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For Small Farmers Future

Pathways for Resilient Small Farms in South Asia

Smallholder farmers can choose and adopt right adaptation strategies in the context of climate change to ensure sustainable and local food security, when enabled through appropriate technical blending and sensitive institutional innovations.

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South Asia Co-ordination Unit, Caritas India,
CBCI Centre, 1 Ashok Place, New Delhi 110001
Tel: (91 11) 23363390, Email: sacu@safbin.org

Smallholder Farmers

Farmers depending on small piece of cultivable land (varies in countries) and practicing subsistence family farming to meet the dietary (nutritional) requirements of the family.

What is enabling

Enabling environment is essential to ensure that small farmers have access to knowledge, skills and necessary technical, material and financial resources to take informed decision or action.

What is technical blending

It is the process of selecting the culturally appropriate and socially acceptable fusion of traditional and conventional innovations or practices.

What is institutional innovation

Incubating a blend of institutional system to maximize the participation, cooperation, collaboration, networking and institutional linkages among stakeholders

What is sustainable and local food security

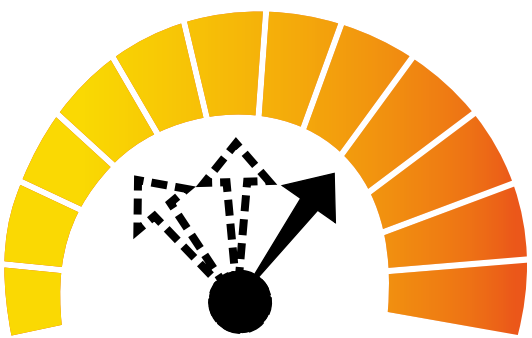
It is the level of stable access and availability of culturally preferable and socially acceptable safe and nutritious food locally to meet the dietary requirement of all people at all times.

Adaptive Farming is:

- Understanding of the local environment and agro-ecology
- Identification of the problems of climate variability and change
- Identification of locally feasible and acceptable solutions
- Testing of the solutions to identify the best results
- Proactive action (precautionary) to overcome the problems
- Mutual sharing and learning

South Asia Scenario

- South Asia hosts the world's largest number of smallholders
- More than 70% farmers in South Asia are smallholders and mostly practice subsistence agriculture
- Chronic malnutrition (1/3rd of the worlds malnourished in South Asia)
- Increasing vulnerability to climate change and signals of change
- Large proportion of rainfed agriculture in arid & semi-arid conditions
- Low productivity and reducing trend of landholding across the region (Avg. landholding 1 - 1.5 ha)
- Vanishing traditional practices and agro-biodiversity
- Lack of farmers access and control over farming inputs, socially acceptable and culturally appropriate food (Food Souveirignty)
- Excessive use of chemicals and external dependency for farming inputs
- Lack of mainstream focus on agricultural research and extension services favourable to smallholder farmers
- Weak agricultural extension system across the region (last mile reach and time delay)



Climate Variability

- Advancement, delay and fluctuations in monsoon and rainfall events (increased climate variability)
- Prolonged dry spell during cropping season (at critical stages)
- Decreased rainfall during critical stages of crops
- Increased frequency of drought events
- Increasing trend of maximum and minimum temperatures events
- Increase in pest, insect and disease infestation
- Increasing trend in the intensity and frequency of extreme events

SAF-BIN

Building Resilience to Climate Change through Strengthening Adaptive Small Scale farming system in Rain fed Areas in Bangladesh, India and Nepal.

SAF-BIN (Strengthening Adaptive Farming in Bangladesh, India & Nepal) is an action research programme under the European Union Global programme on Agriculture Research for Development (ARD). It is a multi-dimensional action research that address the agricultural development challenges of smallholder farmers in South Asia. It is an initiative to promote local food and nutritional security through adaptive small scale farming in four rainfed Agro Ecosystems (AES) in South Asia.

Caritas India, Caritas Bangladesh and Caritas Nepal came together with Caritas Austria and University of Natural Resources and Applied Life Sciences (BOKU), Austria and the associate partners to address the Food Security and Climate Change Challenges of the Smallholder Farmers living in rainfed areas in South Asia.

