation.

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Social Criteria	Descriptive analysis of answers provided by 3 experts
Outreaching a geographical scale that is relevant to the supply chain system's range of activities and positively affecting the society.	Overall, the SIQOs by nature positively affect society insofar as they can objectively prove something: certified production method, superior production quality certified by an external body. Nevertheless, it depends on the organization of relations between actors of the chain, in particular on the levels of concentration and negotiating powers.
Encouraging communication and building agreements within local communities.	The LR label is barely mentioned in PAT (territorial food projects), the scope of discussions is usually AB. So it doesn't much encourage communication and building agreements within local communities.
Promoting transparent, fair/equitable and traceable engagement and practices with partners.	On the production part, because label rouge goes hand in hand with governance specifications that are verified by an external body. But on the marketing part, it is difficult to control, for example, that we sell garlic labeled LR but in fact they have nothing to do with the LR, and it is cheating that must be traceable.

5.5.3 Evaluation of the Haute Valeur Environnemental *certification – GPP*

Economic Criteria	Descriptive analysis of answers provided by 3 experts
Improving product access to different market channels considering minimum production volumes.	Consumers do not know HVE. Nevertheless, the producers ask a lot for this certification, and if the producers ask for it, that means that the buyers ask for it (and in particular the large retailers).
Allowing the given product to meet customer needs (differentiation and quality) at a reasonable price.	For collective catering and public markets, HVE falls into the category of sustainable products (integrating 50% sustainable purchases quota) which complies with the Egalim law. For the general public, better communication of HVE to people should be put in place so that it would be more recognized.
Implying financial costs to be supported e.g., cost of the certification, cost of maintenance of certification.	The HVE certification implies costs to be supported such as cost of time to understand how to certify HVE and time for certification, but the actual cost of certification is not high since it is a compromise between conventional production modes and AB. The producers ask for the certification to gain more market channels, and it is reflected in sales prices.
Addressing desired target customers.	For collective catering and public markets, the HVE certification answers target customers because these institutions understand and know about HVE. The general public doesn't know the certification, and thus, they are not guided towards HVE purchases.

Environmental Criteria	Descriptive analysis of answers provided by 3 experts
Strengthening the environmental function (environmental role positive/negative) of the product.	Environmental function is strengthened by the HVE certification in theory through pushing towards agroforestry. However, consumers who do not know HVE may not perceive it that way.

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Contributing to the circular economy and to extending the end of life of the product by reducing waste and disposal.	In the specifications of HVE, circular economy is not integrated, but the production mode is fairly a closed cycle and circular economy in this case depends on the production and distribution processes of the actors of the chain.
Contributing to the reduction of environmental impacts caused as consequences from logistics and distribution.	Logistics and distribution as well are not part of the HVE specifications, but this should be regulated. Farmers may be indirectly reducing the environmental impact caused by logistics and distribution through a time-saving approach and an economical approach put in place to streamline logistics. When logistics are rationalized for economic purposes, there will be positive environmental impacts but indirect ones.
Promoting the reduction of GHG emissions and carbon accounting.	Carbon accounting is not a feature of the certification. But it sure does reduce the GHG emissions through the specific production mode in place.
Having any ecological benefits such as protecting biodiversity, and raising awareness on climate change mitigation.	HVE is the only quality sign that offers objective criteria that are verified for the protection of biodiversity.

Social Criteria	**Descriptive analysis of answers provided by 3 experts**
Outreaching a geographical scale that is relevant to the supply chain system's range of activities and positively affecting the society.	HVE is still in its first phases in its application, but it is starting to get well developed in France and have interesting expectations.
Encouraging communication and building agreements within local communities.	Communication wise, HVE encourages all sorts of communication among actors, but for building agreements HVE is less politically engaged than AB. and in PTAs, actors talk about the relocation of food only with regard to AB. Elected officials in the territories do not speak of the installation of HVE operating systems to supply collective catering. However, many fruit and vegetable producers request this certification because it is requested by their buyers.
Promoting transparent, fair/equitable and traceable engagement and practices with partners.	HVE promotes transparency and traceability for the certified production part. But, once produce enters the market place, it may not be enough. Equity and fairness to the producers is not very clear through this certification.

6 SWOT and Identification for improvement

In order to improve the entities – sustainability standards – of this framework, and propose new prototypes VSS, we rely on two main elements:

- The criteria not met through the evaluation carried out by the experts of each supply chain system in each country partner.
- The SDG targets identified following the alignment of VSS with SDGs.

Based on these elements, a desk based SWOT analysis is conducted. This 3 dimensional analysis (economic, environmental and social) in which we determine the Strengths, Weaknesses, Opportunities and Threats of each standard evaluated, is also supported with the database provided by experts in the questionnaire, i.e., through the why question we can understand the main weaknesses/ threats that do

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not allow the standard's implementation sustainably. Moreover, through the how question, we can deliberate on other standards how they can meet criteria (strengths/ opportunities). In that sense, we will be able to propose opportunities on how standards can be improved. In addition, state out the threats they may encounter and find new solutions to become adequately and sustainably applied.

The final number of new VSS proposed based on these improvements is 15 VSS. Three VSS per country partner (two SFSC and one EOSC for Italy, Greece, Morocco and Egypt; three GPP for France).

Following each SWOT for every standard, a proposition of a new standard prototype is in order.

6.1 SWOT analysis – Italy

6.1.1 AIAB ORGANIC certification – SFSC

	Strengths	**Weaknesses**
Economic	Improved relationship between producers and consumers	Private-private and/or public private relationships are not improved
	In-depth knowledge of the farm and the entire productive process	High costs corresponding to farm support and representativeness at trade level
	Valorized product quality and price control	Sales are not guaranteed
Environmental	Conscious shopping	No carbon accounting exists
	Use of low environmental impacting materials and processes	No aspects on climate change awareness
Social	Communication and building local community agreements	No aspects related to resilience to climate related hazards and natural disasters (as social benefits) are in place
	Valorized farmers' work and efforts	
	Opportunities	**Threats**
Economic	Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships	Decrease of price control and monitoring leading to the increase in prices
	Create a fund or a microcredit system with low interest rates to help farmers financially develop within the certification	Decrease in the number of trainings provided for the actors and farmers in particular
	Adopt measures to ensure the proper functioning of food commodity markets and guaranteeing sales for farmers	
Environmental	Integrate climate change measures into national policies, strategies and planning	Climate measures not covering all aspects of climate change
	Valorization of carbon accounting through the phases of the chain (setting a threshold that can't be surpassed or else losing the certification)	
Social	Adopt and implement national disaster risk reduction	Awareness of farmers is not sufficient with relation to the impacts of great natural disasters

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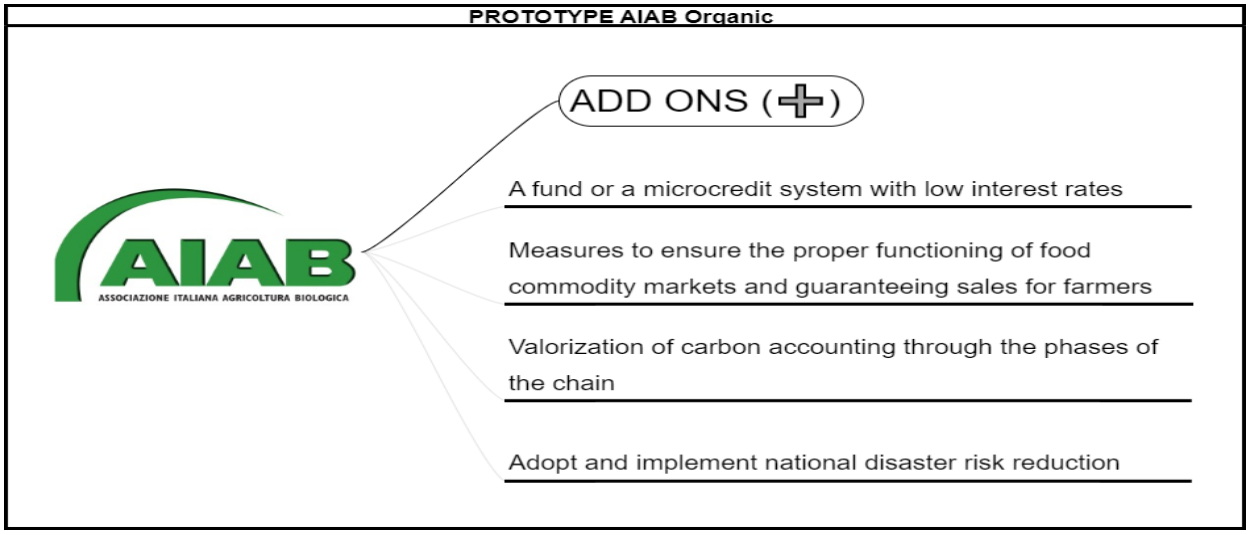
Figure 6: New standard prototype of AIAB organic



