



ENHANCED RURAL RESILIENCE IN YEMEN (ERRY)

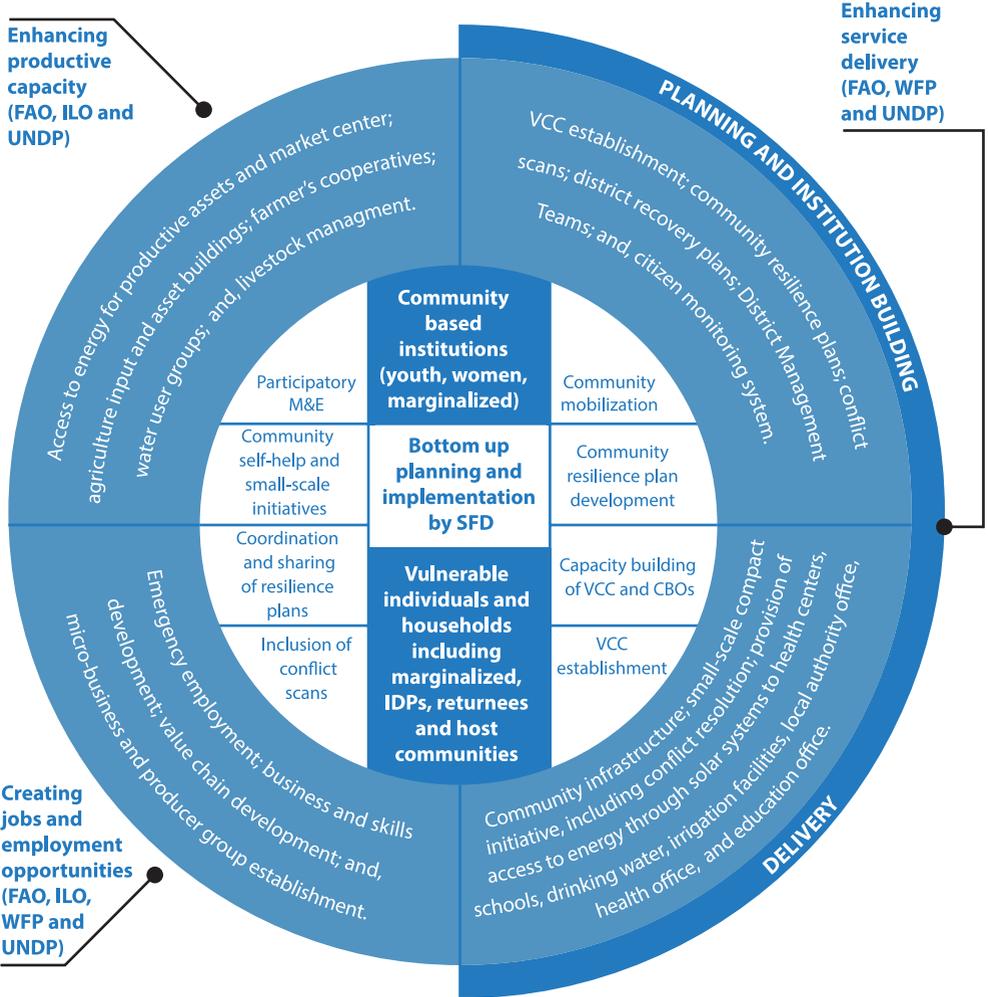
SOLAR ENERGY INTERVENTION IMPACT



This programme is funded
by the European Union



COMMUNITY-BASED RESILIENCE BUILDING MODEL IN CRISIS CONTEXT IN YEMEN



Implemented By



Abbreviation Index: *ERRY*: Enhanced Rural Resilience in Yemen | *SFD*: Social Fund for Development | *VCC*: Village Cooperative Council | *CBOs*: Community Based Organizations | *IDPs*: Internally Displaced Persons | *DMTs*: Districts Management Teams | *IPC*: Integrated Food Security Phase Classification

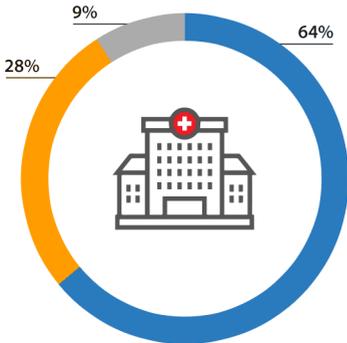
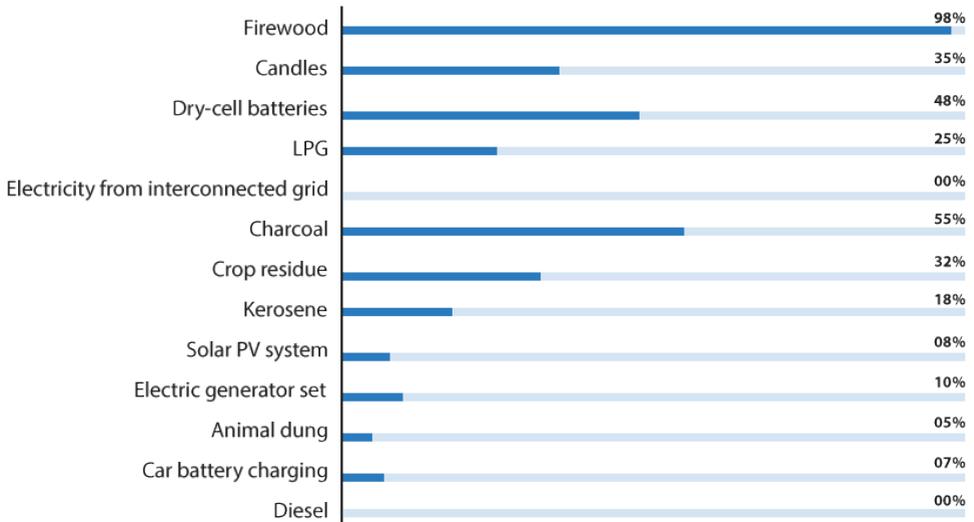
EXPECTED RESULT