Overall Objective

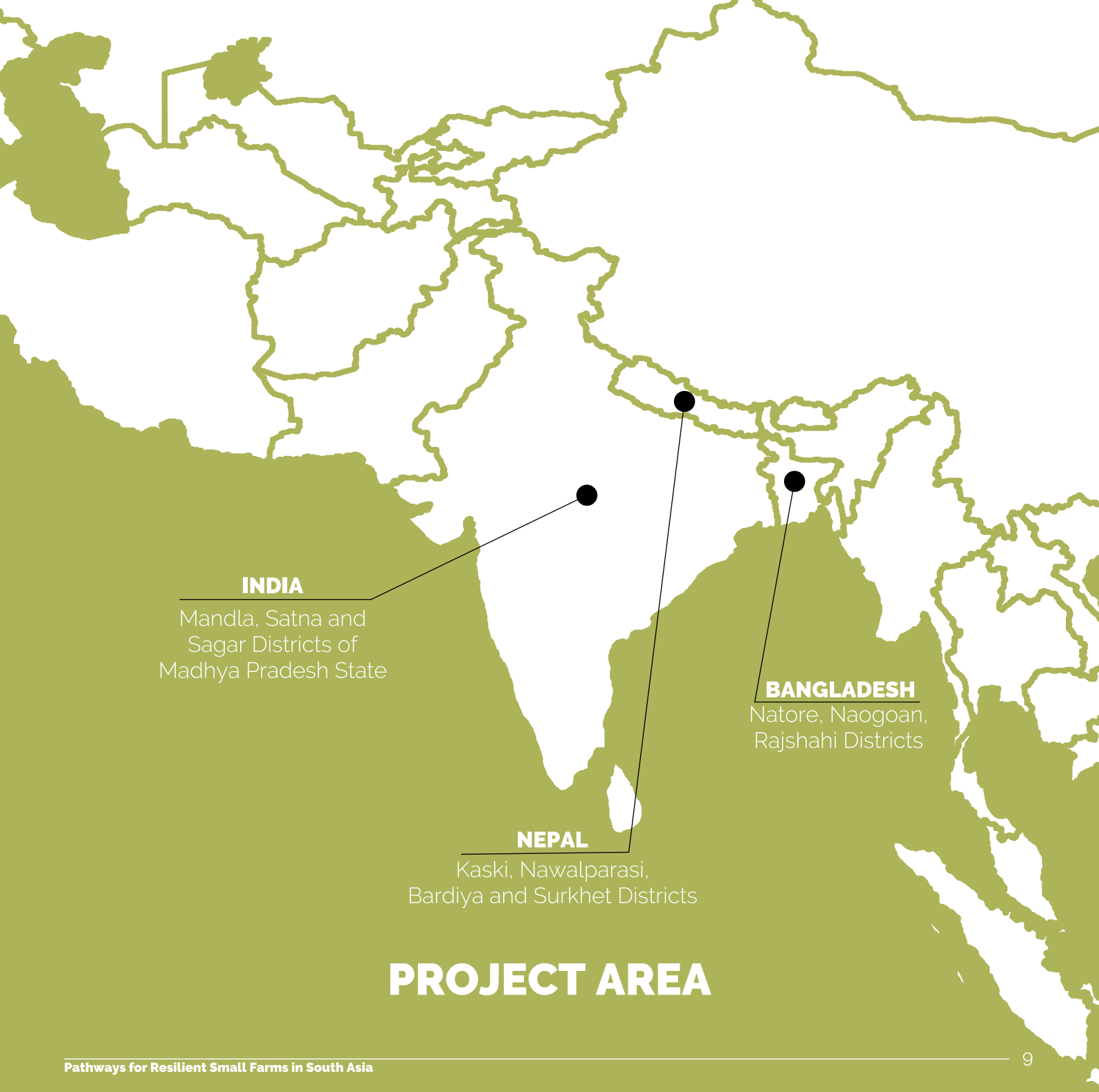
Promote local food and nutritional security through adaptive small scale farming in 4 rainfed AES in South Asia in the context of climate change.