6.1.2 ISO 22000 Certification – SFSC

	Strengths	Weaknesses
Economic	Improved relationship between producers and consumers	Private-private and/or public private relationships are not improved
	Upgraded farmers' knowledge on regulations and their application	Not concerned with meeting reasonable prices for the produce
	Meeting consumers' need (food security)	
Environmental		No objective such as reducing GHG emissions and carbon accounting.
		No objective such as the use of low environmental impacting materials and reducing and managing agro-chemicals
Social	Valorized farmers' work and efforts	No objective such as communication and building agreements with local communities
	Training and initiatives on securing hygiene and safety standards	No objective such as protecting cultural and natural heritage for society
	Opportunities	**Threats**
Economic	Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships	Not being able to ensure food security
	Setting a threshold for prices that can't be surpassed or else the product loses the certification	Not being able to guarantee sales
Environmental	Including specifications on increasing substantially the share of renewable energy in the global energy mix	Phasing out the environmental dimension throughout the application of the standard
	Introducing specifications requiring the reduction of GHG emissions and the use of low impacting materials and processes	

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Social	Expenditure on the preservation, protection and conservation of all cultural and natural heritage, by source of funding (public, private), type of heritage (cultural, natural) and level of government (national, regional, and local/municipal)	Not being able to maintain fair wages for workers and ensuring equal opportunities
	Communication and building local community agreements through ensuring responsive, inclusive, participatory and representative decision-making at all levels	

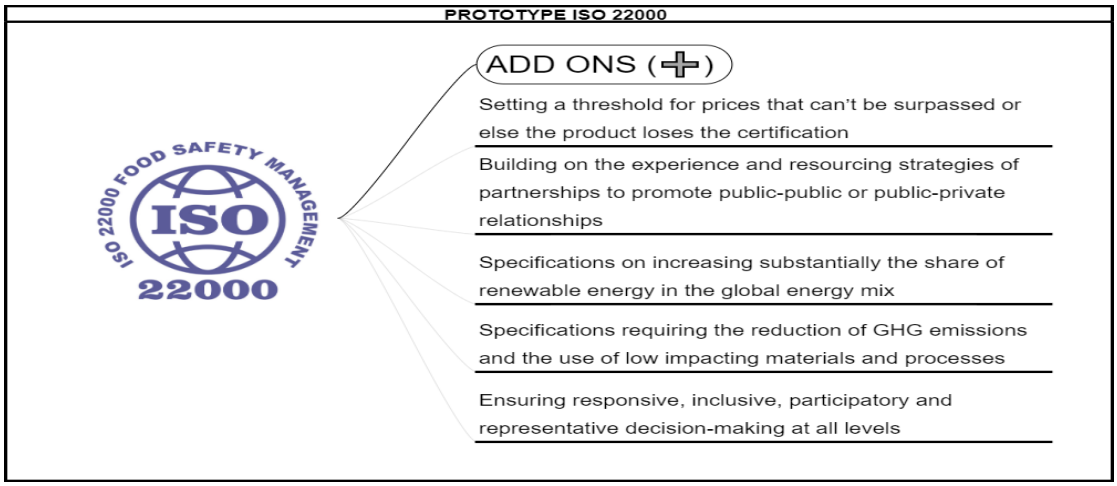

Figure 7: New standard prototype of ISO 22000

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6.1.3 GRASP certification – EOSC

	Strengths	Weaknesses
Economic	Protect and safeguard workers	Not correlated to product quality
	Improved B2B and B2C relationships	
Environmental	Derivative of the Global GAP	Does not contribute to the reduction of environmental impacts caused as consequences from logistics and distribution.
		No environmental aspects are related to the certification
Social	Improved workers' life conditions (rights and benefits)	No correlation with consumers' quality of life
	Opportunities	**Threats**
Economic	Ensuring the conformity with Global GAP	
Environmental	Introducing requirements related to transportation and packaging	
	Including specifications on increasing substantially the share of renewable energy in the global energy mix	
	Including specifications on reduce waste generation through prevention, reduction, recycling and reuse	
Social		No compliance with the objective of improving workers' conditions

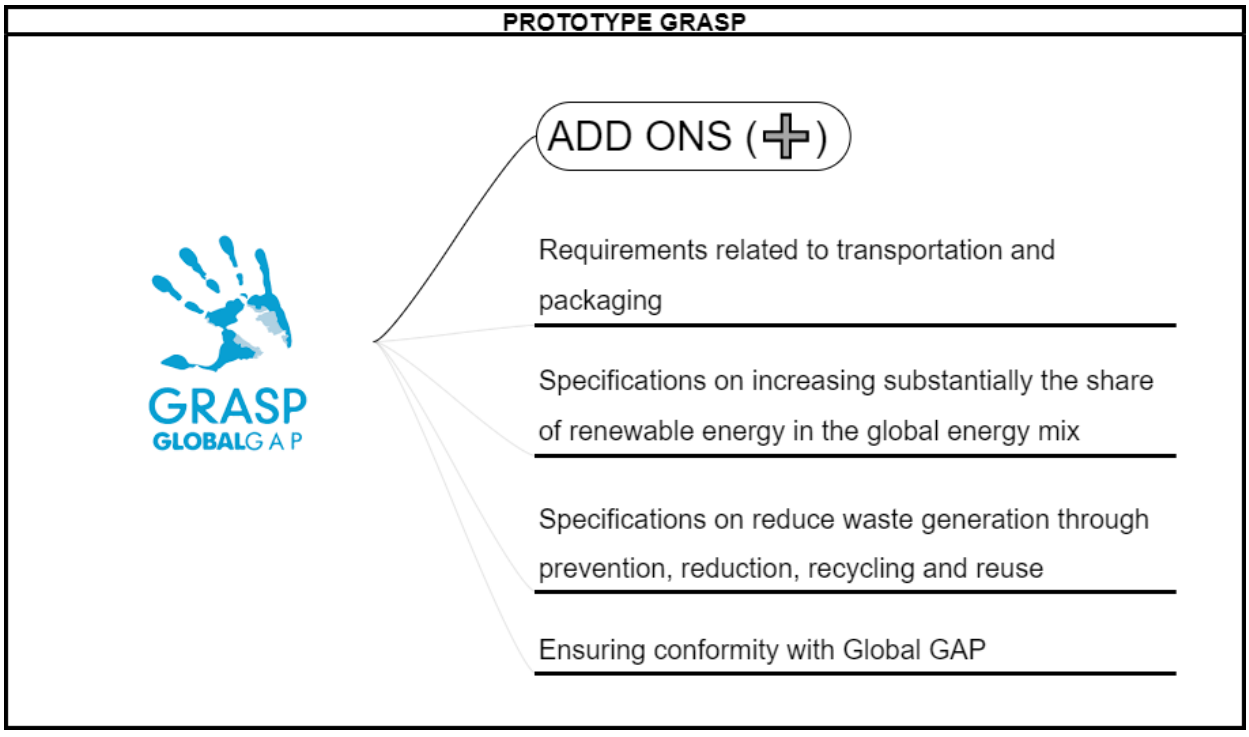

Figure 8: New standard prototype of GRASP

6.2 SWOT analysis – Greece

6.2.1 Traditional Specialty Guaranteed standard (TSG) – SFSC

	Strengths	Weaknesses
Economic	Improved market access	Consultancy costs to be supported
	Reinforced B2B and B2C relationships	Training is not compulsory
Environmental	Use of traditional techniques reducing the environmental impact	No carbon accounting
	Contributing to circular economy	No aspects on climate change awareness.
Social	Promoting good governance	
	Focusing of cultural aspects	
	Offering fair opportunities	
	Opportunities	**Threats**
Economic	Create a fund or a microcredit system with low interest rates to help farmers financially develop within the certification	Losing market access to a more marketed and sustainable certification
	Ensure that actors have the relevant information and awareness for this sort of production in harmony with nature through training programs	B2B and B2C relationships not empowered enough and losing the insights of the producers themselves
Environmental	Valorization of carbon accounting through the phases of the chain (setting a threshold that can't be surpassed or else losing the certification)	Climate measures not covering all aspects of climate change
	Integrate climate change measures into national policies, strategies and planning	
Social		Not being able to maintain fair wages for workers and ensuring equal opportunities

