

# **Cover Page**

## **Technical Report**

### **On**

**“Alternative Wetting and Drying Pilot Study in Bangladesh”**

**IRRI References: PLA ID: C-2023-37**

**Agreement ID: A-2022-74**

**Submitted To:**

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**Country Representative – Bangladesh**

**International Rice Research Institute (IRRI)**

**Submitted By:**



**AVA Development Society (AVADS)**

**Gopalpur Village, Lalpur, Natore, Bangladesh**

**Submission Date: 16<sup>th</sup> July 2023**

**Introduction:** AVA Development Society is a National Non-Political, Non-Profitable, Non-Government, Voluntary and Social Organization for the service of the poor majority of the rural areas of the country. AVA Development Society believes in the service of human beings for their total (Socio-economic, Cultural, Political and Spiritual) development. Therefore, it gives priority to the poor, oppressed, marginalized and deprived group of people in the society for their advancement so to establish their human dignity, values and social justice in the community of rural Bangladesh. The main mission of AVA Development Society is to form the organization of the poor, disabled, landless, marginalized and indigenous men and women in order to integrate them in the process of socio-economic development ventures for their self-sufficiency and authentic development.

AVA Development Society (AVADS) is working as a partner organization of the International Rice Research Institute (IRRI) since 15/02/2016 to till now. An LoA has been signed dated 9<sup>th</sup> April 2023 between AVADS and IRRI for the project named “Alternative wetting and drying pilot study in Bangladesh”.

**Description:** AVA Development Society (AVADS) planned, designed & conducted a pilot study in Bangladesh on alternative wetting and drying as per IRRI survey guidelines in the IRRI’s selected locations. This pilot study aims to test and develop the expertise with water-level data loggers to establish a standard for other measurement approaches.

