

Webinar Series:

Productive Uses of Energy for Improved Livelihoods in Humanitarian Contexts

Session 1:

Understanding the Energy-Livelihoods Nexus: Challenges and Opportunities

Date and time:

Tuesday, 1 March 2022
14:00-15:30 CET



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Co-hosted by:



ICRC



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GPA

GLOBAL PLATFORM FOR ACTION

Webinar Series on Clean Energy for Livelihoods and Productive Uses of Energy in Humanitarian Contexts



- Share knowledge and experience on how clean energy can support livelihoods and income generation in humanitarian contexts
- Support practitioners and end users with tools and knowledge to assess need and plan future work
- Assess demand for future deep dives or development of a specific Task Force on energy-livelihoods in humanitarian contexts

Session 1: Understanding the Energy-Livelihoods Nexus: Challenges and Opportunities

1 March 2022

15 March 2022

Webinar 2: Planning Energy-Livelihoods Interventions in Humanitarian Settings - Tools and Delivery Models

Webinar 3: The Energy-Livelihoods Ecosystem in Humanitarian Settings - Finance, Technology supply chains, Market Linkages and stakeholder roles

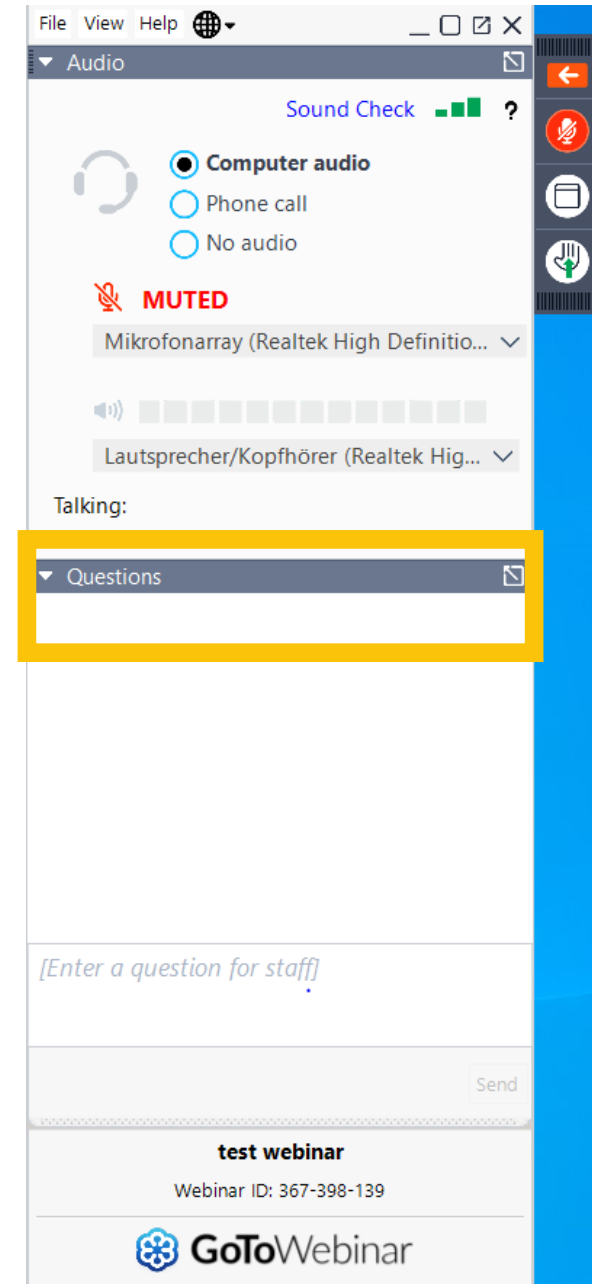
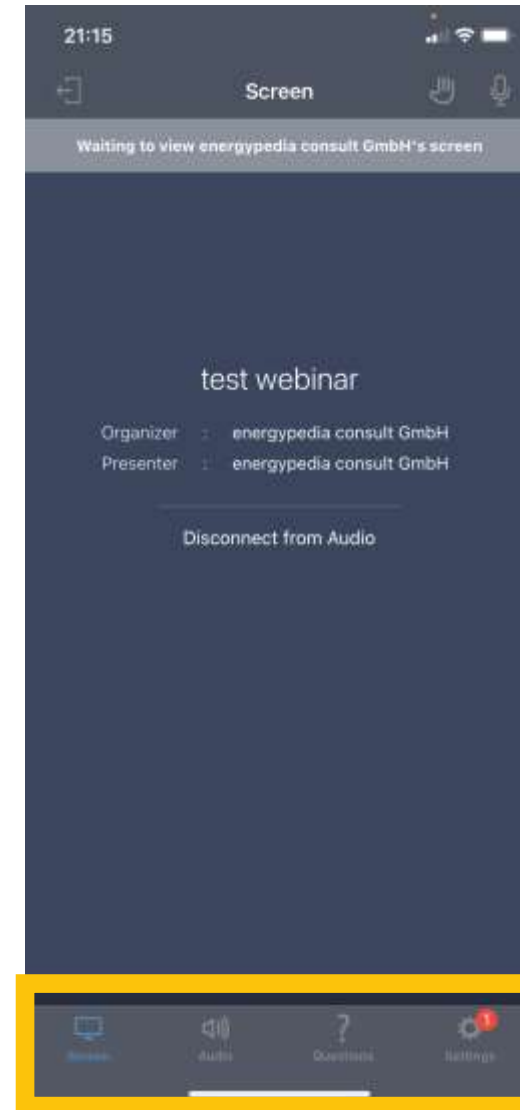
29 March 2022

