QUESTIONNAIRE SURVEY

BEČVA RIVER BASIN — RESEARCH OF EXTREME WEATHER EVENTS AND THEIR IMPACTS ON SOCIO-ECONOMIC CONDITIONS, ADAPTATION AND POPULATION DYNAMICS

Ladies and gentleman,

you take part in questionnaire survey concerning on social and economical changes of the municipalities affected by floods or droughts. We would like to ask you about several questions concerning your livelihood and adaptation strategies to extreme weather events within last 15 years, including your evaluation of weather and climate changes.

We also research, to what extend was your livelihood affected by other weather events and environmental changes (extreme winds, precipitations, soil and water erosion). Moreover, we ask you about some social and economical data concerning your livelihood.

We want you to assure you of the fact that questionnaire is fully anonymous and we will treat acquired data only for research purposes. We do not give your personal data and names to anybody else. We intend to use only aggregate anonymous data for purposes of publications in scientific journals, public releases in newspapers or as a groundwork for governments. Our paper would focus on weather, environmental and socio-economic changes in your country to show how is your livelihood exacting and what kind of troubles you have to overcome.

We ask you to fill the questionnaire openly and truthfully. Only through the right answers, we get the truthful picture about your livelihood and environment.

Thank you very much for your openness and cooperation.

Mgr. Robert Stojanov, Ph.D.(survey coordinator)

| Questionnaire n | umber_ | | | | | | | | |
|-------------------|-----------|------|----------|--------|---------|----------|---------|---------|-----------|
| Date: | | | Inte | rview | er: | | | | |
| City: | | | City | area/ | street | : | | _ | |
| | | | | | Dat | e | | | |
| Risk category: | HIGH | | LOV | V | NON | NE | D | RY | |
| Name of waterco | ourse/ so | urce | of risk: | | | | | | |
| Estimate the dist | | | iouse f | rom th | ne rive | r /strea | am – so | ource o | of floodi |
| Written by: | | | | | | | | | |
| Filled in part: | | Α | В | С | F | G | Н | I | |
| | | | | | | | | | |

DISTRIBUTION OF RESPONDENTS

1. Have you had personal experience with floods from the river Thaya (or its tributaries?)

Yes --> Go to question **1.A.**

No ---> Go to question **7.A.**

PART A - EXPERIENCE WITH FLOODS AND OTHER NATURAL RISKS

1.A In which years did you come into contact with floods?

This part applies to your household and is focused on the level of contact with natural risks

| 2.A What p | fect | | 1 - | leas | | fect | ted) | | ater? elds, | | est | ock | wor | ·ksh | ops, | Foc | nd st | tore | a | araç | ne. |
|-------------------|------|------|------|------|------|------|------|------|----------------|-----|------|-----|-----|------|-------|-----|--------------|------|---|------|-----|
| | • | ous | C | | Ciia | • | | arde | | LIV | CSC | OCK | | | lings | (| utili oon | ty | 9 | ui u | , - |
| Current Status | y | es r | 10 | уe | es i | no | y | es r | าด | y | es i | no | y | es i | าด | y | es i | no | у | es i | าด |
| 1997 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 |
| 2002 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 |
| 2006 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 |
| 2009 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 |
| 2010 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 |
| Other year: | | | | | | | | | | | | | | | | | | | | | |
| | | | rty_ | | | | | | | | | | | | | | | | | | |

| | 0 - 50 | 50 - 100 | 100 - 200 | 200 - 500 | 500 – 1.mil. | 1. mil. and more |
|-------------|--------|----------|-----------|-----------|--------------|------------------|
| 1997 | | | | | | |
| 2002 | | | | | | |
| 2006 | | | | | | |
| 2009 | | | | | | |
| 2010 | | | | | | |
| Other year: | | | | | | |
| | | | | | | |

6.A Try to estimate how you paid for the damage

(100% - full compensation, 0% - no compensation paid)

| | insurance | own resources | Exceptional immediate assistance | commercial loan | (Municipal) grant to refurbish household etc. | Preferential state loan for reconstruction ¹ |
|-------|-----------|------------------|----------------------------------|--------------------|--|---|
| 1997 | | | | | | |
| 2002 | | | | | | |
| 2006 | | | | | | |
| 2009 | | | | | | |
| 2010 | | | | | | |
| Other | | | | | | |
| year | | | | | | |

¹For example, from the Ministry of Regional Development or the State Programme for the development of housing, etc.

