

INTERNATIONAL RENEWABLE ENERGY COOPERATIVES CONFERENCE

IZMİR, TURKEY

10-11 SEPTEMBER 2018



MARRAKECH
COP22 2016 | CMP12
UN CLIMATE CHANGE CONFERENCE

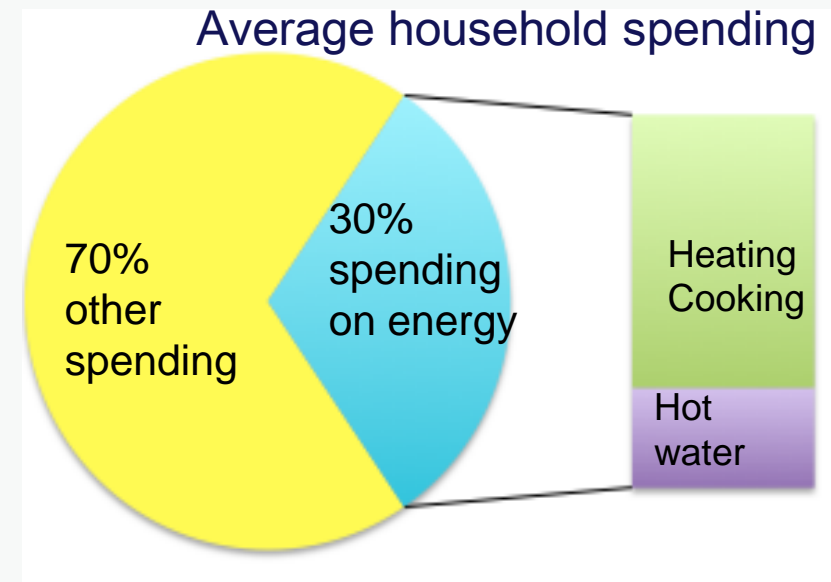
Experience of Energy Cooperatives in Georgia Givi Javakhishvili

Rural communities Development Agency, Georgia



Situation in rural areas of Georgia

- 400.000 households use 10-12 m³/ year of firewood for water heating, house heating and cooking
- Wide spread energy poverty – 1 inefficient stove for all the family



Impact esp. on women

- Labor burden
- Indoor air pollution
- Deforestation

Pilot phase 2014

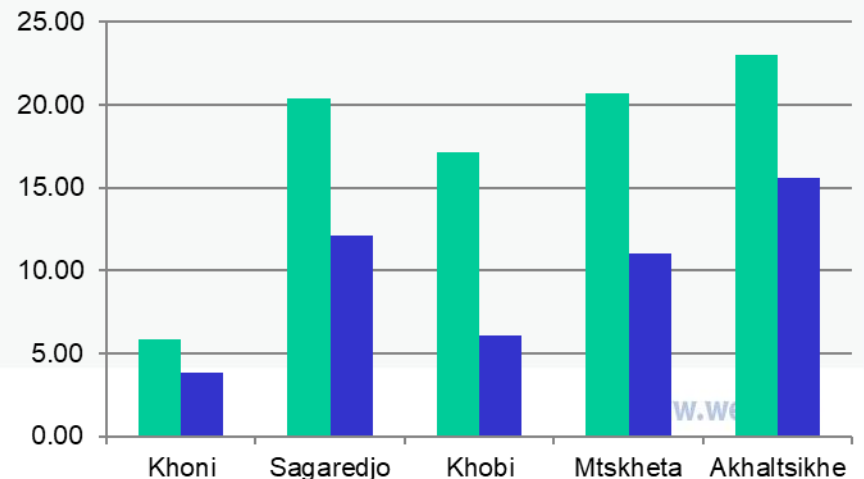
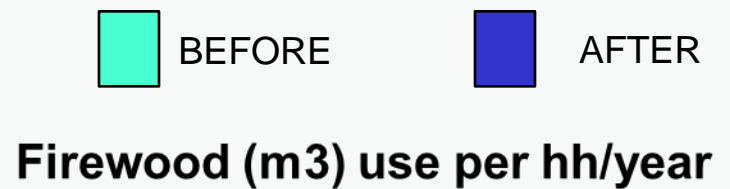
- 2017:

- 4 energy cooperatives + 1 umbrella cooperative set up
- 850 Solar Water Heaters
- 50 Houses insulated,
- 150 fuel efficient stoves
- Less air pollution, better health



Safe an

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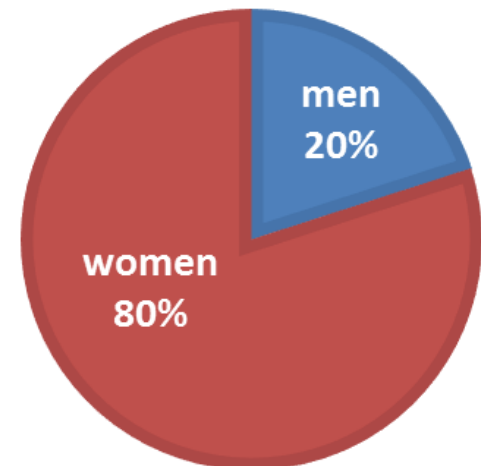
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Benefits for women

