Ministry of Environmental Protection and Regional Development
Republic of Latvia

Climate Change (CC) Adaptation situation and processes in Latvia

Ieva Bruņeniece
Gustavs Gudzuks
Solvita Degaine

Oslo, 6-7th October 2015

Ministry of Environmental Protection and Regional Development
Republic of Latvia

Content

1. Latvia`s geophysical features: *status quo*, risks and advantages
2. Institutional structure and responsibilities
3. Scientific achievements
4. Challenges and opportunities for development of CC adaptation system
5. On-going work – projects and other initiatives

Ministry of Environmental Protection and Regional Development
Republic of Latvia

1. Latvia`s geophysical features

Latvia encompasses 64,589 square kilometers and is an extension of the East European Plain, 495km long sea coast

Flat surface topography (98% of the country lies under 200m` above sea level)

The climate is humid (mean precipitation varies from 600 to 850 mm/year) and comparatively cold - mean annual air tº + 5.8º

Latvia is rich in waters: the mean density of the river network is 600m/km^2 water bodies occupy 1.7% from territory

About 10% of Latvian territory consists of peat bogs, swamps, and marshes (>50% without human impacts)

Rich in forests (main species: pine-tree, spruce, birch, alder, maple) – cover about 50% from territory; rich in biodiversity and biotopes

42 nature parks in Latvia

Ministry of Environmental Protection and Regional Development
Republic of Latvia

Main trends of CC impacts on sectors

Sea level rise (e.g. rise of ground water level, flooding, landslides / soil / coastal erosion, changes in salt water inflows; results in economic losses, e.g. loss of territories)

Increase of atmospheric temperatures (e.g. changes in nutrient load, increase of water temperatures; results both in economic losses, e.g. more need for cooling, and gains, e.g. less need for heating)

Increase of precipitation amount (e.g. more run-offs - economic losses, e.g. effects on freshwater intake; also gains, e.g. more electricity produced in hydro-power-stations)

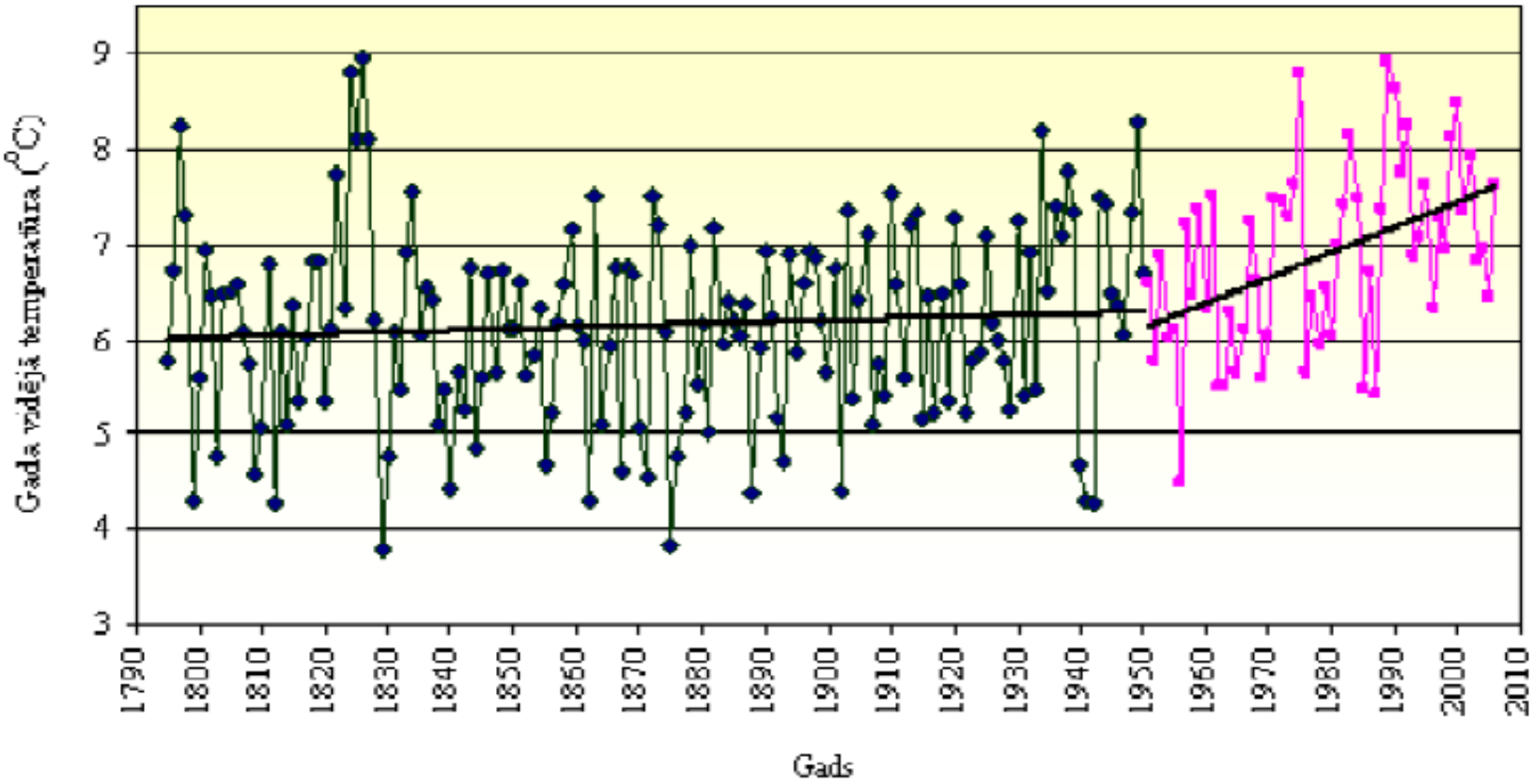
Changes in wind regimes (economic losses, e.g. impacts on human settlements, property, and infrastructure; gains, e.g. for wind farms);

