

Kampala City stakeholders' workshop on the urban food-energy-water and waste nexus Workshop Report



Participants from different sectors of Food-Energy-Water-Waste of Kampala City Council Authority at Fair Way Hotel, 2024 (Photo credit: Joviah Gonza, I4D)

**February, 14th – 15th 2024,
Kampala Uganda**

**Innovations for Development
In the Regional Network for Equity in Health in East and Southern
Africa (EQUINET)**

**with support from
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Key messages

Delegates at the EQUINET Regional Meeting on Urban Health in East and Southern Africa (ESA) noted that there is rising urbanization, including around extractives, with increasing commercial and climate impacts. They thus called for the region to move from single issue interventions to comprehensive, integrated, area-based approaches; and to shift from project – to process-thinking, designing for sustainability from the onset. There was recognition that promising practices are taking place locally, but not scaled up. Therefore, there is a need to engage and listen to not only affected communities but also other stakeholders to further generate evidence, build synergy and identify multiple actors to address drivers of inequities in food-waste-water-energy nexus.

With support from EQUINET through TARSC and OSPC, I4D organized a stakeholders' capacity-building exercise in Kampala and Masaka cities as an avenue to strengthen mechanisms, processes and capacities of cities to build collaborations, partnerships and engagements that will realise the scale-up of promising practices to achieve equitable urban health and development in the sectors of food, water energy and waste management.

This workshop in Kampala hosted 24 participants from the sectors of water-energy-food-waste in Kampala City Council. They participated in a series of sessions that introduced key concepts, knowledge and tools to build capacities to answer the challenging issues in their respective sectors. Participants were exposed to the framework developed by members of EQUINET. The framework was used as a blueprint to analyse critical bottlenecks, guidelines, enablers and possible strategies to build collaborative, multi-sectoral and multi-actor sustainable, equitable and people-centred solutions to the food-energy-water-waste challenges.

The dialogue culminated in participants proposing actions to address the systemic challenges as well as recommendations for follow-up. Follow-up emails and phone calls were made to all the participants that attended. Participants were tasked to select at most three recommendations that were most pertinent in mapping a way forward towards actions to build collaborative, sustainable, interlinked and multi-sectoral opportunities for change in the four sectors. The prioritised recommendations were to:

- a. Build capacity across the leadership spectrum within the city on the practical steps, actions to intersect and integrate the four sectors especially within the divisions and communities.
- b. Conduct mapping and documentation of local evidence practices and innovations depicting integration and offer scale-up opportunities.
- c. Conduct awareness and advocacy processes to build support and political will for the nexus approach at all levels of governance include central government (ministries & departments) and local governments, agencies, private sector, non-governmental organisations and communities.
- d. Convene and establish a city-wide coordination structure that will support operationalisation of planned actions, strategies, support knowledge sharing, and advocacy geared at institutionalising the nexus framework in the four sectors.

1. Background

Delegates at the EQUINET Regional Meeting on Urban Health in East and Southern Africa (ESA) noted that there is rising urbanization, including around extractives, with increasing commercial and climate impacts. They thus called for the region to move from single issue interventions to comprehensive, integrated, area-based approaches; and to shift from project – to process-thinking, designing for sustainability from the onset. There was recognition that promising practices are taking place locally, but not scaled up. Therefore, there is a need to engage and listen to not only affected communities but also other stakeholders to further generate evidence, build synergy and identify multiple actors to address drivers of inequities in food-waste-water-energy nexus.

To advance this agenda forward, the urban health collaborative in EQUINET developed a conceptual framework in 2023 that illustrated critical principles, systems and goals to achieve functional, sustainable and people-oriented systems for food and waste management. The principles included; i. being inclusive and equitable; ii. generating new knowledge and evidence; iii. built with institutionalized capacities and good governance; iv. able to design and share promising practices; v. able to engage and link with drivers, policies and rules, with an enabling environment that will facilitate systems to interconnect and link and to foster sustainability. The framework also emphasizes the need to ensure that particular principles, features, and goals must be aligned to achieve better possibilities in the links between food, energy, water and waste, such as in a circular economy, and adapt in an equitable manner to climate challenges.

In Uganda, a pilot initiative was designed by I4D, an EQUINET steering committee member, to identify opportunities to scale-up promising practices in food-water-energy-waste management in an integrated, interlinked and collaborative manner. It was implemented in Kampala and Masaka cities. I4D implemented a mapping process to identify key stakeholders, assess their needs and prepare learning resources to help address some of the identified knowledge gaps and needs. The pilot workshops then aimed to catalyse further interest among leaders to create a functional, people-oriented, integrated and interlinked urban nexus of food-water-water and waste systems. With support from EQUINET through TARSC and OSPC, I4D organized a stakeholders' workshop in Kampala and Masaka cities to strengthen mechanisms, processes and capacities of cities to build collaborations, partnerships and engagements to scale-up promising practices to achieve equitable urban health and development in the sectors of food, water energy and waste management.

This report gives an account of the capacity building workshop conducted in February 2024 to share information and discuss with key stakeholders from Kampala City Authority. The programme and participant list are shown in *Appendix A*.

1.1. Learning objectives:

The workshop was organized with the following learning objectives, to:

- a. Enable participants to understand the food-energy-water and waste (FEWW) nexus approach, its key concepts, principles and features and how these relate to green spaces, circular economy and sustainable development
- b. Enable participants to explore avenues to ideate, design and implement multi-sectoral, multi-actor collaborative responses to address food, waste, energy and water system challenges
- c. Facilitate the acquisition of practical tools, resources and techniques to implement a holistic city-based system approach through planning, policy-making and implementation in the urban context to fix the urban challenges of food, waste, water and energy systems.
- d. Explore ways how evidence and knowledge can be shared within sectors and across sectors to facilitate expansion and adoption of best practices in the food-energy-water and waste systems within the gambits of climate justice, circular economy and sustainable development.

