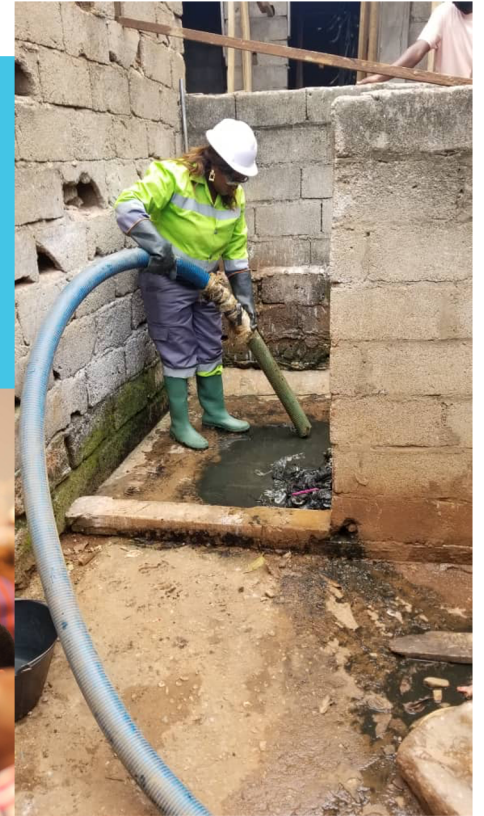


The Faecal Sludge Management Alliance Presents

# FSM6 Highlights

A virtual event held 31<sup>st</sup> May to 4<sup>th</sup> June 2021



**FSM6**  
*Virtual*  
2021

# Letter from the Executive Director

The last 18 months have been nothing short of unprecedented. As I write this, COVID-19 continues to spread across the globe, highlighting the inequalities and injustices within our current societies and systems. Sanitation and FSM continue to validate their importance in creating resilient, equitable, and just societies.

In the past ten years, we as a sector have made incredible strides in providing safely managed sanitation to communities across the globe. However, we need to continue moving and modernising – with urgency – towards SDG 6.2.

With this in mind at FSMA, we decided to host a virtual conference that would be wildly different than years past. Our goal was to facilitate diverse (sometimes difficult) yet much-needed conversations in the FSM sector.

These conversations highlighted the need for more diversity in the sector, the lack of women in leadership roles, and the need for the sanitation sector to emerge out of its current silo and interact with other industries.

FSM6 also provided insights into how to implement resilient, affordable, and safe sanitation systems. Many organisations presented tools to provide decision-makers with more data to make decisions around financing and implementation of FSM.

As a sector, we need to continue having difficult conversations and further advocate for diverse voices to be at the table. FSM6 brought attendees from 61 countries (50 of those were LMICs) to continue to move the needle forward on FSM, yet this is only one event. We need to continue sharing knowledge and collaborating if we, as a sector, are to make significant progress towards SDG 6.1 and 6.2.

Within the pages of this report, you'll hear stories of FSM, key takeaways, and calls to action that bubbled up during the conference. This report is your eyes and ears to the rich conversations and discussions that happened during FSM6.

**Within the FSM sector, we cannot afford to walk alone. We hope you join us in these conversations.**



Jennifer Williams  
Executive Director  
FSMA



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**FSM6 was an opportunity for exchanging best practice and sharing experiences related to faecal sludge management (FSM). Participants joined from 61 countries.**

This report highlights the conversations, outcomes, and key takeaways that emerged during FSM6. This is the first report of two that will be released summarising the event. This report is intended to be a summary report that summarises the event at a high level.

# Overview of The Faecal Sludge Management Alliance (FSMA)

*Creating a world where all people, everywhere, enjoy equitable access to safely managed and dignified sanitation services*

The FSMA is a member-based network supporting organisations and individuals working in faecal sludge management (FSM). Our goal is to create a collaborative, responsive, and collective platform to advocate for the adoption and implementation of FSM as a utility service. We also support our members in their work in helping to achieve SDG 6.2 and improve access to safely managed sanitation.

