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## Solar Stove

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# SOLAR STOVE



"You've already gotten your water. I can't give you anymore."

"She said she used the water to cook. She says she needs another bottle for her children to drink."

"I'm sorry. She's had her water for the day."

## RISKS OF OPEN FLAMES

In July 2017, an informal camp in Lebanon's Bekaa Valley a fire broke out, leaving a child **dead** and 6 others **injured**. Around 100 tents were destroyed resulting in **102 families without shelter**.

Gas canisters, used for **cooking** and heating, start fires.

When wood is burned, particulate matter gets into people's eyes and respiratory system. It aggravates chronic heart and lung disease.



## ENVIRONMENT

Around refugee camps, there is rampant **deforestation**.

Refugee demand drives up fuel prices in the countries they have relocated to. Local governments lose revenue when refugees deplete their reserves of natural resources. By making refugees more **self-sustaining**, they are more **desirable** to host countries.



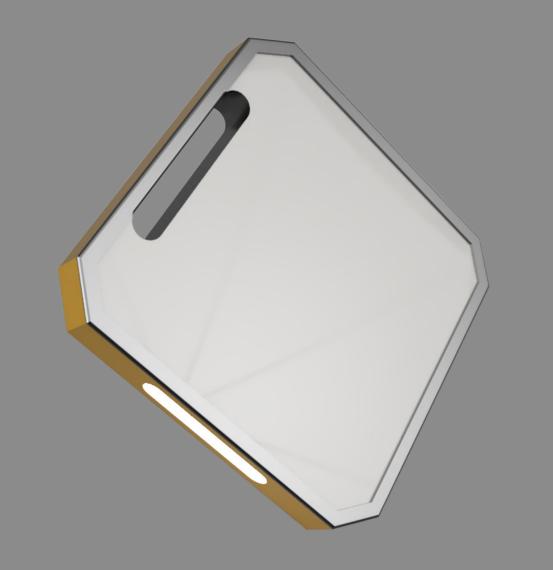
# HEALTH AND SAFETY

"They brought us food, but we couldn't eat it — it didn't taste like our food."

