LIGHTHOUSE STORY: INDIA, BANGLADESH, NEPAL

Best Practices Strengthening Climate Resilience: transforming food systems with the Green Evolution Regional Program

Focus area: Climate Adaptation Project

PROJECT OVERVIEW

Welthungerhilfe (WHH), in collaboration with 9 local partners and funded by the Federal Ministry for Economic Cooperation and Development (BMZ), is leading the Green Evolution program, a four-year (2024-2028) development program transforming food systems across India, Bangladesh, and Nepal.

Acknowledging the reliance on unsustainable chemical inputs that degrade soil, reduce biodiversity, and threaten health, the program promotes agroecological approaches. This involves promoting farming practices that work in harmony with nature, such as rainwater harvesting, diversification of crops, and improved soil health management. To achieve this, the program engages approximately 35,000 farming households (40% women) and indirectly impacts over 1.2 million individuals. The activities include training in sustainable agricultural techniques, support for establishing community-based seed banks, and promoting access to markets for ecologically produced goods. These activities are coupled with efforts to empower smallholder farmers, particularly women, by strengthening their access to resources, information, and decision-making power.

Traditional knowledge systems, often overlooked, are also being revitalized and integrated into modern farming practices. By preserving and promoting these tested methods, the program seeks to **build resilience to climate change and maintain biodiversity**. Ultimately, the Green Evolution program seeks to address the vulnerabilities of the South Asian food system to climate change and ensure access to nutritious food for all.

PROJECT SNAPSHOT

Name:	The Green Evolution Program
Location:	India, Bangladesh, Nepal
Objectives:	Transforming local food systems in South Asia through agroecological approaches, fostering resilience, equity, and sustainability
Duration:	50 months (April 2024 – May 2028)
Budget:	4.000.000 EUR
Funded by:	BMZ
Partners:	WASSAN, Abhivyakti Foundation, Pravah, Pragati in India; FIVDB, WAVE Foundation in Bangladesh; LI-BIRD, ANSAB, HPC in Nepal

THE CLIMATE CHALLENGE

- Increased droughts and floods disrupt crop yields and livelihoods in South Asia, especially for rain-fed agriculture, which supports over 55% and contributes to 44% of food production.
- Since the 1960s, the Green Revolution in India increased agrochemical use, leading to biodiversity loss, soil degradation, pesticide exposure and contribution to the climate crisis. Climate change worsens these issues by disrupting the weather, intensifying pests, and stressing ecosystems, further threatening food security and health.
- South Asia warmed by 0.6°C from 1901 to 2018, with the majority of the hottest years occurring since 2003, highlighting the accelerating pace of climate change in the region.

Floating vegetable garden in Bangladesh.

HOW THE PROJECT STRENTHENS CLIMATE RESILIENCE

The Green Evolution program strengthens climate resilience in South Asian food systems through a multi-pronged, agroecological approach. The program addresses the vulnerability of smallholder farmers, particularly women, to the impacts of climate change, including erratic rainfall patterns, increased drought frequency, and other extreme weather events. This is achieved through several key practices:

Promoting diverse cropping patterns, integrating livestock and trees (agroforestry), and utilizing climate-resilient crop varieties reduces reliance on single, vulnerable crops and enhances overall farm productivity and resilience. This approach also improves biodiversity, bolstering the ecosystem's capacity to withstand environmental shocks. The program promotes efficient water use through techniques like rainwater harvesting, and improved irrigation methods. This reduces dependence on unreliable rainfall and enhances water security, especially crucial in regions prone to drought.

Agroecological practices such as cover cropping, composting, and the use of organic fertilizers improve soil health, increase water retention, nutrient cycling, and carbon sequestration. Healthy soils are more resilient to extreme weather events and contribute to long-term food security and climate change mitigation.

In conclusion, the program strengthens climate resilience by fostering community-based adaptation strategies that empower local populations to manage natural resources, adapt to climate change, and enhance food and nutritional security. By emphasizing participatory approaches, it ensures long-term sustainability and local ownership of climate resilience efforts, reinforcing the broader goals of agroecological transformation in South Asian food systems.

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More insights here

"Our Green Evolution program aims to transform food systems in South Asia by empowering smallholder farmers, especially women, to adopt sustainable practices that enhance climate resilience and improve livelihoods. "

Phillippe Dresruesse, Head of Programs, WHH India

IMPACT AND LESSONS LEARNED

The Green Evolution program aims to create climate-resilient, equitable, and sustainable food systems in the target regions. This includes improved livelihoods for smallholder farmers, increased dietary diversity, and reduced environmental impact, through strengthened collaboration among stakeholders. A multi-stakeholder network will coordinate assessment, planning, and monitoring across levels, with 50% of civil society actively engaged in policy dialogues and lobbying. Regular monitoring and evaluation ensure lessons learned are incorporated to maximize impact, supported by shared tools and increased funding for agroecological initiatives. Agroecology's transformative potential is demonstrated by the program, addressing climate adaptation, improved livelihoods, food security, and sustainability. Legislative change in all countries embeds agroecological principles into national strategies, while 70% of government advisors report improved capacity to apply them. Local and traditional farming knowledge are integral to success, with 70% of institutions integrating agroecology into curricula, and 70% of farmers showing better knowledge and practice. Gender equality is promoted by addressing women farmers' challenges and transforming roles in South Asia's food systems, where 60% report a 25% income increase and 16,000 families now farm agroecologically on 15,000 hectares.

KEY TAKE AWAYS

- Transforming food systems to ensure food security and sustainability requires a holistic approach that considers the interconnectedness of agriculture, environment, economy, and society.
- Implementing climate-resilient practices, such as drought-resistant crops and efficient water management practices, reduces climate change impacts on food production, enhancing overall food systems resilience.
- Applying agroecological practices, like crop diversification and organic farming, improves soil health, biodiversity, and resilience to climate change impacts while also reducing greenhouse gas emissions linked to food production, improving nutrients content, supporting sustainable agriculture and long-term food security.