Frequency of extreme weather events (e.g. increased number of days with heavy rains /snow - economic losses, e.g. effect on sea transport, electricity supply systems)

Increase of ocean temperatures (results both in economic loses and gains, e.g. positive effects on maritime transport).

Ministry of Environmental Protection and Regional Development
Republic of Latvia

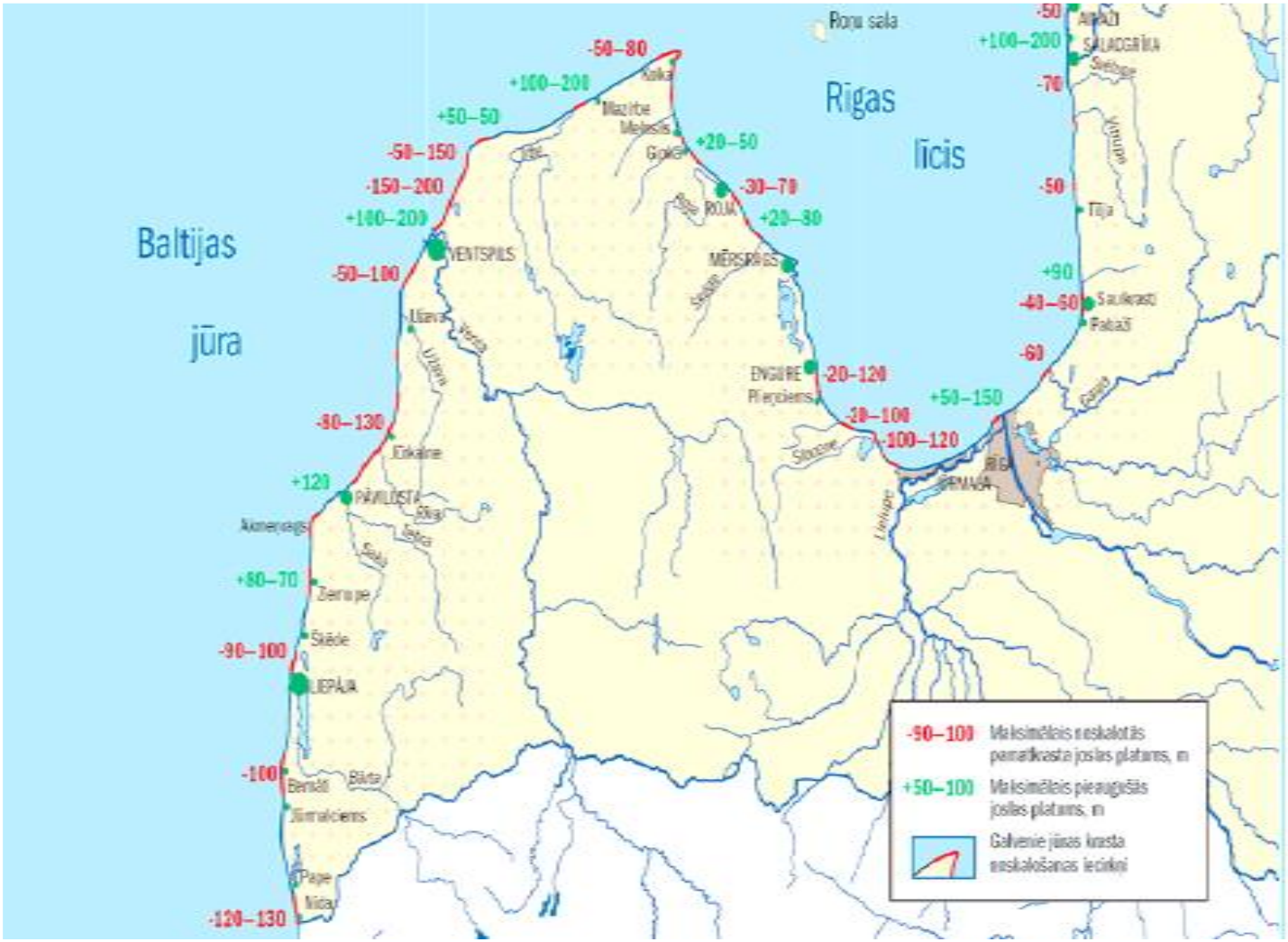
Annual mean temperature in Riga over period of 1790 – 2010. Example



Ministry of Environmental Protection and Regional Development
Republic of Latvia

Coastal geomorphological processes.
Example

Overall change of basic coastline over period of last 70 years - territory of Latvia has lost 1000 ha taken by the Sea eroding basic coastline in range up to 50 – 200 m.



