

Annex 6: Acronyms and Abbreviations

Acronym / Abbreviation	Elaboration
ATC	Agricultural Technical Committee
ADB	Asian Development Bank
AEZ	Agro Ecological Zone
AfDB	African Development Bank
AIS	Agriculture Information Service
BARI	Bangladesh Agricultural Research Institute
BAU	Bangladesh Agricultural University
BBS	Bangladesh Bureau of Statistics
BDS	Business Development Services
BFSA	Bangladesh Food Safety Authority
BMDA	Barind Multipurpose Development Authority
BSTI	Bangladesh Standards and Testing Institute
CALIP	Climate Adaptation and Livelihood Protection
CBOs	Community Based Organizations
CCRIP	Coastal Climate Resilient Infrastructure Project
CDSOP IV	Char Development and Settlement Project IV
COVID-19	Corona Virus Disease 2019
CSA	Climate Smart Agriculture
DAE	Department of Agricultural Extension
DAM	Department Agricultural Marketing
DCFs	Digital Champion Farmers
DPP	Development Project Proposal
DVC	Digital Village Centre
ERD	Economic Relations Division
FAO	Food and Agriculture Organization
FCS	Food Consumption Score
FFS	Farmer's Field School
FGs	Farmer's Groups
FIAC	Farmer's Information and Advisory Centre
FIES	Food Insecurity Experience Scale
GAFSP	Global Agriculture & Food Security Program
GAP	Good Agricultural Practices
GDP	Gross Domestic Product
GED	General Economic Division
GGR	Global Gender Gap Report
GHGs	Greenhouse Gases
GHP	Good Hygiene Practices
GoBD	Government of Bangladesh
HH	Household
HILIP	Haor Infrastructure and Livelihood Project
HRD	Human Resource Development
HVC	High Value Crop
ICT	Information and Communication Technology
ICU	Implementation Coordination Unit
IFAD	International Fund for Agricultural Development
IDB	Inter-American Development Bank
IGAs	Income Generation Activities
IPM	Integrated Pest Management

Acronym / Abbreviation	Elaboration
IT	Information Technology
LDC	Least Developed Country
LGED	Local Government Engineering Department
MDD-C	Minimum Dietary Diversity-Children
MDD-W	Minimum Dietary Diversity-Women
M&E	Monitoring and Evaluation
MMI	Missing Middle Initiative
MoA	Ministry of Agriculture
NBCC	Nutrition Behaviour Change Communication
NGOs	Non Government Organizations
ODA	Official Development Assistance
O & M	Operation and Maintenance
PACE	Promoting Agricultural Commercialization and Enterprises Project
PD	Project Director
PIU	Project Implementation Unit
PKSF	Palli Karma Sahayak Foundation
PO	Producer Organization
PP	Perspective Plan
PPP	Public Private Partnership
PSC	Project Steering Committee
RLF	Revolving Loan Fund
RMM	Results Monitoring Matrix
RPSF	Rural Poor Stimulus Facility
SAAOs	Sub Assistant Agricultural Officers
SACP	Smallholders Agricultural Competitiveness Project
SBKS	Sara Bangla Krishak Society
SDGs	Sustainable Development Goals
SE	Supervising Entity
SLCPs	Short Lived Climate Pollution
SMEs	Small and Medium Enterprises
SORT	Systematic Operations Risk Rating Tool
SPS	Phyto-sanitary Standards
TA	Technical Assistance
ToT	Training of the Trainers
USG	Urea Super Granule
US\$	United States Dollar
VC	Value Chain
VCCs	Virtual Call Centers
WB	World Bank
WFP	World Food Programme
WUG	Water User Groups
8FYP	8th Five Year Plan

Annex 7. Summary of the Country-Led GAFSP Proposal for Bangladesh

GAFSP grant funding. The Global Agriculture and Food Security Program (GAFSP) works to improve the income and food security of poor people in low-income countries through public and private sector investments, as well as technical assistance and advisory services. GAFSP aims to fill the financing and technical gaps in country-owned and country-led agriculture and food security strategies and plans. GAFSP invites Governments and Producer Organizations (POs) to submit proposals for investment grants and technical assistance to support the implementation of country-led initiatives. The Call for Proposals is being launched in the context of the ongoing COVID-19 global pandemic. Therefore, GAFSP funding will support countries' medium- to long-term COVID-19 response efforts for a more sustainable, inclusive, and resilient recovery of their agriculture and food systems in a changing climate to 'build back better'. Bangladesh is among the eligible countries for grant funding application.

The Country-led proposal of Bangladesh. The Ministry of Agriculture (MoA) is preparing a country-led proposal, in close partnership with IFAD and FAO, which are proposed to be the proposed project's preferred Supervising Entities, respectively for investments and for technical assistance.

The MoA intends to apply for a GAFSP grant funding of US\$25 million, with private sector investment of US\$2 million from participating agro-enterprises' matching, and government matching of US\$5 million mainly in participating staff salaries, offices, and ongoing programme matching in agricultural machinery and processing and storage facilities. Project cost is estimated for a total of US\$32 million, all financiers combined.

Geographic coverage. 18 districts (out of total 45) and 97 upazilas (out of 257) will be covered by project implementation. The areas covered fall under three of the six climate hotspots identified in the Government's Bangladesh Delta Plan, 2100¹ – the Coastal Zone, the Barind and Drought Prone Areas, and the River Systems and Estuaries (Char) hotspot areas.

Climate Hotspot Zone	Districts	Remarks
Coastal Zone	Satkhira, Khulna, Borguna, Patuakhali, Bhola, Lakshmipur	6 of total 19
Barind and Drought Prone Areas	Rajshahi, Chapainawabganj, Noagaon, Bogura, Joypurhat, Dinajpur	6 of total 10
River Systems and Estuaries (Char)	Kurigram, Jamalpur, Gaibandha, Tangail, Pabna, Rajbari	6 of total 16

Target population, target group and targeting strategy. The proposed project districts cover 14.58 million acres of agricultural land, of which 50% is irrigated land. The project has the potential of directly reaching 800,000 rural households or 4,400,000 people. Female direct participation is estimated at 35%, youth at 40% and ethnic vulnerable people² at 20%. The selection of project beneficiaries will be undertaken based on an inclusive targeting strategy focusing on marginal and small farmers, with at least 80% of beneficiaries coming from these categories. Youth will constitute up to 20% of beneficiaries

1 GED, 2018. Bangladesh Delta Plan 2100: Bangladesh in the 21st Century. General Economic Division, Bangladesh Planning Commission

2 Data update by MoA from Statistics of proposed project districts.

and women participation will target at least 35%, ethnic vulnerable people 20%. The project will take existing or new farmer groups that are formed by local DAE for agricultural production and marketing as its entry point.

