









SEMINARIO INTERNACIONAL CADENAS GLOBALES DE VALOR EN AMÉRICA LATINA Y EUROPA: EXPERIENCIAS, DESAFÍOS Y OPORTUNIDADES 23 y 24 de enero de 2024

Medición y gestión de la sostenibilidad en cadenas de valor globales

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Medición y gestión de la sostenibilidad en cadenas de valor globales

WHAT? HOW? FOR WHAT?



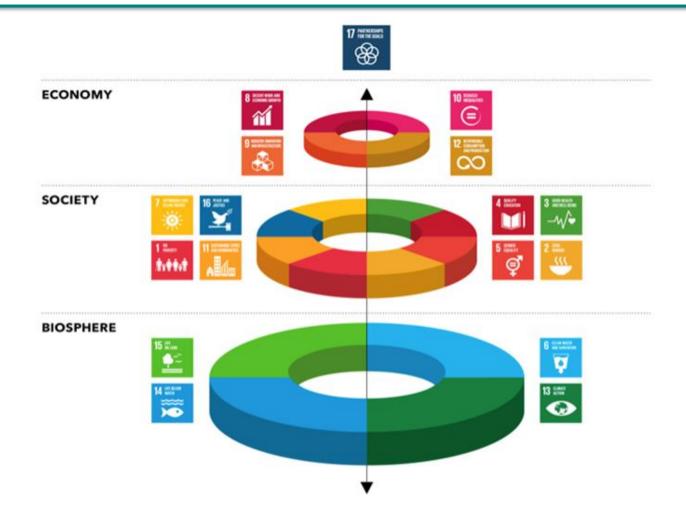
Outline

- Sustainability principles for organizations and SDGs: key criteria for sustainability assessment framework, upstream and downstream
- Assessment tools for Corporate Sustainability Performance along global value chains
- Company reporting and management practices under a global value chain context
- SMART H2020: Sustainability Assessment Framework, impact assessment in a global value chain context
- More informed decision-making process: social, environmental, economic impacts
- Some examples:
 - Sustainable supply chain management in a global context: a consistency analysis in the textile industry between environmental management practices at company level and sectoral and global environmental challenges
 - Social Life Cycle Analysis of Textile Industry Impacts for Greater Social Sustainability of Global Supply Chains
 - Transitioning the agri-food system. Does closeness mean sustainability? how production and shipping strategies impact socially and environmentally. Comparing Spain, South Africa and U.S. citrus fruit productions
 - ToNoWaste: Towards a new zero food waste mindset based on holistic assessment

What is sustainability?

Sustainability principles for organizations and SDGs: key criteria for sustainability assessment framework

Sustainable development, which is required to achieve sustainability, is defined as the development that 'meets the needs of the present without compromising the ability of future generations to meet their own needs' (WCED, 16: 1987).





• How could we operationalize sustainability concept?

Definition of **basic** and **common principles** to operationalize **sustainability concept** (Muñoz et al. 2018):



- Three dimensions of sustainability, i.e. economic, environmental and social, and the balance among them.
- Inter-generational perspective
- Stakeholder approach
- **Life cycle** thinking





Corporate Sustainability



How to operationalize
the concept of
'sustainable
development' in an
organizational context?

The concept of corporate sustainability is being developed in a context of managing economic, social, environmental and good governance impacts and risks of organizations.

Corporate sustainability refers to "corporate activities that proactively seek to contribute to a sustainable balance, including today's economic, environmental, and social dimensions, as well as their interrelationships within and across a temporal dimension (i.e., short, long, and longer-term), while managing the company's systems, that is, operations and production, strategic management, organizational systems, procurement and marketing, and evaluation and communication, as well as their stakeholders" (Lozano, 2015).

Lozano, R. (2015). "A holistic perspective on corporate sustainability drivers". *Corporate Social Responsibility and Environmental Management*, 22, pp. 32-44.

The integration of sustainability principles into the assessment of companies along the supply chains is a growing research area.

However, there is an absence of a generally accepted method to evaluate corporate sustainability performance (CSP), and the models and frameworks proposed by the literature present various important **challenges** to be addressed.



Assessment tools for Corporate Sustainability Performance

Practicioners have been using different **tools** and **initiatives** that could be useful in the process of **corporate sustainability performance assessment**

	Tools and initiatives
Financial Market	Sustainability Rating Agencies Sustainability Indices
International Institutions	Organization Environmental Footprint (OEF) UNEP/ SETAC Life Cycle Initiative OECD Guidelines for Multinational Enterprise UN Global Compact UN's PRI
Stakeholder International Initiatives	AA1000 Assurance Standard CDP (former CARBON DISCLOSURE PROJECT) EMAS certification ISO 1400X ISO 45001 SA8000 ISO 26000 GRI Report Guidelines – Standards International Integrated Reporting Framework



*For a complete review, see Muñoz et al. (2017)

Assessment tools of Corporate Sustainability Performance

Can current organizations **sustainability tools** be **useful** in the process of **corporate sustainability performance assessment**? Analysis of tools by the participants according to their knowledge and experience.

