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## WWF-Pakistan Food and Markets Programme







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## Reducing the Environmental Footprint of Agricultural Commodities

WWF-Pakistan's **Food and Markets Programme**, formerly known as the Sustainable Agriculture and Food Programme, started its journey **in 2004, when it built the capacity** of around **200 farmers** on sustainable practices in the cotton landscape. Over time, this small initiative grew and today, it is **one of the largest programmes** at WWF-Pakistan – with **17 field** offices across four provinces of the country, more than **100** professionals, and around **1,000** field staff that are facilitating a transition towards sustainable agriculture.



LAUNCHED IN  
**2004**

 **17** FIELD OFFICES

**1,000** FIELD STAFF 

 **100** PROFESSIONALS

 **250,000+** FARMING FAMILIES

Traditionally, crop production has relied heavily on industrial agricultural systems, which employ large amounts of pesticides and fertilizers and other practices that damage our soil, water, air and climate. These practices degrade the same natural resources they rely on.

**Recognizing the interconnectedness of environmental, economic and social factors, WWF-Pakistan's Food and Markets Programme aims to mitigate the damaging environmental impacts of farming practices, without compromising on productivity and profits.**

To increase the socio-economic and environmental resilience of agricultural commodities, the Programme is minimizing **environmental impacts** of input-intensive (water, agrochemicals, synthetic fertilizers, etc.) and pest-sensitive crops by **building the capacities of farmers** on economically and ecologically efficient farming solutions and technologies, and **engaging stakeholders** to develop sustainable farming practices and a sustainable supply chain. To do so, the Programme collaborates with premier research and academic institutions, farmers' and industrial entities and organizations, government departments, civil society organizations, and relevant ministries at the federal and provincial levels.

The Programme is adopting a holistic approach to tackle the socio-economic and environmental challenges associated with agricultural commodities. Projects focusing on **climate-smart agriculture, reduction of greenhouse gases in farming operations, agricultural water stewardship, soil health improvement, agrobiodiversity, agroforestry, value chain development, and the use of digital tools are being implemented; with an across the board focus on gender empowerment and livelihood improvement.**