Specific Objectives

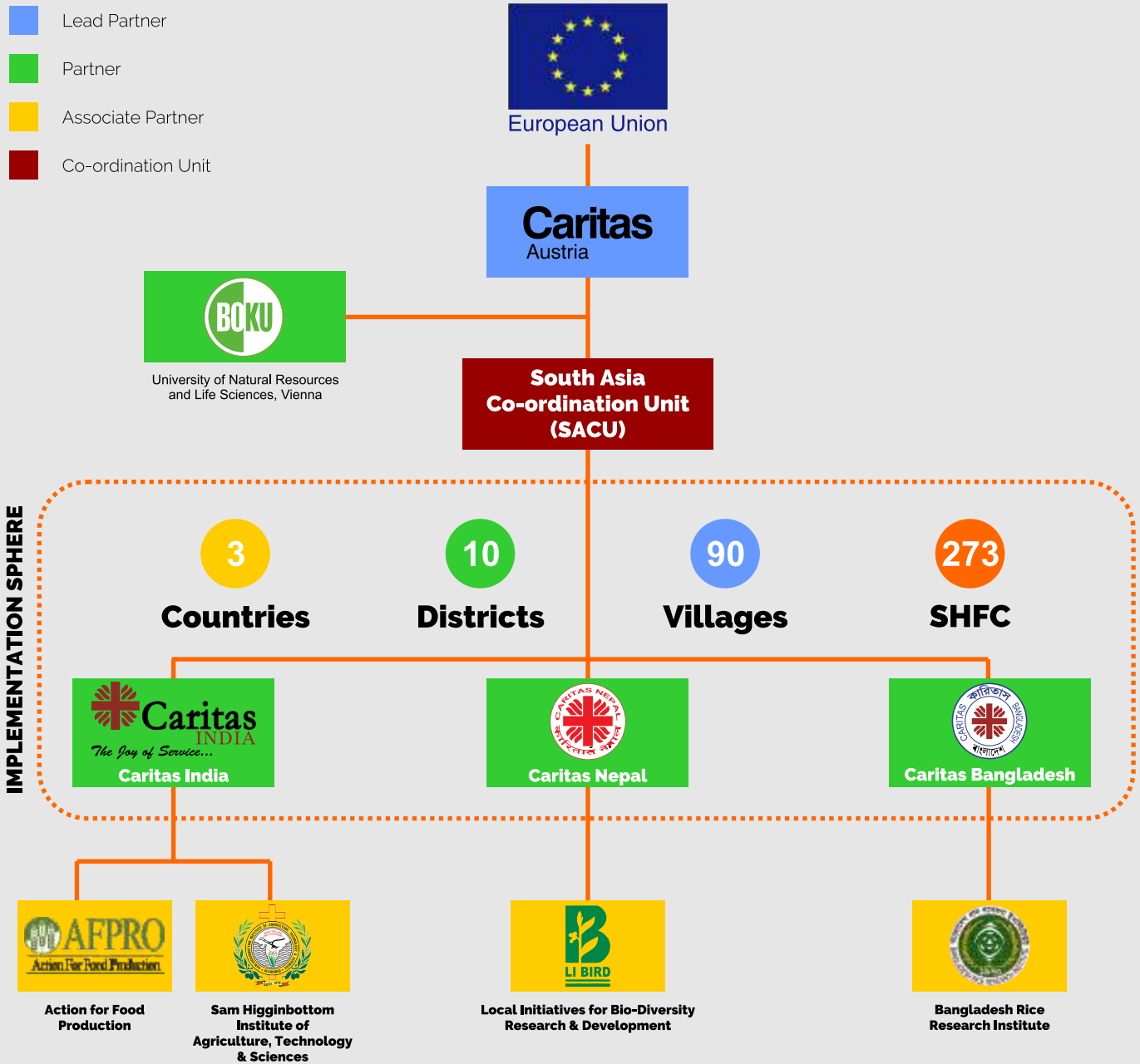
- Screen and document innovations in traditional food production, distribution and consumption system of Small Holder Farmers (SHF- FPDCS) with respect to climate change adaptations, mitigation and around nutritional security;
- Collectivize and/or strengthen SHF institutions for an organized and sustainable approach;
- Test potential of SHF-FPDCS models designed through blending traditional and modern innovations for their abilities to adapt, mitigate and ensure nutritional security;
- Influence national research and policy agenda for promotion of collectivized SHF-FPDCS to adapt to and mitigate climate change and nutritional security

Expected Results

- Increased understanding and use of documented innovations in rainfed SHF-FPDCS as pro-poor research and policy options towards adaptive food security and climate change mitigation.
- Improved productivity, diversification, and adaptation in small farms and enhanced food and nutritional security of SHF in vulnerable and remote rainfed AES in the context of climate change.
- Enhanced appreciation of the National Agriculture Research System (NARS) of cross-cutting issues affecting climate change and food security viz. cultural identity, gender, collective action, sustainability, health and natural resource base.
- Innovative multi-stakeholder partnerships & dialogue among SHF collectives, Civil Society Organization (CSO), Agriculture Research and Extension agencies and policy makers leading to more inclusive and responsive policy.


INDIA
Mandla, Satna and
Sagar Districts of
Madhya Pradesh State
BANGLADESH
Natore, Naogoan,
Rajshahi Districts
NEPAL
Kaski, Nawalparasi,
Bardiya and Surkhet Districts
PROJECT AREA