Ministry of Environmental Protection and Regional Development
Republic of Latvia

2. Institutional structure, responsibilities

Ministries and its subordinated institutions,e.g. MEPRD, Latvian Environment, Geology and Meteorology Centre (LEGMC), Latvian Hydroecological Institute (LHEI), State Fire and Rescue Service (SFRS), State Forest Service (SFS), Latvian Geospatial Information Agency (LGIF), etc.

Scientific research institutes: forestry - "Silava", rural economics - Institute of Agrarian Economic, Institute of Physical Energetics (PEI), Institute of Solid State Physics (SSPI), etc.

Universities: analysis of CC impacts and trends - University of Latvia, University of Agriculture, CC technologies (energy efficiency) - Riga Technical University

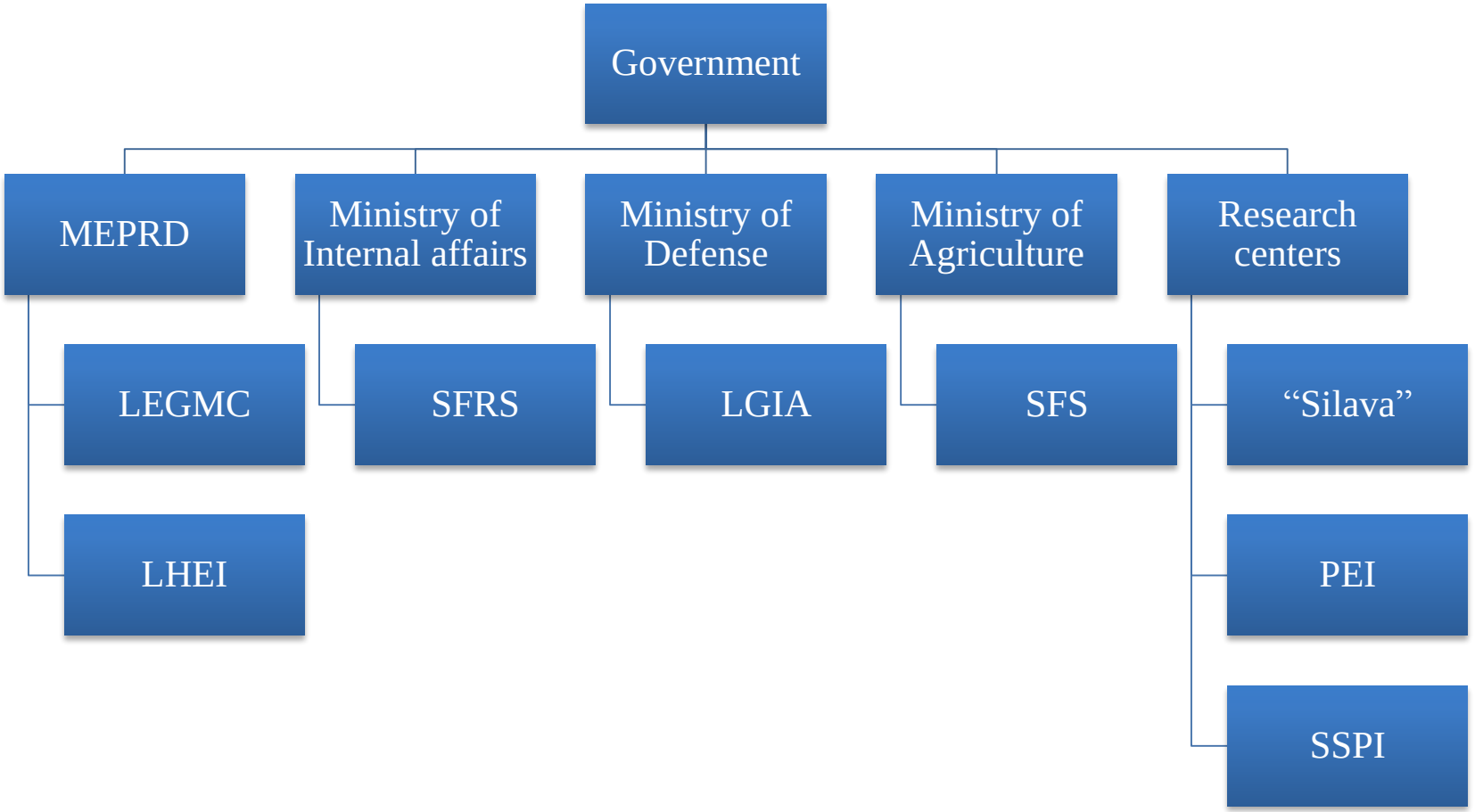
Entrepreneurs, NGO, professional associations: ornithologists, insurers, etc.

