



# RIVER UNIVERSITY



Flood Risk  
Management in the  
Baltic Sea Region

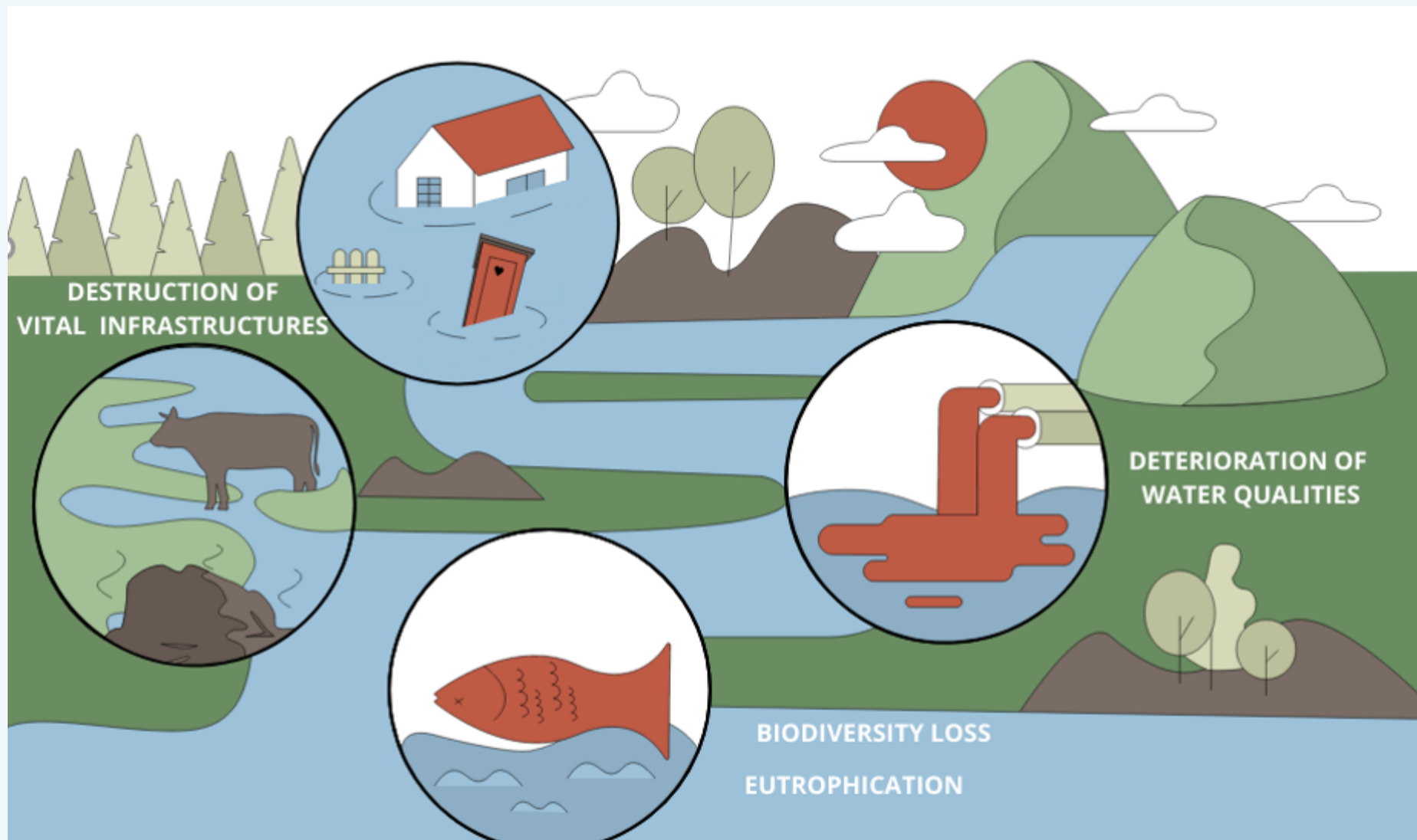
Anna Ushakova

11-15  
July  
2022



Haaliste river, credit, Ilmar Roosmaa,  
[www.Soomaa.com](http://www.Soomaa.com)