2. Workshop Sessions

The workshop was attended by 26 participants from the different sectors of Water, Energy, Waste and Food in Kampala Capital City Authority. The sessions were facilitated by Dr Danny Gotto, ED (Innovations for Development), Dr Faithful Atusinguza (Global Green Institute) and Mr Kalumba Isaac (Water for People)

2.1. Introduction to the EQUINET, ESA urban health work and I4D

The first session learning objectives were to:

- Increase participants' understanding of EQUINET's work on advancing Health EQUITY in the ESA region.
- Facilitate participants' understanding of the key goal(s) and objectives of the I4D-EQUINET partnership in the two cities.

Dr Danny Gotto provided an introductory journey, briefing participants on the wider mission of EQUINET in the ESA region and the work of EQUINET under the urban health equity thematic area. Danny outlined the 2023 regional meeting that identified the need to scale up promising practices in the food and waste management sectors. The initiatives reported included promising practices from the ESA region including Kampala City. The desire was to institutionalise these practices beyond small-scale isolated projects. He emphasized that invited delegates to this workshop would provide useful insights on processes and actions that will create an environment through which inequities in the food-energy-water-waste can be addressed. Since all invited participants were leaders from their respective sectors, it was incumbent upon them to find ways to build integrated, interlinked and collaborative mechanisms to address existing challenges in the sectors to achieve sustainable development for all. Danny informed participants about the resources available on the EQUINET website (<https://equinetafrica.org/>) particularly the recently published case studies on work within the region that highlight different interventions on food and waste management systems. He urged participants to utilize these resources in their work.

He summed up the session by emphasizing the objectives of the workshop noted earlier and the anticipated outcomes from the meeting. This includes ensuring that participants have a firm grasp of the contextual issues about the urban nexus of food-water-energy-waste in Kampala City to develop appropriate actions and interventions in a collaborative, interlinked, inter-sectoral, sustainable, participatory and equitable manner. He noted that to achieve these outcomes there is a need for a paradigm shift that will involve the adoption of key principles of equity, collaboration, strategic shared learning, integrated cross-sector action and learning and strong governance. He noted that planned sessions have been designed to explore participatory ways how these desired principles can be adopted.

Ms Emily Namanya who represented the Public Health and Environment Division of the Kampala City Council Authority (KCCA) gave the opening remarks on behalf of Dr Okello (head of the Division). She acknowledged the timeliness of the training as critical given the current realignment processes being planned. She reminded participants that technical leadership within the city has a strong interest in embracing integrated planning and implementation. Although progress has been slow some steps have been taken by the waste, water and energy sectors to collaborate on different programmes. It was the food/agricultural sector which was still missing out on fully coming into the fold. She noted small pilot programmes underway in the climate change space and in smart city engagements. She emphasized that although ambition was there, there were still existing barriers that needed to be eliminated including internal structural issues, policy environment, financing shortfalls and technical capacities. She urged participants to use EQUINET and I4D's workshop opportunity to explore practical and innovative ways to address the acknowledged challenges. Participants inquired about logistic issues and the next steps in the training and the facilitators provided the answers to them.

2.2. Introduction to the urban food-energy-water-waste security nexus

The second session's learning objectives were;

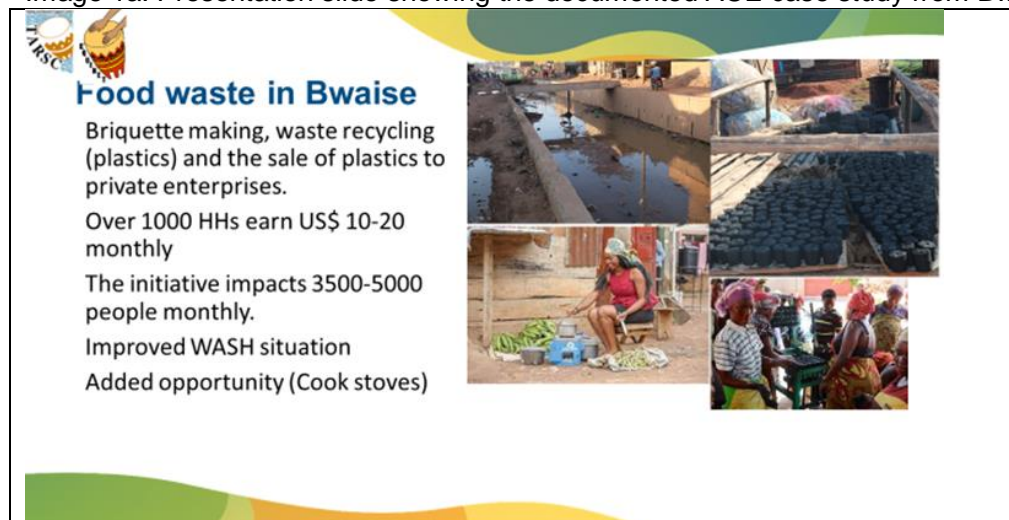
- To Introduce the FEWW and the associated securities to the participants;
- Provide an overview of major global/national/local trends in the water, energy, food and waste sectors
- Introduce the EQUINET framework for understanding the FEWW Nexus approach in ESA
- Learn the critical need/benefit for an inter-sectoral approach to the F-E-W-W nexus approach, particularly on the opportunities and synergies and role of in pursuance of Urban Health Equity

The session started with a pre-test exercise to identify the level of knowledge about the FEWW sectors. 19/26 participants were from government agencies including KCCA, and Ministries departments, 2/26 were from civil society, 3/26 were from academia and 2/26 represented the private sector. In terms of representation by sector, 10/26 represented all four sectors, 6/26 represented waste, 4/26 represented food, 4/26 represented water and 2/26 represented energy sectors.

