

Energy in the Humanitarian Action: experiences from MSF

Nairobi, April 2019

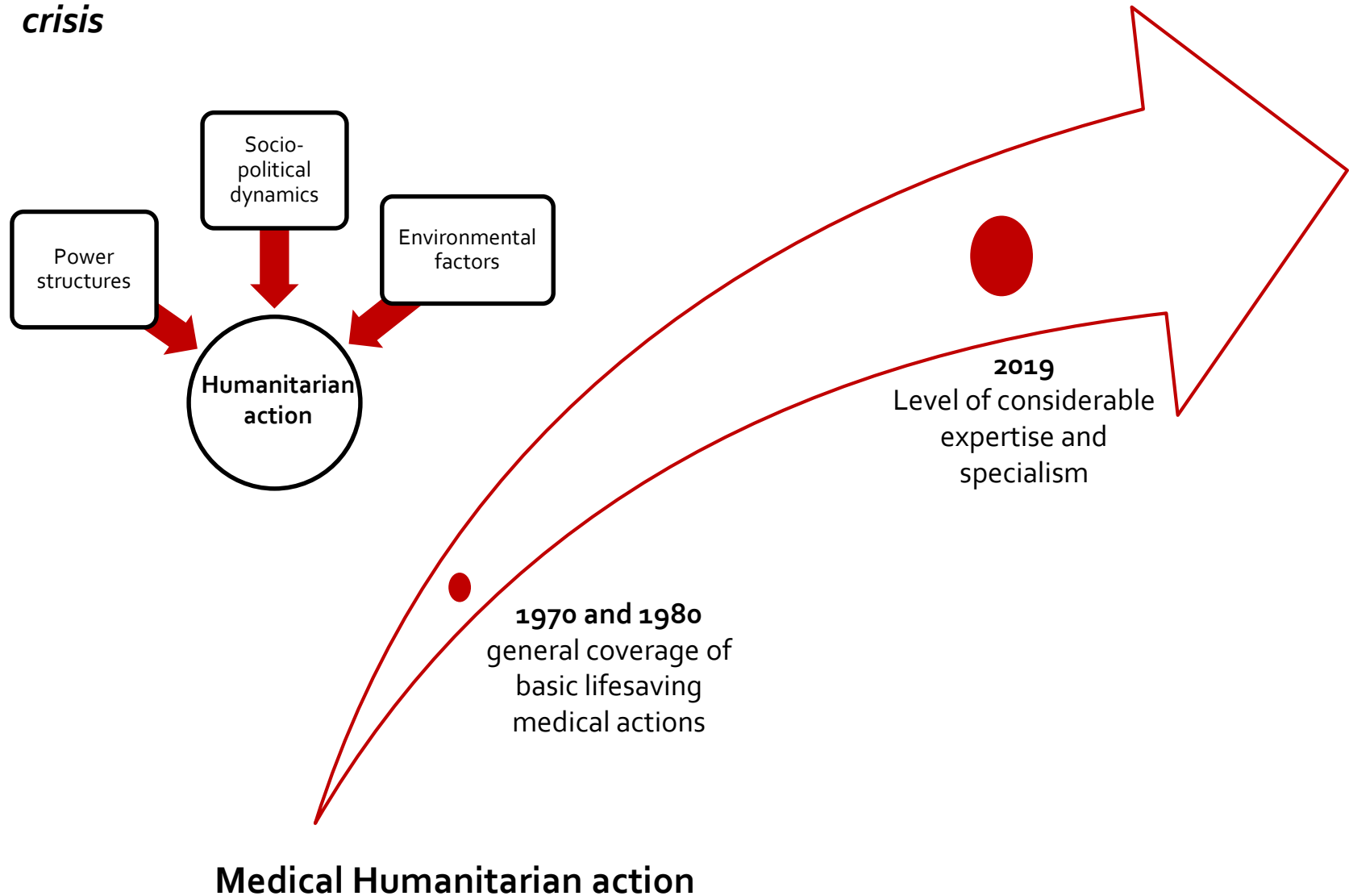
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Humanitarian Action

The impartial life-saving assistance provided to people suffering from severe crisis