- **Women benefitted most** from SWH installed at their home
- **Women as monitor and maintenance experts**
- **Women community leadership** → active in e-cooperatives



SWHs obtained through revolving fund by women



Implementation strategies

Business model energy-cooperatives

Value-chain for economically sustainable low-carbon, equitable, energy sector

Financial mechanism -> equitable replication

Levering private finance with subsidy mechanism combined with affordable loans

Policy support and changing behaviour

Promoting sustainable forest use and economic development through awareness raising & capacity building

Sustainable energy technologies for rural households

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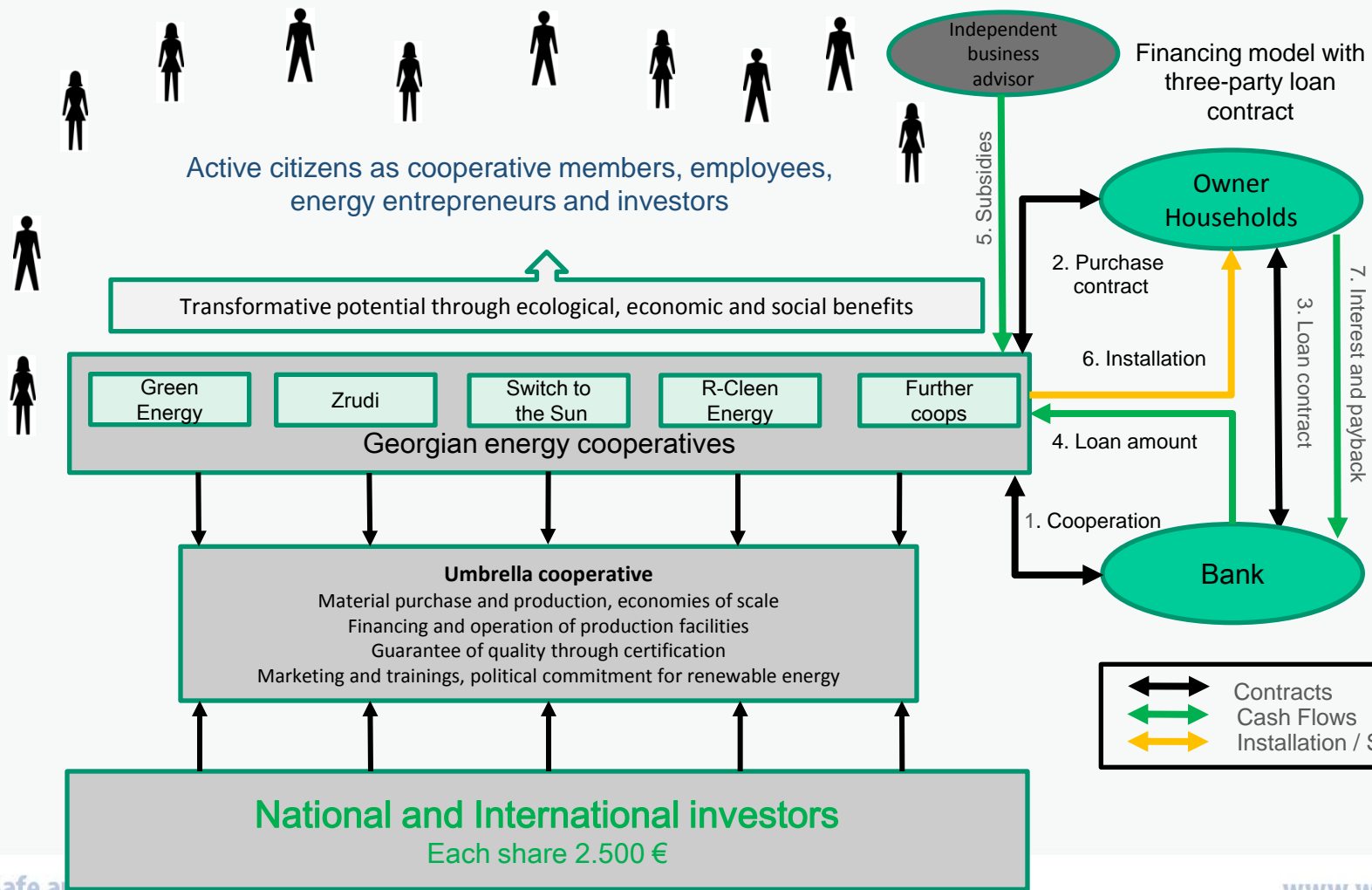
Reduced costs and effort, more comfort, better health and less unsustainable firewood use