The project approach. This proposed project will be implemented over four years in line with the government's agriculture and food security development agenda as described in the Eighth Five-Year Plan (07/2020-06/2025). It will invest in restoring and developing agriculture productivity and diversification capacity as immediate reactions to the COVID-19 crisis and subsequently invest in strengthening the basis for a more sustainable and nutrition sensitive food system after the crisis, with a focus on "building back better". The project implementation will follow the Government DPP for approved donor-assisted project design reports; it will target the vulnerable men and women living in three climate hotspots identified in the Government's Delta Plan, 2100³ by taking the farmer groups as entry points to reach out to the vulnerable women, youth, ethnic groups among other target segments. The project will address the identified thematic focus areas of gender empowerment of women and girls, climate resilience and nutrition outcomes by: a) designing specific and exclusively tailored activities, and b) building relevant actions under activities to ensure the issues will be addressed, target groups reached and targets achieved.

Coping with COVID-19 and afterward. Bangladesh did not face a crisis of food shortage at national level but marginal and rural vulnerable groups have been severely affected in their daily income and food security. Negative impacts on agriculture can be summarized as: (i) disrupted agricultural supply chains, (ii) curbed food consumption behaviour of poor and vulnerable groups, (iii) widespread temporary unemployment and loss of income sources, (iv) reduced farmers' market access for procuring raw materials and hiring labourers, (v) destroyed underdeveloped productive capacities, (vi) low prices of forced sales of agri-products mainly at farmgate, (vi) increased food loss and waste, and (vii) adversely affected nutrition and food security. Therefore, shielding the agricultural sector from the vulnerabilities exposed during the COVID-19 crisis is essential to cope with the immediate shocks as well as to prepare better to ensure medium- to long-term food security

Immediate coping solutions. This proposal includes immediate response actions such as for example under component 1: diffusion of proven existing emergency packages and solutions for both consumption and production, identification of rapidly ready nutrition solutions for adaptation, household food-based system adoption with diversified nutrition sources, and under component 2 Covid-19 Response in Agri-Product Collection Points.

Building back better with medium and long-term perspectives. The majority of proposed interventions are related to building back better with longer perspectives but achievable effects in short-term. The project will address the priority areas of government investment priority in agriculture and food security, or a sustainable food system at its production or supply side, with project investments primarily on generation, diffusion and distribution of diversified varieties and new technologies, sustainable and climate-smart on-farm water management, reduction of post-harvest losses and improved market access for better price premium from informed nutritious and safe foods. The project will invest in decentralized and demand-led agricultural extension, research-extension-farmer linkage,

3 GED, 2018. Bangladesh Delta Plan 2100: Bangladesh in the 21st Century. General Economic Division, Bangladesh Planning Commission

post-harvest management, market access, e-commerce and digital solutions as stipulated in the government's Eighth Five-Year Plan, and these constitute the primary activities proposed in this GAFSP proposal. The proposed project will take advantage of the analysis of the private sector investments environments that has been undertaken by the ongoing SACP of MoA-IFAD cooperation. The analysis will be periodically updated by SACP management team and local stakeholders.

Components. Two technical components are proposed, namely Component 1 – Agricultural Diversification and On-Farm Water Management, and Component 2 – Post-Harvest Management and Market Access, supported by a Management and Coordination Component that includes policy advocacy. The project will support increased production diversification, identify market opportunities for both fresh and processed agri-products, value added post-harvest management, build agricultural competitiveness in stress tolerant and climate-smart, high-value and nutrition sensitive varieties and new technologies at both institutional and household level through two technical components supported by a project management component. FAO technical assistance will provide technical contributions in support of the three components in areas where its core competencies are recognized both in the country and worldwide. Cross-cutting themes will be addressed under proposed relevant activities and actions as integrated parts of the project implementation, being monitored with measurable indicators.

