

Comparative study of the environmental impact of emergency shelter models in the Sahel Region

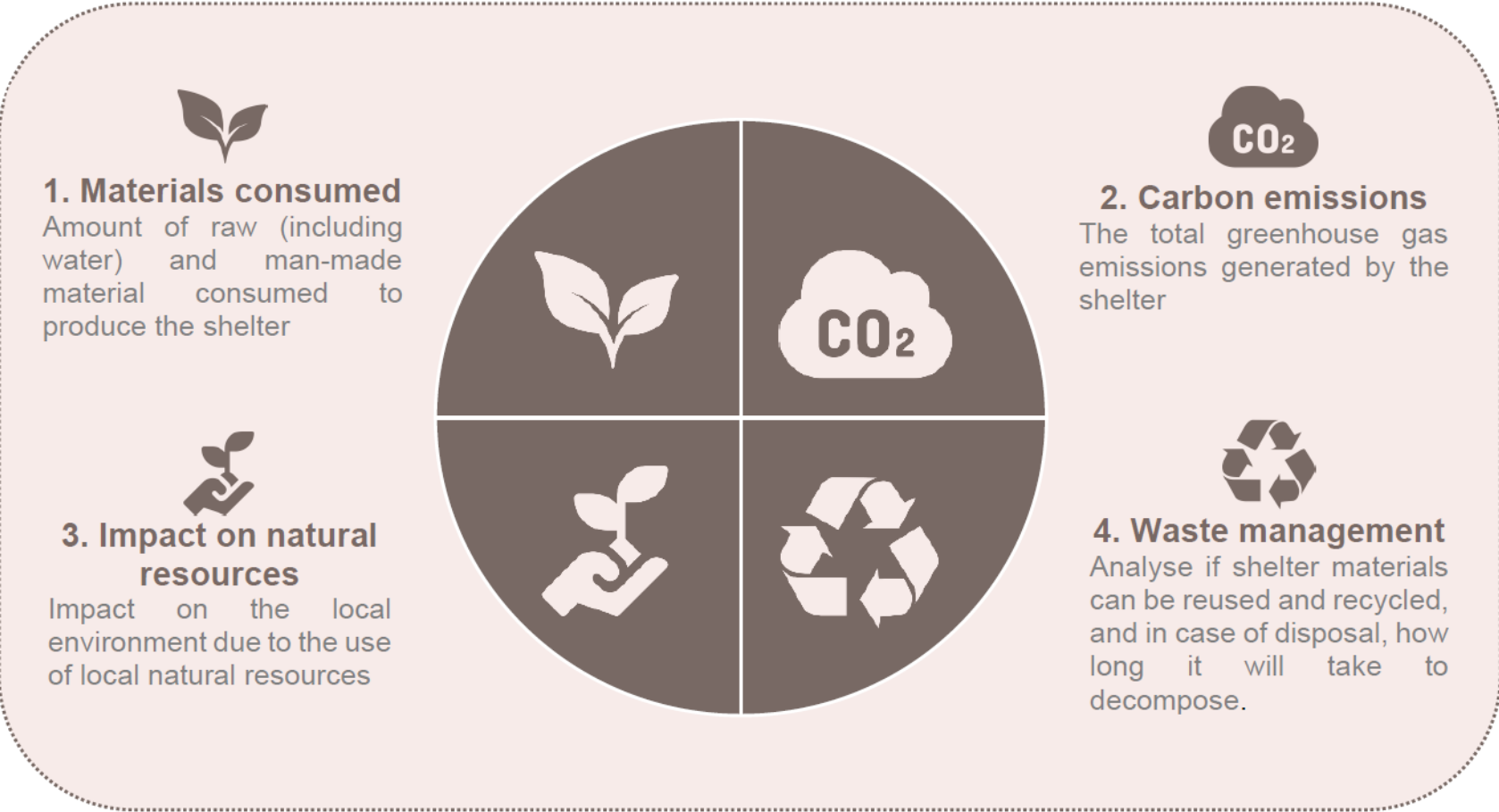


Purpose

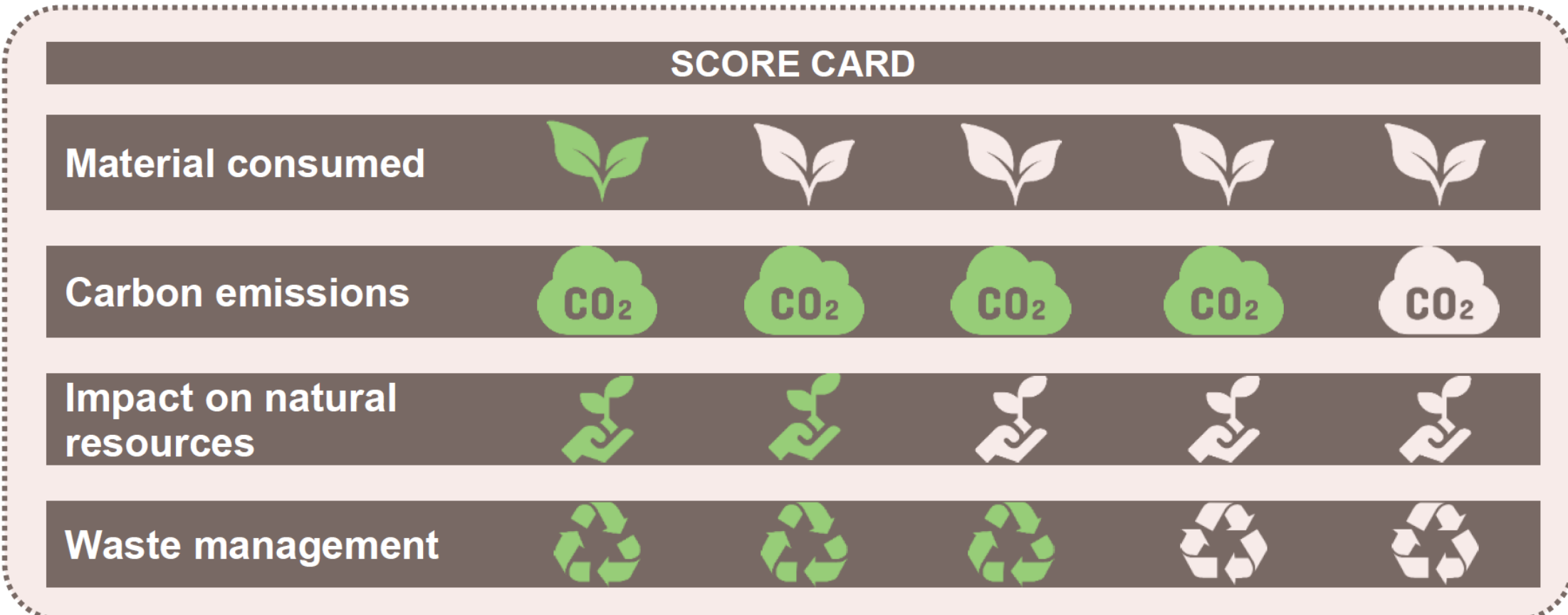
- Aim: to reduce the environmental impact of the shelter programs implemented in the Sahel (Burkina Faso, Chad, Niger & Mali) by the **International Aid of the Luxembourg Red Cross**.
- A contribution to the growing body of work on the environmental impact of humanitarian assistance.
- The published **reports**, (English and French), are available on the **Global Shelter Cluster** web site



