Set No	Climate change effect	Hazardous event	Possible control measures / improvements of WSP or SSP	Monitoring plan: parameters	Policy action
1	Increased temperature/drought	Reduced drinking-water quantity availability per capita, due to: - increased demand in different areas - competition of water usage - raw water limitation	- Develop additional sources for drinking-water production. - Raise awareness among consumers on water use.	Monitor: - Air temperature; - Data on drinking-water usage, including peak times. (These above can be linked to establish causal relationships between temperature and water usage, which can be used as predictive and therefore preventative measure. These can also be used to inform and support policy decisions.) - Groundwater levels. - Water levels in water reservoirs.	- Restrict water usage. - Prioritize drinking-water over other uses. - Start building reversed osmosis drinking water factories - Enlarge reserves/create buffers
2	Increased temperature	- Enhanced cyanobacterial (“algal”) blooms, including toxigenic cyanobacteria. - Increase of presence pathogens. ? - New/other pathogens	- Additional drinking-water treatment with: ○ Activated carbon (for cyanotoxins) ○ Disinfection (for pathogens) - Reduce the discharge of nutrients into source water/catchment area. - Reduce the discharge of nutrients in waste waters.	- Visual inspections. - Cyanotoxins. - Water temperature.	- Restrict discharges from agriculture/industries/untreated wastewater. - Implementation of sedimentation traps for runoff of manure.
3	Drought	Reduced surface water quality due to decreased dilution in rivers.	- Additional treatment of both drinking-water and wastewater. - Reduce the discharge of contaminants in the catchment area.	- Use predictive models of discharge (large rivers). Monitor: - Water levels. - Water quality.	- Intensified restriction of emissions from industry/wastewater treatment plants.
4	Drought	Reduced drinking-water quantity due to drying up of wells as a consequence of reduced groundwater tables.	- Infiltration of surface water into the ground (Managed Aquifer Recharge). - Application of treated wastewater in agriculture outside drinking-water sources /water protection zones. - Develop additional water sources for drinking water production. - Raise awareness among water users.	- Groundwater levels.	- Restrict water usage. - Prioritize users/purposes of water use. - Additional temporary allowance of aquifer recharge. - Start building reversed osmosis drinking water factories - Enlarge reserves

5	Sea-level rise	Salty taste due to saline intrusion, i.e. the influx of seawater into fresh water aquifer (groundwater) (Taste thresholds of sodium are generally between 200-300 mg/L)	- Infiltrate fresh water into the ground. - Dilute salty drinking-water with fresh drinking-water. - Additional water treatment (e.g. Reverse Osmosis). - Develop additional sources for drinking-water production.	- NaCl concentration - Conductivity -	- Prioritize groundwater usage in coastal areas for drinking-water production purposes only, i.e. restrict the use for other purposes, in order to prevent further drop in groundwater table and therewith minimize further saline intrusion.
6	Sea-level rise	Freshwater-saltwater interface along river estuary reaches the point where raw water is abstracted and leads to increased salt concentrations (surface water)	- Dilute drinking-water with fresh water. - Additional water treatment (e.g. Reversed Osmosis). - Translocate drinking-water abstraction point.	- NaCl concentration - Conductivity -	- Prioritize drinking-water usage. - Temporarily exemptions allowing for higher NaCl concentrations.
7	Flooding	Discharge of contaminants through combined sewer overflows due to heavy rainfall events.	- Decrease use of combined sewer systems - rainwater collection tanks. - Separate rainwater collection from sewer systems. - Communicate to end-users and consumers not to play in water on streets, or swim non-dedicated bathing locations.	- Visual inspection of raise of water levels on streets due to overflow. - Visual inspection raised river levels and turbidity. - Faecal indicators (e.g. coliform bacteria, *E. coli*). - Turbidity.	- Enforce construction of separate sewer systems in new development projects. - Enforce separate rainwater collection tanks. - Encourage implementation of rainwater collection tanks in existing housing. - Restrict down-stream bathing activities
8	Flooding	Interrupted drinking-water treatment process / poor drinking-water quality, due to damaged treatment infrastructure.	- Stop drinking-water treatment preventatively when flooding is predicted - Provide alternative drinking-water: delivery by other drinking-water production facilities, or delivery by truck or boat supply, provision of bottled water.	- Control parameters like pH, oxygen, turbidity. - Water levels. - Visual inspection of the treatment processes.	- Implement flood early warning system and inform/communicate. - Create DW buffers

9	Heavy rainfall	Source water gets polluted (along with particles) due to increased run-off and linked erosion.	- Limit bare soils and paved surfaces:
			  ○ Re-naturalization of riverbanks.
			  ○ Planting trees.
				- Turbidity.
				- Contaminants:
				  ○ Nutrients (in agricultural areas).
				  ○ Fecal indicators.
					- Implement a tax for paved surfaces, e.g. pavement in gardens
					- Subsidize planting trees in the catchment.
					- Restrict down-stream bathing activities.