Development of a Faecal Sludge Data Repository

Biomass Controls

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Global Monitoring - Safely Managed Sanitation Services

In 2015

> Estimates for safely managed sanitation were available for 84 countries. [1]

- Global indicator: Safely Managed Sanitation Services
- Three sub-indicators:
  - excreta treated and disposed insitu (e.g. covered pits)
  - excreta emptied and treated offsite (faecal sludge management)
  - wastewater treated offsite

[1] Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines. WHO and UNICEF

Faecal sludge treatment - Take a guess

For how many of the 84 countries was data on **"excreta emptied and treated offsite"** available.

In other words: How many countries with data on the effectiveness of faecal sludge treatment?

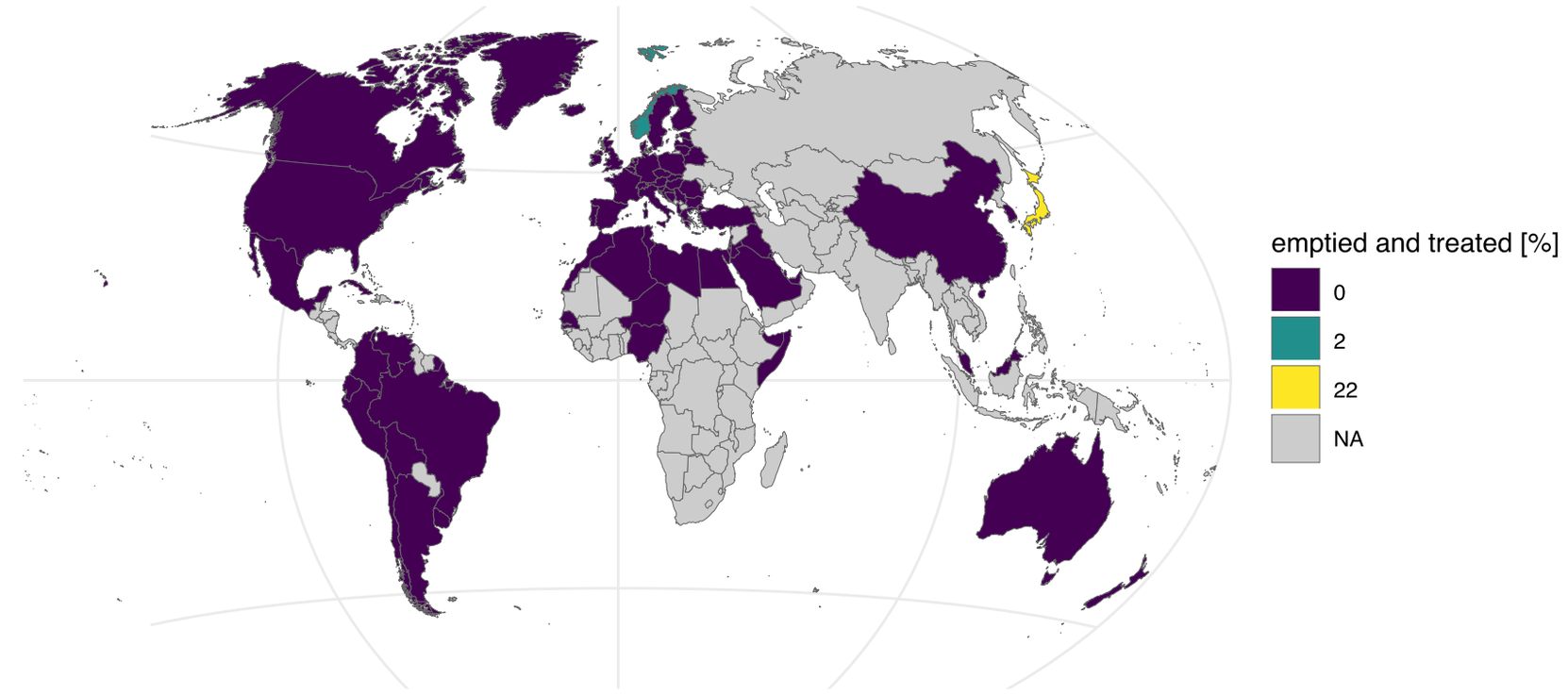
a) 11

b) 56

c) 2

d) 21

Excreta emptied and treated offsite



Data from: www.washdata.org

Why so many 0's?

