



How to quantify realization of WFD-objectives of groundwater resources?

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Groundwater is a major resource for drinking water in the Netherlands. Evaluation of the EU Water Framework Directive (EU-WFD) showed that protection of this valuable resource needs improvement. Drinking Water Protection Files were set up to assess risks and identify actions needed regarding the identification and implementation of measures enhancing the protection level of groundwater resources in groundwater protection areas. Evaluation of these first generation protection files showed several issues for further improvement, among others on effectiveness of measures. In workshops we analyzed and discussed the feasibility to quantify the impact of measures by combining information on groundwater quality with experiences of stakeholders with success and failure factors. Although there is still a way to go in the quantification of the impact of measures regarding the EU-WFD objectives, these workshops contributed to insight in i) the joint experience we gained on measures and their implementation at different spatial scales, ii) the distribution of the measures over identified risks (i.e. nitrate, pesticides and emerging contaminants) and iii) the estimated contribution of methods to reach the WFD objectives and knowledge gaps. From discussions in the national working group on protection files, it became clear that this analysis is a valuable first step in prioritizing and implementing the measures. Adequate monitoring of implemented measures will additionally contribute to a more quantitative assessment of the realization of the objectives of groundwater resources.