Agenda

Presentation	Presenter
Energy – Livelihoods nexus Opportunities and options	Surabhi Rajagopal SELCO Foundation
Livelihood needs and challenges in humanitarian contexts	Alexandre Gachoud ICRC
Panel Discussion and Q&A	Moderator: Surabhi Rajagopal Panelists: Alexandre Gachoud, ICRC Emael Mrema, KAKUTE Vasco Amisi, Resilience Action and Okapi Green Power

Housekeeping

Please send us
your questions via
the “**QUESTIONS**”
tab!



POLL & SURVEY

Presenter



Surabhi Rajagopal, Senior Program Manager, SELCO Foundation.

Surabhi has been working with SELCO Foundation since 2011, on aspects of ecosystem building for energy access including financing, skill development and policy, from a Practitioner perspective. Her work includes bottom-up planning, programme design and policy engagement to integrate sustainable energy solutions for livelihood improvements and healthcare delivery, including in humanitarian settings. She has a Masters in Environmental Policy and Regulation from the London School of Economics, UK.



Sustainable energy for livelihoods:

Challenges and opportunities in humanitarian contexts

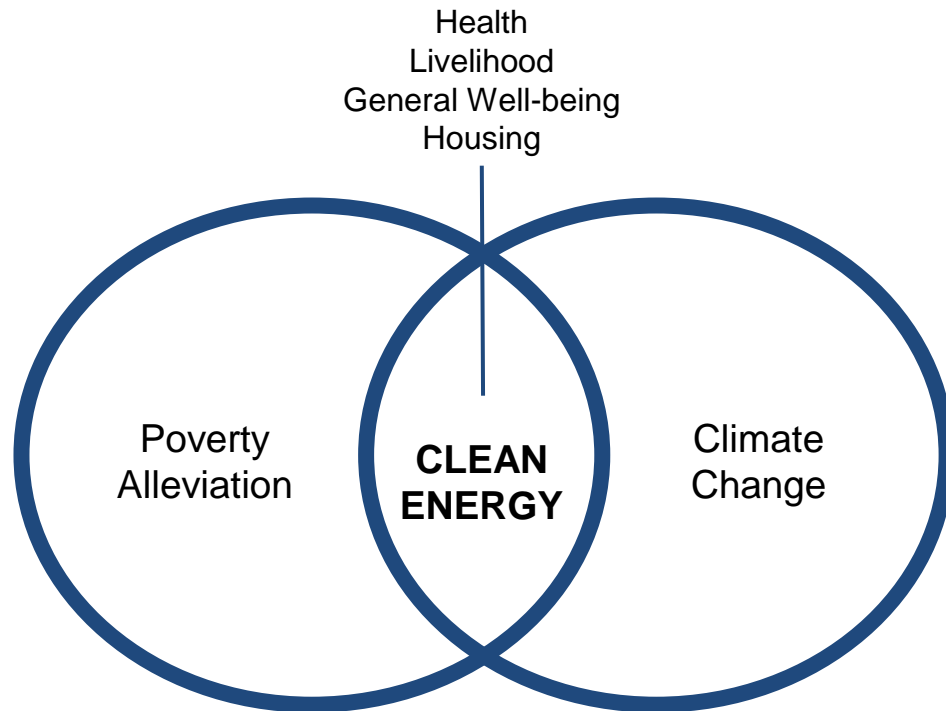


Contents

- Background
- Gaps and challenges in enabling energy for livelihoods
- Energy- livelihood nexus approach
- Typical humanitarian contexts
- What livelihoods do we typically see
- Gaps, and opportunities for discussion and future efforts

Energy Access for Poverty Alleviation, Climate Action and Sustainable Development

Energy is a primary requirement for a large number of developmental activities. Essentially making SDG 7 a prerequisite to achieve other SDG targets.



SELCO Foundation- Since 2010

- Inclusive innovation to meet end-user needs
- Incubation of local energy enterprises
- Institutionalization- working with partners across health, livelihoods etc.
- District level, State level solutions
- National level advocacy
- Global Replication

Energy for livelihoods: Gaps and challenges



EXPENDITURE and RELIABILITY

Existing energy solution options:
Unreliable energy access
Fossil fuels- costs + CO2 implications



MANUAL PROCESSES + DRUDGERY

reducing the drudgery involved in manually intensive activities



PRODUCTIVITY+ INCOME GENERATION

possibility of greater value capture within the community

LONGER TERM RESILIENCE BUILDING

