

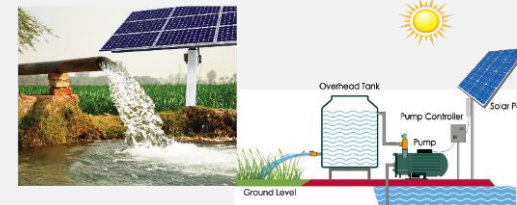
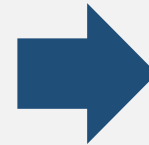
Solar Sure✓

A+ A B

C D

F

Platform for grading and tracking



Repurposing for Agricultural Applications

Demo site of second-life PV



Local collection point



End of life

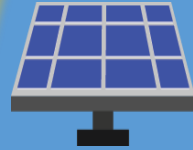


PV Recycle

Objective

- Identifying risks and challenges.
- Assessing the cost effectiveness.
- Formulating the recommendations.

Solar Module



Second Life for Better Life

Organized by



Ministry of Industry



Ministry of Higher Education, Science, Research and Innovation



Supported by

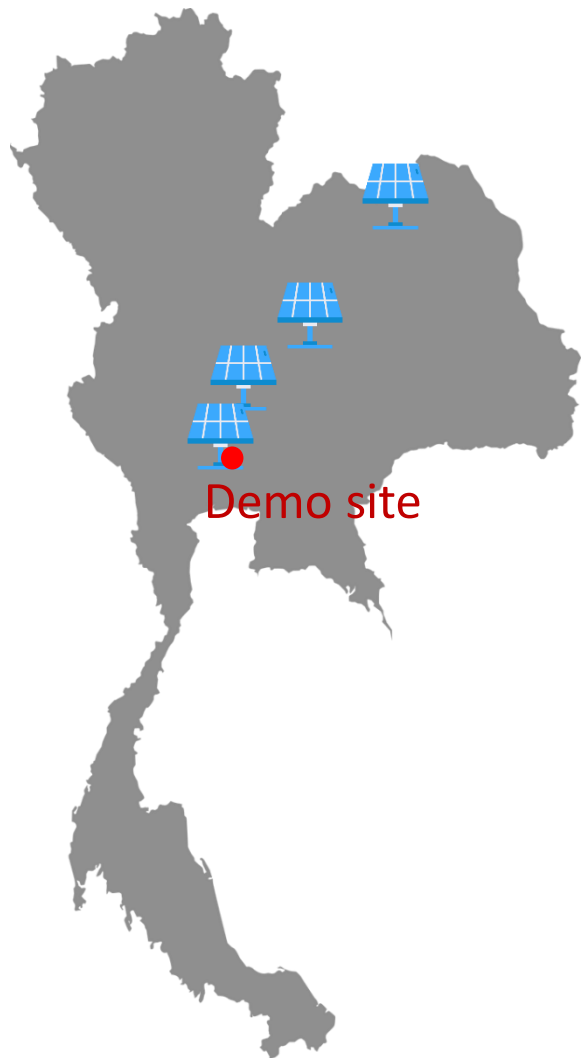


Valaya Alongkorn Rajabhat University under the Royal Patronage



Private sector (Solar farm owners)

Decommissioned solar modules in this project



Poly crystalline silicon



Thin film CIS



Thin film silicon (a-Si/μc-Si)

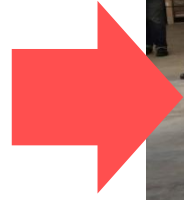


Thin film silicon (a-Si)