Methodology: 4 Criteria used to analyse environmental impact



Methodology – Score Card approach



1 poor, 2 average, 3 medium, 4 good, 5 very good

SMAC tool

- These studies **are the first to use the SMAC**, the new carbon footprint calculation tool for the shelter sector.
- **Extended engagement** with the Shelter Cluster Environmental Community of Practice.
- **Feedback** was shared with the developers of the tool (BRE) to improve it.
- Very **useful** tool, **relatively easy** and **intuitive** to use, **unique** and much needed for the sector
- Some **limitations** with the tool. Based on a **'good enough'** approach
- The **tool was adapted to** fit the purpose of these studies



SMAC tool limitations

- Only comparison **of shelters, not materials**.
- **Comparison of up to 4 different shelters**, across the following factors: **(1) Production of component materials (2) Packaging (3) Transport (4) End of Life**.
- **Not all types of materials** included in the database.
- Assumptions are made in the SMAC relating to **end of life** (recycling options and level of CO² released from disposal). These can have a big impact on results.

Therefore a score card approach is important, which can allow for a more explicit inclusion of local environmental factors (beyond carbon emissions)

Example of what SMAC tool allows. Comparison of two shelter models in Chad

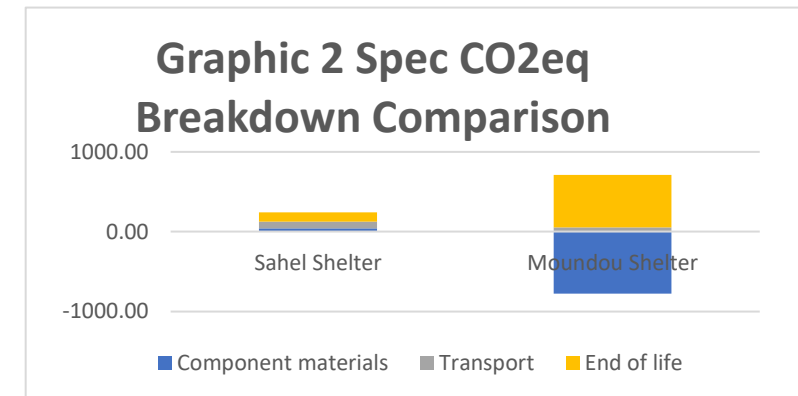
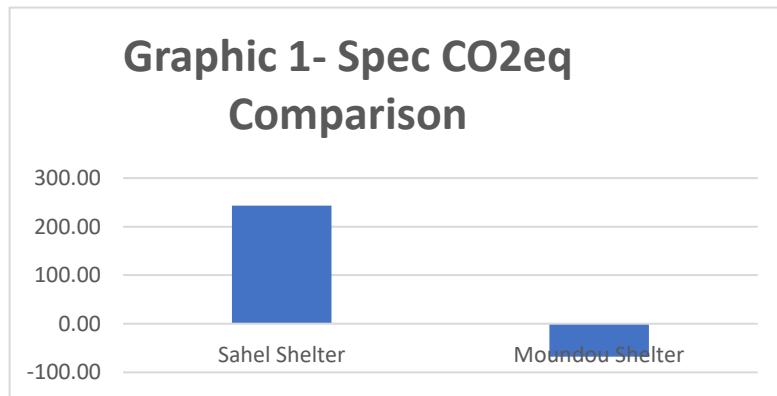


Sahel Shelter

Vs



Moundou shelter



Conclusions

- SMAC won't give all the answers, but provides inputs **for decision making**.
- This is where **a score card approach is important**, as this can allow for a more explicit inclusion of local factors and help to identify **mitigation solutions**.
- Some **limitations** with the tool; **'good enough approach'**
- Need to take care to explain situations where there are **'negative emissions'**
- **End of life assumptions** (burn vs decompose) **can make a big difference to the results**.
- The idea that there is a perfect shelter solution that meets all requirements is not realistic. Between the different options, the **"least harmful solution"** should be adopted.
- The final verdict is based on **options available to mitigate some of the environmental impacts**, which could reduce the overall environmental impact of shelters in future.

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