Approaches to designing energy solutions in livelihoods

1. Holistic system design:

Appropriate Technology, finance, business models for each intervention

2. Ecosystem:

Aspects that ensure sustainability of energy solutions

3. Value chain:

Energy interventions at each stage in the value chain

Holistic Sustainable Energy Led Solutions and Models for Livelihood Development

1



+

2



+

3



Micro-Entrepreneurship, Livelihood and Community Development requires an enabling ecosystem

Linkages

Backward and forward linkages as well as market linkages for carrying out livelihood activities.

Access to services provided under other enabling ecosystem pillars - Technology, Infrastructure, Financing & Policies.

Technologies

Energy efficient technologies with reliable energy for productive and less laborious work

Infrastructure

Energy efficient and climate responsive built environments for carrying out business activities effectively - for housing of machines, storage, etc.

Needs of Entrepreneurs & Enabling Ecosystems

Training and Capacity Building

For business plan development, operational efficiency, asset management, financing, marketing, growth, etc.

Financing

For purchase of assets, working capital, growth & expansion along with appropriate supporting policies

Policy

Supporting policies for issuance of financing or sales of end products, expansion and linkages

Value chain approach: to identify need and type of energy intervention



Solution and Innovations can be Provided across **Livelihood Sectors**

Agriculture	Animal Husbandry	Food Processing	Crafts
Paddy	Dairy Farming	Roti/Chappati	Pottery
Millet	Poultry Farming	Chips	Cotton Textile
Flour		Khowa	Silk Textile
Spices		Pedha	Rope
Cold Storage		Vermicelli	Bamboo

More sectors continuously explored and solutions developed with various technology manufacturers and innovators as per users needs and innovation potential

Sustainable Energy for Humanitarian settings



Typical Humanitarian and Displacement contexts

SOCIO-POLITICAL CONFLICT

DISASTER

ECONOMIC CRISIS

PROTRACTED



Refugee Camps; Internal Displacement camps

- Income generation opportunities
- Improvements in productivity
- Reduced expenditure on fossil fuels
- Reduction in drudgery



Disaster affected communities

- Powering local services
- Challenges during + post disaster
- Resilience building