Communities benefit from solar energy for sustainable livelihoods opportunities.



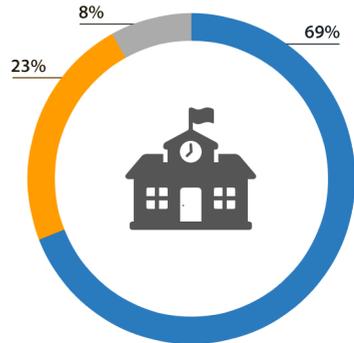
Access to Solar Energy Baseline - 2017 (random samples from 8 districts)

Energy Sources in 8 Districts of 4 Governorates



■ Grid Electricity ■ Generator ■ Solar PV System

Access to energy by health facilities



■ Grid Electricity ■ Generator ■ Solar PV System

Access to energy by schools

“

Very few solar micro-businesses exist in the targeted communities and governorates for income generation. ”

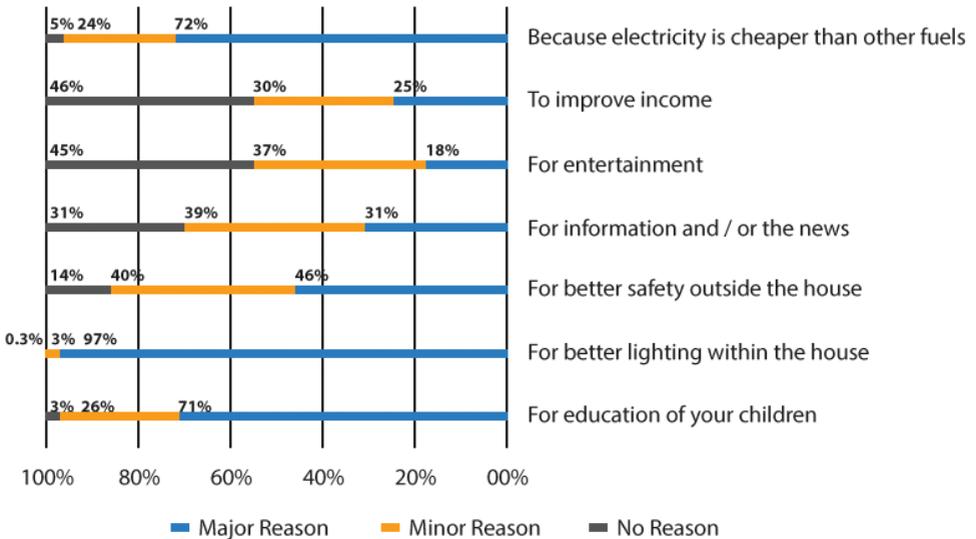
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90% of drinking water systems in all four governorates are motorized and so is irrigation. ”

