



tr Transform
Rural
India

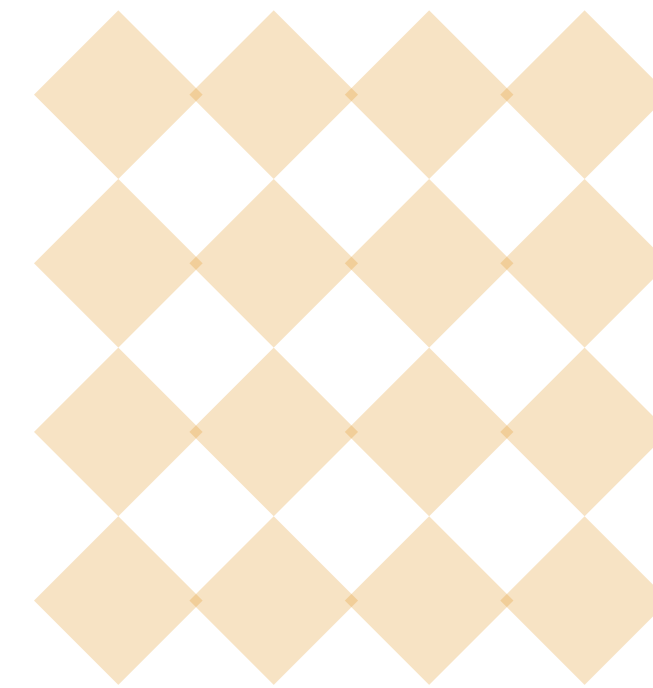
Transform Rural India

AgriVoltaics

Building local adaptive capacity,
resilience and creating economic
opportunities for rural in the
green transition

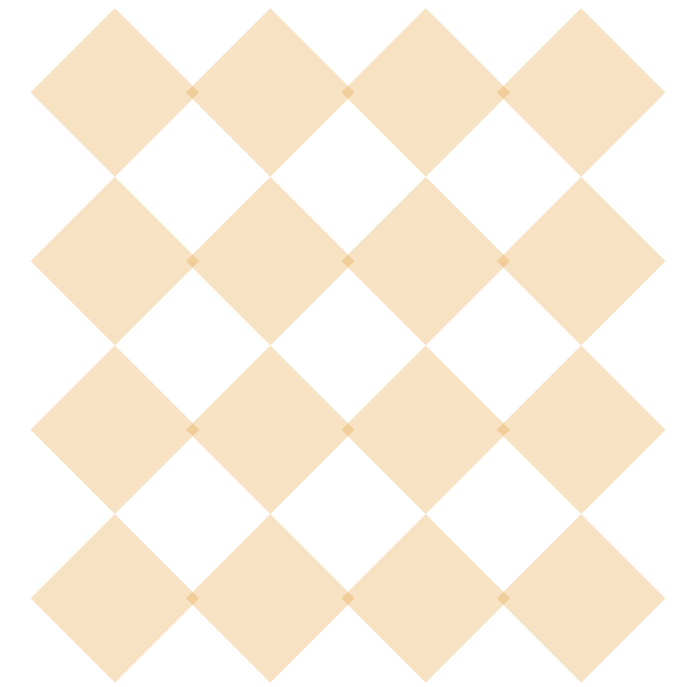
Key lessons from your experience, projects, or programmes

- Agri PV can be beyond electricity Generation and Farming together
- Micro , Mini, Meso capacity of plants can be designed location-wise
- One Agriculture pump can replace 06-10 diesel pumps
- The model is possible to design with the small and marginal farmers engaging existing community institutions
- ~ 1500 Sq M of land used for APV is irrigating ~ 4 Lac Sq M of land belongs to the 160 farmers
- Water service cost at Rs.60/- per hr in lieu of Rs.200/- per hr expense
- User's friendliness of the service ; even an adult female can take the service freeing the male members for other productive activities



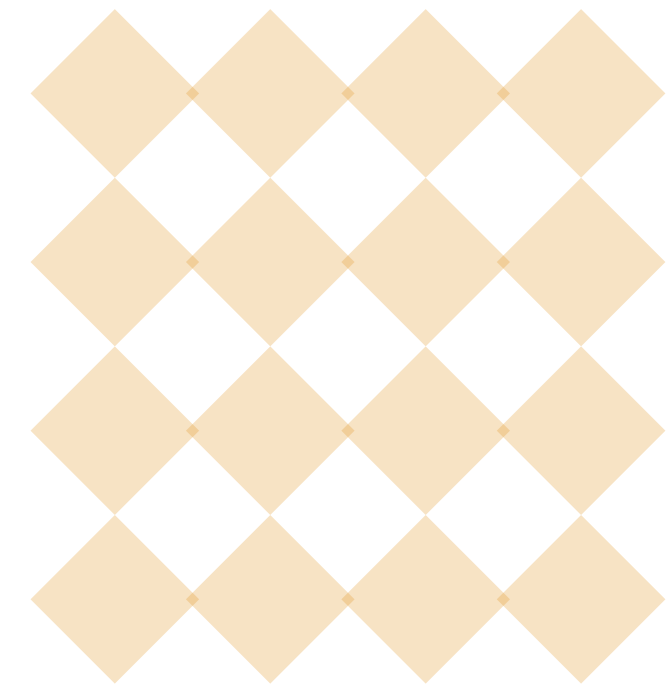
What worked and why

- Consideration of the community aspiration in the designing of the system & Involvement of the community in decision making
- Ecosystem Approach worked involving EPC, Community Organisation and Research Institutions
- Long-term engagement with the community
- Ownership of the assets conveys the sense of belongingness ; the community keeps vigil on the plant performance & judicious usage of the resource
- Agri PV land rent is kept manageable as the land is possible to be utilised for farming like before
- Women are the service providers and service receivers.
- Blended Finance