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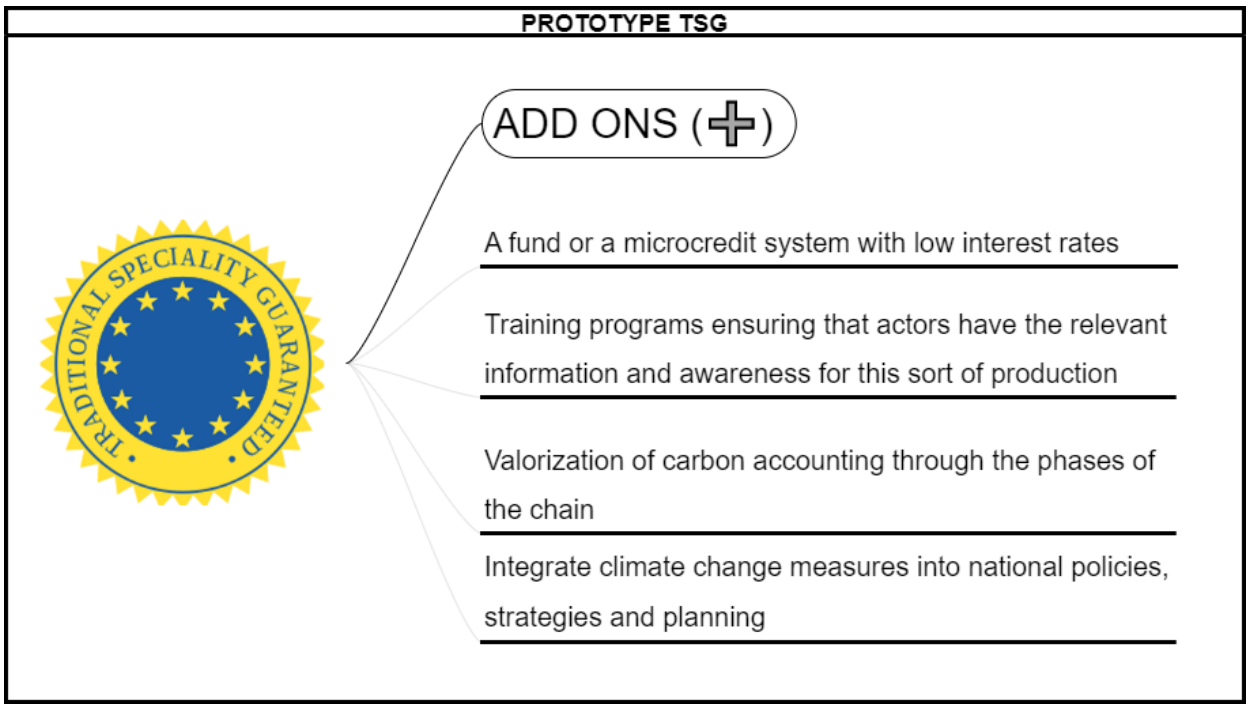

Figure 9: New standard prototype of TSG

6.2.2 Fairtrade certification – SFSC

	Strengths	Weaknesses
Economic	Improved market access	Cost of certification and compliance
	Empowered farmers and involving them in the decision-making process	Only farmers in the network can profit from Fairtrade practices
Environmental	Fairtrade contributes to a circular economy	No carbon accounting
		No direct specifications on decreasing environmental impacts
Social	Implied good governance	Using the fair trade accreditations as marketing tools to differentiate their products
	Improved workers' life conditions	
	Opportunities	**Threats**
Economic	Create a fund or a microcredit system with low interest rates to help farmers financially develop within the certification	Losing market access to a more marketed and sustainable certification
	Including more producers in the Fairtrade practices even if they don't belong to the network	Losing the insights of the producers themselves
Environmental	Valorization of carbon accounting through the phases of the chain (setting a threshold that can't be surpassed or else losing the certification)	Phasing out the environmental dimension through the application of the standard
	Include specifications aiming to the reduction of negative environmental impacts such as improving water quality,	

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	eliminating dumping and minimizing release of hazardous chemicals and materials	
Social	Monitoring working conditions in-line with the certification's specification	Fear that abusive labor practices are reintroduced after certifications are expired or abandoned

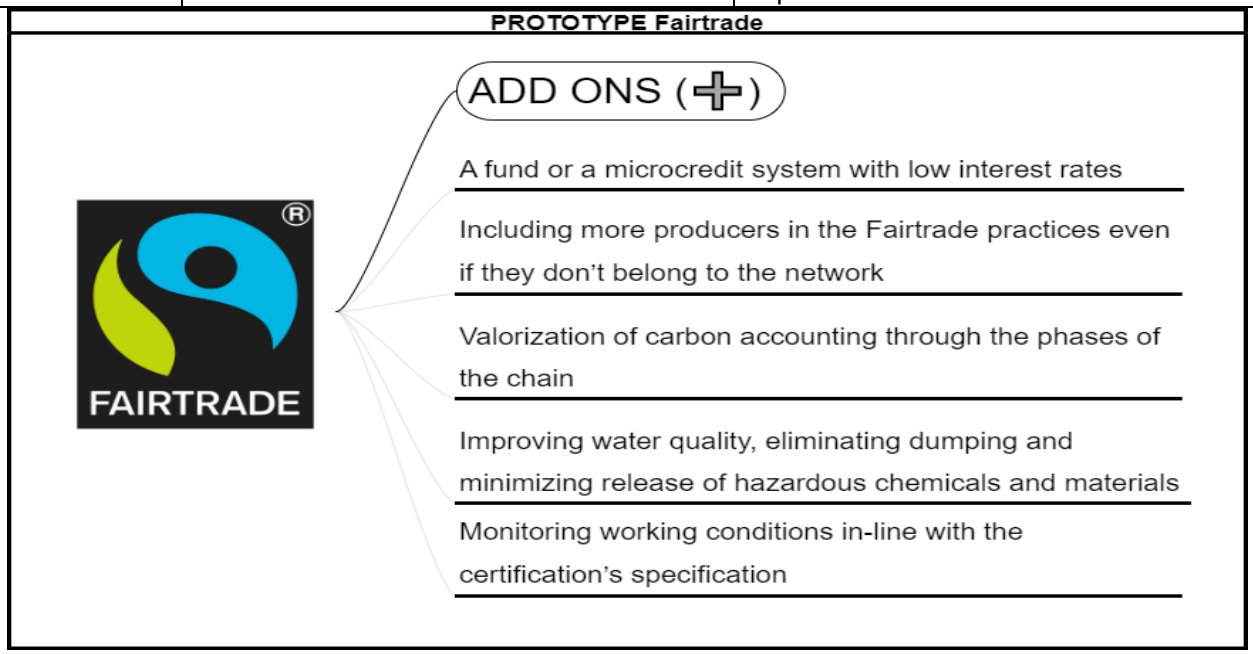

Figure 10: New standard prototype of Fairtrade

6.2.3 Organic EU certification – EOSC

	Strengths	**Weaknesses**
Economic	Improved market access	High costs of conversion
	Sales are guaranteed by the actual demand of target customers	
	Reasonable prices for the quality offered	
Environmental	The use of low environmental impacting processes and materials	No direct specifications on decreasing environmental impacts through distribution and logistics
	Production practices protecting biodiversity	
Social	Promoting good governance	No direct specifications on improving workers' life conditions
	Improving consumers' quality of life through offering high quality produce	
	Opportunities	**Threats**
Economic	Create a fund or a microcredit system with low interest rates to help farmers financially develop within the certification	Increase of products' prices
Environmental	Introducing requirements related to transportation and packaging	Neglecting environmental impacts in the postproduction phase

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Social	Introducing requirements related to life conditions of laborers	Loosing insights of good governance along the chain

