



# CREATE!

Center for Renewable Energy  
& Appropriate Technology  
for the Environment

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## Fall Newsletter 2019



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"Many women didn't have an occupation after the rainy season. They used to stay in their homes without any activity. Now, we have the means for succeeding." - Ndeye Diop, Mboss

## Communities in Rural Senegal Take Action to Combat Climate Change:

While the whole world feels the effect of climate change, the impact is disproportionate. It is argued that less industrial communities experience the most harmful effects, even though they contribute the least to the problem (USGLC). If we are to achieve global stability, it is essential to understand that our world is an ecosystem and that our choices affect environments around the world.

13 CLIMATE ACTION



The UN Sustainable Development Goals (SDGs) address major global issues with this unified outlook. The SDGs are 17 interconnected goals, which together create a comprehensive blueprint to achieve a better and more sustainable future. SDG #13 focuses on Climate Action: Take urgent action to combat climate change and its impacts. This is the foundation of *CREATE!*'s mission in rural Senegal as climate change has drastic environmental and cultural impacts.

### How is climate change affecting Senegal?

Climate change and deforestation are contributing to the rapid encroachment of the desert in rural Senegal. This causes the soil to degrade, agriculture to be less productive, temperatures to rise, and critical natural resources to decline. Desertification also leads to human migration, reduced quality of life, and loss of economic opportunity. Of the 15 million people in Senegal, over half live in rural areas, and over 30% live on less than \$1.25 per day. With limited access to electricity and water, rural communities are more reliant on (and vulnerable to) their environment and climate.

In Senegal, traditionally, communities make a living through agriculture. Approximately 70% of agriculture is rainfed, and with Senegal's 3-4-month rainy season, most farmers can only work a few months out of the year (USAID). With increasing desertification and decreasing rainfall, rural communities are having trouble sustaining themselves

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# Reduce, Reuse, Recycle



To protect cooperative gardens from natural pests such as locusts, communities recycle old mosquito nets to cover the crops and deter insects.



To shelter their chickens from the heat and dust, women sew together an array of empty feed bags to use as a window cover in their poultry sheds.



Communities use a chain-linked fence to guide the growth of their live-fence around the cooperative garden. Once the live-fence is fully grown, communities can remove the chain-linked fence. They will then donate the fence to *CREATE!*'s next partner community.

## Communities in Rural Senegal Take Action Cont.:

with the lack of food and income-generating opportunities. According to USAID, 15% of rural households in Senegal are food insecure. This means that nearly 1 in 7 families are not getting sufficient nutrition in rural Senegal.

The lack of food security and economic opportunity leads to families breaking apart as men search for jobs in the cities and even as far as Europe. Dijby Top is a young man who decided to leave the village of Ouarkhokh, one of *CREATE!*'s partner communities, to find work abroad. This choice was a difficult one for Dijby, and after years of working outside of his country, he decided to return home again. "It is better to work for my community's development instead of working for the profit of others," Dijby explained to us.

### How are rural communities combating the effects of climate change?

*CREATE!* is providing rural communities with climate-smart techniques to sustainably work towards economic empowerment and self-sufficiency. Through the use of local and renewable technologies and strategies, communities work to gain access to clean water, energy, food, and income. Within these programs, *CREATE!*'s partner communities are engaged in specific projects that combat climate change as well as build sustainable futures for their families. These projects include:



Using solar-powered water pumps instead of fossil fuels



Switching to Improved Cookstoves to reduce firewood use



Engaging in annual reforestation campaigns

Climate change is not just a rural but a global challenge, and now more than ever, we need to come together as a global community to solve it. At the end of September 2019, millions of people around the world came together to take action against climate change. Over 66 countries participated in making this one of the most significant climate strikes in history. In Senegal, hundreds of students protested from Dakar (BBC). The diversity and wide span of the gatherings reiterated that everyone is affected and how together, we can rise up with our neighbors to face the challenge.

**What is one of the ways you can personally help combat climate change? Check out our carbon calculator on page 3!**

### Citations:

"Climate Change and the Developing World: A Disproportionate Impact." USGLC, Sept. 2019, <https://www.usglc.org/blog/climate-change-and-the-developing-world-a-disproportionate-impact/>

"Climate Strike: Latest updates from around the world". BBC. September 20, 2019. <https://web.archive.org/web/20190920073229/https://www.bbc.co.uk/news/live/world-49753710>

"Sustainable Development Goal 13." Sustainable Development Goals Knowledge Platform, United Nations, <https://sustainabledevelopment.un.org/sdg13>.