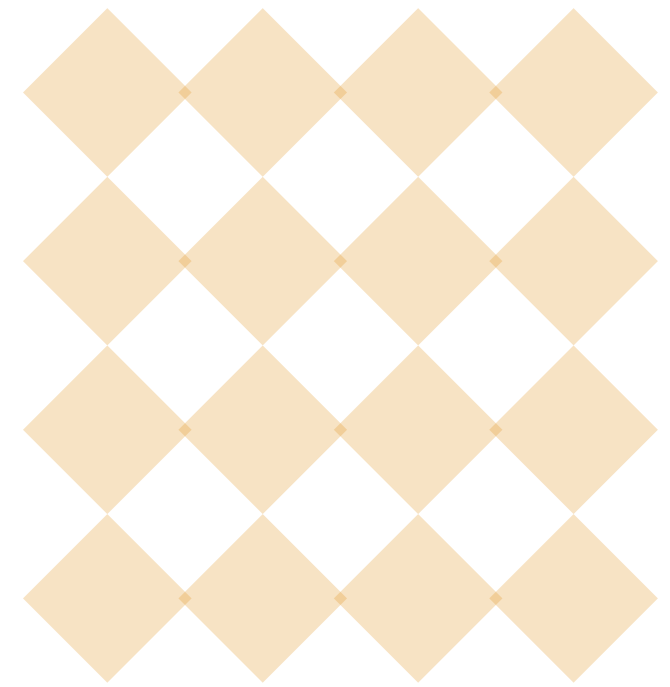
Challenges, failures, or barriers encountered

- Maintaining high height of the structure and gap in between the rows add to the cost of the mounting structure and can be optimised based on other form of farm mechanisation (hand tiller usages in lieu of tractor)
- Available financing structure is not ready for Agri PV models financing making resource mobilisation difficult
- Non-availability of cropping data beneath the solar panels in different agroclimatic zones makes the cropping in the initial years challenging
- The automatization of pumps operation can make the overall system more efficient



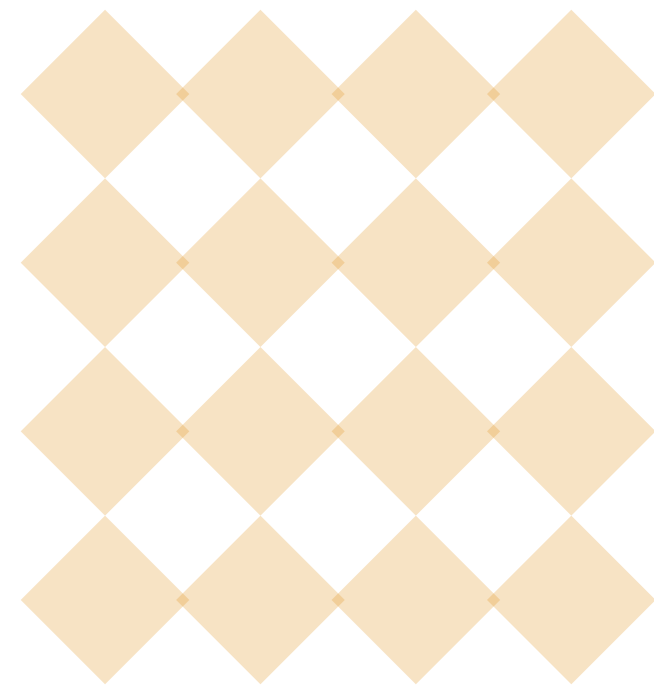
Practical recommendations for scaling and replication

- In-situ pilot projects are more impactful ; non-user neighbours get encouraged by the benefits of the model
- We consider ideal condition for the Agri PV Projects where Diesel Pump density is maximum (the location may be unelectrified or underserved)
- Localisation Model from the design stage to the operation stage along with the ownership of the assets is better suited
- No compromise with the quality of the Solar components and execution
- Ensuring earning from both farming and non-farming activities



Policy, financing, institutional, or implementation insights relevant to the discussion

- Self-reliance on Energy front; foreign exchange savings
- The farmers pay only for the energy they consume making RE universally affordable.
- Farming is no longer a dependable profession for marginal or sub-marginal farmers forcing them to look for unskilled (manual) activities
- Depending on the location and water availability the model can be specific to productive use applications or water service application
- Retrofitting of the Solar Plants should be encouraged
- Localisation model in high diesel pumps usage locations
- Ensuring Quality materials and execution





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Thank You