# Climate change impact on river basin



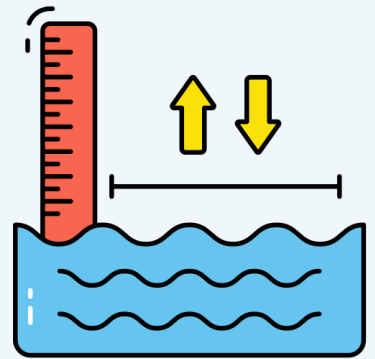
What are the consequences?

- deterioration of water qualities due to the increased level of pollutants flushed into waters;
- exacerbation of eutrophication due to the increased level of nutrients runoff;
- biodiversity loss due to the deterioration of water bodies and increased temperatures;
- destruction of vital socio-economic infrastructures.

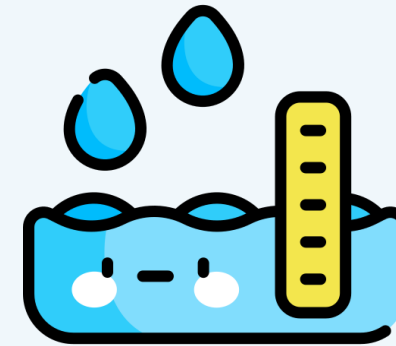


# Expected impacts of climate change

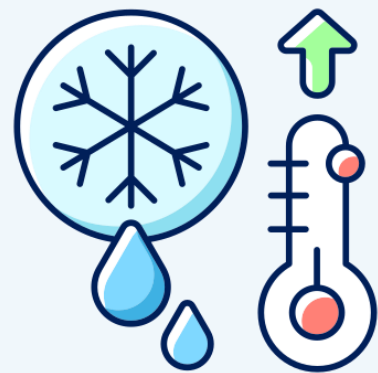
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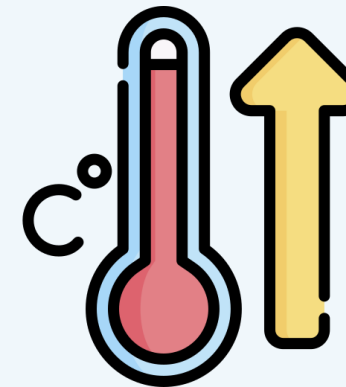
**INCREASE SEA LEVEL**



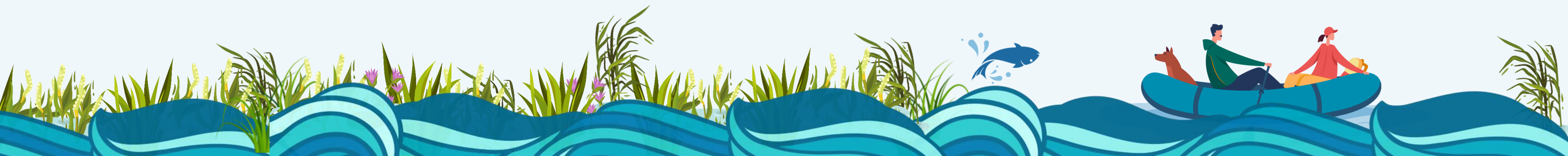
**EXTREME PRECIPITATION**



**DECREASE COLD SPELLS  
AND SEVERE ICE WINTERS**



**INCREASE HEAT WAVES AND  
PHYTOPLANKTON BLOOMS**





The number of major floods in Europe **has increased** over a 25-year period.

The summer floods 2013 in central and south-eastern Europe were the most catastrophic.

Under a high-emissions scenario, climate change could **triple** the direct damages from river floods during the 21st century in the absence of additional adaptation measures.

