



Solidaridad **SOPA**

Role of Indian Standards for Sustainable Soy in Soy Value Chain

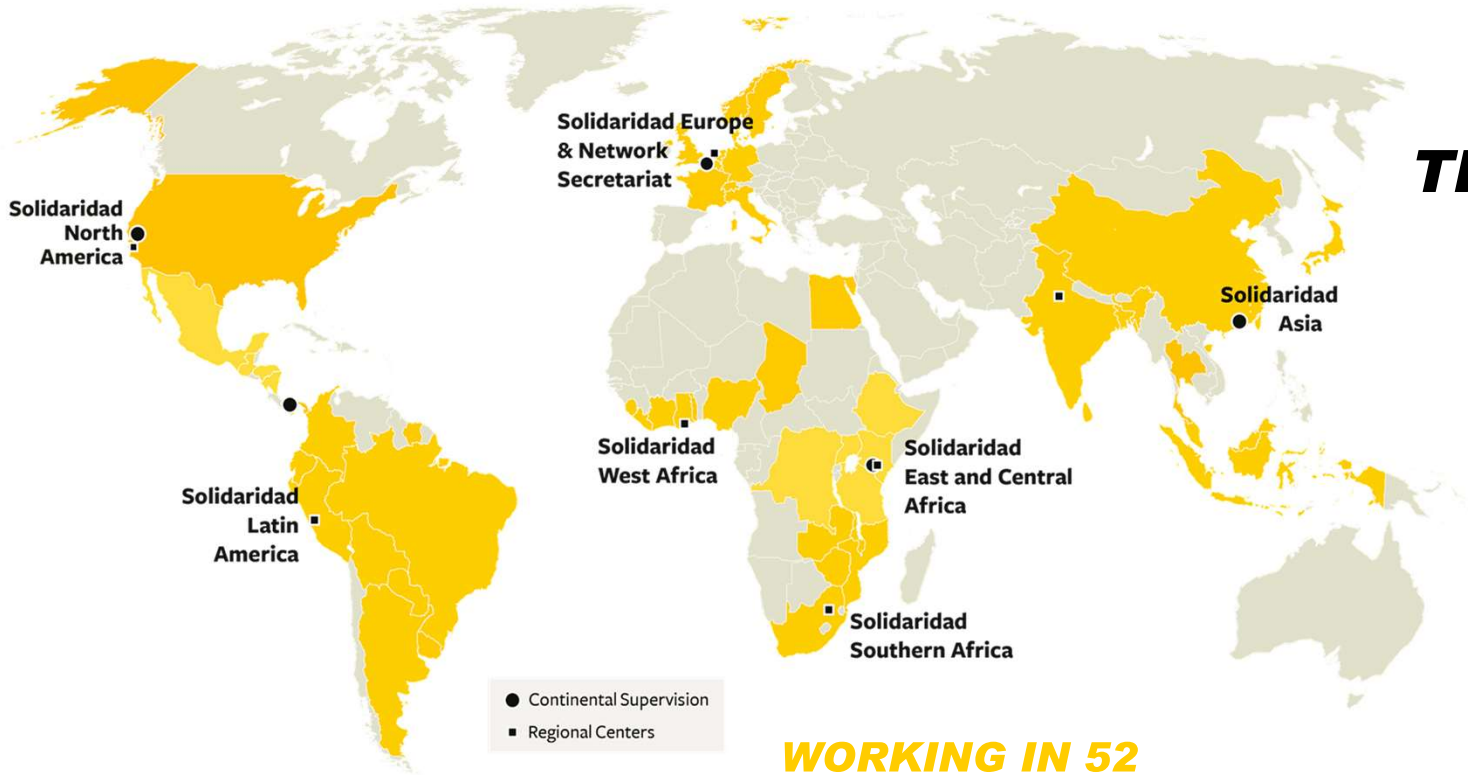


Dr Suresh Motwani, Programme Head,

Vegetable Oils, Solidaridad

International Soy Conclave 2024, Indore, India

SOLIDARIDAD: PIONEER ORGANIZATION IN SUSTAINABLE SUPPLY CHAIN DEVELOPMENT SINCE 1969



**WE WORK
THROUGHOUT THE
WHOLE SUPPLY
CHAIN TO MAKE
SUSTAINABILITY
THE NORM**

**OVER 55 YEARS
OF EXPERIENCE IN WORKING
TOWARDS PROMOTION
OF SUSTAINABILITY
SOLUTIONS**

**WORKING IN 52
COUNTRIES WORLDWIDE**



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From Fair Trade to National Standards: Solidaridad was the initiator or co-initiator for last 5 decades

