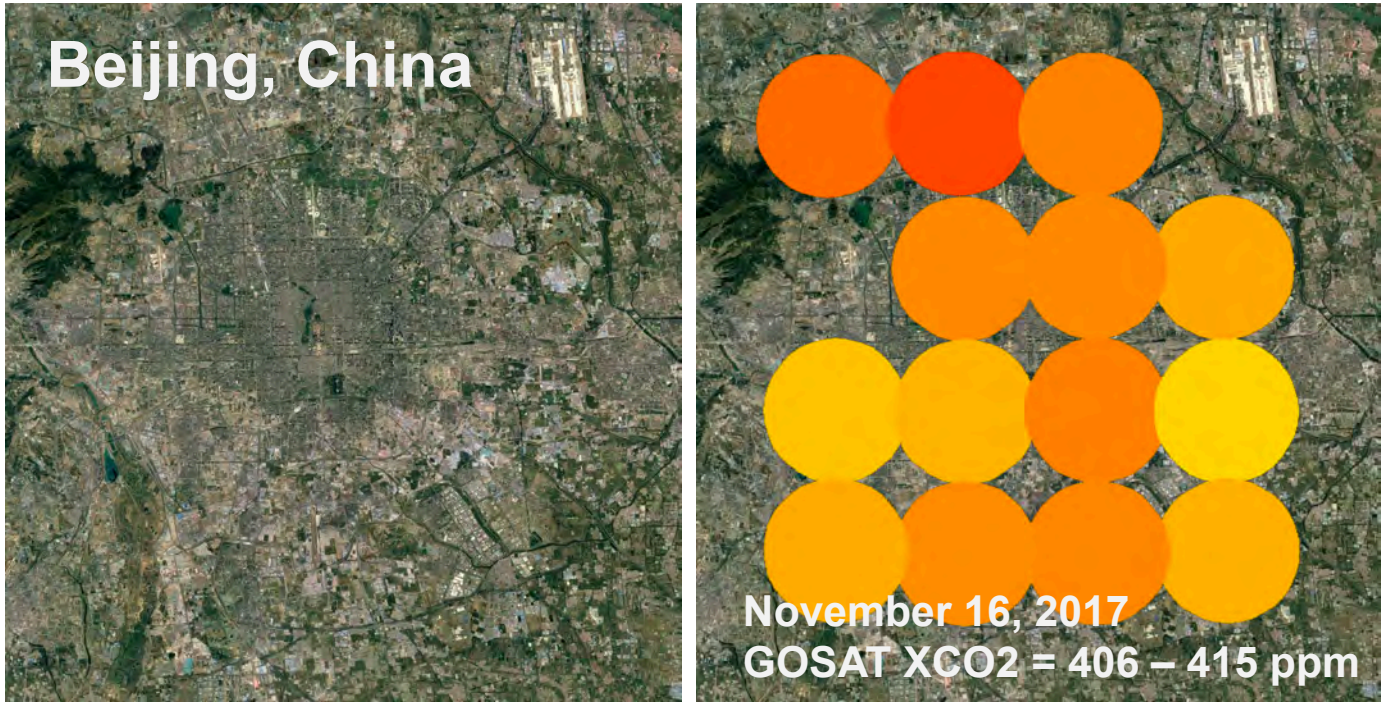
MOE/NIES Guidebook and IPCC TFI Update



Tsuneo Matsunaga
Satellite Observation Center
National Institute for Environmental Studies (NIES)

UNFCCC COP23
(Bonn, Germany, November 2017)

Side Event at Japan Pavilion “Cutting-edge Satellite Monitoring and Scientific Knowledge to contribute to the Paris Agreement: Focusing on the IPCC Guidelines for National Greenhouse Gas Inventories”

Statement of Masaharu Nakagawa, Minister of the Environment of Japan at UNFCCC COP23

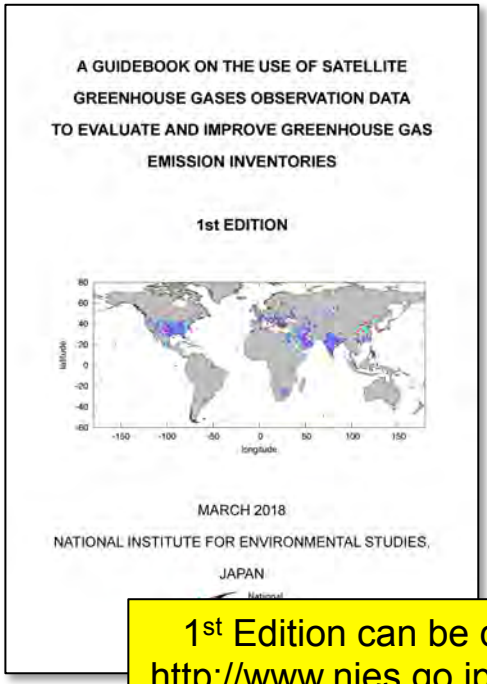
“Japan is going to establish "**the Partnership to increase transparency for co-innovation (Visualization Partnership)**," in which our country, developing countries and international organizations will participate.
As part of that initiative, Japan is going to contribute 5 million dollars to "**the Capacity-building Initiative for Transparency**". In 2018, Japan plans to launch "**GOSAT-2**," a satellite to observe the amount of greenhouse gas emissions worldwide.”

