

## ***Interactive comment on “Solar Distillation of Impure Water from Four Different Water Sources under South-Western Nigeria Climate” by Saheed A. Adio et al.***

### **Anonymous Referee #2**

Received and published: 22 July 2020

The removal of TDS and EC was studied using a locally made solar distillation installation. Various water sources were used and compared to other experiments described in literature. The paper is reasonably well written, but lacks a clear objective and a good discussion of the results with literature. General comments: - A clear objective at the end of the introduction is missing. How does this relate to previous research in the area? What is novel? Only location is not sufficient.. Is the design novel? - It should be explained why solar stills are used to treat the water mentioned water sources. Probably there are more cost effective ways to treat groundwater, rain water and surface water. - EC and TDS is not sufficient to judge the treatment performance since these are not indicators for microbial contamination e.g. - Comparing EC and

C1

TDS to WHO guidelines is not sufficient to judge performance. - The discussion with literature should be included in the sections describing the results (now they are separated). - Cost analyses should be made in comparison with the production, so xxx €/m<sup>3</sup> - Language, including tenses, should be checked - Redundant information should be deleted. - Avoid too general introduction. Specific comments: - Line 21-22 and 23-26: see comment above - Line 28-38: see general comment above and delete. - Line 39: of = in; sporadic? - Line 46: which part of the world? - Line 48-51: see general comment above and delete - Line 54-57: see general comment above and delete - Line 58: bold statement; term = terms. - Line 60-62: see general comment above and delete - Line 80-81: how is this reflected in this study? - Line 84: faced = facing - Line 81 and onwards: give more references - Line 89 and onwards: explain how this “solution” relates to more economic and sustainable solutions? Or phrase the study differently.. - Line 95-96: bold statement and should be rephrased - Line 103: flow = flows - Line 118: is = was - Line 125: indicated by whom? Give references - Line 138-145: should be rephrased based on general comments, since there are many flaws in this reasoning. - Line 162: can be = was - Line 167: is = was - Line 168-173: redundant information - Line 174: give overview of all experimental settings and explain if duplicates in experiments and water sampling were performed. - Line 175: “Performance evaluation” should be part “Materials and Methods” - Line 183-186: explain what design variables were varied and evaluated for optimized performance - Line 196-209: should be rephrased (or deleted) based on the general comments above - Line 210: dissolved solids are not “particles”; What is a “digital TDS meter”, (type/measurement method, etc.)? - Line 219-220: redundant information - Line 222:226: should be more extensive and part of Materials and Methods section (see comment line 174). - Line 228-230: consider deleting - Line 232: why randomly selected days? Is there another way to present all days? - Line 234/235: till = until - Line 236-237: is this relationship known from literature, then discuss this with literature... - Line 238-240: rephrase or delete - Line 240: smaller = lower - Line 243: evening = afternoon - Line 243 and onwards: how does it compare with other studies? Give references... - Line 248: than the tem-

C2

perature of the water - Line 256 and onwards: how does it compare with other studies? Give references. . . - Line 267-269: not new - Line 274: results = resulted - Line 275: do not use “significantly” when statistical analyses are not performed - Line 284: has = had - Line 294-307: can be deleted, because the graphs represent the same data of previous graphs and do not give extra information. - Line 311-319: poor performance analyses and lack of discussion with other studies (see also general comments above) - Line 320-337: should be incorporated in previous sections - Line 338-359: should be incorporated in previous sections and not ready yet (methods should be incorporated in Materials and Methods section) - Line 361-363: see general comments - Line 365-365: too general information - Line 387-394: too bold conclusion

---

Interactive comment on Drink. Water Eng. Sci. Discuss., <https://doi.org/10.5194/dwes-2020-5>, 2020.