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Drinking Water
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Discussions

Interactive comment on "Application of Machine Learning For Real-time Evaluation of Salinity (or TDS) in Drinking Water Using Photonic Sensor" *by* Sandip Kumar Roy and Preeta Sharan

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Dear Reviewer

I appreciate your comments and suggestion. Pl. find below our response to your observations.

Kind Regards Authors

1- Introduction is very short. it is better that explain about other research.

Authors: Since this is multi disciplinary work, we tried to explain the research in details in theory section and introduction was to just introduce the concept. Your point noted

for future consideration.

2- Please explain about other methods of measurement of TH, Ph, Caco3, EC, CEC, SAR in the water.

Authors: Scope of current work was for detection of Salinity/TDS, hence explanation for these are not part of the paper. Very good point you mentioned. We would like to consider in future these measurements as enhancement of the sensor and machine learning algorithm.

3- Do the Photonic Sensor used electromagnetic waves? Please explain more about it.

Authors: Yes! In section 2.1 of the paper we explained how we are using Maxwell's Electromagnetic Equation. Briefly, EM propagation through a medium is dependent on permittivity of medium Ïţ. Ïţ is further dependent on refractive index of material. As refractive index changes Ïţ changes as a result the EM propagation also gets impacted. Our sensor work on this principle.

4- If it is possible, please used Hossain et al, 2016 and Walker, M. and Newman, 2011 in INTRODUCTION. Hossain, M. S., Akhter, F., and Emery David Jr, V.: Feasibility assessment of household based small arsenic removal technologies for achieving sustainable development goals, Drink. Water Eng. Sci. Discuss., doi:10.5194/dwes-2016-1, in review, 2016. Walker, M. and Newman, J.:

Authors: Thanks for sharing the citation. We shall go over the article.

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