Groundwater treatment

Groundwater is an essential source for drinking water supply for more than 2 billion people worldwide. Groundwater, however, often contains natural (geogenic) impurities like iron, manganese, ammonium, arsenic, fluoride, natural organic matter, etc. that have adverse effect on human health and/or aesthetic quality of drinking water. In addition, human activities have been introducing pollutants (e.g. nitrate, organic micro pollutants, pesticides, heavy metals, etc.) that are increasingly found in groundwater at concentrations of health concern. Presence of multiple impurities and pollutants requires appropriate and increasingly complex treatment of groundwater, to allow its use for drinking water supply. This module will provide knowledge and skills required for assessment of groundwater quality, and will introduce techniques required for treatment of different groundwater types with different water quality matrixes. In addition to theoretical knowledge on different groundwater treatment processes, the module will train participant how to incorporate required treatment processes in an appropriate treatment scheme for a given groundwater situation.