

Topical editor comments on manuscript gmd-2015-121

Dear author,

Please answer the following comments and provide a revised manuscript in track mode so that I can easily see what has been changed to answer my comments.

Major comments:

- **Code and Data Availability:**
Here data refers to any information that is required to either fully appreciate or reproduce the results presented in the manuscript. So you also have to describe how one can get access to the configuration files (e.g. bathymetry, forcing fields) needed to reproduce your runs. The data should preferably be available from an archive with a digital object identifier (DOI) but suitable repositories can be found at the [Registry of Research Data Repositories](#). Although not recommended, and authors will typically be requested to improve on this, it is also possible to provide the code and/or data only upon request via a given point of contact. If the authors cannot or do not wish to make the code and/or data public (e.g. copyright or licensing restrictions), the reasons must be clearly stated.
- **1st comment from Referee #1**
You write “A sentence has been added in the introduction in order to show the benefit of having such regional configuration to feed the global model. We also precise the main differences between the 1/12° operational model (PSY4) and INDO12.” I cannot find this addition. The arguments presented in your answer should be included in the text.
- **2nd comment from Referee #1**
Your argumentation is convincing and few sentences should be added in the text on this issue.
- **5th comment from Referee #1**
Reading through the text, the grammar seems better now but this is typically something difficult to evaluate without the “track mode” version of the new manuscript.
- **P.17 lines 10-29 & p. 18 lines 1-3:** this whole paragraph needs to be reviewed. Despite Referee #2 comment, I cannot understand how greater ITF can be associated to a 2007-2008 La Nina.
- **p.18 lines 27-28 and p.19 lines 1-2:** these two sentences are redundant and partly contradictory. Are Timor INDO12 values stronger than INSTANT or do they “compare favorably”?

Minor comments:

- p.2 change “in-situ” for “in-itu”
- p.2 and p.3 change “(Gutknecht et al., 2016)” for “(Gutknecht et al., 2015)”
- p.2 define ITF the first time Indonesian Throughflow appears, i.e. l.17
- p.2 change “these problems” for “remaining problems” as the sentence before does not describe the weaknesses
- p.3 change “fully operational.” for “fully operational mode.”
- p.3 change “elsewhere” for “in a further paper”
- p.3 change “the Equator” for “the equator”

- p.3 change “up to 4000 m” for “down to 4000 m”
- p.9 change “wet tropospheric component, high-frequency oceanographic signals” for “ wet tropospheric component high-frequency oceanographic signals” without the comma !!
- p.13, line 1 “where SSS data”: specify which SSS data
- p.13 define RMSD the first time it appears i.e. line 11
- p.17 line 16 change “But INSTANT ...” for “Also, INSTANT ...”
- p.18 lines 4-23, improve the writing of the paragraph, e.g. the sentence “In 2009, the only El-Niño occurs during the simulation period and no IOD event, consequently, it is the weakest ITF transport of the period.” is badly constructed. It should be “ “In 2009, the only El-Niño of the simulation period takes place and no IOD event; consequently, the weakest ITF transport of the period occurs that year.”
- p.18, line 20: I do not understand what “(no occurrence during 2008-2013)” refers to.
- Fig 1 captions: change for “Bathymetry (in meters) of the INDO12 configuration (latitudes: 20 S–25 N and longitudes: 90–145 E) based on ETOPOV2g/GEBCO1 + in-house adjustments in straits of major interest. Three ITF exits are indicated in red. Main straits/passages are indicated in white.”
- Fig 2 & fig 3 captions: remove capital letters in “Circulation”, “Boreal”
- Fig 4 captions: change “either side” for “both sides”
- Fig 8 captions: change “INDO12” for “INDO12 SSH”
- Fig 9 captions: change “bias” for “SSH bias”
- Fig 10 captions: change “and ARGO (JAMSTEC (ARGO+TRITON+CTD)) (bottom) “ for “and JAMSTEC (ARGO+TRITON+CTD) (bottom)”
- Fig 11 captions: change “INDO12” for “INDO12 SST” and “monthly map” for “monthly maps” (?)
- Fig 12 captions: change “bias” for “SST bias”
- Fig 20 captions: change “INDOMIX data (red dots)” for “INDOMIX data (red)”, “INDO12 simulation (dark blue crosses)” for “INDO12 simulation (dark blue)” and “parent model (PSY3) (green plus)” for “parent model PSY3 (green)”
- Fig 21 a,b,c,d,e,f: change “parent model (PSY3)” for “parent model PSY3 (green line)”
- Fig 22 captions: change “each sides” for “both sides”
- Fig 23 a & b captions: change “Luzon strait” for “Luzon strait (purple squares)” and “first 200 meter depths” for “first 200 meters”