

Solidaridad

Solidaridad's Initiatives & Solutions Around Sustainability and Food Security in Agri-food Industry



Indo Agri-food and Feed Conference - 2024

Dr Suresh Motwani, Head for Vegetable Oils Programme, Solidaridad

8th January, 2024, Mahabalipuram, Chennai

SUSTAINABILITY & FOOD SECURITY

KEY FACTS & CHALLENGES



1. CLIMATE CHANGE : THREAT TO FOOD SUPPLY

Erratic weather patterns, rising temperatures and extreme events disrupt agricultural production, leading to crop failures and reduced yields.



2. LAND DEGRADATION

33% of the Earth's soils are already degraded and over 90% could become degraded by 2050. Soil erosion can lead up to 50% loss in crop yields.



3. LOSS OF BIODIVERSITY

Unsustainable food production practices contribute towards the decline in biodiversity which can result in reduced resilience of ecosystems and agricultural systems, making them more susceptible to pests, diseases, and environmental stresses.



4. WATER CHALLENGE

According to World Bank, Already, almost two-thirds - 63 percent - of India's districts are threatened by falling groundwater levels

Solidaridad

SUSTAINABILITY & FOOD SECURITY

KEY FACTS & CHALLENGES



5. POPULATION GROWTH

The world's population is projected to reach nearly 10 billion by 2050. This puts pressure on food production systems to meet increased demand for nutrition and calories.



6. FOOD WASTE AND LOSS

Across the globe, approximately 14 percent of the world's food, valued at \$400 billion is lost on an annual basis between harvest and the retail market (FAO 2019). At the same time, an estimated 17 % of food is wasted at the retail and consumer levels.



7. FOOD IN-SECURITY & MALNUTRITION

Around 2.3 billion people in the world (29.3 percent) were moderately or severely food insecure & it is estimated 828 million undernourished people in year 2021 (FAO). Projections are that nearly 670 million people (8 percent of the world population) will still be facing hunger in 2030.

8. INCOME AND GENDER INEQUALITY



One in three people lacks access to adequate food (Development Initiatives, 2021). Economic disparities can limit people's ability to access sufficient and nutritious food, leading to undernutrition and malnutrition. 31.9 percent of women in the world were moderately or severely food insecure. Women often have limited access to resources and decision-making in agriculture

Solidaridad

WHY IT IS IMPORTANT TO ADDRESS SUSTAINABILITY IN AGRI-FOOD INDUSTRY



Ecologically Sustainable

- **I. Natural Resource & Biodiversity Conservation:** The agri-food industry is a major consumer of natural resources. Implementation of sustainable practices helps conserve these resources and minimize negative effects on ecosystems while promoting the preservation of biodiversity.
- **II. Climate Change Adaptation and Mitigation:** Emissions Reduction: Sustainable and regenerative agricultural practices can help reduce emissions and mitigate climate change impacts.



Economically Sustainable

- **I. Long-Term Viability and Continued Supply:** Sustainable practices contribute to the long-term viability of the agri-food industry, ensuring resilience and continued and stable food supply.
- **II. Market Access:** Increasingly, consumers and international markets are demanding sustainably produced food.



Socially Sustainable

- **I. Community Well-being:** Sustainable practices support the well-being of rural as well as vulnerable sections of the community by providing stable incomes and fostering social cohesion.
- **II. Ethical Considerations:** Addressing sustainability issues involves ethical considerations, such as fair labor practices, gender equality, and responsible use of resources.



Food Security

- **I. Access to Nutritious Food:** Sustainable practices can contribute to increased access to nutritious and diverse food options.
- **II. Resilience to Shocks:** Sustainable agri-food systems are more resilient to shocks, such as extreme weather events, pests, and diseases. This resilience is crucial for maintaining food security in the face of unpredictable challenges.