Consumers



Companies



Sectors



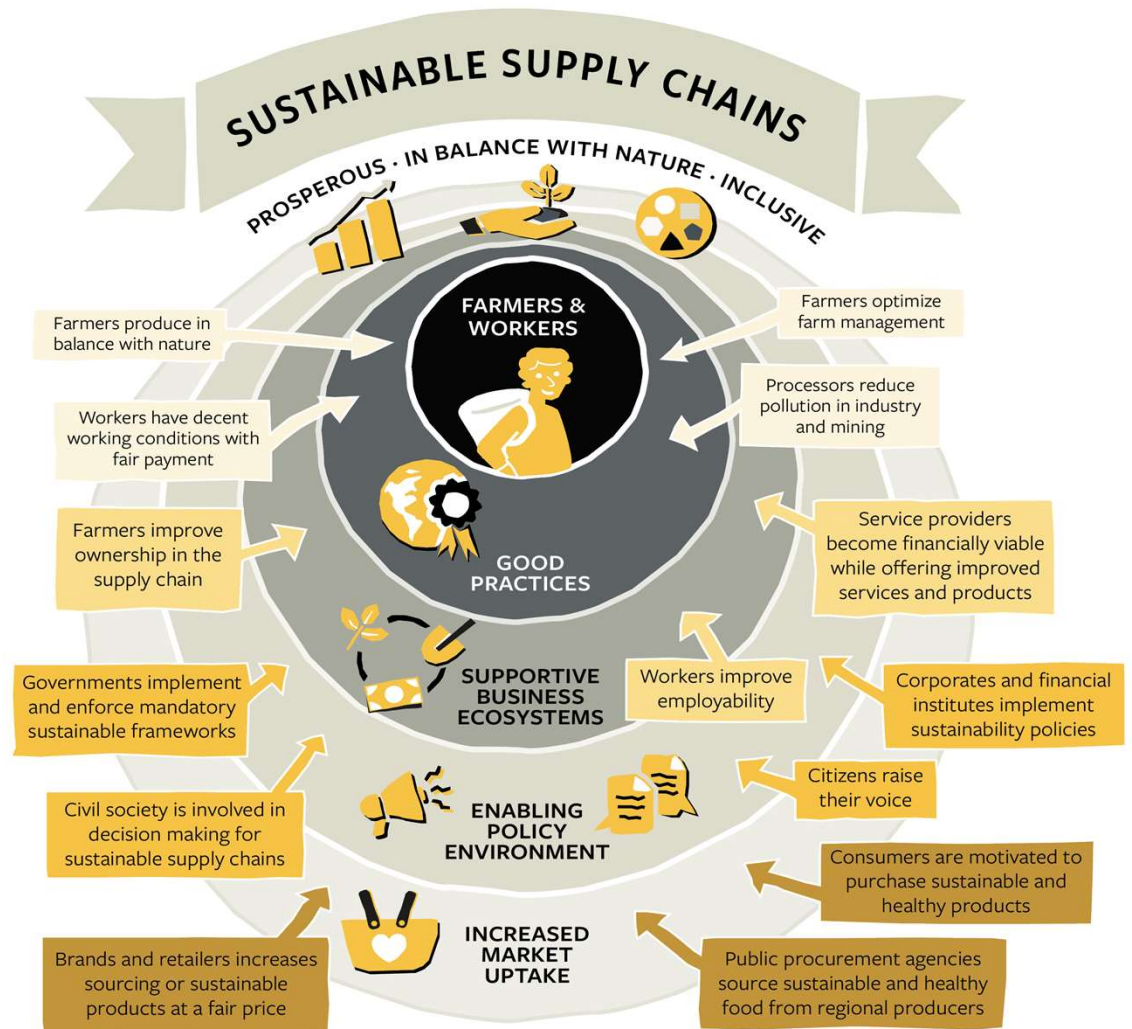
National Standards



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IMPLEMENTATION STRATEGY

SUSTAINABLE SUPPLY CHAINS THROUGH FOUR INTERCONNECTED LEVELS



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Solidaridad Promotes Sustainable Supply Chain Across Various Agri Commodities in India