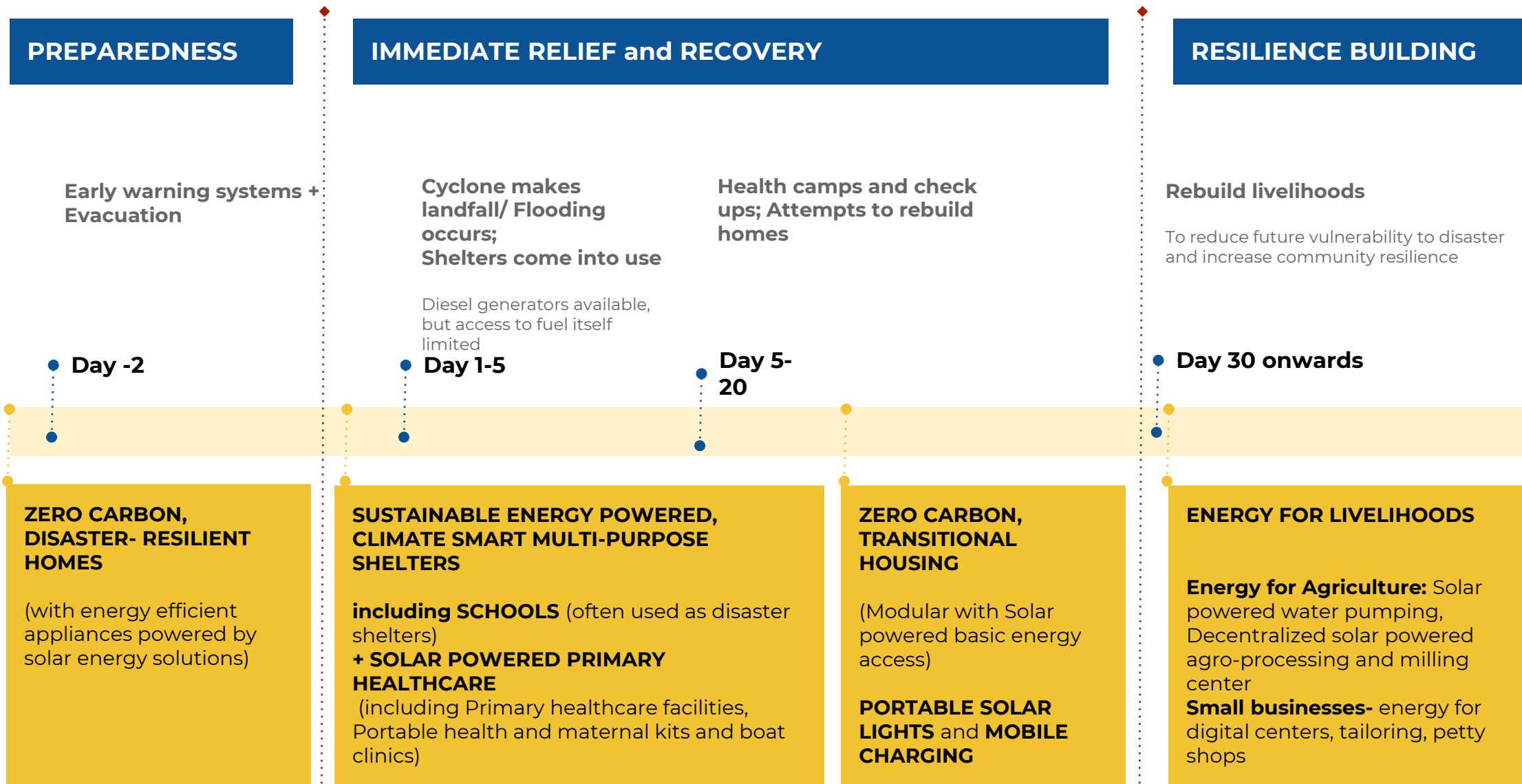


Urban Slum communities

- Income generation opportunities
- Reduced expenditure on fossil fuels
- Reduction in drudgery

Disaster affected communities:

Mapping response timeline and solution possibilities for cyclones



Typical Livelihoods in humanitarian contexts- Small businesses



ICT SERVICES

- Phone charging
- Digital services- laptop, printers
- ICT Hub



MIXED BUSINESSES and SERVICES

- Small restaurants- refrigeration
- Salons and-hair dressers



MANUFACTURING/ PRODUCTION

- Tailoring- sewing machines
- Pottery- pottery wheels

Typical Livelihoods in humanitarian contexts- Agriculture and Livestock



SUBSISTENCE AGRICULTURE

- Solar Water pumping + sustainable irrigation
- Basic tools for on-farm activities