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D5.1 Lifecycle Thinking: Issues to Be Considered





Tools and Initiatives

Assessment tools for Corporate Sustainability Performance

Tools and Initiatives	Sustainability Dimensions ¹	Balance	Inter-Generational Perspective	Stakeholder Approach	Life Cycle Thinking					
promoted by financial market										
Sustainability agencies and indices	EC EN SO	х	≠	√	x					
promoted by international institutions										
Organization Environmental Footprint [63]	EN	Х	√	√	√					
UNEP/SETAC Life Cycle Initiative [64]	SO	х	√	√	√					
OECD Guidelines for Multinational Enterprise [65]	EC EN SO	-	√	х	√					
UN Global Compact [66]	EC EN SO	-	√	х	х					
The UN's Principles for Responsible Investment [67]	EC EN SO	√	√	√	x					
	promote	ed by multi-s	takeholder internation	al institutions						
AA1000 Assurance Standard (Accountability) [68]	EC EN SO	х	х	√	х					
CDP (the former CARBON DISCLOSURE PROJECT) [69]	EN	х	√	√	x					
EMAS certification [70]	EN	х	√	√	≠ Indirect aspects and product life cycle issues.					
ISO 1400X [71] OHSAS 18001 [72] SA8000 [73]	EN SO SO	X -	V V	V V	x x					
ISO 26000 [11]	EC EN SO	Х	√	√	√					
GRI Report Guidelines G4 Sustainability Reporting Guidelines [74]	EC EN SO	-	≠	√	≠ For some indicators direct + indirect impacts must be accounted					
International Integrated Reporting Framework [75]	EC EN SO	-	√	√	x					

Practitioners do not have any tool or initiative that allows them to fully integrate sustainability principles into the corporate sustainability assessment process.

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[√] YES; X NO;

≠ PARTIALLY—Not explicit, Source: Own work.

¹ Financial Economic (EC), Environmental (EN), Social (SO).

What is the situation of company management practices under a global supply chain context?

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D5.2 List of best practices and KPIs of the textile products life cycle



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D5.3 List of best practices and KPIs of the mobile phone life cycle





Deliverable D5.2 carried out an analysis of the state of the art regarding Key Performance Indicators and Best Practices reported by 31 companies that belong to textile products life cycle.

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D5.2 List of best practices and KPIs of the textile products life cycle



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Methodology description

Step 1: Presentation of WP5 Sustainability Assessment Framework (SAF), structure of environmental, social and economic footprints and impact categories.

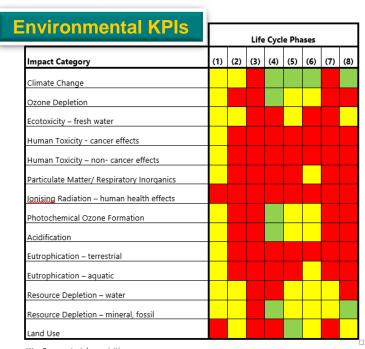
Step 2: Identification of the most relevant companies in terms of sustainability in each life cycle phase.

Step 3: Analysis of public information about sustainability performance and practices of the companies selected in the previous step (Sustainability reports, Integrated reports, Websites, etc.).

Step 4: Review of sectoral guidelines, standards and certifications used by companies as reference for the management of social, environmental and economic concerns in each life cycle phase.

Step 5: Categorization of the information according to the different environmental, social and economic impact categories defined in sustainability footprints of WP5 Sustainability Assessment Framework (SAF).

Step 6: Results analysis and discussion.



- (1) Raw material acquisition
- (2) Carding and spinning
- (3) Dyeing, washing and rising
- (4) Transportation
- (5) Garment manufacturing
- (6) Transportation and distribution
- (7) Consumer use
- (8) Disposal/reuse
- Green means that 100% of the companies in the sample define at least one indicator linked with the impact category.
- Red means that none of the companies define an indicator linked with the impact category.

 Yellow means otherwise.



S	ocial KPIs								
	- Tillo	Life Cycle Phases							
Stakeholder categories	Subcategories	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Freedom of association								
	Child Jabour								
	Fair salary								
Workers/	Working hours								
employees	Forced Jabour								
	Equal opportunities/Discrimination								
	Health and safety								
	Social benefits/Social Security								
	Health and safety								
	Feedback mechanism								
Consumers	Consumer privacy								
	Transparency								
	End of life responsibility								
	Access to material resources								
	Access to immaterial resources								
	Delocalization and migration								Т
	Cultural heritage								Т
Local	Safe and healthy living conditions								
Community	Respect on indigenous rights								
									Т
	Community engagement								Н
	Local employment								Н
	Secure living conditions								Н
	Public commitments to sustainable issues								H
	Contribution to economic development								
Society	Prevention and mitigation of armed conflicts								
	Technology development								H
	Corruption								
	Fair competition								
Value chain actors (not	Promoting social responsibility								
including consumers)	Supplier relationship								
	Respect of intellectual property rights								

Economic KPIs		Life Cycle Phases										
Impact Category	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)				
Business Survivorship												
Taxes												
Efficiency												
Compliance												
Employment												
Inequality												

Main findings:

A lack of information associated with the environmental, social and economic dimensions. Only the aspects linked to climate change, health and safety and social security of employees are the most advanced in the management systems of the explored companies.