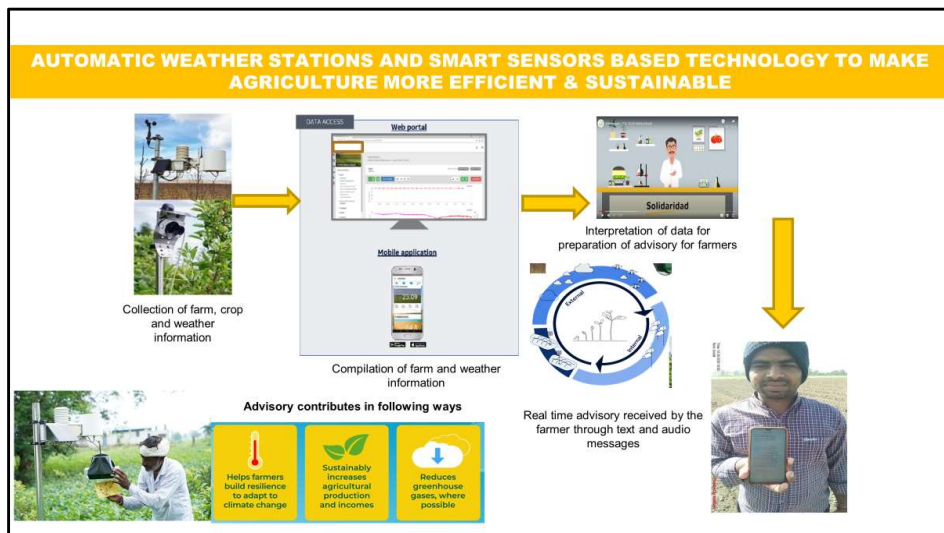


- ❑ We are recognized as knowledge resource agency for sustainability solutions in the vegetable oil sector in the country
- ❑ We work towards improving supply chain efficiency and inclusivity of farmers in the supply chain through Farmer Producer Organizations (FPOs)
- ❑ We are expert in on-ground implementation of public-private partnerships programmes for sustainable agriculture and livelihood of smallholder farmers

- ❑ We are working with around **1.5 million farmers** Across Various Cropping Systems in 15 States of India and preparing them for Regenerative & Climate Smart Production

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IoT based Solutions and Regenerative Agriculture to Build Climate Resilience



Solidaridad Practices for Regenerative Agriculture

Soil Health	Efficient Water Use	Environment and Bio-diversity conservation	Integrated Livestock Management
<ul style="list-style-type: none"> • Soil test based nutrient management • Promotion of bio-fertilizers • Intercrops and mixed cropping <ul style="list-style-type: none"> • Crop diversification • Cover crop and crop rotation <ul style="list-style-type: none"> • Protected farming • Converting farm waste into bio-fertilizers 	<ul style="list-style-type: none"> • Promotion of micro-irrigation • Rain water harvesting and water conservation • Efficient use of water in irrigation • Weather based advisory for irrigation scheduling 	<ul style="list-style-type: none"> • Expanding diverse cropping system • Intercropping, Multiple Crop, Mixed Crop, Border Crop, • Promotion of agro-forestry • Integrated farming system • Reduced use of chemicals 	<ul style="list-style-type: none"> • Promotion of integrated livestock-crop production system • Improved nutrient cycling • Promotion of bio-energy



