

A decade of GHG monitoring activity at the Global GAW Station Bukit Kototabang, Indonesia

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on behalf of the GHG monitoring team

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Outline

- Introduction
- GHG Measurement Activity at BKT
- Some results
- Further direction



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Station Bukit Kototabang, Indonesia

Bukit Kototabang

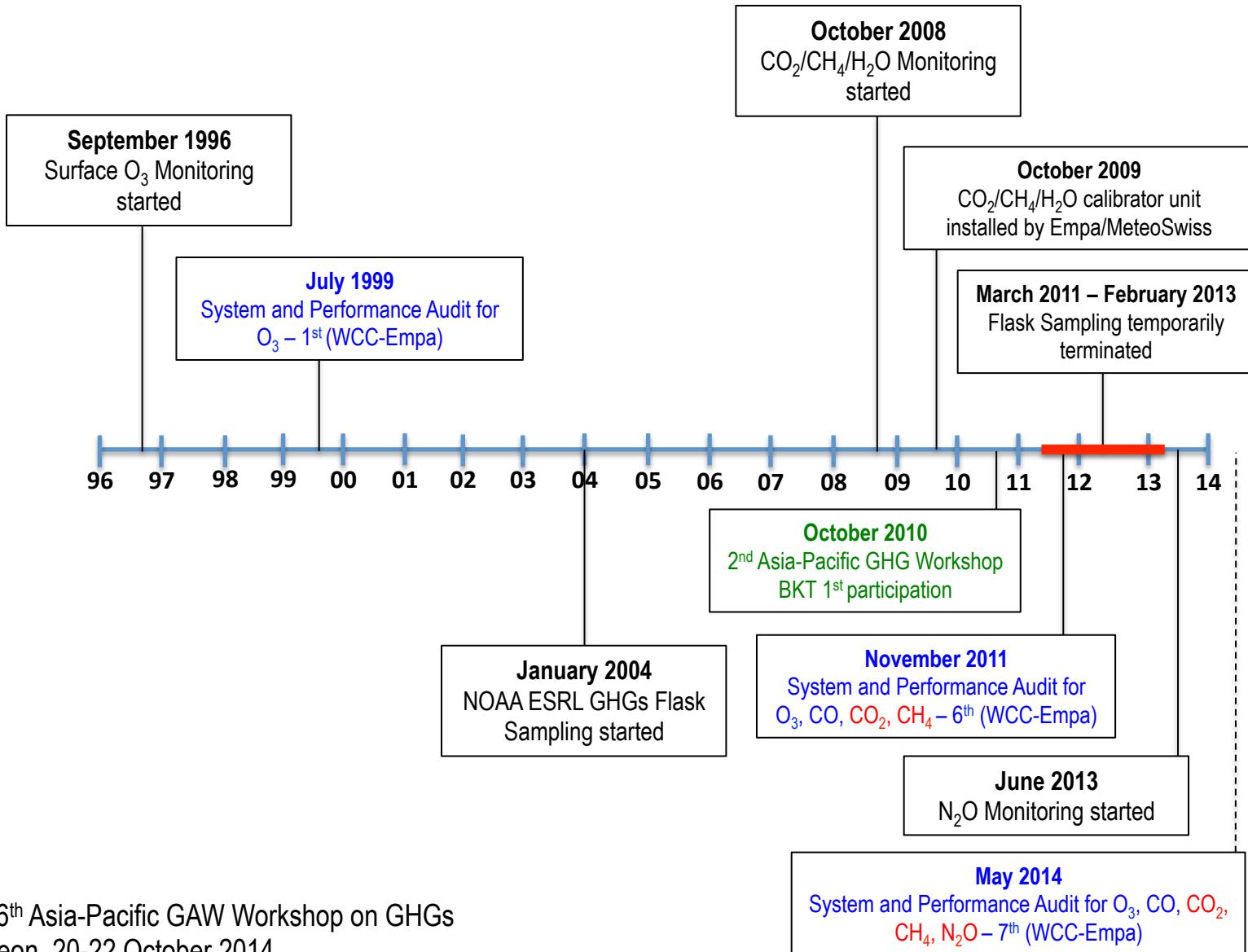


GHG Measurement Activity at BKT

- Started in 2004
- CO_2 , CH_4 , N_2O , SF_6
- Flask sampling (CO_2 , CH_4 , N_2O , SF_6)
- Continuous (CO_2 , CH_4 , N_2O)
- International support (WMO, NOAA, Empa, MeteoSwiss)



