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For Small Farmers Future

CARITAS BANGLADESH
কারিতাস বাংলাদেশ

Naogaon
District Assessment Report

This publication contains the results of a village level assessment carried out by Caritas Bangladesh in 10 SAF-BIN project villages in Naogao district, Bangladesh.
The base for this report was literature review conducted by the Caritas Bangladesh team. Additionally interactions with the involved communities were used to conduct Participatory Rural Appraisal, household surveys, focus group discussions and in depth interviews.

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Summary information of working area

(Basic information of 10 hamlets from Patnitala upazila under Naogaon district)

Upazila		**Patnitala**					District	**Naogaon**	
Altitude		0		AEZ -3		FAO-AEZ-05			
Geographical Area (ha)		379.75		Agriculture area(ha)		300.9	Irrigated Area(ha)		38
Single cropped area(ha)	43.1	Double cropped area(ha)		120		Triple cropped area(ha)			137.8
Area under horticulture/plantations		1		Area under pasture		No	Forest Area		8
Average Rainfall (mm)		1707.2 mm		Max Temp		30.52 ^{C}	Min Temp	21.20 ^{C}	
Main Soil Type		Sandy , Loamy and Clay Soil				Main land type		High, Medium & low and terrace	
Population	3721	No of HH		944		No of SHF HH		504	
No of Tribal HH	381	No of SC HH		No		Total Number of Other Vulnerable HH		--	
% of School Going Girl	68.51 %	Access to subsidized food supply		119		Average child (< 5 yrs) death per '000 birth per year		40	
Road Connectivity	3.7 KM	Electricity Connection		1 village		Mobile Network coverage		Yes	
No of SHG	30	Grain bank		No		No of Farmers' Institute		1	
No of Gardner/Nursery raiser	No	No of Resource/Lead Farmer		18		No of Organic farmer / Farmer practicing sustainable agriculture		No	
Rainfed Main Food Crop 1		Rice		Yield/ Ha		5.21	Area Coverage(ha)		203.7
Rainfed Main Food Crop 2		Mustered		Yield/ Ha		1.87	Area Coverage(ha)		38.73
Rainfed Main Food Crop 3		potato		Yield/ Ha		12.80	Area		21.1

Area under Integrated Farming	No	Area under IPM	84 ha	Area Under INM	No
Cow, Bullock & Buffaloes	Cow-1747 Bullock-261 Buffaloes-36	Goats, Sheep & Pigs	Goat-705 Sheep-109 Pigs-204	Poultry	4155
Milk Production (liter)	143.95	Fish Production (kg)	54554.83	Egg Production	360 (nos)
Trend in Temperature	Increase	Trend in Rainfall	Decrease	Trend in Extreme events	Extreme temperature in Summer erratic rainfall

What are farmers' perceptions and indicators (visibility) on Climate Change?

Farmers' perceptions on Climate Change:

Rainfall:

- Earlier (15-20 years back) heavy rain it used to occur during June-July now rains starts late in August- September.
- Earlier cats and dogs' rain used to occur for 5-7 days but now it is not happening.
- Earlier irrigation during rainy season was not required but now farmers use supplemental irrigation even in rainy season.
- Rainfall decreased in Kharif season even there haven't no rain.

Temperature:

- Earlier length of winter seasonwas 4-5 months which reduced after 1980 to 1-2 months **(winter become short)**
- Earlier up to end of March we used to feel cold now we feel warm from mid of February.
- Heat wave occurrences and frequency increased during boro flowering

Misty weather:

- Earlier the misty weather used to observe only in December and January now misty weather observes even in March.

Farmers' Indicators (visibility) of climate change:

- The transplanting time of Aus seedling is changed.
- The ponds, cannels and open water bodies become less water even in rainy season (earlier enough water used to remain year round).
- Increasing cultivation of less water consuming crops.
- Earlier farmers used to get enough water from tube-wells now farmers are not getting water 2-3 months.
- Decreased local species of fish including snails, crabs, kucha etc.

What are the vulnerabilities on agriculture (including livestock, fisheries etc.)?

Crops:

- Increased diseases and pests.
- Decreasing yield (because of drought and not raining timely)
- Crop variety has changed.
- Increasing production cost.
- Increasing food insecurity.
- Increasing unfertile grain due to high temperature and heat wave.

Livestock:

- Increasing viral and bacterial diseases of poultry and livestock.
- Because of decreasing of open grazing opportunity; scarcity of fodder is increasing resulting poor health.
- Production and reproductive ability of the livestock are decreasing.

Fisheries:

- Because of dried-up of ponds, cannels and open water bodies the local species are about to extinguished.
- Breeding water body availability has decreased resulting natural fish availability is decreased.
- Diseases increased.
- Profession of the fisherman is changed.
- Floodplain land is decreased.
- Because of increased temperature dissolve oxygen in water is decreasing which resulting on growth of fish.

				Coverage(ha)	
Irrigated Main Food Crop 1	Rice	Yield/ Ha	5.5	Area Coverage(ha)	38
Foodscape 1	Watered rice, Bread, Vegetables	Foodscape 2	Rice,Vegetables,pulse, egg and Fish	Foodscape 3	Rice, Vegetables,fish and egg
Main Cropping pattern-rainfed	Rice + Potato/mustered			Area (ha)	262.9
Food Availability	Rice,wheat, Mustered, potato, Fish,Mango,Guava,Jackfruit, Onion, garlic, turmeric vegetables etc.	Own Production	Rice, Wheat, Mustered, potato, Fish, vegetable Mango,Onion, garlic, turmeric	From Outside	Rice, wheat, Oil, Sugar,Tea, salt, biscuit, Fish, Meat , vegetable etc.
No of times crop (key food crops) failure in last 5 years	Rice, Potato	Any famine conditions in the past 5 years in the Village			No
% households with more than 2 months of food insecurity	37.25	%SHF households with more than 2 months of food insecurity			32.4
Key Storage Technology for food crops	Jute Bag,earthen pot. Use of Neam leaf inside storage Place	Key Processing Technology for Food Crops			No Rice Meal in the Working Village

Main Food Crop Varieties	Indigenous/ HYV/ Hybrid **Indigenous:** **Rice:** Indurshail, Swarna, Jra, parija, Kajollata, Chiniatop **Wheat**- Local Mustard: Torab, Highland, Rai **Potato**- Patnai, lalpakri, Sadapakri, Satal **HYV :** **Rice-:** BINA-7, BRRI dhan-28,29, 33, etc. **Wheat:** Kanchon, Sonali **Mustard: -** Tori-7 **Potato:** Cardinal, Diamond	**Seed of Main food Crop-** Rice, Wheat, Mustard	**Local/ External-** Farmer own house, BADC Dealer and Open Market

Strengthening Adaptive Farming in Bangladesh, India and Nepal (SAF-BIN) is an action research programme under the European Union Global programme on Agriculture Research for Development (ARD). It is a multi-dimensional research that address the agricultural development challenges of developing and emerging countries. 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. The programme is implemented by the Caritas Organisations in Bangladesh, India & Nepal in partnership with University of Natural Resources and Applied Life Sciences (BOKU), Austria and in association with Action for Food Production (AFPRO), India; Sam Higginbotom Institute of Agriculture, Technology & Sciences (SHIATS), India; Bangladesh Rice Research Institute (BRRI), Bangladesh and Local Initiatives for Biodiversity, Research and Development (LI-BIRD) to address the Food Security and Climate Change Challenges of the Smallholder Farmers living in rainfed areas in South Asia.