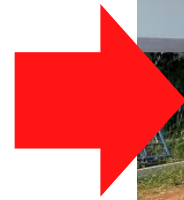
Module age **7-10** years



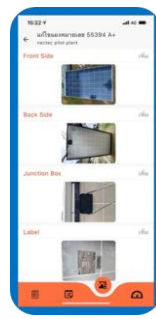
e-manifest



Inspection

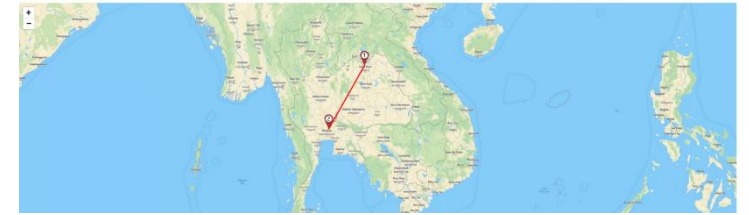


Transportation



Measuring and recording

#	Serial	W-Pkg	Weight	Vol	Watt
1	29 Apr, 2022 at 10:43:10	102.737	17.1800	-	
2	29 Apr, 2022 at 14:47:57	102.471	16.1344	-	

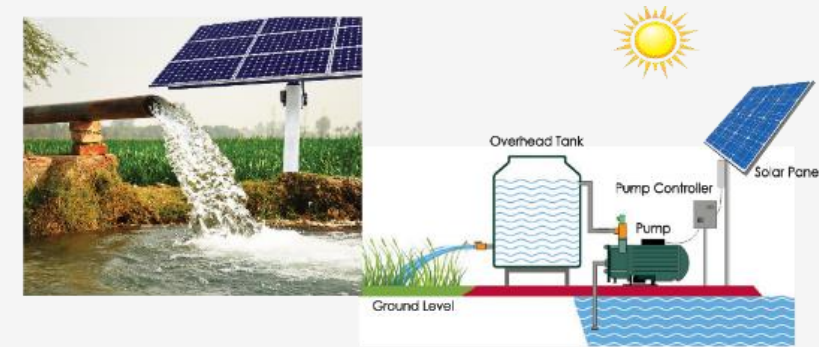


Tracking

Extending usage lifetime in different purposes.

Power output $\geq 70\%$ of initial value

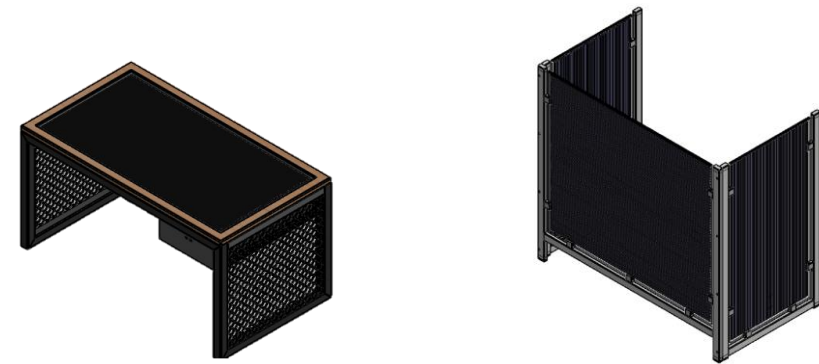
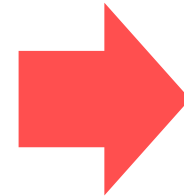
Selecting solar modules with homogenous quality.



Repurposing as **small off-grid PV systems.**

Power output $< 50\%$ of initial value

Selecting solar modules with good appearance and low toxicity.