LIVESTOCK

- Poultry- Backyard poultry and for sale
- Vaccination needs
- Pastoralists and Dairy farming- hydroponics, refrigeration, milking machines

AGRO PROCESSING and MILLING

- Grinding, milling
- Flour, Sorghum, millets

Key areas for further discussion

Technology and innovation:

- Energy solution options and design considerations- incl. built environment
- Supply chains- appliance and energy systems
- Installation and maintenance

Financing for energy solutions and viability

- Opex and Capex
- Sources of financing
- Business viability

Livelihood development and linkages:

- Input and market linkages
- Key actors and stakeholders in different community typologies

Skills and capacity development:

- Capacity of various stakeholders- incl. energy and humanitarian agencies
- Maintenance and after-sales capacity

Thank You

<https://globalsdg7hubs.org/>



Presenter



Alexandre Gachoud , International Committee of the Red Cross (ICRC))

Alex has been working for the past 3 years with the ICRC as the Global Cash & Markets advisor with the Economic Security Unit based in Geneva. Before joining the ICRC, Alex has worked with different UN agencies and International NGOs. His current role with the ICRC consists of providing remote and in-country support on market analysis, Cash & Voucher Assistance (CVA), market support interventions and value-chain development in conflict-affected contexts where the ICRC operates. Alex also leads training on market-based programming for the ICRC and the broader Red Cross and Red Crescent Movement.

Energy needs for livelihoods in conflict-affected contexts



ICRC



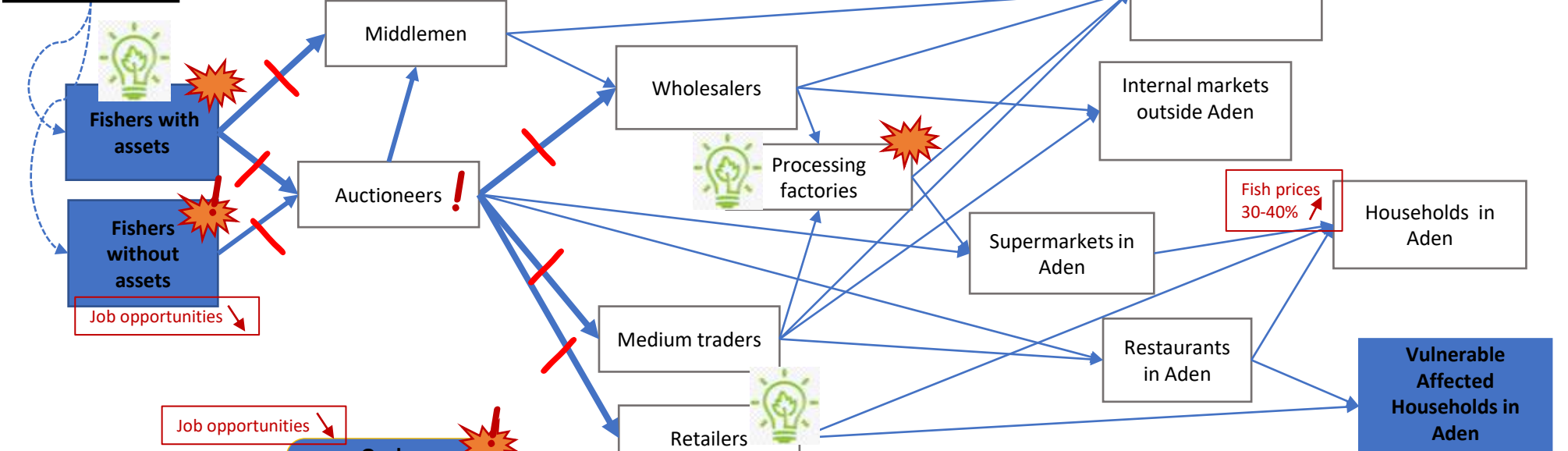
SMALL-SCALE FISHERIES MARKET SYSTEM – February 2020 – Aden- YEMEN

