

# ***Interactive comment on “Assessment of Uranium concentration in groundwater and its human health impact in a part of Northern Tamil Nadu, India” by S. Parimalarenganayaki et al.***

## **Anonymous Referee #2**

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General comments: - It is not clear how this research relates to existing literature - Ground water = groundwater - Once “U” is introduced, always use “U” - Be consequent in units: or ppb or  $\mu\text{M}$  or  $\mu\text{g/L}$  - Use “concentration” instead of “amount”, “quantity” or “content” - The section 5.1 is not relevant for the manuscript since this is the basis for the WHO and USEPA guidelines. Specific comments: - 14, what is meant with “major” and “minor” ions? - 15, “has been” - 17, delete “the” and “and” - 19’ “is exceeded” - 20, delete “for” - 27, “minute quantities” = “Low concentrations” - 29, “in” = “on” - 29-30, give references - 30, what is meant by “significant”, “quantities” = “concentrations” - 31, “processes”, “mobilizes” - 33, “U is mainly present” - 34, “amount” = “concentration” - 35, “Higher concentrations of U can affect” - 36, delete “and it is” - 44, “water due to U

was" - 49, delete "the study of" - 53, delete "the" - 54, "a concentration range of" - 58, "boreholes"(check also rest of the manuscript), are these boreholes with hand pumps or are the hand pumps placed on "dug wells"? - 59-60, not clear what is meant, why is this relevant (and to do with the U concentration)? - 62, explain why. - 65, is Vellore a "region" or a "city"? - 70-71, see comment on line 59-60 - 73, repetition and not clear what is the relation with U. - 77, "the study area" - 79, not clear what the radius of 5 km has to do with the grids of 2 by 2 km. - 82, "the" = "a" - 83-84, give reference - 85-86, not clear what is meant - 89, "the different locations" - 90, "in Table 1" - 90-91, rephrase - 91, delete "in the present study" - 92, delete "very" and explain what is meant by "high" - 93, "Similar to TDS, the values for EC are high and ranged. . ." - 93-94, unclear what is meant - 94, "the groundwater samples exceeded . . ." The value of 500 mg/l refers to? - 95, "are lies"? - 95-97, "Whereas the DO varied from 3.8 mg/l to 7.3, mg/l." (delete the rest of the sentence) - 97, combine Table 1 and 2. - 98, what is meant by "percentage of U and its concentration" - 99, "the samples in the study area had an U concentration" - 100, "are" = "were" - 103, delete "as per". What is AERB? - 103-104, "thus only one location has crossed this limit". - 104, delete "as per", "have permissible limits of" - 105, "is" = "of" - 106, "exceeded this limit" (delete i.e. >30 ppb). "The spatial distribution" - 107-109, explain how this is known - 109, "not a strong correlation" - 110, explain what can be the positive correlation between U and TDS and if there are references. - 111-114, delete sentences, no extra information. - 116-118, delete sentences - 118-120, is for introduction and give also references - 141-142, not clear why this is and how this can be explained (with references) - 143-151, not relevant for this manuscript.

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Discussion paper