Guidebook on the Use of Satellite Greenhouse Gases Observation Data to Evaluate and Improve Greenhouse Gas Emission Inventories

- ✓ To promote the use of satellite GHG data in national GHG inventory verification and contribute to **2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.**

- ✓ Schedule
  - Draft edition = Oct. 2017
  - Open review = Nov. 2017 - Feb. 2018
  - 2nd Expert Mtg = Feb. 2018
  - 1st edition = Mar. 2018
  - Minor revision = June 2018
  - WGIA16 = July 2018

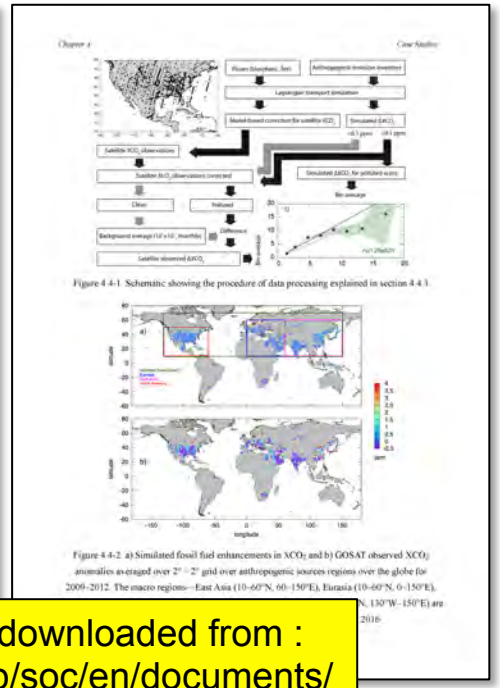
- ✓ Great contributions from satellite and inventory communities. Thank you !


A GUIDEBOOK ON THE USE OF SATELLITE GREENHOUSE GASES OBSERVATION DATA TO EVALUATE AND IMPROVE GREENHOUSE GAS EMISSION INVENTORIES

1st EDITION

MARCH 2018

NATIONAL INSTITUTE FOR ENVIRONMENTAL STUDIES, JAPAN



1st Edition can be downloaded from : http://www.nies.go.jp/soc/en/documents/

NIES SOC 衛星観測センター Satellite Observation Center

Tsuneo Matsunaga (matsunag@nies.go.jp), National Institute for Environmental Studies (NIES), Japan,
Workshop: Interfaces Between CEOS Agencies and the GHG Monitoring System, Ipsta, Italy, June 18-19, 2018

Contents of Guidebook

Tsuneo Matsunaga (matsunag@nies.go.jp), National Institute for Environmental Studies (NIES), Japan,

Chapter 4 “CASE STUDIES” of Guidebook

	Target	Gas Data	Method*	Spatial Scale	Author
4.1	CO_2	SCIAMACHY	Conc.	Global, Continental,	Buchwitz
4.2	CO_2	OCO-2	Conc.	Continental, City	Hakkarainen
4.3	CO_2 / CH_4	GOSAT / SCIAMACHY	Conc.	City	Kort
4.4	CO_2 / CH_4	GOSAT	Conc.	Global, Continental	Janardanan
4.5	CH_4	GOSAT / SCIAMACHY	Conc.	Country, City	Buchwitz
4.6	CH_4	GOSAT	Inv.	Continental	Turner
4.7	CO_2	GLOBALVIEW	Inv.	Global, Continental	Saeki
4.8	CH_4	NOAA / JMA	Inv.	Continental	Patra
4.9	CO_2	OCO-2	Conc.	Powerplant	Nassar

*: “Conc.” = “Concentration Enhancement Method”.
“Inv.” = “Inverse Modelling Method”.

Workshop on Greenhouse Gas Inventories in Asia
http://www-gio.nies.go.jp/wgia/wgiaindex-e.html

- In order to support the enhancement of capacities for national GHG inventories in Asia, NIES has been organizaing the Workshop on Greenhouse Gas Inventories in Asia (WGIA) annually since November 2003 with the support of MOEJ. This workshop supports government officials, compilers, and researchers in the Asian countries to develop and improve their GHG inventories through enhancing regional information exchange. The Greenhouse Gas Inventory Office of Japan (GIO), affiliated with the Center for Global Environmental Research (CGER), NIES, has functioned as the Secretariat for this workshop since its first session.

