

Cover Page

Technical Report

On

**“Evaluating the Impact of Stress-Tolerant Rice Varieties
Through Remote Sensing and Econometric Methods: Phase 2”**

IRRI References: PLA ID: C-2021-155

Agreement ID: A-2015-117 (2021 Activities)

A-2019-33 (2022 Activities)

Submitted To:

Dr. Humnath Bhandari

Country Representative – Bangladesh

International Rice Research Institute (IRRI)

Submitted By:



AVA Development Society (AVADS)

Gopalpur Village, Lalpur, Natore, Bangladesh

Submission Date: 31st December 2022

Background

To implement the activities of the project titled “Evaluating the Impact of Stress-Tolerant Rice Varieties through Remote Sensing and Econometric Methods: Phase 2” in Bangladesh, AVA Development Society (AVADS) signed a Letter of Agreement (LoA) with the International Rice Research Institute in 2021. The purpose of the agreement was to plan, design and conduct a panel survey of 1500 Rice Monitoring Survey (RMS) households by AVADS as per survey guidelines to be provided by IRRI.

Major activities done by AVADS under this LoA

1. AVADS has updated the list of 1500 respondents at the selected areas of this project (as per IRRI provided list). In this survey study, AVADS covered 06 (six) divisions, 16 (sixteen) districts and 75 (seventy-five) upazilas and 150 villages.

Sl. No.	Division	District	Upazila	Village
1	Barisal	Barisal	Barisal	Horinafuliya
2	Rangpur	Thakurgaon	Bhurungamari	West Kedar
3	Rajshahi	Natore	Baraigram	Karbala
4	Khulna	Bogra	Jhenaidah	Ganna
5	Khulna	Bogra	Kaliganj (Jhenaidaha)	Bhatpara
6	Khulna	Bogra	Kotchandpur	Elangi
7	Chittagong	Chandpur	Faridganj	Kalir Bazar
8	Rangpur	Kurigram	Baliadangi	Seoradangi
9	Rangpur	Kurigram	Baliadangi	Sindurpindi
10	Rangpur	Thakurgaon	Bhurungamari	MonglarKuti
11	Rangpur	Kurigram	Thakurgaon	DeoGaon
12	Rangpur	Kurigram	Thakurgaon	Yakubpur
13	Rangpur	Thakurgaon	Nageswari	Daynarpar
14	Rangpur	Kurigram	Haripur	Mosaldangi
15	Rangpur	Thakurgaon	Nageswari	Mornearpar
16	Rangpur	Kurigram	Ranisonkail	Birasi bazar
17	Rangpur	Kurigram	Ranisonkail	Kochal P. Para
18	Rangpur	Kurigram	Pirganj (Thakurgaon)	Dowlatpur/Mallikpur
19	Rangpur	Kurigram	Haripur	Bat Toli (vabanandapur)
20	Rangpur	Kurigram	Pirganj (Thakurgaon)	UttorMaloncha/ Barobari
21	Chittagong	Chittagong	Chandanaish	Jafarabad
22	Rangpur	Thakurgaon	Chilmari	Kuyarpar
23	Rangpur	Thakurgaon	Chilmari	Ranigonj
24	Rangpur	Thakurgaon	Rowmari	Sutirpar
25	Rangpur	Thakurgaon	Rowmari	Khatiamari
26	Rangpur	Thakurgaon	Razibpur	Baliamari
27	Rangpur	Thakurgaon	Razibpur	Mathpara
28	Rajshahi	Barguna	Shariakandi	Hatserpur