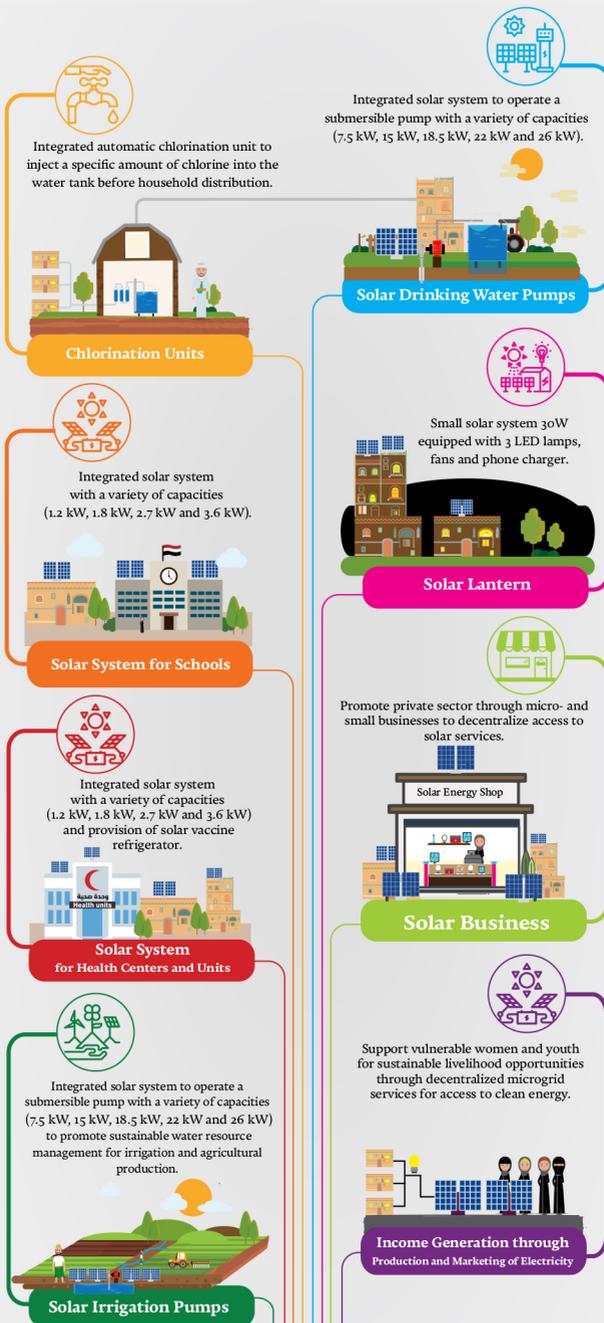
Source: Solar Socio-Economic Assessment 2017, ERRY UNDP



Reasons stated for wanting solar power



OVERALL SOLAR PROGRAMMING



INTERVENTIONS

Providing solar PV lantern to improve access to energy at HHs level

5,600

Individuals received PV lanterns including IDPs, returnees and host communities

Improving service delivery capacities in health centers / facilities and schools through solar energy solutions

176

Schools and health centers supplied solar systems to help reopen, benefiting **101,983** individuals

Equipping health centers and facilities with solar refrigerators to increase storage capacity, improving vaccination and immunization

72

Vaccine solar refrigerators installed ensuring beneficiaries have access to health and vaccination facilities, benefiting **36,000** individuals

Improving productive assets capacity through solar energy solutions for income generation

19

Solar systems provided to **15** productive assets and four market centers to prolong business hours, benefiting **9,300** individuals

Rehabilitating water systems through solar for drinking and irrigation facilities

8

Four solar drinking water systems with automated chlorination stations and four solar irrigation facilities established in Abyan (Kanfer), Hodeidah (Al Marawah) and Lahj (Lawder) to improve access to clean drinking water and sustainable irrigation facilities

Creating livelihood opportunities through solar energy

200

Micro-businesses established in Hajjah (Abs) and Lahj (Tuban) districts to create income generation opportunities and decentralized services such as electricity generation through solar micro-grid



FINDINGS

- Solar lanterns have helped targeted IDPs, returnees and hosts to improve access to energy for day-to-day needs and helped save **USD \$67,000** from electricity expenditures.
- Solar lanterns have also provided multiple benefits to targeted individuals such as prolonged business hours for income generation for vulnerable households.
- **72** vaccine solar refrigerators equipped in health centers / facilities have increased outpatient rate by **32%**, improved vaccination and lowered default immunization rate by **94%** and have increased savings from fossil fuel by **USD \$50,112** in a year.

IMPACT II



FINDINGS

- The solar intervention coverage, especially in the health sector, is much higher compared to other services.
- The majority of the health units (55%) in Hajjah and Hodeidah are not functioning due to the lack of access to energy.
- The solar intervention has improved the service delivery capacities of health centers / facilities and resumed emergency and critical services.
- In Hajjah and Hodeidah, ERRY targeted 54% health centers / facility to improve the storage capacity, level of vaccination and immunization.

Source: ERRY UNDP Database and Quarterly Reports 2018



FINDINGS

- Installed Solar Drinking Water Facilities with automated chlorination system in an area where cholera outbreak occurred in 2016 and 2017. This is a preventive measure to avoid any future outbreak in the area and has benefited **4,000** individuals.
- **4** solar drinking water and cholera prevention systems were built in the cholera effected locations benefiting **6,039** individuals while improving access (within 500 meters) and quantity/quality (**70 liters per person, per day** chlorinated at source water) and saving of **USD \$22,490**.

Source: ERRY UNDP Database and Quarterly Reports 2018 and ERRY Baseline 2017

IMPACT IV



FINDINGS

- **4** solar irrigation pump systems installation supported **80** small-scale farmers, improving their crop production and savings of **USD \$1,800** per pump from fossil fuel and maintenance.

IMPACT V



FINDINGS

- **200** solar micro-businesses were built to improve solar market and decentralized access to energy (electricity generation) for income generation opportunities through local market and solar micro-grid.



ERRY Joint Programme and Implementing Partners



FOR FURTHER CONTACT

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**SOLAR ENERGY
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**SOCIAL COHESION
INTERVENTION IMPACT**

**LIVELIHOOD
INTERVENTION IMPACT**

**LOCAL GOVERNANCE
INTERVENTION IMPACT**