Country/pilot	Scenario	Reasons for the choice of scenario	Stakeholder involvement	Management options/prospects
GE1/2/3	RCP8.5	Modellers decided based upon: data availability, BAU and worst case scenarios, sea level rise and groundwater recharge 2071 – 2100 (RCP2.6 is status quo)	The ministry for the environment, the water/soil associations are informed, consultations with municipalities take place. The CLIWAT (http://cliwat.eu/) project started participatory processes, the Geological Survey provides data for decision makers	The water/soil associations implement measures based upon the models. Scenarios for surface water, land use and groundwater management are taken into account
NL 1	WH worst case 2050 drought	Management of dry periods, limits set by NATURA2000, groundwater extraction and irrigation permissions must be given by authorities	Farmers are the main "drought" stakeholders, participatory processes are managed by the water boards; the province gives permits for groundwater uptake; NGO (Staatsbosbeheer) has a control function and is involved in the participatory process	The water board is the central stakeholder with decision and implementation functions. General permissions are given by the province. The NGO can appeal against management options or plans.
NL 2	WH worst case 2050 drought	This scenario assumes highest impact in order to create awareness. Implementing measures on a field scale with significant impact takes a long time and therefore you have to start early and look far ahead.	Farmers are the main "drought" stakeholders, participatory processes are managed by the water boards; Looking for mutual benefit both for the farmer as well as for the regional water authorities	The water board is the central stakeholder although we will not implement measures on a field scale (expect on a pilot level). Hence, we need the voluntary cooperation of the farmers.
Dutch (example outside the TOPSOIL programme)	WL not extreme	Support the calculation of costs for dykes and/or pumping stations; search for no regret management options and (mutual) benefits at the long term, budget planning, not all scenarios are tested. This is an economic decision	The province provide norms for water safety. The province decides based upon the current situation. The water boards develop projections and measures for the future to meet the goals for water safety.	Future planning for safety is a central task of the water boards
DK4	4th IPCC report scenario A1B and "wet" climate models from EU-project ENSEMBLES → 2100	Climate change in Denmark is calculated by the Danish Meteorological Institute's Danish regional climate model HIRHAM5 on the basis of projections carried out with the global climate model ECHAM5 in connection with the EU project ENSEMBLES. The scenario we've chosen is based on "wet models" from ENSEMBLES, as we believe, that the increasing precipitation will increases the risk from the soil and ground water	A participatory process took place prior to the modelling activities including the ministry for the environment; experts, esp. the meteorological institute, were assigned. In June 2010 the Danish Climate and Energy Ministry and the Environmental Ministry recommended using SRES strategy A1B to work in the municipality tasks with climate adaptation up to 2050. All 98 municipalities have developed a climate adaptation plan based on this scenario. They have worked with data of sea levels, groundwater, surface water	Regulations for the municipalities and residents must be developed to protect groundwater and the water cycle as a whole; municipalities want to avoid regulations. There is still a gap in the participatory process. The awareness for groundwater protection needs to be increased. People still believe rainfall is the main reason for floods

		pollutions.	and precipitation. The evaluation of adaptation plans demonstrates that the flooding risk caused by ground water rising is not included in many management approaches of the municipalities.	
UK	UKCP18 (Met Office) to 2100 integrates global climate change models	Given observed UK climate trends over the most recent decade (2008-2017): on average 0.3C warmer than 1981-2010; 0.8C warmer than 1961-1990. All top ten warmest years occurred since 1990. Average increased UK rainfall with some regions up to 11% wetter. All future scenarios predict warmer, wetter winters and hotter drier summers. High emission (worst case) scenarios predict by 2070: 0.7C-4.2C inc. in winter temps 0.9C-5.4C inc. in summer temps UK average rainfall changes of 1%-35% in winter and -47% and 2% in summers. Sea level change of up to 1.15m	Farmer engagement around soil and water sustainable management and protection under both high rainfall and drought conditions. Good soil management will increase water retention/infiltration and reduce loss of water (and soil) from run-off to surface and groundwater . Catchment Partnerships are working to inform and influence statutory risk managers linking planning and projections to wider audiences.	Continuity of supply is thought not be an issue, even under worst case scenarios. Potential impact on surface-groundwater connectivity and quality is subject to many local variables, making an overall diagnosis impracticable. Although whole catchment management incorporating sustainable drainage, temporary water storage and Natural Flood Management is seen to be the common approach. Infiltrative sustainable drainage may be used where geological and groundwater levels permit. UK2: Cross sector modelling: thresholds (absolute red lines) for different sectors are determined and explored against plausible future scenarios - water demand and climate change to identify interventions and trade-offs. Currently at a regional level, but will roll out to the detailed catchment scale. Mitigation measures to protect both water supply and quality are critical to support public drinking water supplies and economically vital agriculture. Catchments are already over-licensed and of poor quality.