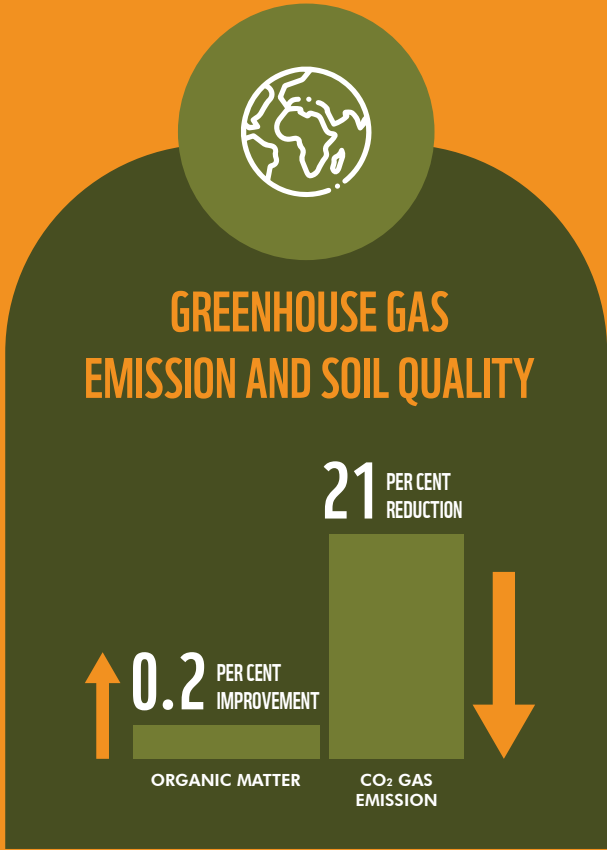
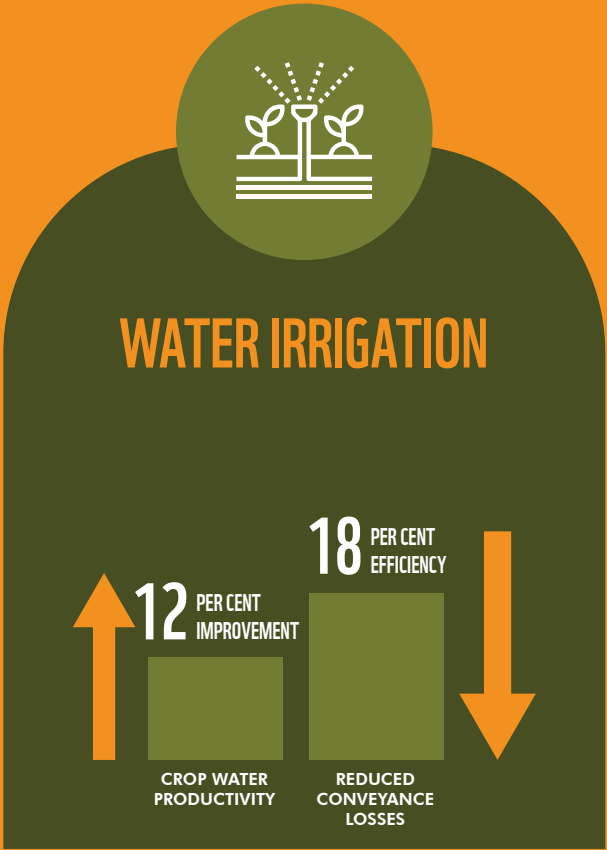
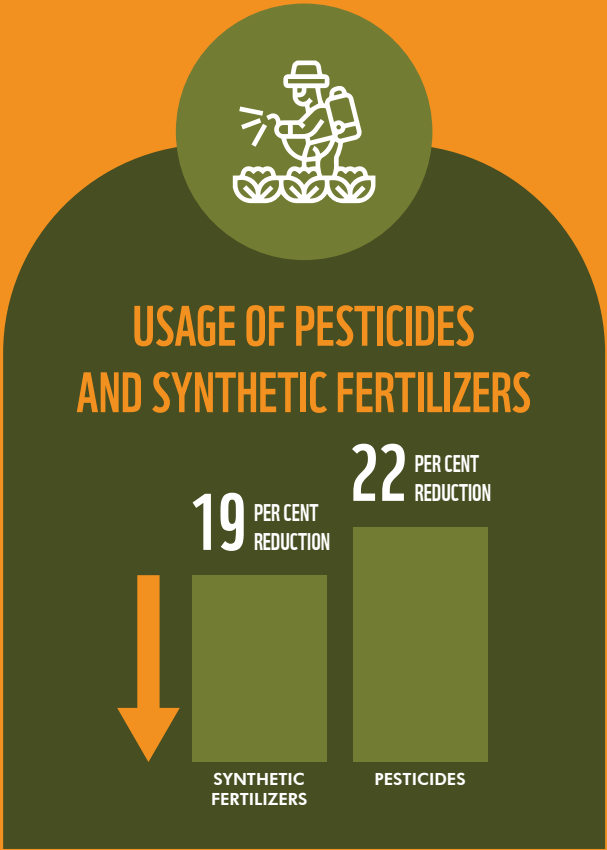
**Currently, the Programme is directly working with over 250,000 farming families in eight districts of Punjab, four districts each of Sindh and Balochistan, and one district of Khyber Pakhtunkhwa; enabling them to make site-specific crop management decisions over a collective area of around 0.6 million hectares.**



The adoption of innovative, climate-smart solutions are shifting these farmers towards a more environmentally, economically and socially sustainable farming system. Overall, the **use of pesticides has reduced by 22 per cent** and **synthetic fertilizers by 19 per cent**, while the **conservation of irrigation water has improved by 12 per cent**, and **the water conveyance and distribution efficiency from irrigation network to farm gate has increased by 18 per cent**.

In terms of **greenhouse gas emissions**, results indicate an approximate **21 per cent** reduction in emissions by project farmers compared to the baseline control group. Soil quality has also improved, with a documented **0.2 per cent** improvement in soil organic matter.

