# EDI Metadata Template (2019)[[1]](#footnote-1)

Data should be in csv text file. If starting with an Excel spreadsheet, please make sure it does not contain any formulas and comments on cells. If you need comments put them in their own column. If data were used in a database and major table linking is necessary to analyze, please de-normalize into a flat file, not just database table exports.

## Dataset Title

(be descriptive, more than 5 words):

Response of humic acids and soil organic matter to vegetation replacement in subtropical high mountain forests

## Short name or nickname you use to refer to this dataset:

SOM at three forest types in Taiwan

## Abstract

(include what, why, where, when, and how)

In this study, we used solid-state 13C NMR spectroscopy, photometric analyses, and chemical fractionation to examine carbon (C) components and lability of SOM in a Japanese cedar (Cryptomeria japonica) forest and moso bamboo (Phyllostachys edulis) plantation reforested on a cutover primary broadleaf forest in Taiwan. The data was collected in Feb 2014.

## Investigators

(list in order as for a paper with e-mail addresses, organization and preferably ORCID ID, if you don’t have one, get it, it’s easy and free: <http://orcid.org/>) add table rows as needed

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| First Name | Middle Initial | Last Name | Organization | e-mail address | ORCID ID (optional) |
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## Other personnel names and roles

(dataset creators & contact, field crew, data entry etc. with e-mail addresses, organization and ORCID ID)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| First Name | Middle Initial | Last Name | Organization | e-mail address | ORCID ID (optional) | Role in project |
| Hsueh-Ching |  | Wang | University of Taipei | Hsuehching.wang@gmail.com | 0000-0002-6265-9826 | Dataset creator & contact |
|  |  |  |  |  |  |  |

## License

(Select a license for release of your data. We have 2 recommendations: [CCO – most accommodating of data reuse](https://creativecommons.org/publicdomain/zero/1.0/), & [CCBY – requires attribution](https://creativecommons.org/licenses/by/4.0/))

## [CCBY – requires attribution](https://creativecommons.org/licenses/by/4.0/)

## Keywords

(List keywords and separate with commas. Using keywords from a controlled vocabulary (CV) will improve the future discovery and reuse of your data. The LTER CV is effective at describing ecological and environmental data. [Access the LTER CV here](http://vocab.lternet.edu/vocab/vocab/index.php). [Try this text mining service to extract LTER CV keywords from your abstract or methods](http://vocab.lternet.edu/keywordDistiller/). Additionally, please determine one or two keywords that best describe your lab, station, and/or project (e.g., Trout Lake Station, NTL LTER). This will help others discover your data by site/project).

Soil organic matter, humification, 13C NMR spectroscopy, reforestation, plantation

## Funding of this work:

Add rows to table if several grants were involved, list only the main PI, start with main grant first:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| PI First Name | PI Middle Initial | PI Last Name | PI ORCID ID (optional) | Title of Grant | Funding Agency | Funding Identification Number |
| Chih-Yu |  | Chiu | 0000-0002-6842-1253 |  | Ministry of Science and Technology, Taiwan | MOST 107-2313-B-001-002 |

## Timeframe

* Begin date: 2014/02
* End date: 2014/02
* Data collection ongoing/completed: completed

## Geographic location

* Verbal description: The study was conducted in the Shitou Experimental Forest of National Taiwan University in Nantou County, central Taiwan
* North bounding coordinates (decimals) 23°39′17′′N
* South bounding coordinates (decimals)
* East bounding coordinates (decimals) 120°48′29′′E
* West bounding coordinates (decimals)

## Taxonomic species or groups

Broadleaf forest, Japanese cedar (Cryptomeria japonica) forest, moso bamboo (Phyllostachys edulis) plantation

## Methods

(please be specific, include instrument descriptions, or point to a protocol online, if this is a data compilation please specify datasets used, preferably their DOI or URL plus general citation information)

The soil water content was determined by oven-drying at 105 °C to constant weight (w/w, %). A combination glass electrode was used to determine pH of 1:1 soil-water extracts. Organic C and total N (TN) were measured by combustion in a Fisons NA1500 elemental analyzer (ThermoQuest Italia, Italy). Soil C mass was calculated by multiplying soil organic C concentration and bulk density.