In the absence of data and if offsite sanitation is the dominant part (> 50% with piped sewers), the percentage of faecal sludge treated at a faecal sludge treatment plant is assumed to be 0.

JMP METHODOLOGY 2017 UPDATE & SDG BASELINES. March 2018. Access link

Wastewater treatment - Take a guess

For how many of the 84 countries was data on **"wastewater collected and treated"** was available?

In other words: How many countries with data on the effectiveness of wastewater treatment?

a) 54
b) 84
c) 21
d) 115

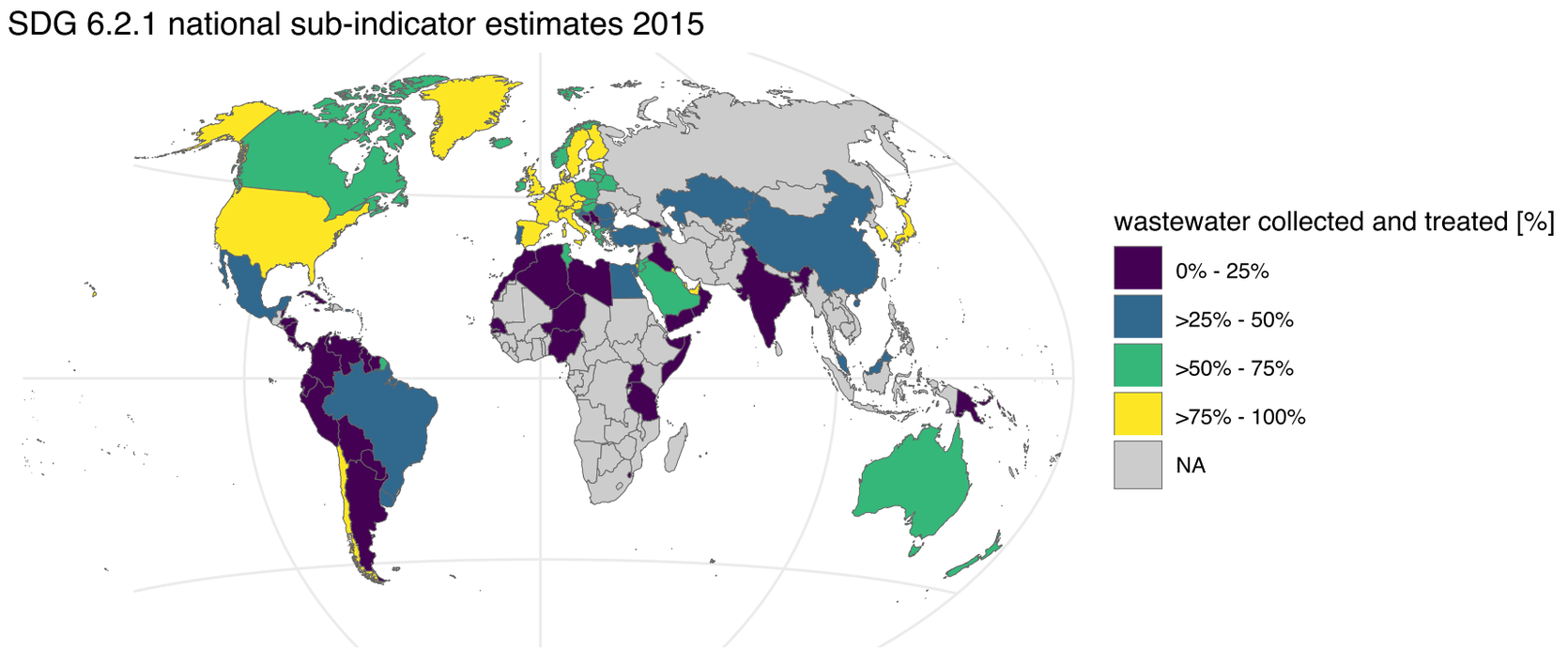
Wastewater treatment - Take a guess

For how many of the 84 countries was data on **"wastewater collected and treated"** was available?

In other words: How many countries with data on the effectiveness of wastewater treatment?

a) 54
b) **84**
c) 21
d) **115**

Wastewater collected and treated



Data from: www.washdata.org

Wastewater treatment data

- Some data sources for wastewater treatment are open, structured and accessible
- These include:
  - Urban Wastewater Treatment Directive
  - OECD data
- For other countries data is available through utilities and JMP data drive

> Incomplete data on excreta management in on-site systems is the most challenging data gap for monitoring Target 6.2. [1]
>
> Data leads to better decisions and better policies. It helps us create goals and measure progress. It enables advocacy and accountability. [2]

[1] Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines. WHO and UNICEF [2] Our 2019 Annual Letter. Bill and Melinda Gates.)

FSM4 - Let's make data available

Ratri hendrowati
@RatriHendrowati

Although it is challenging, lets make the data available - industry 3.3 @Larnsce #FSM4 #FSMCleanUpIndia #Sanitation

10 11:11 AM - Feb 22, 2017

See Ratri hendrowati's other Tweets

Access to FSM4 slides

Faecal sludge treatment data

- Data sources are hidden, unstructured and not accessible.
- Currently no standards against which "safe treatment" could be measured.
- Currently no central location where data could be accessed.

Opportunity