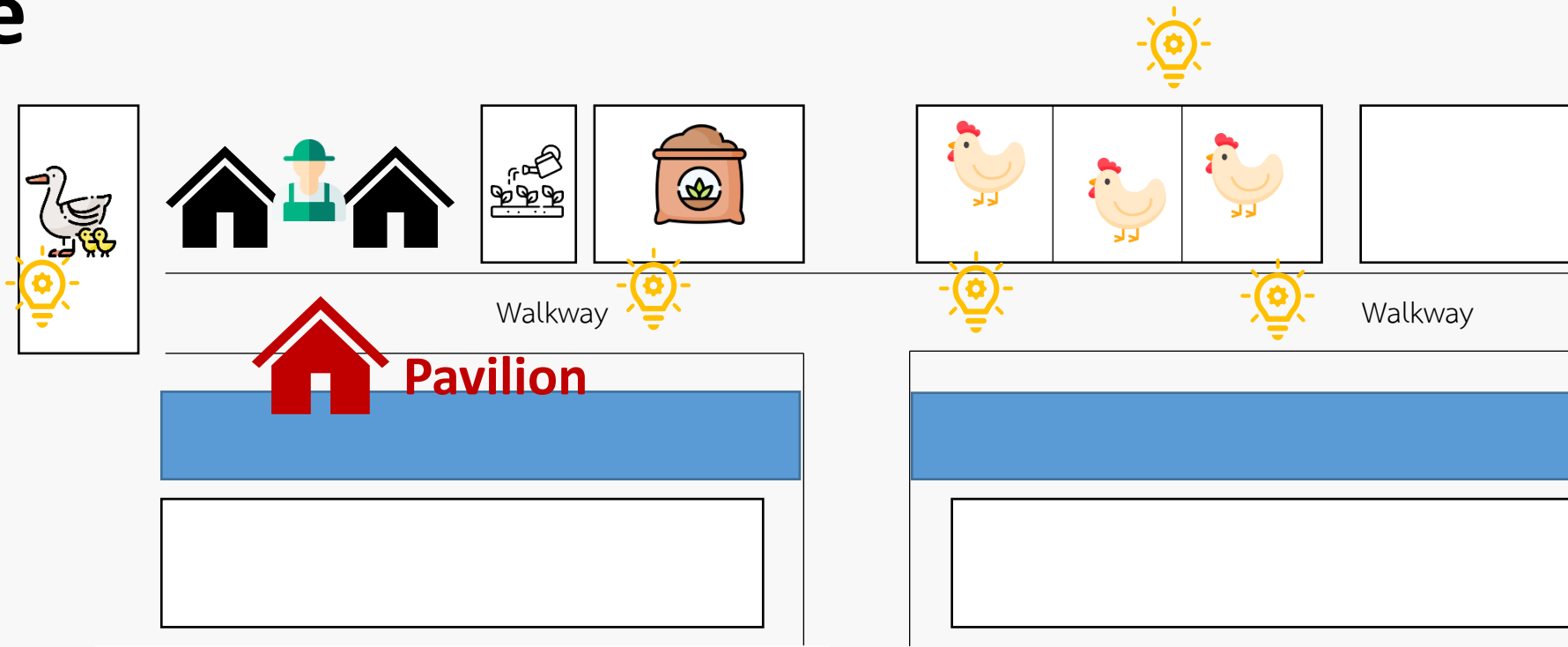
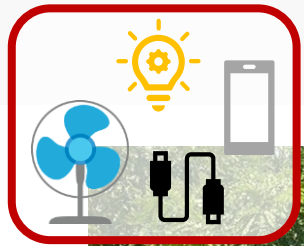