Municipalities – CC risks are included in their development strategies

Planning regions

Ministry of Environmental Protection and Regional Development
Republic of Latvia

Institutional structure



Ministry of Environmental Protection and Regional Development
Republic of Latvia

Legislative policy instruments

Policy planning documents: Latvia's long-term development perspective – up to 2030; flood risk assessment and management; agricultural risk management; land-use policy; rural development; territorial and spatial planning; Baltic Sea and Gulf of Riga coastal zone management; national security and civil protection system strengthening (including e.g. material reserves), etc.

Legislative acts: water management, sustainable forest management, protected belts and territories, compensations for damage in agriculture, invasive species distribution areal contain, flood risk control, construction standards (including building climatology), etc.

Ministry of Environmental Protection and Regional Development
Republic of Latvia

Legislative policies containing adaptation component

- Forestry and Related Field Policy Strategy 2014-2020
- Environment Policy Strategy 2014-2020
- Rural Development Program 2014-2020
- Coastal Spatial Development Strategy 2011-2017
- Public Health Program 2014-2020

Ministry of Environmental Protection and Regional Development
Republic of Latvia

Scientific research institutions

Faculty of Geography and Earth Sciences of the University of Latvia - adaptation policy design, climate change impacts on aquaculture, surface and ground water, inland and Baltic Sea, coastal erosion)

Faculty of Biology of the University of Latvia (e.g. ecosystems` services, CC impacts on biotypes and species)

Center of Processes` Analysis and Research (PAIC, flood modelling, future climate modelling, CC scenarios, projection of impacts` values)

Institute of Biology of the University of Latvia

Latvian State Forest Research Institute "Silava" (e.g. forest ecology, entomology, regeneration and establishment, forest monitoring)

Institute of Food Safety, Animal Health and Environment "BIOR" (fishery inspection, data collection and research for fish resources, etc.)

Riga Technical University (e.g. climate change technologies)

Latvia University of Agriculture (bioeconomy, forestry, agriculture, the impact of CC on water ecosystems, forestry and agriculture, adaptation)

Agrarian Economic Institute of Latvia (CC risk management in agriculture)

Other research institutes for new breed crop varieties suitable to changing climatic conditions in Latvia, etc.

Ministry of Environmental Protection and Regional Development
Republic of Latvia

Institutions and CC impact monitoring system

Data on CC direct impacts / risks are gathering by Latvian Environmental, Geological and Meteorological Center (LEGMC)

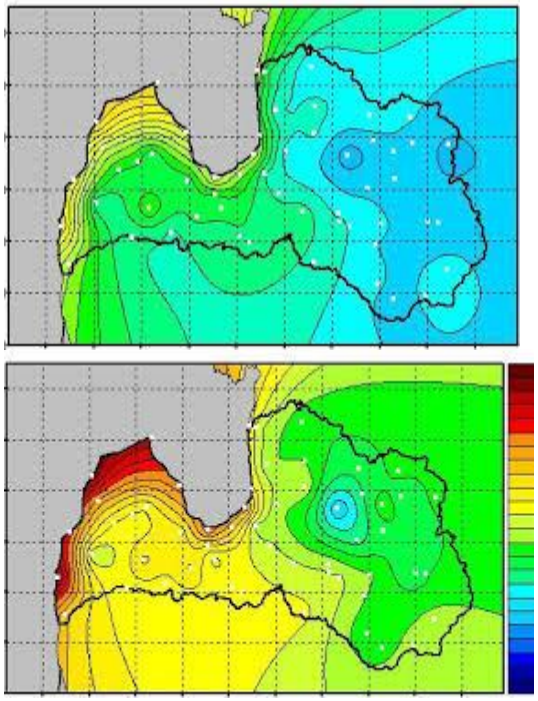
State Forest Monitoring Programme: explore the impact of CC to forest ecosystems, forest biodiversity status, forest soils. Responsible institutions: Ministry of Agriculture, State Forest Service and Latvian state Forestry Research Institute "Silava"

National monitoring of geological processes of the seacoast (University of Latvia) –interrupted now

Aerophoto and 3D relief model – by Latvian Gespatial Information Agency (LGIA) and company "Metrum"

Ministry of Environmental Protection and Regional Development
Republic of Latvia

3. Scientific achievements



Faculty of Geography and Earth Sciences of the University of Latvia - adaptation policy design, climate change impacts on aquaculture, surface and ground water, inland and Baltic Sea, coastal erosion)

Faculty of Biology of the University of Latvia (e.g. ecosystems` services, CC impacts on biotypes and species)

Center of Processes` Analysis and Research (PAIC, flood modelling, future climate modelling, CC scenarios, projection of impacts` values)

Institute of Biology of the University of Latvia

Latvian State Forest Research Institute "Silava" (e.g. forest ecology, entomology, regeneration and establishment, forest monitoring)

Institute of Food Safety, Animal Health and Environment "BIOR" (fishery inspection, data collection and research for fish resources, etc.)