- **7.A** Try to remember what other natural disasters you have faced in the past:
- **7.1.** A. Do you remember any kinds of restrictions that you had to take? (no open fires, no pumping of water from the river, etc.)

| 1 - drought; | 2 - strong winds; | 3 - hail; | 4 - severe frost; | 5 - soil erosion; | 6 - |
|--------------|-------------------|-----------|-------------------|-------------------|-----|
| other | | | | | |

| Kind | What damage occurred: | 1. Method of settlement (financial, repairing, changes,) 2. Prohibitions, restrictions | Year |
|------|-----------------------|---|------|
| | | | |
| | | | |
| | | | |

PART B - HOUSEHOLD ADAPTATION MEASURES

| iaturai | 113/2 | |
|---------|--|--|
| | Can you give the year when Where is your house situated 1. On flat ground 2. On a gentle slope 3. On a steep slope | |
| 3.B | Your house has: 1. A basement 2. No basement 3. Ground floor | 4. Two storeys5. Three storeys6. More than three storeys |
| 4.B | What building materials are 1.Fired brick 2. Combination of fired and 3. Unfired brick (adobe) 4. Hollow brick | e the load-bearing walls of your house made from? |

This section refers to specific measures that you have taken to protect your home against

- 5.B At what height above the ground does your living space start?
 - 1. Ground floor at ground level

5. Autoclaved aerated concrete6. Other - what

- 2. About one metre above ground level
- 3. Ground floor higher than 1 metre above ground level ("raised floor")
- **6.B** Is your house is protected against damp or flooding in general? If you made these adjustments to your house after having experienced floods, when was it?

| | Just cutting | Waterproofing, | Total rebuilding of | Landscaping |
|-----------------|--------------|---------------------|----------------------|----------------------|
| | | drainage around the | drainage system from | (embankments , wall, |
| | | house | the land | trench , planting of |
| | | | | greenery , etc.) |
| Before flood of | | | | |
| 1997 | | | | |
| 1997 -before | | | | |
| 2006 | | | | |
| 2006 -before | | | | |
| 2010 | | | | |
| after flood of | | | | |
| 2010 | | | | |
| Other date: | | | | |

| 7.B.1 Other repairs / date_ | | |
|-----------------------------|--|--|
| , , , | | |

| | Move things from the | changing the | Mobile barriers on doors |
|----------------------|----------------------|--------------|--------------------------|
| | basement | floors | and windows |
| before flood of 1997 | | | |

7.B What measures to the interior did you take after the flood and in which years?

| | basement | floors | and windows |
|----------------------|----------|--------|-------------|
| before flood of 1997 | | | |
| 1997 - before 2006 | | | |
| 2006 - before 2010 | | | |
| after flood of 2010 | | | |
| Other date: | | | |

| 7.1.B Other measures in the interior (for example, installation of drainage channels in th floor, etc.) |
|--|
| 7.2.B Date (before / after which flood) |

8.B Is your property insured? Against what? Specify the year of signing the contract

| Property / | against theft | against natural disasters in | Do you have specific |
|---------------|---------------|----------------------------------|---------------------------|
| Insurance | and vandalism | general, such as lightning, hail | insurance against floods? |
| | (year) | (year) | (Year) |
| Household and | | | |
| property | | | |
| Land, farm | | | |
| buildings | | | |

| 8.1.B | Did you hav | e any prob | olems insu | ring your | property | and | household | agains | t floodir | ng? |
|-------|-------------|------------|------------|-----------|----------|-----|-----------|--------|-----------|-----|
| | | | | | | | | | | |

| 8.2.B Has the | price of insurance | increased over i | the last 10 y | /ears: |
|---------------|--------------------|------------------|---------------|--------|
| | | | | |

