Risks and prioritisation of risk preventive measures in Valka district.

In order to discuss and determine main risks and preventive measures local specialists were gathered in Valka City Council to attend a meeting on 8th of September, 2017. Representatives from various fields were invited – health and welfare, construction, tourism, civil protection and work safety, county planning and development, as well as management. Complete list of participants and invitations issued, agenda and summary of covered topics can be found in attachment.

Several weeks prior to meeting specialists were supplied with reports on identified risks and adaptation activities to prevent these risks or reduce the impact ("C10 Climate Change Risks and Vulnerabilities un C10 Climate change adaptation activities" in Latvian). Participants were asked to familiarize themselves with the documents in order to prepare for a discussion, and provide constructive comments and suggestions on the topic.

Goal of the meeting was to exchange information in various fields of expertise and how the latter can be affected by climate change, and what kind of adaptive measures are required and can be implemented. Two methods were employed:

- discussion, where all identified risks were analysed and main risks were identified;
- written survey, that was filled in individually

Discussion

Participants were involved in open discussion and share their opinion on what are the main risks of climate change, and what should be the main focus of the project going further. Following risks were highlighted:

1.2. Generalist species replacing specialist species.

Experts pointed out a hogweed invasion as one of the main concerns. Mapped spread of hogweed in Valka district in attached to the report.

Suggestions: Herd grazing in hogweed spread territories, mowing, chemical control (herbicides)

2.2. Chronic diseases flare (CVD, diabetes etc.) and increase in mortality rate.

Including acute viral infection outbreaks in organized groups.

Suggestions: Informative seminars, raising awareness of and educating medical personnel and social workers.

2.3 Increased incidence of diseases and/or endemic occurrence of insect-born infections.

Particular emphasis was placed on the increased tick distribution area and prevalence of tick-borne diseases. Based on data from The Centre for Disease Prevention and Control, Valka district is not an endemic region for Tick-borne encephalitis, therefore children under 18 years cannot avail of publicly-funded vaccination scheme.

Suggestions: Informative seminars, raising awareness of and educating medical personnel and social workers. Increase public awareness of non-specific preventive measures and their significance.

3.2 Flood risk (rising water levels in rivers and lakes), 5.5 Road damage caused by rainfalls and 6.2 Flood risk caused by heavy rainfalls

Flood affected areas were identified; risk area map was added to the report.

Suggestions: (1) Improve pumping station operation. The problem of capacity has been identified, as in the case of heavy rainfall, it's not sufficient to pump large volumes of water; an increase in capacity is required. (2) Develop a technical guidance project to optimize rainwater drainage systems. (3) Inspection of canal locks on river Pedele (Selija street) to assess its operational state.

5.1 Storm caused rooftop damage. 5.6. Electric distribution network disruptions due to wind gusts.

During storm in 2016, Mierkalna folk house rooftop was displaced, and trees fell in surrounding territories.

Suggestions: (1) Tree removal around power lines to prevent wind-caused disruptions. (2) Exploring alternative energy sources.

Survey

Participants filled in a survey, indicating (1) what is the impact of each of the identified risks to Valka district and (2) what impact can be made to mitigate those risks at Valka district level, implementing various measures. Table XXX entails survey results.

Based on their expertise and experience in particular fields participants determined risk probability in Valka district and possible mitigation or aversion measures applicable at regional level. Scale from 1 to 5 was used to assess the risk probability level, 1 indicating the lowest probability, and 5 – very high probability. This method was used to evaluate all 30 risks. Average rating for risk probability was 2.76 points, and 1.95 points for impact mitigation probability. Above average rating was obtained for 18 risks in risk probability category and 17 risks in impact mitigation possibility. Out of these, 9 risks were assigned above average rating for both risk probability and mitigation possibility.

