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A team installed the "remote irrigation" system on this farm. All of the photos were provided by Abdou Maman Kané.

NIGER - 10/29/2015

How mobile phones are improving irrigation in Niger

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OBSERVERS



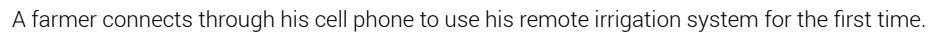
Abdou Maman Kané

(</en/contributor/abdou-maman-kane>)

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An entrepreneur from Niger has created an irrigation system that allows farmers to control the watering of their crops from afar by simply using their cell phones. The system uses water more effectively and pollutes less than methods traditionally used by local farmers for irrigation.

Abdou Maman Kané is the man behind this "remote irrigation system". He's been selling the system in Niger since 2013, through his business **Tech-Innov** (<http://www.tele-irrigation.net/>). About 200 farms – both individual and collective – currently use the system.



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Moreover, these pumps have to be started and stopped manually-- even if they are 70 metres down. This is a very dangerous process and people die doing it. Often, workers are lowered down with a rope and some people have fallen to their deaths. Others die after inhaling poisonous gases released by the underground water tables.

"We use solar power to fuel the pump"

Our remote irrigation system involves four different components.

We give farmers a pump, which can be used both above and below ground, depending on where the water is located. For 95% of the installations that we do, the pump is powered by solar panels, which we also install. We make sure to adapt the irrigation system according to which crops the farmer is cultivating. For example, we use a drip system if plants only need to be hydrated through their roots. If the plants also need to have their leaves watered, we alter the system. Finally, we install a box between the pump and the solar panel that contains a SIM card, which makes it possible to control the whole system remotely.

Each time that we install this system, we do a careful study of how much water each plot of land needs.



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Solar panels fuel the pump

"All you have to do to start up the irrigation system is dial a number on your cell phone"

Once the entire system is installed, when a farmer wants to irrigate his farm remotely, all he has to do is dial the numbers "142" on his cell phone. That free call connects him with the system.

If he happens to be illiterate -- which is the case for many farmers in Niger -- then the server automatically sends a signal to start up the pump for a set amount of time.

If the farmer does know how to read, then he can indicate how long he wants the pump to run. These calls cost 200 CFA francs [Editor's note: or 30 euro cents].

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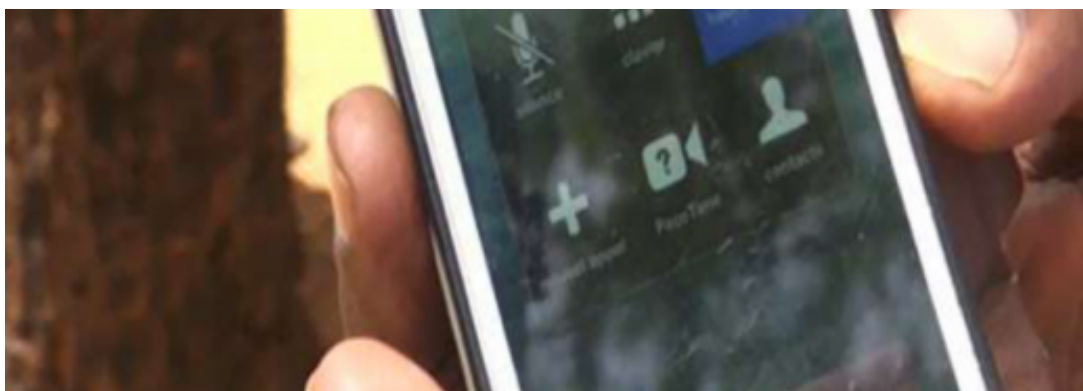
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The system is controlled remotely using a cell phone.

"We can collect meteorological and hydrologic information in real time"

The "remote irrigation" system also includes an optional component, which collects meteorological and hydrologic information in real time. It records information like the temperature, the humidity percentages in the soil, the levels of solar radiation, wind speed and rainfall – all for the farmer's use.

"Télé-irrigation" au Niger, un système pour économiser l'eau (2).



Tahoua, a region in Niger.

Thanks to this system, farmers use water more effectively and waste less. They can use the saved water to irrigate larger surface areas, thus producing a larger crop yield. Because the pumps are fueled by renewable energy, they pollute less and are cheaper. Because they can irrigate their fields remotely, farmers also lose less time watering their fields. They can spend the time saved on other activities!

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There are about 200 farms – both privately-owned and collective – that use the remote irrigation system in Niger.

Abdou Maman Kané won the **Hassan II prize for water**

(http://www.worldwatercouncil.org/fileadmin/world_water_council/documents/press_releases/CP_Laureat_Grand_Prix_Mondial_HassanII) at the 7th annual World Water Forum, held in South Korea in April 2015. His company also won **third place at the African Start-Up Award ceremonies** (<http://www.ny-forum-africa.com/en/african-start-up-award>), held in Gabon at the end of August.

This initiative was reported on by our team for France 24's "**Observers vs Climate Change**"

(<http://observers.france24.com/en/20150820-become-climate-observer-france-24>) project. If you know of an initiative near where you live that's been set up to fight climate change, don't hesitate to get in touch with our team at obsduclimat@france24.com

ARTICLE WRITTEN WITH



Chloé Lauvergnier, Journaliste francophone

Twitter (<https://twitter.com/clauvergnier>)

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Zimbabwe
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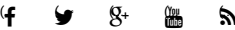
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