29	Rajshahi	Barguna	Kahalu	Pilkunja
30	Rajshahi	Barguna	Dubchachia	Gunahar
31	Rajshahi	Barguna	Shariakandi	Jorgacha
32	Rajshahi	Barguna	Kahalu	Malancho
33	Rajshahi	Barguna	Dhunat	Nimgachi
34	Rajshahi	Barguna	Nandigram	Kumira/ Vhatara
35	Rajshahi	Barguna	Nandigram	Kuhuli
36	Rajshahi	Rajshahi	Bagmara	Sakuwa
37	Rajshahi	Barguna	Dhunat	Maturapur
38	Rajshahi	Rajshahi	Bagmara	Vobaniganj
39	Rajshahi	Rajshahi	Durgapur (Rajshahi)	Alipur
40	Rajshahi	Rajshahi	Durgapur (Rajshahi)	Kathalbaria
41	Rajshahi	Rajshahi	Godagari	Iswaripur
42	Rajshahi	Rajshahi	Godagari	Kumarpur
43	Rajshahi	Rajshahi	Puthia	Gondagoali
44	Rajshahi	Rajshahi	Rajshahi Metro	Kasiadanga
45	Rajshahi	Rajshahi	Rajshahi Metro	Kathalbaria
46	Rajshahi	Rajshahi	Puthia	Varuwa
47	Rajshahi	Natore	Gurudaspur	Bakibegpur
48	Rajshahi	Natore	Gurudaspur	Chowddamatha
49	Rajshahi	Natore	Baraigram	Balia
50	Rajshahi	Rajshahi	Charghat	Dowlatpur
51	Rajshahi	Rajshahi	Charghat	Solua
52	Rajshahi	Natore	Bagatipara	Noyapara
53	Rajshahi	Natore	Bagatipara	Faguadyar
54	Rajshahi	Natore	Lalpur	Hapania
55	Rajshahi	Natore	Lalpur	Kadamchhilan
56	Dhaka	Manikganj	Daulatpur (Manikganj)	Daulatpur
57	Dhaka	Manikganj	Daulatpur (Manikganj)	Hazipara
58	Rajshahi	Barguna	Dubchachia	Koalakopa
59	Dhaka	Manikganj	Manikganj	Joyra
60	Dhaka	Manikganj	Manikganj	Vanumoti
61	Dhaka	Manikganj	Ghior	Kellai
62	Dhaka	Manikganj	Ghior	Gangdubi
63	Dhaka	Manikganj	Singair	Kangsa
64	Dhaka	Manikganj	Singair	Azimpur
65	Dhaka	Manikganj	Harirampur	Bijoynagar
66	Dhaka	Manikganj	Harirampur	Kolta
67	Khulna	Bogra	Kotchandpur	Boluhor
68	Khulna	Bogra	Jhenaidah	Porahati
69	Khulna	Bogra	Moheshpur	Hanifpur

70	Khulna	Bogra	Kaliganj (Jhenaidaha)	Pirojpur
71	Khulna	Bogra	Moheshpur	Mirjapur
72	Dhaka	Shariatpur	Naria	Naogaon
73	Dhaka	Shariatpur	Naria	Kandapara
74	Dhaka	Shariatpur	Shariatpur	Hugli
75	Dhaka	Shariatpur	Shariatpur	Amtoli
76	Dhaka	Shariatpur	Bhedarganj	Mirjapur
77	Dhaka	Shariatpur	Bhedarganj	Kaichkuri
78	Chittagong	Chandpur	Faridganj	Katakhali Bazar
79	Chittagong	Chandpur	Haimchar	Rayer bazar
80	Chittagong	Chandpur	Haimchar	Algi Bazar
81	Barisal	Barisal	Gournadi	Vurghata
82	Dhaka	Shariatpur	Goshairhat	Charmonpura (Khunerchar)
83	Dhaka	Shariatpur	Goshairhat	Abupur
84	Barisal	Barisal	Agailjhara	South Sihipasa
85	Barisal	Barisal	Hizla	Sankarpasa
86	Barisal	Barisal	Gournadi	Batajor
87	Barisal	Barisal	Muladi	Dorirchar
88	Chittagong	Chittagong	Mirsharai	Haji sarai
89	Barisal	Barisal	Babuganj	Rakudiya
90	Chittagong	Chittagong	Mirsharai	Durgapur
91	Khulna	Satkhira	Tala	Mirzapur
92	Khulna	Satkhira	Tala	Islamkathi
93	Barisal	Pirojpur	Nazirpur	Bakshi
94	Barisal	Pirojpur	Nazirpur	Chowthaimohal
95	Khulna	Satkhira	Satkhira	Bakal
96	Barisal	Bhola	Bhola	P. Charnobad
97	Barisal	Pirojpur	Nesarabad	Kuhudaskathi
98	Barisal	Pirojpur	Nesarabad	Juluher
99	Barisal	Bhola	Bhola	Moutupi
100	Chittagong	Chittagong	Sitakunda	Nunachar
101	Khulna	Satkhira	Satkhira	Fingree
102	Barisal	Jhalakati	Nalchity	Bhorotkathi
103	Khulna	Satkhira	Assasuni	Budhata
104	Chittagong	Chittagong	Sitakunda	Madhya Mohadebpur
105	Barisal	Barisal	Agailjhara	ModdhaSihipasa
106	Khulna	Satkhira	Assasuni	Kundoria
107	Barisal	Jhalakati	Nalchity	Nachonmohal
108	Barisal	Barisal	Hizla	Pownivanga
109	Barisal	Bhola	Burhanuddin	Laxisampur
110	Barisal	Bhola	Burhanuddin	P. Laxisampur