Timeline

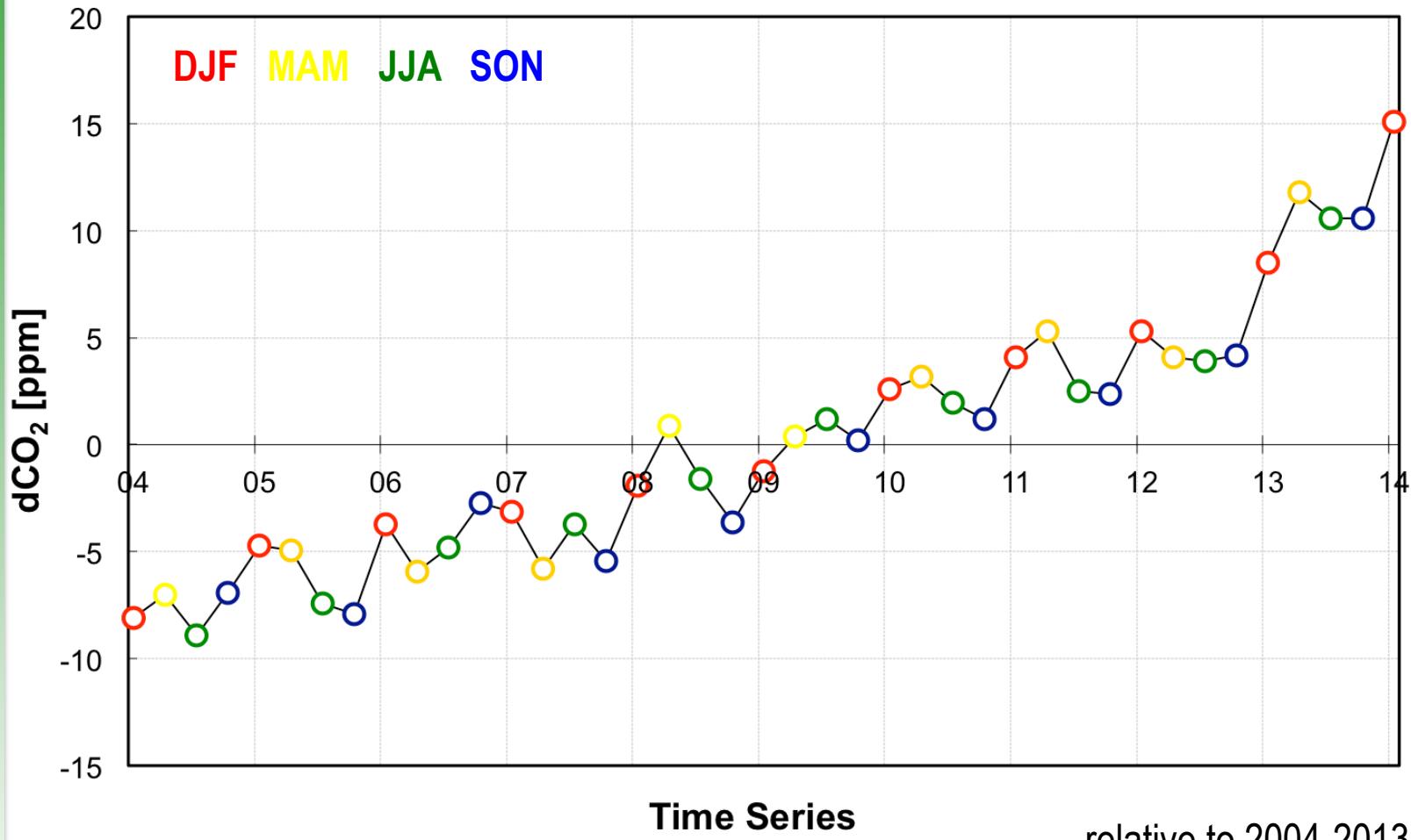


Annual mean abundances

	CO ₂	CH ₄	N ₂ O	SF ₆
Abundance in 2013 (Global)*	392.1 ppm (396 ppm)	1839.3 ppb (1824 ppb)	327.1 ppb (325.9 ppb)	7.94 ppt
2013 abundance relative to year 2004	105%	102%	103%	146%
Mean annual absolute increase during the period 2004-2013 (Global)*	2.12 ppm/yr (2.07 ppm/yr)	3.7 ppb/yr (3.8 ppb/yr)	1 ppb/yr (0.82 ppb/yr)	0.31 ppt/yr