Repurposing as **upcycled furniture.**

Demo site

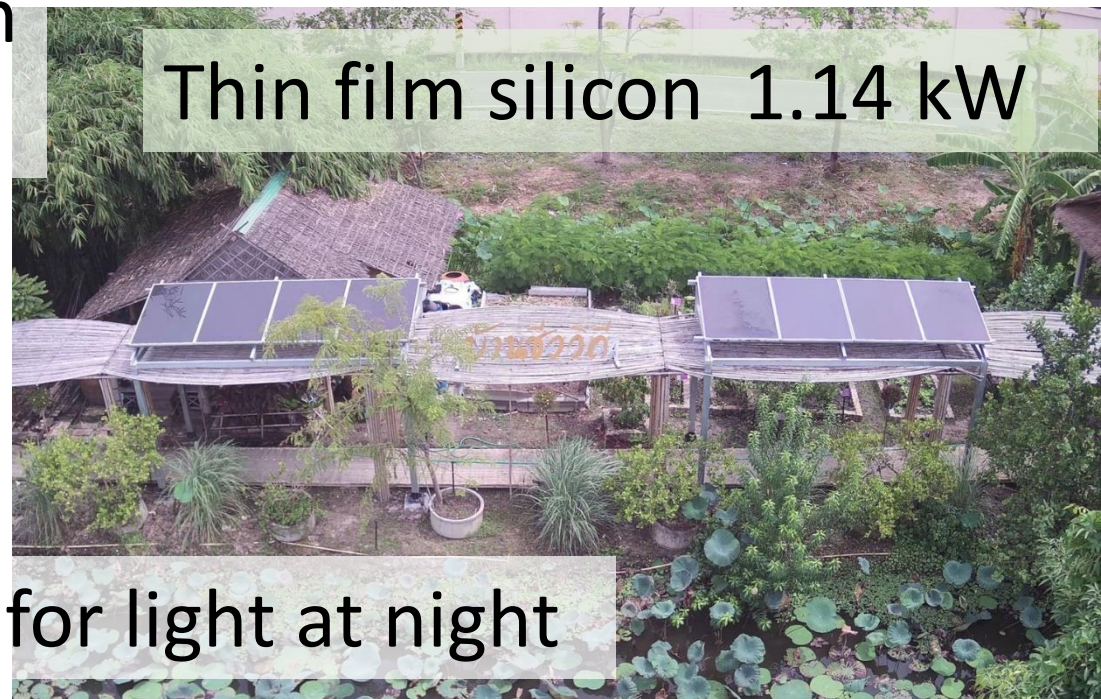
1

Solar pavilion



Copper indium gallium selenide (CIS) 2.1 kW

Thin film silicon 1.14 kW

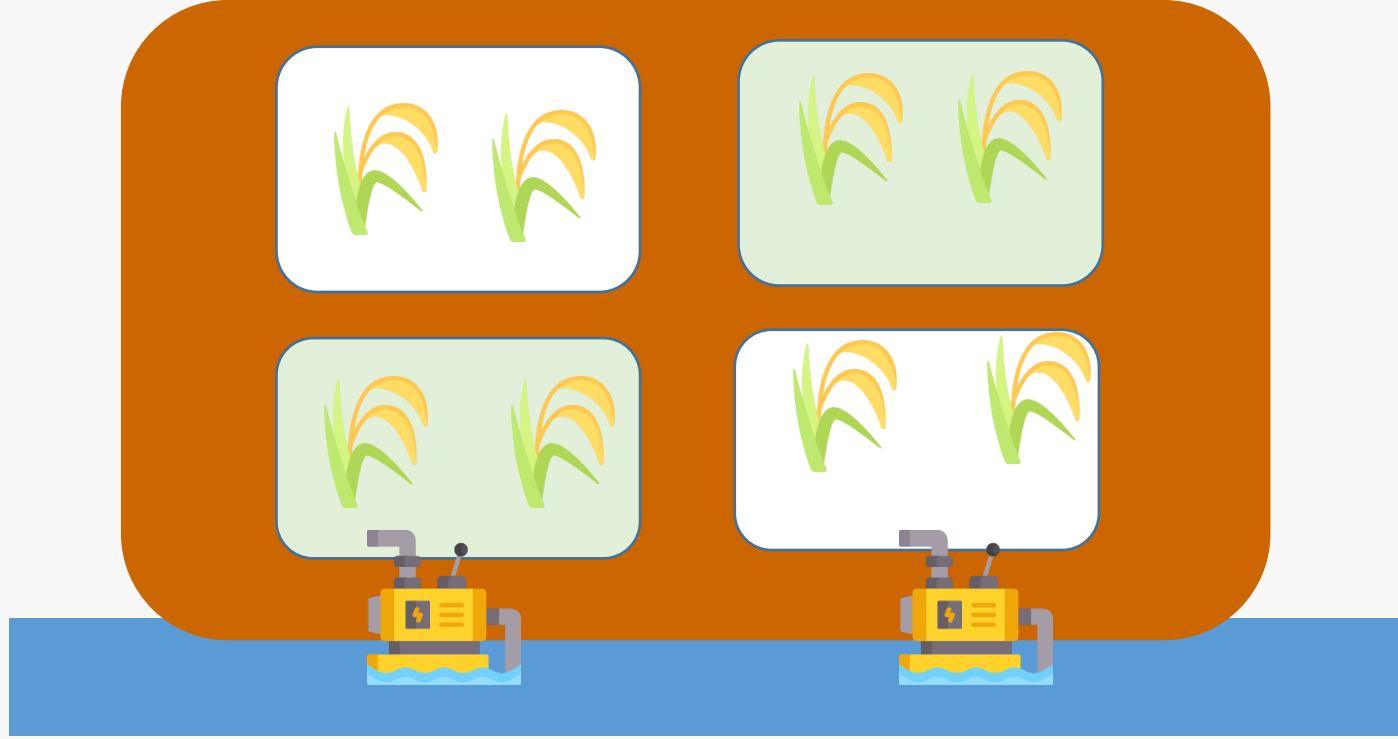