111	Khulna	Satkhira	Debhata	Hadipur
112	Barisal	Barisal	Muladi	Bojaysuly
113	Khulna	Satkhira	Debhata	Debishor
114	Chittagong	Chittagong	Sandwip	Bauria
115	Barisal	Jhalakati	Rajapur	Nolbunia
116	Barisal	Pirojpur	Bhandaria	Koloni Bazar
117	Barisal	Pirojpur	Bhandaria	PurboBhandaria
118	Barisal	Barguna	Betagi	Fultola
119	Chittagong	Chittagong	Rangunia	Fakir Khil
120	Barisal	Barisal	Barisal	Sarshi
121	Barisal	Barisal	Babuganj	Gojaliya
122	Chittagong	Chittagong	Rangunia	bacha Shahnagar
123	Chittagong	Chittagong	Sandwip	Mogdhara
124	Chittagong	Chittagong	Hathazari	Fateyabad
125	Chittagong	Chittagong	Hathazari	Chikandandi
126	Barisal	Jhalakati	Kathalia	UttorAwora
127	Barisal	Barguna	Betagi	Keurabunia
128	Barisal	Bhola	Tazumuddin	Shambupur
129	Barisal	Jhalakati	Kathalia	Joykhali
130	Barisal	Bhola	Tazumuddin	Uttar shasrs
131	Khulna	Satkhira	Shyamnagar	Bongshipur
132	Barisal	Barguna	Bamna	Sunakhali
133	Chittagong	Chittagong	Patiya	Okara
134	Chittagong	Chittagong	Patiya	Allai
135	Barisal	Barguna	Bamna	Nijamtoli
136	Khulna	Satkhira	Shyamnagar	Sripalkathi
137	Barisal	Bhola	Monpura	Char Jotin
138	Barisal	Bhola	Monpura	Sonarchar
139	Barisal	Bhola	Lalmohan	ECharUmad
140	Barisal	Bhola	Lalmohan	Collagepara
141	Barisal	Barguna	Amtali	Gerabunia
142	Barisal	Barguna	Amtali	Chaltabunia
143	Barisal	Bhola	Charfasson	Nurabad
144	Barisal	Bhola	Charfasson	Char Tofajjal
145	Barisal	Barguna	Patharghata	Golbunia
146	Chittagong	Chittagong	Chandanaish	Bailtoli
147	Chittagong	Chittagong	Satkania	UttorChorpara
148	Chittagong	Chittagong	Satkania	Daksinrampur
149	Barisal	Barguna	Patharghata	Nizlathimara
150	Barisal	Jhalakati	Rajapur	Kanudaskathi

2. AVADS selected 15 qualified enumerators out of 30 existing enumerators based on their experience and skills for the survey purpose. A list of the enumerators is given below.