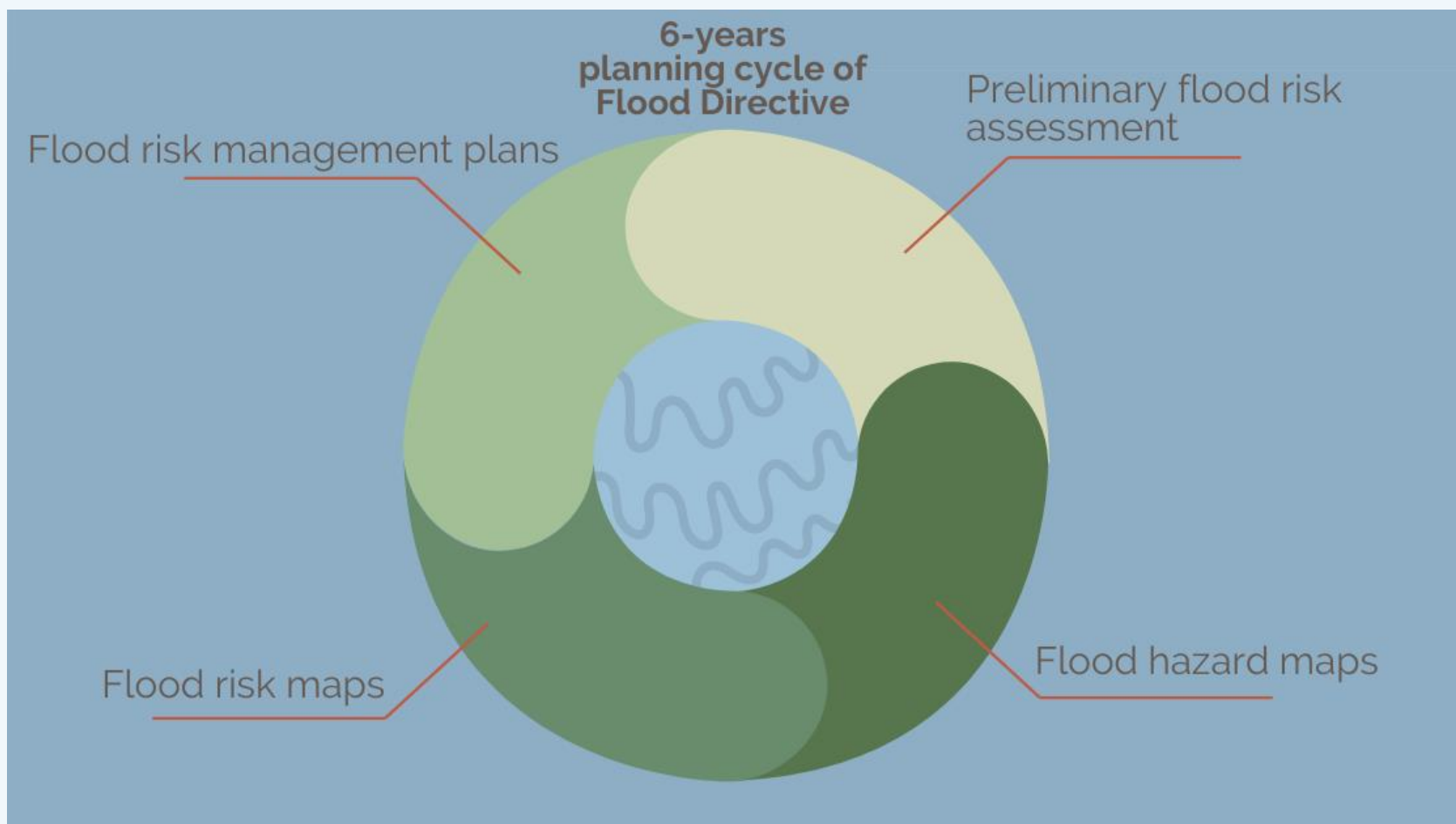


#BalticClimate

#BalticClimate

# Flood Risk Management Plans and approaches in EU

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- The European Water Framework Directive (WFD) obliges EU countries to develop and update River Basin Management Plans (RBMPs);
- Directive 2007/60/EC Flood Risk Assessment and Management requires EU countries to develop Flood Risk Management Plans (FRMPs).