Project Management Structure




sof bin
Earthworm Compost
কেঁচো সার

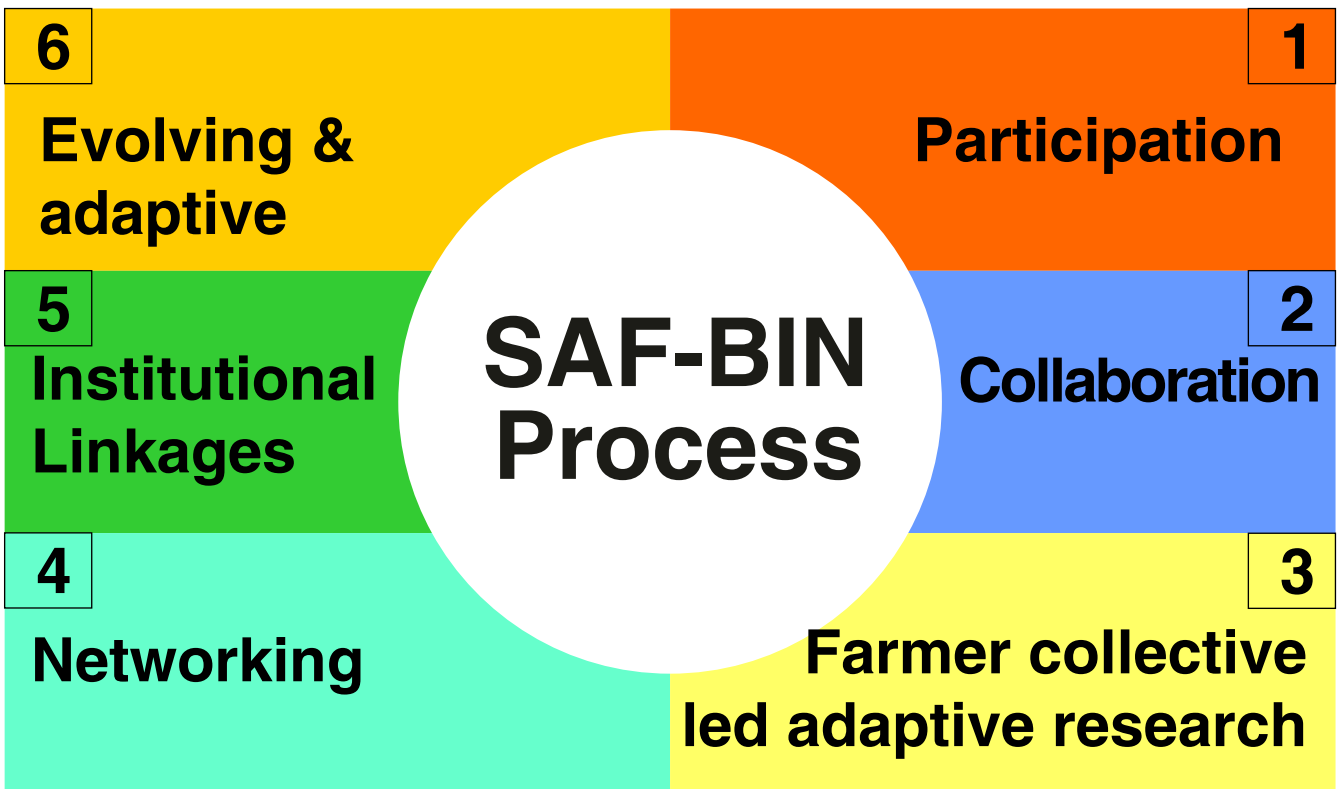
Processes of Intervention

Situation Analysis:

- Secondary Review
- Primary appraisal of Food Production, Distribution and Consumption Systems of Smallholders
- Scouting and Screening of Innovations

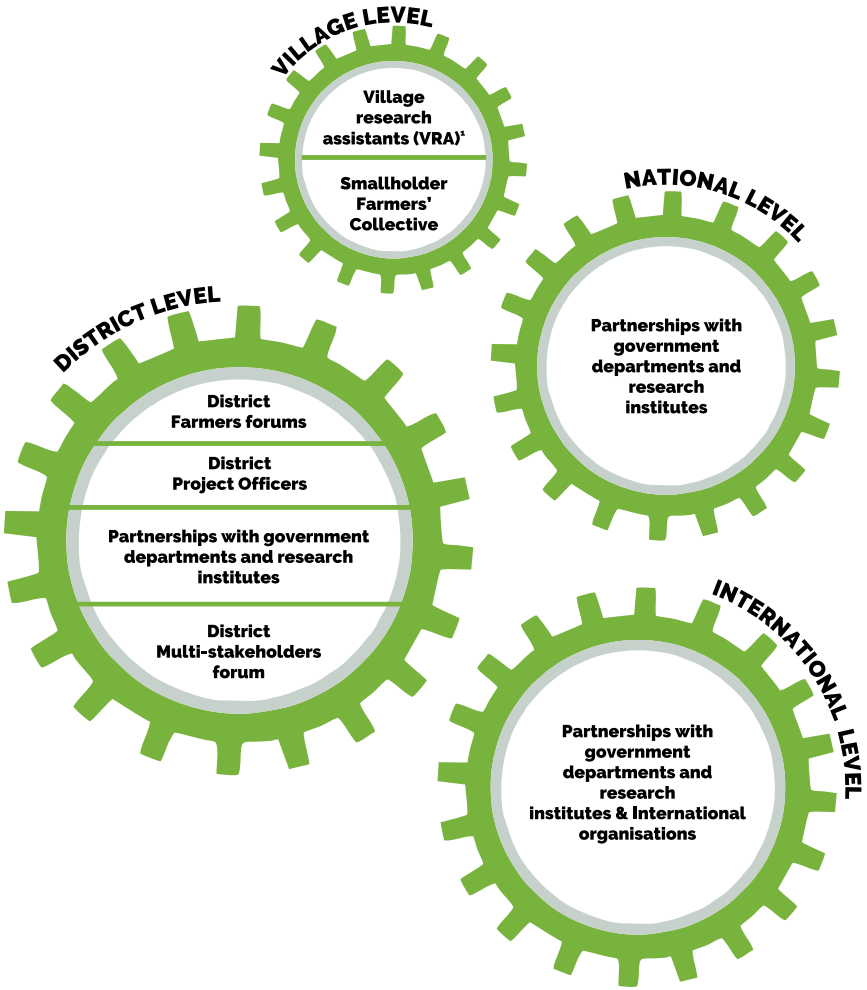
Institution and Capacity Building

- Formation and strengthening of smallholder institutions (SHFC, DFF, DRC, VRC)