Sl. No.	Name	Gender	Email
1	Mehedi Hasan	Male	batighor2419@gmail.com
2	Helal Hossen	Male	helalratun@gmail.com
3	Shoriful Islam	Male	sumonsany123@gmail.com
4	Tutul Ali	Male	tutulahmed789130@gmail.com
5	Ismail Hosain	Male	ismailhosain88327@gmail.com
6	Abdur Rakib	Male	abrakib2016@gmail.com
7	Md. Ashikuzzaman	Male	ashikbdkiron@gmail.com
8	Lipon Sarker Raaz	Male	tapondas143@gmail.com
9	Rekat Ali	Male	noyon1995gp@gmail.com
10	Kowsar Ahmed	Male	kowsarp6@gmail.com
11	Abdul Akher	Male	aakher9@gmail.com
12	Md. Rokonujjaman	Male	rokon1987gp@gmail.com
13	Romijul Islam	Male	romij2441139@gmail.com
14	Fozla Rabbi	Male	rabbi.igc@gmail.com
15	Shirina Akter	Female	aktershirin434@gmail.com

3. AVADS arranged the indoor and field training for the selected 15 enumerators at Rajshahi, Bangladesh during 19-22 October 2022. Total 10 instructors/facilitators from IRRI HQ and IRRI Bangladesh Office participated in the training program. The training covered the following items.

- Overview of the project and survey objectives
- Introduction of Survey Solution Software
- Briefing on Questionnaire Modules
- Module by Module Survey Questionnaire
- Guidelines on Data Collection and Submission Procedure
- GPS Data Collection
- Mock Test (on survey questionnaire)
- Field demonstration (Paba Upazila, Union: Baragachi, Village: Madhabpur.)
- Observations from the field demonstration /Q&A session



Fig: Indoor Training



Fig: Outdoor Training

4. Trained enumerators of the AVADS physically visited the listed 1500 RMS households of 150 villages of 75 upazilas/sub-districts and collected required data as per the questionnaire provided by IRRI. The enumerators collected data through using Survey Solution server.



Fig: Data Collection activities in south and north

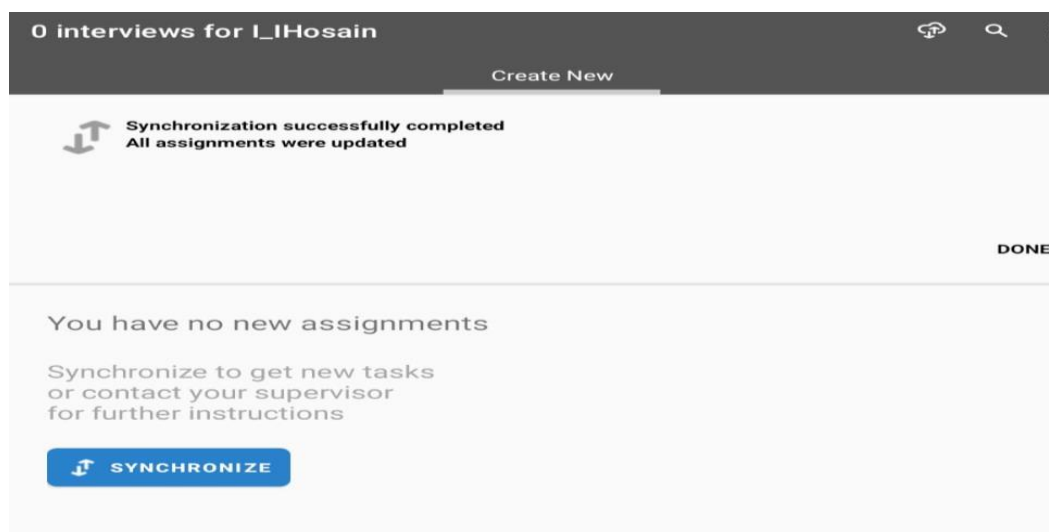


Fig: Screenshot of data acceptance

5. AVADS completed the data cleaning activities according to IRRI provided guidelines. AVADS also helped IRRI in crosschecking and editing collected data.