## The need for an FSM Global Standard

A uniform standard in the FSM sector is needed to remove significant sources of uncertainty and disincentives for FSM sector stakeholders, and create market drivers that stimulate demand for FSM approaches.

### **FSMA is focused on creating a global FSM standard that is:**

- Built Upon Existing Standards
- Applicable to the Full FSM Value Chain
- Globally and Locally Relevant
- Broadly Accepted

We believe a global FSM standard is a powerful way to mobilize and grow the FSM sector. At the same time, we recognise that many questions exist at this early stage of the development process. Phase I will consist of conducting a landscaping study that establishes the conceptual and practical basis for the global FSM standard.

## Become a Member!

As the only member network devoted exclusively to FSM, we have an exciting range of benefits to support organisations in the sector. We will be adding more in the future! [Become a member](#) to stay up to date.

### **Benefits include:**

- Discounts on FSMA conference registration fees
- Exclusive access to FSM-related trainings and webinars
- Networking opportunities with experts, young professionals, peers and sector leaders
- Access to the latest FSM news, publications, sector announcements and case studies

# The Big Ideas

*"We can put a man on the moon - why can't we empty toilets?"*

**Peter Hawkins**

For the first time, in 2011, FSM1 brought together people working in the emerging field of faecal sludge management (FSM). The past ten years have brought a change in how sanitation is viewed and firmly established the need to address and champion FSM. The importance of FSM is key to advocating for change, but there is an urgent need to build safely managed sanitation systems that are affordable, circular, equitable, and community-led.

Collectively, the world is not on track to meet SDG 6.2. However, this does not mean taking our feet off the gas pedal. At FSM6, key themes emerged on how to better implement FSM. This included the strong need for uniform standards, diverse leadership, and collaboration between all stakeholders.

## Uniform Standards

FSMA is developing a uniform standard to promote, formalise and sustain the FSM sector. Developing industry-driven standards will create a sustainable way for the FSM sector to flourish.

## Increasing Equality

Involving women, indigenous people, and people of colour in high-level leadership positions in the WASH space is critical to the achievement of SDG 6.2. FSM needs to promote more diverse leadership now.

## Eliminating Silos

The sanitation sector needs to develop a better way of working that acknowledges failures, shares knowledge, and incentivises collaboration. This would improve progress and reduce redundancies.

# Our Country Host: Indonesia

*The International Faecal Sludge Management Conference alternates locations between Asia and Africa. For FSM6, Indonesia was selected to be the host country for its innovative approaches to incorporating FSM into their urban sanitation plans. PD Pal Jaya and DKI Jakarta were selected as our local co-hosts, working with the Ministry of Public Works and Housing and the Ministry of the National Planning Agency.*



## Selecting Indonesia for FSM6

Indonesia highlights unique geographical challenges, being a large island nation with over 240 million people, to managing faecal sludge and septage. In order to do this, Indonesia promotes collaboration across government departments and demonstrates gender diversity in their work.