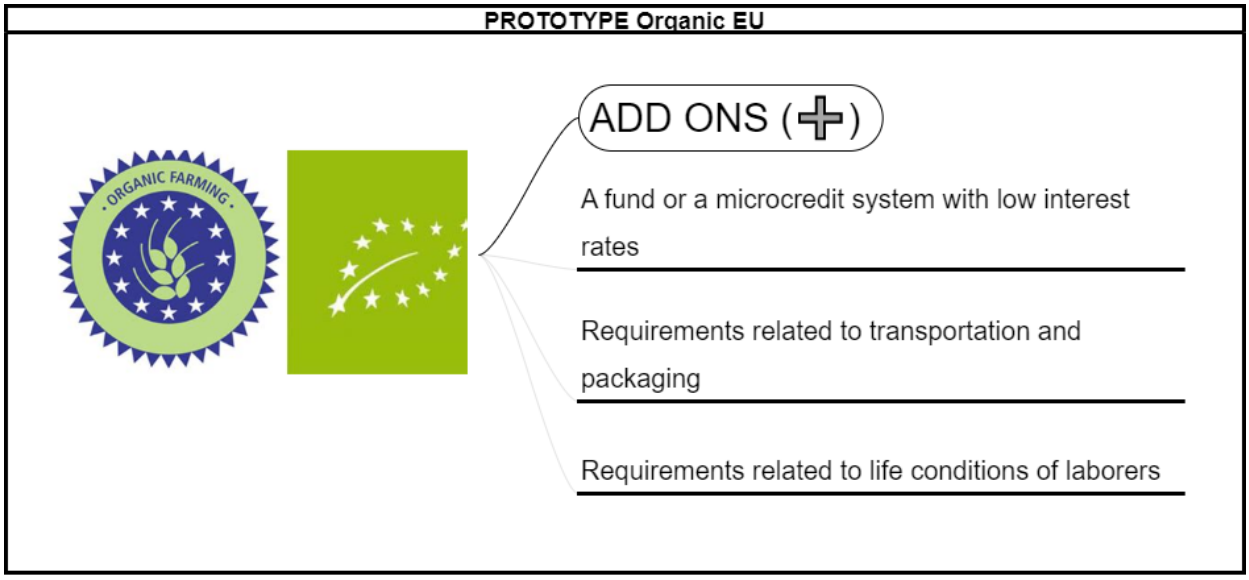

Figure 11: New standard prototype of Organic EU

6.3 SWOT analysis – Morocco

6.3.1 Système Participatif de Garantie (SPG) standard – SFSC

	Strengths	Weaknesses
Economic	Improved market access	Financial costs to be supported
	Upstream private-private and/or public-private partnership and improved the relationship built between producers and consumers	Desired target customers are not always addressed because the intermediary does not make all the necessary information available
	Reasonable prices for the quality offered	
Environmental	The use of low environmental impacting processes and materials	Circular economy is at the stage of development and recognition
	Reduction of GHG emissions and carbon accounting because it requires the use of energy that does not have an impact on the environment.	
Social	The manufacture and distribution of the product transmits social and even cultural values throughout its journey	System doesn't reach the geographical scale relevant to the supply chain system
	Provision of beneficial social claims on how to protect cultural and natural heritage	
	Opportunities	**Threats**

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Economic	Create a fund or a microcredit system with low interest rates to help farmers financially develop within the certification	Increase in products' prices and thus losing market access
	Monitoring the transfer of all necessary information to the end-user	
Environmental	Introducing requirements enhancing circular economy practices	Lack of monitoring to ensure carbon accounting and low GHG emissions
Social	Promote the development, transfer, dissemination and diffusion of the system's technologies and specifications	Losing the sense of cultural heritage

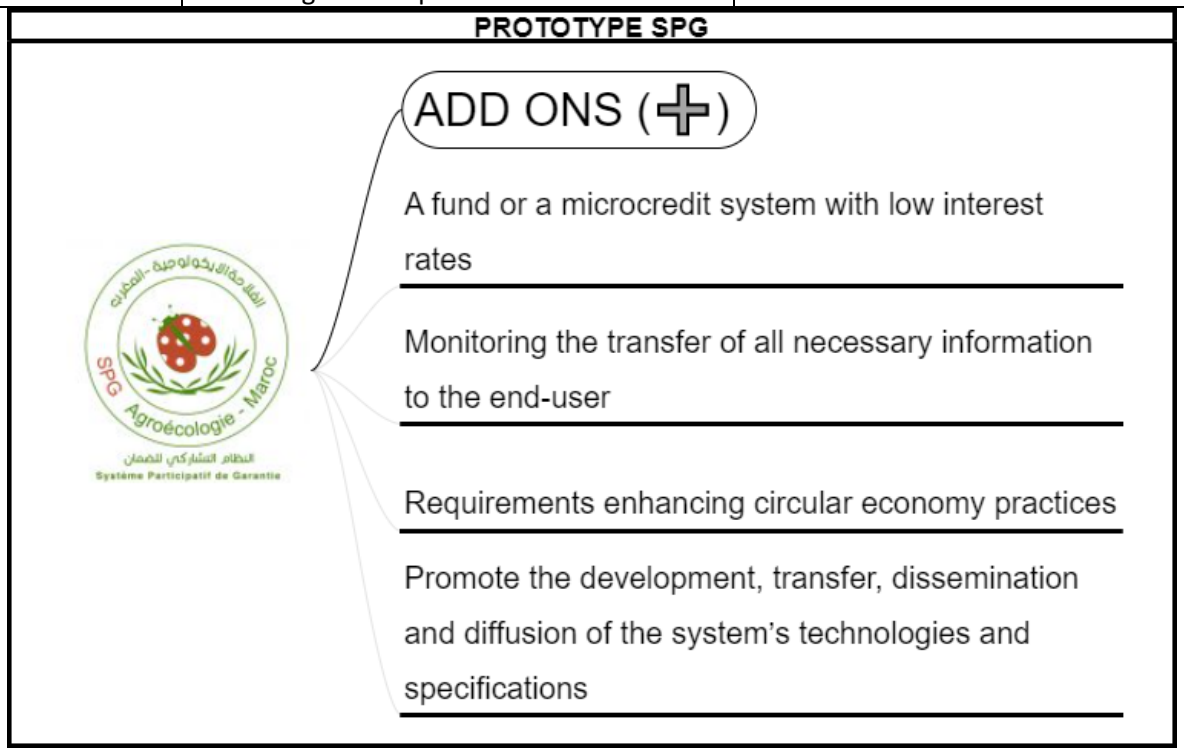

Figure 12: New standard prototype of SPG

6.3.2 Saveurs du Marroc certification – SFSC

	Strengths	Weaknesses
Economic	Reinforced B2B and B2C relationships	Doesn't guarantee access to different market channels
	Actors collaborate with each other to realize possible synergies	Financial costs to be supported (certification and maintenance)
	Improved efficiency for the main economic activities	Prices are high exceeding the purchasing potential of a large population
Environmental		No role in contributing to the reduction of environmental impacts caused by

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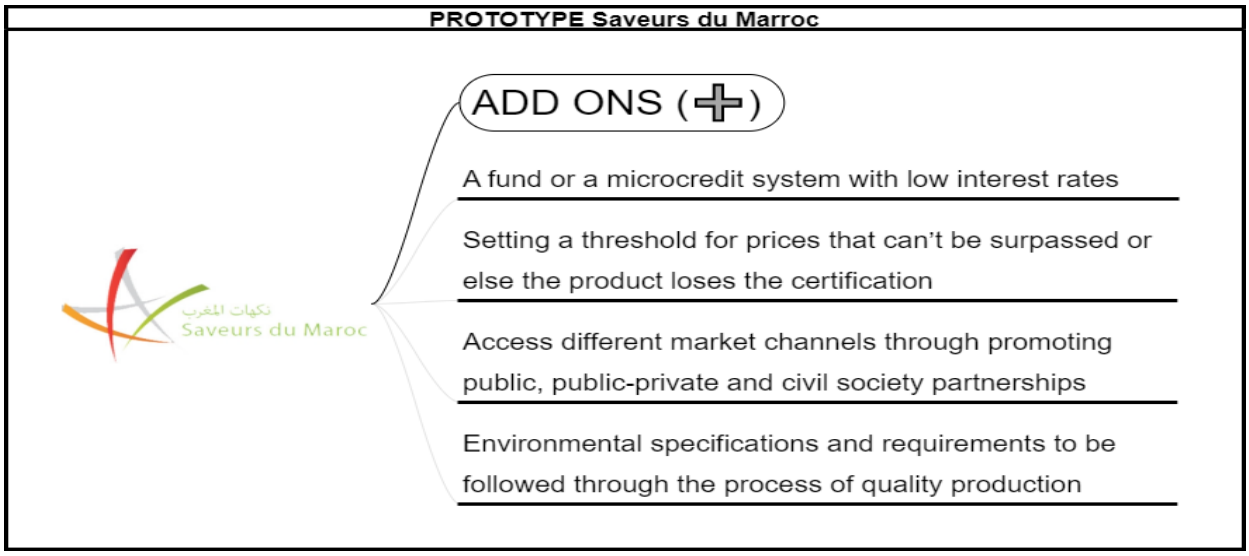
		materials, processes, distribution and logistics
		No carbon accounting or requirements on GHG emissions nor circular economy
Social	Promoting quality produced from origin under controlled sanitary conditions	
	Providing claims on how to protect cultural and natural heritage	
	Improved companies' performances and employment.	
	Improved life conditions such as the rights and benefits of the workers and labor conditions	
	Opportunities	**Threats**
Economic	Create a fund or a microcredit system with low interest rates to help farmers financially develop within the certification	Decrease of sales due to the high environmental impact, the products won't be of interest.
	Setting a threshold for prices that can't be surpassed or else the product loses the certification	
	Encourage and promote effective public, public-private and civil society partnerships, in order to access different market channels	
Environmental	Introducing environmental specifications and requirements to be followed through the process of quality production	Phasing out the environmental dimension through the application of the standard
Social		Decrease of quality appreciation due to the high environmental impact

Figure 13: New standard prototype of Saveurs du Marroc



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6.3.3 Morocco Foodex certification – EOSC