Key areas of flood risk management plans (art. 7 WFD):

1. Flood prevention.
2. Flood protection.
3. Preparation for flooding (preparedness), including:
  - flood forecasting and the development of early warning systems;
  - promoting sustainable land-use practices;
  - improving flood retention by natural floodplains;
  - using controlled flooding (polders, reservoirs);
  - Reducing the effects of flooding through land use management in flood zones, including prohibiting or limiting activities that increase risk [1].



# Flood Risk Management Plans and approaches in RF and RB

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## The Russian Federation

- the Water Code of the Russian Federation

Since 2014 Integrated Water Resources Use and Protection Schemes (IWRMS) for 63 basins and sub-basins, including the basins of Russian and transboundary rivers in the Baltic region. [2].

- the Decree of the Government of the Russian Federation No. 360 of April 18, 2014 "On Defining the Boundaries of Flood Zones and Submerged Areas" which defines the procedure for establishing, changing, and terminating the existence of flood zones

## Republic of Belarus

### The Water Code of the RB

River Basin Councils and River Basin Management Plans (RBMPs). The plans include information on pressures on river basins caused by dangerous hydrometeorological phenomena, including the effects of climate change: floods, low-water periods, and erosion processes.

The RBMP includes a list of measures aimed at flood risk management:

- including the development of flood risk assessment maps;
- establishment of an early warning system based on operational data of automatic monitoring of the level regime of rivers;
- identification of zones of flooding and waterlogging of areas leading to economic damage due to flooding;
- regulation of the use of areas potentially subject to flooding; implementation of adaptation measures to climate change [3].



# Transboundary/integrated Flood Risk Management

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- The development of a transboundary/integrated Flood Risk Management Plan, common to all countries in the river basin;
- Signing of international agreement on transboundary rational use and protection of transboundary waters BSR. Establishment of international water commissions for all transboundary river basins in the BSR;
- Development of international warning and alert plans within transboundary river basins;
- Improvement of interagency agreements in the field of hydrometeorology, environmental monitoring and data exchange on the condition of transboundary watercourses between countries in the transboundary BSR river basins.



