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For a world without hunger

Sustainable Integrated Farming Systems

SIFS | The ecological way to food and nutrition security

USE OF SPACE

Farms are developed with a multilayered design, so that different crops and trees can make the best use of available space, sunlight, water and soil nutrients.

USE OF TIME

Multiple cropping systems are introduced in a right sequence so that there is less competition for nutrients amongst crops and the field is not left unproductive at any point.

INTEGRATION

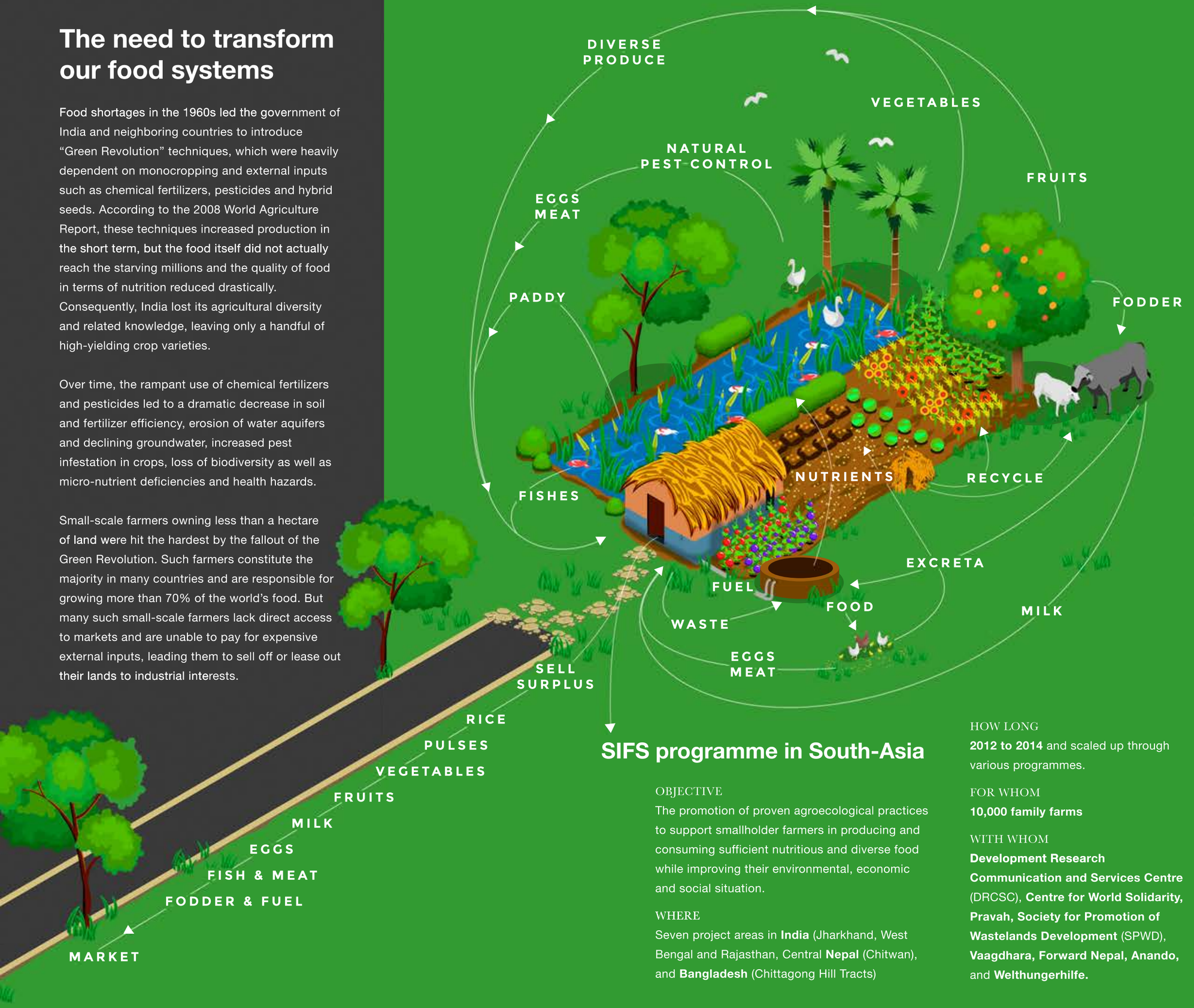
Soil, plants, animals, insects, flora, fauna and humans are brought together to create a holistic ecosystem. These elements are combined in such a way and proportion that each element helps the other; and the waste of one is recycled as resource for the other

The need to transform our food systems

Food shortages in the 1960s led the government of India and neighboring countries to introduce “Green Revolution” techniques, which were heavily dependent on monocropping and external inputs such as chemical fertilizers, pesticides and hybrid seeds. According to the 2008 World Agriculture Report, these techniques increased production in the short term, but the food itself did not actually reach the starving millions and the quality of food in terms of nutrition reduced drastically. Consequently, India lost its agricultural diversity and related knowledge, leaving only a handful of high-yielding crop varieties.