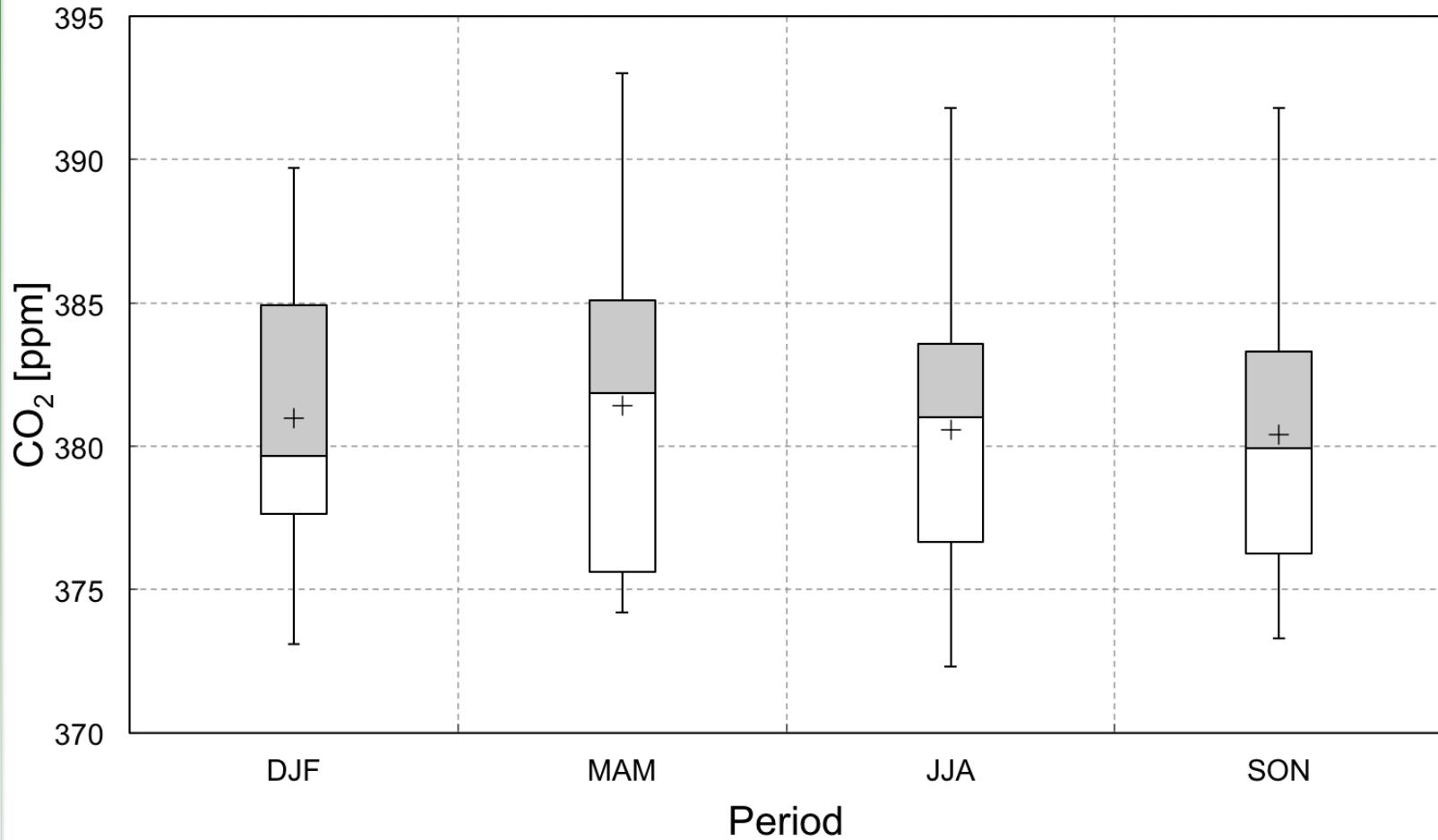
*WMO GHG Bulletin No.10/2014

CO₂ seasonal trend

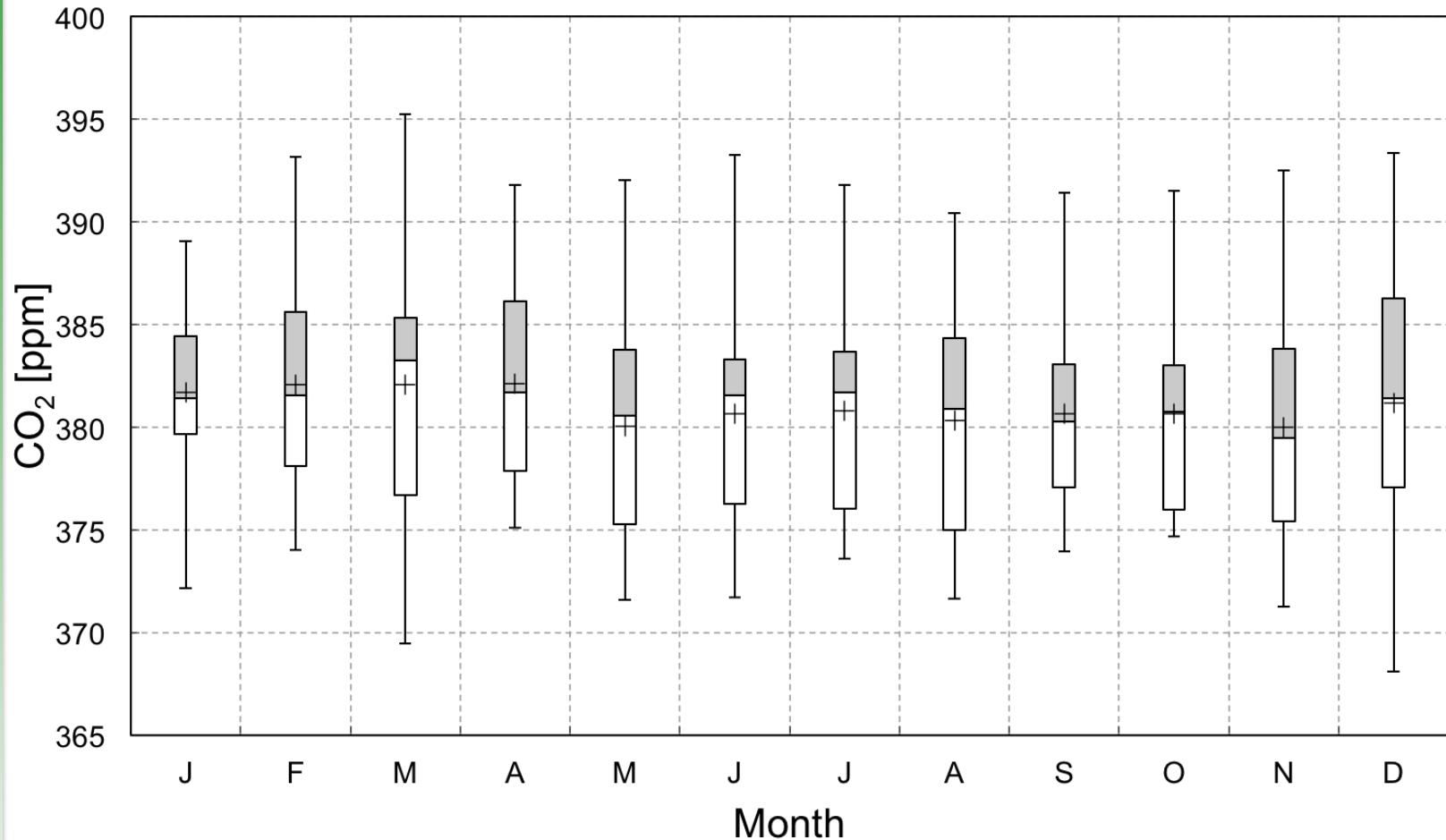