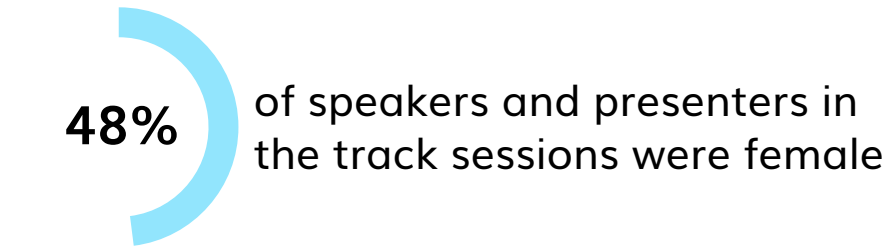
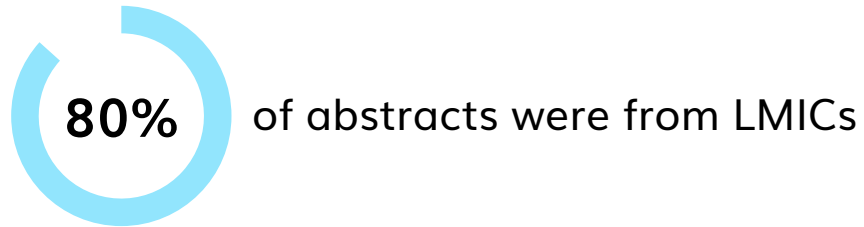
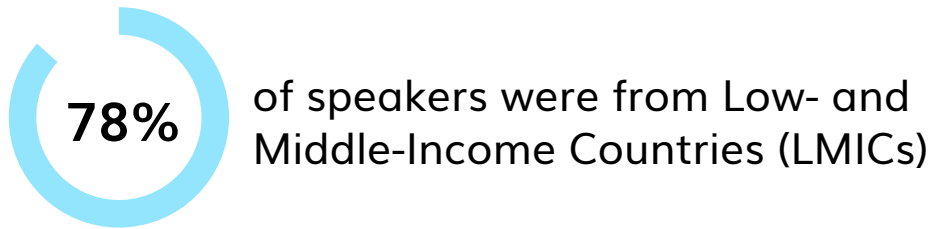
They have also created a mayor's association (AKKOPSI), that promotes city-level discussions amongst its 400+ members on key issues, including urban sanitation.

While we were unable to physically travel to Indonesia, the sanitation partners there put together a robust Indonesia conference track that featured a wide range of examples of how Indonesia manages FSM.

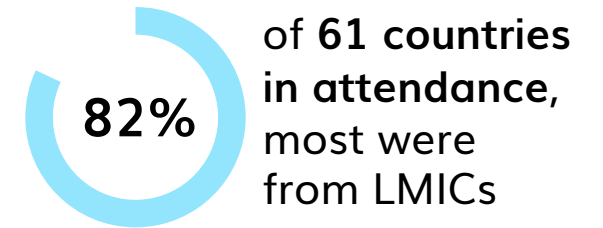
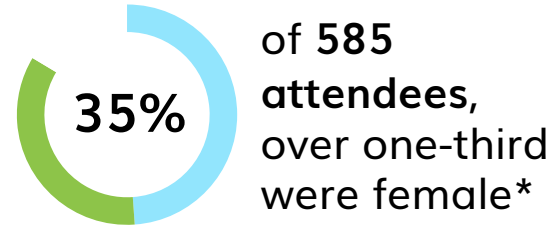


