

CV – DR. NICOLA GREENE**Name:** Nicola Elaine Greene**Skype:** Nicola.greene**Nationality:** Irish**Phone:** +254 790 499 409**E-mail:** Nicola@opero-services.com**EDUCATION AND TRAINING**

Universities attended	Degree/Certificate obtained	Date
Water, Engineering and Development Centre (WEDC), Loughborough University (UK)	PhD, 'Seasonal Access to Water and Sanitation in Humla District, Nepal'	2013
Newcastle University (UK)	MSc Sustainable Management of the Water Environment (Distinction)	2009
University College Dublin (Ireland)	BA Hons. Biosystems Engineering (1 st Class)	2008

TRAINING: *Certificate in Development Entrepreneurship* – Flame Tree Initiative; *Human Centred Design* – D-Lab, Massachusetts Institute of Technology; *SPSS* – Loughborough University; *Quantitative and Qualitative Data Processing* – Loughborough University

EMPLOYMENT RECORD

COUNTRIES OF WORK EXPERIENCE: Brazil, Ethiopia, Jordan, Kenya, Malawi, Nepal, Rwanda, Sierra Leone, Uganda, Zambia.

From – To: 2018 – Present
Employer: OPERO Services Ltd, Sanitation Enterprise Centre
Positions held: Founder, Urban Sanitation Specialist

From–To: 2016 – Present
Employer: Sanitation Consultant
Positions held: Multiple projects (see below)

From–To: Apr – Nov 2016
Employer: Pivot Enterprises (Rwanda)
Positions held: Technical Manager, Pit Vidura Faecal Sludge Sourcing

From–To: 2015 – 2016
Employer: UNICEF Eastern and Southern Africa (ESARO), (East Africa Region)
Positions held: Private Sector Engagement in Sanitation -Consultant

From–To: 2014 – 2015
Employer: SANIHUB (Malawi)
Positions held: Sanitation Engineer

From–To: 2014 – 2015
Employer: Grace & Greene (UK)
Positions held: Co-Founder

From–To: 2013 – 2014
Employer: Coventry University (UK)
Positions held: Lecturer in Humanitarian Engineering

RELEVANT EMPLOYMENT AND CONSULTANCIES

Work	OPERO Services + Sanitation Enterprise Centre
Year	Dec 2018 – present
Location	Kenya - Nationwide
Client	Clients to date have included: Sanergy, Sistema.bio, Practical Action Kenya, Practical Action UK, DAI
Main project features	<p>A company with a dual aim to (i) be a source of technical and business development support for faecal sludge and solid waste management enterprises; and (ii) support the professional development of Kenyan youth interested in this sector through providing employment in a setting that actively prioritises learning, growth and knowledge sharing.</p> <p>The Sanitation Enterprise Centre (SEC) is our new offering to work exclusively to boost the capacity of Kenyan owned sanitation businesses. This work has received funding from the Stone Family Foundation to operate in Kisumu, Kenya from January 2021. The SEC will focus on the faecal sludge management industry via support for local businesses, while highlighting the high level investment needs to create a functioning enabling environment for the sector.</p>
Positions held	Founder, Urban Sanitation Specialist
Activities performed	<ul style="list-style-type: none"> • Leading \$1 million commercialization process for a biogas digester product in Kenya • Founded and established Sanitation Enterprise Centre • Sanitation market assessment of Western Kenya – Kisumu, Busia • Pit latrine emptying market development in Kisumu, Kenya • Design, install and research strategy for novel decentralised faecal sludge dewatering station • Development of market entry strategies for sanitation technology • Design and installation of locally manufactured bathrooms, digesters, anaerobic baffle reactors etc. • Work with solid waste management enterprises to boost waste collection efficiency • Development of solid waste management research tools to enable city wide needs assessment
Name of project	Support to Refugee Water and Sanitation Masterplan
Year	Oct '19 – Mar'20
Location	Kenya - Kakuma
Client	GFA, GIZ
Main project features	Design of a faecal sludge emptying and treatment model for Kakuma refugee camp
Positions held	Faecal sludge emptying and treatment specialist
Activities performed	<ul style="list-style-type: none"> • Faecal sludge needs assessment • Technology selection – emptying and transport • Business model development – emptying and transport • Stakeholder analysis and capacity needs assessment • Training and capacity development