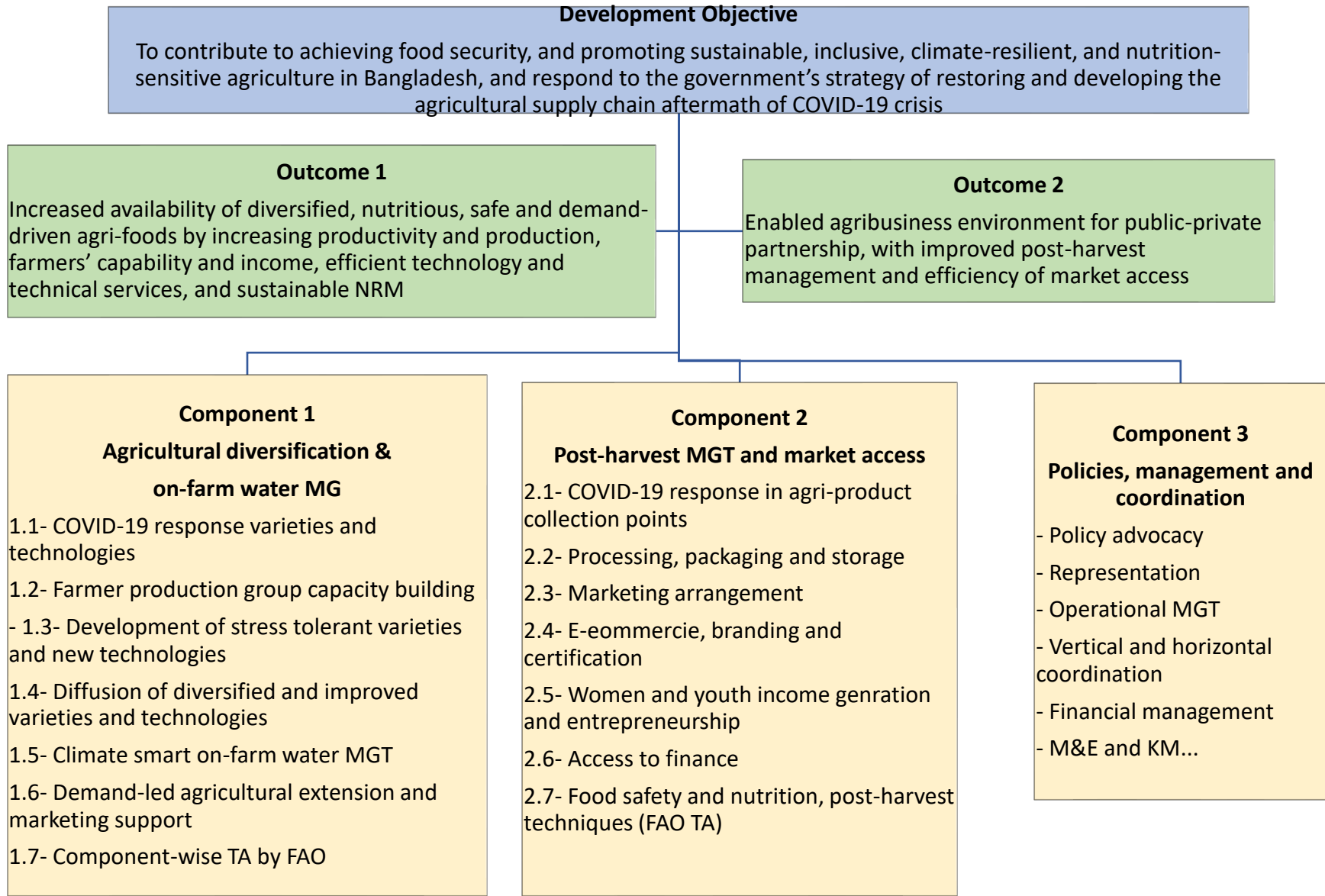
Implementation management. A central Project Implementation Unit (PIU) will be embedded in DAE of MoA with coordination focal points from DAM, BARI and other relevant departments and agencies. Under the overall management of this PIU, three Regional Project Implementation Units will be established and located in the project areas of Southern Coastal zone, Barind Tract and Char zone to assume the operational management of planning, coordinating, M&E, knowledge management and financial management in line with the project objective and design. The central PIU will be led by a Project Director appointed by MoA supported by a team of technical experts to monitor and evaluate project activities as they unfold. In addition, a Project Steering Committee (PSC) will be formed Chaired by the Secretary MoA and comprise of representatives from relevant Line Departments, ERD, the Planning Commission, relevant officers of the BARC, DAE and DAM, the supervising entity (IFAD), FAO, and Civil Society Organizations and farmers' organizations at the discretion of the Chair.

Supervising entity for investments will be IFAD and it ensures the related responsibilities and tasks under the framework of its country programme in Bangladesh, which will be mainly assumed by its Country Office in Dhaka, and supported by its Sub-Regional Hub in Delhi and its HQ in Rome.. IFAD will be responsible for supervising the overall effectiveness and efficiency of implementation, quality of operational management, financial management and fiduciary aspects, and procurement among others.

Supervising entity for technical assistance will be FAO. FAO will provide demand-led TA to the project as proposed under each component.

Following is an overview on the proposed project's development objective, expected outcomes and primary activities under different components.

GAFSP OVERVIEW FRAMEWORK



Annex 8: Summary of Community Consultation Workshops in Project Areas

The Barind Tract lies in north-western Bangladesh between the floodplains of the rivers the Padma and the Jamuna covering 7,727 km² area, which comprises 5.33% of the total area of the country (BBS, 2021). Based on the distinctive physiographic characters and agro-climatic conditions the Barind Tract is grouped into High Barind Tract (HBT) with 1600 km² of deep grey terrace, Level Barind Tract with 5049 km² of shallow grey terrace and North-Eastern Barind Tract with 1076 km² with deep grey terrace (BBS, 2021). The HBT is characterized by its terraced land with soil of low fertility, sparse vegetation, absence of major river channels, and comparatively low rainfall with a long dry period, during October-May, and thus, is clearly differentiated from other parts of the country. It is regarded as the most drought prone area of the country due to its relatively low and erratic precipitation, limited groundwater reserves and recharge, poor water holding capacity of surface soil in the post-rainy season along with high summer air temperature (Khatun et al., 2016, Nadiruzzaman et al., 2021). Drought is likely to become more frequent and intense in the HBT area due to climate change (Hossian et al., 2016). It is also important to note that changes in the timing of drought could be another negative factor and the impact would not only be on agricultural production, but also on availability of water resources for agriculture and domestic use particularly in the dry season. It is observed that in every 10 years this area is experiencing 107 mm less rainfall with very erratic distribution, which causes drought in monsoon season as well for the cultivation of the most commonly grown crop T. *Aman* rice. Absentee land owner, insufficient farm mechanization, poor market linkage and storage facilities causing fluctuating market price of the common produce, mostly fruits like mango, guava, litchi etc. are some of common challenges for sustainable agricultural production and improved livelihood of the people in this area.

There are 12 ethnic groups living in the area, who are mostly poor agricultural laborer and they are getting marginalized day by day. These indigenous community people are to be given priority in the project along with the smallholder and marginal farmers. A very strong coordination among the farmers, researchers, extension workers, NGOs, international organizations and market actors is to be encouraged in the project proposal.

Following interventions are prioritized for incorporation into the GAFSP proposal: i) adaption of short duration and drought & heat tolerant crop species and varieties such as minor cereal crops (like millet), pulses, onion, maize, mungbean, black gram grass pea, chickpea, lentil, mustard, safflower, linseed, barley, wheat, sesame and potato in light textured soil, tomato, spices etc., ii) enhancing year round homestead vegetable and fruit cultivation using Barind model, iii) promotion of export quality fruit cultivation like mango, dragon, guava, custard apple, sugar apple following Good Agricultural Practices (GAP), strengthening integrated water resource management through rain water harvest (mini pond), its storage and efficient distribution (by low cost PVC irrigation pipe or Fita pipe, iv) integrating the water and crop governance through digitization, v) Using water saving agronomic practices like conservation agriculture, vi) Fostering household level utilization of a range of nutrient dense combinations, recipes, preparation and processing technologies, vii) Value chain development and storage capacity build up for fruits, especially for mango (to make it available year round), viii) Women and young girl entrepreneurship development targeting both domestic and international market of the crop commodities available in the region, ix) developing agro-processing industry and linking it up with nutrition, x) market development with backward and forward linkage and involving public-private-partnership, xi) Formation of Farmers' cooperative to sustain their entrepreneurship, FFS etc., xii) Advancing farm mechanization with sufficient local service provider, xiii) sustainable management of soil acidity and soil fertility through accelerating sensor-based soil parameter determination and xv) facilitating portable solar energy use in agriculture including irrigation.