Table XXX Survey results

		Risk probability	Ability to affect	Included in discussion
1. Biodiversity and ecosystem service area				
1.1	Water body contamination/eutrophication	3,25	2,25	
1.2	Ecologically plastic species (generalist species) drive out ecologically sensitive (specialist species).	2,42	1,75	✓
1.3	Entrance of infection diseases uncharacteristic for Latvia	2,08	1,75	
1.4	Entrance and increase of viability of new species	2,75	2,00	
1.5	Increase in pest and pathogen spread and viability	3,25	1,67	
1.6	Flood risk (storm surge at sea coast)	0,58	0,25	
2. Health and welfare				
2.1	Risk of increase in acute intestinal infection diseases, disease flare	3,25	2,58	

2.2	Chronic diseases flare (CVD, diabetes etc.) and increase in death rate	**3,08**	**2,42**	✓
2.3	Acquired endemic state and/or increase in diseases caused by insect-born infections	**3,17**	**2,33**	✓
2.4	Increase in incidence and mortality from respiratory diseases, especially within particular risk groups	2,92	2,58	
2.5	Increase in heat stroke frequency	2,33	2,58	
2.6	Internal and external migration	2,00	2,25	
3. Tourism and landscape planning				
3.1	Change in winter tourism season length and characteristics	3,50	1,50	
3.2	Flood risk (water raising in rivers and lakes)	3,33	1,67	✓
3.3	Flooding and erosion of the Baltic Sea and Rīgas Bay coastal areas	0,75	0,33	
3.4	Change in summer tourism season length and characteristics	3,42	1,92	
4. Agriculture and forestry				
4.1	Spread of tree diseases and insect pest populations	3,25	1,83	
4.2	Damage caused by spring frosts	3,42	1,42	
4.3	Storm risk	3,58	1,50	
5. Construction and landscape planning				
5.1	Increased storm-caused rooftop damage	**3,67**	**2,50**	✓
5.2	Building damage risk due to rainfall caused flooding	3,00	2,17	
5.3	Snow caused overload increase on rooftops	2,75	2,58	
5.4	An increase in indoor overheating	2,25	2,67	
5.5	Road damage risk due to rainfall caused flooding	**3,17**	**2,50**	✓
5.6	Electrical transmission network damage due to wind gusts	**3,58**	**2,92**	✓
5.7	Increased demand for electricity during summer	2,50	2,25	
6. Civil protection and emergency assistance				
6.1	Flood and ice drift	2,58	1,83	
6.2	Flood risk caused by heavy rainfalls	**3,33**	**2,00**	✓
6.3	Storm and storm surge risk	0,25	0,17	
6.4	Forest and peat fire risk	3,33	2,42	

Priority risks

Main risks were determined based on discussion and survey results. These risks and mitigation and prevention measures were further analysed. 3 factors were taken into account when selecting the risks:

- Was the risk considered a priority during the discussion;

- Does the risk probability rating exceed average rating determined by the survey;

- Does the ability to affect/mitigate risk at Valka district level exceed average rating determined by the survey;

Table XXXX Selected risks

2.2	Chronic diseases flare (CVD, diabetes etc.) and increase in death rate
2.3	Acquired endemic state and/or increase in diseases caused by insect-born infections
5.1	Increase storm-caused rooftop damage
5.5	Road damage risk due to rainfall caused flooding
5.6	Electrical transmission network damage due to wind gusts
6.2	Flood risk caused by heavy rainfalls

During the meeting it was established that risks no.5.5 and 6.2 are often grouped together as flood risk, with road damage as a main concern. In national expert studies above mentioned risks were determined from two separate areas - Construction and landscape planning and Civil protection and emergency assistance. Therefore, this is the same risk considered from two different perspectives. In context of Valka district, road damage was assessed to have the main impact.

As a result, following risks were prioritized:

1. Chronic diseases flare (CVD, diabetes etc.) and increase in death rate

2. Acquired endemic state and/or increase in diseases caused by insect-born infections

3. Increase storm-caused rooftop damage

4. Electrical transmission network damage due to wind gusts

5. Road damage risk due to rainfall caused flooding