Addressing sustainability and food security issues in the agri-food industry is key for ensuring the long-term viability of the industry in the face of global challenges

**Then what are the
Challenges?**



Solidaridad

KEY CHALLENGES IN THE UPTAKE OF SUSTAINABILITY IN THE AGRI-FOOD INDUSTRY

Lack of consumer awareness and market uptake of Sustainability compliant food products

Sustainable production is skewed towards more developed countries

Farmers income is increasing however more improvement is needed & Price premium related issues

The high cost of implementation and certification results into exclusion of smallholders

Lack of Mandatory Regulations and Enforcement

Multiple standards for single commodity leads towards duplication of efforts

Lack of enabling Government policies

Lack of use of traceability solutions and related tools

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**

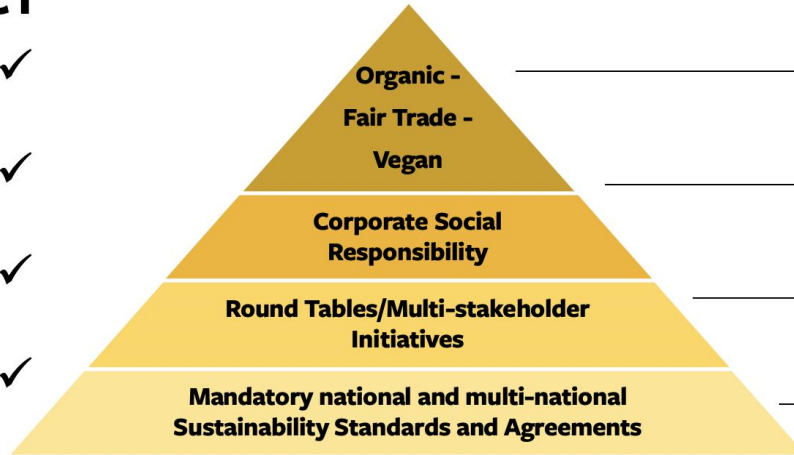


FOUNDERS OF FAIR TRADE

Solidaridad

OUR LEGACY

IMPACT



DRIVERS

CONSUMERS

COMPANIES

SECTORS

GOVERNMENTS

SCALE

- ❑ In 1988, Solidaridad initiated Max Havelaar coffee: the Dutch name of what became the Fairtrade certification and labelling on a global scale
- ❑ Since last few years Solidaridad has facilitated a fourth and most recent generation of certification i.e. National Standards

Solidaridad leadership in sustainability labels and standards development

1987
Founder of the **Stichting Max Havelaar**. 

1988
Market introduction of the Max Havelaar label
The first fairtrade label for coffee.



1991
Co-founder of the network organization for fairtrade initiatives in Europe, culminating in the formation of the **Fairtrade Labelling Organizations International (FLO)**. 




1996
Founder of **AgroFair BV**, the first fairtrade fruit company. AgroFair has grown into the biggest fairtrade fruit company in Europe, with an annual turnover of over sixty million euros in **Oké fruit**. 



2001
Founder of **Kuyichi BV**, the first fairtrade fashion brand. Kuyichi has grown into a pan-European jeans brand with an annual turnover of over 15 million euros. 



2002
Co-founder of the **Utz Kapeh Foundation** (now **UTZ Certified**), a CSR label for sustainable coffee. **UTZ Certified** is expanding into other sectors such as cocoa and tea. 



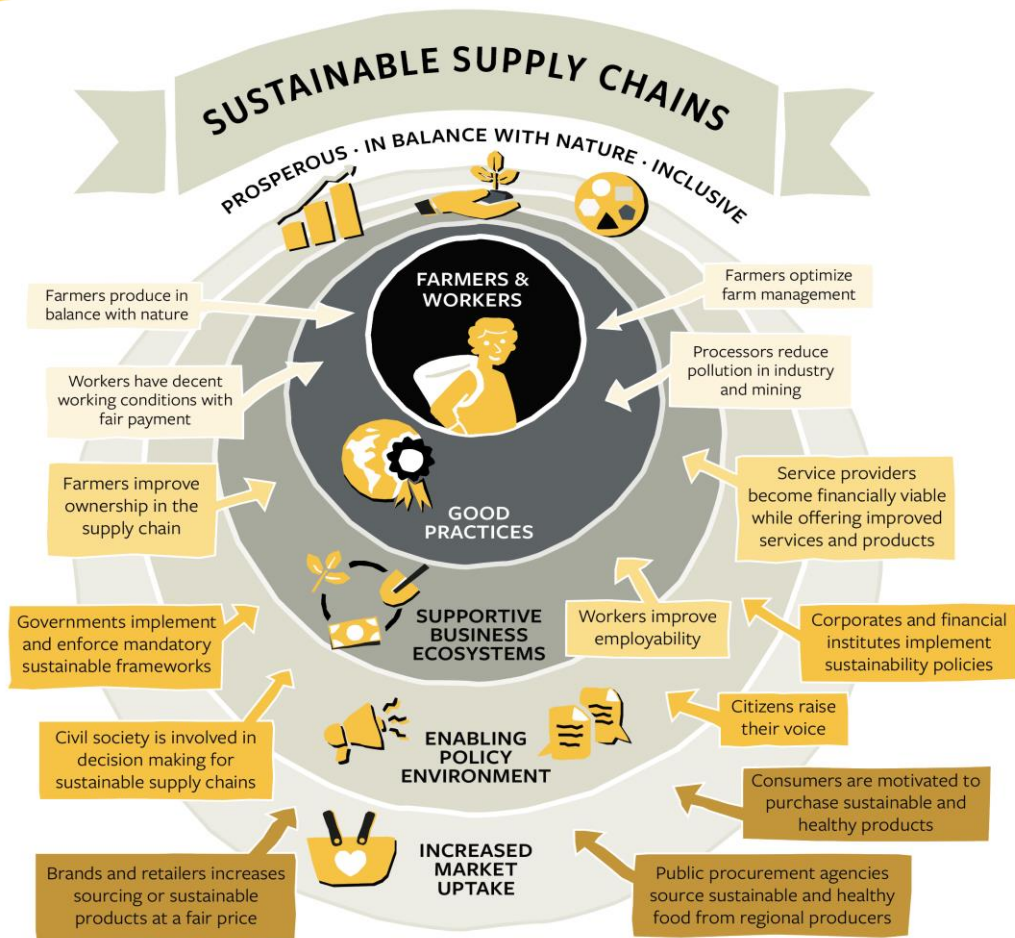
2004
Founder of the **MADE-BY Foundation**, a collaboration between over thirty fashion brands (to date) aiming at sustainable production chains. 