# FSM6 by the Numbers

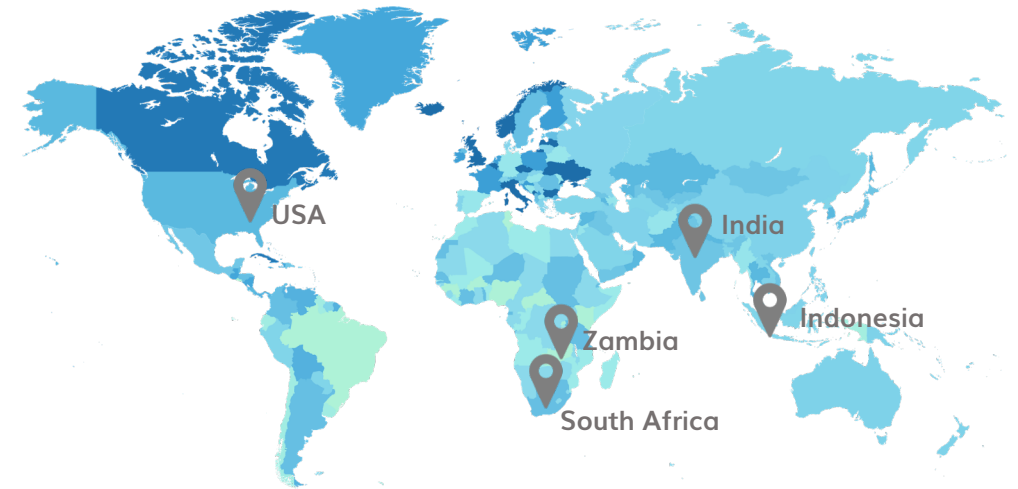
## Speaker Breakdown



## Participant Breakdown

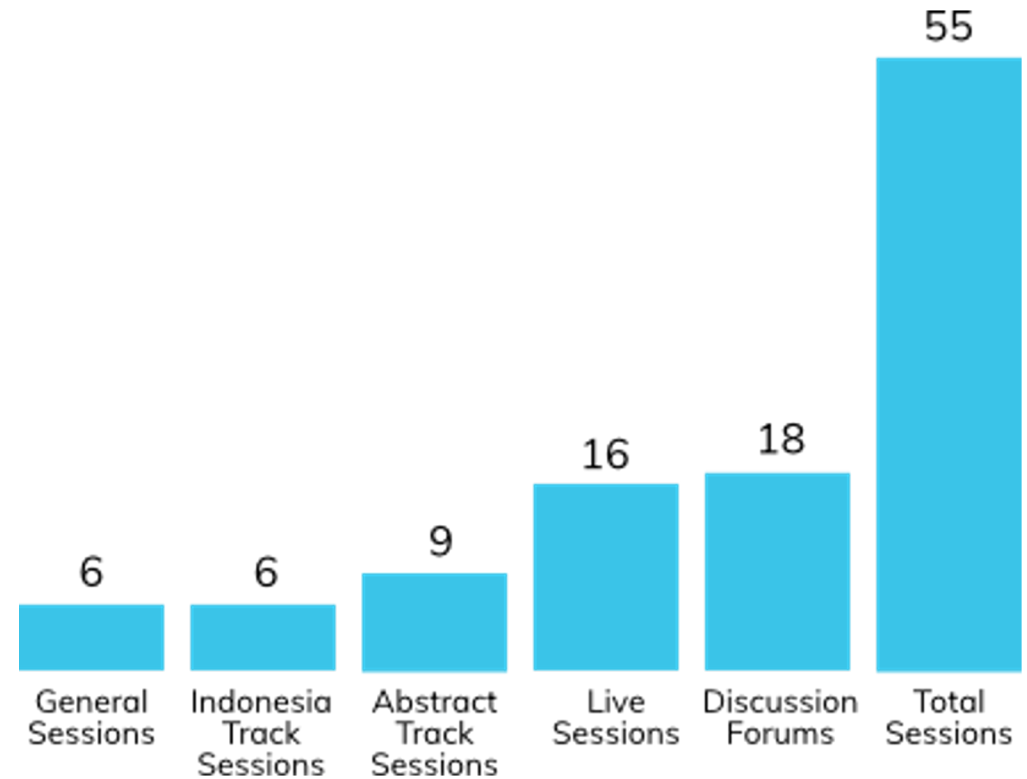
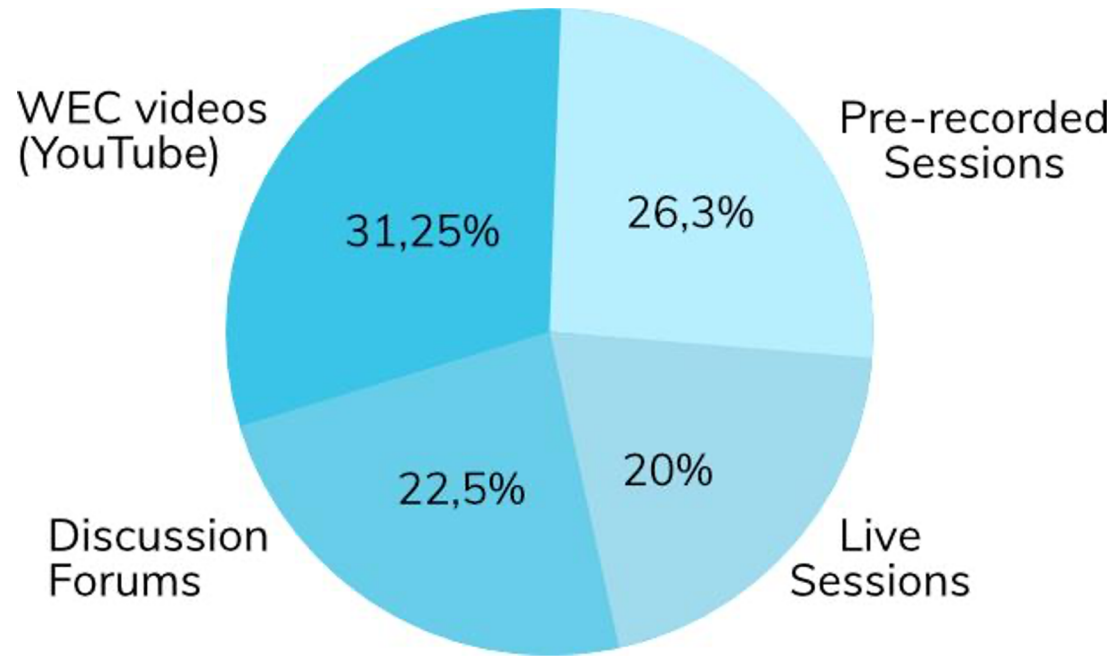