NICO ROOZEN
International Centre of Excellence for
REGENERATIVE AGRICULTURE

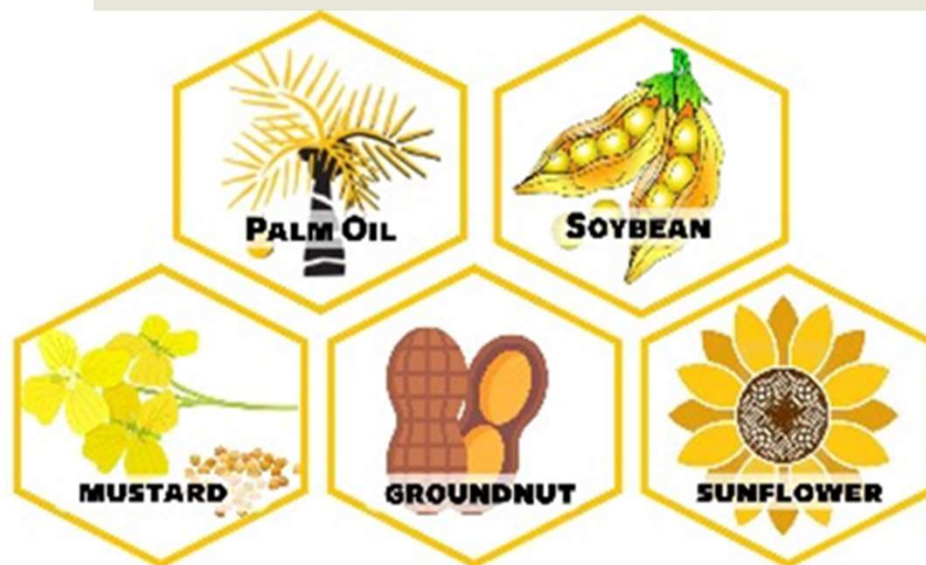
The International Centre of Excellence for Regenerative Agriculture has been established in Madhya Pradesh, India for large scale promotion of regenerative agriculture.

SMART AGRI Hub facilitate the convergence of scientific data using disruptive technologies such as mobile/cloud computing, Internet of Things (IoT) etc. Team of experts is engaged for monitoring, assessment and generation of real-time advisories and technical knowledge support



India Sustainable Veg Oil Mission

Key Veg Oil Commodities

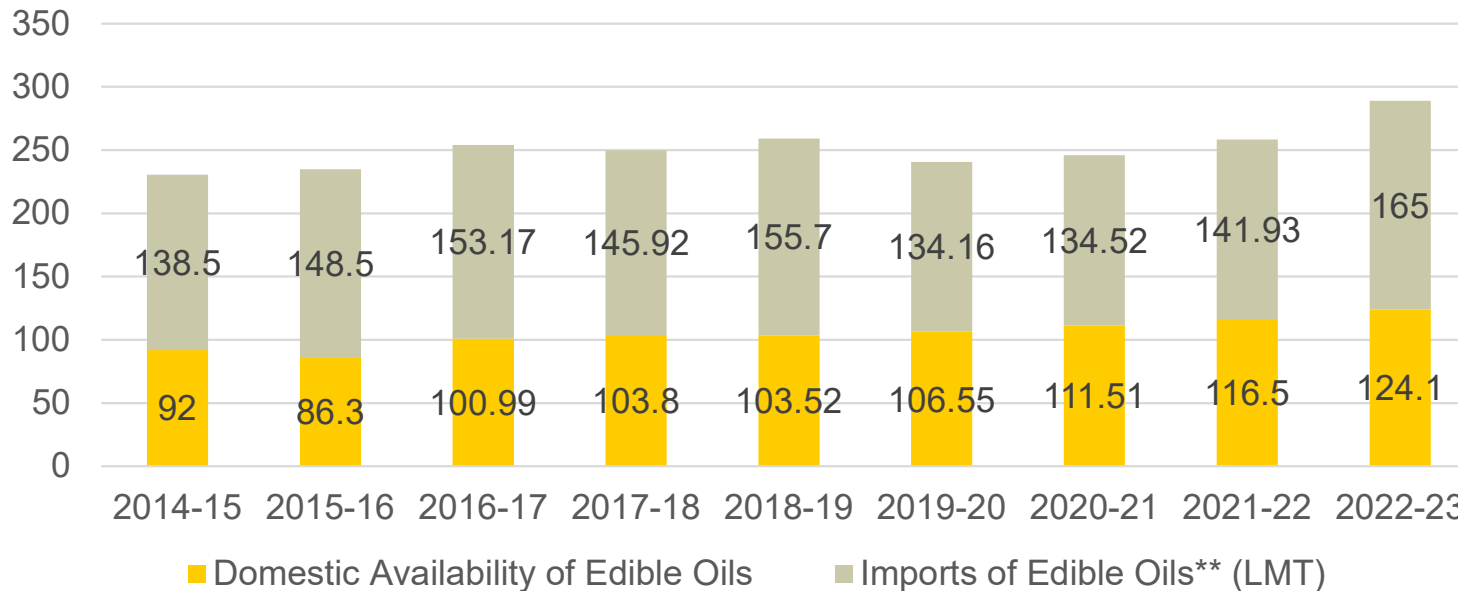


***Supporting Honourable Prime Minister's Mission to
Make India 'Atmanirbhar' in Edible Oils***

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India: Edible Oil Demand and Supply Scenario