- **9.B** Do you catch (rain) water in any way?
 - 1. Yes, (drums, barrels)
 - 2. Yes, in a different way:
 - 3. Yes, I have my own water source:
 - 4. No
- **10.B** For what purposes do you use rainwater?
 - 1. Watering the garden
 - 2. WC, technical purposes
 - 3. Other:_____
- **11.B** How many litres are you able to catch? _____
- **12.B** How do you heat your house (water heater, heating)?
 - 1. Wood
 - 2. Coal (brown / black)
 - 3. Gas (boiler, condensing boiler)
 - 4. Electricity (boilers, heaters)
 - 5. Other (solar panels / heat pump...)
 - 7. Remote heating source

| 1. Regula 2. Green | s your source of electricity? Far electricity provider (e.g. EON , etc.) For energy from the grid For point in alternative sources, which ones: |
|-----------------------|---|
| - | ou done anything to reduce energy consumption in the house? Give d year of implementation: |
| | nsulation, attic, |
| | tion of walls and floors |
| • | tement of existing windows for euro-windows |
| | g existing windows s, such as: |
| o. Others | , such as |
| 15.C From | what source do you get your drinking water: |
| | |
| DART C - DREE | PAREDNESS FOR NATURAL HAZARDS AND THEIR PERCEPTION |
| _ | s us about how prepared you are for flood risk |
| 1.C Do yo | u follow the weather forecast? |
| 1. Yes | |
| 2. No | > go to question 3.C. |
| | |
| 2.C How ofte | n are you interested in the weather forecast? |
| 1. Every | day |
| - | second day |
| _ | or twice per week |
| | |
| | hat source do you get information? |
| 1. TV 2. Radio | |
| | et - web (which): |
| | try to guess the weather for myself |
| | my own weather station |
| 6 11,000 | a meteorological diary |

| 3.C How do you rate the quality of life and housing in your town? Please mark like a |
|---|
| school grade 1 (excellent) - 5 (fail) |

| Area of life | 1 | 2 | 3 | 4 | 5 |
|-----------------------------|---|---|---|---|---|
| Quality of life and society | | | | | |
| Nature, Environment and | | | | | |
| surroundings | | | | | |

- **4.C** In what area do you think you live with regard to risk of flooding?
 - 1. There is no risk for me
 - 2. In an area of low risk (sometimes)
 - 3. In an area of high risk (often)

| 4. I don't know |
|---|
| 4.1. C In what area do you live with regard to drought (in terms of rainfall, availability of surface and ground water)? 1. There is no risk for me 2. In an area of low risk (sometimes) 3. In an area of high risk (often) 3. I don't know |
| 5.C In your opinion what influences the occurrence of floods (and other natural risks)? 1. Human activity has a significant effect on the occurrence of natural risks 2. It's the influence of weather and nature, which we can't control 3. Both, it is a combination of human activities and weather |
| If you have your own opinion , please write it here: |
| |
| |
| 6.C Please evaluate the level of anti - flood protection in your town (1 excellent - 5 insufficient) $1 - 2 - 3 - 4 - 5$ If you have your own opinion, please write it here: |
| |

 $\textbf{7.C} \ \ \text{In your opinion how ready is your household for natural risks, especially future floods or drought?}$

(1 - well-prepared, 5 - unprepared)

1 2 3 4 5

8.C Write what you plan to (would like to) do to make your house adequately prepared for floods and other natural risks

9.C Have you observed in recent years (approximately 5-10 years) a change in the local climate throughout the year where you live?

- 1. Yes , it is changing significantly
- 2. I have not observed any significant changes
- 3. I don't know

10.C What specific changes have you noticed?

1. Earlier onset of spring YES NO I DON'T KNOW

2. Higher temperatures lasting for longer in summer KNOW

YES NO I DON'T

| 3. Milder winters | YES |) | NO | ΙL | ON I | KNO | /V | |
|---|-------|-----|-----|----|------|--------|------------|---|
| 4. Colder winters | YES | 5 | NO | ΙD | ON'T | . KNO | Ν | |
| 5. Radical changing of the weather | | | YES | | NO | I DOI | Ν'Τ | |
| KNOW | | | | | | | | |
| 6. More frequent droughts | | YES | 1 | OV | I DO | ON'T k | NOW | 1 |
| 7. More frequent occurrence of heavy rains and floo | ding | YES | 1 | OV | I DO | ON'T k | NOW | 1 |
| 8.The emergence of new species (or pests) | | YES | 1 | OV | I DO | ON'T k | KNOW | 1 |
| 11.C Have you noticed other changes? Write which | ones: | ! | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