Name of project	Decentralised Faecal Sludge Management
Year	May 2018– ongoing
Location	Kenya (Nairobi)
Client	Fresh Life, Sanergy
Main project features	Advising optimum engagement with pit latrines users in Mukuru, Nairobi to facilitate safe removal of human waste from pit latrines from the community with a focus on faecal sludge transfer stations and productive use of sludge from faecal waste.
Positions held	Faecal Sludge Management Consultant
Activities performed	<ul style="list-style-type: none"> • Design, construction and operational procedures for faecal sludge transfer stations in Mukuru, Nairobi. • Assessment of all potential pathways for treatment and reuse for faecal sludge and comparison under client specific KPIs • Design and implementation of a dewatering pilot rig for pit latrine sludge
Name of project	Commercialization of emerging sanitation products in emerging markets
Year	Dec 2017 –Present
Location	Global
Client	Triangle Environmental
Main project features	Working with a range of clients to bring emerging sanitation products and services to market via market assessments and in-country trials. Clients include North Carolina State University for the improved pit latrine emptying equipment, the Excluder; and Crane Engineering mobile dewatering unit.
Positions held	Sanitation Industry Specialist – Emerging Markets
Activities performed	<ul style="list-style-type: none"> • Technology development- contextual advisor • Global review of enabling environments for FSM • Primary data collection and needs assessment on private sector activity in Faecal Sludge Management • Review of global status of decentralised faecal sludge collection, disposal and treatment infrastructure • Business Model development for 'improved' pit latrine emptying • Target market identification for technology trials and sales • Implementation of technology trials • Technology commercialisation strategy development
Name of project	Lusaka Sanitation Programme: Faecal Sludge Business Development
Year	Dec 2017 – Apr 2018
Location	Zambia
Client	WSUP Advisory
Main project features	Market assessment of current service delivery models across non-sewered sanitation provision, emptying, transport and valorisation markets as part of the Lusaka Sanitation Programme.
Positions held	Sanitation Markets Consultant
Activities performed	Lead market assessment of (i) faecal sludge private sector activity, and (ii) market for faecal sludge treatment and potential by-products to contribute to public-private partnership development.

Name of project	Faecal Sludge Treatment and Disposal Assessment
Year	Dec 2016 – Jun 2017
Location	Sierra Leone (Freetown)
Client	WSUP Advisory via Goal Sierra Leone
Main project features	Assessment of faecal sludge treatment and disposal facilities in Freetown, Sierra Leone and development of short and long-term recommendation for infrastructural and enabling environment improvements
Positions held	WSUP Consultant – Faecal Sludge Treatment
Activities performed	<p>Assessment of existing FSM infrastructure including:</p> <ul style="list-style-type: none"> (i) The theoretical treatment needs of the city; (ii) Current operational data available; (iii) Existing infrastructure; (iv) Institutions and their capacities; (v) Relevant faecal sludge treatment technology for Freetown’s environmental conditions; and (vi) Potential funding opportunities to engage. <p>Designed phased investment faecal sludge treatment plant with recommendations on infrastructure and enabling environment development required.</p>

Name of project	Faecal Sludge Business Development
Year	Nov 2016 – May 2017
Location	Kenya (Kisumu)
Client	WSUP Kenya
Main project features	Private sector delivery of improved faecal sludge management services in Kisumu
Positions held	Urban Sanitation Consultant
Activities performed	<p>Work with relevant stakeholders to build an improved FSM Service in Kisumu, Kenya. Support included technology development, operational improvements, data systems and customer acquisition.</p> <p>Private sector development led to launch of an improved FSM Service called Gasia Poa Ltd Enabling environment support included the development Standard Operating Procedures for the Public Health Office, negotiation of licenses to operate for pit latrine emptiers, and work with the local utility, KIWASCO, for development of disposal fee structure and assessments of impact of faecal sludge on existing infrastructure; and business case for treatment by-products.</p>

Name of project	Faecal Sludge Sourcing
Year	Apr – Nov 2016
Location	Rwanda (Kigali)
Client	Pivot Enterprises
Main project features	Design and implementation of a phased approach to city-scale pit latrine emptying (Pit Vidura) in Kigali, Rwanda.
Positions held	Technical Manager
Activities performed	<p>Included:</p> <ul style="list-style-type: none"> (i) Community level and private sector assessment of sanitation service provision in low income areas; (ii) Development of pit latrine emptying technology and associated

- business model;
- (iii) Management of early- stage service delivery; and
- (iv) Strategy development for city-scale service delivery.

Name of project	Private Sector Engagement in Sanitation
Year	Oct 2015 – Oct 2016
Location	East Africa Region
Client	UNICEF ESARO
Main project features	Understanding how UNICEF can leverage resources to support increased private sector engagement in sanitation service delivery.
Positions held	Private Sector Engagement Strategist
Activities performed	Conducting market assessments highlighting opportunities and barriers for a range of sanitation products, including LIXIL Satopan, and services in Kenya, Rwanda, Ethiopia, Uganda and Zambia.

Name of project	Design and Development of Sanitation Services for the Malawian Market
Year	Jul 2014 – Sept 2015
Location	Malawi (Blantyre)
Client	SANIHUB
Main project features	Establishing a central hub for distribution of sanitation products and services in Blantyre, Malawi.
Positions held	Sanitation Engineer via Engineers Without Borders UK
Activities performed	Design and development of low costs latrines, latrine upgrades and pit emptying services for the Malawian market. Role included business model development - market surveys, product trials and sales (LIXIL Satopan, low flush ceramic pans); technology design (Gulper II, Rammer and Durasan latrine); and business mentorship.

Name of project	Review of Business Opportunities from Faecal Waste Products
Year	2015
Location	Malawi (Blantyre)
Client	WASTE
Main project features	Evaluation of potential business case for faecal sludge treatment by-products in Blantyre, Malawi
Positions held	Sanitation Consultant
Activities performed	<ul style="list-style-type: none"> • Assessment of potential by-products and market applicability for Malawi • Interviews with key stakeholders • Development of a business case with market drivers and inhibitors

LANGUAGES

	Speaking	Reading	Writing
English	<i>Native</i>	<i>Native</i>	<i>Native</i>
Swahili	<i>Basic</i>	<i>Basic</i>	<i>Basic</i>
French	<i>Basic</i>	<i>Basic</i>	<i>Basic</i>