



1st Workshop on Higher Education Partnerships for Sub-Saharan Africa, 19 - 20 August 2020

Summary of Lessons Learnt by Academia from Industry



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Staff Training Details

Staff Trainee	University/Dept	Organization	Focus Area
Dr. Andrew Katumba	Makerere University/ Dept. of Electrical & Computer Eng.	Uganda Broadcasting Corporation (UBC)	SIGNET Uganda Contact Person: Bob Rich Mwecumi
Eng. Dr. Swaib Semiyaga	Makerere University/ Dept. of Civil & Env. Eng.	National Water & Sewerage Corporation (NWSC)	Faecal Sludge and Wastewater Treatment
Dr. Al-Mas Sendegeya	Kyambogo University/ Dept. of Electrical and Electronics Eng.	Uganda Electricity* Gen. Co. Ltd. (UEGCL)	

*UEGCL

UNRA

Kiira Motors

– Staff attached not yet started training

– Not yet started

– Training will commence in a month's time.

Training Program for Dr. Al-Mas Sendegeya at UEGCL

Week	Activity	Expected Outcome
Week 1	Introduction to UEGCL & meeting management	Get acquainted with UEGCL
	Presentation of Kyambogo University academic activities, research opportunities, areas of collaboration	Awareness of Kyambogo University's Academic and Research Activities
	Discussion with UEGCL Technical Team & agree on the areas/sections to visit for learning	Possible areas for collaboration in training identified; exposure of students to industry activities.
Week 2	Visit the sites/sections agreed upon in four days	Input into curriculum the State-of-the-Art and recent trends in the power/generation sector
Week 3	Discussion with the Head Research at UEGCL on Areas of Collaboration in Research	Possible areas of collaborative research identified. Further engagement actions agreed

Feedback on Internship for our Students

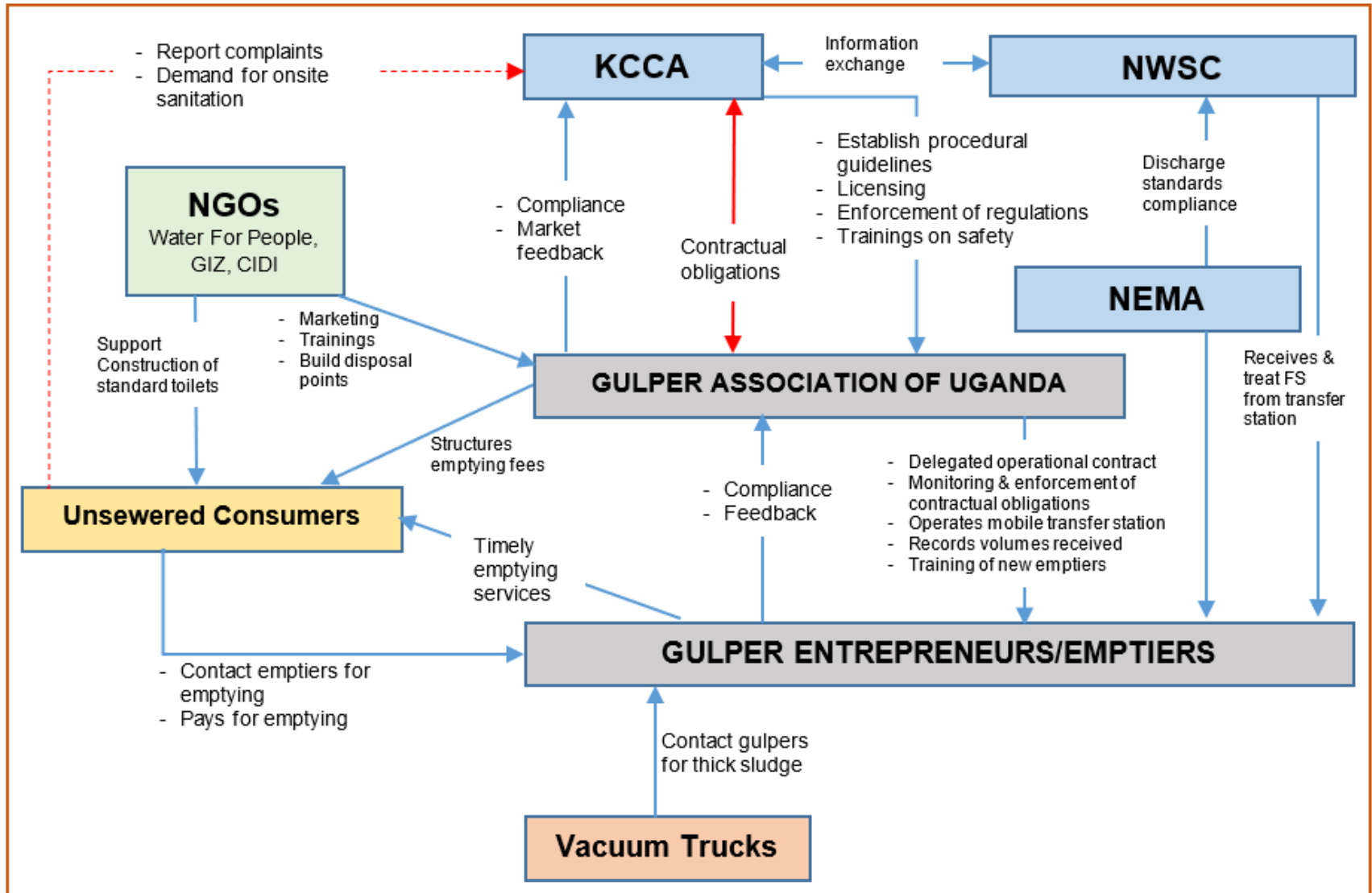
- ✓ Train undergraduate and post graduate students from Different Universities, within Uganda and beyond
- ✓ Varying curve: Some good, some bad....
- ✓ Some show no interest in wastewater
- ✓ Poor time keeping, no initiative, lack practical skills
- ✓ But can grasp ideas quickly
- ✓ Some get employed. At least 10% of previous trainees from ECE now employed at UBC
- ✓ Poor reporting skills

