

CLIMATE INNOVATION CHALLENGE

Monthly Progress Update

Reporting Period (Month)	20 December 2021 - 20 January 2022
Grantee Name	Curtin University, Australia
Project Title	Innovating Nonmonetary Interventions for Climate-smart Agriculture: An ADOPT Model for Technology Diffusion
<p>1. List the key activities undertaken during this month</p> <ul style="list-style-type: none"> • Review literature including government documents, journal articles and working papers; • Finalize the theoretical framework to develop survey instruments; • Prepare the survey instruments that include a) A survey questionnaire for farming households; b) A survey questionnaire for solar/electricity operators; and c) A survey questionnaire for solar providers; • Determine the sampling frame for the selected study regions; and • Complete A One Day Training on survey instruments for the survey team by the consortium members. 	
<p>2. List the key beneficiaries /stakeholders consulted during this month</p> <ul style="list-style-type: none"> • Ministry of Agriculture and Ministry of Environment, Forest and Climate Change of the Government of the People’s Republic of Bangladesh; • Sustainable and Renewable Energy Development Authority (SREDA), Bangladesh • Agricultural office staffs in the Department of Agricultural Extension (DAE), Ministry of Agriculture, Government of the People’s Republic of Bangladesh; • The technical team working on the survey app “mWater”; and • Three survey teams comprising of 13 members in each team. 	
<p>3. Summarize key achievements and milestones of this month</p> <p>This project completed two phases of the survey process. The first phase includes three activities a) identification of the study regions; b) deciding the empirical strategy; and c) developing the survey instrument. In the second phase, the</p>	

processes of translating the survey questionnaires and transferring the questionnaires into mWater are completed. As a part of the third phase, a training session for the technical team and three survey teams was conducted. The following sections briefly describe the activities in two phases during this reporting period.

The first phase: The process of developing the survey instrument for the ADOPT model project is complete. As the survey instrument, three separate questionnaires for farming households, solar/electricity pump operators and solar irrigation providers respectively have been prepared. The objective of the survey instrument for farming households is to formulate appropriate questions regarding irrigation energy-use and low-carbon irrigation technology adoption behaviour. The efficacy of the four ADOPT nudging tools, namely advocacy, demonstration, omitting misinformation and peer pressure will be tested and compared between solar and non-solar user-farmers. This is the empirical strategy for the ADOPT model pilot project. Regarding the identification of the study regions in Bangladesh, two solar systems are randomly selected in each of 28 districts (i.e. major administrative areas) and thus 56 solar irrigation systems are selected for the survey. The GPS coordinates of the solar systems are identified and each solar system is given a unique code number based on the system serial number on the government database.

The second phase: The survey questionnaires are translated into Bengali (the mother tongue in the study area) for the convenience of the surveyors and the potential participants. The questionnaires are also transferred into the survey app, mWater. The survey teams received first training on the survey questionnaires. In this training session, a detailed discussion was held on the theoretical framework (i.e. the Nudge theory), the ADOPT model and the survey questionnaires.

4. List key issues to be resolved

- Survey instruments have been developed;
- Training has been organized for the survey team;
- The procedure of random selection of the sample households for the survey has been finalized; and
- A pre-test of the survey questionnaires has been done.

5. Any additional issues (observations/learning in terms of the applicability, scalability and sustainability)

During this reporting period, there was no additional issue regarding the scalability and sustainability of this project. However, in terms of its applicability, there are a few challenges. To address these challenges, the possible solutions are planned in this period only. The description is given below.

- *Validity of the survey instrument:* The survey instrument will be pre-tested in two study regions on a sample of 100 farming households. Necessary corrections will

be performed after analysing the pre-test survey data. The survey instrument will be finalized after making the necessary changes.

- *Survey monitoring:* The consortium including the project leader and coordinators will monitor the survey and data collection. There will be one field supervisor on each survey team. Field supervisors will be reportable to the consortium.
- *Health risks (Covid-19 and other health issues):* Health safety measures will be provided to surveyors and participants. All surveyors are confirmed to be double vaccinated (Covid-19).