

Introduction

While climate change is an emerging hazard to water supply, literature on the vulnerability of bank filtration (BF), a proven technique of drinking water production in Central Europe and North America, is yet scarce. The Intergovernmental Panel of Climate Change (2007) has projected a global temperature increase between 1.1 and 6.4 °C by 2100. This will affect vital factors for water supply such as precipitation regime, groundwater recharge, run-off, river discharge and raw water quality. Projections on climate change and the implications are difficult because of the uncertainties associated with climate scenarios and modelling. However, in Europe and North America where BF is in operation, the projected increase in seasonal floods and droughts has already been experienced. In addition, site-specific considerations (e.g. land use, demographic trends) are to be taken into account to evaluate the potential impacts on water supply. To fill the current gap in literature, this report provides a first overview on how changing environmental conditions may affect BF operation.

Approach

In order to assess the vulnerability of BF systems to climate change, the report aims at

- (i) identifying climate-sensitive factors that affect BF performance,
- (ii) assessing their relevance in moderate climate zones based on a 'dry' and 'wet' scenario and also benefiting from the TECHNEAU experience gained at BF sites in India,
- (iii) illustrating by means of a case study how water suppliers relying on BF operation evaluate future challenges by climate change and other stresses.

Contact

Iris Hülshoff, M.Sc., KompetenzZentrum Wasser Berlin gGmbH

Email: iris.huelshoff@kompetenz-wasser.de

Phone: +49 (0) 30 536 53 825

Dr. Gesche Grützmacher, KompetenzZentrum Wasser Berlin gGmbH

Email: gesche.gruetzmacher@kompetenz-wasser.de

Phone: +49 (0) 30 536 53 813