- Global Partnership of Laboratories for Faecal Sludge Analysis
- SFD Promotion Initiative
- Emerging ISO PC318 Standard
- Engineering Field Testing Platforms
- Smart City Initiatives
- Gates Open Research Platform
- Utilities
- Private sector
- many, many other sources

How?

Share your data publicly

1. Publish data, for example on Open Science Framework.
2. Follow FAIR Data Principles.
    - Findable
    - Accessible
    - Interoperable
    - Reusable
3. Develop data standards. (**Chat to Lindsey Noakes from Gather**)

How?

Establish a centralised open source data repository

1. Introduce controlled data vocabularies.
2. Write open source scripts.
3. Make data queryable (e.g. SQL).
4. Develop version controlled (i.e. git) software.
5. Host and govern data in a centralised open source **Faecal sludge data repository** (e.g. GitHub, GitLab, Bitbucket)

ETL pipeline

> In computing, extract, transform, load (ETL) is the general procedure of copying data from one or more sources into a destination system which represents the data differently from the source(s). [1]

- The source is us.
- The transformations are the application of data standards and vocabularies.
- Data is stored openly as a public good, so that it can be "loaded" by anyone.

[1] https://en.wikipedia.org/wiki/Extract,_transform,_load

Interested?

Let's talk at FSM5

Tuesday, February 19, 11:00

How Urban Sanitation Data Standards Will Accelerate Progress to SDG 6.2. Lindsey Noakes, Gather UK.

Wednesday, February 20, 14:00

Leveraging IoT Technology for Building Smart Sanitation Solutions. Poster

Thursday, February 21, 15:00

Development of Tools for Efficient Remote Monitoring of Faecal Sludge Treatment Units. Slides

Biomass Controls at FSM5:
https://biomasscontrols.com/news/

Thanks!

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Slides available at: http://www.lse.de/slides/fsm5/
Source code available at: https://github.com/larnsce/FSM5

Slides created via the R package **xaringan**.

The chakra comes from remark.js, **knitr**, and R Markdown.