## Attendee Top 5 Countries



\*16% of participants did not disclose a gender.

# Program Breakdown







## Key Conversations

Over the course of four days, FSM6 held 55 sessions that were organised around three different tracks to help facilitate conversations on key aspects of the FSM sector. The following topics were repeatedly discussed by attendees and panelists alike.

- Strong call for more diversity in the FSM sector
- Importance of co-treatment in urban sanitation: treating septic, sewer, and pit latrine waste
- Need for standards and regulatory frameworks
- Need for unique financing and affordable systems
- Importance of building effective partnerships

*The following pages highlight these key discussions.*

# More Diversity in the FSM Sector

*“Often we become entrenched and inherited in systems and outdated paradigms that meaningful change starts to feel out of range.”*

Mei Yee Chan

Diversity, equity, and inclusion in WASH are not new topics for a sector that has generally been high-income country white males implementing solutions in low-income countries. However, with the Black Lives Matter movement gaining global support in 2020, the sanitation and FSM sector needs to build upon these conversations with actions to create a sector where local communities and diverse perspectives lead the direction, implementation, and scaling.

**Without diverse leadership, the WASH sector will continue experiencing failures, dwindling sanitation resources, and the overall low sanitation coverage in developing nations.**

There is a disproportionate disparity for women in WASH as they are far less likely to be involved in decision-making. These disparities affect women at every level in FSM, including the informal and waste emptying sectors. General challenges for women include lack of mentoring, lack of industry readiness to accept women, lack of family support or childcare, lack of appropriate safety gear (i.e., PPE), and societal taboos of working with waste.

During FSM6, there was a strong call for better data to improve women's position in the WASH sector. Other actions to improve the disparity included introducing job quotas, increasing the visibility of women, developing mandates to improve the livelihood of informal sector workers, and including more men in the conversation.

**Intersectionality is needed to increase the number of women in WASH and ensure that all women flourish.**

**There are disproportionate health economics and social outcomes in black and brown countries due to racial disparity in policies and development.**

**In the last year, there have been many global acts of solidarity calling the end of the current systems of inequality and exclusion for a new world of equality, love and justice.**

# Importance of Co-treatment in Urban Sanitation



City-wide sanitation refers to collecting, transporting, and treating all human waste within an urban area. These city FSM systems are as diverse as the cities themselves. Throughout FSM6, various case studies were shared highlighting the complexity and uniqueness of FSM in cities.

