

# Living lab



#### LIVING LAB

## Morocco



### Solar energy

The validation demo will validate the integrated systems approach of renewables and energy storage systems by implementing a solar off-grid network (cost- and energyefficient PV panels) coupled with lithium-ion batteries for energy storage, and a sustainable model housing unit that will demonstrate domestic use cases. In view of the circular economy, the end-of-life management of lithium-ion batteries will be explored. Via R&D, testing and teaching, while the potential for green transition will be explored via the deployment of electric motorcycles operated by women. Moroccan demonstration actions occur on two sites: an urban context in which e-mobility is being launched and a rural site where an off-grid solar component is planned to be deployed. In cooperation with the NGO Act4community, GEP and involved stakeholders are planning the construction of the solar energy system, distribution and access, and business model, which will allow for the project's sustainability. In the urban context the e-mobility concept is now well advanced, and will be in full service by the end of May 2023. With POGO as a business partner and an NGO, the female student association, Dar Attaliba, the procured e-mopeds, which in the first hand will be used by the female students, are assembled and ready to be distributed on the sites that have been selected.



Overview of the selected rural site

#### **Technologies tested**

For the urban living lab 40 e-scooters and corresponding Lithium-Ion batteries (greater or equal to 1.3 KWh) are deployed in the city of Marrakech. Scooters' mileage is 50 – 60 km. For the rural living lab – Two sites are selected in the rural areas of Benguerir municipality. The offgrid energy system will provide rural households with electricity (lighting and household daily use of energy). Other uses related to outdoor activities are also planned as water pumping, Infospots, etc

## **Leading Partners**







Asset(s)	Total number	Specifications
Charging hubs	10	-
Solar canopy (6 panels)	1	-
E-mopeds	40	-
AC charging stations	-	-

Across the city are 10 charging hubs for 40 (shared?) e-mopeds. The AC charging stations are grid connected, except for the hub at the University which is solar powered. In the future, Pogo will develop a battery swapping system.





# MOROCCO Ben Guerir (Rural living lab)



Ctre Commune Ouled/Hassoun Hamri مرکز جماعه

أولاد حسون



Asset(s)	Total number	Specifications
Site	1	-
Solar park	1	20-30 kWp
Battery	1	-

Rural community in Morocco. A solar field of 20-30 kWp will supply power to nearby houses and a water pump to pump water from the water bore hole for irrigation purposes. A (2nd life?) battery storage system serves as an energy buffer.