- 15th WGIA was held in Myanmar in July 11-13, 2017.
  120 participants from Australia, Brunei, Cambodia, China, India, Indonesia, Japan, Lao, Malaysia, Mongolia, Myanmar, Philippines, Korea, Thailland, Vietnam, IPCC TFI, UNFCCC, and UNEP.
  http://www-gio.nies.go.jp/wgia/wg15/wg15index-j.html

- 16th WGIA will be held in India in July 10-12, 2018.
  Shamil Maksyutov, NIES, will attend WGIA16 and give an introductory lecture on Guidebook and the use of GHG data from satellites.

WGIA15 Photos

Tsuneo Matsunaga (matsunag@nies.go.jp), National Institute for Environmental Studies (NIES), Japan,

2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories

- The development of the new Methodology Report to refine the current inventory guidelines (2006 IPCC Guidelines for National Greenhouse Gas Inventories), is being carried out by the Task Force on National Greenhouse Gas Inventories (TFI) in accordance with the decision taken at the 44th Session of IPCC in Bangkok, Thailand, in October 2016. The final draft of this new Methodology Report titled “2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories” (2019 Refinement) will be considered by the IPCC for adoption/acceptance at its Plenary Session in May 2019.

Event	Schedule
Call for Nomination of Authors	October 2016
1st Lead Author Meeting (LAM1)	7-9 & 12-14 Jun 2017
2nd Lead Author Meeting (LAM2)	25-28 Sep 2017
First Order Draft (FOD) Expert Review	4 Dec 2017 – 11 Feb 2018
3rd Lead Author Meeting (LAM3)	10-13 Apr 2018
Literature cut-off date	25 Jun 2018
Second Order Draft (SOD) Government/Expert Review	2 Jul – 9 Sep 2018
4th Lead Author Meeting (LAM4)	Week of 22-27 Oct 2018
Final Draft Government (FDG) Review	28 Jan – 24 Mar 2019
IPCC Panel Adoption/Acceptance	**May 2019**

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Refinement in Relation to Satellite Data

- **Volume 1: General Guidance and Reporting**
  - **Chapter 6: Quality Assurance/Quality Control and Verification**
    - Issue: Update/elaborate verification guidance because the existing guidance is outdated (especially the guidance on comparisons with atmospheric measurements and new datasets).
    - Location in 2006 IPCC Guidelines: Section 6.10
    - Type of refinement: Update/Elaboration

- **Volume 4: Agriculture, Forestry and Other Land Use (AFOLU)**
  - **Chapter 2: Generic Methodologies Applicable to Multiple Land-use Categories**
    - Issue: Develop guidance on how to use biomass density (amount per unit area) maps generated from RS data for biomass estimation.
    - Location in 2006 Guidelines: New Subsection in Section 2.3.1
    - Type of refinement: New guidance

  - **Chapter 3: Consistent Representation of Lands**
    - Issue: Develop guidance on how RS data, ground based data, and ancillary data can be integrated and used to derive consistent time series estimates of land use and land-use change.
    - Location in 2006 Guidelines: Section 3.3 and Annex 3A.1 and 3A.2
    - Type of refinement: Update/Elaboration/New guidance

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List of Authors and Review Editors of 2019 Refinement: Volume 1: General Guidance and Reporting

Last Name	First Name	Role	Country of Residence	Citizenship	Affiliation
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DE LAURETIS	Riccardo	LA	Italy	Italy	ISPRA - Institute for Environmental Protection and Research
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FANG	Shuangxi	LA	China	China	China Meteorological Administration
GILLENWATER	Michael	LA	USA	USA	GHG Management Institute
GINZBURG	Veronika	LA	Russia	Russia	Institute of Global Climate and Ecology Roshydromet and RAS
GOODWIN	Justin	LA	UK	UK	Aether Limited
HA	Chia	LA	Canada	Canada	Environment and Climate Change Canada
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RADUNSKY	Klaus	LA	Austria	Austria	Umweltbundesamt
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WOO	Jung Hun	LA	Republic of Korea	Republic of Korea	Konkuk University
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IRVING	William N.	RE	USA	USA	US Environmental Protection Agency

https://www.ipcc-nggip.iges.or.jp/home/2019refinement/docs/2019Refinement_ListofAuthors180525.pdf

IPCC 2019 Refinement Online Resources

- IPCC Task Force on National Greenhouse Gas Inventories
  https://www.ipcc-nggip.iges.or.jp
- 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories
  https://www.ipcc-nggip.iges.or.jp/home/2019refinement.html
- List of selected Authors & Steering Group (Latest version :May, 2018)
  https://www.ipcc-nggip.iges.or.jp/home/2019refinement/docs/2019Refinement_ListofAuthors180525.pdf
- Report of First Lead Author Meeting (June 2017)
  https://www.ipcc.ch/news_and_events/PR102017_LAM1_2019Refinement.shtml
- Report of Second Lead Author Meeting (September 2017)
  https://www.ipcc.ch/news_and_events/pdf/press/pr_2019_refinement_LAM2.pdf
- Presentation at UNFCCC COP23 (November 2017)
  https://www.ipcc-nggip.iges.or.jp/presentation/1711_3_2019Refinement.pdf