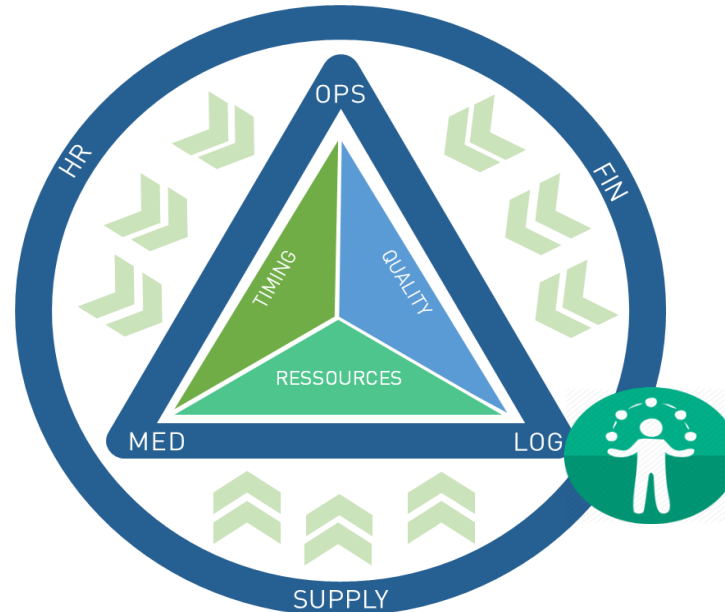
Sustainability in Humanitarian Action: a simple comparison



- Contribution to a **healthier individual** and **society**
 - Effects on how food is **cultivated, produced, distributed and consumed.**
 - Lots of **planning**
 - **Time** consuming
 - **High investment costs**
- **Simplest** answer
 - **Acceptable quality**
 - **Fast**
 - More **waste**
 - **Low investment costs**

MSF in Humanitarian Action: building an operational response

MSF: Medical action & bearing witness. Working in 73 countries and in 460 projects around the world; more than 40.000 staff worldwide



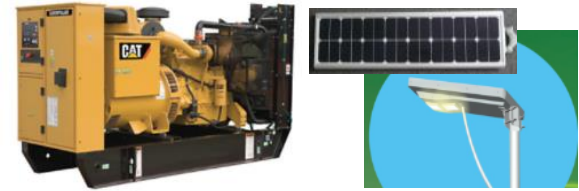
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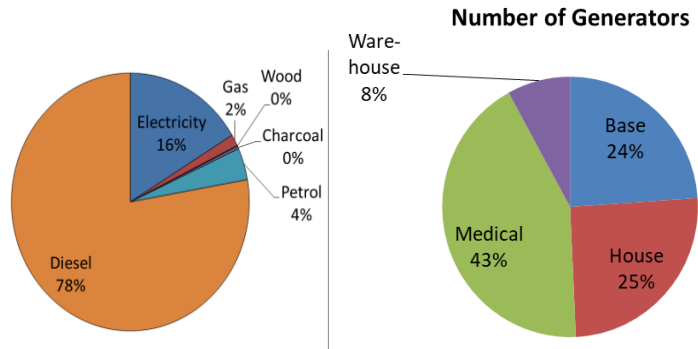
- Climate
- Accessibility and security
- Local availability of material and/or expertise
- Cultural factors

MSF in Humanitarian Action: multiple responses

- From interventions in **camp**s, **mobile clinics**, **health centers** or **hospitals**.
- Setup of **temporary**, **semi-permanent** or **permanent infrastructures**. **Rehabilitations** and/or **constructions**.
- Running **autonomously**.



MSF's approach to NRG: Global Picture & Vision



- 350-400 stationary generators currently deployed.
- Fuel consumption: 1400 m³/year.
- Total fuel spending: 4.9 M€/year.
- CO₂ emissions: 13,500 tones/year.

Provide *technically, socially, environmentally and economically responsible* energy solutions adapted to *context and needs*, offering the best setup for *our operations*

PRIORITIES

1. Safety of people

2. Protection of devices

3. Continuity of service



Consumption

Energy Efficiency
Priority Loads
Demand Side Management

- Distribution -

Generation

Renewable Energy
Energy storage

MSF's approach to NRG : case studies

Kunduz, Afghanistan Trauma Hospital (50 beds)

- Installed power: **1.583 kW.**
- 8* 220kVA **synchronized** gensets
- Energy efficiency measures: **HVAC**

Kenema, Sierra Leone Pediatric's Hospital (161 beds)

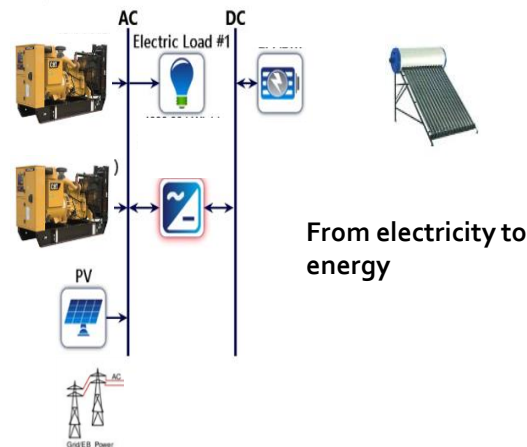
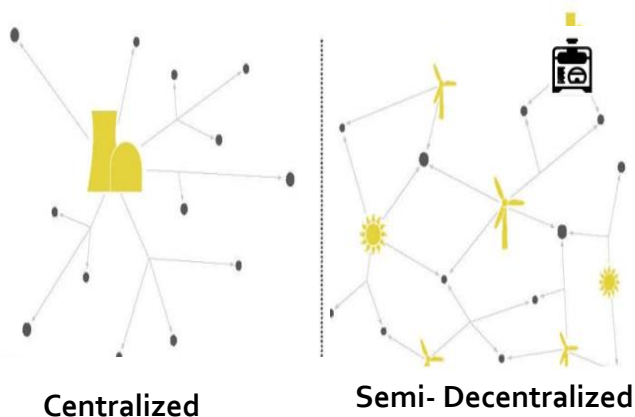
- Installed power: **576 kW.**
- **Phase 1:**
 - 3*220kVA **synchronized** gensets
 - PV Production: **750 kWp** ; 2750 PV panels (270 Wp)
 - Battery Storage: **1500 kWh**