**City-wide inclusive sanitation needs to focus on reliable service delivery by both public and private actors.**

FSM6 Highlights

*“Good service is valuable to all residents wherever they live or whatever their socio-economic status”*  
**Nick Alcock**

## Key Lessons:

- Design subsidies and financial mechanisms specific to each cities' opportunities and failures.
- Top-down government-only provision of sanitation is rarely sustainable. Engage the private sector, as utilities do not have to deliver all services directly.
- Explore FSM opportunities that are both demand-driven and direct to the consumer.
- Informal small-scale service providers play a critical role in urban FSM. However, formal associations could help to scale and validate these informal markets.
- Key additional enabling factors are involving the community in planning, using IT for monitoring, and ensuring the safety of all FSM workers.

## Challenges of Co-Treatment

Many urban cities deal with the challenges of treating different types of waste in one system. **Co-treatment is the process of treating combinations of sewage, septage, and faecal sludge in one facility – which can be a rather complex process.** Within co-treatment, there are many risks, such as the potential for increased flow, too many solids, and increased toxins. There are options to strategically adopt co-treatment and minimise risks. Recently, a new e-book, **“Co-treatment of Septage and Faecal Sludge in Sewer Treatment Facilities”** by author Dorai Narayana was published along with an excel tool and handbook to help design systems and mitigate risks for co-treatment.

# Regulatory Frameworks & Standards

*"We need to start developing standard methods to improve communication among practitioners, designers, students, and teachers."*  
Linda Strande



FSM is a critical part of domestic sanitation for countries that use mainly onsite systems to achieve SDG 6.2. FSM needs its own set of regulatory frameworks and standards to support its growth. **Creating standards and regulatory frameworks would ensure safety for FSM workers and citizens using onsite sanitation systems.**

Creating a suite of regulatory frameworks to address standards across these aspects will help provide sustainable infrastructure. It will also promote and professionalise FSM services by enabling institutions to train providers and certify safe high-quality services. Creating standards for FSM reuse products ensures the safety and addresses the "yuck factor" often associated with sanitation products.

Creating standards in regulatory frameworks requires **active collaboration from stakeholders** at local and national governments, international agencies, the private sector, academia, and service providers.

Creating regulatory frameworks also **requires good data** that help governments and stakeholders develop evidence-based regulations that are practical for providers and can be shared widely (e.g., the [FSM Toolbox](#)).

Data systems would also help regulatory agencies hold providers accountable for complying with standards over time (e.g., the Integrated Management Information System by SNV in Bangladesh).

Lastly, **regulations and standards must be enforceable** and enforced by regulatory agencies in each municipality, region, and country.

**There are several FSM aspects that need standards and regulations:**

- Technical onsite product standards (e.g., ISO 30500:2018);
- Service standards such as emptying, maintenance, and associated tariffs;
- Treatment standards, such as for faeces, urine, and liquid waste that differ from wastewater;
- Faecal sludge analyses that indicate best methods for treatment;
- FSM reuse products, such as biochar and composted fertiliser; and,
- FSM in emergency settings.

# Affordable and Unique Financing

Financing sanitation is a crucial component of achieving SDG 6.2 and ensuring that all people have access to safe, affordable sanitation. However, like many components of the FSM sector, financing is not a 'one fit for all' solution. Exacerbated by the COVID-19 pandemic, providers of FSM technology and service solutions are facing increased challenges to finance their operations in low-income communities.

FSM6 highlighted several financial mechanisms and case studies. Below are some of the key takeaways and quotes.

- 1 The cost of an urban sanitation chain is poorly understood due to: poor documentation; incomplete estimates that only consider parts of a service chain and selective modes of costs (CAPEX or OPEX); and a lack of comparable metrics for quality and scale of service.

- 2 "Impact Investors have an appetite to take on more risks with pioneering / emerging technology; recognizing that innovation is part of what makes FSM dynamic" – Dr. Jeremy Gorelick

- 3 Governments need to design tax policies carefully, to not incur a high cost of taxation both for the government and society. This can be done through VAT incentives to alleviate costs for sanitation and domestic wastewater treatment services (for both public and private players).