Partnerships

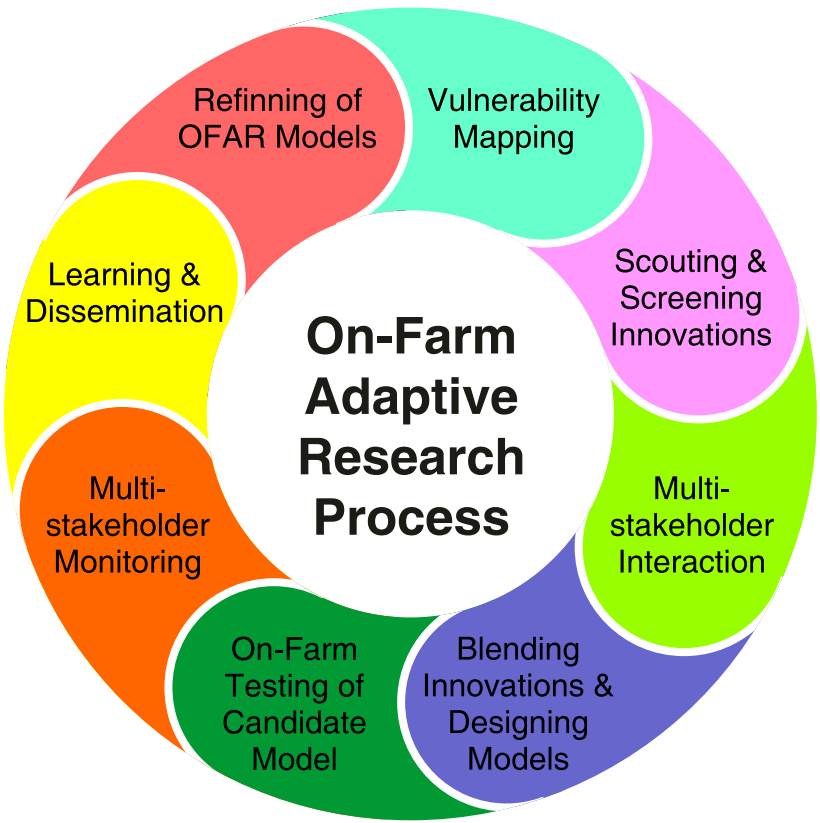
The partner organisations have developed partnerships at various levels between organisations, smallholder farmers and their stakeholders. These partnerships have enabled smallholder farmers to engage effectively with various stakeholders to solve their issues and challenges in the context of climate change and food security. Given below is the partnerships developed in SAF-BIN.




বাংলাদেশ, ভারত ও নেপালের বৃষ্টি নির্ভর এলাকার ক্ষুদ্র কৃষকদের দক্ষতা
বৃদ্ধির মাধ্যমে জলবায়ু পরিবর্তনের সাথে খাপ খাওয়ানোর সক্ষমতা বৃদ্ধি
safbin
সমস্যা : ছাপমারা বৃষ্টি, কম অর্থপূর্ণ মাটিতে আর্দ্রতা।
মডেল : উচ্চফলনশীল গমের জাত যাচাই পরীক্ষা।
গমের জাত : শতাব্দী
বীজ বপনের তারিখ : ২৩/১১/২০১৩
পরিমাণ : ১০ শতাংশ
Caritas

Smallholder Collective Led On-Farm Adaptive Research

- Vulnerability Assessment and identification of problems by farmers
- Blending of traditional and conventional innovations and knowledge systems
- Multi-stakeholder engagement
- Design and testing of OFAR models
- Generating learnings from the trials through collective monitoring
- Multi-stakeholder monitoring mechanism
- Refining and testing of refined models



DISSEMINATION CHART

Dissemination mapping tool was developed and used in the project to identify the extent to which the project has contributed in spreading good agricultural practices innovations practiced by the smallholder farmers. The above figure is depicting the spread of technology beyond a project village in India.