2006-2010
Co-founder or member of the **Round Tables** for responsible soy (RTRS), palm oil (RSPO), sugar cane (BS) and cotton (BC).

Solidaridad

SUSTAINABLE SUPPLY CHAINS THROUGH FOUR INTERCONNECTED LEVELS



Our Partners

Some examples....



Solidaridad

OUR OUTREACH & KEY IMPACTS



1.4
million farmers
supported or trained



3.4 million
hectares under
good agricultural
practices

20 new or improved
mandatory sustainability
frameworks



974,000
farmers with
increased income



358 processors have
reduced pollution



80,000
hectares with improved
soil organic matter

647 corporates
supported to test
solutions with
Solidaridad



1 million
workers and miners
under improved
working conditions



795,000
farmers with
improved yields
(kg/ha)

2,971 service
providers with
increased turnover

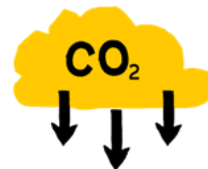


256 CSOs trained or
supported in decision
making and dialogue



933,000
farmers and miners
obtain new or
improved services
from service providers
supported by Solidaridad

1.1 million
tonne reduction of
carbon dioxide
emissions (tCO₂e/year)



Our strategy of building sustainable supply chains has yielded significant success. Over the strategic period 2016-2020, we have improved the practices of 1.4 million producers and we have brought no less than 3 million hectares under sustainable management.

Solidaridad

SOLIDARIDAD ASIA

Four Coherent Intervention Strategies



SOLIDARIDAD ASIA

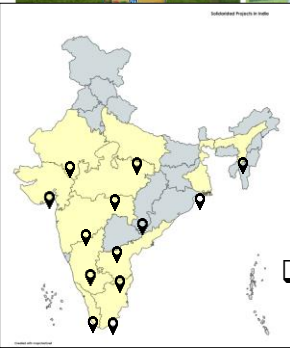
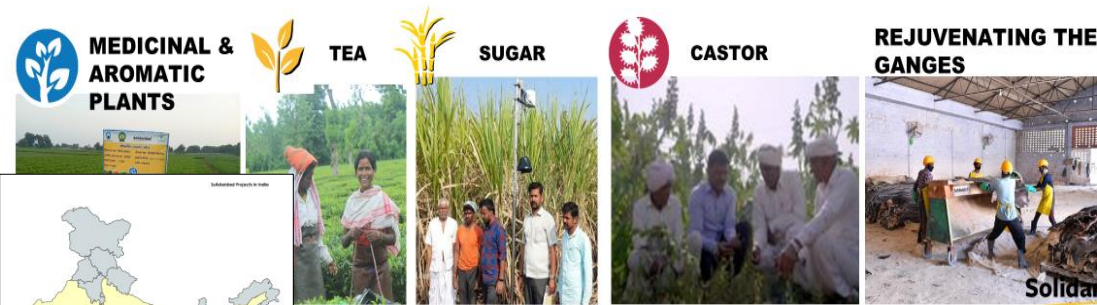
-  Aquaculture
-  Castor
-  Cotton
-  Dairy and Livestock
-  Fruits and Vegetable:
-  Gold (Minerals)
-  Leather
-  Medicinal Plants
-  Palm Oil
-  Sugarcane
-  Soy
-  Tea