On the other hand, this transition is also helping farmers to be profitable and contribute to their local economies. Among other indicators, there has been a **15 per cent increase in crop yield** and an **18 per cent** decrease in the cost of production. Also, the Programme has, with the support of communities, planted one million trees to combat climate consequences and reduce the vulnerability of the lives and livelihoods of farming families.







# Sustainable Production and Consumption: Supply Chain Development

## ● Better Cotton Farmers Support Programme

WWF-Pakistan's cotton work became the foundation of the globally recognized **Better Cotton Standards** that aim to help cotton communities thrive, while protecting and restoring the environment. It enables businesses to reduce their ecological footprints and use natural resources sustainably.

The Better Cotton Support Programme addresses the most pressing sustainability issues in cotton farming, including use of pesticides and synthetic fertilizers, water use efficiency, and working conditions (child labour, gender inequities in wages, poverty, etc.). WWF-Pakistan's field teams build the capacities of farmers to adopt Better Cotton Standards to improve the sustainability of cotton production, resulting in substantial benefits for people, the environment and the cotton sector.

Under this workstream, WWF-Pakistan is working with more than **200,000** smallholders in the provinces of Punjab and Sindh, over an area of around **0.5 million hectares** through the following projects:

### ● Better Cotton Project-Punjab

### ● Better Cotton Project-Sindh



**250,000**  
smallholders



**9 Districts**  
3 in Sindh and 6 in Punjab



**0.5 Million**  
hectares of land



## ● Organic Cotton Projects



WWF-Pakistan is a pioneer in organic cotton cultivation and certification in Pakistan, developing the country's first organic certified cotton bale in 2018-19.

Organic cotton is grown without the use of toxic pesticides, synthetic fertilizers and genetically engineered seeds, and has a low impact on the environment, thus **sustaining the health of the people and the planet.**

In 2015, with financial support from Laudes Foundation, WWF-Pakistan collaborated with the Department of Agriculture Extension - Government of Balochistan on standard practices of organic cotton cultivation to ensure compliance of the strict organic certification criteria. As a result of these integrated efforts, Pakistan's first certified organic cotton bale was produced in 2018-19. It created the spirit of efforts to develop a conducive environment and increase the volume of certified produce. This resulted 9700, 13000, and 34000 bales (165 kg cotton lint per bale) of certified cotton lint in 2019-20, 2020-21 and 2021-22 respectively.

This success has attracted **local textile groups which are now working** in partnership with WWF-Pakistan to scale up organic cotton cultivation through independent projects with dedicated supply chains to directly benefit project farmers. Currently the organic cotton projects are engaged with 13,000 farmers cultivating cotton on nearly 80,000 acres, of which 21,833 acres are organic certified and the rest are in transition to organic certification. By engaging GOTS certified ginning and textile mills, and international brands, WWF-Pakistan has developed the organic cotton supply chain in Pakistan to ensure uptake of certified seed cotton of the project farmers at premium price. The initiative also focusing certification of organic wheat crop and development of its supply chain.

Through its organic cotton projects, WWF-Pakistan aims to reach out to **25,000** farmers and cover **100,000** acres of land under organic/in-conversion cotton by 2025.







# Climate Change Mitigation and Adaptation: Building Resilience in Rural Communities

In **2005**, WWF-Pakistan and IKEA joined hands to initiate the Pakistan Sustainable Cotton Initiative to promote **sustainable production** and **responsible sourcing** of raw materials. With the passage of time, the partnership evolved to include broader themes for a sustainable cotton landscape. Now in its **seventh phase**, the partnership is working on:

- Promoting water stewardship and sustainable land use management;
- Reducing greenhouse gas emissions;
- Enhancing green infrastructure;
- Conserving agrobiodiversity;
- Improving livelihoods; and
- Creating sustainable supply chains for the benefit of people and planet.



## ● Climate-Smart Production System (CSPS)

**Climate change** poses a serious threat to agriculture, which is heavily dependent on climate and weather conditions. The Climate-Smart Production System enhances the adaptive capacities of the farming sector to combat climate change through **climate-smart agricultural** practices.