Domestic Availability v/s Import of Edible Oils in India



Oil Year (Nov-Oct)	% Self sufficiency	% Share of imports
2014-15	40	60
2015-16	36.8	63.2
2016-17	39.7	60.3
2017-18	41.6	58.4
2018-19	40	60
2019-20	44.3	55.7
2020-21	45.3	54.7
2021-22	45.1	54.9
2022-23	42.92	57.07

- ❑ India's self-sufficiency in edible oil production is approximately 43%
- ❑ 57% of edible oil is imported from other countries

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Importance of Edible Oils in the Country's Economy

Essential part of the Indian diet and Key for Food Security: Edible oils are integral to Indian cooking, with almost every household using oil in daily food preparation, contributing significantly to food security and nutrition.

Major import commodity: India is one of the largest consumers and importers of edible oils, making it a crucial component of the country's import basket and trade balance.

Key for livelihood of millions of Farmers: Oilseeds play an important role for livelihood of millions of farmers and employment opportunities.

Boost to agro-industries: Significant contribution in India's agro-based industries, from farmers growing oilseeds to processing, refineries and retailers.

Role in Value Chains: The edible oil industry supports integrated value chains (oil extraction, food processing and allied sectors like livestock feed, contributing to broader economic growth)

Government's Ambition towards Self-sufficiency: The government's focus on "Self-sufficiency in Edible Oils" highlights the strategic importance of edible oils in economic planning.

Impact on inflation: As a staple commodity, edible oil prices significantly influence food inflation and overall price stability in the economy, affecting consumer spending and economic growth.

OVERVIEW: SOY SECTOR

- ❑ **Soy due to its versatility and nutritional benefits known as the “king of beans”. Soy is fastest expanding crop worldwide: production doubled since 1995**
- ❑ **As a significant agricultural commodity, soy constitute over 10% of the total value of global agriculture trade**
- ❑ **The global soybean sector has experienced rapid growth in the past 5 decades and is now worth USD 155 billion. It is projected to reach USD 278 billion by 2031**
- ❑ **India is the world's fifth largest producer of soybean and soybean oil (behind Brazil, USA, Argentina and China), contributing 3.72% and 2.14% of the global market share, respectively**
- ❑ **Among nine major oilseeds, soybean leads with 34% of the total oilseed production, followed by rapeseed & mustard (31%) and groundnut (27%), contributing to more than 92% of total oilseeds production. This underlines the dominance of soybean, rapeseed-mustard, and groundnut in India's oilseed production**
- ❑ **Madhya Pradesh, Maharashtra, and Rajasthan account for 92% of India's soybean production**

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KEY SUSTAINABILITY ISSUES IN SOY SUPPLY CHAIN IN INDIA

Environmental				
Pest and Pesticide Management <ul style="list-style-type: none"> • Environmental contamination by pesticides • Pest management and crop production • Human exposure to pesticides 	Water Management <ul style="list-style-type: none"> • Water depletion • Crop water management • Soil salinization • Water quality 	Soil Management <ul style="list-style-type: none"> • Soil fertility • Soil erosion 	Biodiversity and Land Use <ul style="list-style-type: none"> • Land conservation • Land productivity 	Climate Change <ul style="list-style-type: none"> • Greenhouse gas (GHG) emissions • Decomposition and mineralization • Energy use • Carbon stock changes
Economic				
Economic Viability, Poverty Reduction and Food Security	Economic Risk Management			
Social				
Labour Rights and Standards <ul style="list-style-type: none"> • Child labour • Employment conditions • Freedom of association • Social protection 	Worker Health and Safety	Equity and Gender	Farmer Organization	

1. Technological Constraints and Huge Yield Gap: There is still scope of improvement in development of high yielding varieties coupled with appropriate production technologies suitable to different regions.

2. Socio-economic constraints: The low income and investment capacities of smallholders on various resources, pricing, market linkages as well as gender related constraints.

3. Environmental Constraints: About 72% area of oilseeds fall under rainfed farming where biotic threats (diseases) and climate vagaries cause severe damage to crops.

