TITLE:
CEOP_Tsukuba_NIAES-MASE_20070701_20071231.stm

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1. 0 DATASET OVERVIEW:

1.1 Introduction:

The Mase paddy flux site was established in 1999 to monitor greenhouse gas exchange between paddy fields and the atmosphere. Since then, the site has become one of the key study sites of AsiaFlux (http://www.asiaflux.net/).

1.2 Time period covered by the data:
Start: 1 July 2007, 00:00 (UTC)
End: 31 December 2007, 23:30 (UTC)

1.3 Physical location of the measurement:
Latitude: 36° 03' 14.3" N
Longitude: 140° 01' 36.9" E
Elevation: 11 m a.s.l.
Landscape: Agricultural fields (paddy fields)
Soil characteristics: Soil type is Eutric Fluvisols. The site is flooded during most of the rice-growing season (from the beginning of May to mid-September).

1.4 Data source:
Original data.

1.5 WWW address references:
http://www.asiaflux.net/network/007MSE_1.html
http://ecomdb.niaes.affrc.go.jp/e_level_page.php?select_area=1045&select_site=1121

2.0 INSTRUMENTATION DESCRIPTION:

2.1 Platform:

Sensors are set around a 6-m tall mast on which meteorological sensors are mounted.

2.2 Description of the instrumentation:

Parameter	Model	Manufacturer
Soil Temperature	-	Home-made
Soil Temperature	-	Home-made
Soil Temperature	-	Home-made
Soil Temperature	-	Home-made
Soil Temperature	-	Home-made
Soil Moisture	TDR100	Campbell, Logan, UT, USA
Soil Moisture	TDR100	Campbell, Logan, UT, USA
Soil Moisture	TDR100	Campbell, Logan, UT, USA
Soil Moisture	TDR100	Campbell, Logan, UT, USA
Soil Moisture	TDR100	Campbell, Logan, UT, USA

2.3 Instrumentation specification:

Parameter	Sensor Type	Depth of sensor (m)	Accuracy	Resolution
Soil Temperature	T-type thermocouple	0.01	-	-
Soil Temperature	T-type thermocouple	0.05	-	-
Soil Temperature	T-type thermocouple	0.10	-	-
Soil Temperature	T-type thermocouple	0.20	-	-
Soil Temperature	T-type thermocouple	0.40	-	-
Soil Moisture	Time domain reflectometry	0.02 (0.025) *	-	-
Soil Moisture	Time domain reflectometry	0.03 (from surface to 0.05)**	-	-
Soil Moisture	Time domain reflectometry	0.05 (from surface to 0.10) **	-	-
Soil Moisture	Time domain reflectometry	0.10 (from surface to 0.20)**	-	-
Soil Moisture	Time domain reflectometry	0.15 (from surface to 0.30) **	-	-

* The sensor was set horizontally in the soil at 2.5 cm depth.
** The sensors were set obliquely in the soil.

3.0 DATA COLLECTION AND PROCESSING:

3.1 Description of data collection:

Data are retrieved weekly.

3.2 Description of derived parameters and processing techniques used:

1) Soil temperature data were sampled every 5 seconds and their 30-minute averages were stored.
2) Soil moisture data were sampled every 5 minutes and their 30-minute averages were stored.

4.0 QUALITY CONTROL PROCEDURES:

At this stage of data processing, only apparently erroneous data were removed. Further quality control the data will be done later.

5.0 GAP FILLING PROCEDURES:

At this stage of data processing, no gap filling procedure was applied. Gap filling will be done later.

6.0 DATA REMARKS:

6.1 PI's assessment of the data:

6.1.1 Instruments problems
Instruments problems were found in soil moisture measurement. Missing data periods are shown below.

6.1.2 Quality issues
Soil temperature and soil moisture sensors were temporarily removed from the field during ploughing, transplanting and harvest. Dubious data during those works are indicated by flags.

6.2 Missing data periods:
2007/07/20 00:00-2007/07/20 10:00 (Soil Moistture, 0.02m)
2007/07/21 06:00-2007/07/21 10:00 (Soil Moistture, 0.02m)
2007/07/30 04:00-2007/09/24 07:30 (Soil Moistture, all depths)
2007/09/20 23:30-2008/01/01 00:00 (Soil Temperture, 0.1m)
2007/10/29 01:00-2007/10/29 03:00 (Soil Moistture, all depths)
2007/11/01 02:00-2007/12/18 01:30 (Soil Moistture, all depths)
2007/12/18 01:00-2008/01/01 00:00 (Soil Temperture, 0.4m)

6.3 Data intercomparisons:

7.0 REFERENCE REQUIREMENTS:

Original data were collected in the framework of Research Project for Global Warming Monitoring by NIAES. The project is funded by Ministry of Agriculture, Forestry and Fisheries, Ministry of Environment and NIAES.

8.0 REFERENCES

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