relative to 2004-2013
annual average

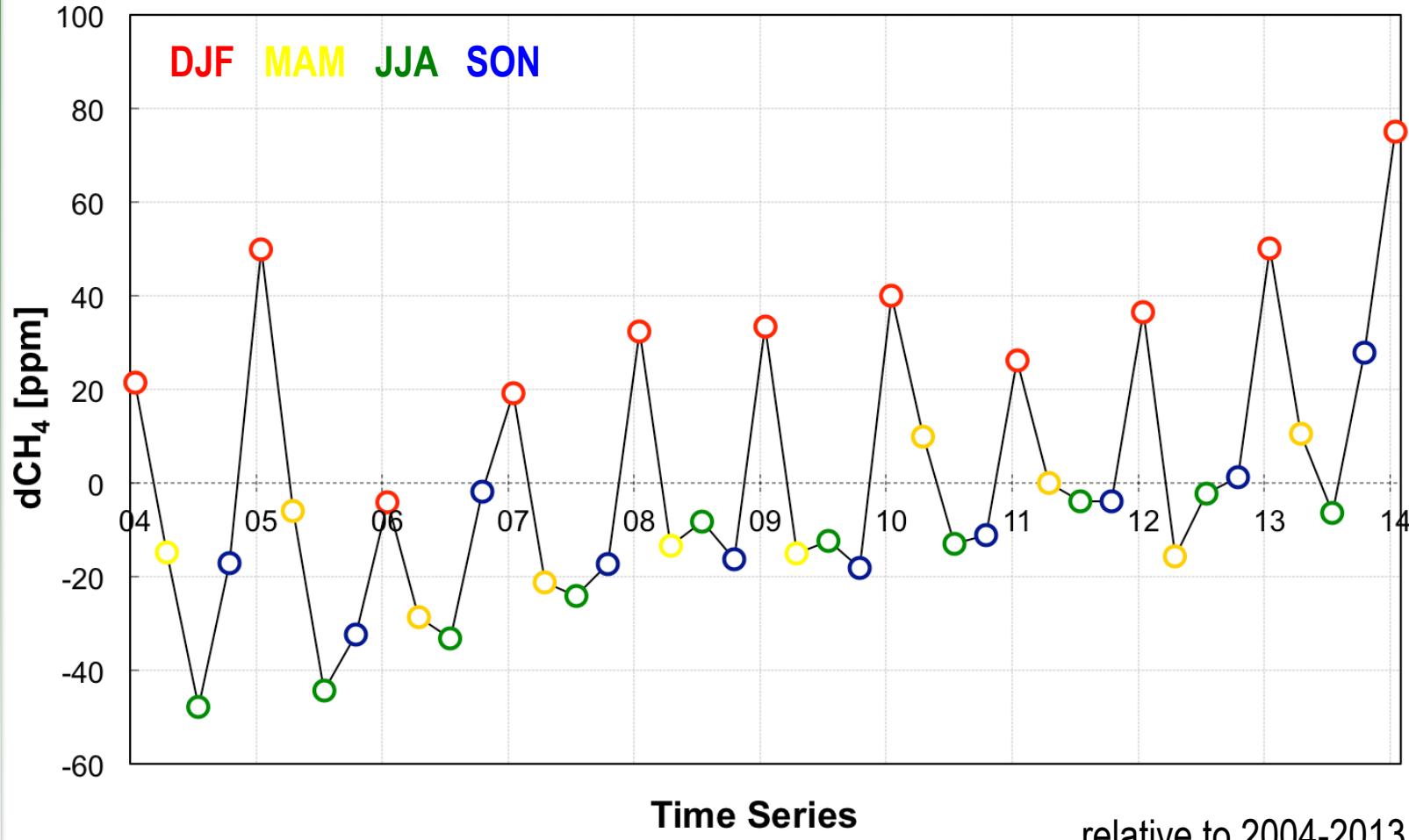
Seasonal Stats, CO₂