4. Infrastructural constraints: Majority of the Vegetable Oil extraction industries are operating on 40-50% capacity (due to poor supplies they are un-able to utilize the full capacity).

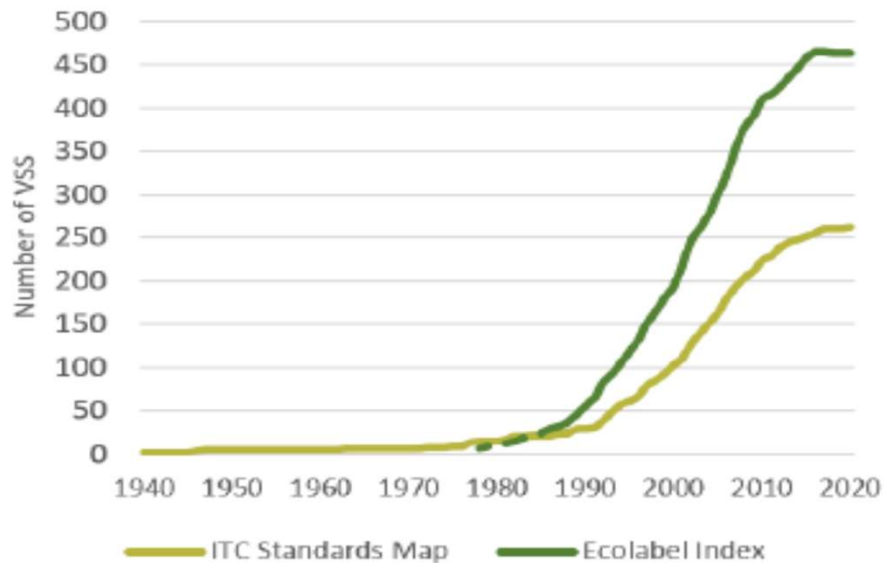
5. Adoption Gaps of Recommended Agronomic Practices: There is huge gaps in the adoption of recommended agronomic practices.

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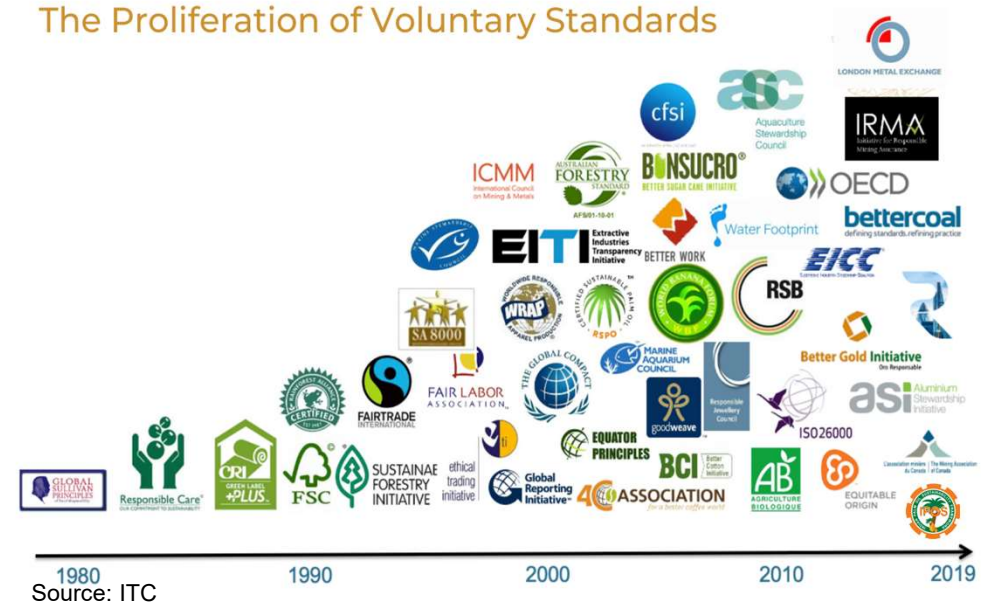
EMERGENCE OF SUSTAINABILITY STANDARDS IN AGRICULTURE

- ❑ **Hundreds of sustainability standards have emerged over the last three decades as market tools that enhance sustainable development in the agriculture sector**
- ❑ **Sustainability standards first came to the forefront in the 1980s, with standards like Organic (IFOAM) and the Rainforest Alliance**
- ❑ **The first VSS with global reach was launched in the fields of agriculture, forestry, as well as in the fair-trade arena**
- ❑ **VSS are widely used to govern environmental, social and ethical issues in global supply chains**

Evolution of Number of Standards



The Proliferation of Voluntary Standards



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SUSTAINABILITY STANDARDS FOR SOY IN GLOBAL MARKET

There are around 70 soy certifications.

