

## Supplementary material: Survey questionnaire S1

### The value of water – estimating water-disruption impacts on businesses

#### 1. Which Swedish county is your company mainly active in?

- ☐ Stockholms län
- ☐ Uppsala län
- ☐ Södermanlands län
- ☐ Östergötlands län
- ☐ Jönköpings län
- ☐ Kronobergs län
- ☐ Kalmar län
- ☐ Gotlands län
- ☐ Blekinge län
- ☐ Skåne län
- ☐ Hallands län
- ☐ Västra Götalands län
- ☐ Värmlands län
- ☐ Örebro län
- ☐ Västmanlands län
- ☐ Dalarnas län
- ☐ Gävleborgs län
- ☐ Västernorrlands län
- ☐ Jämtlands län
- ☐ Västerbottens län
- ☐ Norrbottens län

#### 2. How many employees does your company have?

- ☐ 0–9 employees
- ☐ 10–49 employees
- ☐ 50–199 employees
- ☐ ≥200 employees

#### 3. Which economic activity sector (section and division) does your company belong to?

NACE Code	Economic activity (section)	NACE code	Economic activity (division)
A	Agriculture, forestry and fishing	A 01	Crop and animal production
		A 02	Forestry and logging
		A 03	Fishing and aquaculture
B	Mining and quarrying	B 07–09	Mining and quarrying
C	Manufacturing	C 10–12	Food, beverage and tobacco
		C 13–15	Textiles and leather
		C 16	Wood products
		C 17	Paper products
		C 18	Printing and recorded media
		C 19	Coke and petroleum
		C 20–21	Chemicals and pharmaceuticals
		C 22–23	Rubber and plastic
		C 24–25	Metal products
		C 26–27	Computer and electronics

		C 28	Machinery
		C 29–30	Transport equipment
		C 31	Furniture
		C 32	Other manufacturing
		C 33	Repair and installation
D	Electricity, gas, steam and air	D 35	Electricity, gas, steam and air
E	Water, sewerage, waste and remediation	E 36	Water collection, treatment and supply
		E 37	Sewerage
		E 38	Waste collection, treatment and disposal activities; materials recovery
		E 39	Remediation activities
F	Construction	F 41	Construction of buildings
		F 42	Civil engineering
		F 43	Specialised construction activities
G	Wholesale and retail; repair of motor vehicles	G 45	Wholesale and retail trade and repair of motor vehicles
		G 46	Wholesale trade, except of motor vehicles
		G 47	Retail trade, except of motor vehicles
H	Transportation and storage	H 49	Land transport and transport via pipelines
		H 50	Water transport
		H 51	Air transport
		H 52	Warehousing and support activities for transportation
		H 53	Postal and courier activities
I	Accommodation and food service	I 55	Accommodation
		I 56	Food and beverage service activities
J	Information and communication	J 58	Publishing activities
		J 59	Motion picture, video and television, sound recording and music publishing
		J 60	Programming and broadcasting activities
		J 61	Telecommunications
		J 62	Computer programming, consultancy
		J 63	Information service activities
K	Financial and insurance activities	K 64	Financial service activities, except insurance and pension funding
		K 65	Insurance, reinsurance and pension funding
		K 66	Activities auxiliary to financial services and insurance activities
L	Real estate activities	L 68	Real estate activities
M	Professional, scientific and technical activities	M 69	Legal and accounting activities
		M 70	Activities of head offices; management consultancy
		M 71	Architectural and engineering; technical testing and analysis
		M 72	Scientific research and development
		M 73	Advertising and market research
		M 74	Other professional, scientific and technical activities
		M 75	Veterinary activities
N	Administrative and support service activities	N 77	Rental and leasing activities
		N 78	Employment activities
		N 79	Travel agency, tour operator and other reservation service
		N 80	Security and investigation activities
		N 81	Services to buildings and landscape activities
		N 82	Office administrative, office support
O	Public administration and defense	O 84	Public administration and defense
P	Education	P 85	Education
Q	Human health and social work activities	Q 86	Human health activities
		Q 87	Residential care activities
		Q 88	Social work activities without accommodation

R	Arts, entertainment and recreation	R 90	Creative, arts and entertainment
		R 91	Libraries, archives, museums
		R 92	Gambling and betting activities
		R 93	Sports activities and amusement and recreation activities
S	Other service activities	S 94	Activities of membership organisations
		S 95	Repair of computers and personal and household goods
		S 96	Other personal service activities

#### 4. What type of main water source do you use in your company?

Do not consider any supplementary water sources in this question.

- ☐ Only municipal water
- ☐ Municipal and private water
- ☐ Only private water

#### 5. If private water, what is the water source?

Choose one or multiple alternatives.

- ☐ Groundwater
- ☐ Surface water
- ☐ Desalinated seawater
- ☐ Other: *Open ended*

#### 6. How much of your value added\* (%) do you estimate that you can maintain during a water disruption of the following duration?

Assume that the shorter disruptions occur at a time when the business is running. 100 % corresponds to value added at normal business activity, and 0 % corresponds to added value when the business is closed. If you have access to a supplementary water source, take that into account in your answer. See examples in the figure below for how the added value can change over time.

\*Value added = Value of the company's output minus the total cost of inputs.

For those of you who do not conduct your economic activity as a company (e.g. authorities), answer the question based on the percentage of normal activity.