From a life cycle perspective, this shortcoming is more evident in the three initial phases of the textile products life cycle which reveals an important lack of reporting and assessment systems in these production phases.

How could we built on this gap? How could we cover the assessment requirements of organizations taking into account the whole supply chain?

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D5.4 Sustainability Assessment Guide V0.1





SMART Sustainability Assessment Framework

This guide presents a logic framework to assess sustainability, integrating different well-known tools and processes, as well as others created on an ad hoc basis for the framework.

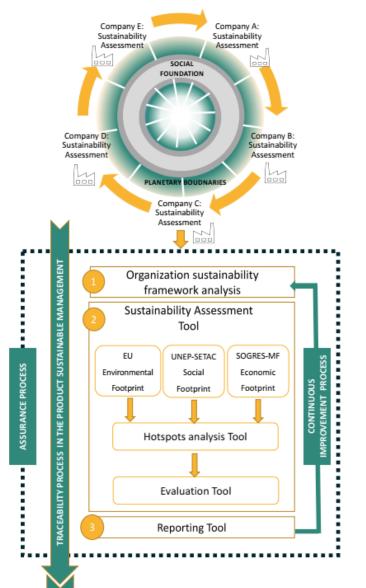
SMART DELIVERABLE

D5.4 Sustainability Assessment Guide V0.1



Principle 1: TBL and balance among three dimensions

Principle 3: Stakeholder Approach

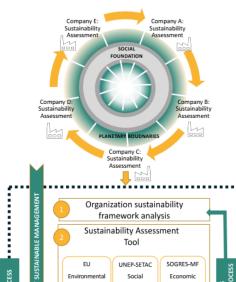


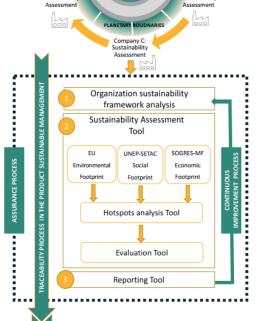
Supply Chain Framework in accordance with Circular SDGs

Principle 4: Life-Cycle Thinking

> Principle 2: Inter-generational perspective









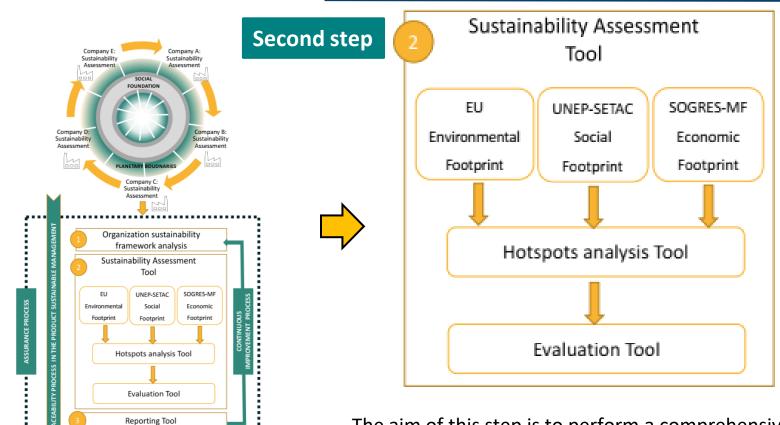


Organization sustainability framework analysis



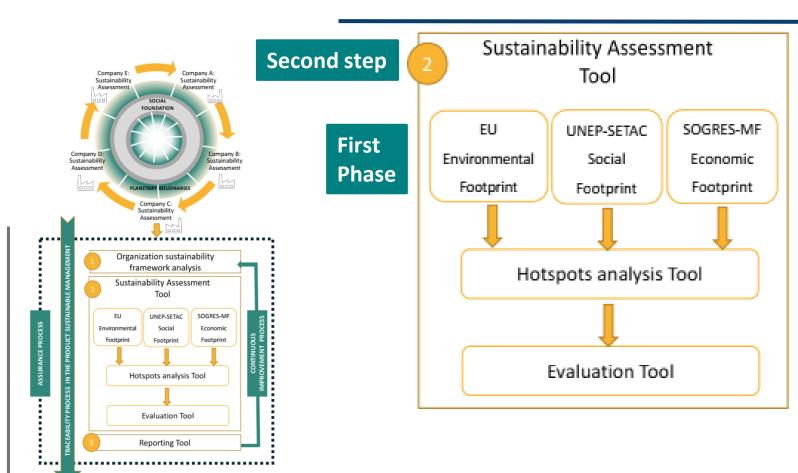
The organization should establish the basis of the analysis:

- Make the board commitment explicit
- Connect corporate governance with sustainability
- Know the objectives and scope
- Positioning the organization within the supply chain
- Be aware of its impacts throughout the life cycle
- Define its supply chain map
- Identify its stakeholders
- Move forward in the evaluation process
- Plan the sustainability strategy





The aim of this step is to perform a comprehensive sustainability evaluation, using science-based metrics and tools (footprints, hotspots analysis and multi-criteria decision-making methods). The logic structure of this tools' system has been defined with the objective of supporting informed decisions with data on the organization's hotspots, on how to manage material impacts and on how to provide a synthetic sustainability indicator.