Wetland in Coastal Area. One of the most climate vulnerable areas of Bangladesh is the southern coastal wetland which covers about 20% of the country's total land area and over 30 percent of the net cultivable area accommodating more than one-fifth of the total population in the country. Crop productivity in the region is severely affected by a variety of climatic hazards including prolonged submergence/ water logging during and after the monsoon season and increasing soil salinity and drought during the dry season. Under the current climate change context the intensity of climate vulnerability in the coastal area of Bangladesh is increasing day by day. For example, salt-affected areas in the coastal region of Bangladesh increased by 26.71% in 2009 from 1973 (SRDI, 2010). This aggravating agro-climatic condition in the area is posing a serious threat for crop productivity by lowering the levels of cropping intensity, crop diversity and crop yield. As a result, the area is disadvantaged by poverty, food insecurity and limited livelihood opportunities, which is reflected by nearly 65% of the population in this area living below the poverty line compared to the country's average of 40% (World Bank, 2013).

Although salinity is a year-round problem in the coastal area of Bangladesh, it varies with the location as well as the timing of the year. Salinity level is usually lesser during monsoon season (June to October), which gradually increases from November with the onset of rainless dry period and gets its peak during March-May (Rasel et al., 2013; Shammi et al., 2019). Therefore, cultivation of *Rabi* and *Kharif I* crops are severely affected in the coastal region due to both salinity and drought. Among the salinity affected 19 coastal districts, the level of salinity is comparatively higher in Satkhira, Potuakhali, Borguna, Bhola, Noakhali, Laksmipur and Feni usually ranging from 2 to 16 dS/m (Seraj et al., 2006; Rasel et al., 2013).

The interventions which are suggested in the consultation workshop include:

1. Adaption of improved and modern stress tolerant crops and varieties (salinity and drought tolerant crops during Kharif I and Rabi and submergence tolerant crops during Kharif II). Salinity and drought tolerant crops are cowpea, water melon, sunflower, sesame, Wheat, maize, mungbean, barley, mustard, soybean, sweet potato, Summer Tomato in Satkhira; Fruits like Guava, malta etc.
2. Boosting use of both local innovative and modern component technologies such as vegetable cultivation in raised bed technique, Sorjan method of cultivation, Pyramid agriculture; Dyke cropping for vegetable cultivation, Floating agricultural practices, Year round homestead vegetable and fruit cultivation, soil less agriculture/ Hydroponic/ Aquaponics / Coco dust culture etc.
3. Facilitating Polder management and drainage
4. Infrastructure development for efficient irrigation is needed. Because of clayey soil surface irrigation is very troublesome and inefficient. Permanent subsurface irrigation systems will increase the use efficiency of irrigation water. Rain water harvest is to be strengthened through excavation/ re-excavation of ponds and canals.
5. Providing weather information alert to the community more easily and more precisely.
6. Strengthening women friendly, gender responsive and nutrition specific agricultural technologies.
7. Introduction of crop insurance for the vulnerable farmers, as crop production is risky for climate vulnerabilities.
8. Market linkage development involving women and youth in the value chain and entrepreneurship development.
9. Emphasizing wetland biodiversity management
10. Upgrading the existing extension services

Overall Inter-ministerial coordination is necessary for the management of crops, livestock, fishery, water management, beribadh and sluice gate management, trans-boundary river management.

Char Land. In Bangladesh, nearly 1 million hectare of land is char, which is distributed along the main rivers - Brahmaputra, Jamuna, Padma, Tista, Meghna - and their 500 branches and tributaries across the country. However, most of the char lands are concentrated in the northern, central and southern part of the country with different soil textures. Char land in the northern part is dominantly sandy, whereas char land in the southern part is mostly clayey. In the central part, char land is dominated by silty soil. The challenges associated with northern, mid region and southern chars include their vulnerability to climatic shocks such as landslides, flood, drought accompanied by heat etc. and their difficulty to access agricultural inputs due to their remote locations, poor communications, market linkage and storage facilities. There is always an uncertainty in char area, like when heavy rainfall occurs and river flow seems abnormal, all type of char can be destroyed. Because of their remoteness, technology dissemination is also very slow in the char land.

The following interventions are suggested to be incorporated into the GAFSP proposal targeting the for char land:

1. Barren fields/ Fallow lands are to be brought under crop cultivation. Main target should be focused on unstable char. Millet can be a good option as cover crop in the unstable char land. Other suitable crops may include pumpkin (pit method), linseed, ground nut, grass pea, barley, wheat, mustard, leafy vegetables, onion, coriander, linseed, fennel, sweet potato (super feed with B carotene), mustard, sunflower, onion, soybean, quinoa, chilli, maize, jute, fodder, corn silage, bio-fortified crops, Zn enrich crops etc.
2. Selection of crops is to be done based on the soil texture, soil properties, environment, water holding capacity etc., nutrition, especially micronutrients and nutrient dense food crops. High value crops with high nutrients should be included to link COVID 19 responses.
3. Facilities development for supplementary irrigation during Kharif I and Rabi season. This can be done by creating water reservoirs including pond, introducing solar irrigation, fita pipe irrigation, portable drip irrigation etc.
4. Cooperative market systems development and introduction of Local Service Providers (LSPs) from the women and young girls and their involvement in the value chain. Linkage with Financial Institution through Cooperatives.
5. Store house development including seed storage facilities. Solar based small scale storage facilities development, which can be movable.
6. Bringing char people closer to Government facilities like marketing, value chain etc. This is particularly very important under this COVID-19 pandemic situation.
7. Digital extension service, Krishi Call Centre etc. are to be strengthened, as road access is very poor. Char allowance for the government officials is to be given to promote technology transfer
8. Private sector and SME development involving women and youth. Private sector is to be linked along with public sector with the Char value chain. Development of micro seed entrepreneur.
9. Women empowerment, women and child nutrition, diversified food recipe, awareness on nutrition, behavioral change, locally readymade food during crisis period to overcome hidden hunger. School meal program can be introduced.
10. Mixed homestead fruit orchard development keeping the stability of char in mind. Homestead vegetable cultivation through sack culture during monsoon season
11. Farm mechanization like dryer, portable machineries etc.