Dissemination of Learning

- Documentation of learnings
- Publication of research results
- Dissemination of learnings at local, national and international levels
  - IEC materials / reports
  - Awareness events
  - Cross learning visits
  - Exposure visits
  - Conferences


বাংলাদেশ, ভারত ও নেপালের বৃষ্টি নির্ভর এলাকার ক্ষুদ্র কৃষকদের দক্ষতা
বৃদ্ধির মাধ্যমে জলবায়ু পরিবর্তনের সাথে খাপ খাওয়ানোর সক্ষমতা বৃদ্ধি
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90
Project
Villages
273
Smallholder
Farmers
Collectives
4180
Project
Smallholder
Farmers
10,000
Smallholder
Farmers
Reached out
(2015)

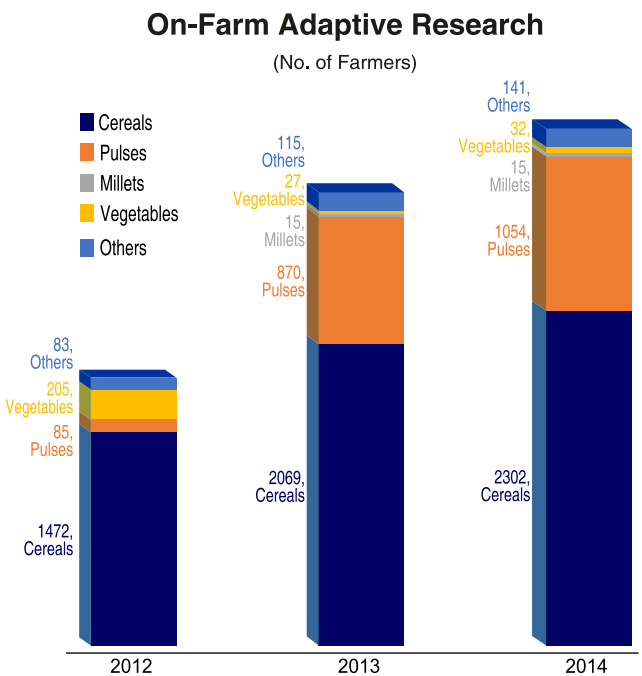
Major Achievements

- ⇧ Food security and sufficiency (number of food secure days & surplus production)
- ⇧ Access to culturally preferred and socially acceptable food
- ⇧ Understanding of the farmers on the factors of climate variability and climate change
- ⇧ Focus of the farmers on farming system approach
- ⇧ Capacities of the farmers to test and research favourable options suiting local conditions
- ⇧ Linkages with stakeholders of agriculture in the area
- ⇧ Unity, sharing and learning mechanism among farmers
- ⇧ Appreciation among stakeholders on the FPDCS of smallholder farmers
- ⇧ Upscaling of the farmers learning among larger geographical areas
- ⇧ Capacities of students and researchers on On-Farm Adaptive Research

Food availability of the farmers have increased from 6 months to 10 months per year.

INCREASE IN FOOD BASKET			
2011	9	10	18
2016	12	21	31

Food Basket: Numbers of locally produced items in the food have increased significantly in the project area.