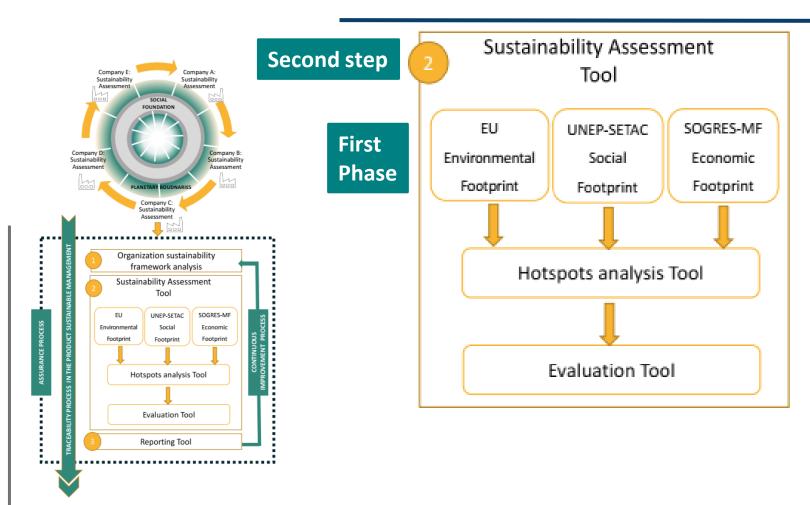


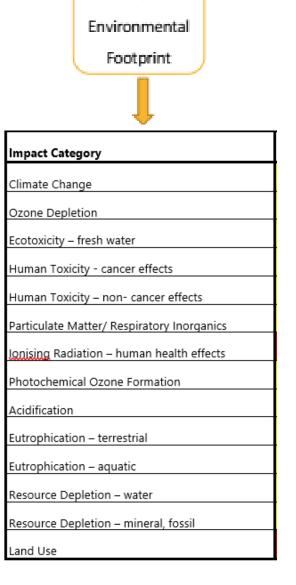
Footprint methodologies to identify and measure environmental, social and economic impacts, grounding on the best practices and aligning efforts with key initiatives:

- Environmental dimension:
 Organizational Environmental
 Footprint from the European
 Commission
- Social footprint: UNEP/SETAC S-LCA methodology
- SoGReS MF Economic footprint



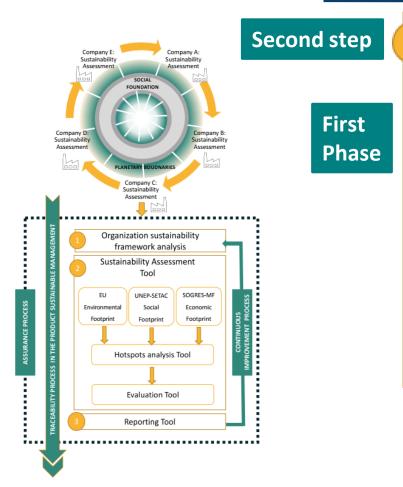
EU

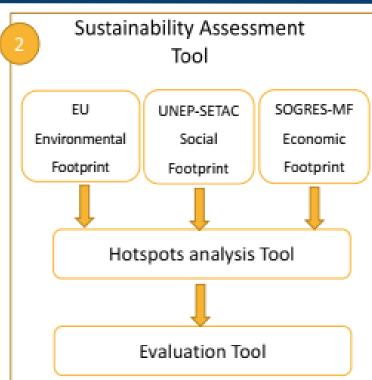






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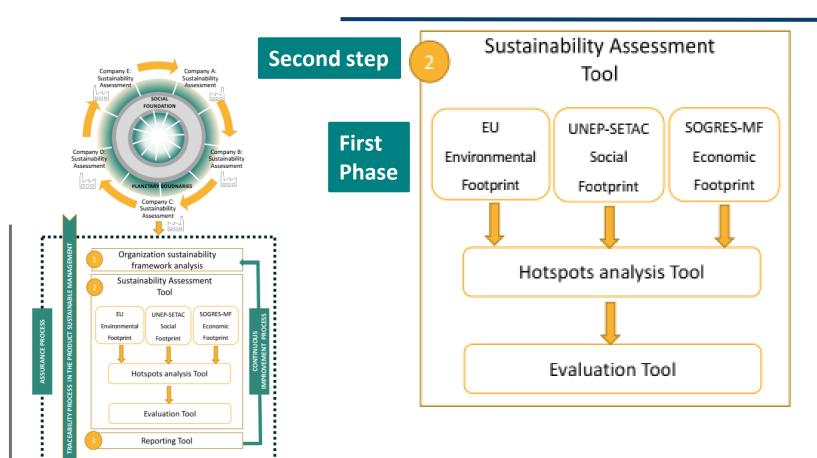


