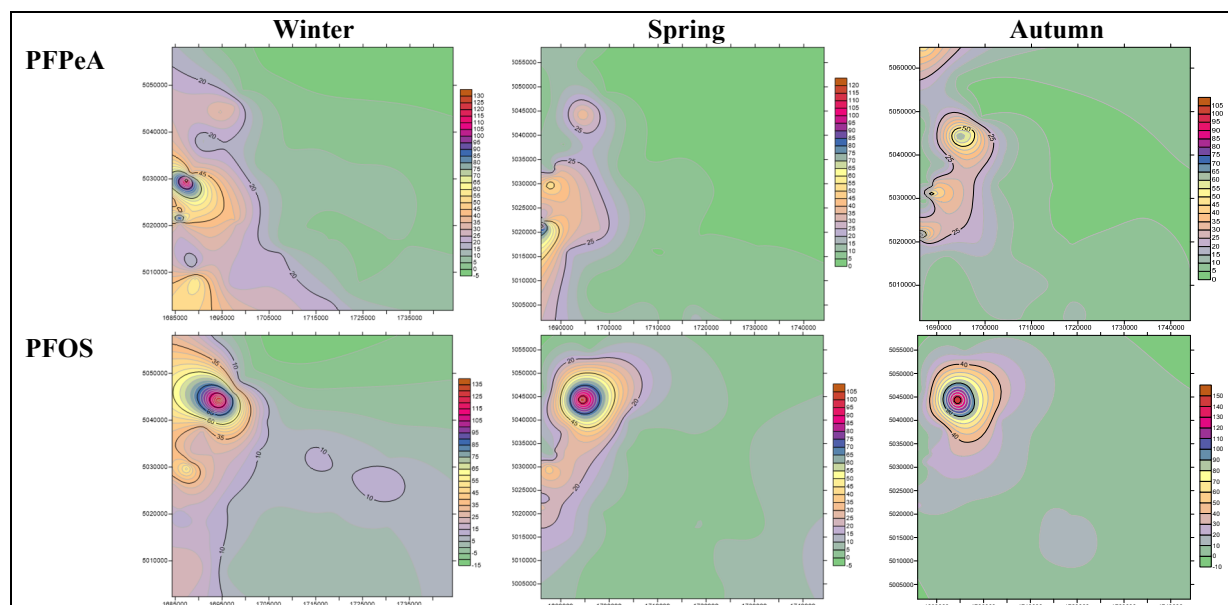


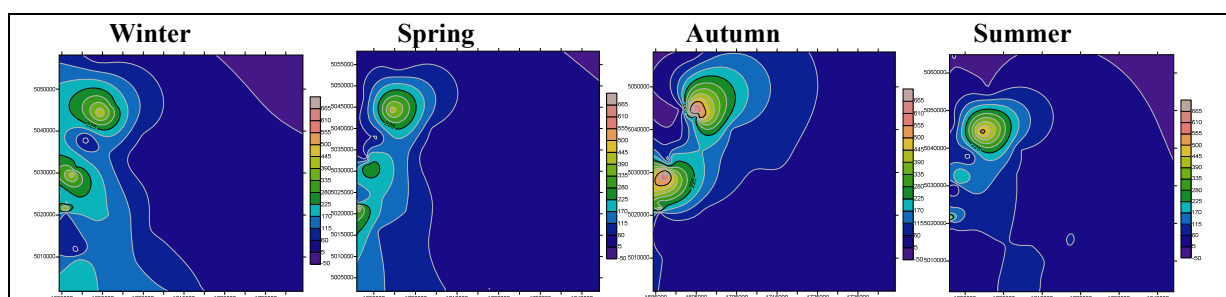




Moreover, the use of surface water in local agriculture activities that are settled on very permeable soil may contribute to the contamination of groundwater intended for drinking purposes. This could be a serious issue for residents that draw water from private wells without filtration systems equipped to reduce PFAS contamination.



**Figure 4.** Iso-concentration maps (ng/L) of PFPeA and PFOS variation in surface waters during different seasons. Summer data are very similar those shown for Autumn.



**Figure 5.** Iso-concentration maps (ng/L) of PFOA variation in surface waters during different seasons.

To conclude, the multivariate statistical analysis approach is proposed for risk assessment and management activities for an industrial/rural area contaminated with PFAS. This approach takes into account seasonal influences and their impact on the profile and amount of PFAS in surface water. In addition, this approach can be used to trace the transition from long- and medium-chained PFAS to short-chained PFAS in local manufacturing activities, as in the case of PFBS, independently from their formation and release as degradation products of precursors from waste-water treatment facilities.

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ARPA Veneto open access dataset on PFAS concentration in water bodies sampled by ARPA Veneto, available at : <http://www.arpa.veneto.it/dati-ambientali/open-data/idrosfera/concentrazione-di-sostanze-perfluoroalchiliche-pfas-nelle-acque-prelevate-da-arpav> , last update March 31, 2019 is acknowledged under Creative Commons 3.0 License.

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