Riga Technical University (e.g. climate change technologies)

Latvia University of Agriculture (bioeconomy, forestry, agriculture, the impact of CC on water ecosystems, forestry and agriculture, adaptation)

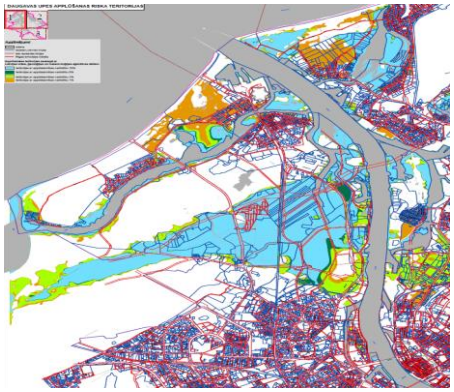
Agrarian Economic Institute of Latvia (CC risk management in agriculture)

Other research institutes for new breed crop varieties suitable to changing climatic conditions in Latvia, etc.

Ministry of Environmental Protection and Regional Development
Republic of Latvia

State research programme – KALME. Outcomes

The first National Research Programme, devoted to detailed assessment of climate change impacts, was programme "**Climate change impact on water environment in Latvia"** (KALME, 2006-2009)



Evidences and future projections for t°, precipitation, hydrological processes, coastal zone geological processes, Baltic Sea level

Recommendations for measures how to adapt in relation to the waters in such sectors as agriculture, forestry, fisheries, water supply and drainage, water resources management, energy supply, navigation, building and urban management, spatial planning, education and science, decision-making

Risk assessment and management enforcement

Recommendations for adaptation concerning water sector within spatial planning policies in such priority areas:

Prohibition of new construction of important infrastructure – regarding coastal segments endangered by erosion and flooding risk

Understanding of urban water streams during flooding - for flood management and mapping of potential flooding areas

Maintenance of existing and development of new drainage systems for rain waters during rainstorms

Improvement of natural infiltration systems for surface water runoff within the spatial plans

Ministry of Environmental Protection and Regional Development
Republic of Latvia

State research programme – EVIDEnT. Ongoing

" **The value and dynamic of Latvia`s ecosystems under changing climate - EVIDEnT**“ ((2014-2017).

EVIDEnT is structured in 5 projects:

1st Project will adapt/elaborate models for wind fields, wave and current dynamic, developed wave and current measurement sensor prototypes and performed field measurements, and performed food chain study in system lake-river-sea.

2nd Project will investigate introduced species in freshwater ecosystem (HEP reservoir), port and adjacent to them areas, and in the sea.

3rd Project will develop tool to estimate air emissions and calculate future scenarios, survey farms and estimate GHG emissions from agricultural sector, and estimate integral impact from forestry.

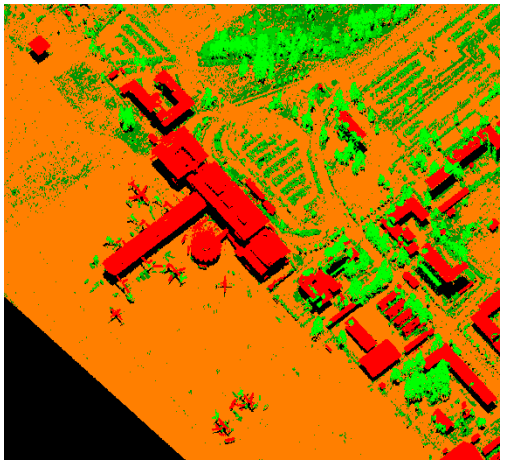
4th Project will perform studies of biodiversity on all levels, model biotopes and estimate monetary value of selected ecosystem services.

5th Project will develop climatic scenarios including extreme events, develop/improve hydrogeological model including infiltration from surface water measurements.

Ministry of Environmental Protection and Regional Development
Republic of Latvia

Life+ project "Riga against floods'". Outcomes

EU Life+ project "Integrated Strategy for Riga City to Adapt to the Hydrological Processes Intensified by CC Phenomena". Realised by Riga City municipality, 2010-2012



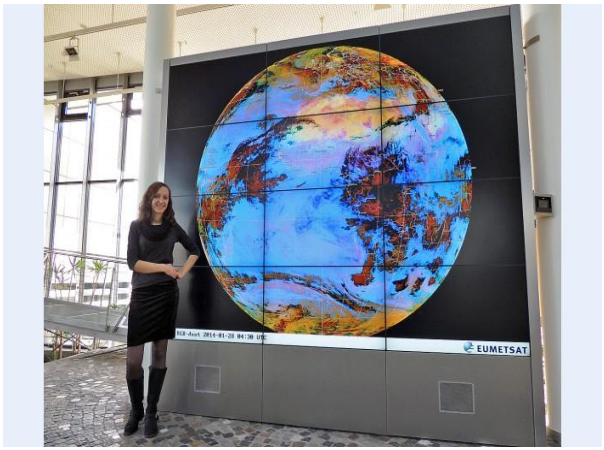
- ✓Flood risk management plan for Riga city
- ✓Digital 3D model for the whole territory of Riga
- ✓Studying and forecasting hydrologic processes and their impact, incl.economic, on Riga territory
- ✓Development of methodological guidelines for territorial planning in flood prone areas
- ✓Riga City relief model by Light Detection and Ranging (LiDAR) method (using aero laser scanning - all data and model is used for modeling and projecting floods, intensive precipitation, wind surges, coast erosion, ground water level changes, etc.
- ✓Physical and socioeconomic models for the future flooding intensity and extent, including the impact of flooding to the buildings, and development of recommendations