PART F - SOCIO - DEMOGRAPHIC

| 1 year | <u>-</u> | | | |
|------------------------|------------------|-----------|----------|--|
| 1. Where did you move | | 3. Cour | ntry | |
| 2.F How many people li | e in your house? | Adult(s), | children | |

3.F Please fill in the table for each person in your close family who lives or has permanent residency in your home.

| Person | Gender | Membership in family | Marital status | Highest | Field of work | Type of work | Place of | Income after tax (CZK) | years have | Average hours worked | Permanent | Lives here? Yes/no |
|--------|--------|-------------------------|-------------------|---------|------------------|-----------------|--------------------|------------------------------|------------|-------------------------|-----------|--------------------------|
| 1 | | | | | | | 1> с. п 2> č. G | | | | | |
| 2 | | | | | | | 1> č. H | | | | | |
| _ | | | | | | | 2> č. G | | | | | |
| 3 | | | | | | | 1> č. H | | | | | |
| 4 | | | | | | | 2> č. G | | | | | |
| 4 | | | | | | | 1> č. H | | | | | |
| 5 | | | | | | | 2> č. G | | | | | |
| 5 | | | | | | | 1> č. H 2> č. G | | | | | |
| 6 | | | | | | | 1> č. H | | | | | |
| U | | | | | | | 2> č. G | | | | | |
| 7 | | | | | | | 1> č. H | | | | | |
| | | | | | | | 2> č. G | | | | | |
| 8 | | | | | | | 1> č. H | | | | | |
| | | | | | | | 2> č. G | | | | | |
| 9 | | | | | | | 1> č. H | | | | | |
| | | | | | | | 2> č. G | | | | | |

PART G - COMMUTING TO WORK / STUDY AND MIGRATION
This part applies to commuting and migration (national and international)

| 0.G Number of people 3F1 3 | 3F2 3F3 3F4 | 3F5 3F6 |
|--|-------------------|--|
| 1.G Where do you commute to 1.Town 2. Region | | you study / Where do you live? |
| 2.G How many kilometres do you o | commute to work | / to study / to the place you live now? |
| 3.G How often during the last three 1. Every day 2. 2-3x per week (every second) 3. once per week (Mon-Fri at the second) 4. 2x month 5. 1x month Other combination: 4.G How long does it take to comment | nd day) work) | |
| Vehicle | Time (min) | Frequency of use (3 regularly, sometimes 2 - rarely 1) |
| Individual transport - car | | 1 a. a.y 2, |
| Car - with co-passenger / s | | |
| Public transport - bus | | |
| Public transport - train | | |
| Combination (e.g. car+train) | | |
| Bike | | |
| Walk | | |
| 6.G How long have you worked in t | the place where y | ou commute to / live / study? |
| 1 | | - m.k.l.s |
| 1 year. 2 | m | <u>ontn</u> |
| 7.G What is your primary purpose 1. Job Opportunities 2. Family reasons 3. Dissatisfaction with living condit 4. Repeated flood risk 5. Environmental pollution 6. Medical reasons 7. To be more independent 8. Studies at secondary School 9. Studies at university 10. Studies at a Language School 11. Other (give more details) | - | work / study / residence changes ? |

PART H - INTENTIONS OF MOVING OR COMMUTING TO WORK / STUDY

0.H Number of people 3F1 3F2 3F3 3F4 3F5 3F6

| 1 U le anyon | o in vour housoh | ald planning to w | ark / study in anothor | town, or move to another |
|---|--|----------------------|-------------------------|--------------------------|
| town? | e iii your nousend | old plaining to we | ork / Study iii another | town, or move to another |
| | -> question 2.H -> finish | | | |
| 2.H What exa | actly do you have | e in mind? | | |
| | uting to work uting to study g out | | | |
| 3.H What is y | our main reason | ? | | |
| 4. Repeated f 5. Environme 6. Medical rea 7. To be more 8. Studies at 9. Studies at 10. Studies a | sons Ition with living collion Ition with living collion Ition Iti | I | | |
| 4.H Where do | o you plan to go? | (fill in at least on | e part) | |
| 1. Town_ | 2 | . Region | 3. Country | |
| | long do you plan ur community? | to commute to w | ork / study outside of | your community or reside |
| 1 | year(s) | 2 | month(s) | 3. I don't know |