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Interactive comment on "A seawater desalination scheme for global hydrological models" *by* Naota Hanasaki et al.

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While this work has merit of enhancing the understanding of driving forces for desalination expansion, it needs substantial improvement to provide solid contribution to the community.

1. The methodology part is very vague, no model representations or equations are documented, and it is not clearly explicit so that the study can be reproduced.

2. The assumption of "All the municipal and industrial water withdrawal in Area Utilizing Seawater Desalination (AUSD) is supplied by seawater desalination" is unrealistic. Take the current biggest desalination country Saudi Arabia as an example, the surface freshwater withdrawal, groundwater withdrawal and desalinated water in 2005 is 1.1, 21.5 and 1.0 km3, respectively (AQUASTAT).

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3. Only global total desalination amount for 2025 and 2055 is presented, the part that would be valuable to the community – the spatial and temporal changes of desalination amount – is missing.

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