Ministry of Environmental Protection and Regional Development
Republic of Latvia

The climate atlas for Latvia

EUMETSAT - the climate atlas is a tool to help visualise climate datasets for Europe and Latvia: http://www.eumetsat.int/website/home/Images/ImageLibrary/DAT_2266050.html

The atlas is based on the climate datasets provided by the Satellite Application Facility on Climate Monitoring (CM SAF). It consists of maps providing climatological information of different meteorological parameters (e.g. suface albedo, cloud fraction, pressure, daylight intensity, etc.)



These include:

- ✓general climatic characteristics of meteorological parameters over Europe and Latvia
- ✓information on satellite data suitable for climatological studies
- ✓an example of the strengths and weaknesses of satellite data for climate applications
- ✓instructions for creating a satellite climatology atlas and beginning to work with satellite datasets in general.

Ministry of Environmental Protection and Regional Development
Republic of Latvia

Actual research needs

Need for more precise data – especially for spatial models, risk maps

Combined use of different data sources (meteorological, hydrological, land use data, socioeconomic data, etc.), and improvement of monitoring needs (especially extreme events and socio)

Need for new and / improved models on flood dynamics, risk assessment, ice condition changes, modelling of sand outwash dynamics, etc.

Need for multidisciplinary studies (with holistic view): synthesis studies, scenarios development, socioeconomic assessments of climate change impacts, cost-benefit and risk analysis studies, action research, social science, economics and organization studies to proceed from studying impacts towards adaptation research

Studies on basic ecosystem mechanisms and interactions under CC: how CC will alter them, how will population dynamics of key species change, CC impacts on winter-time ecology, harmful alien species: prognosis and risk assessment; how to control, changes of fish reproduction areas and times?..

Ministry of Environmental Protection and Regional Development
Republic of Latvia

5. Opportunities and challenges for development of CC adaptation system

Existing

CC adaptation policy and measures practically are incorporated into all sectorial policies (coast zone management, health care, civil protection, etc.) as well as at all levels in spite of lack of adaptation system

✓Insurance system regarding weather extremes is developing rapidly. Two insurance schemes exist: 1) "Natural Disasters" exists in the private sector and applies to humans as persons, 2) the second insurance scheme is developed especially in agriculture - insurance of agricultural risks (special fund)

✓ Civil protection system which includes management of all natural extremes (storms, rainfall, floods, etc.) in all sectors and governmental levels (under supervision of State Fire and Rescue Service)

Ministry of Environmental Protection and Regional Development
Republic of Latvia

Adaptation indicators for adaptation monitoring – in agenda

Developed, not implemented yet

- ✓GDP/adaptation
- ✓Population density / vulnerable territories
- ✓Significant natural areas (ha, % of the whole territory)
- ✓Fragmented natural areas (ha, % of the whole territory)
- ✓Green areas as natural adaptation measures (ha, % of the whole territory)
- ✓Nature based solutions
- ✓Risk perception
- ✓Institutional capacity
- ✓Preparedness
- ✓Medical capacity
- ✓Technical capacity
- ✓Alarm systems within civil protection system
- ✓Share of budget spent on civil protection
- ✓Share of budget spent on CC and adaptation R&D
- ✓Share of budget spent on CC risk communication

Ministry of Environmental Protection and Regional Development
Republic of Latvia

Identification of CC impacts (risks and gains) on main sectors

Sectors

- ✓Health and welfare
- ✓Water management and infrastructure
- ✓Construction and building
- ✓Biodiversity
- ✓Forestry
- ✓Transport infrastructure
- ✓Health and welfare
- ✓Water management and infrastructure
- ✓Construction and building
- ✓Biodiversity
- ✓Forestry
- ✓Transport infrastructure

Example. Water management and infrastructure

Risks

- Damage to hydropower plants (HPP) built on a big rivers as a result of extreme hydrological conditions
- Flood caused problems in a water supply and sewage systems;
- Flood caused threat to public and civil engineering infrastructure
- Threat caused by the coastal erosion to the infrastructure objects near the Baltic Sea and / or the Gulf of Riga
- Ice congestion and flood damage to private properties

Benefits

- Increase in river flow
- Changes in the seasonality of river flows and hydroelectric power resources

Decrease of the early spring flooding risk

Ministry of Environmental Protection and Regional Development
Republic of Latvia

5. On-going work:

projects and other initiatives

ICELAND LIECHTENSTEIN NORWAY
eea grants

EEA grants program
"National Climate Policy"
pre-defined Project

Development of proposal for national <u>adaptation</u> strategy, including identification of scientific data, measures for adapting to changing climate, impact and cost evaluation

Ministry of Environmental Protection and Regional Development Republic of Latvia

Key facts

ICELAND LIECHTENSTEIN NORWAY eea grants

Project implementation period: currently 1 April 2014 – 30 April 2016, but has been requested an extension till 31 December 2016