	Two-hour disruption	Four-hour disruption	Twelve-hour disruption	One-day disruption	One-week disruption	One-month disruption
100 % (normal business activity)						
80-99 %						
60-79 %						
40-59 %						
20-39 %						
1-19 %						
0 % (closed business activity)						

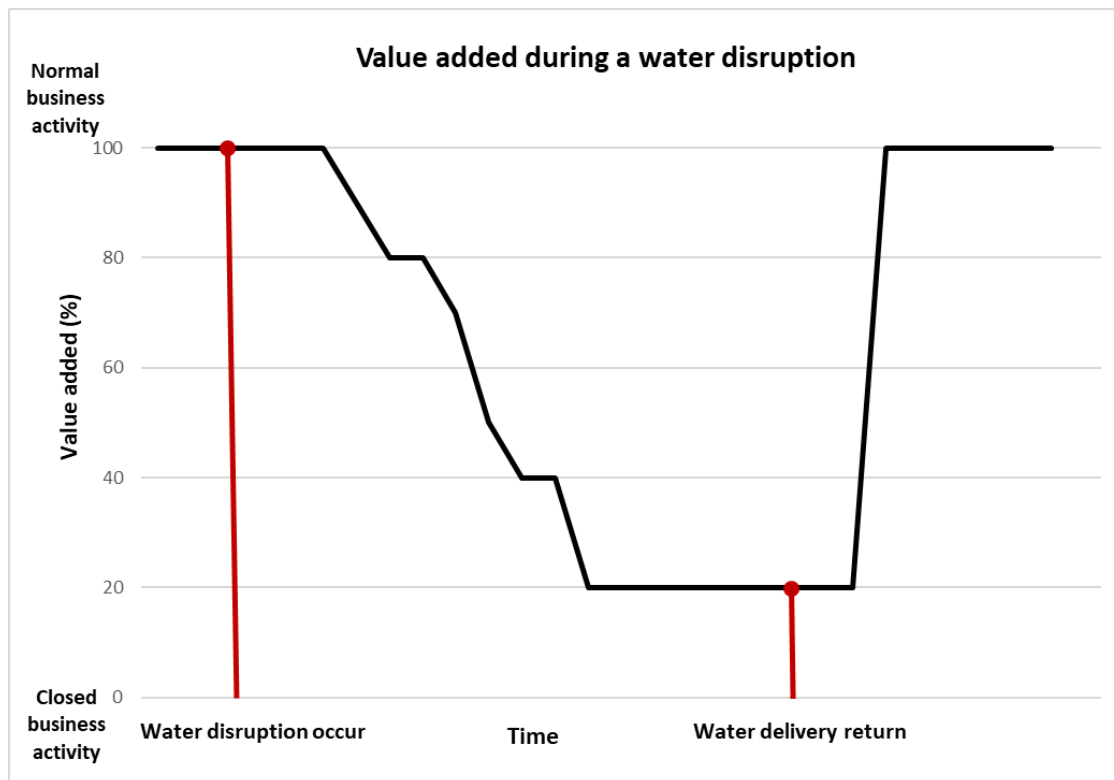


Figure 1 Example of how the value added can change during a water disruption. The company in the example can maintain normal business activity a short while after the disruption occurs. The value added then decreases gradually to 20%, a level that the company can maintain for a longer period. Shortly after the water supply has returned, the company is back in normal business activity (100 %).

**7. If you must slow down or shut down your business activity during a water disruption event, what is the reason?**

Choose one or multiple alternatives.

- ☐ The business activity is dependent on water and we can therefore not maintain normal business activity in the event of a water disruption.
- ☐ We choose to slow down or shut down our business due to the risk of not being able to handle a fire.
- ☐ We choose to slow down or shut down our business due to the risk that safety equipment, such as an emergency showers, will not work.
- ☐ We choose to slow down or shut down our business for hygienic reasons.
- ☐ Other

**8. If you need to slow down or shut down your business during a water disruption event, how long time after the water has returned is your value added back at 100%?**

100% value added corresponds to normal business activity.

For those of you who do not conduct your economic activity as a company (e.g. authorities), answer the question based on the percentage of normal activity.

	When the water supply returns after a <u>2-hour</u> disruption, the value added is back at 100% after additionally:	When the water supply returns after a <u>4-hour</u> disruption, the value added is back at 100% after additionally:	When the supply returns after a <u>12-hour</u> disruption, the value added is back at 100% after additionally:	When the water supply returns after a <u>1-day</u> disruption, the value added is back at 100% after additionally:	When the water supply returns after a <u>1-week</u> disruption, the value added is back at 100% after additionally:	When the water supply returns after a <u>1-month</u> disruption, the value added is back at 100% after additionally:
Immediately						
< 4 hours						
4-11 hours						
12-23 hours						
1-6 days						
1 week-1 month						
> 1 month						
The company cannot recover and goes bankrupt						
We do not need to slow down or shut down the business						

**9. Does your company have access to supplementary water that you can use in your business during a water disruption?**

Choose one or multiple alternatives.

- ☐ No
- ☐ Yes, groundwater
- ☐ Yes, surface water
- ☐ Yes, desalinated seawater
- ☐ Yes, we store water in a reservoir
- ☐ Yes, we can purchase water from another municipality
- ☐ Yes, we can meet our needs by purchasing water from a grocery store
- ☐ Yes, we can purchase water from another private actor
- ☐ Yes, other

**10. Have you taken any other measures to reduce the risk of being affected by a water disruption?**

Choose one or multiple alternatives.

- ☐ We plan to invest in a supplementary water source
- ☐ We plan to invest in new water efficient technology
- ☐ We have invested in new water efficient technology
- ☐ We can temporarily alter the business activity
- ☐ We have performed a risk analysis and have taken relevant precautions
- ☐ We have not currently taken or planned any measures
- ☐ Other

**11. Have your company suffered an unplanned water disruption during the last five years?**

Choose "Yes" regardless of the extent of the disruption.

- ☐ Yes
- ☐ No
- ☐ Do not know