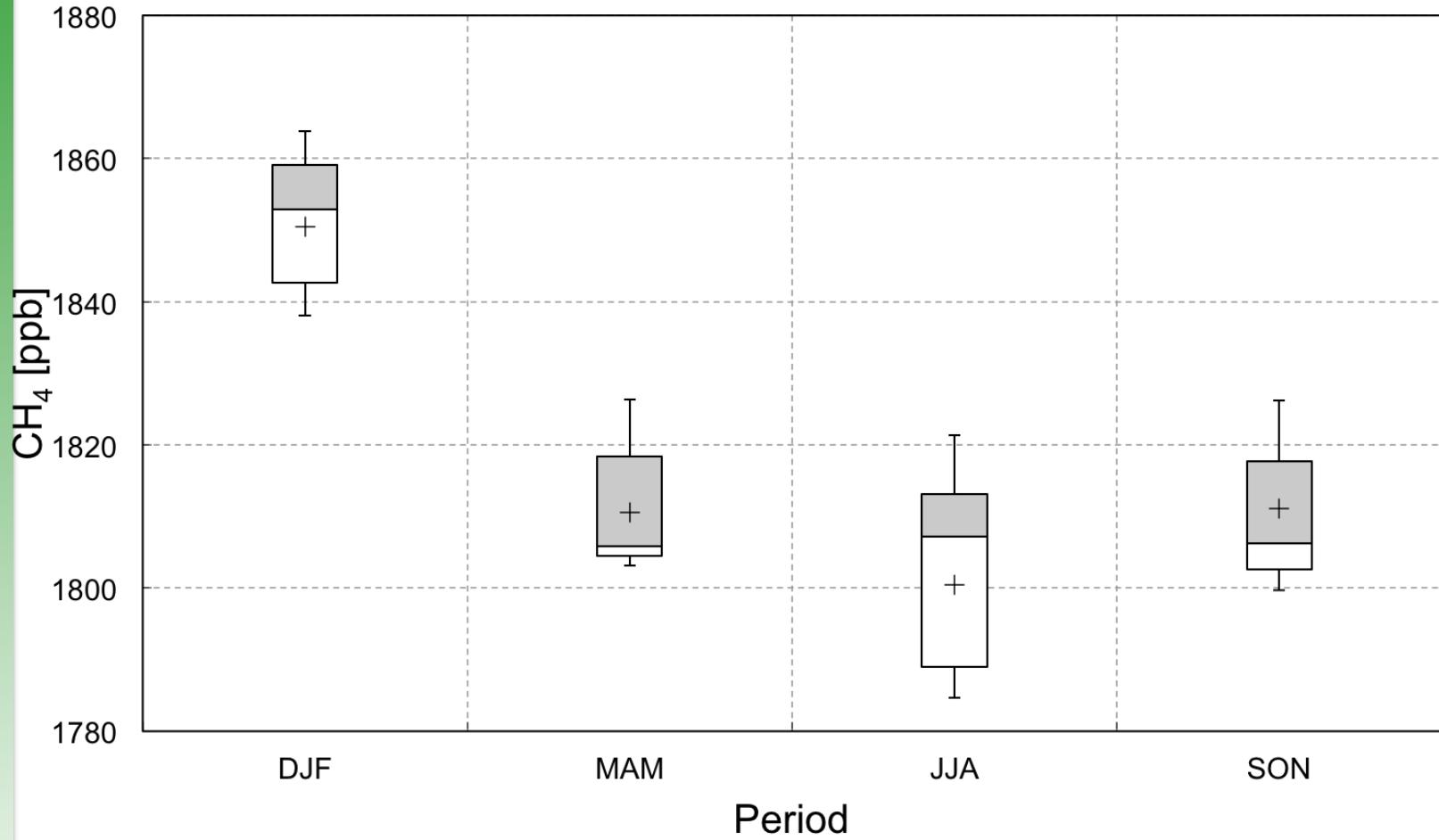
Monthly Stats, CO₂



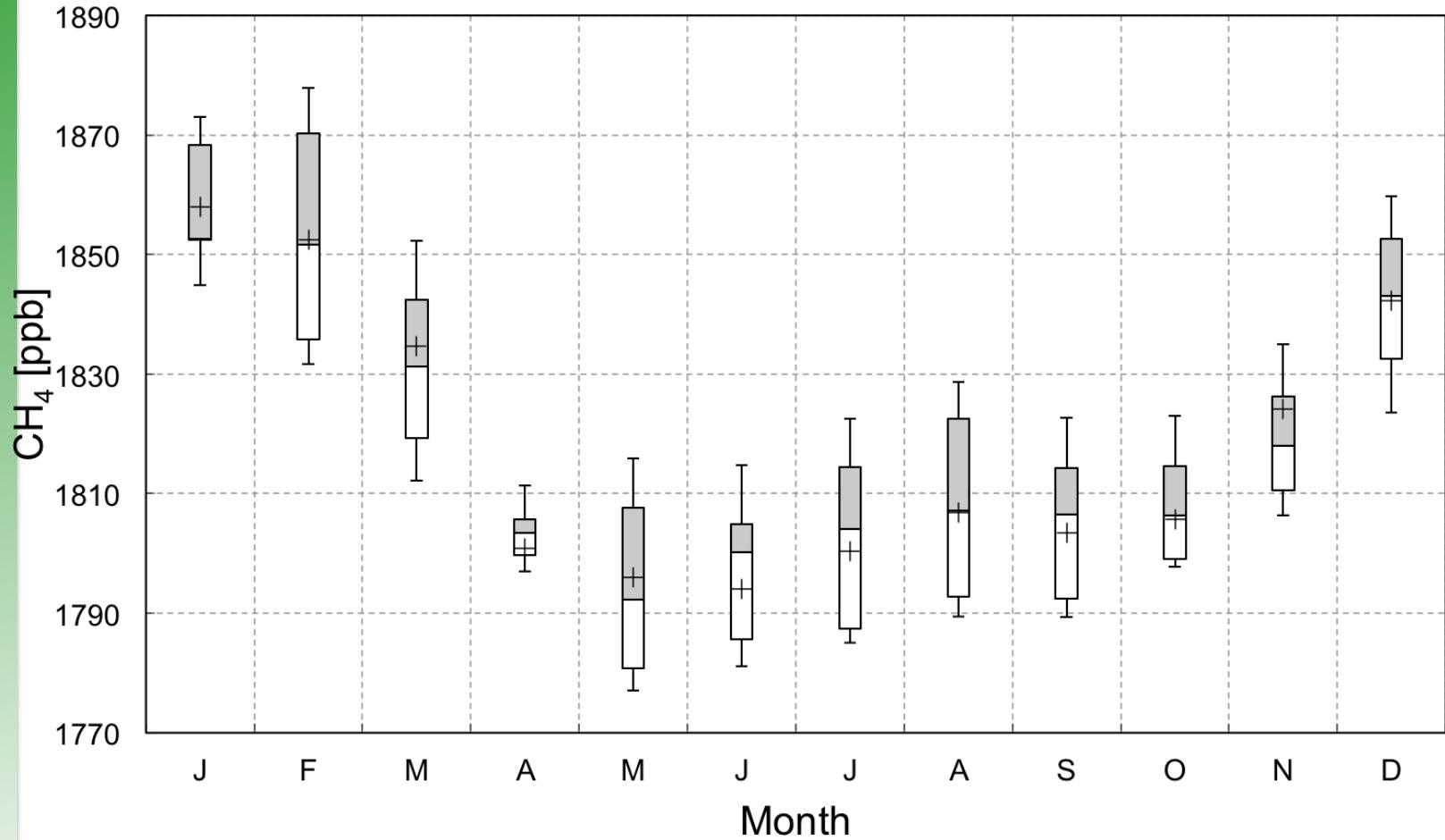
CH₄ seasonal trend