Lessons from NWSC – Gulper sludge

- Focused on Faecal sludge (more challenges)
- What is faecal sludge (FS)?
- Interested more in water supply, sewerage sanitation and FS less.
- Less than 10% sewerage and many use pit latrines. Not standard and not emptied by vacuum trucks.
- NWSC treats received FS, but a huge % does not reach plant.
- More designed plants did not incorporate this sludge – consider vacuum trucks.
- No research done to inform new designs and decisions. More attention is on water!!!! Many involved stakeholders.
- Thick sludge generates lots of solid waste (1/3 of FS) and silt.
- No clear plans in NWSC about gulper FS, focus is on vacuum trucks !!!!!!!!!!!!!!!
- Current business model is profit driven



Lessons from NWSC – Gulper sludge



Recommendations - Industry

- Co-supervision of final year project ideas with academic and field supervisors. *How Industry benefits??*
- Improve information flow within the industry - NWSC.
- Use existing plants to study to improve future designs.
- Plans to offer more internship positions.
- Staff to be in touch with relevant industry to benefit students being supervised.
- Use university staff/students' research to improve the industrial processes.

Recommendations - University

- Development of case studies from industry to use in teaching. Need to give real life field examples.
- Further staff exchanges (both ways) even beyond HEPSSA. (visiting industrial staff).
- Co-Supervision of students with industry supervisors
- Staff to be in touch with relevant industry to benefit students being supervised.
- Use of industrial staff for examination of students' thesis
- Co-publishing with industry staff
- Plan of funding industry staff??
- Findings dissemination. Funds?? University staff being proactive.
- A number of industry staff interested in post-graduate training
 - Topics from industry.
- Re-consideration of our internal training strategy to match industrial needs - Could for example UBC engineers lead practical lab sessions in the pertinent courses

Potential Research Collaboration Areas

UBC (SIGNET Uganda)

- ✓ Replacement of Satellite and Digital Microwave Links with Fiber
- ✓ Remote monitoring of sites
- ✓ Maintenance strategy

NWSC (Faecal Sludge)

- ✓ Management of solid wastes generated from faecal sludge treatment and gulper FS preparation.
- ✓ Characterization of gulper FS to design management facilities.
- ✓ Silt characterization and treatment.
- ✓ Management models for gulper FS transfer stations
- ✓ Revision of designs for FTP for inclusion of thick sludge from gupers

Thanks For Listening