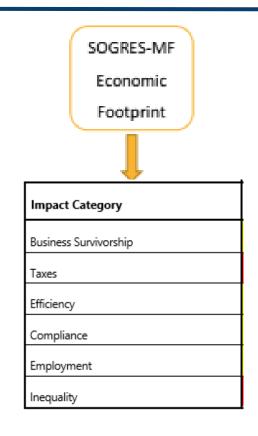
Stakeholder categories	Subcategories
Workers/ employees	Freedom of association Child Jabour Fair salary Working hours Forced Jabour Equal opportunities/Discrimination
	Health and safety Social benefits/Social Security
Consumers	Health and safety Feedback mechanism Consumer privacy Transparency End of life responsibility
Local Community	Access to material resources Access to immaterial resources Delocalization and migration Cultural heritage Safe and healthy living conditions Respect on indigenous rights Community engagement Local employment Secure living conditions

Stakeholder categories	Subcategories
Society	Public commitments to sustainable issues Contribution to economic development Prevention and mitigation of armed conflicts
	Technology development Corruption
Value chain actors (not including consumers)	Fair competition Promoting social responsibility Supplier relationship Respect of intellectual property rights

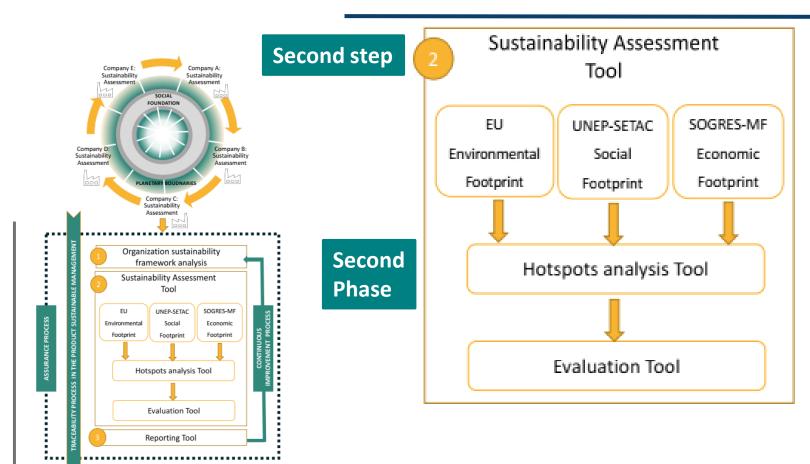


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The critical points of the company are determined by the application of a hotspots analysis:

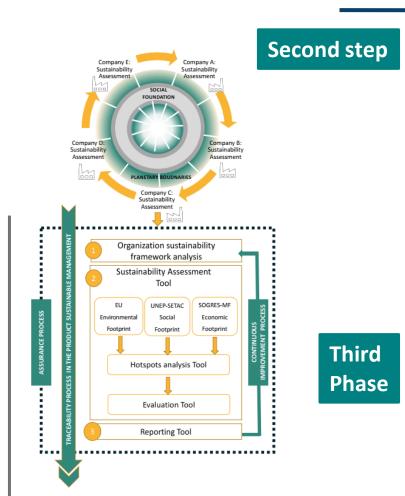
These hotspots are obtained after the first evaluation of the company and they are kept active all the time until their correction or suppression.

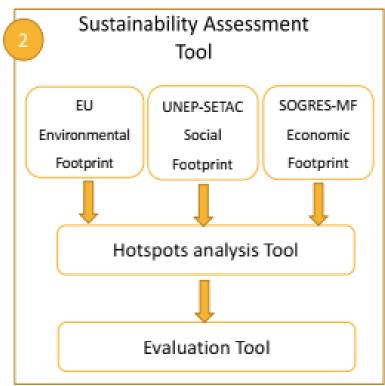
To carry out this phase UNEP (2017)

"Hotspots Analysis Overarching

Methodological Framework and guidance for product and sector level application" should be considered.





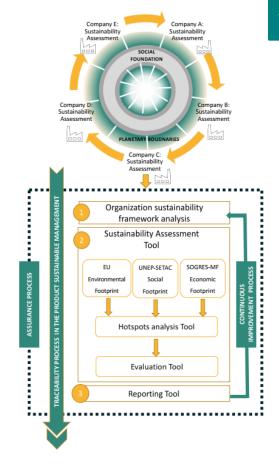


The outcome of this phase is a sustainability footprint.

The results obtained in phases 1 and 2 of the SAT are considered to evaluate sustainability performance.

This evaluation is based on the Fuzzy Multi-Criteria Decision-Making Methodology, since it allows to overcome the current sustainability assessment limitations.







Third step

3)

Reporting Tool

Minimum relevant information about sustainability content:

From SAF Step 1: the board commitment to sustainability, the governance managerial bases, objectives and scope of the report, shall show the position of the organization within its supply chains, the process followed to identify the key issues for the organization and stakeholders and the description of the business strategy with objectives and tracking metrics.