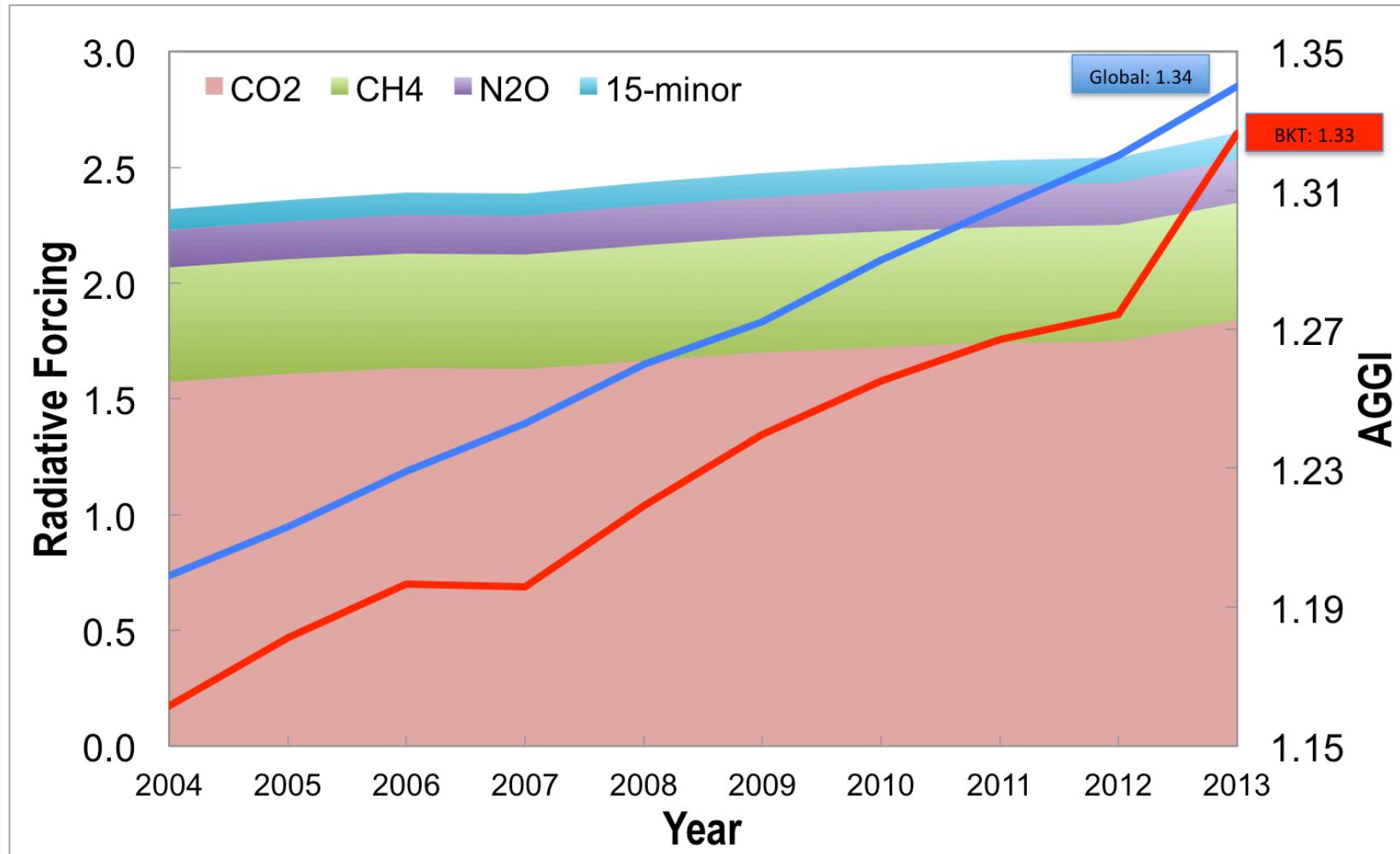
Seasonal Stats, CH₄



Monthly Stats, CH₄

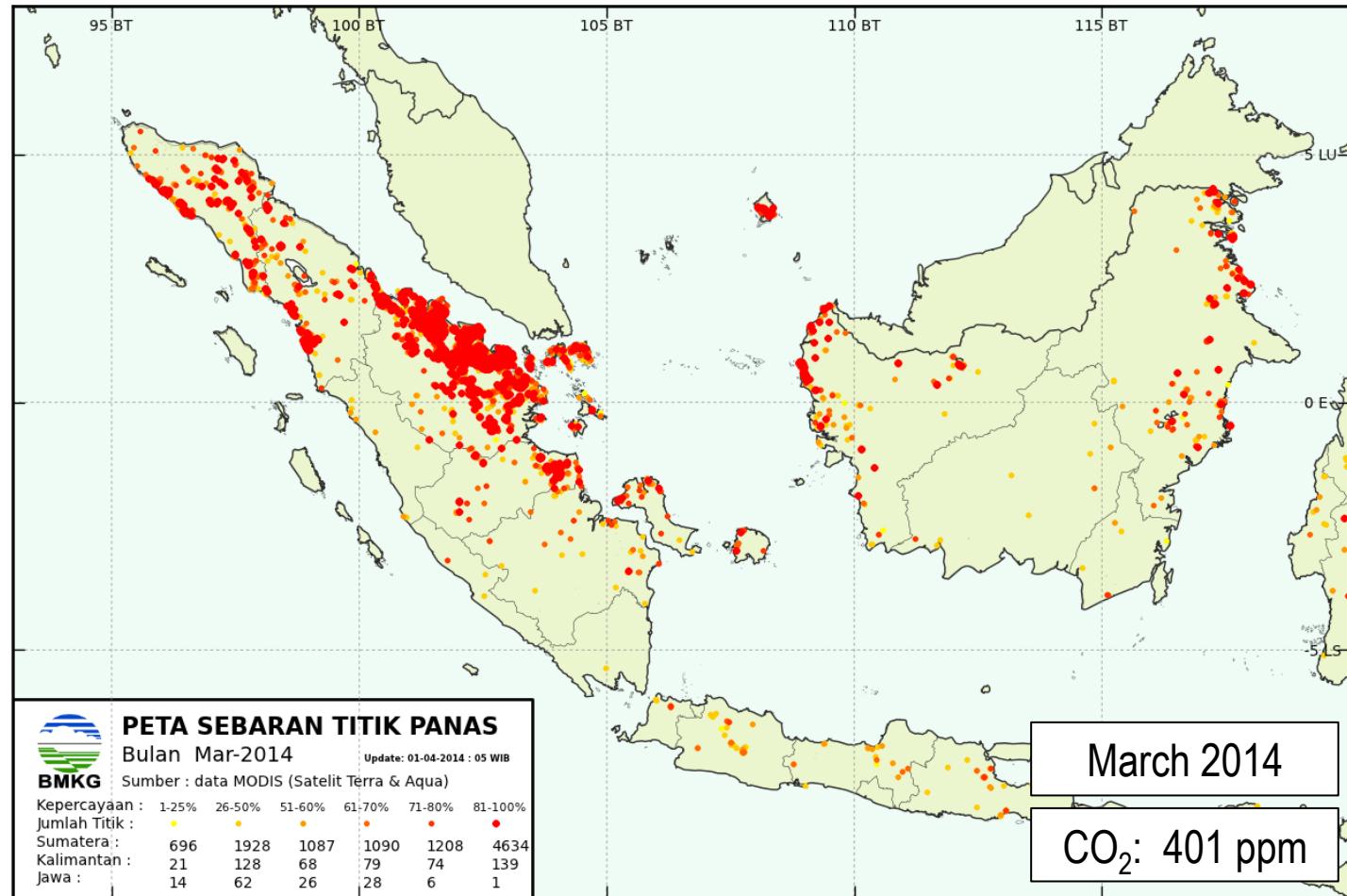


Annual Greenhouse Gas Index