The majority (21/26) of participants were mid-level managers responsible for the implementation of programme and 2/26 were in senior leadership roles and responsible for policy-making processes. Only 6/26 reported feeling confident that they could implement or advocate directly for the implementation of agreed changes. The rest of 20/26 felt they needed to convince their superiors for the adoption of recommendations and plans.

The facilitator shared an extract from the case study documented by the Accelerating City Equity (ACE) project in Bwaise about a waste management initiative by women groups. The story introduced participants to an intervention that addressed energy poverty through the production of briquettes, improved the water crisis by reducing flooding and addressed reduced food waste.

Image 1a: Presentation slide showing the documented ACE case study from Bwaise III.

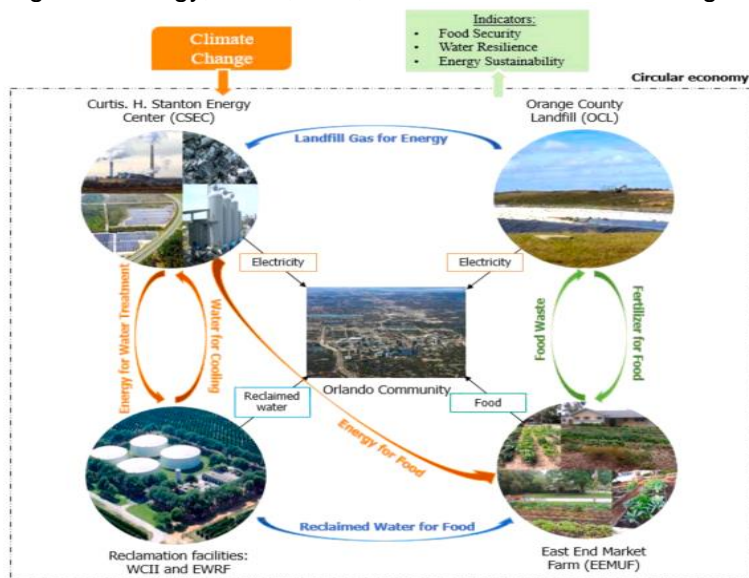


Source: I4D presentation slide.

Participants shared their experiences with similar initiatives from other areas of the city. The facilitator then introduced, defined and explained key concepts in the FEWW nexus, including: food security, energy security, water security, nature solution, circular & linear economic models, green space, and green economy. Participants dialogued on the potential benefits of developing integrated, multisectoral collaborative interventions in the four sectors of water, energy, food and water and how the Nexus approach differed from other approaches like Integrated Water Resource Management (IWRM)

To illustrate the examples of the Water, Energy, Food and Waste linkages, the facilitator used extracts from the EQUINET food, energy, water and waste conceptual framework. Presentation slides showing the linkage of food-energy-waste-water sectors and the linkages with climate and circular economy models were shared. Slides highlighting the FEWW situation in Uganda examining the present, future, unmet demand and increasing demands were discussed.

Image 1b. Energy, water, food, waste nexus- climate change and a circular economy



Source: Valencia et al., 2022: 3 (extracted from EQUINET framework)

During the session, an outline of the relevance of a multisectoral approach for national, and city development was shared. The growing demand for and insecurities in water, energy, food and waste were emphasized. Participants were tasked to discuss critical challenges in the respective sectors and identification of key trade-offs and solutions. The interaction of each of the sectors on another was emphasized especially in situations where interventions in one sector can interfere with other goals within the other sectors and potentially have negative impacts on those as well ("trade-offs").

Discussion points on urban systems characteristics and principles, Photo: J Gonza 14D, 2024

PRINCIPLES FOR AN URBAN NEXUS

- ① EQUITY
- ② INTEGRATED ACROSS SECTORS, ACTORS, & SPACES
- ③ PARTNERSHIP & PARTICIPATION
- ④ INCLUSIVE & SUSTAINABLE
- ⑤ STRATEGIC, SHARED LEARNING
- ⑥ CLIMATE JUSTICE

CHARACTERISTIC FEATURES OF THE URBAN FEWW SYSTEMS

- a) Generating evidence & knowledge
- b) Inclusive & equitable economy
- c) Institutional capabilities
- d) Effective governance
- e) Shared promising practices
- f) Ensuring climate 'proofing'
- g) Emerging global, regional drivers, policies & rules



Discussion poster on challenges in the food-energy-waste-water sectors, Photo: J Gonza, I4D, 2024

Table 1 shows participant responses on what they identified as challenges for the FEWW nexus in Kampala.

Table 1: Challenges identified by participants in the FEWW nexus sectors in Kampala

Water	Energy	Food	Waste
<ul style="list-style-type: none"> - Monopoly of a single service provider - Inequities in coverage of water especially in informal settlements. - Unaffordable cost of water - Poor quality of water in most lowland areas. 	<ul style="list-style-type: none"> - Expensive cost of clean energy (electricity), and gas. - Limited choice of energy types available to poor people. - Unclean energy sources causing pollution in the city. - Demand increasing every year outstripping insufficient supply. 	<ul style="list-style-type: none"> - Adulteration of food causing poor quality diets. - Import of poor quality food into the city. - Food waste due to limited preservation capacity. - Food deserts in particular areas of the city. - Dwindling food production capacity within the city 	<ul style="list-style-type: none"> - Increasing waste due to rapid population increase. - Poor waste management where most solid waste is dumped in landfills. - Limited technology and technical capacity to reuse, recycle, reduce.. - Weak regulation especially of pollution and a challenge with plastics
Identified trade-offs in the sectors <ul style="list-style-type: none"> - Investment in clean solutions in all sectors requires high investment amidst competing city priorities for areas like road infrastructure and other social services like health and education. - The time required to invest in advancing the FEWW nexus is enormous and yet those suffering from insecurities and spill-over effects may not be able to wait. - The human resource capacity needed to fix nexus challenges is not adequately available. To have solutions the city may be required to invest in building human resource capacity which may postpone investment in solutions. - Population pressures and the current volatile political environment in the city hinder investment in holistic multisector approaches like the urban nexus. 			

