

The "URBAN ZOO" Newsletter

AUGUST, 2015

Quarterly Newsletter on "Epidemiology, Ecology and Socio-Economics of Disease Emergence in Nairobi"

Co PI's Letter: Planning and Policy Team

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URBAN ZOO PROJECT

Urban Zoo is an interdisciplinary programme focused around the role of urbanization in the emergence of zoonotic pathogens. We are funded by the Environmental and Social Ecology of Human Infectious Diseases initiative (ESEI), a joint UK Research Council initiative which is part of the Living With Environmental Change Programme.



Dr. Cecilia Tacoli

The Planning and Policy Team's work focuses on the socio-economic and environmental conditions that contribute to the diversity of microbial exposure of urban residents. It is estimated that 60 percent of Nairobi's residents live in informal settlements, where

inadequate housing, insufficient basic infrastructure and services and widespread livestock keeping translate into severe environmental hazards. Understanding how this affects local residents' exposure to microbial diversity is key in formulating and implementing appropriate policies.

Much has happened since the last letter from the Team in April. We have continued to support the work of the Kenyan Federation of the Urban Poor, *Muungano wa Wanavijiji*, thanks also to additional funding from the UK Department for International Development. Building on the piloting of innovative participatory methodologies, researchers decided to focus more on food street vendors, for several reasons. The first is the central role of food vendors in providing cheap food to residents of informal settlements who often do not have space to cook and store food, nor time to prepare meals at the end of long working days. Street vendors also play an important role in the social life of the settlements, by congregating along the main roads until late at night and in this way increasing security for those residents, especially women, returning home after dark. Because of its flexible working hours and minimal need for starting capital, selling food, either raw or cooked, is also one of the main sources

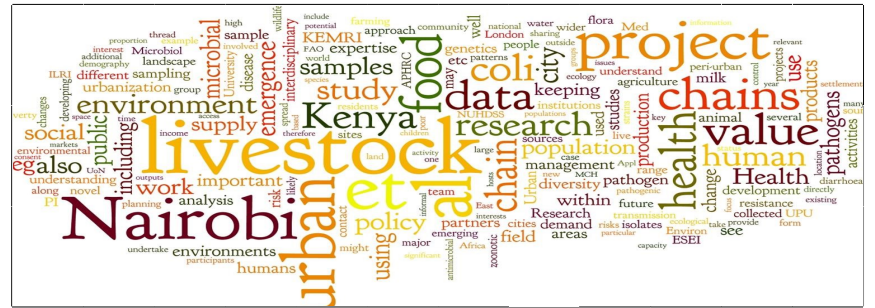
of income for women, especially those responsible for young children and sick relatives.

But while they may not be harassed by the authorities like their colleagues working in the 'formal' part of the city, street vendors within informal settlements face several challenges which can also generate health risks to their customers. These include food contamination due to proximity to solid waste dumps, open air sewers and roaming livestock; limited access to water – in many cases only available at high prices from private vendors – to wash food, hands and utensils thoroughly; inadequate public lighting and high levels of insecurity that can prevent sellers, especially women, from selling after dark. Such issues require holistic interventions that address both socio-economic and environmental conditions. Documenting the challenges and setting up vendors' associations that can establish a dialogue with local authorities to develop appropriate interventions are key steps, as described in a new working paper: [Cooking up a storm: Community-led mapping and advocacy with food vendors in Nairobi's informal settlements](#).

Another step has been the joint organisation with our Urban Zoo partners APHRC and ILRI of a series of 'training of trainers' on food safety and handling for street vendors and *Muungano* members, the first of which took place in July. Collaboration between grassroots organisations and scientists in the project enriches our understanding, and helps identify ways in which research can inform and stimulate action.

Dr. Cecilia Tacoli is a Principal researcher, Human Settlements Group and a team leader, rural-urban development at IIED.

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Urban Zoo Partners:





The focus of the congress was on multidisciplinary collaboration involving human, veterinary and eco-health disciplines, other life sciences, social sciences, and informatics. The need for one health approach was stressed to ensure an improved and sustainable human and animal health which is key to improving monitoring, analysis and prevention of novel global threats posed by re-emerging (infectious) diseases and food safety hazards.