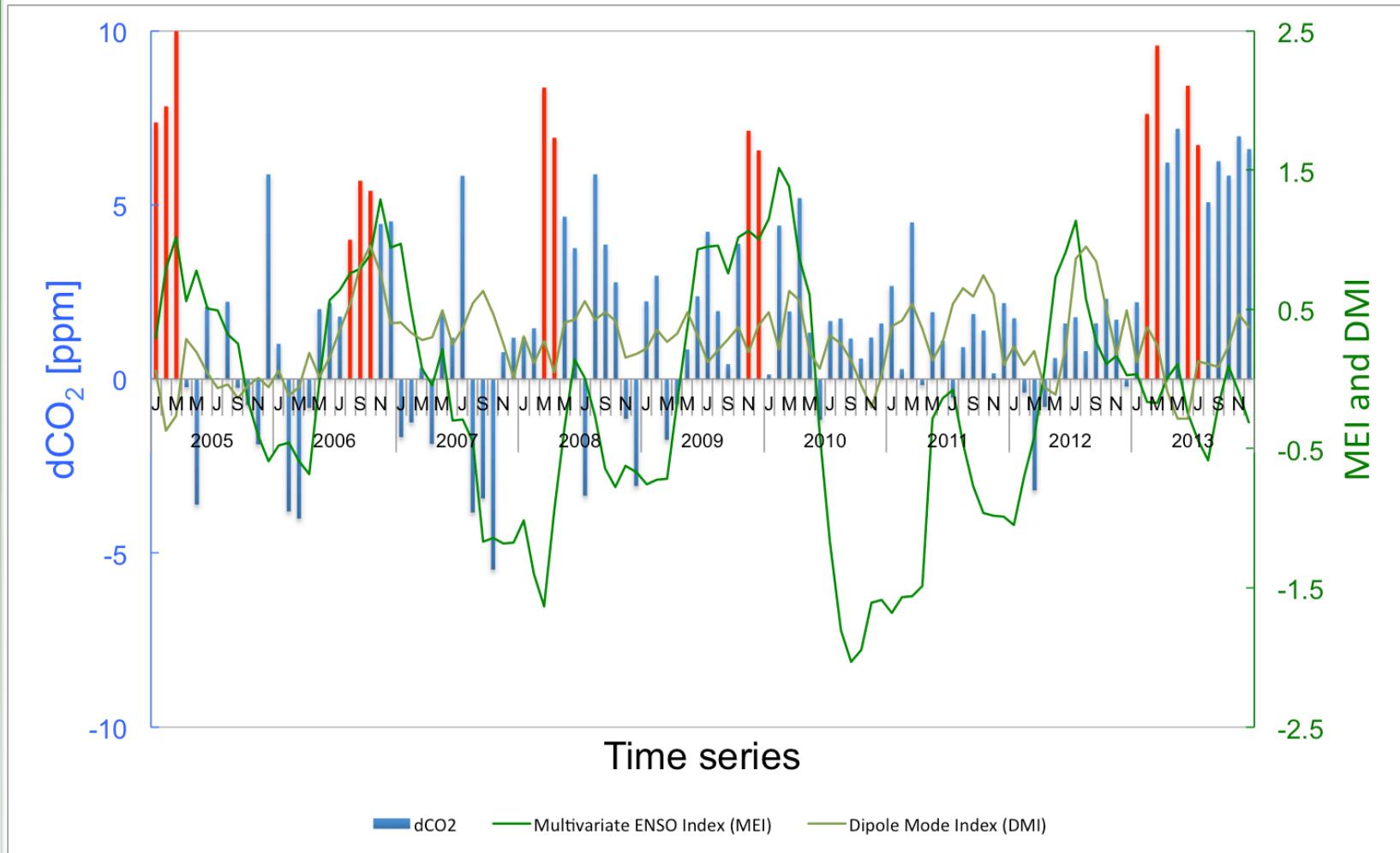
based on the NOAA Annual Greenhouse Gas Index
(Butler & Montzka, 2014)