Organic C functional groups were measured for soil humic acid and littler by 13C NMR spectroscopy. Freeze-dried soil humic acid samples were placed in a sample tube (7 mm diameter) to determine the soil chemical-shift composition using 13C NMR spectroscopy (BRUKER DSX 400 MHz solid-state NMR, Germany).

LPI-C and LPII-C were quantified using a total organic C analyzer (Model 1010, O.I. Analytical, TX), while RP-C was measured similarly to the soil organic C using an elemental analyzer.

## Data Table

* Column name: exactly as it appears in the dataset. Please avoid special characters, dashes and spaces.
* Description: please be specific, it can be lengthy
* Unit: please avoid special characters and describe units in this pattern: e.g. microSiemenPerCentimeter, microgramsPerLiter, absoptionPerMolePerCentimeter
* Code explanation: if you use codes in your column, please explain in this way: e.g. LR=Little Rock Lake, A=Sample suspect, J=Nonstandard routine followed
* Data format: please tell us exactly how the date and time is formatted: e.g. mm/dd/yyyy hh:mm:ss plus the time zone and whether or not daylight savings was observed.
* If a code for ‘no data’ is used, please specify: e.g. -99999

Please add rows as needed

**Table description:** Add a description for each table

|  |  |  |  |
| --- | --- | --- | --- |
| Column name | Description | Unit or  code explanation or date format | Empty value code |
| Vegetation | Forest types (Broadleaf, BL; cedar plantation, CRP; bamboo, BM) |  |  |
| Soil water content | Soil water content | % |  |
| bulk density | Soil bulk density | g cm-3 |  |
| pH | pH |  |  |
| TC | Total organic carbon | % |  |
| TN | Total carbon | % |  |
| TC mass | Total organic carbon mass | Mg C ha-1 |  |
| ∆logK | ∆logK value was then calculated as log(A400/A600), where A400 and A600 are the humic acid absorbances at 400 and 600 nm |  |  |
| Litter Carboxyl-C | Litter 13C NMR functional group | % |  |
| Litter Aromatic-C | Litter 13C NMR functional group | % |  |
| Litter Di-O-alkyl | Litter 13C NMR functional group | % |  |
| Litter O-alkyl-C | Litter 13C NMR functional group | % |  |
| Litter alkyl-C | Litter 13C NMR functional group | % |  |
| Litter A/O-A | Litter humification index |  |  |
| Litter aromaticity | Litter humification index |  |  |
| Soil Carboxyl-C | Soil 13C NMR functional group | % |  |
| Soil Aromatic-C | Soil 13C NMR functional group | % |  |
| Soil Di-O-alkyl | Soil 13C NMR functional group | % |  |
| Soil O-alkyl-C | Soil 13C NMR functional group | % |  |
| Soil alkyl-C | Soil 13C NMR functional group | % |  |
| Soil A/O-A | Soil humification index |  |  |
| Soil aromaticity | Soil humification index |  |  |
| LPI-C | Labile-I carbon content | gC/kg |  |
| LPII-C | Labile-II carbon content | gC/kg |  |
| RP-C | Recalcitrant carbon content | gC/kg |  |
| LPI/TC | Labile-I carbon / total organic carbon |  |  |
| LPII/TC | Labile-II carbon / total organic carbon |  |  |
| RP/TC | Recalcitrant Carbon / total organic carbon |  |  |

## Articles

(List articles citing this dataset)

|  |  |  |
| --- | --- | --- |
| Article DOI or URL (DOI is preferred) | Article title | Journal title |
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## Scripts/code (software)

(List any software scripts/code you would like to archive along with your data. These may include processing scripts you wrote to create, clean, or analyze the data.)

|  |  |  |
| --- | --- | --- |
| File name | Description | Scripting language |
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## Data provenance

(Were these data derived from other data? If so, you will want to document this information so users know where these data come from.)

|  |  |  |  |
| --- | --- | --- | --- |
| Dataset title | Dataset DOI or URL | Creator (name & email) | Contact (name & email) |
|  |  |  |  |
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## Notes and Comments

1. This document liberally borrows from similar documents at SBC and GCE [↑](#footnote-ref-1)