Cultivating Research in a War-ravaged City

Mabinty Fofanah, a member of the New England Vegetable Growers Association, plants a new batch of potato leaf suckers.

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By Chris Tenove

The Kingtom Bomeh municipal dump site in Freetown, the capital of Sierra Leone, is a post-apocalyptic landscape. Pariah dogs hide from the sun beneath the skeletons of rusted-out cars. Men and children in flip-flops search among mounds of rubbish, scavenging for iron scraps or discarded appliances that can be fixed and resold. Oily plumes of smoke rise skyward from piles of burning trash. And here, in this arid wasteland, Yebu Sesay is expanding her vegetable garden.

She drags her bare fingers through the dark red dirt, combing it for debris. Whatever she finds — rusted metal, shards of wood, scraps of plastic — she tosses onto a low wall of rubbish that surrounds her plot. Sesay is lucky: she has found a depression in the terrain where groundwater seeps through the soil. A lush patch of potato leaves is nearly ready for harvest, and she is clearing land to grow more.

It is mid-March, the peak of Sierra Leone’s dry season, and for now Sesay’s garden is a lush green oasis among the expanses of trash and red dust. But when the rains begin in April or May, men and women from around Freetown will come to this dump site and transform it into a mosaic of green. Spinach, potato leaves, krain krain [a green-leaf vegetable], cassava leaves, okra, beans, cucumbers, and even watermelons will all be coaxed from the ground. In those months, many of Freetown’s estimated 1.5 million residents will eat vegetables grown in dump sites like this one. "Everyone knows that people are farming down here, but very little attention has been paid to it," says Margaret Kroma, a rural sociologist from Cornell University.

"That is true of urban farming in general," she adds. With support from the International Development Research Centre (IDRC), Kroma and her colleagues at Freetown’s Njala University...
College are studying the economic, social, and agronomic factors behind agriculture in the Greater Freetown area.

A wartime breadbasket

There is a growing recognition of the magnitude and value of urban agriculture. The United Nations Development Programme (UNDP) estimates that, around the world, as many as 800 million city dwellers are involved in raising livestock or growing vegetables, fruit, or herbs — and they produce about 15% of all food eaten in cities. Recent research has found that urban agriculture plays a role in improving food security for low-income households, maintaining city green spaces, and recycling urban solid waste and wastewater.

Kroma and her colleagues are conducting the first systematic study of urban and peri-urban agriculture (UPA) in Sierra Leone, but residents of Freetown are well aware of the importance of local farming. In the late 1990s, the city was besieged by war. Rebels had looted or burnt most crops and chased farmers away from their lands. Harvested crops rarely made it through the rebel roadblocks that choked off transport to Freetown. And very little food could arrive by air or ship. "People would have starved in Freetown if it hadn’t become a breadbasket for itself," says Kroma. Sierra Leone’s civil war ended in 2001, after a decade of fighting between rebel factions, the army, pro-government militias, and peacekeeping troops. The legacy of conflict is obvious. Roads are ruined, farmlands have been reclaimed by the jungle, and many residents of Freetown — which swelled during the war as Sierra Leoneans fled their villages — still lack reliable access to healthy food.

"We don’t have any definite figures on the number of hungry people in the country, but if you link food security to poverty, then I would estimate that over 70% of people are food insecure," claims Thomas Winnebah, a researcher with the UPA project and a lecturer at Njala University College.

President Ahmad Tejan Kabbah vowed that his government would tackle the issue of food security. His inauguration promise — that by 2007 no Sierra Leonean will go to bed hungry — is mounted on a plaque in the foyer of the Ministry of Agriculture. (Sierra Leone was a net agricultural exporter after it achieved independence in 1961, but productivity has declined since then, most significantly during the mass migration, institutional breakdown, and capital destruction caused by the war.)

To reach that goal, the Sierra Leonean government called on the support of international donors, but the country will also need to harness the capabilities of its premier institute for agricultural research and extension training, Njala University College.

Hazards of urban farming

The civil war forced Njala University College to relocate from its rural base to the city. [See related sidebar: A University in Exile] Given its temporary urban home, a project on urban agriculture was a perfect fit. In fact, Njala’s temporary campus, located in the New England neighborhood of Freetown, is perched over a longstanding site for urban farming. As children, both Kroma and Winnebah were impressed by the gardens along the New England streambed. Even then they were amazed at the profusion of vegetables that local women were able to coax from seemingly inhospitable terrain.