USAID. "Climate Risk Profile: Senegal." Climatelinks, Jan. 1, 2017, <https://www.climatelinks.org/resources/climate-change-risk-profile-senegal>

World Bank. "Country Senegal." Climate Knowledge Portal, <https://climateknowledgeportal.worldbank.org/country/senegal>



# Do you know what your transportation carbon footprint is?

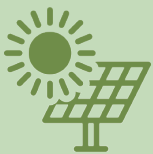
## Offset your Annual Transportation Carbon Footprint Through *CREATE!*'s Climate Action Programs

In 2017, transportation accounted for one-fifth of the U.S. carbon footprint. Daily commutes, annual vacations, and more have added up across the country to a total of 1,098 million metric tons of carbon dioxide equivalents, according to the New York Times. When it comes to climate change, we believe that all sources of carbon emissions should be addressed. However, we are choosing to focus on transportation because of its prevalence in people's daily lives around the world.

This fall *CREATE!* developed a Transportation Carbon Footprint Calculator that lets you calculate how much carbon you contribute per year. You can offset your footprint by donating to *CREATE!*'s solar water project and tree-planting campaign. The calculator will determine how much you should donate to offset your total carbon footprint based on the amount of carbon each project eliminates and the cost of each project.

To calculate and offset your transportation carbon footprint, please visit: <https://www.createaction.org/offset-transportation-carbon-footprint/>

### Solar Water Projects



- 322,000 liters of water pumped daily across our partner villages
- No fossil fuels
- Easy access to year-round water
- Clean drinking water
- Water for growing food
- Water for sustaining trees

### Tree-Planting Project



- About 20,000 trees planted per year across our partner villages
- Trees help by:
  - Nourishing the soil
  - Reducing erosion
  - Reducing air temperature
  - Providing shade and windbreak
  - Replenishing firewood

## Help Two New Partner Communities Combat Climate Change & Sustainably Develop Self-Sufficiency

In the spring of 2019, rural Senegalese communities Boustane Lo and Mbossedji signed Memorandum of Understandings with *CREATE!*, ensuring member's commitment to the development of their village through climate change projects. In July, *CREATE!*'s Executive Director, Michael Carson, visited Boustane Lo and Mbossedji to meet with community members and leaders. He recalls:

**"I was impressed with the level of organization of the women that I met along with the support from their husbands and religious leaders in their villagers."**

*CREATE!*'s field team is working hard to ensure access to clean, abundant water through well-rehabilitation, the installation of solar-powered water pumps, and the use of a new drip irrigation system. Once this is achieved, sustainable year-round crop cultivation will be possible in the communities for the first time without the use of expensive and nonrenewable fossil fuels! You can support Boustane Lo and Mbossedji's effort to combat climate change while simultaneously developing community self-sufficiency by donating through *CREATE!*'s carbon calculator and offsetting your transportation carbon footprint: <https://www.createaction.org/offset-transportation-carbon-footprint/>

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**Cooperative president Rokhy Dieye signs a Memorandum of Understanding between Boustane Lo and *CREATE!*.**



# By the Numbers: Local Impact, Global Awareness

## How *CREATE!*'s Partner Communities are Alleviating Climate Change in Rural Senegal



*CREATE!*'s Improved Cookstoves reduce firewood consumption by **60-70%**.

There is an average of **450 Improved Cookstoves** in each of *CREATE!*'s partner communities.

There is a total of **17 solar-powered water pumps** across *CREATE!*'s partner communities.

By using solar-powered water pumps instead of fossil fuels, *CREATE!*'s partner communities eliminate approximately **460 tons of carbon** per year.



*CREATE!*'s Tree-Planting Campaign eliminates approximately **350 tons of carbon** per year.

*CREATE!*'s partner communities plant about **20,000 trees** per year.



## *CREATE!* Welcomes Five New Technicians to the Team:

Five new technicians have joined the *CREATE!* team in Senegal since 2018. We are so excited to welcome Papa Mayoro Diop, Nogaye Loum, Bamba Diagne, Georges Nesta Mancabo, and Abib Niang! We believe their skills and dedication will support the mission of *CREATE!* in spreading sustainability and prosperity across rural Senegal.

In this issue, we will meet Papa Mayoro Diop. Mayoro's love for gardening led him to earn his BA from the Professional Horticulture Training Center (CFPH) in Dakar, Senegal.

**"Through working at *CREATE!*, I am also learning how to become a humanitarian man."** Mayoro combines his love for horticulture with his passion for philanthropy to assist rural villages in developing self-sufficiency. Having grown up in the city of St. Louis along the coast of northern Senegal, Mayoro tells us his view has changed since he has experienced life in the rural areas of his country. **"Now I know life in rural Senegal communities, and how to help them with the available means they have in the villages."**