	Strengths	Weaknesses
Economic	Recognized at national and international level, thus increase in sales and revenues	Financial costs to be supported
	B2B and a B2C relationship between actors of the chain	No trainings are provisioned
	Upstream private-private and/or private-public partnerships (coordinating efforts between the public body to guide exporters develop on international markets)	Consumers bearing high product prices
Environmental	Reducing ecological cost as part of the coordination of export-oriented activities.	Logistics and distribution specifications only required sometimes for exportation
	Specifications on logistics and distribution could be asked to cohere with	No carbon accounting
Social	Promoting good governance	
	Laborers access their rights and good working conditions	
	Opportunities	**Threats**
Economic	Create a fund or a microcredit system with low interest rates to help farmers financially develop within the certification	Decrease in sales due to the none existing specifications on distribution and transportation
	Setting a threshold for prices that can't be surpassed or else the product loses the certification	Losing guidance from public bodies for producers aiming to export
	Ensure that actors have the relevant information and awareness for this sort of production in harmony with nature through training programs	
Environmental	Logistics and distribution specifications mandatory required to reduce environmental impacts	Losing markets due to the none existing environmental specifications
	Valorization of carbon accounting through the phases of the chain (setting a threshold that can't be surpassed or else losing the certification)	
Social	Promote,	Not being suitable with all aspects of good governance along the chain (Fairness, equitability, transparency and traceability)

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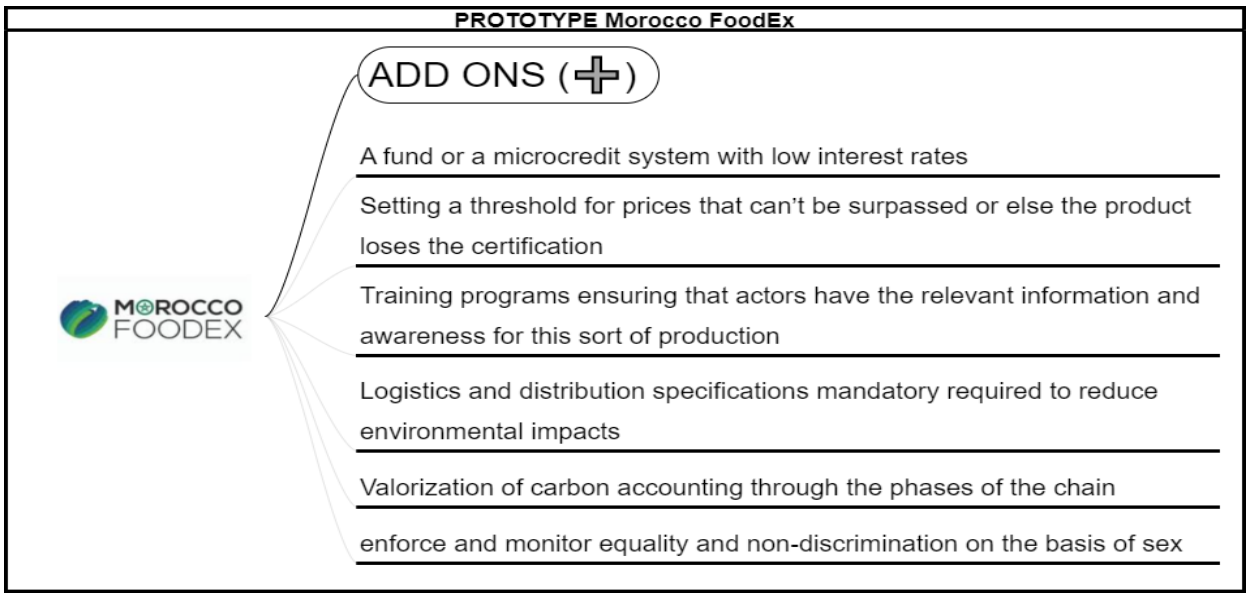

Figure 14: New standard prototype of Morocco Foodex

6.4 SWOT analysis – Egypt

6.4.1 Economy of Love (EoL) certification – SFSC

	Strengths	Weaknesses
Economic	Mandatory round tables where actors of the chain come together and discuss all aspects related to their needs and the challenges they are facing	New system, not widely spread around Egypt
	Improved efficiency of production through the reduction of usage of several tools and machines	Sales are not guaranteed for this certification
	Education program in place	
Environmental	Provision of an environmental impact assessment	Reducing food miles from transportation and distribution is not mandatory
	High ecological benefits	
Social	Requires transparency, fairness and traceability along the supply chain between partners	No insights or requirements on rules on how to act upon any climate change related risks or natural disaster
	Provision of equivalent requirements to Fairtrade (fair income for people, fair labor rights and living wages)	Not being able to ensure that consumers with lower income have access to these produce
	Opportunities	**Threats**
Economic	Raising awareness on this certification	Marketing the certification
	Matchmaking between customers and producers is essential in order to guarantee sales	Lack of communication between consumers and producers

Environmental	Making requirements about transportation and distribution mandatory	Losing new green market channels due to the none mandatory requirements on logistics and distribution
	Compensate for environmental emissions mandatorily	
Social	Adopt and implement national disaster risk reduction	Loosing insights of good governance along the chain
	Ensure consumers' access to EoL products through subsidizing these products and setting a marge of profit to the producers	Not enforcing and monitoring equality and non-discrimination on the basis of sex

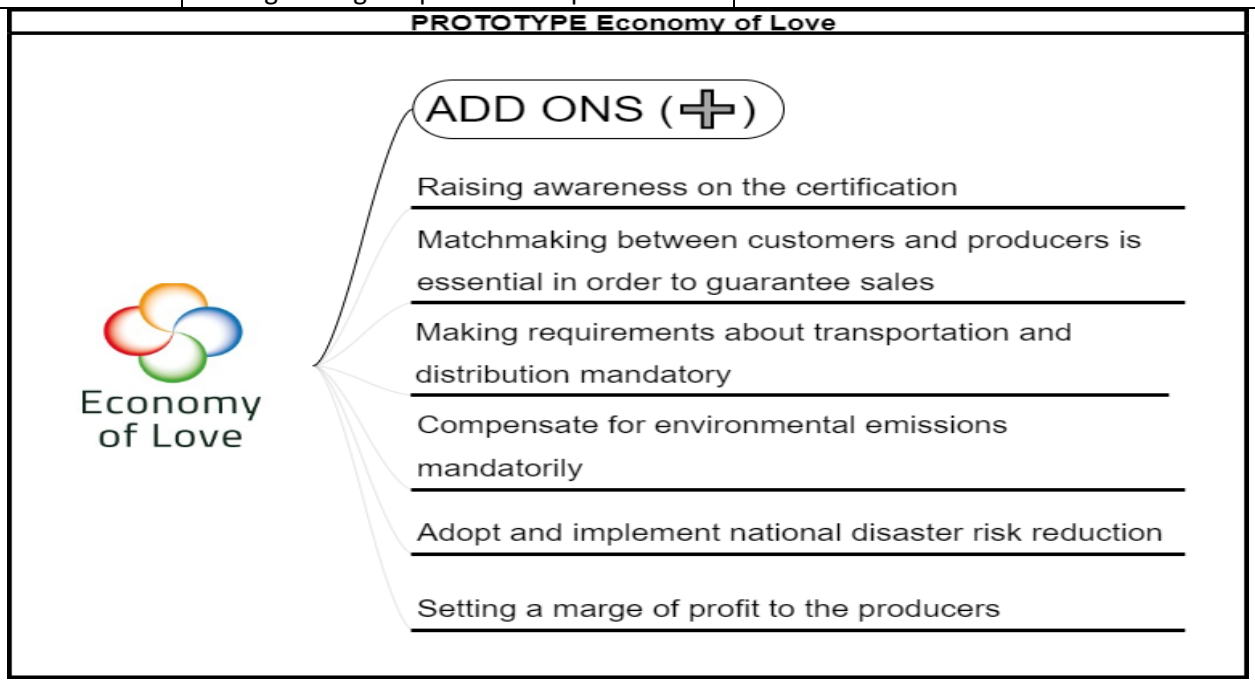

Figure 15: New standard prototype of Economy of Love

6.4.2 Demeter PGS certification – SFSC

	Strengths	Weaknesses
Economic	Efficiency improved on the farm level	Efficiency not improved on the processing level
	Lower production costs (material and renewable energy)	Sales are not guaranteed
Environmental	Derivative of the Demeter standard (biodynamic)	No direct mandatory specifications on decreasing environmental impacts through distribution and logistics
	Requirements directed towards the protection of nature and biodiversity	Carbon accounting is not required in the specifications
Social	Solidarity between farmers as they participate together in the cross-inspection	Small geographical scale outreached
		Phasing out good governance