- 4 1. Cross-subsidies provide an opportunity to implement a fixed price for the end user, lower than typical market cost and subsidise the difference through the government or private utility. Some sanitation entrepreneurs are implementing tiers, offering different price points based on a consumer's willingness to pay.

*"It is good to remember that most sanitation systems in the world are subsidised in some capacity."*  
Dr. Caroline Delaire

## Mechanisms that are Trending Upwards

1. **Cross-Subsidies:** Cross subsidies function by creating different price points for consumers based on their ability to pay
2. **Results-Based Financing:** These financial mechanisms provide funding for governments or utilities when specific results are achieved

## Implementing a Financial Mechanism

- Understand your current market and research your market's willingness to pay
- Build on evidence as much as possible
- Reduce the need for subsidies but do not eliminate them
- When looking at the cost of sanitation, don't forget the household infrastructure cost
- Be mindful of the sustainability of financial mechanism

# Building Effective Partnerships to Scale FSM

A partnership is an ongoing working relationship where different groups share risks and benefits based on equity, transparency, and mutual accountability principles. **FSM is not an isolated issue and needs more partnerships beyond the sector's current actors to help create collective action.** Well-coordinated partnerships are better able to create universal sanitation coverage. Including different stakeholders can lead to even more partnership building, capacity building, and coordination. **Partnerships can also help decolonisation** - international donors can partner with local groups to redistribute global powers and resources.

Advocacy has been a convening power in the FSM sector, bringing multi-sectoral stakeholders together and fostering effective partnership building. When creating partnerships, stakeholders must hold clear roles and know what others' roles are to create effective collaborations, addressing gaps while reducing duplication of efforts.

FSM6 Highlights

In particular, successful implementation and scaling of sustainable and viable FSM solutions require partnerships between the public and private sectors. **Public-private partnerships (PPPs) can be vital to improving service delivery while expanding coverage.** In PPPs, the public sector creates an enabling environment with policies and regulations and defines budget priorities. In contrast, the private sector has to define and provide technologies and assist the public sector in implementation. **Some programs have already seen PPP successes – in Senegal, the Dakar government involved private sector actors in FSM, greatly improving performance at four faecal sludge treatment plants (FSTPs).**

Of course, not all partnerships will work out. One collaboration in eThekweni showed that communal service models (where municipalities partnered with communities) led to complex issues that can be expensive and challenging to maintain. The project ended up having high cost-ineffective maintenance challenges and struggled to balance the sanitation systems' ownership.



*“Co-creation will be key in strategically prioritising interventions addressing necessary changes at the organisation leader and peer level. After all, progress can not be made in silos.”*  
Euphresia Luseka

# Conversations To Amplify Louder

*“All our planning is actually climate change resilient. All our projects will have to be climate smart”.*

Reuben Sipuma

With 37 sessions and 18 discussion forums, FSM6 facilitated many diverse and rich conversations. There were clear topics that were top of mind for both panelists and attendees alike, as seen in the previous pages of this report. However, as a sector, there are conversations that we, at FSMA, think should be amplified louder. Two topics of discussion that we heard during the conference but wanted to see more of were: climate change and intersectionality.

With rising temperatures and frequent extreme weather occurrences, FSM must continue to implement resilient systems while designing for an unpredictable, water-stressed future. Intersectionality is key to building an inclusive, locally-led, and diverse sector while decolonising existing practices in FSM.

## Climate Change

What more can we do to address climate challenges?

- There needs to be clear correlation of the evidence on climate change effecting sanitation and the cost of 'no-action' on existing sanitation systems
- Advocate for climate resilient sanitation in low-income countries
- Continue the conversation in large forums and stress the effects of climate change on sanitation

## Intersectionality and Inclusion

Sanitation cannot be solved in a silo, and must include more intersectionality between diverse people and different sectors (i.e. water, agriculture, energy, transportation).