Charging station and for light at night

Demo site

2

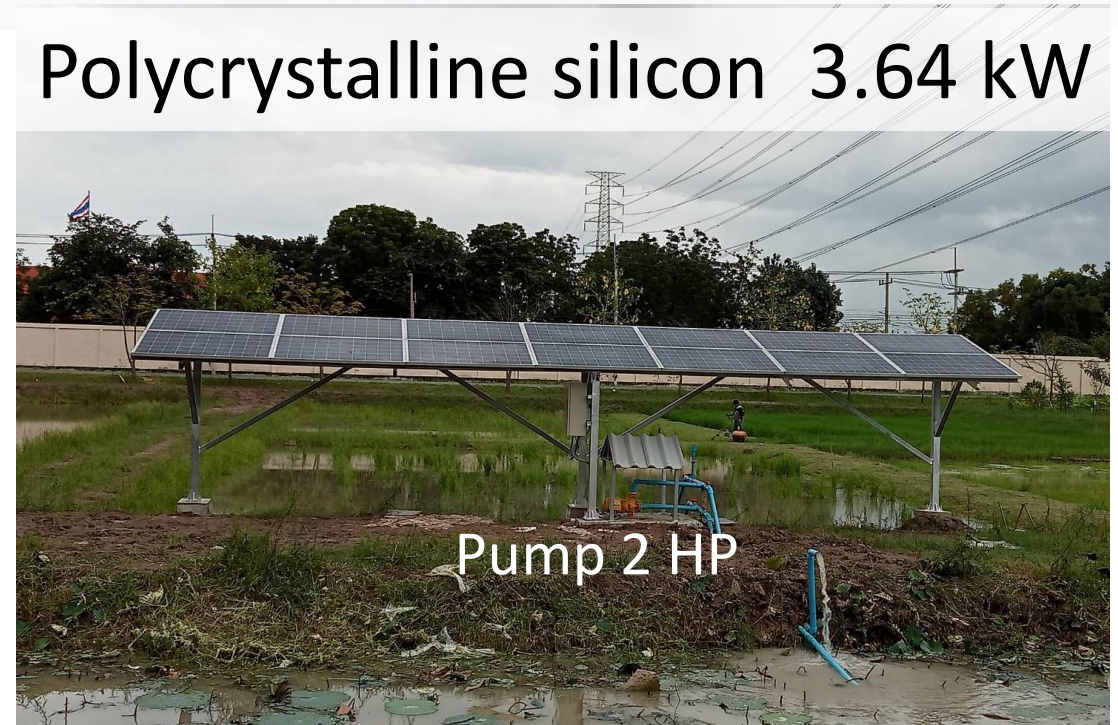
Solar water pumping in rice field



Thin film silicon 2.84 kW



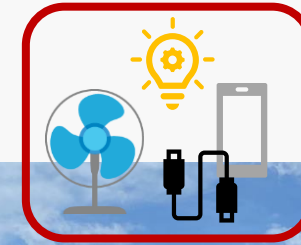
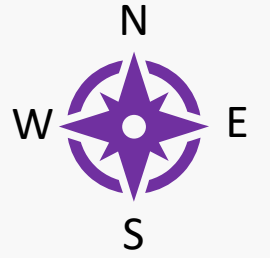