Peatland/Forest fires & CO₂



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Peatland/Forest fires & CO₂

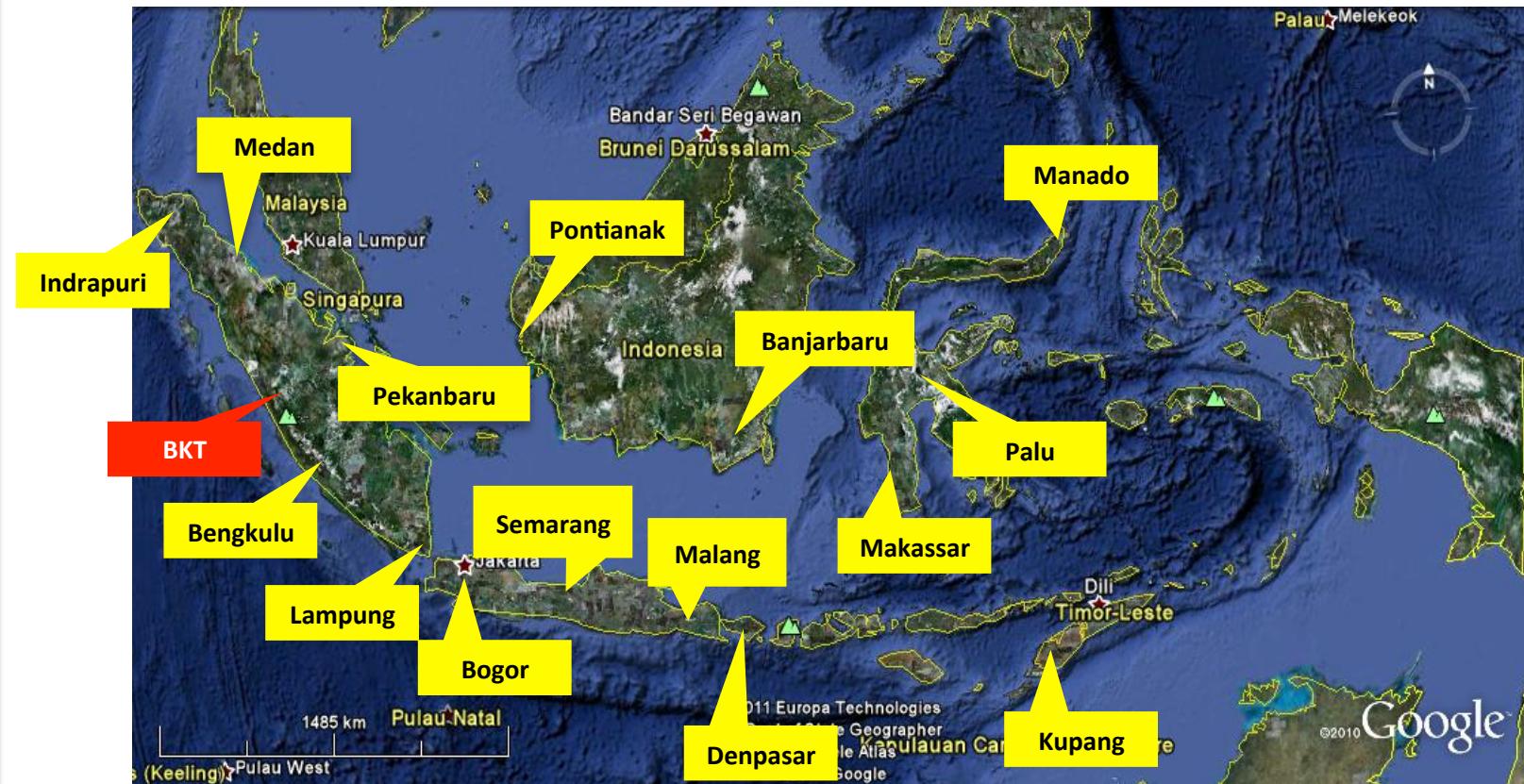


Further direction

- Ongoing support
- Collaboration & Partnership
- Expanding network (GHG)



GHG Meas. Network in Indonesia



As of late 2011
CO₂, CH₄ and N₂O



Thank you

Terima kasih

감사합니다