2.3. Devising solutions to the urban FEWW challenges

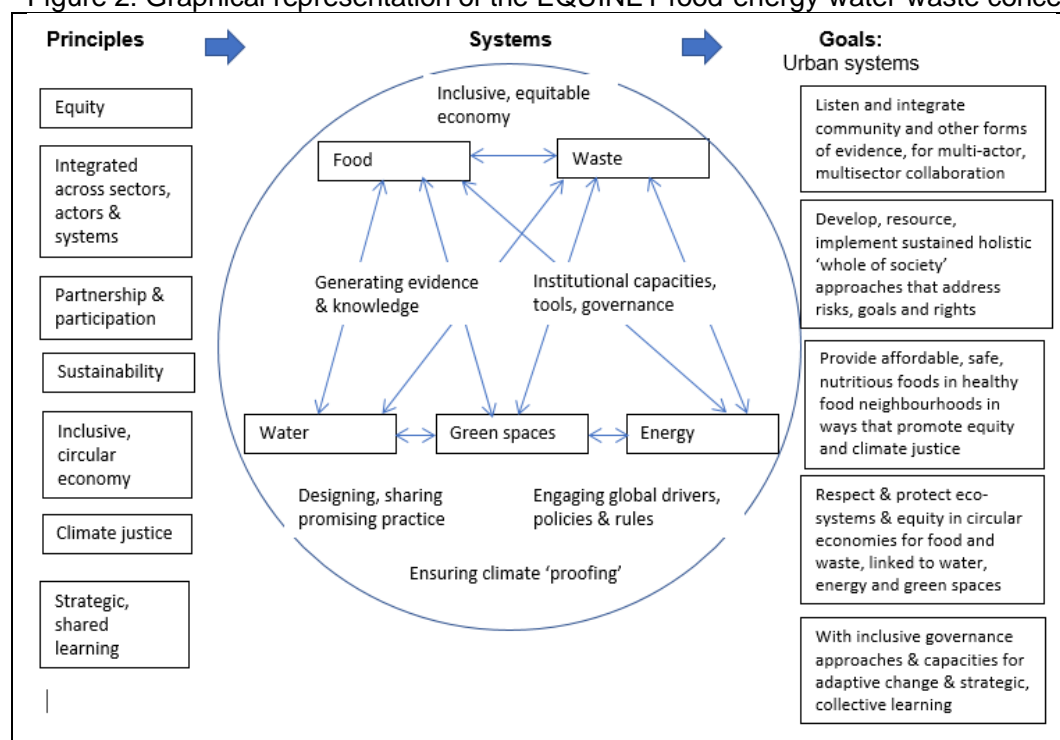
This session focused on providing participants with an opportunity to dialogue around solutions to some of the identified nexus challenges. The facilitator introduced the lens within the conceptual framework developed by EQUINET and the principles, features and goals it includes shown in *Figure 2*. He noted that these features provide a multisectoral approach.

The learning objectives of the session were that learners could:

- Define key concepts, principles and goals of the FEWW nexus approach as it relates to the conceptual framework
- Understand the FEWW sectors' linkages to other concepts (SDGs, Climate Change, Integrated Resources Management, Circular Economy)
- Identify critical gaps in knowledge, and policy within the urban authorities to realise equitable urban FEWW systems.
- Share practical examples/case studies highlighting best practices and approaches in the FEWW nexus.

The session started with presentation of the key concepts, tools, and evidence in the conceptual framework (The website for the full document is shown below *Figure 2*). The session presented the interconnections between the EQUINET framework and nexus concepts like inclusive equitable economic models, circular economy, evidence-knowledge generation, governance, and national/city and local drivers.

Figure 2: Graphical representation of the EQUINET food-energy-water-waste conceptual framework

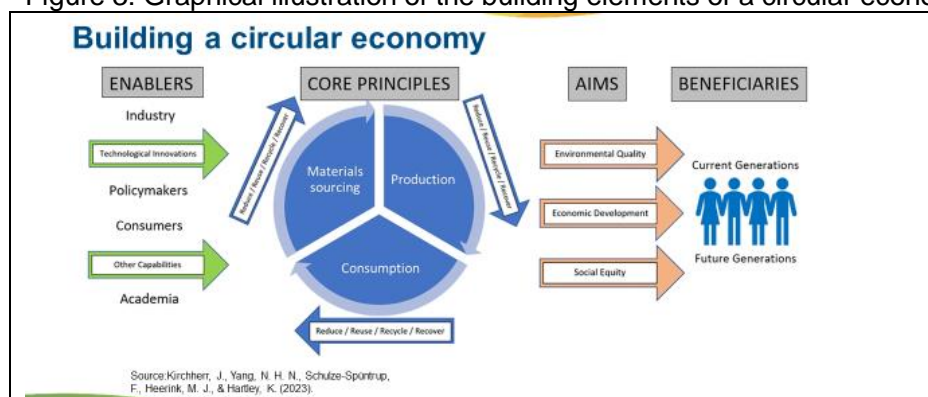


Source: EQUINET conceptual framework 2023, Online at <https://equinetafrica.org/sites/default/files/uploads/documents/EQUINET%20conceptual%20framework%20for%20UH%20food%20and%20waste%20systems.pdf>

Participants discussed in groups the city's position and status on the concepts. The facilitator shared slides of FEWW sectors and linkages with Sustainable Development Goals (SDGs), the circular

economic approach, and the principles of climate justice, sustainability, partnerships and collaboration, and integrated urban resource management. (Figure 3)