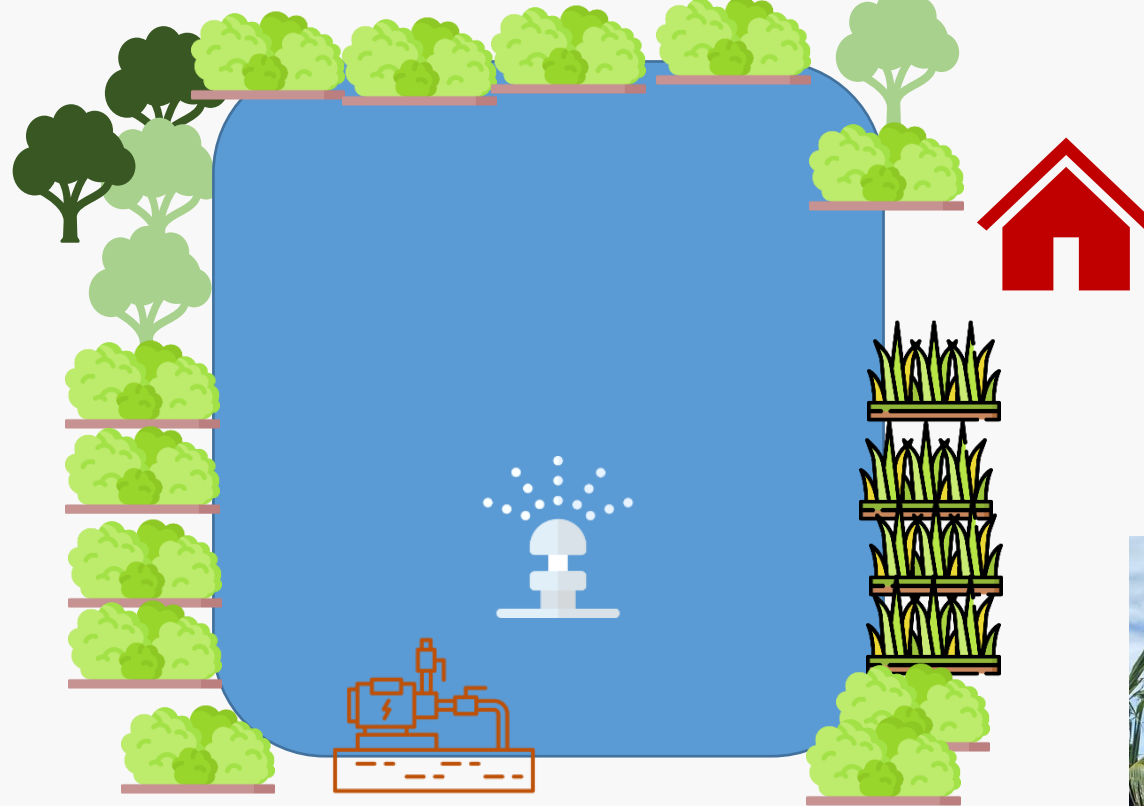
Polycrystalline silicon 3.64 kW



Demo site

3

Khok Nong Na



Polycrystalline silicon 1.56 kW

Solar pumping for water circulation



Thin film silicon 600 W

Charging station in rest area