# Transboundary/integrated Flood Risk Management

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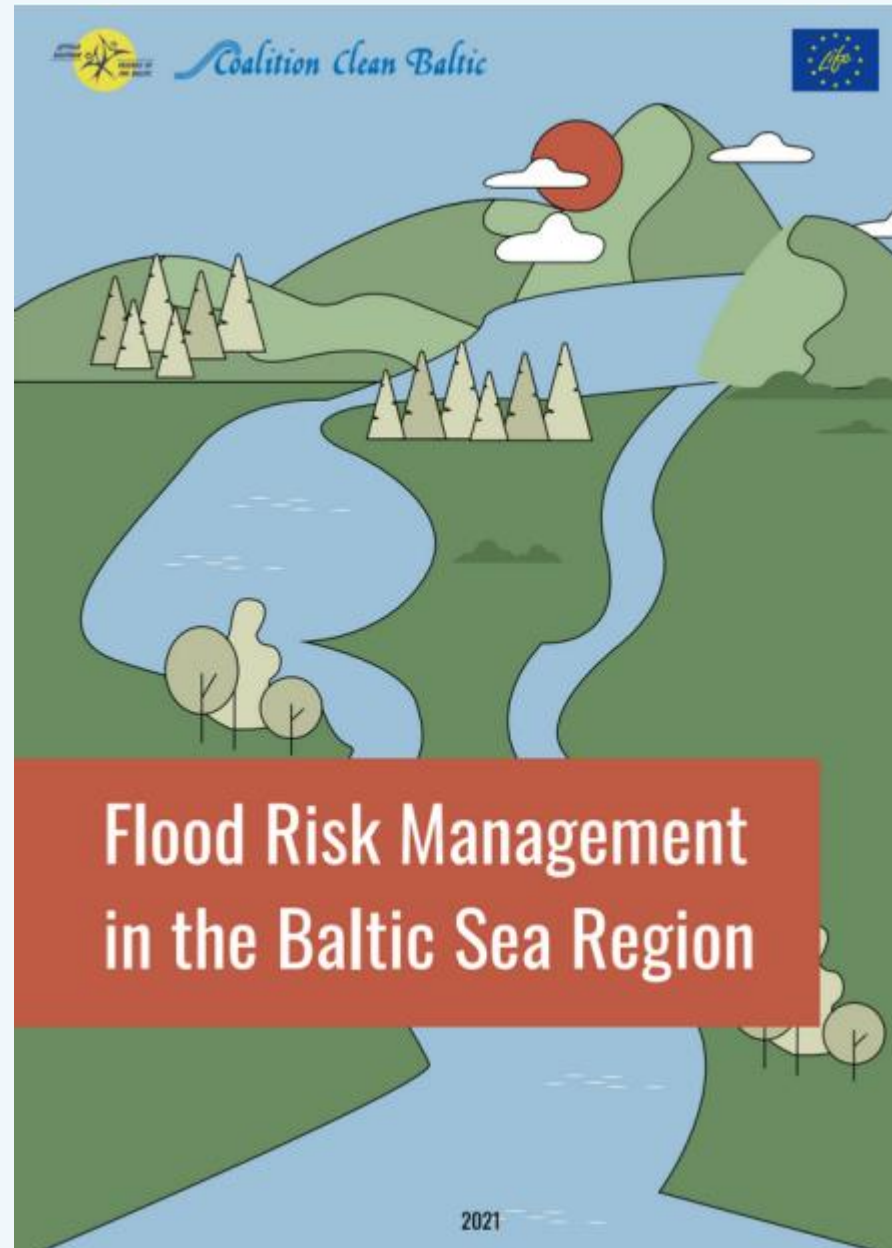
- The Vistula River basin is shared by Belarus, Poland, Slovakia, and Ukraine.
- The International Vistula River Basin District (IRBD) is evaluated by the European Commission as cooperation category 3:
- there are formal international agreements between the countries,
- but there is no specialized management body of the international river basin region and international RBMP





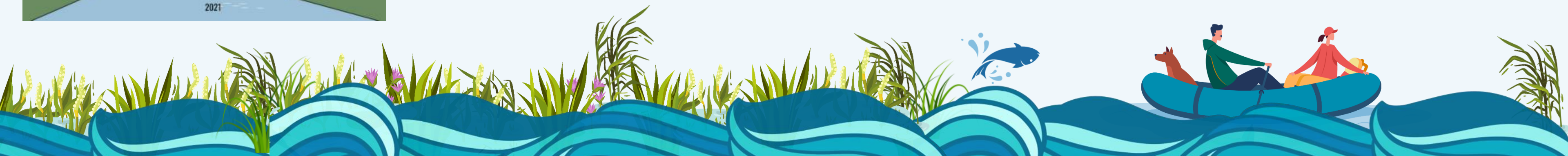
# Flood Risk Management in BSR

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This report gives an overview of existing Flood Risk Management Plans and approaches in the Baltic countries and includes proposals for integrated Flood Risk Management Plans, development of national adaptation measures coordinated by basins and proposals for public participation.

<https://www.ccb.se/publication/flood-risk-management-in-the-baltic-sea-region>



# Campaign

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- the impact of climate change
- examples of flooding in the region
- statistics of droughts and water scarcity
- adaptation measures and best practices
- documents, reports and publications
- An example of water management in the region
- flood risk management and water quality
- Vistula and Neman sugar beet production and water management tools

## #BalticClimate

Despite the specificity and narrowness of the topic, in 5 days we managed to reach more than 13 thousand people and collect more than 150 reactions from our followers in social media