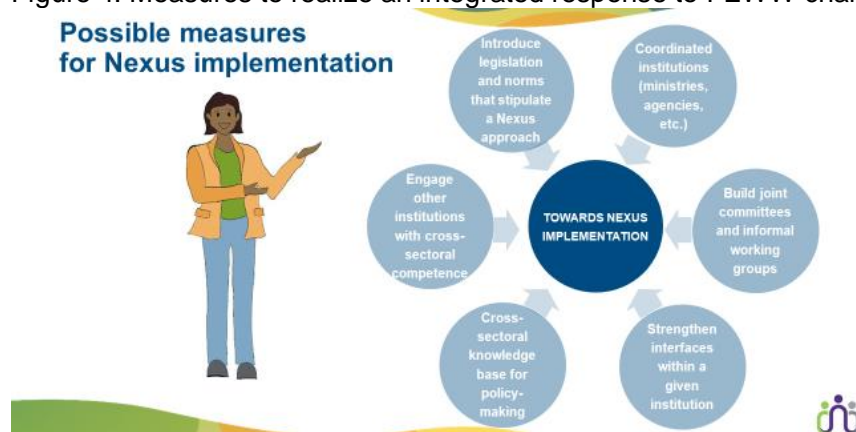
Figure 3: Graphical illustration of the building elements of a circular economy



Source: Kirchherr et al , 2023

During the session, details were presented of key principles to realise a functional multi-stakeholder collaboration, and equitable FEWW system with emphasis on the principles in the EQUINET framework shown in Figure 2. The practical segment involved participants in 5 groups discussing the implications of the 5 key features in the conceptual framework, their feasibility for implementation, possible challenges and practical strategies to realize their achievement (Figure 4).

Figure 4: Measures to realize an integrated response to FEWW challenges.



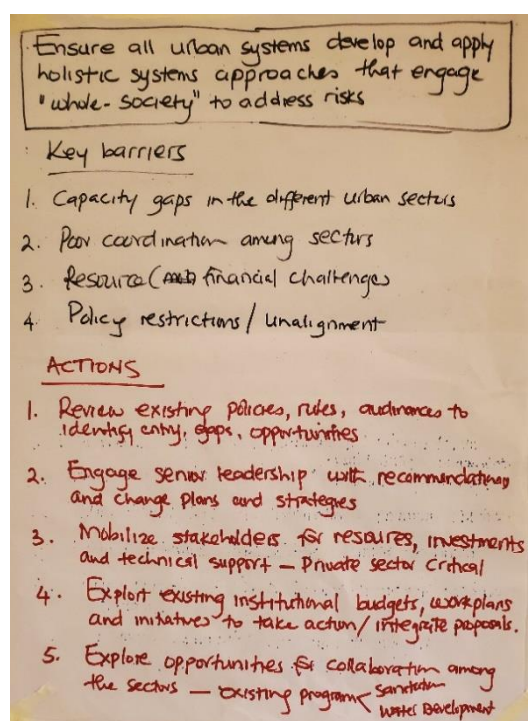
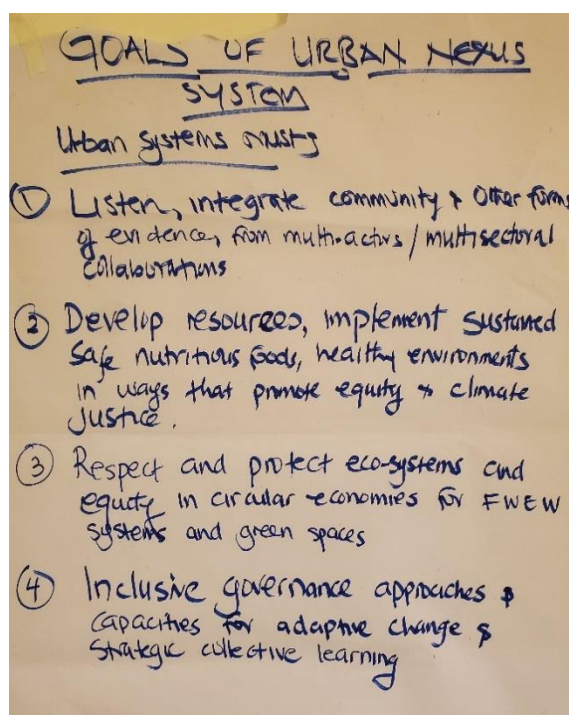
Participant sharing group ideas on implementation, Photo: J Gonza, I4D, 2024

2.4. Reimagining actions for equitable urban systems

This session was conducted on the 2nd day of the workshop and participants continued with building plans for action while reflecting on the feasible but impactful ideas to build collective, collaborative and equitable systems that are rooted in communities' aspirations, indigenous knowledge and agencies. Participants were split into five groups and each group was provided a guide from the proposed priorities under the five thematic areas put forward in the EQUINET conceptual framework, shown in Table 2 *below*. Each group was tasked to understand the areas of action and develop their own feasible and context-based actions which they can pursue in their work plans. *Table 2* shows the actions put forward by all five groups within the different thematic features.