Less GHG emissions

Better Livelihood for women & men

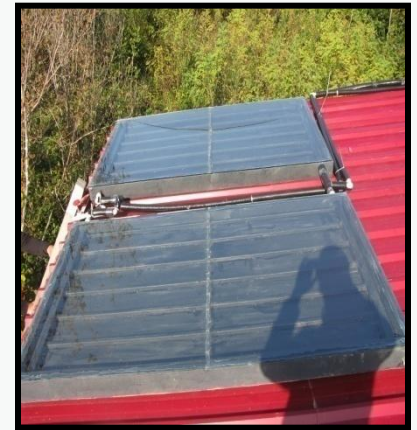
Aim: all rural households (400.000) have sustainable Safe and Sustainable Energy and Climate Protection for All locally produced energy by 2040

Georgian energy cooperative



Services of Energy Cooperatives

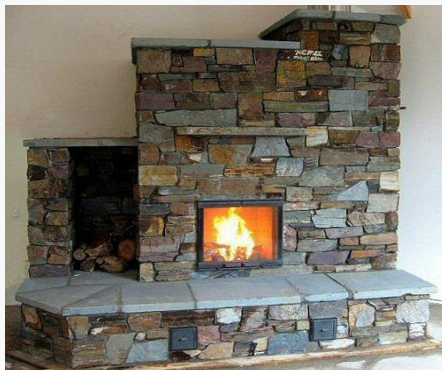
Construction and Installation of Solar Water Heaters(SWH) and back up services



Save 25% of energy
Saves 1 ton of CO₂ PER 1M² SWH
Improved health

Production and Installation of Fuel efficient stoves

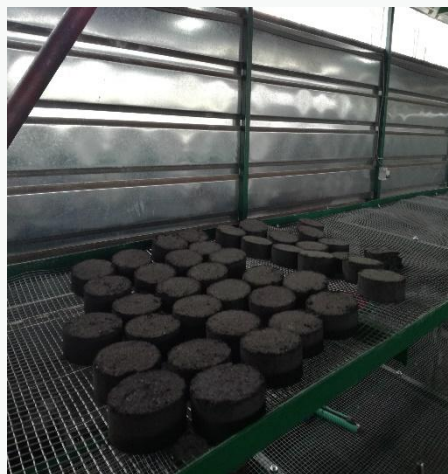
- Consume 60% less fire wood
- Less emissions of GHG
- Decreased exposure to hazardous substances
- Less burden on women
- Decreased expenditures



Solar Dryers for Fruits and Vegetables . Organizing Drying Facilities



Production of Fuel Briquettes from Agricultural & Forest Residues



- Replaces use of fire wood
- Decreased expenditures on energy
- Improved health
- Decreased emissions of CO₂
- Fueling the local small businesses

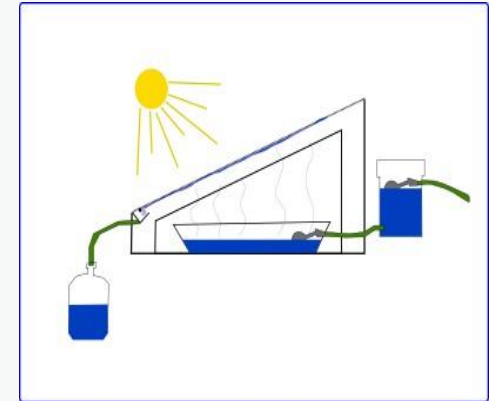
Construction/production of different solar devices



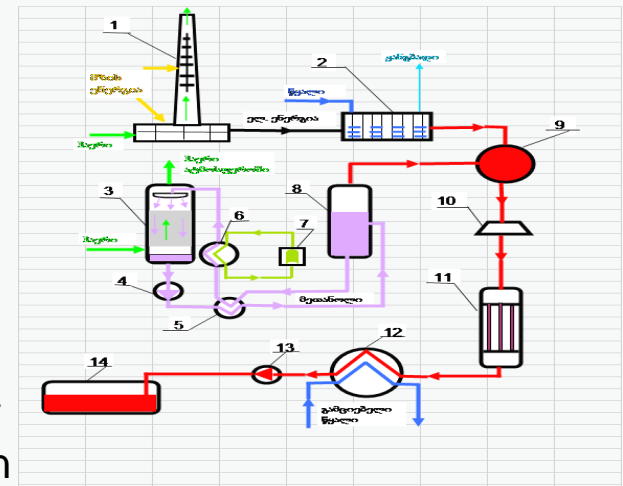
Milk pasteurizers



Water distillatory



Solar energy accumulation



Insulation of Houses



Used natural locally growing materials:
Straw, reeds, typha, clay, etc.

Improved energy efficiency by a factor of 50%

Thank YOU!