*Coalition Clean Baltic*

Climate

Change



# Floods in Haapsalu, Estonia



@UrmasLauti

@Iohan Hejner

#BalticClimate

# Spring Flood in Silute region, Lithuania



@L. Balandis / 15min.lt

@L. Balandis /

#BalticClimate

# Media tour for journalists and bloggers

(august 2021)

to points out real examples of the effects of climate change on the northern and southern coasts of the Gulf of Finland





# Media tour for journalists and bloggers

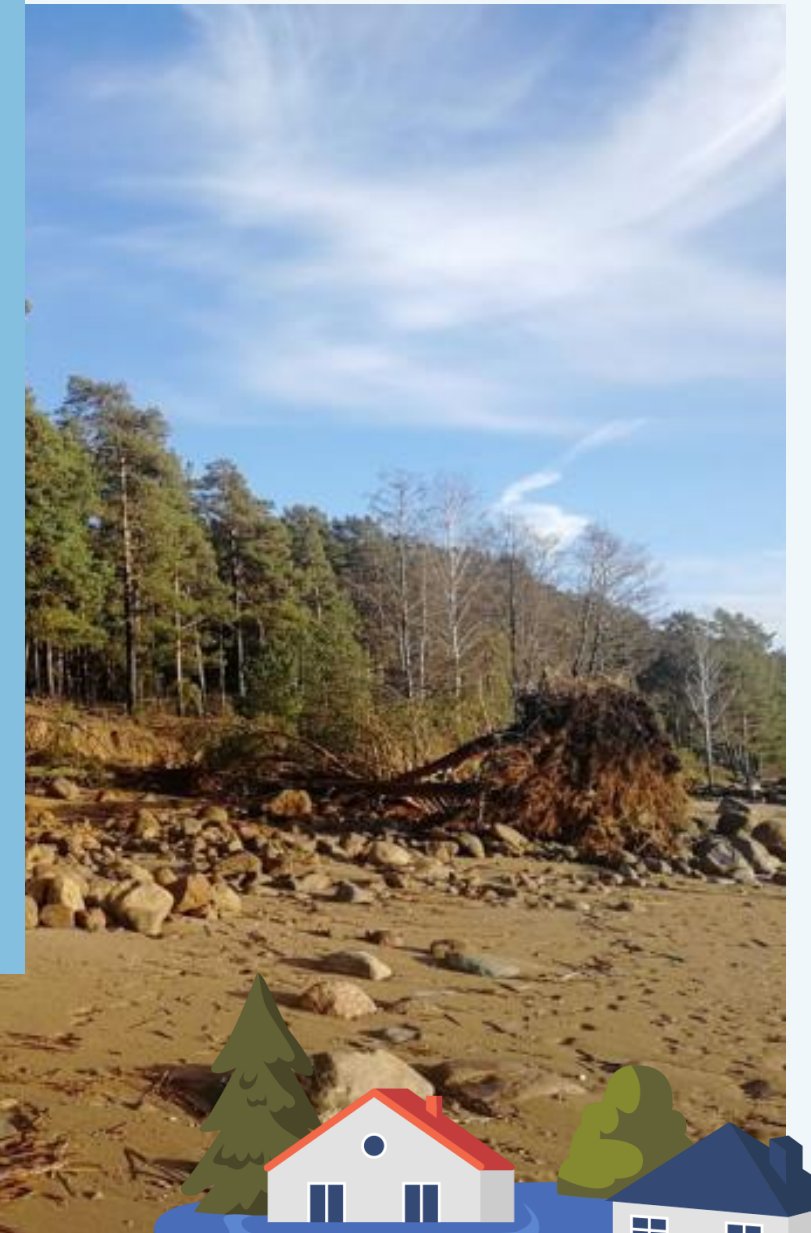
Toilet with separate collection of organic waste. This is an environmental solution to cesspools.



...used the factors of ...; -reduction of ice ...er level.



Following the results of the media tour, dozens of media outlets and blogs in St. Petersburg and the Leningrad region published articles on the topic of the relationship between climate and water.





# THANK YOU

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MORE INFORMATION [HERE](#)