

Interactive comment on “Dynamics of global atmospheric CO₂ concentration from 1850 to 2010: a linear approximation” by W. Wang and R. Nemani

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Additional comment 2: On committed warming.

In my report Enting (2014) on the discussion paper by Wang and Nemani (Wang and Nemani, 2014a), I noted that it was wrong to say that the full climate impact of CO₂ emissions not being realised is due to the airborne fraction being less than one. I pointed out that the reason that the full climate impact of has not been seen is that the atmosphere-ocean system is out of climatic equilibrium. The difference between realised and potential climate change is often characterised as ‘committed warming’ (e.g. Hare and Meinshausen, 2006) and is extensively discussed in various IPCC re-

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ports. The response by Wang and Nemani (Wang and Nemani, 2014b) disputed my criticism. (In my report (Enting, 2014) I assumed that the issue of ‘committed warming’ was sufficiently well known not to need a citation).

Presumably what this disagreement really reflects is what was noted by referee 2 (Referee-2, 2014). The paper (Wang and Nemani, 2014a) is poorly written. Possibly what they meant to say was the less profound statement: that (other things being equal), the less CO₂ remains in the atmosphere, the less is its effect.

References

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