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	committee and the sharing of common interests in the production process	No aspects related to resilience to climate related hazards and natural disasters (as social benefits) are in place
	Opportunities	**Threats**
Economic	Achieve higher levels of economic productivity and efficiency through diversification, technological upgrading and innovation	Lack of training leading to losing the real insights behind this certification (cooperation between farmers)
	Matchmaking between customers and producers is essential in order to guarantee sales	
Environmental	Valorization of carbon accounting through the phases of the chain (setting a threshold that can't be surpassed or else losing the certification)	Lack of environmental criteria to be applied along the chain leading to losing market place
	Making requirements about transportation and distribution mandatory	
Social	Promote the development, transfer, dissemination and diffusion of the system's technologies and specifications	Loosing insights of good governance along the chain
	Implement good governance ground rules along the chain	Decrease of quality appreciation due to the high environmental impact
	Adopt and implement national disaster risk reduction	

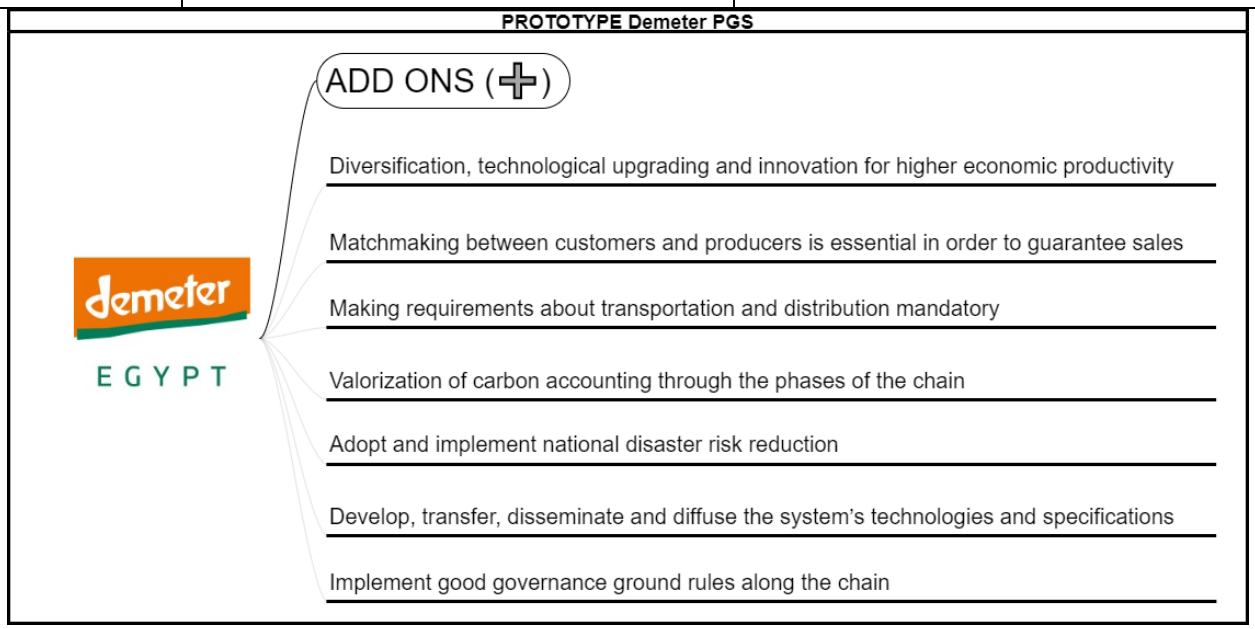

Figure 16: New standard prototype of Demeter PGS

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6.4.3 Organic EU – EOSC

	Strengths	Weaknesses
Economic	Considerable B2C relationships	B2B not improved
	Ability of the producer to take effective decisions	Training not provided
	Documentation and record keeping are in place	Doesn't determine the nature of private-private or public-private partnerships
Environmental	Prohibiting the use of pesticides and chemical fertilizers	Carbon accounting is not included
	Requiring compost usage	No direct specifications on decreasing environmental impacts through none-core materials
	Promoting usage of renewable energy	Ecological practices such as crop rotation and improving biodiversity are no mandatory requests
Social	Ensuring a transparent traceability system that follows every step of the production	Fairness and equitability are not ensured
	Improving continuous communication between all parties in order to have a high-quality certified product	Few requirements in the social dimension
	Opportunities	**Threats**
Economic	Ensure that actors have the relevant information and awareness for this sort of production in harmony with nature through training programs	Not being able to evaluate of prices are reasonable since there is no reference point or benchmark
Environmental	Valorization of carbon accounting through the phases of the chain (setting a threshold that can't be surpassed or else losing the certification)	Certification doesn't mean less environmental emissions
	Introducing mandatory requirements related to the use of low environmental impacting materials and process preserving biodiversity	
Social	Reinforcing social requirements with regard to discrimination, wages, rights	Losing partnerships and collaborations between actors and lack of information and knowledge sharing
	Introduce fairness and equitability requirements along the chain	Losing track of the transparent traceability system

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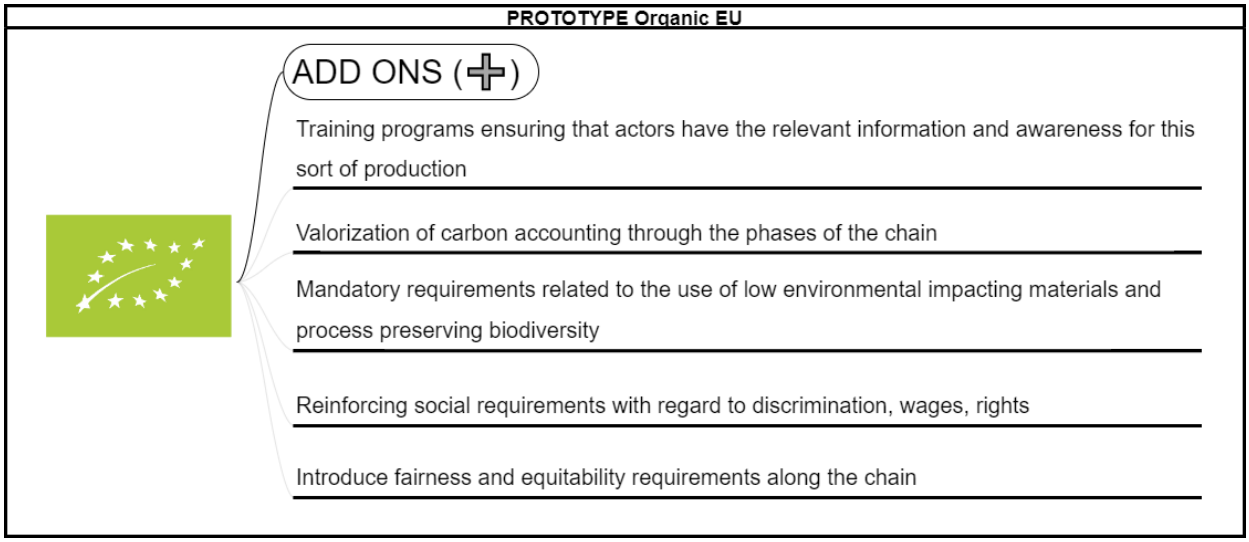
Figure 17: New standard prototype of Organic EU



