

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 36	Water collection, treatment and supply
		E 37	Sewerage
		E 38	Waste collection, treatment and disposal activities; materials recovery
E	Water, sewerage, waste and remediation	E 39	Remediation activities
		F 41	Construction of buildings
		F 42	Civil engineering
F	Construction	F 43	Specialised construction activities
		G 45	Wholesale and retail trade and repair of motor vehicles
		G 46	Wholesale trade, except of motor vehicles
G	Wholesale and retail; repair of motor vehicles	G 47	Retail trade, except of motor vehicles
		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	Transportation and storage	H 53	Postal and courier activities
		I 55	Accommodation
I	Accommodation and food service	I 56	Food and beverage service activities
		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	Information and communication	J 63	Information service activities
		K 64	Financial service activities, except insurance and pension funding
		K 65	Insurance, reinsurance and pension funding
K	Financial and insurance activities	K 66	Activities auxiliary to financial services and insurance activities
L	Real estate activities	L 68	Real estate 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	Professional, scientific and technical activities	M 75	Veterinary 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	Administrative and support service activities	N 82	Office administrative, office support
O	Public administration and defense	O 84	Public administration and defense
P	Education	P 85	Education
		Q 86	Human health activities
		Q 87	Residential care activities
Q	Human health and social work 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)						

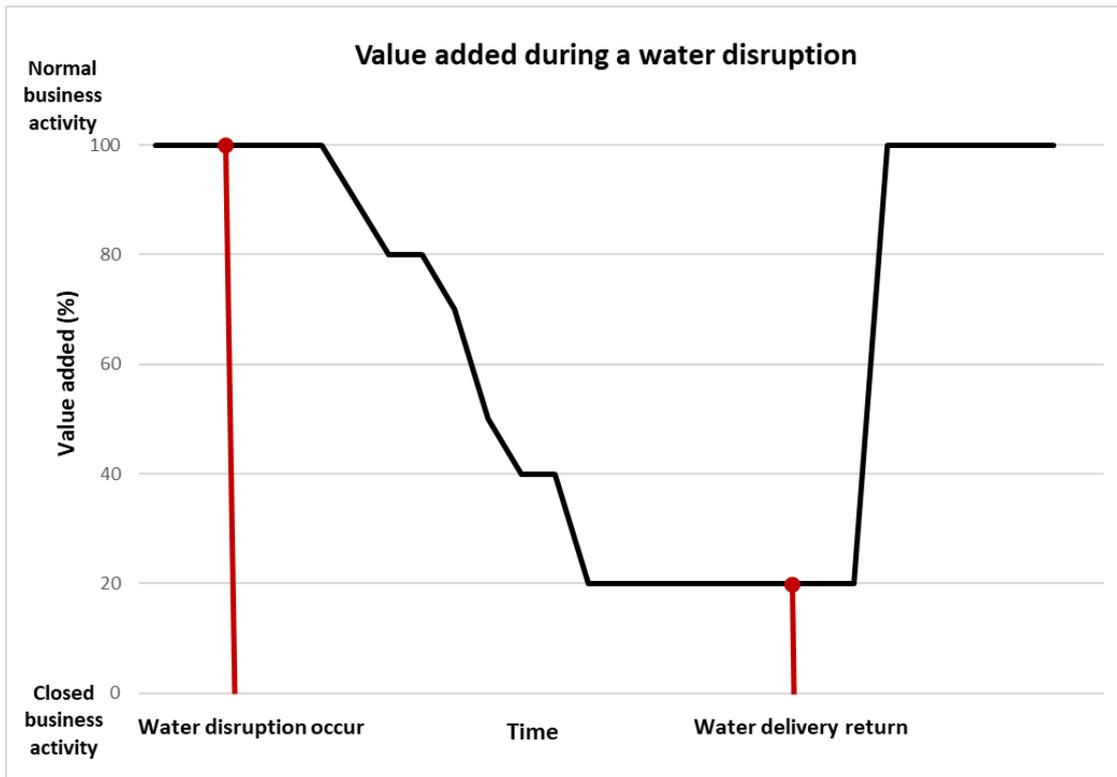


Figure 1 Example of how the value added can change during a water disruption. The company in the example can maintain normal business activity a short while after the disruption occurs. The value added then decreases gradually to 20%, a level that the company can maintain for a longer period. Shortly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