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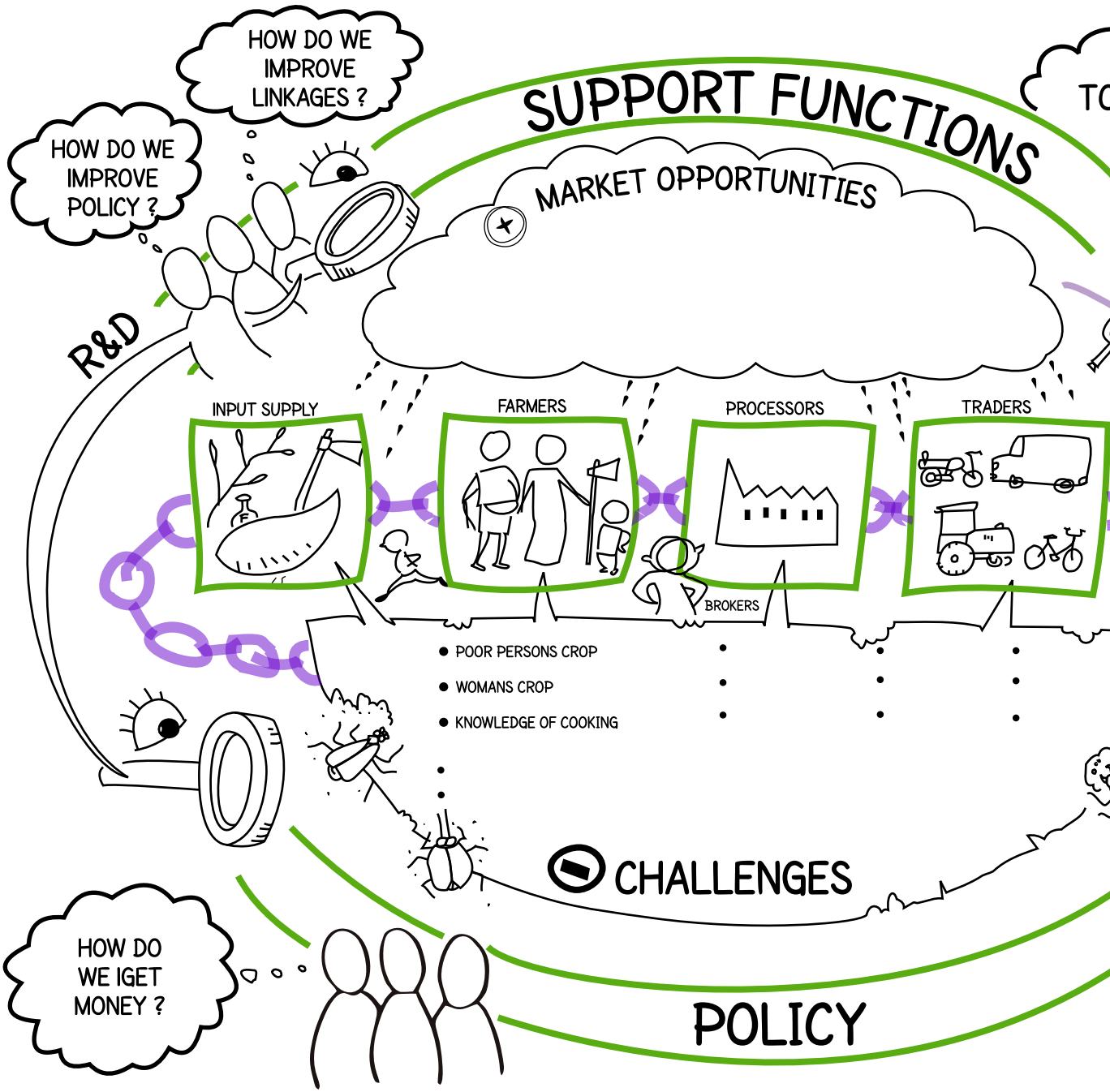
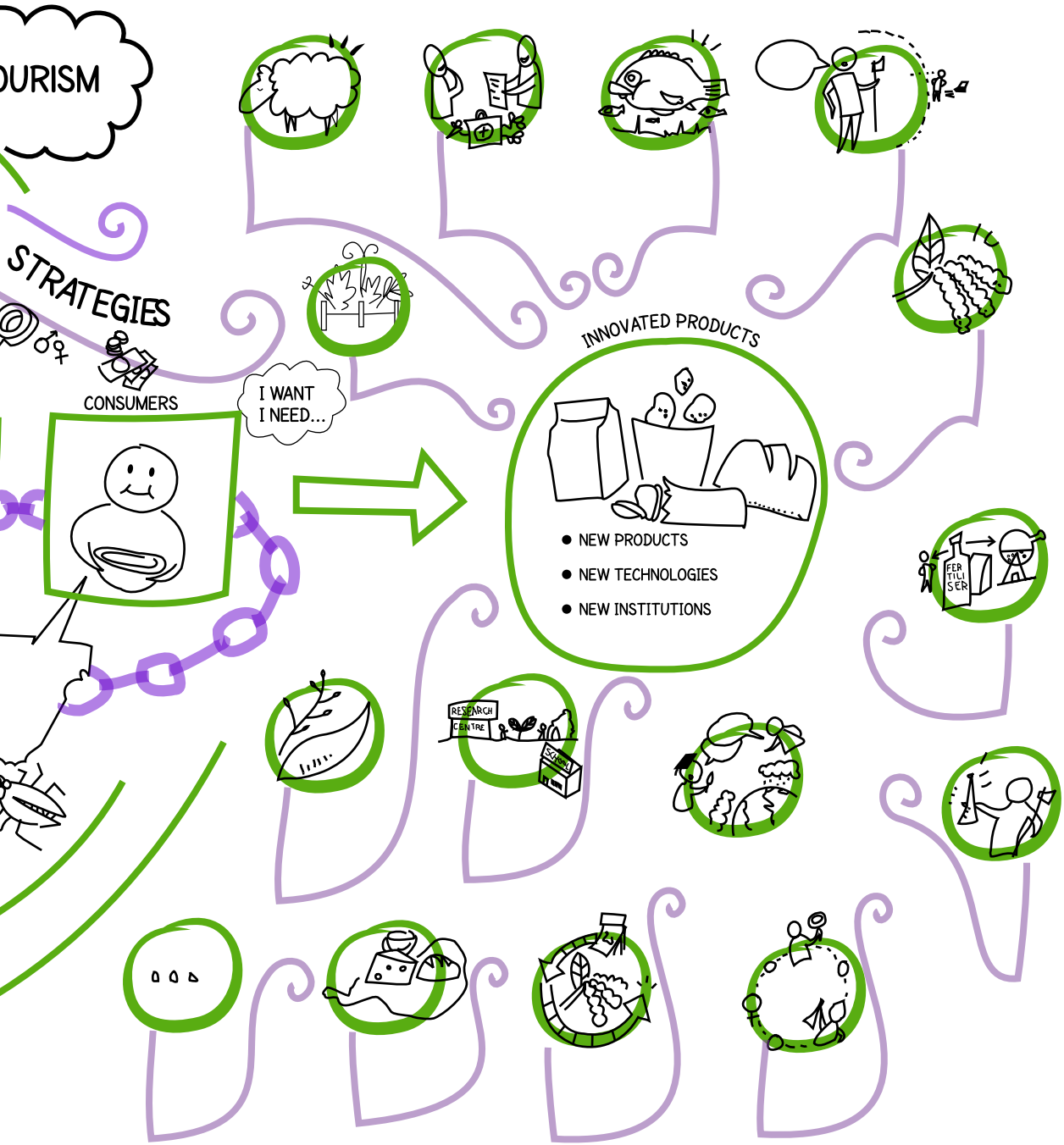
How Smallholders adapt to Climate Change & ensure their Food Security

