

There is no new method or new findings in this paper. However, the model domain, the SEA area, which the authors thought necessary to evaluate, is the important point of this paper. Despite many restrictions, such as few observation data and the target year of 2007 seeming rather old, the results are reasonable.

There is black carbon (BC) in the title, however, I cannot recognize the necessity of explicitly mentioning BC. It should be connected with contents of Part 2, but it may be written as PM?

In addition, as the title is "emission inventory", especially Indonesia, Thailand, and Cambodia seem to be using detailed EI in each region, please write those contents more carefully.

The model domain contains a lot of sea area, so please mention emissions from ships.

< Specific Comments >

p.2 L9

Since the annotation of PM_{2.5} is carefully written, I think that it is better to write PM₁₀ as well.

p.3 L16

“The emissions from major anthropogenic sources (except for biomass open burning) in Indonesia, Thailand and Cambodia”

Please describe that part in detail, especially, temporal and spatial distribution. Table 1 contains only activity data used for EI calculation. It does not match the description in the text.

p.3 L23

For CROB, Kanabkaew and Kim Oanh (2011) and Permadi and Kim Oanh (2013) are extremely fine in both spatial and temporal resolutions to apply CTMs. I think that it should be described in detail. Furthermore, if it is possible, please indicate the difference between those data and GFEDv3.

Do biomass burning emissions of Cambodia depend on GFEDv3?

p.5 18L

I think that the boundary condition is a bit old. Were there problems to adapt 1998-2002

year conditions to the 2007 year? It is better to apply the result of global chemistry modeling such as MOZART or CHASER.

p.6 17L and p.10 13L etc.,

I think that AIT refers to the Asian Institute of Technology, but please describe it clearly.

p.7 26L~

It is impossible for Cambodia, CO₂ of EDGAR emission to be a reasonable agreement. For Thailand and Cambodia, BC of EDGAR emission is high but Indonesia is not so high. I think that it can be safely said that CGRER of OC is certainly higher for Indonesia, however, for Thailand, OC of CGRER is not so high, rather OC of EDGER is low.

p.7 31L

Which of the legends of Figure S2, SI refers to commercial combustion?

p.8 6L

It is Table 2 instead of Table 3.

p.8 11L

Why are the authors showing CO (Carbon monoxide) in many chemical species in Fig.1?

p.8 “3.2 WRF model results and evaluation” and/or Table 3

Please note the description of the statistics measures are listed in Table S1, SI.

p.9

There is "1 station in Kuala Lumpur, 2 stations in Bangkok, and 1 station in Surabaya" in the text, but in Figure 2,

1 station in Kuala Lumpur

1 station in Surabaya

3 stations in Bangkok

are described. Is Bangkok 3 stations or 2 stations?

Also, in Table 4, not the notation, it is difficult to understand the meaning of BMR and SUF 1, so please specify the place name as shown in the main text and Figure 2.

It might be better to list measuring station names. Since there is no explanation of the meanings of 10T and 11T, are there any relationships with 13T and 20T of Ground measurement of aerosols, 4, Urban air quality monitoring network in Bangkok, Thailand in Table S2, SI? Or if those station names are not important I think that they might be omitted.

p.11 8L

Please explain scientifically and carefully the difference between EC and BC.

p.12 9L

As authors wrote in the text “PM_{2.5} are more uniformly distributed in an urban area than the coarser particles”, the value of PM_{2.5}/PM₁₀ be influenced not by local PM_{2.5} emissions, but rather by local PM₁₀ emissions?

p.13 14L

Maximum monthly average of BC in Aug. and Nov. are different from the value of Table S3, SI. Please check it.

p.15 11L

In the text, “The seasonal variation in the emission input file would need to be further refined to improve the situation”. However, the data of GFED and the biomass burning data which authors applied are changing at least monthly. Does it refer other anthropogenic emissions rather than biomass burning?

< Tables and Figures >

Figure S1, SI

Characters in the legend of Figure S1, SI are collapsed and cannot be read.

Figure S2, SI

PM_{2.5} and PM₁₀ on the vertical axis of the Figure S2, SI are written as PM₂ and PM₁, respectively.

The sizes (heights) of the graphs of Indonesia, Cambodia and Thailand are different. The height of Cambodia's graph is high and that of Thailand is low.