GOOD PRACTICES	SUPPORTIVE BUSINESS ECO-SYSTEM	ENABLING POLICY ENVIRONMENT	MARKET UPTAKE
Regenerative farming in 1.4 million ha of land	Disrupt existing supply chains with farmer-owned business	Regional cooperation on sustainable trade	Farm to fork Traceability through soli-trace
Decent work for 1 million workers	Affordability, availability and accessibility of suitable technologies for climate-smart farming	Fair data movement for farmers right over their own data	Fair payment for Eco-system services by the farmers
Pollution prevention at the source	Create 100,000 rural jobs(mainly women)	Improve governance of workers & smallholders organisations	Inclusive supply chain development



Solidaridad

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

Solidaridad

PROMOTION OF 4th GENERATION NATIONAL SUSTAINABILITY STANDARDS



Sustainable Castor
Association



The National Standards are well aligned with the local laws and regulations

Three Pillar Approach

INCLUSIVE VALUE CHAINS

Train excluded smallholder to produce and trade as per the national sustainability framework

DIGITAL ASSURANCE

From a square route driven third party audit system to digital assurance system for continuous improvement

REGIONAL APPROACH

Facilitate a common approach in Asia including mutual recognition of national sustainability frameworks

REGENERATIVE AGRICULTURE FOR SUSTAINABLE FUTURE OF AGRI-FOOD INDUSTRY

Solidaridad's promoted regenerative agricultural practices are well aligned with the regenagri standard developed by Peterson and Control Union

- ❑ Solidaridad's regenerative agriculture programme is an initiation into **reviving the traditional farming approaches with a new scientific rigor**
- ❑ The aim is to bring a **systemic change, shifting the focus from single commodity to farm level transformation**
- ❑ **Solidaridad is increasing the regenagri footprints across Asia & Globally** in various agricultural supply chains

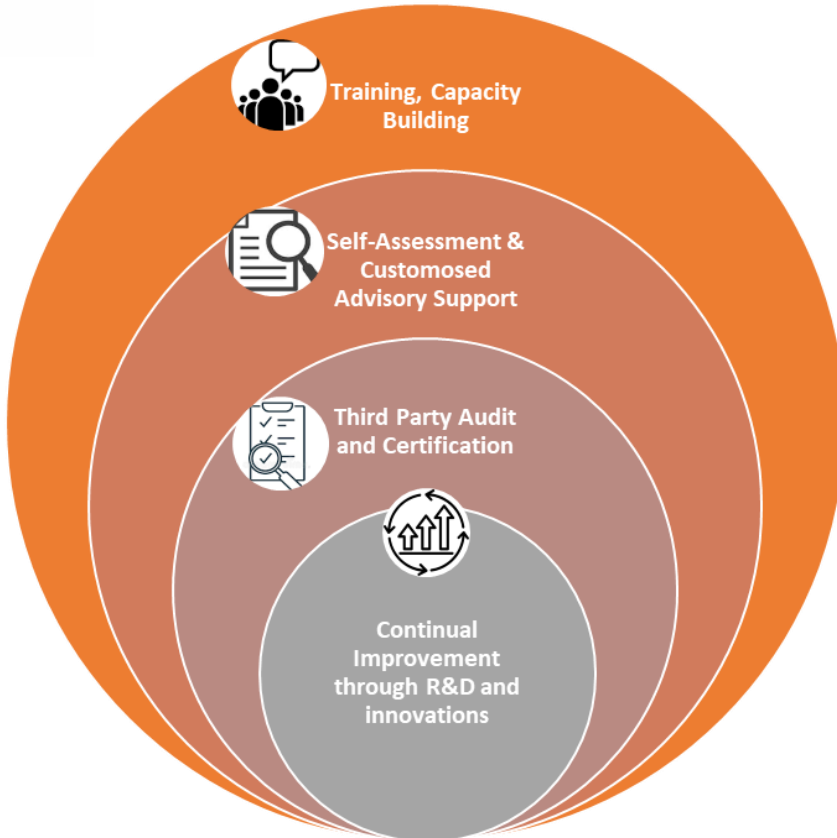
Market Preferences

- ❑ The current decade is poised to experience a **shift in market preference** with the rise of more informed and conscious consumerism
- ❑ **Brands are already embracing regenerative labels** that not only contribute to the next big change in sustainable procurement, but also work as a distinct market differentiator



