



Global Soil Week Bridging Knowledge.
Empowering Transformation.

African Soil Seminar | 28-30 November 2016

TITLE WALKING DEBATE: NAIROBI
Geographies of resisting food insecurity by contemporary urban Africans

WHEN 30 November 2016 | 13:30 – 18:30

HOST/S Global Soil Forum, Institute for Advanced Sustainability Studies (IASS)

WEB www.globalsoilweek.org/african-soil-seminar-2016 and www.globalsoilweek.org/thematic-areas/transforming-cities/walking-debate

MARY NJENGA and RUTH MENDUM

Bioenergy Scientist | m.njenga@cgiar.org
Director, Researcher, Professor | rmm22@psu.edu

Dr. **Mary Njenga** is a Bioenergy Scientist at World Agroforestry Centre (ICRAF) where she supports the bioenergy theme in relation to environment, food and nutrition security and health in agroforestry R&D projects. Additionally, as a visiting lecturer with the Wangari Maathai Institute for Peace and Environmental Studies at the University of Nairobi she contributes to programs and courses in sustainable biomass energy-livelihoods-environment-gender nexus. She is a member of the Board of Directors of Women Organizing for Change and Natural Resource Management (WOCAN).

Dr. **Ruth Mendum** is the Associate Director for Gender Initiatives in the International Programs Office of the College of Agricultural Sciences at Penn State University. Besides several research engagements she teaches gender and development in the Community, Environment and Development. Trained in Rural Sociology and Women's Studies, her focus is currently on integrating gender in woodfuels in Eastern and Southern Africa region in collaboration with ICRAF. She has also worked in Latin America and Europe on gender related analysis. Dr. Mendum is also an active volunteer with the high school exchange program AFS.

Walking Debate in Nairobi:

Resisting food insecurity by poor urban dwellers, and ecosystems services from an urban forest



SUMMARY

This Walking Debate sought to build on experiences of Kenyan urban communities in their struggles for access to food and improved livelihoods. The first segment in the informal settlement of Mathare exposed participants to opportunities as well as struggles of undertaking urban farming, satisfying energy demands for cooking, and making a sufficing income from farming. In the second part at Karura forest, participants discussed contestations of urban green spaces (between privatisation of prime lands versus conservation for greater common good) in relation to job creation, fuel wood provision, leisure as well as biodiversity preservation.

the urban: MATHARE

Mathare is one of close to 20 informal settlements in Nairobi city. It comprises of about 13 villages with an estimated population of half a million persons. Noteworthy, Nairobi's informal settlements host about 60% of its population of over three million, and are continuously expanding making it difficult to define boundaries.

Nairobi is a great example of a city in Sub-Saharan Africa, the fastest urbanising region in the world, where the contrast between rich and poor is dramatic and visually striking. Big houses with ample access to infrastructure and services that ensure comfort and security lie literally next door to what is commonly referred to as slums. Communities in these

settlements struggle for adequate food, shelter and basic services such as water and sanitation. They are vulnerable to food insecurity, malnutrition, poverty and crime.

Nairobi county URBAN AGRICULTURE POLICIES

Along the drive to Mathare Anne W. Kiruri, County Director of Agriculture, Forestry and Natural Resources - Nairobi City County, informed participants that the County Government recognises urban agriculture as a productive sector and regulates its practice under the *Nairobi City County Urban Agriculture Promotion and Regulation Act 2015*. The Act's objectives include enhancing food security through access to agricultural extension; food safety and public health by defining environmental standards, and; institutionalisation of administrative procedures to enable access to agricultural resources such as organic waste.



Picture 1. Anne Kiruri, centre
Lens: Keerthi Kiran Bandru

Anne explained that urban agriculture involves production, processing and distribution of food and non-food items through the cultivation of plants, tree crops, aquaculture and animal husbandry within urban and peri-urban areas, as defined by

Mougeot (2000). Crop and livestock production in Kenya's capital is practiced in backyard farms, on open spaces under power lines, along roadsides, railway lines, riverbanks, as well as on institutional land. Urban agriculture is important as poor dwellers of cities are at a greater disadvantage than their rural counterparts because they have to purchase most of their food (Karanja and Njenga, 2011). Food purchases take up as much as 80% of the income of poor urban households.

The two youth groups visited during the Walking Debate – N.10 and Huruma Town Youth – confirm that crop and livestock production contributes substantially to food security as an important component of food systems in general, and as a means for empowering vulnerable groups. Urban agriculture has become a global practice engaging an estimated 800 million people, producing 15-20% of the world's food.

scaling farming and food to the urban: NO.10 YOUTH GROUP – RABBIT FARMING AND KITCHEN GARDENS

contacts:

Edwin: eddyodhiambo44@gmail.com
or Mary Manygro10@yahoo.com

Edwin Odhiambo, chairperson of the No.10 youth group of Mathare residents, led participants through their work on rabbit rearing and vegetable production at the compound of the Outreach Community Church, which has offered them space. The Group comprises of 18 active members aged between 14-35 years: 6 females and 12 males. At the time of the visit, they had 22 rabbits comprising

of local and cross breeds. Mature rabbits, weighing between 1.5-2.0 kg are slaughtered for meat and fur. In one month, the Group slaughters an average of 14 rabbits of which a third is shared and consumed directly by members, while the balance is sold in near markets at KES 350 (EUR 3.20)/kg; making an average meat sale of KES 5,350-7,000 (EUR 50-65) per month.