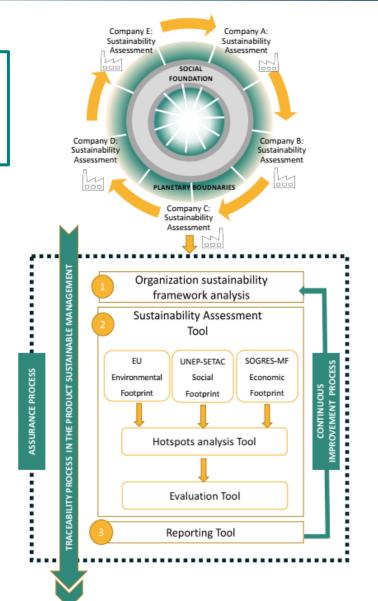
From SAF Step 2: the organization should provide intelligible information about its impacts. This means to present footprints and hotspots analysis results in an aggregate manner, highlighting the most impacting categories, and hyperlinking them with full footprints and hotspots technical reports. It also gives a groundbreaking sustainability score based on social, economic and environmental footprints and on hotspots management initiatives.

Based on the assurance process: the report shall include the **verification** by a third party on non-financial information presented.

SMART Sustainability Assessment Framework

This SAF presents **three processes** and **three steps** that offer a holistic system to ensure the success of the appraisal.

Process 1 Traceability: the tool should consider traceability of the sustainable management of products, which allows the analysis of the direct and indirect impacts of the company along their value chain.



Process 2 Assurance: the whole sustainability assessment should contain enough guarantees to provide confidence to the different stakeholders. In this phase, internal and external auditing processes are defined.

Process 3 Continuous improvement: This process means that the organization shall work towards improving its sustainability practices, processes and performance, over time, which implies gradually extending the scope of the SAF implementation year by year.



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Sustainable supply chain management in a global context: a consistency analysis in the textile industry between environmental management practices at company level and sectoral and global environmental challenges

María Jesús Muñoz-Torres, et al. [full author details at the end of the article]

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Abstract

In a global context, it is crucial to measure and report the corporate sustainability impacts taking into account what is happening along the whole supply chains. The objective of this study is to analyze whether environmental measurement and reporting practices, currently developed by companies under a global supply chain context, are aligned with global environmental challenges and the environmental hotspots at the sectoral level. To tackle this objective, this study has been focused on the textile sector, due to the relevance of its environmental impacts. A research was conducted based on the analysis of global environmental challenges: (1) at company level, on the measurement and reporting of specific environmental indicators connected with the impact categories of the European Organization Environmental Footprint; and (2) on the analysis of textile industry environmental hotspots, through the technical tool SimaPro that allows their quantification and identification along the life cycle phases using different scenarios. The results show a consistency between global environmental challenges and company environmental disclosure; however, a disconnection between the specific environmental indicators reported by textile companies and the main hotspots of the sector are observed. This implies that companies could be managing environmental issues related to global environmental concerns but ignoring those critical environmental issues truly relevant from a technical point of view, according to the nature of their activity. The paper argues that is not only necessary to consider the corporate awareness regarding global environmental challenges, but also to address the real environmental hotspots at the sectoral level. This paper represents a contribution in the discussion about what sustainability management implies along the supply chains, emphasizing the need to advance in a consistent and science-based integration of global environmental challenges, environmental hotspots at the sectoral level and environmental management practices at company level. The results obtained help global chain actors and other organizations to address this challenge.

Keywords European Organization Environmental Footprint (OEF) \cdot Global supply chain \cdot Sustainability measurement and reporting \cdot Textile industry environmental hotspots



Article

Social Life Cycle Analysis of Textile Industry Impacts for Greater Social Sustainability of Global Supply Chains

María Jesús Muñoz-Torres, María Ángeles Fernández-Izquierdo, Idoya Ferrero-Ferrero, Elena Escrig-Olmedo and Juana María Rivera-Lirio



Abstract: Solutions will be effective if they are aligned with the problems that they are trying to solve. This paper studied the most relevant social impacts of the textile industry and how appropriately textile companies manage these social impacts, in order to achieve greater social sustainability in global supply chains. Therefore, we attempted to determine whether companies belonging to the textile product lifecycle identify and manage social impacts in keeping with the most relevant social hotspots in the supply chain of the textile industry. A consistency analysis was conducted based on the management of social indicators at the company level (identified through the analysis of contents of their sustainability reporting) connected with social impact categories defined in the Guidelines for Social Life Cycle Assessment of products provided by the United Nations Environment Programme, and the Society of Environmental Toxicology and Chemistry, and on the technical results obtained by the textile sector through the Social Hotspots Database. The results showed a predominant inconsistency between the main social hotspots of the textile industry showed in the footprint analysis and the social indicators specifically reported by the sector. This paper contributes to the literature about what sustainability management implies along global supply chains, emphasizing the need to advance in a consistent and science-based integration of social hotspots at the sectoral level and social management practices at the company level. In addition, the study could be relevant for companies belonging to complex and global supply chains, since it contributes towards enhancing the knowledge of science-based methodologies, as social life cycle assessments, for identifying, managing, and reporting their social hotspots.