Project budget: EUR 1 209 305

Project promoter: The Ministry of Environmental Protection and Regional Development of the Republic of Latvia (MEPRD)

Vides aizsardzības un reģionālās attīstības ministrija

Project partners:

- Norwegian Directorate for Civil Protection (DSB)
- Latvian Environment, Geology and Meteorology Centre (LEGMC)
- Latvian Institute of Aquatic Ecology (LIAE)
- Ministry of Agriculture of the Republic of Latvia (MA)

dsb Norwegian Directorate for Civil Protection

LATVIJAS VIDES, ĢEOLOĢIJAS UN METEOROLOĢIJAS CENTRS

LATVIJAS HIDROEKOLOĢIJAS INSTITŪTS

MINISTRY OF AGRICULTURE REPUBLIC OF LATVIA

Ministry of Environmental Protection and Regional Development
Republic of Latvia

Overview on Project activities

ICELAND LIECHTENSTEIN NORWAY
eea grants

ACTIVITY 0. **Project management**

ACTIVITY 1. **Climate change and impact scenario for 2010 – 2100 and the current and potential scientific data definition for the adaptation monitoring system**

ACTIVITY 2. **Integrated climate change mitigation and adaptation action research and the impact studies and the necessary adaptation measures is the most sensitive sectors**

- 2.1 Flood risk and impact modelling and development and upgrade of flood risk information system
- 2.2 Research for maritime spatial planning
- 2.3 Thematic reports on risk and vulnerability assessment and adaptation measures
- 2.4 Policy proposal for National Adaptation Strategy
- 2.5 Climate change web portal

ACTIVITY 3. **Publicity**

Ministry of Environmental Protection and Regional Development
Republic of Latvia

ACTIVITY 1.
Climate change and impact scenario for 2010 – 2100 and the current and potential scientific data definition for the adaptation monitoring system

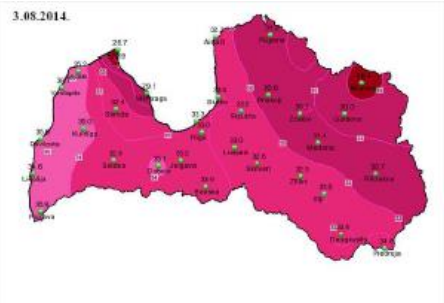
ICELAND LIECHTENSTEIN NORWAY
eea grants

OBJECTIVES

- Development of climate change scenarios for 2010 – 2100
- Creation of public GIS tool for interactive visualization and selection of climate
- Database development of sector–specific climate change indicators and information system for adaptation monitoring

PROGRESS

- Consultations about the development of climate change scenarios
- Selected (historical, present) and prepared data for the development of climate change scenarios
- Announced public procurement for contracting the development of climate change scenarios





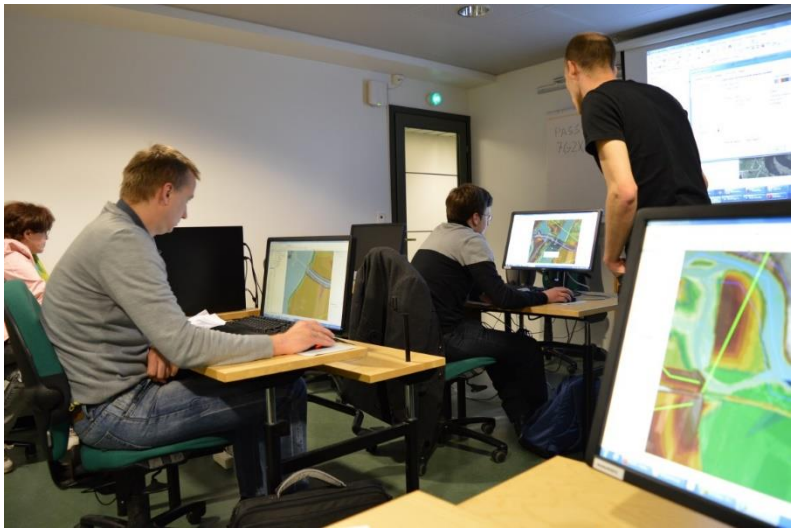
Ministry of Environmental Protection and Regional Development Republic of Latvia

ACTIVITY 1.
Climate change and impact scenario for 2010 – 2100 and the current and potential scientific data definition for the adaptation monitoring system

ICELAND LIECHTENSTEIN NORWAY eea grants

NEXT ACTIVITIES

- Entering into the agreement with contractor and execution of respective tasks
- Workshop on climate change adaptation monitoring information system (poss. December 2015)
- Workshop on climate change scenarios for Latvia (poss. February 2016)



Ministry of Environmental Protection and Regional Development
Republic of Latvia

ACTIVITY 2.1.
Flood risk and impact modeling and development and upgrade of flood risk information system

