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COMMUNITY ENERGY RESILIENCE

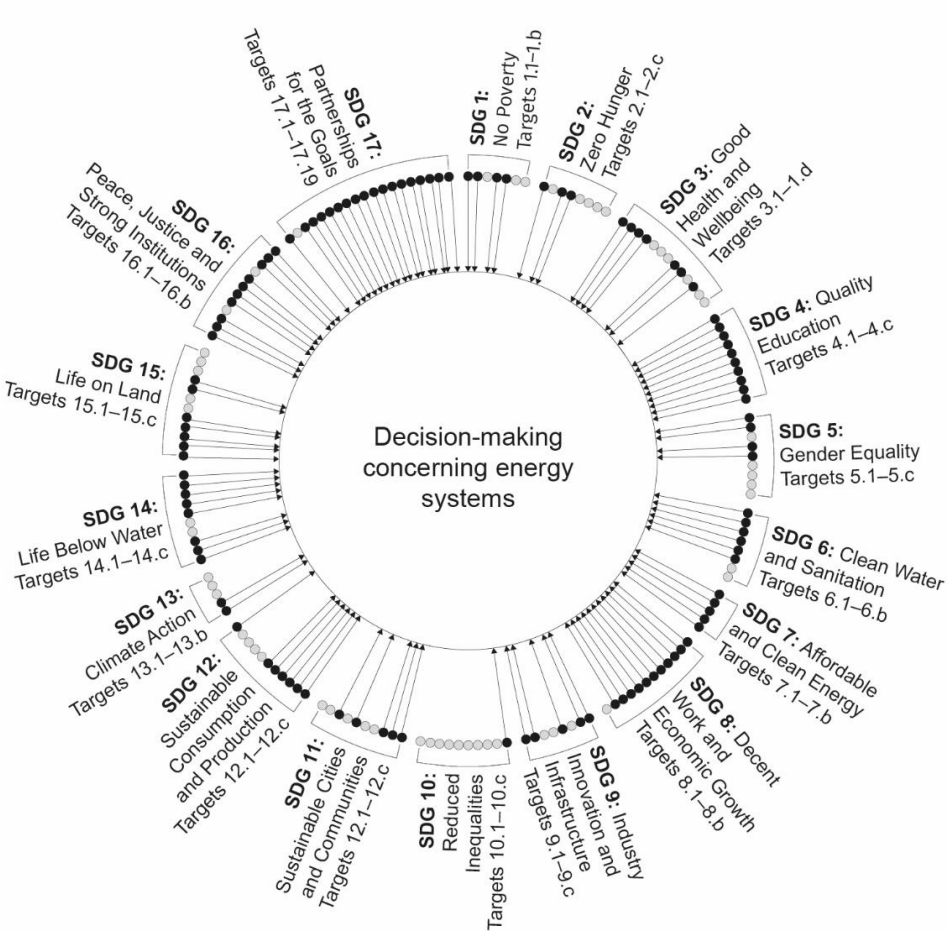

1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS
SUSTAINABLE DEVELOPMENT GOALS

Energy and the SDGs

113 Targets (~65%) require actions to be taken concerning energy systems.

E.g. to:

- address **climate change**
- reduce deaths from **pollution**
- Improve **justice**



Fuso Nerini, F., Tomei, J., To, L.S., et al. (2018), 'Mapping synergies and trade-offs between Energy and the Sustainable Development Goals', *Nature Energy*, 3, 10-15.

Resilience is…

“the ability of individuals, communities, organizations or countries exposed to disasters, crises and underlying vulnerabilities to anticipate, prepare for, reduce the impact of, cope with and recover from the effects of shocks and stresses without compromising their long-term prospects.”

- International Federation of Red Cross and Red Crescent Societies

L.S., 2015. Renewable Energy Projects in Rural China: A Systemic Capacity Approach (PhD thesis). University of New South Wales, Sydney.

Why community energy resilience?