Table 2: Participant's action plans for building equitable urban systems
<i>Build urban systems that listen, respond to and integrate community evidence, institutional and other evidence through a multisectoral, multi-actor engagement and collaboration</i>
Planned actions: <ul style="list-style-type: none"> - Establish a city-level FEWW nexus joint planning and implementation forum - Integrate evidence collection and documentation of best practices, and case studies in existing programs and activities. - Package evidence into publishable format and create communication channels to publish quarterly/annual information materials to different stakeholders - Strengthen existing city-wide structures with skills in research, evidence collection and analysis using various tools including photo-journalism, Health Impact Assessments, etc. - Orient implementing teams of ongoing projects and programmes in the respective sectors to integrate the FEWW nexus in their plans and activities to enable collaboration, multi-sectoral engagement and integrated implementation. - Engage relevant stakeholders including political and technical policy-making leadership to improve policy frameworks and laws to support intersectoral collaboration, partnership and joint learning across sectors. - Engage the private sector, civil society and influential community actors to support efforts to expand and sustain collaborative governance and implementation across FEWW sectors.
<i>Ensure all urban systems develop and apply a holistic systems approach that engages "whole society" to address risks and drivers as well as build capacity for sustainable and equitable responses.</i>
Planned actions: <ul style="list-style-type: none"> - Assess existing policies and laws impacting on FEWW systems at city and national levels to identify gaps, opportunities, risks enablers to launch and scale the urban nexus - Propose recommendations for policy change with sectoral actors and relevant stakeholders as a means to influence change. - Mobilize stakeholders for resources, investments, and technical and moral support to facilitate implementation of cross cross-sectoral actions and to improve collaborations, joint implementation and learning across the four sectors. - Institutionalize processes and mechanisms to finance local initiatives that complement the urban nexus agenda across existing government and development programs. - Assess current programmes across the four sectors to identify opportunities and avenues for collaborative engagements, joint actions, synergy and any trade-offs.
<i>Urban systems that holistically address food, water, energy and waste access challenges, inequities, and insecurities among key populations by prioritizing equity and climate justice, promote a balanced and inclusive environment for all residents</i>
Planned actions: <ul style="list-style-type: none"> - Conduct mapping to identify entities responding to various FEWW nexus especially for those that address inequities, underserved localities and that provide impactful solutions/initiatives. - Organize stakeholder dialogues with key actors, including the private sector, line ministries, and civil society to harmonise priorities, and coordinate investments in FEWW. - Facilitate scale-up of tested and proven models, and solutions that enhance integration,

Table 2: Participant's action plans for building equitable urban systems
<p>address inequity access and minimise deprivation among particular segments of society.</p> <ul style="list-style-type: none"> - Organise forums to facilitate networking, collaboration, partnerships and joint learning among local, national, regional and international actors working to address FEWW challenges. - Promote local urban solutions including small community-level actions that support locally led food production, energy production, water harvest and waste management. - Cultivate support to develop circular economic business initiatives within FEWW, including engaging and sensitizing the private sector and local communities to lead on some initiatives. - Establish partnerships with civil society, academia, researchers and private sector to facilitate knowledge generation and joint learning across the sectors and with government institutions
<i>Urban systems that respect, and protect ecosystems, inclusive and equity-oriented to support the neediest and vulnerable</i>
<p>Planned actions:</p> <ul style="list-style-type: none"> - Assess existing standards and guidelines protecting ecosystems and ensure inclusion and equity. Include standards on Environmental Impact Assessment, Waste Management. - Where necessary propose/recommend revisions/changes to existing standards and guidelines and address inequities, protect the ecosystem and guarantee equity for all. - Monitor sector actors to enhance adherence with and sustained implementation of standards. - Incentivise good practices, and adherence to standards using practical policy and financial instruments like tax waivers and recognition. - Create a repository of evidence and knowledge on what is working/changing in FEWW
<i>Urban systems that involve governance approaches, capacities and measures for the implementation of adaptive changes and strategic learning</i>
<p>Planned actions:</p> <ul style="list-style-type: none"> - Advocate to streamline FEWW nexus interventions for an operating desk at the capital authority whose mandate is to lead/coordinate the urban nexus dialogue processes. - Organise capacity-building with specific leaders across the sectors to enhance their knowledge, skills and interest in pursuing the urban nexus agenda. - Identify and support proven locally-led solutions that involve integration, collaboration, and partnership at local, sub-district and district levels - Facilitate the development and launch of networks, community of practice and collaborative learning initiatives at local, sub-national and city levels to share knowledge and build skills. - Establish mechanisms, channels and platforms for communities and other actors to provide feedback on progress and actions.



Suggested barriers and actions proposed by participants to build an equitable urban system
Photo: D Gotto, I4D, 2024

Suggested barriers and actions raised by participants to build an equitable urban system

Building urban systems that listen
respond to an integrated community
evidence through a multisectoral collaboration

Key challenges

1. Capacity gaps in collecting evidence
2. Challenges to engage communities
3. Disconnected system Uncoordinated under staffed.
4. Shortage of documentable evidence

ACTIONS

1. Establish city level planning & Dialogue forum
2. Invest in collecting evidence Build skills of documentation Research capacity gaps
3. Train teams/Dept on integration of promising practices
4. Engage relevant stakeholders (Political/Technical)
5. Bring private sector on board to support evidence generation
6. Organize community structures to support evidence/knowledge generation.

Urban systems that are holistically addressing food, energy, waste, water, inequities & insecurities among key popd by prioritizing equity & climate justice

Challenges/Barriers

- ① High forms of inequities many years of marginalization various pop segments.
- ② Disjointed communities (lack of collective voice)
- ③ Competing demands
- ④ Political pressures / Societal pressures
- ⑤ Trade-offs (Risks of prioritizations)

ACTIONS

- ① Conduct mapping to identify most needy + issues
- ② Dialogue with communities (most affected) include other stakeholders
- ③ Rally stakeholders for collaborative actions
- ④ Identify success/promising solutions and scale them
- ⑤ Promote locally led, people-centered, home grown.

Photo: Danny Gotto, I4D, 2024



Participants deliberating on possible actions



Photos: J Gokova, I4D, 2024

2.5. Exploring the governance of FEWW in Kampala

This session explored the governance of the FEWW systems in Kampala City. The learning objectives included to;

- Understand the existing governance framework, structures, policies and systems of decision-making within the cities.
- Explore the critical role and responsibilities of the different stakeholders in FEWW.