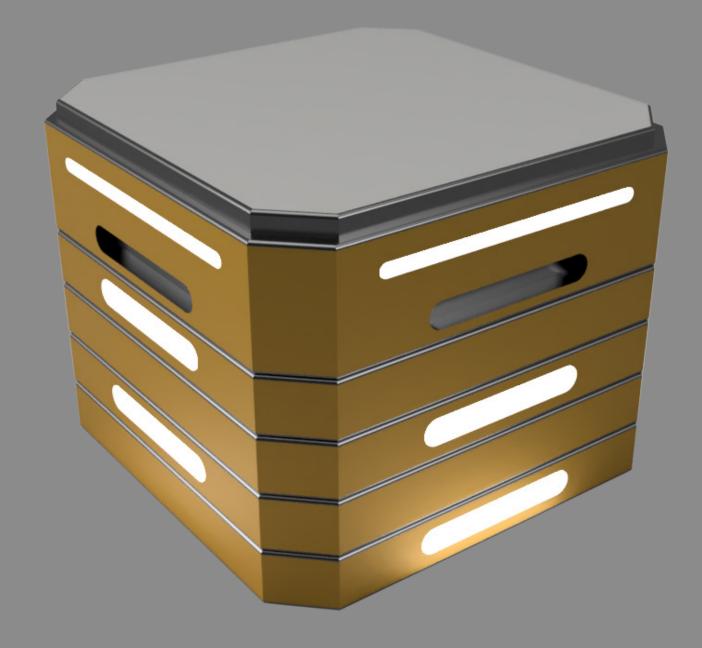
-Nesrin in Kahramanmaras, Turkey

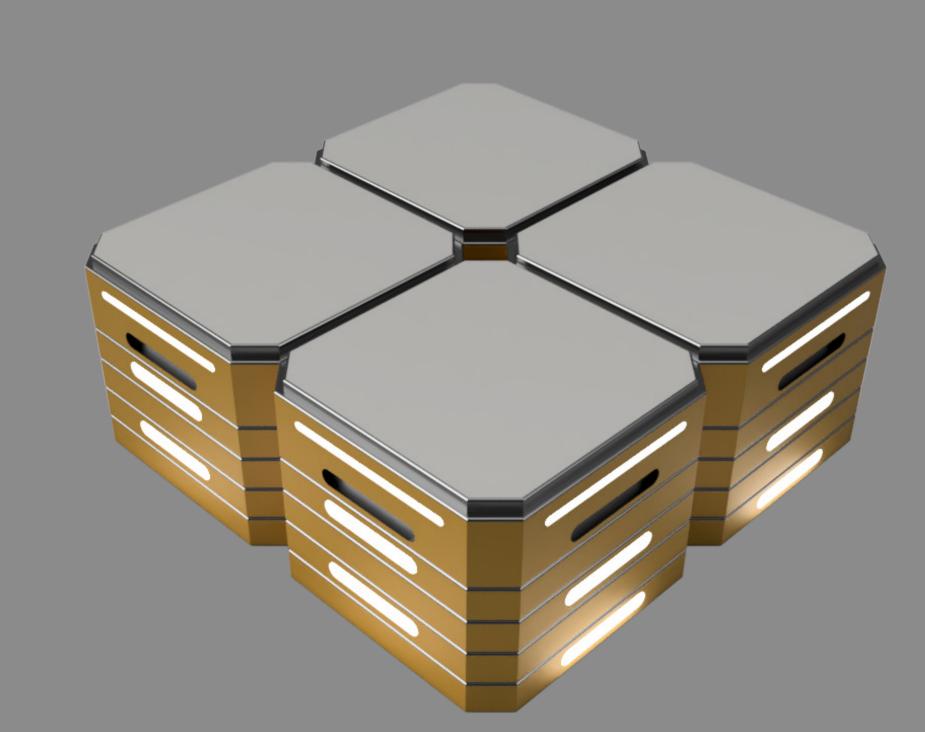
Without kitchen facilities, the only option is to eat prepared meals provided by NGOs. When refugees can cook their own food, they can recreate the dishes they enjoyed at home. This raises their spirits and gives them a feeling of **self-reliance**.

Lack of lighting and the long walks to collect firewood make women and children **vulnerable** to assault.









Johnson a Johnson

"Solar: The Large and Small Scale." NJIT Online . 2017. Accessed September 09, 2017. http://graduatedegrees.online.njit.edu/resources/msee/msee-infographics/solar-the-large-and-small-scale/.
Hansen, Lauren, and Sarah Eberspacher. "Life inside Syrian refugee camps." The Week - All you need to know about everything that matters. March 12, 2014. Accessed September 10, 2017. http://theweek.com/captured/449516/life-inside-syrian-refugee-camps.
Berger, Miriam. "Syrian Refugees Try to Find Hope Amid Despair and Hunger." Slate Magazine. April 29, 2016. Accessed September 10, 2017. http://www.slate.com/articles/news\_and\_politics/roads/2016/04/syrian\_refugees\_lack\_food\_necessities\_at\_a\_greek\_camp\_in\_idomeni.html.

"Fire Engulfs Syrian Refugee Camp in Bekaa Valley." Lebanon News | Al Jazeera. July 03, 2017. Accessed September 10, 2017. http://www.aljazeera.com/news/2017/07/deadly-fire-hits-syrian-refugee-camp-lebanon-170702104207039.html.

Banning-Lover, Rachel. "Greek Refugee Camps Remain Dangerous and Inadequate, Say Aid Workers." The Guardian. February 10, 2017. Accessed September 10, 2017. https://www.theguardian.com/global-development-professionals-network/2017/feb/10/greek-refugee-camps-dangerous-inadequate-aid-workers.

"The Environmental Dangers of Backyard Fire Pits." Scientific American. 2017. Accessed September 10, 2017. https://www.buffingtonpost.com/chelsea-roff/life-in-a-refugee-camp-hu\_b\_10245416.html.

Lynch, Maureen. "Reducing Environmental Damage Caused by the Collection of Cooking Fuel by Refugees." Refuge21:18-27. Accessed September 10, 2017. doi:10.1007/978-3-642-68748-8\_27.