Some of the group members on an evening tour—Amsterdam



The Urban Zoo Team pose for a photo—KVA Conference in Busia

The Kenya Veterinary Association (KVA) 49th Annual Scientific and 15th World Veterinary Day celebrations were held in Busia, Kenya from 22nd to 26th April 2015. The Theme of the conference was "One Vision for a Sustainable Animal and Human Health and Welfare".

The Urban zoo group was presented by Prof. Erastus Kangethe, Pablo Alarcon, Maurice Karani, Patrick Muinde, James Akoko, James Orungo and Victoria Kyallo.

Several members from the team made presentations during the conference and mainly on the Value Chain Mapping.



Some of the group members visiting the ZooLink Lab in Busia

Yukiko Nakamura...Intern for the 99HH study



Yukiko Nakamura

Yukiko Nakamura is currently in her final year of veterinary school in Japan, and for the past few years has been doing research against *Lawsonia intracellularis* infection, which is causing a wasting disease in pigs and horses throughout the world. She is visiting ILRI using the “Tobitate! Young Ambassador Japan” scholarship founded by the Japanese Education ministry, and she is excited to start participating in the wildlife/livestock sampling for the “99 households” study under the Urban Zoo Project.

More info about Yukiko to be found in our website <http://www.zoonotic-diseases.org/who-we-are/currentstaffstudents/yukiko/>

eggs, or snacks like mandazi. Some are mobile vendors, while others sell their items from kiosks and restaurants known as 'hotels.' Even with all their diversity, vendors were consistently engrossed in the training session and stayed throughout their lunch-hour, which would otherwise be a lucrative time for many traders.

A photograph showing three women in a kitchen setting. They are standing around a wooden table, preparing vegetables. One woman on the left is wearing a light pink polo shirt and purple pants, and is cutting green leafy vegetables. The woman in the center is wearing a light-colored t-shirt with 'POWER' written on it and patterned shorts, and is also cutting vegetables. The woman on the right is wearing a dark jacket over a striped shirt and is cutting tomatoes on a wooden board. There are several whole red tomatoes on the table. The background shows a window with a white frame and a wall with some papers.

Nevertheless, the training has fostered widespread benefits in Nairobi's informal settlements, in addition to meeting vendors' own demand for improved skills. Educating vendors *and* consumers in food safety will bolster awareness across their settlements, thereby helping to prevent food-borne illnesses and the associated socio-economic losses. Recognizing vendors as vital providers of food and as community leaders will build their confidence and self-awareness, which is otherwise difficult in the atomized, competitive environment of informal settlements. Above all, the trainings are supporting enhanced access to healthy, affordable meals with multiple benefits for buyers and sellers alike.



Training of Food Vendors is one of the outputs for the Urban Zoo Project—we aim to give back to society by training such lay groups on some of the good practices of handling foods.

This article has been written by the Muungano team

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Using a tablet to scan the barcodes on samples before submission to the labs



Drs. Karani and Muinde collecting samples from a guinea fowl



Prof E Fevre using boot socks to collect environmental samples



Faecal sample collection from a goat



Boot socks samples ready for the lab

Red sticker indicates the E.coli sample that has been selected for whole genome sequencing

The blue sticker indicates the sample has been identified for *Campylobacter* isolation



KEMRI Lab staff explaining the lab procedures to a reporter from the Voice of America News Programme



A motorbike rider loading the cool box full of samples for delivery to the labs



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- 11th Safepork 2015 in Porto, Portugal. 7th to 10th of September 2015. <http://www.safepork2015.com/index.php> Several papers from the urban zoo team have been accepted for oral presentation
- ISVEE 14 in the City of Merida, Yucatan, Mexico, during 3-7 November 2015. Pre- and post-symposium workshops will be offered during 1-2 and 8-12 November, respectively. The Theme for ISVEE 14 is “Veterinary Epidemiology & Economics: Planning Our Future” <http://www.isvee2015.org>. Several papers from the urban zoo team have been accepted for oral presentation.
- 2nd OHCEA International One Health Conference, Kampala, Uganda at Speak Resort Munyonyo on 16-20 November, 2015. Theme: “Strategic Approach to Global Health Security through One Health Innovation: Vision 2035”. <http://ohconference.ohcea.org/>