Climate-smart practices have **multiple benefits, which include improved climate resilience, poverty reduction, enhanced agrobiodiversity, increased crop productivity, and lowered greenhouse gas emissions** from crop production practices and the integration of trees into the cropping system. The project is implementing advanced, innovative and feasible climate-smart technologies and techniques to build the resilience of at least 100,000 farming families with an area of 150,000 hectares, by 2025.

## ● Agroforestry Biodiversity Conservation (ABC)

Agroforestry plays a significant role in managing the adverse effects of climate change along with the provision of **ecosystem services, biodiversity conservation, and soil management**. The Agroforestry Biodiversity Conservation project is building the capacities of farming families to grow trees **without disturbing their regular land management system** and cropping pattern, thereby increasing forest cover and securing additional income.



Better use of tree on low yielding agricultural land



Reduced greenhouse gas emissions



Improved livelihoods and food security



## 1 MILLION TREE PLANTATION

By 2025, at least one million trees will be added to the cropping system to enhance green infrastructure, which will serve as carbon sinks and sustain the agro-ecosystem.

The project also incorporates a strong segment on women empowerment and livelihood improvement through capacity building on alternate income generation activities.

## ● Cotton Value Chain Development (CVC)

The project is promoting **sustainable business solutions** among cotton supply chain actors through the creation of a quality-based digital trading platform 'Apni Kapas' (My Cotton). This platform is facilitating sustainable businesses and ensuring effective communication between buyers and sellers to fetch the right price based on the quality of seed-cotton and lint. On the contrary, traditional cotton trading in Pakistan is mostly informal, without any contractual agreements and specified quality standards.

The project is addressing crucial issues of **trash and contamination** mix-up by promoting **sustainable harvest** and post-harvest practices. Ginning is, alongside the actual cotton farming and harvesting, one of the first and most crucial parts of the cotton value chain. Unfortunately, the cotton industry in Pakistan is lacking **innovative** and **scientific research** and therefore, ginning has become a weak link in the chain. The project is building the capacities of ginning SMEs on **smart ginning practices** pertaining to **energy, production, and process** efficiencies in Punjab and Sindh provinces.



With the support of IKEA's suppliers, WWF-Pakistan aims to make at least 25,000 MTs of cotton available to be traded through devised e-trading platform.





## Sustainable Food Systems

The way food is **produced, processed, transported,** and **consumed** has a profound impact on the sustainability of the food supply chain and on natural resources. Likewise, **food wastage** has serious environmental impacts. WWF-Pakistan is working on the sustainability of the food supply chain, focusing on reduction in harvest and post-harvest losses of agricultural commodities, consumers' dietary behaviour assessment, dietary patterns, food waste reduction, waste-food recycling, etc.

Project teams are working on rice, sugarcane and wheat crops to promote sustainable production practices, and thereby reduce their environmental footprint. Furthermore, efforts are also focusing on promoting global sustainability standards e.g., the **Sustainable Rice Platform (SRP)** in rice and **BONSUCRO** in the sugarcane sector of Pakistan.

At the same time, assessments on food loss and waste have been undertaken to formulate recommendations on mitigating food wastage in the country. These assessments have subsequently informed the development of a policy brief on post-harvest food losses in the rice and tomato supply chain.



# Gender Empowerment and Livelihood Improvement



Almost all the projects being undertaken as part of the Food and Markets Programme have a strong gender empowerment component, which focuses on improving the livelihoods of rural women. In line with this cross-cutting goal, the programme is building economic resilience in women in project areas, building their capacities in farming operations, food production and processing, household work, etc.

As part of skill enhancement, women are being trained on **apiculture; tunnel farming; poultry rearing; embroidery; establishment of kitchen gardens, micro-nurseries, and food gardens; and small scale enterprise development.** These home-based initiatives have become a huge success, as women are the sole producers and proprietors and the primary decision makers and recipients of income. To assist their businesses, they are also being trained on **basic financial skills, linkages with consumer markets, digital marketing, labour rights,** etc.