Picture 2. Rabbit farming, Mathare No.10 Youth Group
Lens: Keerthi Kiran Bandru

Besides selling meat and live animals to other farmers, N.10 has access to a 50x7 meters plot for vegetable production, though currently only utilising about 15x7 meters for the production of kale (*Brassica oleracea*). Manure from rabbits is used in vegetable farming. The vegetables, mainly kale, are shared amongst members and excess is sold in the neighbourhood. Vegetables that are not fit for consumption are fed back to the rabbits.

N.10 members have received various trainings offered by institutions such as the Nairobi and Environs Food Security, Agriculture, and Livestock Forum (NEFSALF), Mazingira Institute and the Ministry of Agriculture, Livestock and Fisheries. Other activities of the Group include free-range rearing of ducks (for eggs, meat and sale of the live birds) and

paid garbage collection. They have a stock of 50 ducks and sell an average of 4 ducks per month at KES 800 (EUR 7) each. They have plans to also rear indigenous chicken. The youth of N.10 are considered role models in the settlement, to such an extent that some parents request their help in counselling their children.

closing the urban waste nutrient flow: HURUMA TOWN YOUTH GROUP – GOAT FARMING

contacts:

hurumahtown@yahoo.com ; ruudva@yahoo.com

FaceBook: H-town youth group

Participants also visited the Huruma Town Youth Group and conversed with Kelvin Uduyu, its chairperson. The Group comprises of 4 females and 11 males aged between 14 and 35 years. They currently have a stock of 13 dairy goats that are fed with 6 bags of organic waste, collected daily from vegetable vendors within a radius of about 200 meters. About 70% of this waste is offered free by vendors, thus looping the cycle by contributing to better hygiene in nearby trading areas.



Picture 3. Goats and chicken farming, Huruma Town Youth Group

Lens: Kara Devonna Siahaan

Huruma Town Youth sell 6 litres of milk per day generating KES 650-800 (EUR 6-7.5), adding up to KES 19,500-24,000 (EUR 182-225) per month. The main customers are local residents; some consider goat milk to have superior health benefits. The Group also earns income from the sale of goats with prices ranging between KES 6,000-12,000 (EUR 55-110), depending on the animal's age.

In addition to goat rearing, which is the Group's main activity, they also keep a mix of birds, comprising of indigenous chicken (65 mature hens that lay eggs), 3 cockerels and ducks. Eggs are sold at KES 500 (EUR 5) per tray of 30 eggs, earning the group about KES 10,000 (EUR 95) per month. 'H-Town Youth' also grows vegetables, mainly kale, in two plots measuring about 20x10 and 30x20 meters. The kale is mostly produced for home-use, as 70% of the youth have families to care for, hence saving about KES 30-50 (EUR 0.28-0.47) per day. Here as well, manure from goats and poultry is used in gardening activities or given out for free to farmers in the neighbourhood. In addition to farming, members run a soccer academy, a car wash, water vending services and household waste collection.

The project was started in 2014 through the support of the Kenyan Ministry of Agriculture Livestock and Fisheries' program *Jaa Marufuku* (prohibit hunger). Some of the members have received trainings through NEFSALF as well as by the Ministry. The Group saves its earnings in a bank account and divides the shares at once at the end of the year.

food access and processing:
MATHARE'S STREETS – VEGETABLE
VENDING AND COOKING

Vegetable vending and food processing by women and youth was a common practice participants noted along roads and paths in Mathare. Vendors purchase vegetables mainly from traders at a central place in the area. The produce comes either from farms in peri-urban Nairobi or from farther rural areas such as from Kiambu County. This constitutes an urban-urban and rural-urban flow of food.

Participants spoke with male youth roasting meat and women cooking *githeri* (a mixture of maize and beans), using charcoal and/or firewood. This gendered choice in trading street food in Nairobi was also noted by Mwangi (2002), where carbohydrate-rich foods were associated with male vendors, while mixed nutrient (*irio*) foods and those rich in micro-nutrients were associated with female vendors.

The contribution of street cooked food to the nutrition of families in poor neighbourhoods is considerable. This could be associated to time constraints and poverty, as families buying cooked or semi-cooked food in small quantities save income (momentarily) and reduce expenditure on cooking fuel. The trade-offs between the use of charcoal in urban areas and land restoration (non)efforts in rural areas should be addressed. For instance, charcoal is used by over 80% of urban households in Nairobi and is mainly sourced from drylands; which has led to high rates of deforestation.

