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MiDAS: Microbial Database for Activated Sludge and Anaerobic Digesters -“Know your microbes!”

The Danish MiDAS Team

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# MiDAS:

## Microbial Database for Activated Sludge and Anaerobic Digesters - "Know your microbes!"



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### Collaboration with treatment plants Sustainable solutions

Established March 2015  
**MIDAS**  
NATIONAL  
BIOBANK  
A platform for future research

### Microbial ecology

### Global studies Reference databases

**MiDAS 4: 16S rRNA database - taxonomy**

MiDAS Genome database

### Surveillance and online control

Decisions in operation

**The MiDAS project (Microbial Database for Activated Sludge and Anaerobic Digesters)** aims to summarize all the knowledge about the physiology and ecology of the important microorganisms present and working in the engineered ecosystems of activated sludge plants, anaerobic digesters, and related wastewater treatment systems. Ultimately, MiDAS creates a universal microbial guide to the field.

#### Collaboration with treatment plants

Since 2006 more than 50 Danish and 10 Swedish wastewater treatment plants have contributed samples and metadata to build a better understanding of the process.

#### Sustainable solutions

Microbial aided removal and recovery of phosphorus, biogas and energy production, reduction of GHG emissions and removal of micropollutants are among the main goals.

#### Microbial ecology

Ongoing characterization of novel microbes with important functions in the ecosystem is a core activity.

#### Global studies and reference databases

Our global MiDAS campaign (2018-2021), covering more than 740 plants, has provided a near-complete ecosystem-specific reference database and taxonomy of microbes present in wastewater treatment plants across the world.

#### Surveillance and control

Years of timeseries data have revealed important trends in microbial seasonality and laid the groundwork for online monitoring and control.

#### Public resources

The online MiDAS field guide links microbe identity to their *in situ* metabolism, morphotypes, and abundance in influent wastewater, activated sludge, and anaerobic digesters. Moreover, it provides tools for sample handling and microbial community analysis.



[www.midasfieldguide.org](http://www.midasfieldguide.org)



UN SDGs in the MiDAS project



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