タワークラックス情報のネットワーク化 -長期安定フラックスデータに向けて-

Network connection of tower flux measurement data :Toward long term stable flux measurement

*小南 裕志[1]、山野井 克己[1]、北村 兼三[1]、深山 貴文[1]、溝口 康子[1]、高梨 聡[1]、安田 幸生[1]、三枝 信子[2]、高橋 善幸[2]、金 元植[4]、宮田 明[4]、小野 圭介[4]、石戸谷 重之[3]、近藤 裕昭[3]、前田 高尚[3]、村山 昌平[3]、パウサイ サムロン[5]、アチャワコム タクシン[6]

*Yuji Kominami[1], Katsumi Yamanoi[1], Kenzo Kitamura[1], Takafumi Miyama[1], Yasuko Mizoguchi[1], Satoru Takanashi[1], Yukio Yasuda[1], Nobuko Saigusa[2], Yoshiyuki Takahashi[2], Wonsik Kim[4], Akira Miyata[4], Keisuke Ono[4], Shigeyuki Ishidoya[3], Hiroaki Kondo[3], Takahisa Maeda [3], Shohei Murayama[3], Samreong Panuthai[5], Taksin Archawakom[6]

1.国利研究開発法人森林総合研究所、2.国立環境研究所 、3.産業技術総合研究所、4.国立研究開発法人農業環境技術研究所、5.タイ国立公園野生生物保護局 、6.タイ科学技術研究院

1.Foresry ansd Forest Products Research Institute , 2.National Institute for Environmental Studies, 3.National Institute of Advanced Industrial Science and Technology, 4.National Institute for Agro-Environmental Science, 5.Department of National Park, Wildlife, and Plant Conservation of Thailand, 6.Thailand Institute of Scientific and Technological Research

Since last half of 1990's, many flux towers have been constructed mainly for monitoring CO_2 flux using eddy covariance method at various land ecosystems in the world. And much effort have been made to keep data quality. Comparing with standard environmental factors (e.g. sun radiation, wind speed), eddy covariance measurement requires sensitive equipment (infrared CO_2 gas analyzer and supersonic anemometer), frequent maintenance and severe data quality are necessary. On the other hand, to evaluate the effect of land ecosystem to global climate change, long term and quality certified data are demanded. We, 4 national research institutes, constructed and have maintained 11 CO_2 flux measurement towers in Japan and East Asia (Fig.1, 8 in Japan and 3 in East Asia countries). To reduce effort of maintenance and increase data quality, we have conducted following contrivances supported by Environmental Agency Fund.

1. For quick check of flux measurement devices and data quality, we constructed the system to integrate whole flux site data in a data saver at Tsukuba using network.
2. To reduce effort of data analysis, we set up standardized flux data format and developed an automated flux data analyze system.
3. To check each site data quality, we developed a mobile closed pass CO_2 flux measurement system
4. For quick learning of flux measurement technique, we published a flux measurement manual (http://www2.ffpri.affrc.go.jp/labs/flux/manual/FluxManual_Ver1.1b.pdf)

キーワード：CO2フラックス、陸域生態系、フラックスタワー

Keywords: CO2 flux, Land ecosystem, Flux tower

Fig.1 11 tower flux sites in Asia