Coordination of all the people/ researcher working in char land and initiating livelihood based program are important. All services from a single point through proper monitoring and coordination should be facilitated.

References

- BBS 2021. Statistical Yearbook of Bangladesh-2020. Bangladesh Bureau of Statistics, Ministry of Planning Government of the People's Republic of Bangladesh.
- Hossain MN, Chowdhury S and Paul SK. 2016. Farmer-level adaptation to climate change and agricultural drought: empirical evidences from the Barind region of Bangladesh. Nat Hazards. <https://www.researchgate.net/publication/303634520>
- Khatun M.A., Rahman M.B. and Hans O.H. 2016. Climate of Bangladesh. MET report no. 08/2016. Bangladesh Department of Meteorology, Meteorology Complex, Agargaon, Dhaka-1207, Bangladesh.
- Nadiruzzaman, M.; Rahman, M.; Pal, U.; Croxton, S.; Rashid, M.B.; Bahadur, A.; Huq, S. 2021. Impact of Climate Change on Cotton Production in Bangladesh. Sustainability 13, 574.
- Rasel HM, Hasan MR, Ahmed B. and Miah MSU. 2013. Investigation of soil and water salinity, its effect on crop production and adaptation strategy. International Journal of Water Resources and Environmental Engineering. 5(8): 475-481.
- Seraj ZI, Islam, R and Begum R. 2006. Genetic diversity of saline coastal rice (*Oryza sativa* L.) landraces of Bangladesh. In Ashwani K. Rai and Teruhiro Takabe (eds), Abiotic Stress Tolerance in Plants. ' 2005 Springer The Netherlands. pp. 229-244.
- Shammi M, Rahman MM, Bondad SE and Bodrud-Doza M. 2019. Impacts of Salinity Intrusion in Community Health: A Review of Experiences on Drinking Water Sodium from Coastal Areas of Bangladesh. Healthcare 7, 50
- SRDI. 2010. Saline soils of Bangladesh. Soil Resource Development Institute. SRMAF Project, Ministry of Agriculture, Dhaka, Bangladesh.
- World Bank, 2016. Bangladesh Interactive Poverty Maps. https://www.worldbank.org/en/data/interactive/2016/11/10/bangladesh-poverty-maps_31 August 2021
- World Bank. 2013. Turn down the heat- why a 40C warmer world must be avoided. A Report for the World Bank by the Potsdam Institute for Climate Impact Research and Climate Analytics. The World Bank, 1818 H Street NW, Washington DC 20.
- World Bank. 2019. Bangladesh Poverty Assessment: Facing old and new frontiers in poverty reduction. International Bank for Reconstruction and Development / The World Bank 1818 H Street NW, Washington, DC 20433.

List of Workshop Participants

<i>Government Focal persons</i>	11
<i>Government Agencies</i>	11
<i>Consultation Speaker</i>	13
<i>IFAD Team</i>	13
<i>FAO Team</i>	13
<i>Food Safety Authority</i>	15
<i>Universities</i>	15
<i>Public Health and Nutrition</i>	15
<i>Research Organizations</i>	15
<i>INGOs & NGOs</i>	15
<i>Private Sector</i>	16
<i>Media</i>	16

No.	Organization	Name	Designation	Char Land 16-Aug-21	Barind Land 17-Aug-21	Coastal Wetland 18-Aug-21
Government Focal persons						
1	MoA	Mrs. Tajkera Khatun	Joint Secretary, Ministry of Agriculture	√	√	√
2	BARC	Dr. Mian Sayeed Hassan	Member Director, Natural Resource Management Division	√	√	√
3	DAM	Dr. Mohammed Razu Ahmed	Deputy Director (Deputy Secretary), Department of Agricultural Marketing	√	√	√
4	DAE	Mr Mohammad Mohsin	Deputy Director (Project Evaluation and Monitoring), Planning, Project Implementation and ICT Wing			√
Government Agencies						
5	BARI	Dr. Md. Shahiduzzaman	CSO, OFRD, BARI, Gazipur	√	√	√
6	RDA	Mr M A Matin	Former Director General, Rural Development Academy	√	√	√
7	BARI, Gaibandha	Mr Abdullah-Al-Mamun	PSO, OFRD, Gaibandha, BARI	√		
8	BARI, Rangpur	Dr. Md. Al Amin Hussain	Senior Scientific Officer, On Farm Research Division	√		
9	BARI, Mymensingh	Dr. Nargis Sultana	Scientific Officer, On Farm Research Division	√		

No.	Organization	Name	Designation	Char Land 16-Aug- 21	Barind Land 17-Aug- 21	Coastal Wetland 18-Aug- 21
10	BARI, Kushtia	Dr. Jahan Al Mahmud	Scientific Officer, On Farm Research Division	√		
11	BARI, Tangail	Dr. Md. Abdul Helim Khan	Scientific Officer, On Farm Research Division	√		
12	BARI, Kishorganj	Dr. Md. Mohiuddin	Scientific Officer, On Farm Research Division	√		
13	BARI, Gazipur	Dr. Muhammad Shahiduzzaman	Chief Scientific Officer, On Farm Research Division	√		
14	BARI, Sherpur	Dr. Md. Shamsur Rahman	Senior Scientific Officer, On Farm Research Division	√		
15	BARI, Manikganj	Dr. Md. Ruhul Amin	Senior Scientific Officer, On Farm Research Division	√		
16	BARI, Rangpur	Dr. Md. Shamim Hossain Molla	Scientific Officer, On Farm Research Division	√		
17	BARI, Borguna	Dr Md Shahidul Alam	PSO, OFRD, Bogura, BARI	√		
18	BARI, Bhola	Mr Gazi Nazmul Hassan	Scientific Officer, On Farm Research Division	√		
19	BARI, Rajshahi	Dr. Md. Mazharul Anwar	PSO, OFRD region-1, Rajshahi		√	
20	BARI, Rajshahi	Dr. Md. Alim Uddin	PSO, FRC, Rajshahi		√	
21	BARI- OFRD,Rajsh ahi	Dr. Jagadish Chandra Barman	PSO, OFRD, Rajshahi		√	
22	BARI, Pabna	Dr. Md. Robiul Alam	PSO, OFRD, Pabna		√	
23	BARI, Chapainawa bganj	Dr. Md. Mokhlesur Rahman	CSO, RHRC, ChapaiNawabgonj		√	
24	BRRI	Dr. Md. Fazlul Islam	CSO, BRRI, Rajshahi		√	
25	BRRI	Dr Habubul Bari Shozib	SSO, Grain Quality & Nutrition Division, BRRI;		√	
26	BINA	Dr. Md. Hasanuzzaman	SSO, BINA, ChapaiNawabgonj		√	
27	BSRI	Dr. Mst. Kohinoor Begum	CSO, BSRI, Rajshahi		√	
28	SRDI	Dr. Md. Nurul Islam	PSO, SRDI, Rajshahi		√	
29	DAE	Md. Sirazul Islam	AD, Rajshahi		√	
30	DAE	K. J. M. Abdul Awal	DD, Rajshahi		√	
31	DAE	Md. Nazrul Islam	DD, ChapaiNawabgonj		√	
32	DAE	Md. Shamsul Wadud	DD, Naogaon		√	
33	BADC	Md. Delwar Hossain	JD (Seed Marketing), Rajshahi		√	
34	BMDA	Dr. Md. Abul Kasem	SE, Rajshahi		√	
35	DAM	Dr. Md. Abul Kasem	SE, Rajshahi		√	
36	DAE Khulna	GMA Gafur	Additional Director			√
37	DAE Khulna	Md. Hafizur Rahman	Deputy Director			√
38	DAE Jhalakathi	Mr Md Falul Hoque	Deputy Director			√