Bar Elias, Lebanon, General Hospital (50 beds)

- Installed power: **875 kW.**
- **Energy monitoring strategy**

Smaller scale:

- **Solar oxygen concentrators** in Guinea
- **Solar air conditioners** in safe rooms in South Sudan

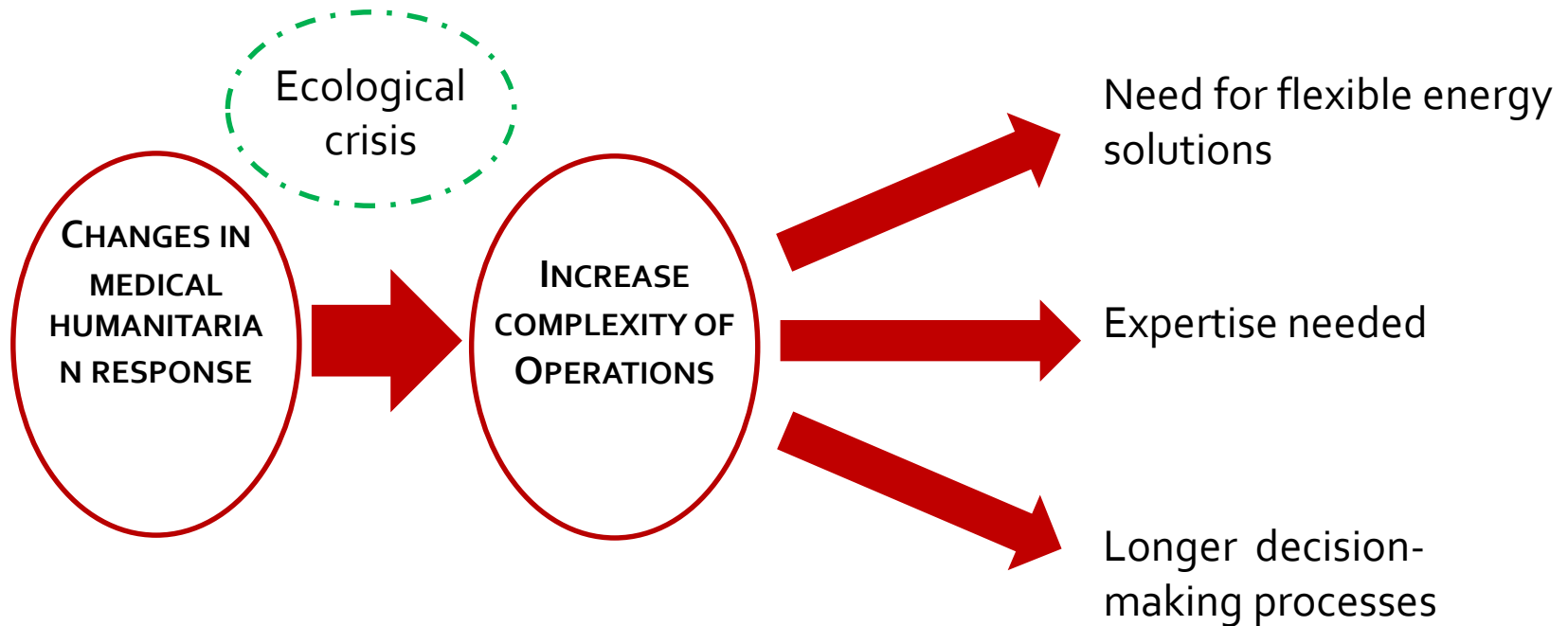


Challenges

- **Emergency mind-set**: longer term operational responses with higher initial costs vs. fast and effective classical responses in the emergency context.
- Specific **expertise**: pool of energy experts able to manage and follow-up the systems.
- Ensure **continuity of service**: back-up systems.
- From electricity **to energy**; from **products** to **services**.
- Need of establishing an **energy dialogue** between **several stakeholders**: other NGOs, outsourced companies, etc.
- **Shortage of data collecting** and analysis relating to energy and health.



Conclusion



Sustainability vs Effectiveness



**How to find the right
balance?**

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