

---

# Nutrient recovery during wastewater treatment and biosolids management in Australia

*A Data Management Plan created using DMPOnline*

**Project Personnel:** Richard Stuetz, Ruth Fisher, Tommy Wiedmann, Jingwen Luo, Shamim Aryampa

**Affiliation:** The University of New South Wales

**Start Date:** 2023-03-30

**End Date:** 2025-06-30

**Faculty:** Faculty of Engineering

**Faculty:** Faculty of Engineering

**School:** School of Civil & Env Eng

**RDMP Id:** D0426751

**DMPOnline Id:** 9690

**Ethic Approval Number:** iRECS4997

**Ethics Approval Expiry Data:** 2029-03-07

**What is the highest/most secure data classification level that applies to any component of the data?:**

Sensitive

**If a different data classification level applies, please describe it:**

May contain sensitive industry data

**Project abstract:**

Material flow Analysis will be used to assess the nutrient and energy flows during biosolids management in Australia

**Last modified:** 01-07-2024

**Copyright information:**

The above plan creator(s) have agreed that others may use as much of the text of this plan as they would like in their own plans, and customise it as necessary. You do not need to credit the creator(s) as the source of the language used, but using any of the plan's text does not imply that the creator(s) endorse, or have any relationship to, your project or proposal

# Nutrient recovery during wastewater treatment and biosolids management in Australia

---

## Data Collection

### Primary Data:

- **Type:** Qualitative and quantitative data will be gathered through industry surveys, from the records of industry partners and direct observations at wastewater treatment plants .
- **Format:** Digital survey responses (through irecs), operational data provided by industry partners, specifically from wastewater treatment plants (primarily in digital formats such as Excel spreadsheets (XLSX) and other relevant data files (CSV, TXT).)
- **Volume:** Expected to include extensive datasets on treatment processes, nutrient flows, energy flows, and other relevant operational parameters

### Secondary Data:

- **Type:** Published research literature relevant to nutrient recovery during wastewater treatment and biosolids management.
- **Format:** Digital documents (PDFs of identified literature and spreadsheets summarising collected data)
- **Volume:** Approximately 150-200 documents, encompassing journal articles, conference papers and reports; 3 spreadsheets recording the data.

- Microsoft excel (.xls)
- Plain text file (.txt)
- Portable document format (.pdf)
- Joint photographic experts group (.jpg)
- Yes

Handwritten notes in physical notebooks.

Primary data will be collected directly from industry partners through a survey and engagement. The survey aims to understand the wastewater industry's nutrient recovery practices in Australia. It is being administered using online survey tools irecs. The survey responses will be collected and automatically stored in the survey tool's (irecs) database, from which they will be exported to Excel or CSV formats for further analysis.

Industry partners will be requested to provide operational data in pre-defined digital formats (e.g., Excel spreadsheets, CSV files). The data will be input by either me or the industry partner worker. Data from various sources will be integrated into a central database for comprehensive analysis.

STAN, Microsoft word, Microsoft Excel, PDF viewer, sankey diagram making software

## Documentation and Metadata

- **Data collection protocols:** Descriptions of methodologies and procedures used for data collection (e.g., survey design, data input protocols, and industry data gathering processes)
- **Data processing methods:** Documentation of data cleaning, validation, and analysis procedures, including any software tools and scripts used.

One folder on one drive contains all the data and manuscript drafts from the project. Each research component has an individual folder containing separate folders for the data and the manuscripts. The files in the data folder are named according to the information contained in them and the date of creation.

A file name contains the content of the file and the date of its creation. When the file is updated, the creation date is changed to the latest date of update, and that becomes the new version of the folder on which further changes or updates can be made.

## Ethics and Legal Compliance

- UNSW
- Other
  
- UNSW
- Other

All issues will be discussed with the project CIs and dealt with according to the relevant guidelines.

Ethical issues will be discussed with project chief investigators and solved accordingly.

## Storage and Backup

- **OneDrive** is used as a primary storage solution
- **UNSW Data Archive** will be used as a long-term storage solution.

Regular backups will be scheduled to ensure that data stored on OneDrive is routinely copied to the UNSW Data Archive. Backups will occur on a monthly basis, or more frequently if needed

Data stored on OneDrive and UNSW Data Archive can be accessed by authorised project team members (project 3B team) from any location.

- Institutional repository

**UNSW Data Archive** will be used as a long-term storage solution.

## Selection and Preservation

Wastewater treatment set ups and Nutrient and energy flows. Nutrient recovery technologies used and their efficiencies.

**UNSW Data Archive** will be used as a long-term storage solution.

## **Data Sharing**

All the data, apart from that collected from the surveys, will be sharable with other projects under the 'Transforming Biosolids' project. The research publications resulting from the data collection will be available in open-access journals.

All manuscripts and conference abstracts, including industry data, must be approved by the project steering committee and the Research Advisory committee. If other researchers who are external to the project need the data, they will request permission from the industry partners. If permission is granted, the data will be shared without identifying the data source.

The data collected from the survey will not be stored, shared, and used for secondary research purposes. All other data can be reused with permission from the ITTC.

## **Responsibilities and Resources**

Dr Shamim Aryampa

Access to Qualtrics for the survey, Onedrive, Microsoft Office, and STAN