As part of the programme, more than **55,000** women are benefitting from on-site technical assistance and acquiring the skills required to generate income.





## Current Projects

Title	Funding	Timeline
Better Cotton Project Punjab	BCI Growth and Innovation Fund	2022-2023 (yearly renewal)
Better Cotton Project Sindh	BCI Growth and Innovation Fund	2022-2023 (yearly renewal)
Organic Cotton Cultivation Promotion with Small and Marginal Tribal Farmers in Pakistan (Phase II) funded by Laudes Foundation	Laudes Foundation	2020-2025
Artistic Milliners Organic Cotton Project	Artistic Milliners (Pvt) Ltd	2021-2024
Soorty Organic Cotton Initiative	Soorty Enterprizes (Pvt) Ltd	2021-2024
Sapphire Organic Cotton Project	Sapphire Textile	2022-2026
Gul Ahmed Organic Cotton Project	Gul Ahmad Textile (Pvt) Ltd	2022-2026
Artistic Fabric Mills Organic Cotton Project	Artistic Fabric Mills	2022-2026
Climate-Smart production system for GHG\ emission reduction, water stewardship and sustainable land use management to improve socio- economic and environmental resilience of Cotton farming Communities of Pakistan (CSPS)	IKEA via WWF-Sweden	2020-2025

Title	Funding	Timeline
Agroforestry for Carbon Sequestration, Biodiversity conservation, Agroecosystem Enrichment to improve socio-economic and environmental resilience of Cotton farming communities	IKEA via WWF-Sweden and IDH	2020-2025
A transition towards standardized, compliant Cotton Value Chain to create enabling environment for quality-based trading in Pakistan	IKEA via WWF-Sweden	2020-2025
Gender empowerment through entrepreneurship development and skill enhancement on homebased micro-enterprises for socio-economic and environmental resilience of farming families	IDH	2020-2025
Promoting Sustainable Sugarcane Production among Smallholder Farmers of Pakistan	Bonsucro Impact Fund	2022-2024
Smart Villages; empowering rural communities through skill enhancement, gender empowerment and conservation of natural resources for socioeconomic and environmental resilience	Mahmood Group of Industries	2022-2024



## Previously Completed Projects

Title	Funding	Timeline
Sustainable Cotton Production in Pakistan's Cotton Ginning SMEs	EU	2012-2015
Pakistan Sustainable Cotton Initiative Phase-I to V	IKEA via WWF-Sweden	2005-2014
Global Sugarcane Producer Support Initiative	Solidaridad	2012-2015
Water Pakistan	IKEA via WWF-Sweden	2014-2017
Organic Cotton Production in Balochistan	C&A Foundation	2016-2019
Climate Resilient Crop Production	IKEA via WWF-Sweden	2017-2020
More Crop per Drop; Water Stewardship in Agriculture	IKEA via WWF-Sweden	2017-2020
Bole to Bale; Cotton Value Chain Development	IKEA via WWF-Sweden	2017-2020
Agroforestry in Cotton Farming	IKEA and IDH	2018-2020
E-Smart Solutions for Agriculture	IKEA via WWF-Sweden	2019-2021
Alternate Energy Solutions for Rural Communities	SNGPL	2018-2020
Milliner Cotton Initiative funded by Artistic Milliners	Artistic Milliners	2019-2021

Title	Funding	Timeline
Crop Residues management by improving soil health through clean disposal of agriculture residues with tangible economic benefits	IKEA	2018-2020
Water Thirsty Crop Project	EU	2006-2009
Fresh Water and Cotton Initiative	WWF-Switzerland	2000-2003
Crop Maximization Project I and II	MINFAL (Ministry of Food and Agriculture)	2002-2007
Sugar Producer Support Initiative (Jhang)	Solidaridad	2009-2012
Food Loss and Waste in the Hospitality Sector	WWF-International	2019-2020
Raise Awareness and Provide Evidence to Facilitate the Creation of New Food Loss and Waste Policies in Pakistan	Food Practice Innovation Fund	2020-2021
Milliner Cotton Initiative Project	Artistic Milliners (Pvt) Ltd	2019-2022