No.	Organization	Name	Designation	Char Land 16-Aug- 21	Barind Land 17-Aug- 21	Coastal Wetland 18-Aug- 21
39	DAE Gopalganj	Dr. Arbind Kumar Roy	Deputy Director			√
40	DAE Patuakhali	AKM Mohi Uddin	Deputy Director			√
41	BARI- Barishal	Raziuddin	Scientific Officer, Regional Agricultural Research Station			√
42	BARI- Barishal	Md. Rafi Uddin	Chief Scientific Officer, Regional Agricultural Research Station			√
43	BARI- Barishal	Dr. Md. Mahbubur Rahman	Scientific Officer, Regional Agricultural Research Station			√
44	BARI- Patuakhali	Dr. Mohammad Idris Ali Howlader	Principal Scientific Officer, Regional Horticultural Research Center			√
45	BARI- Bhola	Gazi Nazmul Hasan	Senior Scientific Officer, On farm Research Division			√
46	BARI- Satkhira	Oli Ahmed Fakir	Scientific Officer, Regional Agricultural Research Station			√
47	BARI- Gazipur	Dr. Muhammad Shahiduzzaman	Chief Scientific Officer, Regional Agricultural Research Station			√
48	BINA- Barishal	Md. Sohel Rana	Scientific Officer, BINA Sub-station			√
49	BRR- Barishal	Dr. Md. Alamgir Hossain	Chief Scientific Officer and Head, Bangladesh Rice Research Institute			√
50	BARI- Rajshahi	Dr. Md. Shakhawat Hossain	SSO, OFRD, BARI, Barind station, Rajshahi			√
51	KGF	Mr Wais Kabir	Former Executive Director, Krishi Gobeshona Foundation			√
Consultation Speaker						
52	BSMRAU	Dr. M. Abdul Karim	Char Land Agriculture, Professor, Department of Agronomy, Bangabandhu Sheikh Mujibur Rahman Agricultural University	√		
53	BARI- Rajshahi	Dr. Md. Shakhawat Hossain	Barind Agriculture, SSO, OFRD, BARI, Barind station, Rajshahi		√	√
54	BARI- Barishal	Dr. Md. Alimur Rahman	Coastal Wetland Agriculture, Principal Scientific Officer, RARS, BARI, Rahmatpur, Barishal			√
IFAD Team						
55	IFAD	Mr Akkas	National Consultant	√	√	√
56	IFAD	Mr Kamal	National Consultant	√	√	√
FAO Team						
57	FAO	Mr Nur Ahamed Khondaker	Assistant FAO Representative (Programme)	√	√	√
58	FAO	Bhattacharjee, Lalita	FAO Bangladesh	√	√	√
59	FAO	Mr Anil Kumar Das	National Consultant Programme	√	√	√

No.	Organization	Name	Designation	Char Land 16-Aug- 21	Barind Land 17-Aug- 21	Coastal Wetland 18-Aug- 21
60	FAO	Ms Farazi Binti Ferdous	National Consultant Programme	√	√	√
61	FAO	Mr Mohammad Amirul Islam	National Consultant	√	√	√
62	FAO	Mr Moin us Salam	Senior Agriculture Sector Development Expert	√	√	√
63	FAO	Mr Abdul Kader	National Lead Agronomist	√	√	√
64	FAO	Mr Kazi Emdadul	National Logistic and Operations Associate	√	√	√
65	FAO	Mr Tayan Gurung	Senior Technical Advisor	√	√	√
66	FAO-MMI	Mr ImanunNabi Khan	National Project Coordinator	√	√	√
67	FAO-MMI	Mr Md Hanif	FAO-MMI		√	√
68	FAO-MMI	Mr Asaduzzaman Szal	FAO-MMI		√	√
69	FAO-MMI	Mr Md Mahmudul Hossain				√
70	FAO	Mr Imtiazahmad Ahmad	Monitoring & Evaluation Specialist	√	√	√
71	FAO	Ms Nusrat Jahan	Assistant National Operations Specialist	√	√	√
72	FAO	Ms Nusrat Alam Nabila	Programme Support Assistant	√	√	√
73	FAO	Ms Samia Rahman	National Project Personnel - Monitoring, Evaluation, Accountability, and Learning	√	√	√
74	FAO	Mr Gazi Sipar Hossain	National Programme Specialist	√	√	√
75	FAO	Ms Rebeka Supti	Programme Support Assistant	√	√	√
76	FAO	Ms Wajiha Khatun	National Nutrition Specialist	√	√	√
77	FAO	Sushmita Tripura	Intern	√	√	√
78	FAO	Rechel Rema	Intern- Agricultural Supply Chain Study	√	√	√
79	FAO	Hlamraching Marma	Intern- Hill Farming System Study	√	√	√
80	FAO	Borsha Rongdi	Intern- Climate Change and Food System Study	√	√	√
81	FAO	Ms Nazrin Sultana	National Consultant- Graphic Design & Communications	√	√	√
82	FAO	Ms Khadeja Tul Kobra	Programme Support Assistant	√	√	√
83	FAO	Ms Lathuenu Marma	National Field Monitor	√	√	√
84	FAO	Mr Debasish Tripura	National Field Monitor	√	√	√
85	FAO	Ms Ambia Begum		√	√	√
86	FAO	Ms Husne Ara		√	√	√
87	FAO	Prof Parimal Kanti Biswas	Soil and Plant National Consultant	√	√	√
88	FAO	Ms Shamsun Naima Rahman	National Programme Specialist	√	√	√
89	FAO	Mr Uttam Mozumder	National Field Monitor	√	√	√
90	FAO	Prof Dr Mahmudul Sikder	National Technical Advisor for One Health	√	√	
91	FAO	Mr Arfan Uzzaman	National Climate Change MRV Expert	√	√	
92	FAO-SACP	Ms Tahmina Begum	Farmer Field School Specialist		√	