- **A positive example of intersectionality** - Desludging using a community centred process led by women supported by different levels of government ensured a more impactful FSM in an informal settlement that was otherwise difficult for the city to sustainably manage (example from India).

# World Emptying Challenge

## All FSM workers matter

Sometimes referred to as the 'informal sector' of FSM, pit emptiers are a key cornerstone of a functioning FSM ecosystem in both rural and urban areas. The World Emptying challenge at FSM6 is an opportunity for pit and septic emptying teams to highlight their exemplary skills and bring visibility to their work.

*"During the COVID pandemic, in Punjab in a small town called Bohja, the sanitation workers went door to door collecting container waste from households, where it was treated as biomedical waste. The people of the city went to their terraces and showered them with flowers, because they were the frontline workers."*

Abhinav Akhilesh

25 teams from 12 different countries participated in the World Emptying Challenge and submitted videos of their everyday work routines. These videos were shared online and voted on by participants. FSMA believes that greater visibility is the path to bridging the gap between emptier professionals and the rest of the sector.

FSMA also provided 20 conference scholarships to the participants.

All the countries in the challenge have ensured the protection of workers and safe disposal of faecal sludge. The challenge showcases effective methods of disposal from different countries and the perception of customers and workers.

## World Emptying Challenge Winners

The Popular Category Winner:  
**Parameshwari Trichurapalli (India)**



The Technical Category Winner:  
**Brilliant Sanitation Ltd (Uganda)**





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This document is an initial snapshot of conversations, discussions and outputs of FSM6. A larger report will be produced by the end of 2021 capturing the richness and details of various sessions.



Subscribe to our newsletter to keep up with all FSM conference related news.

For additional information, please contact us at [info@fsm-alliance.org](mailto:info@fsm-alliance.org).

# Glossary

- **Capital Expenditure (CAPEX):** Initial cost of implementing a sanitation system
- **Citywide Inclusive Sanitation (CWIS):** Sanitation systems that integrate different solutions within a city benefit everyone with adequate service delivery and safely managed human waste. Ideally, the human waste treatment includes resource recovery.
- **Faecal Sludge (FS) / septage:** A mixture of human excreta, water, and solid wastes (e.g., toilet paper or other anal cleansing materials, menstrual hygiene materials, etc.) disposed of in pits, tanks, or vaults of OSS. When it comes from a septic tank, it's called septage.
- **Faecal Sludge Management (FSM):** The collection, transport, and treatment of FS from pit latrines, septic tanks, or other OSS.
- **Faecal Sludge Treatment Plant (FSTP):** The facility where decentralized FS is transported for safe treatment
- **High Income Country (HIC):** A country whose gross national income per capita is greater than \$12,000
- **International Organisation for Standardization (ISO):** Organisation focused on developing international standards
- **Low and Middle Income Country (LMICs/LICs):** A country whose gross national income per capita is less than \$12,000
- **Manual Emptying:** The act of manually emptying pit latrines or sanitation systems without vacuums or desludging mechanized equipment.
- **Operations and Maintenance (O&M):** Daily labour, duties, and functions needed to ensure a system's continued operation.
- **Operations Expenditure (OPEX):** The annual cost of operating a sanitation system.
- **Personal Protective Equipment (PPE):** Clothing, masks, and gloves that protect workers from coming in contact with faecal sludge
- **Public-Private Partnership (PPP):** A cooperative arrangement between two or more public (typically governmental agencies) and private sectors, typically of a long-term nature. In sanitation, typically relating to service delivery agreements.
- **Sewerage:** A network of sewer pipes and drains.
- **Subsidy:** Financial tools that governments use to encourage economic development, help disadvantaged groups, or advance other national objectives.
- **Sustainable Development Goals (SDG):** Developed by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity by 2030.
- **WASH :** Acronym used to describe the Water, Sanitation & Hygiene sector or activities