CHALLENGES:
Supporting small-scale fisheries in Yemen

MARKET ENVIRONMENT

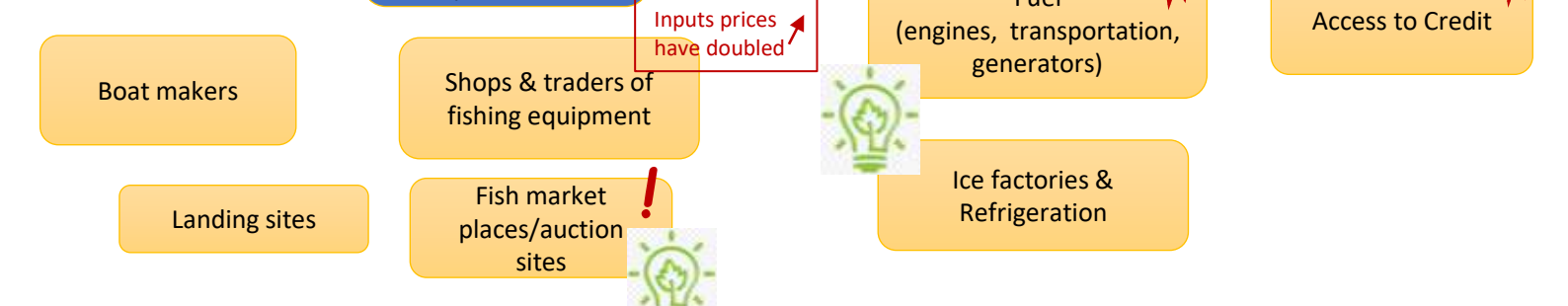


FISHERIES COOPERATIVES



MARKET CHAIN

MARKET SUPPORT SERVICES & INFRASTRUCTURES



Target groups ■

Key actors

Structural issues !

Conflict shocks ☀

OPPORTUNITIES:
Supporting poultry
production in Iraq



ICRC

OPPORTUNITIES:
Innovative cold-chain solutions



Panel Discussion



Surabhi Rajagopal
SELCO Foundation



Alexandre Gachoud
ICRC



Vasco Amisi
Okapi Green



Emael Mreme
Kakute

Presenter



Vasco Amisi, Resilience Action and Okapi Green Power

Vasco, a Congolese refugee, spent the most part of life in internal displacement, as well as in refugee camps outside the country, living in Kakuma Refugee Camp, Kenya since 2010. Vasco is co-founder of Resilience Action formerly SAVIC which was founded in 2010 as a self-help group and later became a CBO and is now an NGO that is benefiting thousands of people in Kakuma. Turned entrepreneur, he is currently CEO of Okapi Green, a refugee-owned for-profit enterprise operating in Kakuma Refugee Camp in northern Kenya. Formalized in 2018, Okapi Green works to increase access to quality, affordable, and reliable electricity for the community of Kakuma. They installed a 20 kwp solar mini-grid along with a Wi-Fi mesh network to supply electricity and connectivity to 200 small businesses, community centers, and individual households within the camp, supplying electricity to the end users via smart meters.

ICT Hub and Distributed Electricity – Kakuma, Kenya









Presenter



Emael Mrema, KAKUTE

Emael has over several years of experience in internal auditing and programme management within Government and non-Government sectors. Emael is currently a programme officer with KAKUTE Projects which is a local NGO based in Arusha, Tanzania, that promotes technology innovation and adoption in East Africa. Objectively focusing on innovation knowledge transfer, nurturing local talent and the use of clean renewable energy resources to improve community livelihoods. Emael is a recipient of a 2011 Switzerland Government excellence scholarship for foreign scholars, having completed her Master of Science in Economics, majoring in management from the Università della Svizzera Italiana in Switzerland.

DRE TECHNOLOGY INNOVATION FOR RURAL TANZANIA

A PHOTOSTORY COLLECTION



With the Partnership of



Supported By



Solar Powered Water Pumping for Household Irrigation and Animal Water Supply

SOLAR POWERED WATER PUMP FOR COMMUNITY WATER REQUIREMENT



DODOMA

Impact : (Increase in income, job creation, increase in overall business.)