Economical	Low cost adaptation (Technology / Extension) model
	SHFC + VRA + DPO supported with District Farmers Forum
	Comparative analysis of the cost of this model with the benefits received by the farmers
Social / Institutional	Collectivised approach help better adaptation
	Institutional partnership / collaboration
Technical / Extension	Local wisdom, resources and practices in sync with modern technical solutions
	Better control of farmers, better adoption and farmer led dissemination
	Not only products but also practices
	No size fit all approach (cropping pattern approach in Bangladesh, drought proofing in Nepal, agro-ecological approached in India (pest & insect management, SRI, SWI, organic inputs)


HOW DO WE IMPROVE LINKAGES ?
HOW DO WE IMPROVE POLICY ?
SUPPORT FUNCTIONS
MARKET OPPORTUNITIES
R&D
INPUT SUPPLY
FARMERS
PROCESSORS
TRADERS
BROKERS
POOR PERSONS CROP
WOMANS CROP
KNOWLEDGE OF COOKING
CHALLENGES
HOW DO WE IGET MONEY ?
POLICY


OURISM
STRATEGIES
CONSUMERS
I WANT
I NEED...
INNOVATED PRODUCTS
NEW PRODUCTS
NEW TECHNOLOGIES
NEW INSTITUTIONS
RESEARCH CENTRE
SCHOOL
FER TILI SER

General Recommendations for building resilience of smallholders in South Asia

- Agriculture should be seen beyond science (cultural and social aspects should be considered while taking decisions)
- Establish adequate mechanism for technology transfer (last mile reach)
- Farmers should be seen as an innovator and not as a receiver of knowledge and inputs
- Focus the development research on the issues of smallholder farmers
- NARS should focus on promoting socially acceptable and culturally preferred food systems
- Address the skewed food basket / shifting food systems
- Reduce the external input dependency in agriculture
- Uphold the rights of farmers as the most important aspect
- Provide sufficient exposure to students on the traditional agricultural wisdom (focus of educational system)
- Focus on making farming a profitable and attractive business
- Build capacities of farmers to address abnormalities in climate
- Facilitate marketing of smallholder produce
- Focus on developing low cost, environmental friendly alternatives to high input oriented inorganic farming
- Invest on improving the natural resources and bio-diversity.
- Restrict the control of multinationals on seed market and facilitate seed farmers concept
- Document and use the traditional knowledge & practices
- Follow farming system approach suitable to the agro-ecological conditions

Recommendations

Government's	Potential of Research partnership with CSO & Smallholder Farmer institutions
	Promote village level smallholder institutions and resource centres and also link them to NABARD, KVK, SAU & Extension Dept and also explore linkage with smallholder producer organisations (SFPO) / agri-clinics
	Encourage local crops and practices under national mission on sustainable agriculture and promote small research trials around them
	Consider supporting longer duration initiatives (7 - 10 years) around agriculture and research for desired impact on smallholders
Donor's	Support alternate discourses around community led agro-ecological approaches and help dialogue with the mainstream
	In line with SDG goals 2, 12, 13, 15 & 17, help smallholders to ensure their food and nutritional security through promotion of sustainable agricultural practices as an adaptation strategy in the context of climate change and stop land degradation and bio-diversity loss by promoting sustainable consumption and revitalising global partnership around adaptive farming
Caritas / CSO's	Develop an on-farm adaptive research portfolio within sustainable agriculture
Corporate Houses	Soil resilience & Carbon Capture potential of Smallholder Farmers Adaptive Farming (SFAF)
	Potential of urban sustainable / consumption through SFAF

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Sunil Simon
Pranab Ranjan Choudhury

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Patrick Hansda

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S.M. Zillur Rahaman
Sunil Simon

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South Asia Co-ordination Unit
Caritas India, CBCI Centre
1 Ashok Place, New Delhi 110001
Tel: (91 11) 23363390, Fax: (91 11 23715146)
Website: www.safbin.org

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