The facilitator took participants through a reflection exercise to examine the governance systems, structures and policy framework within KCCA that may be used to facilitate possible collaboration, interconnection and intersectoral engagement. Participants were also tasked to identify key gaps, opportunities, enablers and barriers. Participants were split into groups to have a deeper discussion within their respective sectors. Each group then returned to share the key highlights of the group discussions. The following are some of the deliberations:

Governance systems

Participants had conflicting knowledge of the complex governance systems and structures of FEWW sectors. However, there was an understanding that the supporting legal framework includes a set of cross-cutting laws, regulations and ordinances. The most relevant include the following;

- *The Constitution of the Republic of Uganda*, which advocates for a clean and healthy environment. The constitution empowers the central government, local governments and the communities/municipalities to ensure that every citizen in Uganda has access to a clean and healthy environment as well as a nutritious diet to achieve a healthy living.
- *The KCCA Act 2010*, that details the different roles of the City in the provision and management of the water, food, energy and waste sectors.
- *The National Water and Sewerage Corporation Act, 1995 (Revised 2000) Cap 317. Section 4(2) of the NWSC Act*, that mandates NWSC to develop water and sewerage systems in urban centres and big national institutions throughout the country.
- *The Public Health Act (Cap 381) 1935 (Revised 2000)* that is the principal sector law regulating all aspects of public health. Aspects of public health regulated under the Act include water and sanitation, food, pollution, waste/sewage and drainage.
- *The National Environment Act, Cap 153 (Revised 2019)* that is the principal legislation governing the environment in Uganda. Its objective is to provide for sustainable management of the environment, including the protection of natural resources such as water.
- *The Water (Sewerage) Regulations (S. 1. 152-3)* that provides for standards and requirements for trade waste discharge from land to sewer systems- Regulation 22(3), (4).

The SDGs were noted to be relevant to the FEWW sectors, including:

- SDG target 8.4: Global resource efficiency in consumption and production
- SDG target 11.3: Integrated and participatory planning
- SDG target 11.b: Integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change.
- SDG Target 6.4: Water-use efficiency across all sectors
- SDG Target 12.5: Reduce waste generation through prevention, reduction, recycling and reuse

Other national policies include:

- Uganda Food and Nutritional Policy 2003
- Uganda Food and Nutrition Strategy and Implementation Plan 2004
- The Energy Policy for Uganda 2023
- Renewable Energy Policy 2007
- National Waste Management Regulation 2020.

The City has departments for water, waste and agriculture that take decision and policy positions for the sectors in consultation with line Ministries. The Ministry of Water and Environment coordinates all policies at national and subnational levels. The City authority is required to implement national priorities and programs. The water sector at the national level is clustered into three major directorates namely; the Directorate of Water Development (DWD), the Directorate of Water Resource Management (DWRM) and the Directorate of Environmental Affairs (DEA). These directorates are differentiated in roles and functions which further complicate intra-sectoral collaboration as each is managed independently with different mandates.

The food system is coordinated by several Ministries namely; the Ministry of Agriculture Animals Industry and Fisheries, the Ministry of Trade and Industry, Ministry of Lands Housing and Urban Development. They're several players, policies and regulations. Kampala City has by-laws and ordinances that regulate restaurant and eating place permits, local trade order, land use, and transportation. There is limited coordination with the central line ministries especially on food coming in from outside the city, given the fact that the city is estimated to produce only 10% of its food and yet nearly 50% of food sold in the entire country takes place in Kampala.

3. Barriers and enablers for urban FEWW systems

3.1. Barriers to institutionalising the urban FEWW nexus

Participants identified the most pronounced barriers to realising the urban FEWW nexus as:

- The complexity of the sectors, with multiple actors at different levels of operations along the hierarchy of implementation making navigation of policy changes difficult because of the different layers of decision-making.
- Policy instruments, laws and regulations not being harmonized and sometimes appearing to conflict with one another. An example was in trade regulations that permit plastics but have a negative impact on waste and food sectors.
- The limitation of financing to actualize implementation of plans across sectors, reported to be a big challenge given the scaling up large-scale solutions.
- Weak political will, especially from parliament. An example was the ban on plastics of given microns being later rescinded by parliamentarians when lobby groups from private companies mounted pressure on them.
- The evidence and knowledge gaps across different actors especially the political and technical teams. Most participants acknowledged their limited understanding of how the interconnection and collaboration will practically work, but majority noted willingness to learn

3.2. Enablers to the institutionalising the urban FEWW nexus

Participants reported several enablers for the scale-up of test solutions;

- There is general enthusiasm especially amongst the technical teams in KCCA who commended their leaders for acknowledging and encouraging the organization of the workshop.
- There are existing initiatives that have taken the initial steps to collaborate, especially in the water and waste sectors. Successes and lessons from these initiatives must be documented and players supported.
- Development partners have started to embrace an integrated approach. These include GIZ and Water for People. Members cited the flexibility of some projects, recently the renewed “faecal slug improvement project” under the Bill and Melinda Gates Foundation that has supported efforts in energy and fertilizer production, noting this as a great integration opportunity.
- The City Greening Campaign is devoted to realising green spaces in the city to achieve an aesthetic, clean and people-friendly city.

4. Case studies of promising practices in the FEWW nexus

The facilitators introduced promising practices documented and published as case studies on the EQUINET website. <https://www.equinet africa.org/content/equinet-publications.html>. Facilitators emphasized the aim of EQUINET to support stakeholders with knowledge and information on promising practices for sustained urban and peri-urban wellbeing in East and Southern Africa and the call to share and review evidence on practice features that could be scaled up across countries. Participants were informed of the criteria for inclusion of promising practices. These were primarily those that met the principles and addressed the 5 pillars articulated in the conceptual framework.

5. Recommendations from the Workshop

The dialogue culminated in participants proposing actions to address the systemic challenges as well as recommendations for follow-up. The recommendations included:

- a. Capacity building on practical aspects of integration and multisectoral engagement by the concerned sectors. Members expressed limitations on how to push forward this nexus agenda.
- b. Localised evidence that operating in the nexus is as impactful as promoted, especially on the impact on integration at a larger scale.