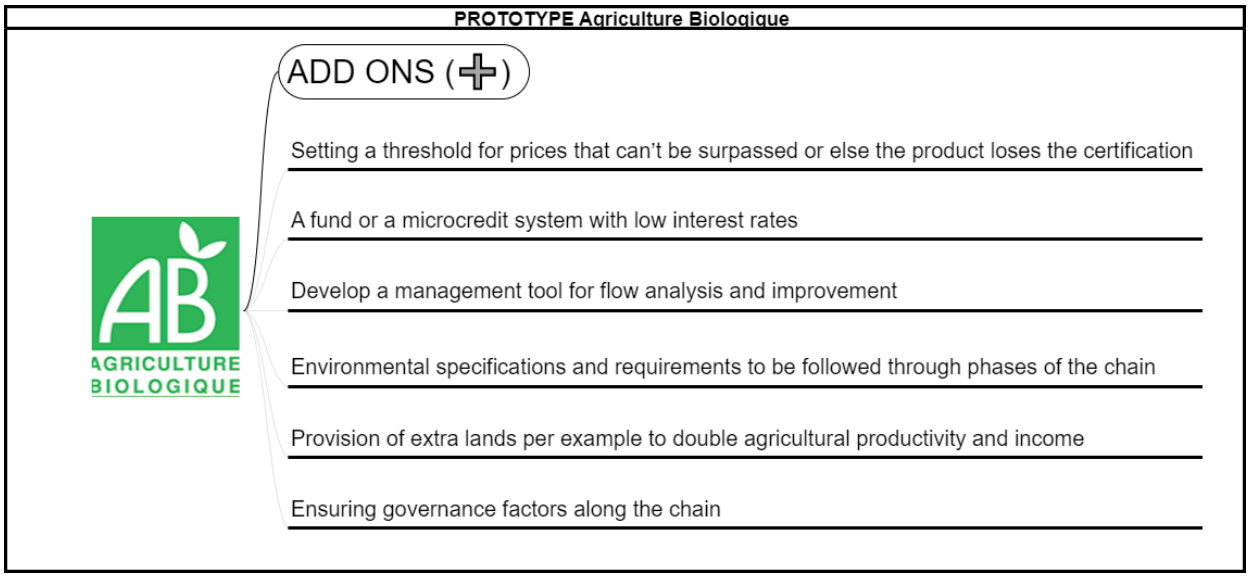
6.5 SWOT analysis – France

6.5.1 Agriculture Biologique – GPP

	Strengths	Weaknesses
Economic	Improved access to public procurement	High prices
	Meeting consumers' needs in terms of healthy produce	Financial costs to be supported
Environmental	Positive environmental role such as biodiversity protection, limitation of contaminants, eliminating plastics and over packaging	No carbon accounting or clear requirements on GHG emissions nor circular economy
	Awareness on climate change among the general public could be raised through the mode of production itself.	No role in contributing to the reduction of environmental impacts caused by distribution and logistics
Social	Promoting transparency and traceability in the production phase	Low organic surfaces and farms
		Good governance may not be practiced in the postproduction phase
	Opportunities	**Threats**
Economic	Setting a threshold for prices that can't be surpassed or else the product loses the certification	Not being able to fulfill public markets' needs due to the low production related to the actual demand
	Create a fund or a microcredit system with low interest rates to help farmers financially develop within the certification	HVE acquiring higher market share due its additional benefits and lower costs
	Development of a management tool for flow analysis and improvement	
Environmental	Introducing environmental specifications and requirements to be followed through the process of production, processing, logistics and distribution	Lack of environmental monitoring

Social	Doubling the organic agricultural productivity and incomes of small-scale food producers through provision of extra lands per example	None provision of farmers with the essential life conditions in order to produce organic
	Ensuring governance factors along the chain	

Figure 18: New standard prototype of Agriculture Biologique



6.5.2 Label Rouge – GPP

	Strengths	Weaknesses
Economic	Securing access to different market channels – well positioned in public markets	Financial costs to be supported
	Assured quality is guaranteed	Higher prices than conventional products
Environmental	Facilitates awareness on climate change mitigation	No specifications related to circular economy, logistics and distribution are required
		No specifications related to carbon accounting and reducing GHG emissions
Social	Good governance followed in the production phase	Not the center of attention in territorial food projects
	Geographically outreached affecting positively the society	Traceability, transparency and fairness are hard to track in the postproduction phase
	Opportunities	**Threats**
Economic	Create a fund or a microcredit system with low interest rates to help farmers financially develop within the certification	Prices exceeding consumers purchasing power
	Ensure consumers' access to products through setting a maximum marge of profit to the producers	

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Environmental	Introducing specifications related to circular economy, logistics and distribution	Producers not aware enough to integrate environmental related criteria such as circular economy
	Valorization of carbon accounting through the phases of the chain (setting a threshold that can't be surpassed or else losing the certification)	
Social	Implying good governance elements in all phases of the chain	Ensuring good life conditions for workers

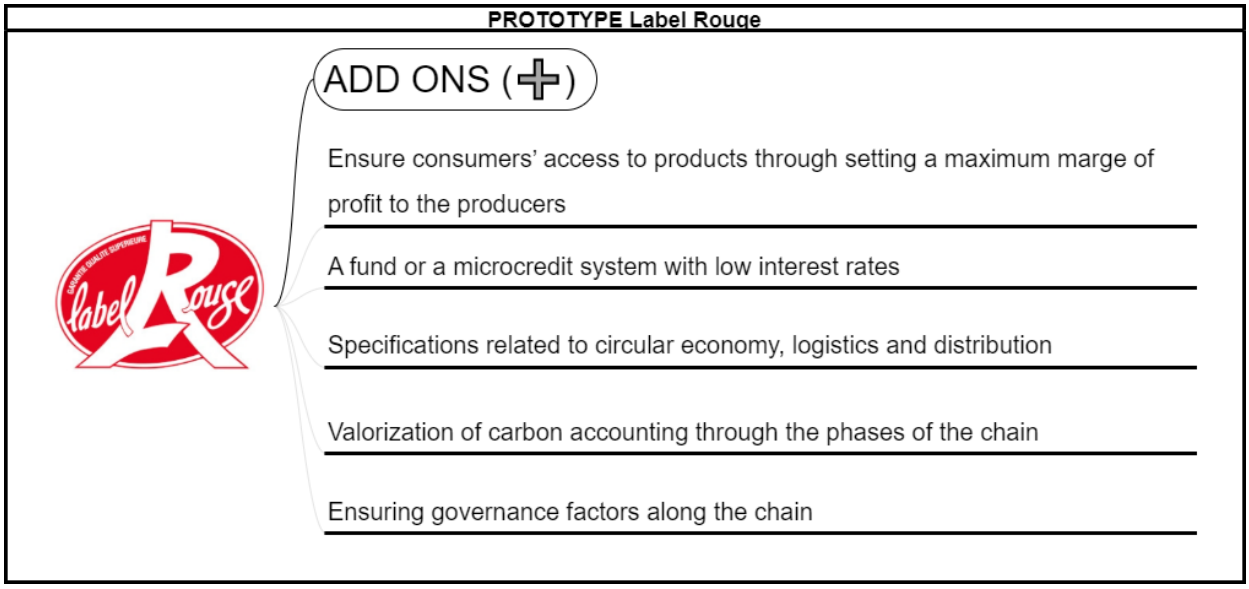

Figure 19: New standard prototype of Label Rouge

6.5.3 Haute Valeur Environnemental (HVE) – GPP

	Strengths	Weaknesses
Economic	Guaranteed sales for public markets	Not widely spread and recognized
	Reasonable prices compared to Organic	Financial costs to be supported
Environmental	Pushing towards agro-forestry	Circular economy is not officially integrated in the requirements
	Objective criteria for the protection of biodiversity	Carbon accounting, logistics and distribution do not take part of the requirements
Social	Communication well developed among actors	Geographically still developing
	Promotes transparency and traceability for the certified production part	Politically less engaged in territorial food projects than AB
	Opportunities	**Threats**
Economic	Better communication of HVE to people should be put in place so that it would be more recognized	Not being able to be widely spread among consumers to prefer it over organic

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	Create a fund or a microcredit system with low interest rates to help farmers financially develop within the certification	
Environmental	Introducing circular economy as an essential requirement in all phases of the chain	
	Introducing specification regarding logistics and distribution mandatorily for the GPP chain	
Social	Raise awareness and create marketing strategies to ensure that all farmers access this certification	Not being able to ensure fairness and equitability
	Re-enforce HVE implementation through regulations	Transparent traceability is not ensured in the postproduction phase

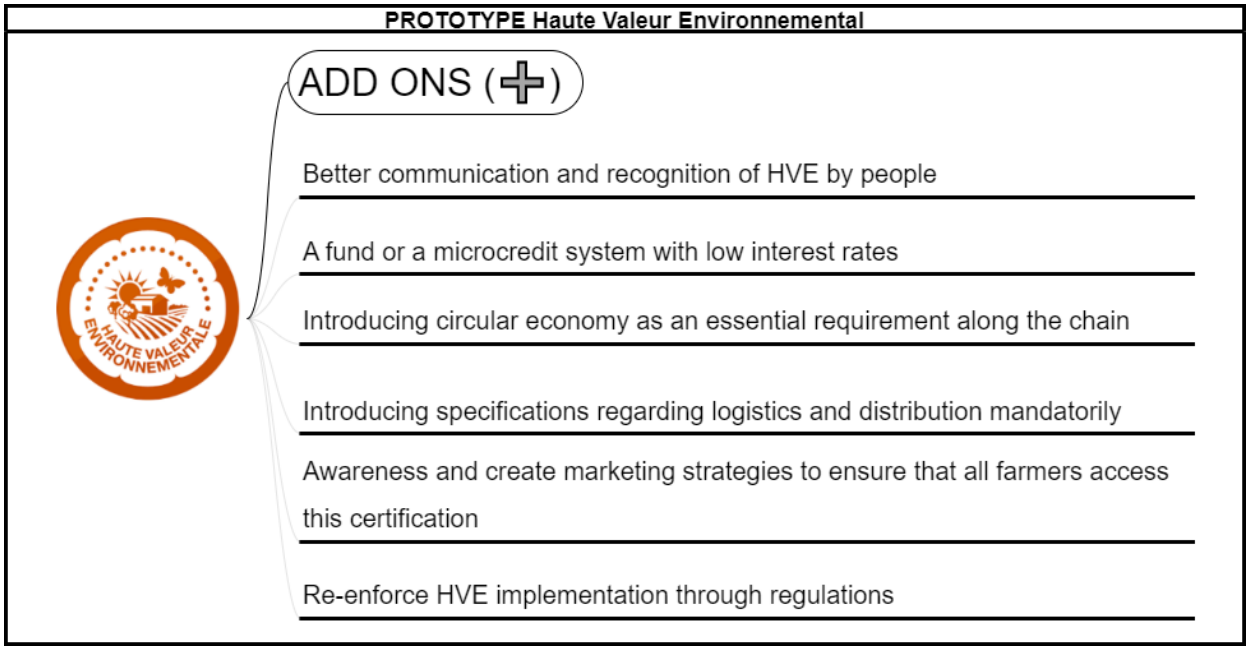

Figure 20: New standard prototype of HVE

7 Key findings and Conclusions

Following the theoretical background linking institutional theory to the conceptualization of a benchmarking framework to enable a Triple Bottom Line perspective to sustainability standards, a five phases benchmarking framework was developed as the objective of task 2.2.