About 40% of charcoal consumed in Kenya is unsustainably produced. As the use of charcoal is predicted to increase by about 14% with every 1% increase in urbanisation, there is a need for sustainable wood production and application of efficient wood-to-charcoal conversion methods. Further, biomass from successful land restoration can be profitably employed for sustainable wood-based energy.



Picture 4. Roasting meat and cooking food, Mathare
Lens: Mary Njenga

critical ecosystems
KARURA FOREST – A ROLE IN NAIROBI
AND BEYOND

Participants enjoyed a refreshing cool walk through Karura forest led by Prof. Karanja Njoroge, Chairperson of Friends of Karura Forest - a Community Forest Association. He explained the uses of the area, the origins of species and flows of the ecosystem, and shared the story about the on-going struggle to keep the forest in suburban Nairobi undeveloped. The protection of this particular forest is largely due to the activism of Green Belt Movement founder, environmentalist and 2004 Nobel Peace Prize Laureate Prof. Wangari Maathai.

Continuing Maathai's legacy in this instance means undertaking legal action to keep the forest area intact, overseeing community access, and gradually replacing exotic tree species like eucalyptus with native ones. The forest currently consists of 40% indigenous species; the remaining 60% are colonial plantings, some of which date back to the period when Nairobi served as a locomotive hub for trains transporting cotton from the Lake Victoria region to Europe.

Today Karura Forest serves multiple purposes. Biologically, it contains wetlands that help filter water draining into the area from surrounding urban landscapes. For high-income neighbors, the forest provides a place for recreation, walking of dogs and respite from city stressors. As in all public forests, the cutting of healthy trees for firewood is not allowed. A neighbouring low-income community is allowed to collect fuel wood at no fee, given it is for household consumption. School children, up to 1000 per week, come to learn about environmental stewardship and their natural heritage.

From a conservation perspective, the community management team is gradually working to return Karura to its status as a natural living forest. As time and resources allow, non-indigenous species that were all planted at the same time, are harvested. They are replaced at first with quick-growing, but short-lived native species. Over time, slower growing plants are introduced. This produces a biodiverse and sustainable forest, housing a wide variety of small mammals and birds. The endangered Columbus monkeys have been successfully re-introduced.

A major challenge remains to retain title to the forestlands. According to Prof. Karanja, currently there are about 270 titles allocated to private parties, some of which are being disputed in court. The fencing around the forest was justified as barrier to those who would engage in disallowed practices on forest property (e.g. squatting, development). Together with local residents, the Community Forest Association preserves and protects a peaceful and beautiful oasis in the middle of bustling urban Nairobi.



Picture 5. An area cleared off eucalyptus for indigenous species, Karura Forest. Lens: Natasha Aruri

LESSONS

- Urban informal settlements like Mathare suffer from space limitations. Urban agriculture by the two groups was practiced in open spaces or through arrangements with institutions for (make-sift) use of land. Urban agriculture supplies food to those involved in production and improves access to affordable food for other persons.
- Urban agriculture empowers youth and women by providing employment, bringing them together for resource mobilisation and knowledge sharing. They can influence positive values in others and promote peace.
- Urban agriculture contributes to resource recovery and reuse (RRR) through employing organic waste as feed for livestock or animal manure for soil improvement. This helps clean neighbourhoods, which is a big challenge in informal settlements due to absence of formal waste management services.
- Rural-urban energy flow for urban food processing and household cooking energy can be enhanced as to positively impact and benefit from rural land and soil restoration.
- Urban agriculture is a recognised productive sector and is regulated by the Nairobi City County Government; hence providing a formal platform for technical, financial and other resources and institutional support for households.

- Karura Forest provides a wide range of ecosystems as well as socio-economic goods and services including water catchment; water cleansing; air pollution control; habitat for wild flora and fauna; recreation, firewood supply, and jobs; all highly desirable in the rapidly urbanizing Nairobi city. Activism and community contribution play significant and eventually detrimental roles in conserving and protecting the forest, for the people.

REFERENCES

- Karanja Nancy and Mary Njenga (2011).** Feeding the Cities. In Worldwatch Institute, State of the World 2011: Innovations that Nourish the Planet. pp 109-120.
- Mwangi AM (2002).** *Nutritional, hygienic and socio-economic dimensions of street foods in urban areas: the case of Nairobi.* PhD-thesis Wageningen University Wageningen, Ponsen en Looijen.
- UN Habitat 2010.** *The State of African Cities 2010: Governance, inequalities and urban land markets.* Nairobi: United Nations Human Settlements Programme (UN Habitat).
- Luc J.A. Mougeot (2000).** Urban Agriculture: Definition, Presence, Potentials and Risks, and Policy Challenges. International Development Research Centre (IDRC). Cities Feeding People Series Report, issue no. 31.