No.	Organization	Name	Designation	Char Land 16-Aug- 21	Barind Land 17-Aug- 21	Coastal Wetland 18-Aug- 21
93	FAO-SACP	Mr Md Sayedur Rahman				√
94	FAO	Mr Jayanta Bhattacharje		√	√	√
95	FAO	Prof Zulfikar Rahman				√
Food Safety Authority						
96	MoFood	Dr Prof Abdul Alim	Member, Food Safety Authority	√	√	√
97	BFSA	Mr. Mohammad Kawserul Islam Sikder	Deputy Secretary, Bangladesh Food Safety Authority	√	√	√
Universities						
98	BAU	Prof Dr Mohammad Gulzarul Aziz	Department of Food Technology and Rural Industries, Bangladesh Agricultural University	√	√	
99	BSMRAU	Prof Safiul Afrad,	Department of Agricultural Extension	√		
100	BSMRAU	Dr. Md. Abdullah Al Mamun,	Dept. of Agronomy	√		
101	DU	Professor Dr Nazma Shaheen	Institute of Nutrition and Food Science, Dhaka University	√	√	
102	RU	Prof. Md Abdul Alim	Department of Agronomy and Agricultural Extension, University of Rajshahi	√	√	√
103	RU	Prof. Dr. Yeamin Hossian	Departments of Fisheries, University of Rajshahi	√	√	√
104	RU	Prof. D. S. M. Sahinul Islam	IBSc, University of Rajshahi	√		
105	SAU	Prof Dr Mirza Hasanuzzaman,	Department of Agronomy, Faculty of Agriculture, Sher-e-Bangla Agricultural University			√
106	PSTI	Prof Dr AKM Faruk-e-Azam	POTUAKHALI SCIENCE & TECHNOLOGY INSTITUTE	√		
107	JATI	Mr Josim Uddin,	JAHURUNNESA AGRICULTURE TRAINING INSTITUTE	√		
Public Health and Nutrition						
108	icddrb	Ahshanul Haque		√		√
109	icddrb	Dr Muttaquina Hossain		√	√	
110	icddrb	Fahmida Dil Farzana		√	√	√
111	icddrb	Mr Md Ashraful Alam		√		√
112	icddrb	Md. Ahshanul Haque	Nutrition and Clinical Services Division			√
113	FPMU	Mr Mostofa Faruque Al Banna	Associate Research Director (FMPU), Ministry of Food	√		√
Research Organizations						
114	CIMMYT	Mr Washiq Faisal	Research Associate	√	√	√
INGOs & NGOs						
115	GAIN	Dr Rudaba Khondker	Country Director, GAIN	√	√	
116	GAIN	Dr Monir Bipul		√	√	√

No.	Organization	Name	Designation	Char Land 16-Aug- 21	Barind Land 17-Aug- 21	Coastal Wetland 18-Aug- 21
117	GAIN	Mr Ashek Mahfuz		√		√
118	Practical Action	Dr Faruk-Ul-Islam		√	√	
119	Practical Action	Dr Anamul Haque	PL-ISF	√	√	
120	Practical Action	Mr Md Zakaria	Agriculture Thematic Lead	√	√	
121	Practical Action	Ms Afsari Begum				√
122	Practical Action	Ms Shawkat A.Begum				√
123	Solidaridad Network Asia	Mr Md Atikuzzaman		√		
124	Solidaridad Network Asia	Ms. Afroza Sharmin	Programme Officer- Food Supply Chain (Nutritionist)	√		
125	Solidaridad Network Asia	Prodip Kumar Raptan	Programme Officer- Supply Chain (Agriculturist)	√		
126	Solidaridad Network Asia	Mohammad Saifullah	Programme Officer- Supply Chain (Agriculturist)	√		
127	Pumpkin Plus	Nazmul Chowdhury			√	
128	Susilon, Borguna	Mr Md Ismail Hossain				√
Private Sector						
129	Golden Harvest, Gazipur	Mr. Ahmed Zilani	QA Incharge	√	√	√
130	RRDF	Abdullah Al Mamun		√		
131	RRDF	Abdus Sattar		√		
132	PROVA	Dr. Md. Yusuf Ali	Executive Director		√	
133	DASCOH Foundation	Md. Jahangir Alam Khan			√	
Media						
134	Dhaka Tribune	Mr Reaz Ahmed	Editor	√	√	√

Annex 9. Examples of IFAD country best practices

HILIP-CALIP

A key feature of the HILIP-CALIP project is the Flash Flood Early Warning System (FFEWS), which helps mitigate the impacts of flash flood events that have at times led to a loss of nearly 80 per cent to 90 per cent of crops. The FFEWS provides farmers with ten-day forecasts, a marked improvement over the three-day warning communicated through family networks. This provides individual farmers as well as market management committees the information necessary to assess the risks posed by flash floods, and affords them enough time to mobilize labour and resources to save the crucial rice harvests. As climate change is projected to increase the frequency, intensity and impacts of extreme weather events, the FFEWS is a timely and appropriate model for replication and upscaling.

Providing timely forecasts is only part of the solution, as infrastructure that allows the mitigation of the worst impacts needs to be built as well. A notably successful solution has been the low-cost innovation known as killas, or raised platforms, which act as artificial islands in a landscape that would otherwise be completely inundated. Farmers have been recorded using the Killa for bringing up crops harvested in response to flood warnings, for threshing and drying and even for evacuating their livestock. This innovation can be replicated and scaled up in other flood-prone areas in Bangladesh. Reforestation with selected vegetative species, such as vetiver grass, also help to mitigate the impacts of floods, acting as a wave barrier while also sequestering carbon.