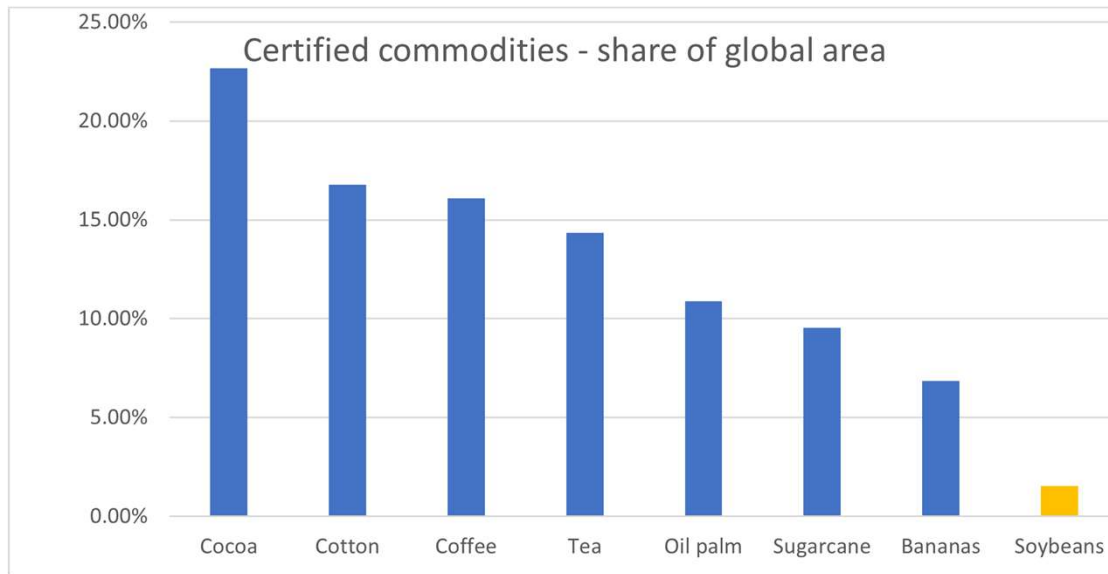
- ❑ Majority of soy sustainability certification systems are often not independent
- ❑ One major issue with many of the soy certification systems is that they are run by the soy traders themselves rather than an independent body



Certification	Owner
RTRS	RTR
ProTerra	The ProTerra Foundation
ISCC + (International Sustainability & Carbon Certification)	ISCC
Europe Soya & Donau Soja	The Donau Soja Association
U.S. Soy Sustainability Assurance Protocol (US SSAP)	U.S. Soybean Export Council
Certified Responsible Soya (CRS)	Celetra
Responsible soybean standard	ADM (Archer Daniel Midland)
Bunge Pro S	Bunge
Cargill Triple S	Cargill
Amaggi Responsible Soy (ARS) standard	Amaggi

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VOLUNTARY SUSTAINABILITY STANDARDS COMPLIANT SOY IN GLOBAL MARKET



According to IISD study, globally less than 3% of soybeans are produced in compliance with sustainability standards

Note: Conventional production volumes do not comply with a VSS, while VSS-compliant production volumes refer to cotton produced in compliance with at least one VSS. Production volumes that are defined as potentially VSS compliant cannot be definitively identified as conventional or VSS compliant with the data currently available.



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INDIAN STANDARDS FOR SUSTAINABLE SOY- ISSS

A group of 10,151 farmers are prepared and successfully certified by the third-party audit agency under the Indian Standard for Sustainable Soy (ISSS)



TIMES OF INDIA

New framework to enhance productivity of soybean

Government Nod Will Be Sought For Implementation

DIVIDENDS OF THE INITIATIVE

- Will bridge yield gap through sustainable crop production practices
- Increase soybean productivity in India that hovers around 1 tonne per hectare to around 2 tonne per hectare
- Enhance domestic availability of edible oils through higher production of soy and enhance livelihood of farmers
- Increase soybean productivity in India that hovers around 1 tonne per hectare to around 2 tonne per hectare

WILL USE LATEST TECHNOLOGY AND BEST AGRICULTURAL PRACTICES

opportunity to enhance productivity of soybean. The committee of experts will also examine the role of extension services in soybean cultivation and the study findings will be then presented to government for implementation of ground level by means of government agencies, farmer groups, social organisations and processors.