KEY OBJECTIVES

The Nico Roozen International Centre of Excellence for Regenerative Agriculture has been established in the serene landscape of Sehore District of Madhya Pradesh



Solidaridad

INDIA SUSTAINABLE VEG OIL MISSION

Solidaridad together with Solvent Extractors' Association of India (SEA), SOPA promoting sustainable vegetable oil mission



Sustainable Soy Programme



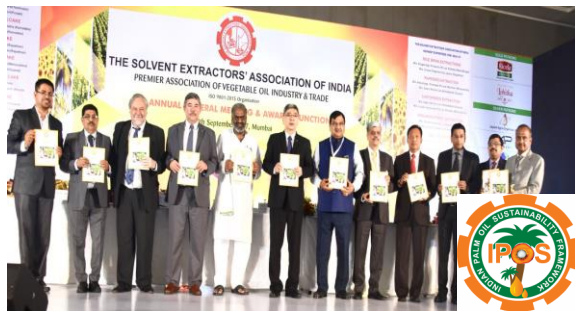
SEA Solidaridad Mustard Mission



Sustainable Oil Palm Programme

National Standards for Sustainable Production and Trade

Indian Palm Oil Sustainability Framework - IPOS



Indian Standard for Sustainable Soy - ISSS



National Platform for Sustainable Soy, (NPSS)



Asian Palm Oil Alliance (APOA)

The apex edible oil industry associations from five major palm oil importing countries of Asia have come together to form the Asian Palm Oil Alliance (APOA) for sustainable palm oil



Solidaridad



Solidaridad

India Sustainable Veg Oil Mission

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



- ❑ Around 3 lakh mustard, soy, ground nut and Oil Palm farmers are supported through model farms, farm field schools
- ❑ Adoption of improved seed varieties including GAPs have contributed significantly towards increase in yield ranging from 20% - 53 %
- ❑ Encouraging farmers to diversify from cereals to Oilseeds

By 2030, we are aiming to increase around ~50% increase in the domestic vegetable oil production

Solidaridad

Promotion of Sustainable Vegetables & Medicinal Plants Cultivation

Promoting high value Vegetables and Medicinal and Aromatic Plants for crop diversification as well as for Better Health and Nutrition



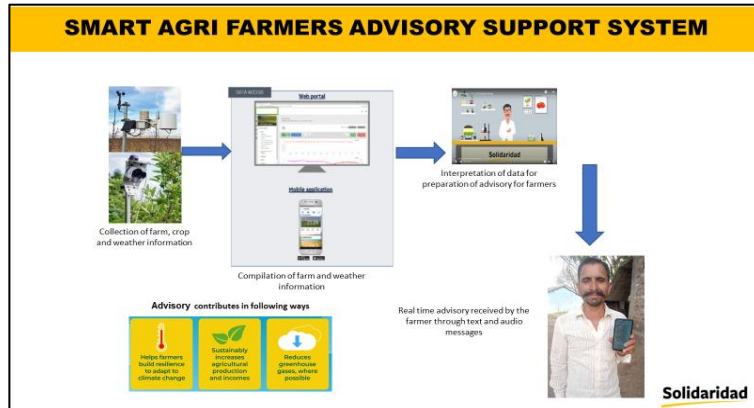
30 % increase in income through crop diversification with vegetables

Through the Ashwagandha cultivation the farmer has earned around INR 300,000/- per acre whereas traditionally with the cereals i.e., wheat, the income was just around INR 50000/- per acre

IFS contributed towards entrepreneurship around inputs services, seed production, farm mechanization, nurseries, primary processing units etc.