The project has also had a positive experience in generating new income opportunities in rural areas. Residential hands-on vocational training through different competent NGOs and government organizations on different demand-based farm and non-farm trades have helped youth in rural areas to learn skills including tailoring, manufacturing, welding and masonry. This has shown a significant impact on entrepreneurship development and employment generation, with about 80% getting some form of employment once training is completed. One notable outcome has been the empowerment of rural women through enhanced incomes and employment opportunities.

<https://www.ifad.org/en/web/operations/-/project/1100001585>

<https://www.ifad.org/en/web/latest/story/asset/39014792?inheritRedirect=true>.

CCRIP

The CCRIP project has successfully piloted an innovative approach to empower women by supporting the formation of women market sections (WMS) to mainstream women beneficiaries in trading. Under this initiative, shops are reserved for women traders in the WMS of each market in the project area. Female beneficiaries also worked on the construction of the market infrastructure through the innovative institutional set-up of Labour Contracting Societies, or LCS. The LCS contracts provide wage income and profit to these women, who are then encouraged to use this income as seed capital to start up businesses in the WMS. Women traders also felt more secure working in such designated areas.

CCRIP also demonstrated that field monitoring officers besides regular Local Government Engineering Department (LGED) staff smoothed the implementation of project activities. During early project implementation, the project found that LGED monitoring officers were not able to monitor work

adequately as they had to look after multiple government and donor-funded projects. This had a negative impact on the quality of work implementation. As a way to resolve the issue, the project hired field monitoring officers to support the project. This helped maintain the efficiency of procurement, M&E and KM functions, accounting and training of beneficiaries in activities funded by various donors. CCRIP has the potential for scaling up under Climate Financing, possibly with the co-financing of the Global Environment Facility.

https://www.ifad.org/documents/38714170/41115388/BD_CCRIP_IA+brief.pdf/b27dc86b-2563-99cb-3540-6e81e0596353

<https://www.ifad.org/en/web/operations/-/project/1100001647>

PACE

Under the PACE project, implemented by Bangladeshi partner PKSF, microfinance institutions used a comprehensive approach of combining financial and non-financial services for microenterprise development by adopting the value chain development methodology. One of the main drivers of this approach was the development of sustainable services by strengthening local commercial service providers. Sector specific policy constraints were identified, analyzed and lobbied with appropriate authorities for introducing pro-poor policies. Two new financial products were also piloted within the project—start-up capital loan and lease financing—to address fund requirement of two different segments of microenterprises. The start-up capital loan provides financial assistance to potential entrepreneurs for starting enterprises while the lease financing targets entrepreneurs that require comparatively larger loans to buy expensive fixed assets, equipment, vehicles, etc. for business purposes. Together, these measures ensured vulnerable target groups could access national microcredit programmes that fit their needs.

The PACE project also commercialized a number of on- and off-farm value chains including environmentally-friendly shoe cluster development, livestock rearing, fish/prawn/shrimp farming and crab fattening to name a few. Such value chain development strategies have potential for further cluster-based development throughout the country. Several of these VC projects have been scaled up by involving the private sector as buyers or input suppliers. The project also has established the country's first successful crab hatchery for the expansion of export-oriented crab culture sub-sector in the southern coastal areas. Another notable achievement was the collaboration with Grameen Euglena to help train farmers to grow and process export-quality mung beans for the Japanese market. Light and easily provided training helped increase yields by up to 40 per cent, using simple yet effective techniques such as inoculum and the introduction of new varieties developed by the Department of Agricultural Extension.

<https://www.ifad.org/en/web/operations/-/project/1100001648>

CDSP

An example of a good practice successfully implemented in CDSP is the land titling process for landless families living on newly accreted coastal islands (chars) that are vulnerable to climate change. Some of the steps followed at CDSP are innovative; examples include the case hearing being held in the respective char, and Government officers attending these hearings coming from different local offices. Subsequently, the land titles are distributed by these government officers visiting the chars. Most significantly, land titles are given and registered in the names of wife and husband with equal (50%) shares in the land ownership, with the name of wife coming first to protect women in the event of death

or divorce. The simple step of writing the woman's name first in the legal document strengthens her position in the family, gives her uninterrupted access to the land and a legal position in many decision-making processes, and protects her in case of conflicts with her husband. In the event the woman is widowed, divorced or abandoned, she will get 100% ownership of the land. **The Ministry of Land is** internalizing the land titling process of CDSP and adopting it for their land distributing system, potentially scaling up this good practice.

<https://www.ifad.org/en/web/operations/-/project/1100001537>

RMTP

As part of efforts to identify new opportunities for grants mobilization, local partner PKSF has conducted a feasibility study on crowd funding in Bangladesh that recommended launching of a crowding platform for mobilizing grants and loans funds. Bangladeshi families are known as generous donors, helping poor relatives and neighbours, and supporting charitable causes. In this context, PKSF plans to mobilize grants for a number of pilot initiatives through a crowdfunding platform. The credibility of PKSF, as well as of the Financial Institutions Division (FID) of the Ministry of Finance (MoF) will generate the trust necessary to keep the crowdfunding initiative successful, and may be expanded further and lead to the development of new policies. To enable smoother uptake of accounting software by microenterprises (MEs), PKSF is testing mobile-based applications and advising MEs on the appropriate software to use. Finally, PKSF is piloting the use of digital distributed ledgers (blockchain) to support traceability initiatives and to keep track of microfinancing to MEs. The results of the pilot will play a key role in determining the feasibility of scaling up this innovation.

<https://www.ifad.org/en/web/operations/-/project/2000002356>

SACP

The Ministry of Agriculture, the local implementing partner, put into action the Rural Poor Stimulus Facility devised by IFAD as a response to the negative impacts of COVID-19, with the goal of enhancing nutrition through homestead gardening, by planning for dietary diversity and increasing incomes of poor and vulnerable households, and ensuring availability of nutritious produce in local markets. The objective was achieved through provision of inputs and capacity-building support for year-round production of high-value and nutrient-rich vegetables in homestead gardens in coastal areas. The successful rollout of this facility can be replicated across Bangladesh. Another notable approach adopted by SACP is the concept of Lead Farmers in Farmer Field Schools, a decentralized approach to support and complement work by local extension officers for effective market facilitation, and for dissemination of useful agricultural practices and innovations.

<https://www.ifad.org/en/web/operations/-/project/2000001464>