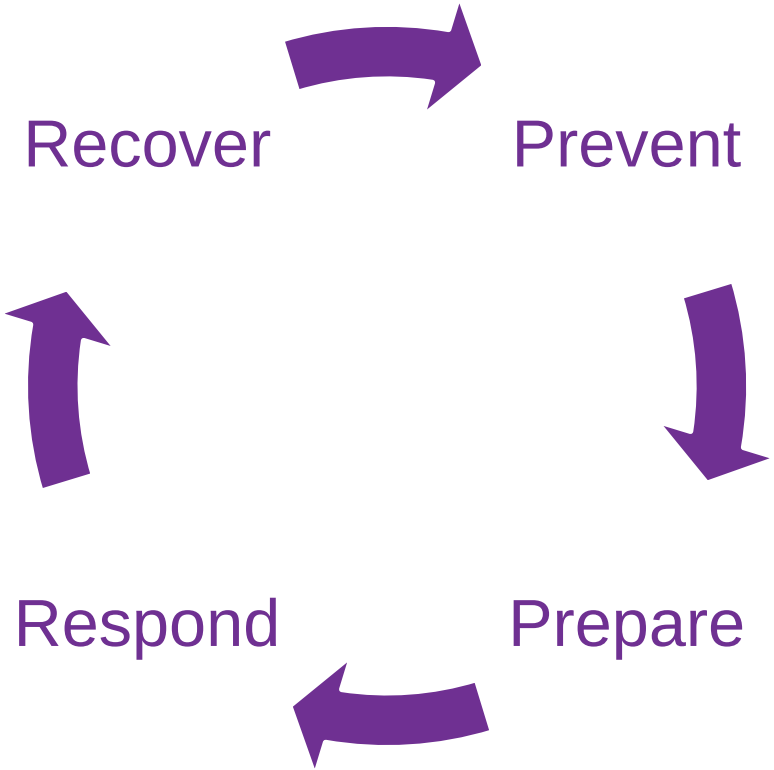
An observation

strategic use of energy by households and communities to improve their resilience

- in disaster situations
- in everyday life

Implications for

- energy services for humanitarian aid & international development
- coordination different types of energy systems


Prevent
Prepare
Respond
Recover

Identify energy needs & resilience strategies

Develop measures for community energy resilience

Create solutions:

pilot projects

Develop design tools

QSAND

A shelter and settlement focussed sustainability self-assessment tool for;

Quantifying
Sustainability In the
Aftermath of
Natural
Disasters.

Developed to;

- Fill a gap in the humanitarian sector for a comprehensive tool
- Benchmarking success
- Support improved delivery for beneficiaries
- Holistic integration of sustainability principles (environmental, social, financial)

What is QSAND?

Aim

- To promote and facilitate sustainable approaches to relief, recovery and reconstruction in the shelter and settlement operations after a natural disaster so helping to ensure economic, social, and health benefits to the community in the short and longer term whilst supporting and protecting the natural environment.

Key objectives

- To guide and inform the decision-making process affecting a disaster-affected community, promoting more sustainable approaches to shelter and settlement activities.

- To provide a coordinated framework for identifying and, where relevant, comparing the sustainability of options/solutions in the relief, recovery and reconstruction of disaster-affected communities.

QSAND Categories

Shelter & Community	Settlement	Material & Waste
– Privacy – Internal Environment – Community Sensitive Design – Construction approach	– Site Selection – Security of Tenure – Spatial Planning – Infrastructure	– Post Disaster Waste Management – Construction Waste Management – Operational Waste Management – Material Properties / Specification – Material Sourcing
Energy	**Water & Sanitation**	**Natural Environment**
– Energy Demand and Supply – Energy Consumption	– Water Demand and Supply – Water Quality – Sanitation	– Human Relationship to Ecosystem Services – Ecological Protection – Ecological Rehabilitation and Restoration
Communications	**Cross cutting Issues**	
– Telecommunication	– Participation – Capability and Skills – Security and Safety – Economic Viability –	– Community Ownership and Sustainable Management – Livelihoods – Resilience – Access and Non-discrimination

Modern Energy Cooking Services

- Aim: to transition from biomass to clean cooking

- Displacement situations

Reflections

- Technological innovation
- Impact
- Humanitarian Engineering

Thank you!

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