Key recommendation: Clean water is the basic need in this project area. Project has potential to scale



SOLAR POWERED WATER PUMP FOR IRRIGATION



DODOMA

Impact : (Increase in income, increase in overall business, Variety of vegetable is available during off season)

Key recommendation: Business case still on development stage. Vegetable market is available in urban and rural area



Solar Powered Egg Incubator and Vaccine Refrigeration



SOLAR POWERED
EGG INCUBATOR
FOR POULTRY
ENTREPRENEUR



IRINGA

Impact : (Increase in income, increased production of chickens one week chick cost 1,500 – 2,500/=)

Key recommendation:
It has potential to increase production of chickens



SOLAR POWERED
VACCINE
REFRIGERATOR &
EGG INCUBATOR
FOR POULTRY
ENTREPRENEUR



DODOMA

Impact : (Increase production of chickens and eggs vaccine per animal is 100 – 300 per head)

Key recommendation:
Proximity access to vaccination in all area of poultry.

Solar Powered Digital Center for Video Showing, Barbershop, Phone Charging, M-Pesa

SOLAR POWERED
DIGITAL &
ENTERTAINMENT
SERVICE
ENTREPRENEUR



DODOMA

Impact : (Increase in income, increase in overall business, Access to M-Pesa, proximity barbershop and phone charging.

Key recommendation: It has potential to scale in all area where there no power.



SOLAR POWERED
BARBER SHOP
SERVICE
ENTREPRENEUR



IRINGA

Impact : (Increase in income, increase in overall business, other impacts hair cutting cost 500 – 1000 per head)

Key recommendation: Hair cutting is the need from child to elderly. There is potential market in all over the region.



SOLAR POWERED
DIGITAL &
ENTERTAINMENT
SERVICE
ENTREPRENEUR



DODOMA

Impact : (Increase in income, increase in business, video watching cost 300-500 per head)

Key recommendation: People want to watch Games through video show is the business in the area.



Solar Lighting for Solar Powered Sewing Machines and Milling



SOLAR POWERED
SEWING MACHINES
FOR TAILORING/
TRAINING CENTER



DODOMA

Impact : (Increase in income, Increase in overall business, Tailoring vocation build capacity to youths in rural area Training @ 20,000 per month)

Key recommendation: Rural tailoring vocational training in rural area easy to establish. Need business skills



SOLAR POWERED
RICE HULLER FOR
MILLING
ENTREPRENEUR



IRINGA

Impact : (Increase in income, increase in overall business, Easy to be own by family and operated in a single phase power)

Key recommendation: Technology is well received and accepted by end user and community members.

Lessons Learnt

Apart from raising awareness of DRE for the increase of income and employment...

1. Modern energy services can **improve the more informal aspects of rural incomes** e.g. reducing daily drudgery (manual work)
2. **Technology innovation using DRE is still a new concept on the ground** and it involves a lot of prototype design testing on the ground
3. **Solid base line research is paramount** to identifying and analyzing project stakeholders.
4. **Local Government officials need to be involved right from the design process** of the project as they can help in **identifying local organizational partners** on the ground
5. **Quantifying the impact** of energy services on human development is not easy. Further development on the ground, by taking more technology solutions to a wider coverage for analysis and more research.
6. Designing energy efficient equipment technology supporting the use of solar energy is not easily available in the local market, hence it **takes time to design and test the technology on the ground.**

Panel Discussion and Q&A



Surabhi Rajagopal
SELCO Foundation



Alexandre Gachoud
ICRC



Vasco Amisi
Okapi Green



Emael Mreme
Kakute

Q&A

Session 2 – 15 March 2022

Session 1: Understanding the Energy-Livelihoods Nexus: Challenges and Opportunities

Webinar 3: The Energy-Livelihoods Ecosystem in Humanitarian Settings - Finance, Technology supply chains, Market Linkages and stakeholder roles

15 March 2022

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Webinar 2: Planning Energy-Livelihoods Interventions in Humanitarian Settings - Tools and Delivery Models

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Thank You

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Webinar Documentation and Registration for Webinar 2:

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