- c. Evaluating trade-offs since the city survives in a politically charged environment where the population often seek quick fixes and can't wait for long-term impacts.
- d. The cost of investing in a nexus for the city leads to some sectors being prioritised and calls for the most impactful solutions to be identified when raising holistic approaches with policy-makers.
- e. More specific understanding of community participation is needed with innovative ways for communities to participate without crowding out policymakers and implementers.
- f. The majority of integrated interventions and solutions are still small-scale and short-term and not convincing as solutions for large-scale problem-thinking without further validation at this scale.
- g. There is need to conduct awareness and advocacy processes as a strategy to engage stakeholders especially within central and local government levels, nexus implementing agencies and institutions.
- h. Nexus systems of food, energy, water and waste are complex and require recognition of multiple trade-offs, calling for multi-effective governance, policy, legal and institutional reforms as well as behaviour change, among other drivers. As one participant said: *We don't lack solutions but rather need to know how to fit them together and how to address our problems collectively.*
- i. Convening and establishing coordination structures and mechanisms as a strategy to operationalize the planned actions and build on the strength of the different sectors.

Follow-up emails and phone calls were made to all the participants that attended. Participants were tasked to select at most three recommendations that were most pertinent in mapping a way forward towards actions to build collaborative, sustainable, interlinked and multi-sectoral opportunities for change in the four sectors. The recommendations/actions that were prioritised are shown in *Box 1* below.

Box 1: Recommendations prioritised by workshop participants

- a. Build capacity across the leadership spectrum within the city on the practical steps, actions to intersect and integrate the four sectors especially within the divisions and communities.
- b. Conduct mapping and documentation of local evidence practices and innovations depicting integration and offer scale-up opportunities.
- c. Conduct awareness and advocacy processes to build support and political will for the nexus approach at all levels of governance include central government (ministries & departments) and local governments, agencies, private sector, non-governmental organisations and communities.
- d. Convene and establish a city-wide coordination structure that will support operationalisation of planned actions, strategies, support knowledge sharing, and advocacy geared at institutionalising the nexus framework in the four sectors.

Appendices

A1 Participant list

#	Name	Title in Kampala City Authority
1	Jemima Nabaggala	Public Health Inspector (PHI)
2	Ruth Nakatudde	Sanitation Officer
3	Vicent Mbahinzireki	Officer Landfill
4	Ejoga Sammy	Public Health Inspector (PHI)
5	Kwesiga Maximus	Environmental Officer
6	Tushabomwe Johnson	Solid Waste Officer- Kawempe
7	Martha Nakyagaba	Nutrition Coordinator
8	Nakazibwe Hadija	Health Assistant (HA)
9	Joseph Kirabira	Senior Public Health Inspector (SPHI)
10	Nakalema J. Vanessa	Ministry of Water
11	Alireki Wilson	Solid Waste Officer
12	Kiganda David	Solid Waste Officer
13	Ann Kagene. K	Public Health Officer
14	Jeffrey Drani	Division Prevention & Environmental Health Officer (DPSEO)
15	Kiwewa Sadat	Energy Specialist
16	Barbra M. Aine	M&E Sanitation management
17	Gloria Mirembe	Coordinator City Wide Inclusive Sanitation
18	Hilda S. Kwesiga	CWIS Program Coordinator
19	Nyange Kyambadde Janet	Sanitation Marketing Officer
20	Lutaaya Henry	Environmental Officer
21	Aggrey Namwanza	Solid Waste Management Officer
22	Okello Richard	District Health Inspector
23	Namanya Emily	Supervisor Solid Waste and Environmental Management (SSWEM)
24	Grace Ajello Okello	District Health Inspector
25	Kulabako Janet	District Health Inspector
26	Naiga Racheal	Health Educator
27	Lubambula Juliet	Gender Officer/ Ministry of Gender

A2: Workshop Program

Venue: Fair Way Hotel.

Day One: Wednesday 14th February 2024.

Time	Activity	Remarks
8:30 AM – 9:00 AM	Arrival and Registration	I4D
9:00 AM – 9:30 AM	Introductory Speeches	I4D
9:30 AM – 10:10 AM	Session 1: Introduction to EQUINET/I4D Urban Health Initiative	Facilitator
10:10 AM – 10:40 AM	Tea Break	Hotel
10:40 AM – 1:00 PM	Session 2: Introduction to Food-Energy-Water-Waste Nexus	Facilitator
1:00 PM – 2:00 PM	Lunch Break	Hotel
2:00 PM – 3:00 PM	Session 2 continued	Facilitator
3:00 PM – 4:30 PM	Session 3: Reimagining Actions for Equitable Urban Systems – Discussion in groups.	Facilitator
4:30 PM – 5:00 PM	Break Teas and Departure	I4D/hotel

Day Two: Thursday 15th February 2024.

Time	Activity	Remarks
8:30 AM – 9:00 AM	Arrival and Registration	I4D
9:00 AM – 9:30 AM	Recap of Day 1	I4D
9:30 AM – 10:30 AM	Session 3: Continued (Plenary Discussion)	Facilitator
10:30 AM – 11:00 AM	Tea Break	Hotel
11:00 AM – 1:00 PM	Session 4: Examining the governance of Food-Energy-Water-Waste systems in Kampala	Facilitator
1:00 PM – 2:00 PM	Lunch Break	Hotel
2:00 PM – 3:00 PM	Session 5: Examining Barriers and Enablers to Implementation of Food-Energy-Water-Waste nexus	Facilitator
3:00 PM – 4:30 PM	Session 6: Exploring Case Studies of Food-Energy-Water-Waste Systems in urban areas	Facilitator
4:30 PM – 5:00 PM	Discussion Next steps & Closing speeches	Rapporteur/I4D
5:00 PM - Onwards	Evening Teas and Departure	Hotel