Women are still tending those plots today. Winnebah introduces Mabinty Fofanah, a war widow who has been farming here for nine years. She is busy planting a new batch of potato leaf suckers while her 10-year-old helper, a war orphan she has adopted, goes to fetch more water.
Fofanah is one of the 356 farmers registered in Winnebah’s UPA research project. Attention is focused on three sites: the New England streambed, the Kingtom Bomeh municipal dump site, and Regent Village, which is situated in a lush valley on the outskirts of Greater Freetown. More than a third of the registered farmers will be surveyed for information about their farming activities. Data will be collected on issues ranging from access to fertilizers, to marketing costs, to the role that agriculture plays in social and family relations.

When asked about the difficulties she encounters, Fofanah reveals a scar on her foot. While clearing her plot oneday, she stepped on a discarded hypodermic needle. Urban debris — which needs to be cleared along with rocks and weeds — is a serious hazard. The danger is even greater at the Kingtom Bomeh dump site, where farmers clearing land can encounter pockets of noxious gas, pits of still-smoldering trash, and toxic waste from hospitals and industrial sites.

Urban farmers must contend with common pests, like locusts and caterpillars, as well as bands of thieves and roving dogs. And they rarely have legal tenure over the land they farm. The Freetown City Council has not developed an official policy for farming in the Kingtom Bomeh dump site, for example. Farmers have to make deals with the site managers to secure a piece of land, and then negotiate with truck drivers not to dump a load of plastic and metal on your plot (a huge chore to clear away) or, for the right price, to dump a load of manure (good for fertilizer).

**Learning from ingenuity**

To prosper, urban farmers in Freetown must combine endurance with ingenuity. Fofanah, for example, has teamed with about 40 other women to form the New England Vegetable Growers Association. They pool labour, lend a hand when someone is ill, and combine their meagre capital to purchase supplies like seeds, pesticides, and fertilizers.

Kroma and Winnebah are carefully studying this organization as a model for improving the sustainability and productivity of urban agriculture. There are numerous questions to consider. Is the food grown in urban settings, and particularly in dump sites, safe to consume? Are there ways to make land tenure more secure? Are some crops more lucrative than others? Is it possible to improve the distribution of inputs like fertilizers, pesticides, and seeds?

All of these questions have policy implications. However, in keeping with the participatory approach used by the research team throughout the project, no policy recommendations will be made before the farmers have had a chance to validate the findings. "This research is conceived out of the philosophy that we academics and technocrats might not have the right answers, and we need to reflect the true felt needs of the stakeholders," says Winnebah.

Besides, there is still much to learn. "One has to appreciate the resilience of these farmers who approach this terrible mess, clean it up, and coax from the ground food that will go into someone’s stomach," he says.

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Sidebar: A University in Exile

Njala University College, like many institutions in Sierra Leone, was devastated and uprooted during the civil war. Since independence, the college had been located in the village of Njala, about 200 km east of Freetown. But in January 1995, the campus was overrun by rebels. Students had not yet returned from Christmas holidays, but several staff members were killed in the attack. In subsequent raids, supplies were looted, buildings burnt, and experimental crops destroyed.

The students and staff joined the country’s exodus to Freetown, where they established a temporary headquarters. Today, the university operates out of a few buildings originally intended for a state broadcasting centre.

"The war was devastating for the university," says Kroma, who did her bachelor and master’s degrees at Njala before emigrating to the United States. "After the conflict it was difficult to get funding for research."

"A huge component of this IDRC project has been capacity-building, because after 10 years of war there were not a lot of good young minds trained in these disciplines."

One of those young minds is Winnebah, who is doing his PhD research on urban farming. The urban agriculture project has already provided research opportunities for two students to complete their master’s degrees, as well as funds for much-needed transportation and information and communication technology (ICT) equipment.

"The IDRC-funded research has been one of our biggest research projects since the war ended," says Aliayagee M. Alghali, the Principal of Njala University College.

The move to Freetown, coupled with a huge surge in the youth demographic, has caused the student population at Njala University College to double to 3000 students and over 100 academic staff. Those numbers are likely to double again in the next three years.

Principal Alghali expects the campus will return to its original location, in Njala village, by the end of 2005.