Project Design Phase
Proposed Solution Template

Date	12 February 2026
Team ID	LTVIP2026TMIDS54583
Project Name	Exploratory-Analysis-Of-RainFall-Data-In-India-For-Agriculture
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in the proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Irregular rainfall patterns, heavy rainfall events, and drought conditions caused by climate change are affecting agriculture, water availability, and economic growth. Farmers face crop loss, flooding, water scarcity, and reduced productivity due to unpredictable weather conditions and poor water management systems.
2.	Idea / Solution description	• The proposed solution focuses on sustainable water management and climate-resilient agriculture through: • Rainwater harvesting systems • Desalination of water in water-scarce regions • Harvesting water from air moisture • Solar-powered irrigation pumps • Rainfall data collection and analysis • Encouraging tree plantation to improve precipitation and environmental balance • This integrated approach helps in water conservation, irrigation management, and improved agricultural productivity.
3.	Novelty / Uniqueness	• Combination of rainfall prediction with sustainable water solutions • Use of solar pumps to reduce electricity dependency • Moisture harvesting technology inspired by MIT research • Integration of climate data and rainwater harvesting in one system • Focus on eco-friendly and renewable methods
4.	Social Impact / Customer Satisfaction	• Reduces drought impact • Minimizes flood damage risks • Ensures water availability in dry seasons • Improves farmer income and crop productivity • Supports environmental sustainability • Contributes to economic growth
5.	Business Model (Revenue Model)	• Collaboration with agriculture sector • Government subsidies for solar pumps and rainwater harvesting systems • Providing technological solutions through subscription-based platforms • Agro-industrial partnerships

		• Selling installation and maintenance services for water systems
6.	Scalability of the Solution	• Can be implemented in rural and urban areas • Adaptable to different climatic regions • Scalable through digital platforms for rainfall data monitoring • Expandable based on climate change trends and temperature variations • Suitable for nationwide agricultural support programs