

Work this study has done sounds very important. Especially, temporally precise monitoring of field soil moisture, EC, temperature and G.W.L and transfer those data through ICT must be valuable. In fact, those field conditions vary with rather short time range. Daily or weekly sampling cannot declare what is going in the field. Human behavior, operation of pumping station in this study, may affect soil water regime in the field. Also, visual data collection may be beneficial at field monitoring. In case of curious response of sensors user can check the real situation visually.

It is very interesting that even in the paddy fields those have dense hard pan below surface soil, fluctuation of ground water due to pump operation could affect response of soil sensors. It is interesting what would happen in the upland field in the coastal area.

This text has good contents, however writing, wording, grammar and structure, has many problems. I would think those problems must be fixed before discussion on scientific contents of this paper.

INTRODUCTION section

1. P3, L60-63: It is not clear how FMS can facilitate recovery of damaged lands? Rather, this issue may be one of the aims of this text.
2. P3.L66- “The FR consumes...” might be “The FR consumes less power and can operate with six-watt solar panel.” Please check and re-consider the expression.
3. P4, L75-79: The reference of Miyamoto et al. (2013) deals only sand and does not have information on clay and loam soils. Also, as English “There results showed.....too low to detect” seems unclear.
4. P4, L80-85: I would recommend previous papers dealing ground water at Sendai plain, i.e. Uchida et al. (2005) Study on the Subsurface Thermal Structure at the Sendai Plain 1. Construction of 3D regional groundwater flow and heat transport model, J. Geothermal Res. Soc. Japan (27(2), 115-130. General description such as Barlow (2003) sounds weak.
5. P4, L88 and others: Does “FEM” mean specific content or simply miss spell of the “FMS”?
6. P4, L92 I would feel the phrase “.... Current status on a construction method for....” does not make sense. Authors had better write more details and with reader friendly attitude.

METHODs section

7. P5, L108 and others: “...low sea level” is a description on sea water. It may be “low altitude”
8. P5, L108-111: I cannot understand nor guess what “In Higashimatsushima, the tsunami damagedin the areas” means and cannot comment on its contents, neither. Please rewrite it.

9. P5, L117 “Light snow” has alternative mean and text might be “less snow fall (maximum snow depth is less than 10cm) “
10. P5, L119 “... the costal side ranges from ...” may be “...coast ranges from ...”.
11. P7, L151 I could not find figure 4b and 4c.
12. P7? No description on methods relating Figure 9.

RESULTS & DISCUSSION section

13. P7, L160 and others: “salinity soil” may be “saline soil”.
14. P7, L163 and others: What does “saturated θ ” means? Is this water saturation or it means number of saturated volumetric water content?
15. P7, L163-165: Where we can see data relating “bulk EC of the desalinated soil was 6 dS/m, which caused a considerable measurement error.”?
16. P8, L176 and latter part and Figures 6&8: Those figures employ “DOY” system however in the text author uses common day-month description and cause confusion by potential readers, i.e. it is difficult for readers to find which rainfall event corresponds to the typhoon event. I would recommend to use day-month system for both figures and text.
17. P8, L177 I would suggest to delete “, ~~while typhoons are rare~~”.
18. P8, L185: “...a direct inflow into a well” may be “...direct inflow of surface water into a well...”, isn’t it?
19. Here, drop of both EC and G.W.L happened simultaneously at first typhoon, (DOY=278), but for the second typhoon (DOY=288) both EC and G.W.L. rose in a short period. This suggests different behavior of surface and subsurface water in the field but authors did mention on only first typhoon. Author had better descript on the second typhoon.
20. P8, L189 “EC of ocean” may be “EC of sea water”, isn’t it?
21. P8, L192 “decrease the ground water level” may be “depress the ground water level”.
22. P8, L192 and others: Please pay attention on use of “deep” and “in depth”.
23. P8, L191-P9, L196 “The pumping station ...into the sea”: These sentences are not clear as well it is not precise. Suppose, in Japan, this pumping system operates to transfer surface water to the sea to depress shallow ground water level. However, irrigated fields under arid climate, i.e. central Asia like Uzbekistan, direct pumping of ground water to depress ground water level is quite common. Those are really different and to prevent miss-understanding author had better descript precisely.
24. P9, L196 and others: “remove salt ~~concentration~~ ...”, concentration cannot be removed.
25. P9, L198: “dead soybean” may be “withering of soybean”.
26. P9, L198-L200: I would guess “At the end of(Fig.6d).” might be “From end of October 2014 and later, ground water level was controlled by the pumping station, constrained daily fluctuation of the ground water level within between soil surface to 50cm in depth”.
27. Please consider the descriptions.

28. P9, L201 “pumping station operated simultaneously to maintain the ground water below a depth of 50cm”: What “simultaneously” means in this sentence?
29. P9, L2120-213: Eq(2) from Kaneko et al. (2002) employed EC of water for the calculation. In this study, authors showed only bulk soil EC and did not discuss soil water EC (EC_w in general). So, it is impossible, at least in this version, to say bulk EC data were consistent with the chloride concentration.
30. P9, L215 “ θ ” may be better to change to “soil”
31. P9, L215-P10,L224: In Fig.8. monitored field in Higashimatsushima was often submerged, positive ground water level”. It is very curious that even under surface water ponding monitored water content at 10 and 20 cm in depth showed temporal changes. Why those could change under ponding condition? Also, I would like to know surface condition of the field during the monitored period.
32. P10,L225-228: It sounds that shallow salty ground water prevent (or retard) desalinization by rainfall (also mentioned at 1st paragraph of CONCLUSION). However, bulk EC is not good to discuss salinization and desalinization since it is affected moisture condition. In Higashimatsushima at 40cm in depth, soil bulk EC decreased with almost constant soil moisture content. This might be a result of leaching by rain water, the reviewer feels. Oppositely, in Iwanuma where relatively deeper ground water, temporal changes in θ and bulk EC coincided temporally. Depth of 20cm that showed small EC depression with the constant water content may be a sign of leaching. Overall, author had better describe monitored result carefully and precisely, as possible.
33. P10, L257: What does “made it difficult to remove salt movement from salty ground water” means?
34. P10,L257 Does “fresh water – salt water environment” mean “brackish water environment”?
35. P10, L234: “increase in salty ground water” may be “rise in salty ground water”
36. P10, L234: “salination” may be “salinization”
37. P10, L234-235: It is curious that why “salinization” caused only below the surface soil?
38. In such situation surface soil may also be salinized.
39. P10, L240 and others: In the phrase of “tsunami sediments and underlying soil” what underlying soil means? Does this mean remove both “tsunami sediments and underlying soil”? Description is too simple and difficult to be understood by potential readers.
40. P11,L249: Does “inland water conservation” mean “inland fresh water reservoir”?
41. P11,L246-L259: Eq(3) may be an expression of simple horizontal percolation above impermeable bed by Darcy law caused by difference in water level between two points. In basic this equation may express horizontal flow above the water level of drainage canal. For engineering purpose this might be applied in the field however as scientific paper author should mention to or modify the equation.
42. P11, L261 “mg L⁻¹ chloride” may be “mg⁻ chloride L⁻¹”

43. P11, L263: As depicted before on Eq(2), please specify bulk soil EC and soil water EC and revise the description.

CONCLSION

44. "Conlusion" may be thoroughly riveded after revision on "aim" and "Results and Discussion".