Over time, the rampant use of chemical fertilizers and pesticides led to a dramatic decrease in soil and fertilizer efficiency, erosion of water aquifers and declining groundwater, increased pest infestation in crops, loss of biodiversity as well as micro-nutrient deficiencies and health hazards.

Small-scale farmers owning less than a hectare of land were hit the hardest by the fallout of the Green Revolution. Such farmers constitute the majority in many countries and are responsible for growing more than 70% of the world’s food. But many such small-scale farmers lack direct access to markets and are unable to pay for expensive external inputs, leading them to sell off or lease out their lands to industrial interests.



SIFS programme in South-Asia

OBJECTIVE

The promotion of proven agroecological practices to support smallholder farmers in producing and consuming sufficient nutritious and diverse food while improving their environmental, economic and social situation.

WHERE

Seven project areas in **India** (Jharkhand, West Bengal and Rajasthan, Central **Nepal** (Chitwan), and **Bangladesh** (Chittagong Hill Tracts)

HOW LONG

2012 to 2014 and scaled up through various programmes.

FOR WHOM

10,000 family farms

WITH WHOM

Development Research Communication and Services Centre (DRCSC), **Centre for World Solidarity, Pravah, Society for Promotion of Wastelands Development** (SPWD), **Vaagdhara, Forward Nepal, Anando,** and **Welthungerhilfe.**

What are Sustainable Integrated Farming Systems (SIFS)?

SIFS represents a universally applicable approach, through which smallholder farmers assess their resources and constraints and create innovative and technologically appropriate solutions based on traditional and scientific knowledge. SIFS considers the farm and its interconnected environment as a self-contained, self-sustaining ecosystem responsible for creating and maintaining its individual health and vitality without any external or unnatural additions. The approach addresses in a holistic and systemic manner the dimensions of food, nutrition, energy and livelihood security as well as climate change adaptation and biodiversity conservation.

How to create SIFS?

Farmer Field schools provide in one year the necessary knowledge to study, design and manage diversified agro-ecosystems that are both productive and natural resource conserving. Research and experimental learnings include cycles of knowledge sharing and joint action to increase system productivity. **A community based participatory monitoring system** helps to track the farming sub-systems, diet and crop diversity, resource flow, external inputs, number of biodigestors, soil and water conservation, and income. Market access is facilitated by local cooperatives and common facility centers to ensure better processing, packaging and marketing of the agricultural produce. Locally established **Participatory Guarantee Systems** (PGS) enhance producer level traceability and provide an ecological guarantee to consumers based on verifiable trust, while avoiding the entry barriers of third-party certification.

Impacts

10,000 families gained access to healthy and diverse food. **70% of the women farmers** now consume a much larger variety of nutritious foods.

69% of the farmers increased their productivity by transforming fallow lands into fertile and polycultural lands.

75% of the farmers are producing more than one crop and are growing 5-7 different kinds of vegetables. They are now able to cover their input needs by recycling several tons of biomass every year.

88% of the farmers have increased their net-income by diversifying the sale of a variety of produce, with most farmers having doubled their income.

Sulochana Devi

Agro Ecologist

Rediscovering food and farming

Sulochana started out with a single cropped farm of 1.2 hectares, which produced rice in the monsoon season using fertilizers and pesticides. The farm lay fallow for the rest of the year. At her farmer field school, she rediscovered farming and food. Through participatory learning methods, she charted out available resources, learnt about the food groups, drew up her farm plan, improved soil and water conservation and effective management of nutrients, pest and diseases. She now stores different kind of vegetables in a double layered brick chamber, which keeps them fresh for a week, and uses her cooperative's oven to make rice pops, which are then packaged and sold.

Women are rarely acknowledged for their contributions to the male-centric farming sector in South Asia. Individuals from tribal background like Sulochana Devi are changing this mindset through the adoption of economically viable agroecological farming methods.

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