Keywords: textile industry; social hotspots; global supply chain; social sustainability; social life cycle assessment





Transitioning the agri-food system. Does closeness mean sustainability? how production and shipping strategies impact socially and environmentally. Comparing Spain, South Africa and U.S. citrus fruit productions

María Jesús Muñoz Torres (1), María Ángeles Fernández-Izquierdo (1), Idoya Ferrero-Ferrero (1), Elena Escrig-Olmedo (1), and Juana María Rivera-Lirio (1)

Department of Finance and Accounting University Jaume I, Sustainability of Organizations and Csr Management Research Group-IUDESP, Castellón, Spain



ABSTRACT

Agricultural techniques and orchard management play an important role in food production sustainability and there is an increasing number of research papers that focus on food cradle-to-gate life cycle assessment. In addition, there is also an emerging body of research on short food supply chains and on whether or not proximity can be a proxy for sustainability in the agri-food system. The objective of this analysis is to consider the most relevant social and environmental impacts of the Environmental Footprint and Social Life Cycle Assessment in the citrus fruit sector and identify crucial hotspots. We will explore the relevance of the length of citrus fruit supply chains on maps of social and environmental impacts in order to reach more wiser sustainability-based decisions. The results obtained show mixed conclusions regarding the relevance and implications of choosing short food supply chains to achieve more sustainable food systems.

KEYWORDS

Sustainable food system; short supply chains; environmental footprint; social life cycle assessment; global supply chains; citrus

Towards a new zero food waste mindset based on holistic assessment

Proyecto Horizonte Europa

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Cuestiones y desafíos mundiales

- La pérdida y el desperdicio de alimentos equivalen al 8-10% del total de las emisiones antropogénicas de gases de efecto invernadero.
- El 30% de las tierras agrícolas desperdician sus cultivos.
- El 70% de todos los alimentos perdidos o desperdiciados por los seres humanos pueden no estar registrados.



Cuestiones y desafíos mundiales

RETO: Reducir drásticamente estas cifras



CÓMO: Evaluando este problema, utilizando sistemas de evaluación basados en la ciencia que permitan tomar buenas decisiones para seleccionar las estrategias más SOSTENIBLES



EL OBJETIVO ES PROPORCIONAR A LOS PRODUCTORES AGRÍCOLAS, LAS EMPRESAS DE LA CADENA DE SUMINISTRO, ASÍ COMO A LOS **CONSUMIDORES Y LOS RESPONSABLES** POLÍTICOS INFORMACIÓN MÁS OBJETIVA, INTEGRADA Y ESTANDARIZADA SOBRE LOS **IMPACTOS Y LOS BENEFICIOS COLATERALES GLOBALES DE SUS ACCIONES DIARIAS**



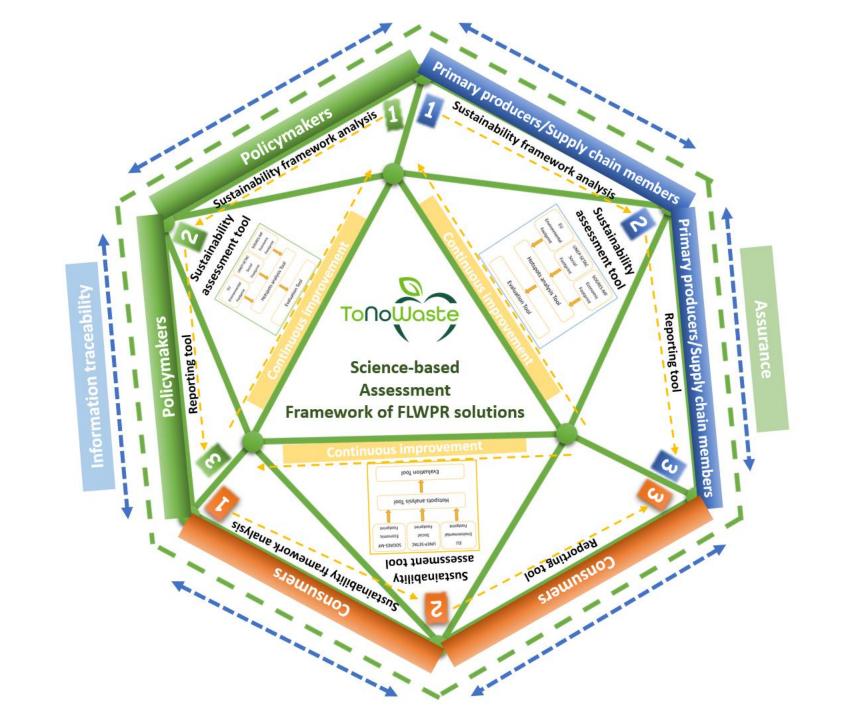
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- 2.ENTIDADES FACILITADORAS
- 3.ACTORES DE LA CADENA DE VALOR ALIMENTARIA
- PILOTO VALENCIA (ESPAÑA)
- PILOTO DE VIENA/GRAZ (AUSTRIA)
- CIUDADES SEGUIDORAS EN HALSINGLANDS (SUECIA) Y CHALANDRIOU (GRECIA)