Sreebh, Member, general manager, soy and oil at the international civil society organisation (ICSI) society responsible economy chain said, "The Indian standards for sustainable soy would potentially address key sustainability concerns of Indian soy sector while fulfilling commitment of Indian soy industry to world sustainability. Moreover, this framework will positively help in achieving sustainable production, social and economic growth, sustainable business performance and environmental conservation."

Experts said sustainable soybean will boost soybean trade by improving export and quality of product.

- ❑ Solidaridad is working with over **200000 Soy farmers** in the state of Madhya Pradesh and Rajasthan
- ❑ **Well established field training centers, offices** and farm field schools across 20 districts of both states; **(200 extension experts and team members)**



INDIAN STANDARDS FOR SUSTAINABLE SOY- ISSS

- ❑ ISSS is India’s own soy certification systems; developed by the Indian industries and stakeholders
- ❑ It is run by an independent body i.e. SOPA ISSS Council rather any individual soy business

Key Advantages of ISSS Certification

- ❑ **Cost effectiveness**
- ❑ **Adapted to local conditions, requirements, laws and legislations**
- ❑ **Enhance international competitiveness of Indian Industries**
- ❑ **Aligned with Government's priorities, policies and agenda**
- ❑ **Aligned with global sustainability and similar other requirements like EUDR**

INDIAN STANDARDS FOR SUSTAINABLE SOY

PRINCIPLES, CRITERIA & INDICATORS

Consists of 6 principles		
	Criteria	Indicators
Principle 1. Sustainable Crop Production Practices (SCPs)	9	28
Principle 2. Comply with the Law	3	7
Principle 3. Community Protection and Dignified Farm Workers Promotion	4	19
Principle 4. Conservation and Restoration	4	15
Principle 5. Good Business Practices	4	9
Principle 6. Continuous Improvement and Transparency	3	7
Each Principle consists of Criteria and each Criteria consists of verifiable Indicators	27	85

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ISSS Provides Supply Chain Traceability Solution & Direct Farmers Sourcing Models



WE USE DIGITAL TRANSFORMATION TO SERVE FARMERS AND VALUE CHAIN PARTNERS



FARMERS



VALUE CHAIN STAKEHOLDERS

- Need relevant information to increase productivity and efficiency;
- Exchange data for support.

TRUST

- Need supplier intelligence to add value to their products;
- Consume data to provide better support.

Traceability Tool



Facilitating Direct Industry - Farmers Linkages for Sourcing of Sustainable/Regenerative Produce



Procurement Centre for direct procurement from farmers/Market Linkage



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WHY SUSTAINABLE SOY – ISSS IS IMPORTANT FOR INDIA

- ❑ ISSS is a very strong step forward in the direction towards solving the sustainability issues in the Soy sector in India (ISSS is developed by the Indian Industries and for the Indian Industries considering the local conditions and realities)**
- ❑ Adoption of ISSS would strengthen the role of India in driving sustainability in the sector and mitigate the associated sustainability risks**
- ❑ ISSS being an unified sustainability standard would reduce duplicity, huge efforts and cost involved in different sustainability certifications**
- ❑ ISSS would provide sustainability framework for effective implementation of National Mission on Edible Oil-Oil Seeds**
- ❑ Sustainably produced Soy would help to protect the environment and better social conditions of producers and workers**

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RECOMMENDATIONS

TO BOOST THE UPTAKE OF SUSTAINABILITY STANDARDS

1 *A Smart mix of measures - legislation, voluntary initiatives, supporting government policies are needed for increased adoption of sustainability*

2 *Integration of ISSS with the NMEO-Oilseeds for sustainable production and expansion*

3 *Robust mechanism for Credibility and Transparency in the implementation and certification process*

4 *Incentive mechanism is needed for increased uptake of national sustainability standards*

CHANGE
THAT MATTERS

Questions/Suggestions/Additional Information

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