Interview Key	District	Village	HH ID	Plot ID	Plot Size	Unit Plot	Total Plot	Own to Land	Land Unit	Corrected Own land
61-43-44-06	Barguna	Nijamtoli	5	0	45	Decimal	159	40	Decimal	40
61-43-44-06	Barguna	Nijamtoli	5	1	45	Decimal			Decimal	
61-43-44-06	Barguna	Nijamtoli	5	2	22	Decimal			Decimal	
61-43-44-06	Barguna	Nijamtoli	5	3	22	Decimal			Decimal	
61-43-44-06	Barguna	Nijamtoli	5	4	25	Decimal			Decimal	
26-11-69-94	Barguna	Nijamtoli	21	0	33	Decimal	211	200	Decimal	211
26-11-69-94	Barguna	Nijamtoli	21	1	11	Decimal			Decimal	
26-11-69-94	Barguna	Nijamtoli	21	2	42	Decimal			Decimal	
26-11-69-94	Barguna	Nijamtoli	21	3	45	Decimal			Decimal	
26-11-69-94	Barguna	Nijamtoli	21	4	35	Decimal			Decimal	
26-11-69-94	Barguna	Nijamtoli	21	5	45	Decimal			Decimal	

SL	interview_key	district_as sign	village_as sign	hhid_assign	name_res_14	reason of non-rice plots
1	87-04-40-92	Chittagong	Mogdhara	36	Tofsirul Alam	Farmer didn't cultivate rice in last year. Because his land was rented out.
2	08-36-86-14	Chandpur	Katakhali Bazar	18	Fozol Ahmed Master	Farmer didn't cultivated last year, he rented out all plot.
3	28-31-00-90	Pirojpur	Kuhudask athi	18	Sontosh Sadhok	Farmer didn't cultivated last year, he rented out his plots.
4	28-96-74-41	Chandpur	Kalir Bazar	18	Alauddin	Farmer didn't cultivate rice in last year. Because he didn't get land.
5	54-95-61-62	Chandpur	Katakhali Bazar	49	Shohidul Islam	farmer didn't cultivated last year, he rented out all plot.

Fig: Data Cleaning

6. AVADS also performed other activities related to the survey (according to the decision of project team).
7. Helped IRRI in translating and modifying questionnaires. Example-

Original Text	Translation
Rice Monitoring Survey without logic	ধান চাষাবাদ পর্যবেক্ষণ জরিপ
Assignment	এসাইনমেন্ট
Consent	সম্মতিপত্র
Household's Identification	পরিবার শনাক্তকরণ
GPS Information	জিপিএস তথ্য
Household	পরিবার
Plot and Variety Information	প্লট এবং ভ্যারাইটি সম্পর্কিত তথ্য
Animal List	প্রাণীর তালিকা
Asset List	সম্পদের তালিকা
 This section is specially designed for creating an assignment. There is no other purpose of this section. It might seem a duplicate section but originally it is not. 	এই সেকশনটি ডিজাইন করা হয়েছে এসাইনমেন্ট তৈরি করার জন্য। এরবাইরে এই সেকশনের আরকোনো উদ্দেশ্য নাই। এই সেকশনকে অনুলিপি/কপি মনে হতে পারে কিন্তু এটি নয়
Division	বিভাগ
District	জেলা
Thana	থানা
Village	গ্রাম
Household Id	পরিবারের আইডি
Value is out of range	মান পরিসীমার বাইরে
Name of the respondent listed in 2014	2014 সালে তালিকাভুক্ত উত্তরদাতার নাম
Read the following consent.	সম্মতিপত্রটি পড়ুন
Do you agree with this consent?	আপনি কি সার্ভেতে অংশগ্রহণ করতে সম্মত

8. AVADS submitted the following reports to IRRI as per the reporting schedule as mentioned in the LoA:
 - Technical report on 31stDecember 2021
 - Technical report on 30thJune 2022
 - Technical report on 30thOctober 2022
 - Financial report on 31stDecember 2022

Challenges

- AVADS enumerators faced local political challenges.
- The inflation rate was much higher at field survey time than LoA signing time.
- Some of enumerators faced some difficulties at survey time for cold weather.

Conclusion: Enumerators did their data collection work very sincerely. AVADS overcome all the challenges at survey time and achieved the goals. AVADS enumerators enjoyed the activities of this survey project. Now they are more experienced in this kind of project. AVADS wants to work next time on this kind of relevant project with IRRI.

Report prepared and submitted by

A handwritten signature in black ink, appearing to read 'mesbahul haque' in a cursive script.

Md. Mesbahul Haque
Program Coordinator
AVA Development Society