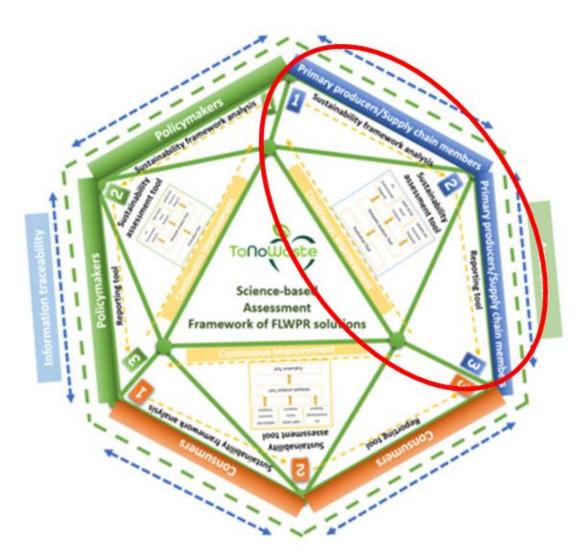


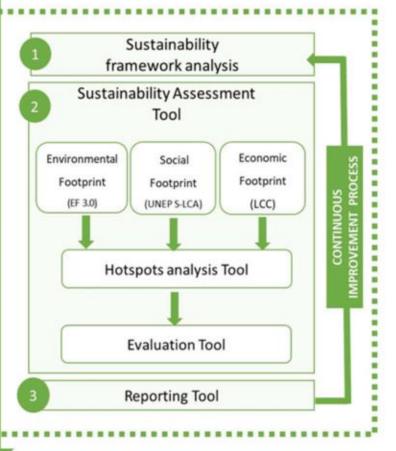
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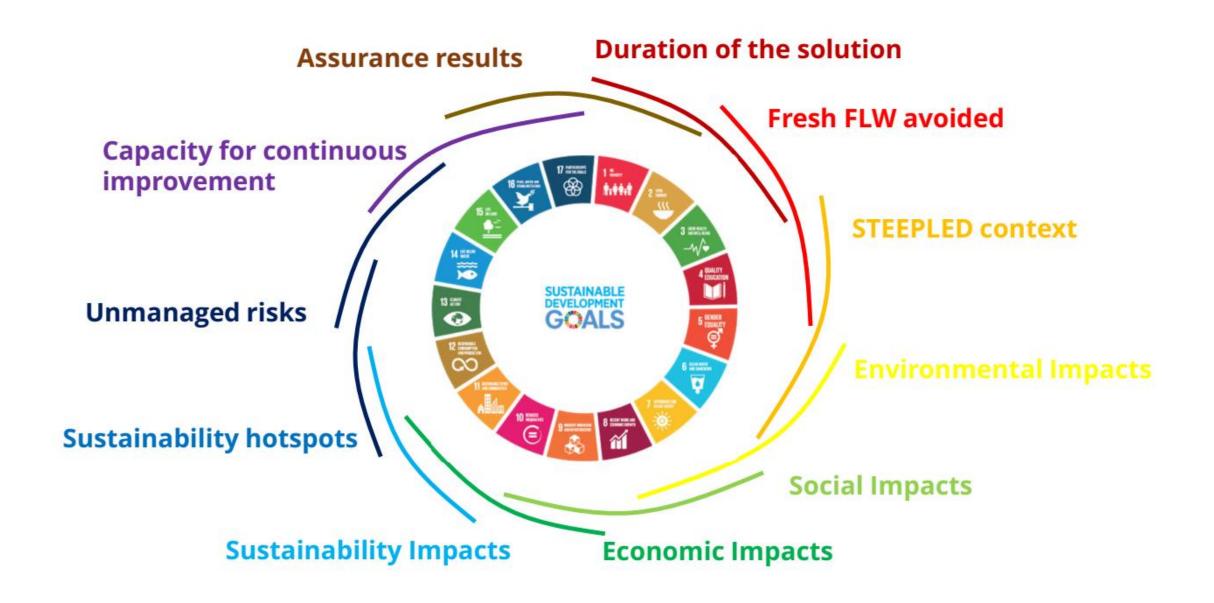
WP	TITLE	LEADER
1	Collaborative investigation of the new decision-making framework	UJI
2	Development of new impact measurement system and its tools	ΟJI
3	Technical development of decision support open access platform	UD
4	Social research to foster changes in consumer behaviour	wu
5	Validation of results and search for synergies in relevant environement	OEAW
6	Cocreation of new policies and guidelines for fostering the change	UiO
7	Impact maximitation	ZAB
8	Project management	UJI
9	Etichs requeriments	ILU























SEMINARIO INTERNACIONAL CADENAS GLOBALES DE VALOR EN AMÉRICA LATINA Y EUROPA: EXPERIENCIAS, DESAFÍOS Y OPORTUNIDADES 23 y 24 de enero de 2024

GRACIAS POR SU ATENCIÓN

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