The methodology followed through all the deliverable enabled us to propose 15 new adapted VSS based on the most used VSS in each supply chain per country partner in the project. The prototypes of these adapted sustainability standards had additions enabling them to respond to three dimensions of criteria (economic, environmental and social) in order to re-enforce the theory of achieving a Triple Bottom Line perspective.

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In order to propose new adapted standards, a SWOT analysis was conducted based on experts' three dimensional evaluation of the most standards as part of the benchmarking process.

For each country partner in the Med-Links projects, three adapted Voluntary Sustainability Standards are proposed, as described below and in the following table:

- Italy, Greece, and Egypt
  - Two adapted VSS belonging to the Short Food Supply Chain
  - One adapted VSS belonging to the Export Oriented Supply Chain
- Morocco
  - Two adapted VSS belonging to the Short Food Supply Chain
- France
  - Three adapted VSS belonging to Green Public Procurement

	SFSCs	GPP	EOSCs
Egypt	- Economy of Love (EoL) - Demeter PGS		- Organic EU
France		- Agriculture Biologique - Label Rouge - Haute Valeur Environnemental (HVE)	
Greece	- Traditional Specialty Guaranteed standard (TSG) - Fairtrade		- Organic EU
Italy	- AIAB ORGANIC - ISO 22000		- GRASP
Morocco	- Système Participatif de Garantie (SPG) standard - Saveurs du Maroc		

8 Contribution to Sustainable Development Goals (SDGs)

The deliverable D2.2, "Report on benchmark framework of optimized sustainability paths suited to local clusters," contributes directly to several SDGs as outlined below:

1. **SDG 1 - End poverty in all its forms everywhere**: This deliverable supports poverty reduction by equipping local agricultural clusters with sustainability benchmarks that enhance productivity and economic resilience. The tailored paths help small-scale farmers access better markets and reduce production risks, leading to improved income stability for vulnerable rural communities.
2. **SDG 2 - End hunger, achieve food security and improved nutrition, and promote sustainable agriculture**: The optimized sustainability paths emphasize practices such as reducing pesticide and fertilizer use, conserving water, and enhancing soil health, which collectively ensure sustainable agricultural production. These improvements directly contribute to food security by increasing yield reliability while maintaining environmental and nutritional integrity.

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3. **SDG 6 - Ensure availability and sustainable management of water and sanitation for all**: Given the water scarcity challenges in the Mediterranean, the deliverable includes optimized paths that promote water-efficient irrigation systems and sustainable water management practices. These measures directly support the conservation of this critical resource, ensuring its availability for future generations.
4. **SDG 8 - Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all**: By fostering the adoption of advanced sustainability standards, the deliverable promotes competitiveness and value creation in local supply chains. This, in turn, generates economic opportunities and decent work, particularly in areas such as certification processes, logistics, and sustainable farming practices, while boosting the overall economic performance of Mediterranean agricultural clusters.
5. **SDG 12 - Ensure sustainable consumption and production patterns**: The benchmark framework prioritizes resource efficiency, waste reduction, and environmentally sound farming techniques. It advocates for circular approaches to agricultural production, reducing dependency on non-renewable inputs and ensuring that consumption patterns align with the principles of sustainability.
6. **SDG 13 - Take urgent action to combat climate change and its impacts**: This deliverable highlights sustainability paths that include low-carbon practices, such as reducing greenhouse gas emissions from agricultural activities, encouraging renewable energy use, and promoting carbon-neutral certifications. These actions directly mitigate climate change impacts, aligning with global climate action goals.
7. **SDG 17 - Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development**: The framework facilitates collaboration among Mediterranean stakeholders, fostering knowledge exchange and cooperation to harmonize sustainability standards. It strengthens regional partnerships and encourages the co-creation of tailored sustainability solutions that can be replicated globally.

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References

Bartley, T. (2007). Institutional Emergence in an Era of Globalization: The Rise of Transnational Private Regulation of Labor and Environmental Conditions. American Journal of Sociology - AMER J SOCIOL. 113. 297-351. 10.1086/518871.

Bissinger, K., Brandi, C., Cabrera de Leicht, S., Fiorini, M., Schleifer, P., Fernandez de Cordova, S., Ahmed, N. (2020). Linking Voluntary Standards to Sustainable Development Goals. International Trade Centre, Geneva, Switzerland.

Depoorter C, Marx A, Otteburn K, (2021). Potential and Limitations of VSS as Global Governance Instruments. Insights from a case study of forest certification. https://www.globe-project.eu/en/potential-and-limitations-of-vss-as-global-governance-instruments-insights-from-a-case-study-of-forest-certification_13831

Djama, M., Fouilleux, E., & Vagneron, I. (2011). Standard-setting, Certifying and Benchmarking: A Governmentality Approach to Sustainability Standards in the Agro-Food Sector. In S. Ponte, P. Gibbon, & J. Vestergaard (Eds.), Governing through Standards (pp. 184–209). Palgrave Macmillan UK. https://doi.org/10.1007/978-0-230-34830-1_8

Elkington, J. (1998), "Accounting for the triple bottom line", Measuring Business Excellence, Vol. 2 No. 3, pp. 18-22. https://doi.org/10.1108/eb025539

Giménez, C & Sierra, V & Rodon, J. (2013). Sustainable Operations: Their impact on the triple bottom line. International Journal of Production Economics. 10.1016/j.ijpe.2012.01.035.

ISEAL alliance (2018), Introduction to Sustainability Benchmarking: Background information for the ISEAL consultation on good practices in sustainability benchmarking

ISEAL alliance (2019), Sustainability Benchmarking Good Practice Guide

ITC Sustainability Map (2020), Building transparency for a sustainable future. https://www.sustainabilitymap.org/home

Joyce, A & Paquin, R. (2016). The triple layered business model canvas: A tool to design more sustainable business models. Journal of Cleaner Production. 135. 10.1016/j.jclepro.2016.06.067.

Kauppi K. (2013). Extending the use of institutional theory in operations and supply chain management research: Review and research suggestions. International Journal of Operations & Production Management, 16/09/2013, vol. 33, n. 10, p. 1318-1345

Krauss, J. & Krishnan, A. (2016). Global Decisions and Local Realities: Priorities and Producers' Upgrading Opportunities in Agricultural Global Production Networks (UNFSS Discussion Paper No. 7). Geneva.

Krishnan, A, & Maxwell, S. (2020). Counting carbon in global trade: Why imported emissions challenge the climate regime and what might be done about it. London: Overseas Development Institute. Available at: https://www.odi.org/sites/odi.org.uk/files/resource-documents/200604_counting_carbon_web.pdf

McNair, C. J. and Watts, T. (2006) Conceptualising the Praxis of Benchmarking through Institutional Theory, School of Accounting & Finance, University of Wollongong, Working Paper 16. http://ro.uow.edu.au/accfinwp/32

Piao, S, et al., (2019). The adoption of Voluntary Sustainability Standards (VSS) and value chain upgrading in the Brazilian coffee production context. Journal of Rural Studies. 71. 10.1016/j.jrurstud.2019.09.007.

Scott, A. J. (1999). The cultural economy: geography and the creative field. Media, Culture & Society, 21(6), 807–817. https://doi.org/10.1177/016344399021006006

UNCTAD (2020), Voluntary sustainability standards assessment toolkit

UNFSS (2013), Voluntary sustainability standards: today's landscape of issues & initiatives to achieve public policy objectives

UNFSS (2015), Voluntary Sustainability Standards and the role of the government

UNFSS (2018), Voluntary Sustainability Standards trade and sustainable development

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United Nations Department of Economic and Social Affairs Sustainable Development (2015), Sustainable Development Goals. https://sdgs.un.org/goals

WWF (2017), SDGs mean business: how credible standards can help companies deliver the 2030 agenda

Yakovleva, et al., (2012). Sustainable benchmarking of supply chains: The case of the food industry. International Journal of Production Research. 50. 1297-1317. 10.1080/00207543.2011.571926.

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