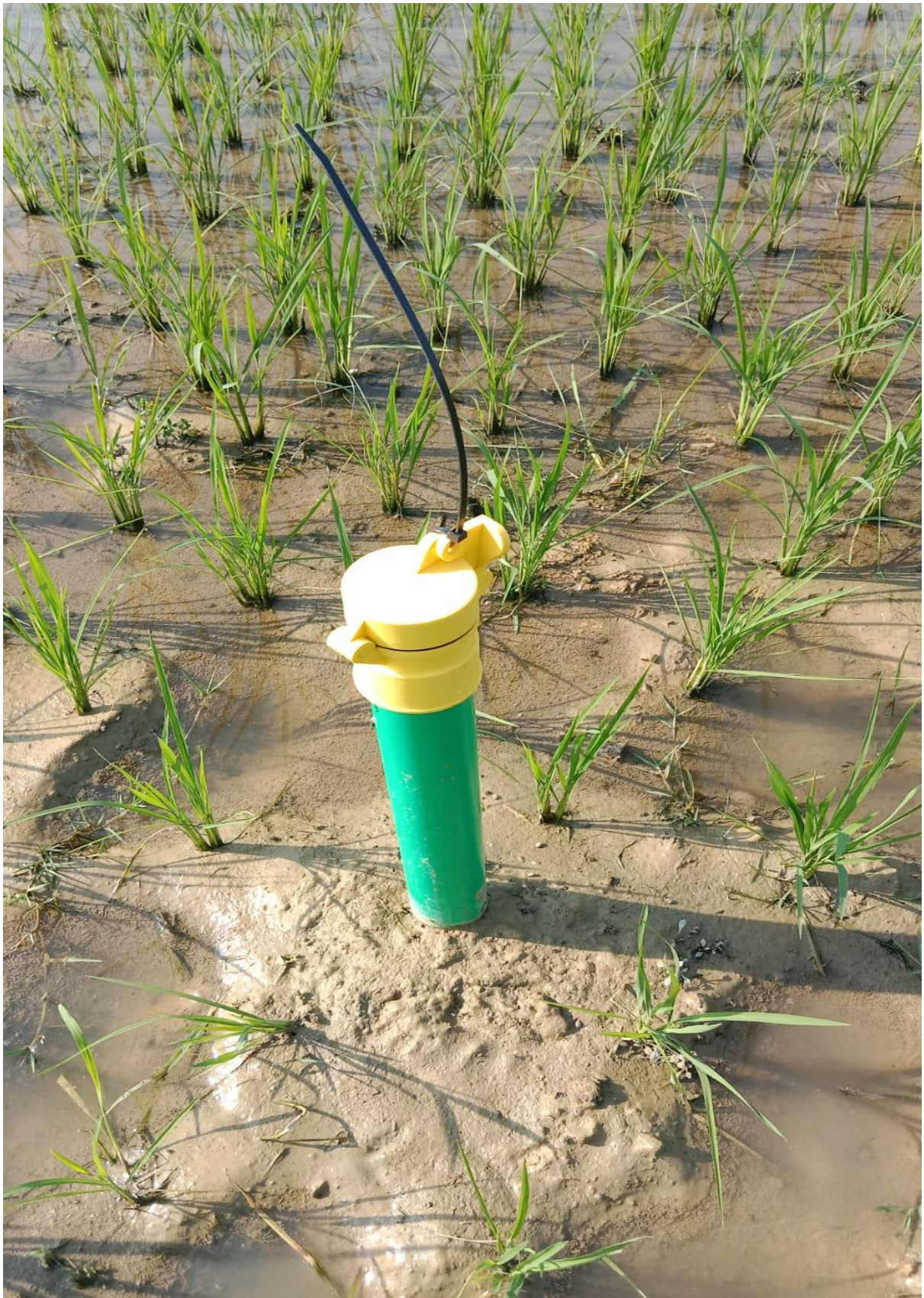
Site Selections: AVADS was involved to find the suitable locations for the experiment. AVADS was recruiting farmers that were willing to have the water loggers in their fields and scheduling a time for installation. AVADS was acquiring the U20 device and other supporting materials for the field deployment. All the device needs their own stilling well. The stilling well setup is the same for the barometric pressure meter and the water logger. First the barometric pressure meters were installed by AVADS and ELFIN in the field, prior to the water loggers’ installation. The barometric pressure meters had been installed in its own stilling well. The location for these meters was in a shaded location with a stable temperature that was never flooded. The configuration of the biometric pressure was at the same logging interval as the water logger. Once the stilling well was installed, the logger had attached to the well cap using the Teflon stainless-steel cable. AVADS and ELFIN installed the water-level logger before it starts logging. We waited 20 minutes after the start of the logging time before collecting the reference measurement for stabilizing the temperature of the instrument, then geo-reference the position of the water level logger. To captured this reference measurement, we used a wooden dowel that we could use like an engine oil dipstick to measure the water depth. The length was slightly less than the depth of the stilling well and had a stopper at the top that spans the top of the PVC stilling well. Then we put the dowel into the well until was stopped by the top of the well and then pulled it up and measured the distance from the stopper to the waiting line on the dowel. After the cropping season following steps had followed by AVADS and ELFIN for data retrieval from the water loggers.

- ✓ Removed the well cap and pull out the logger
- ✓ Removed the black end cap from the device and connect the logger to the shuttle
- ✓ Pressed the lever to offload the data, we got a green light when the offload was done. The time of offload was less than a minute

**Project Location:** AVADS was implementing this project activity in the following areas.

| SL | District Name | Upazila Name | Union Name | Village Name |
|----|---------------|--------------|------------|--------------|
| 1  | Rajshahi      | Godagari     | Gogram     | Usrakanda    |
| 2  | Rajshahi      | Godagari     | Gogram     | Itahari      |





**Fig: Water level logger at the rice field after installation**





**Fig: Barometric pressure meter after installation**



**Field Level Data Collection:** AVADS enumerator physically visited to the selected project locations daily and conducted the following data collection questionnaires through the Kobo tool survey software.

- Daily Data Collection – Plot Level Information
- Daily Data Collection – Pump Owners
- Time Invariant Questionnaire – Farmers
- Time Invariant Questionnaire – Pump Drivers/Owners
- Weekly Questionnaire – Farmers

**Methodology:** Methodologies of this project work are given below -

1. AVADS has selected and trained qualified enumerators for data collection.
2. AVADS enumerators have conducted the survey work at the field level as per IRRI guidelines.
3. AVADS enumerators have collected the data at Kobo tool survey software.
4. AVADS enumerators also collected GPS readings with appropriate measurements.
5. AVADS prepared the final financial report.
6. AVADS also performed other activities related to this project (according to the decision of the project team).

**Conclusion:** Enumerator was done their data collection work very sincerely. They have been overcoming all the challenges at data collection time.

Report prepared and submitted by



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