Innovation & Technology Play a Crucial Role in Addressing the Challenges of Global Food Security

- ❑ Promoting IoT BASE (sensors) solutions and Artificial Intelligence
- ❑ Facilitating transition from traditional delivery channels to ICT-Enabled channel for Smart Agriculture Advisory
- ❑ IoT based weather station and sensors has been established in Target Model Farms areas



SMART AGRI-HUB IN MADHYA PRADESH



- ❑ The 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 for monitoring, assessment and generation of real-time advisories and technical knowledge support to farmers, FPOs and agri-tech entrepreneurs
- ❑ The consolidation of agricultural scientific data, statistics, different models and information would help to develop trends, rapid, accurate and compelling recommendations for farmers as well as researchers and policymakers



The partnership with Vodafone India Foundation and Indus Towers Limited is facilitated for integration of IoT solutions

Solidaridad

SoliTrace Digital Traceability Solution

SoliTrace is an End-to-End Digital Traceability System that track the product from farm to consumer



The diagram shows a woman in a red top using a smartphone to scan a QR code on a tea package. A speech bubble from her says: "The aroma of the tea refreshes me every time I drink your tea. Thank you Ramesh!". A callout box says "Send feedback directly to the farmer". Another callout says "Know the farmer story" pointing to a video of a farmer. A third callout says "Experience the product with traceable info" pointing to the QR code. Below the QR code is a box titled "Data embedded in the QR code" containing the following information:

Production
Location: Sankal (village), Assam, India
Topography: Hilly
Elevation: 200 m
Chemical fertilizer used: No
Bio-fertilizer used: Yes
Traces of harmful chemicals: No
Date of procurement: 20/04/2021
Date of packing: 21/05/2021
Packer: Kettle Tea Pvt. Ltd.
Distributor: Ramworld Incorporated
Carbon footprint: minimal
Environmental best practice: allowed

WORKING AS RESOURCE AGENCY FOR BUILDING SUSTAINABLE ECOSYSTEM FOR SUSTAINABLE FPOS

- ❑ Our expertise in the development and promotion of FPOs goes a long way back
- ❑ We are the first organization, instrumental in developing the first FPO of the country

Institutional Strengthening

Business Planning, Access to Finance, Infrastructure for Storage, processing and value addition along with tools like Certification/ Traceability etc.

Linkages with potential Markets



**BHARATKHAND
CONSORTIUM**
of Farmer Producer Organizations

- Bharatkhand Consortium of FPOs is formed to promote collective strength of FPOs
- It enables smallholders for better integration and ownership in the formal value chains to earn a fair income and produce in balance with nature

We are empaneled with SFAC – Government of India as a CBBO for the formation and promotion of FPOs

Solidaridad

Solidaridad

“Good Farming – Good Food”

Promoting Three Pathways for Developing Sustainable Food Supply Chains to Improve Affordability and Accessibility of Nutritious and Healthy Food

Pathway 1: Availability and affordability of nutritious crops including vegetables at farm and household level

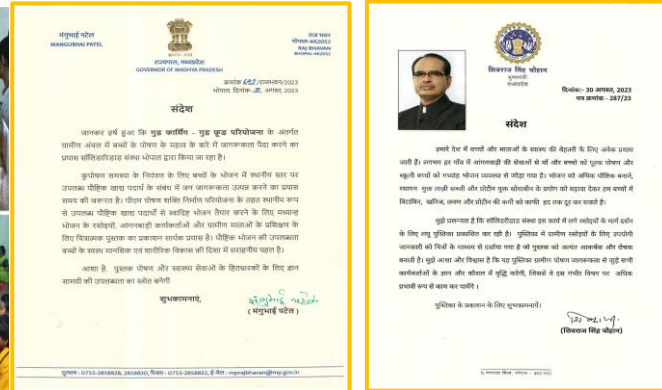
Pathway 2: Availability, affordability and accessibility of nutritious food products to the rural areas (BoP)

Pathway 3: Awareness raising to stimulate consumption of nutritious food products

Cadre of Trained Nutrition Experts for the Delivery of Nutrition Knowledge and Practices



Engagement with Government Feeding Schemes for Promotion of Nutritious Food



Value Addition and Supply Chain Development for Nutritious Food Products



Solidaridad

Key Recommendations

- 1 **Public-private-Civil society prog./initiatives to be promoted for sustainability in the agri-food sector**
- 2 **National sustainability standards are to be followed to ensure sustainability in supply chains**
- 3 **Encourage and strengthen FPOs for direct linkages (input supplies and sourcing)**
- 4 **Consumer awareness around importance of sustainability and market uptake/incentives for sustainably produced produce**
- 5 **Enabling government policies for the adoption of sustainability initiatives**

CHANGE
THAT MATTERS

Questions/Suggestions/Additional Information

suresh@solidaridadnetwork.org



solidaridadnetwork.org



@solidaridadnetw



/company/solidaridad



/solidaridadnetwork



/solidaridadnl