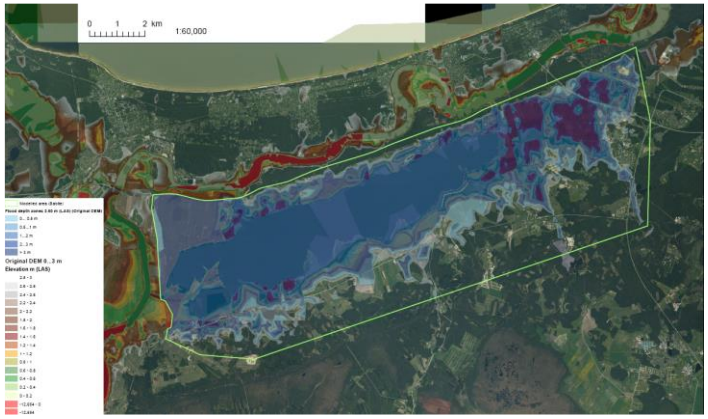
ICELAND LIECHTENSTEIN NORWAY
eea grants

OBJECTIVES

- Development of flood risk maps and flood risk management plans for three river basins (the Gauja, the Lielupe, the Venta)
- Upgrade of flood risk information system

PROGRESS

- Contribution with the Finnish Environment Institute (SYKE) about the Development and delivery of the flood information system and integration into Integrated Environment Information system
- Workshop on flood hazard and flood risk mapping for Lielupe river using Latvian data
- Developed hydraulic model application for Lielupe river (Jūrmala) and Babite lake flood risk areas



Preliminary flood hazard map for Babite lake

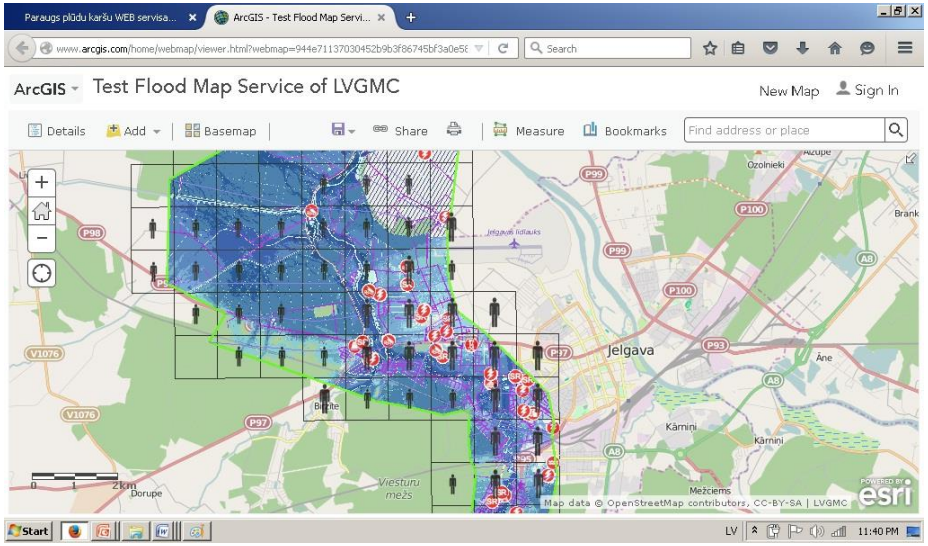
Ministry of Environmental Protection and Regional Development
Republic of Latvia

ACTIVITY 2.1.
Flood risk and impact modeling and development and upgrade of flood risk information system

ICELAND LIECHTENSTEIN NORWAY
eea grants

NEXT ACTIVITIES

- Development of flood risk maps for Lielupe river (Jūrmala) and Babite lake flood risk areas
- Development of hydrological simulation and forecasting system for Venta, Lielupe and Gauja river basin districts
- Contribution of Norwegian experts



Ministry of Environmental Protection and Regional Development
Republic of Latvia

ACTIVITY 2.2. Research for maritime spatial planning

ICELAND LIECHTENSTEIN NORWAY
eea grants

OBJECTIVES

•Development of draft Maritime Spatial Plan and Strategic Environmental Impact Assessment

PROGRESS

•Finalization of the public procurements and entering into the agreement with the Baltic Environmental Forum about Maritime Spatial Plan and Environmental Impact Assessment development

- ✓ Prepared report of the potential uses of the Baltic Sea which will be included in Maritime Spatial Plan
- ✓ Prepared two interim reports about progress in Maritime Spatial Plan and Environmental Impact Assessment development
- ✓ Developed methodology for the ecological value determination of the territorial waters of Latvia

NEXT ACTIVITIES

•Development of maritime planning documents, geospatial data base and organization of public hearings

•Development of third interim report about progress in Maritime Spatial Plan and Environmental Impact Assessment development

•Contribution of Norwegian expert/peer-review of planning deliverables

Ministry of Environmental Protection and Regional Development
Republic of Latvia

ACTIVITY 2.3.
Thematic reports on risk and vulnerability assessment and adaptation measures

ICELAND LIECHTENSTEIN NORWAY
eea grants

OBJECTIVE

•Development of risk and vulnerability assessment and identification of adaption measures on 6 sectors: building and infrastructure planning; farming and forestry; civil protection and emergency planning; landscape planning and tourism; biodiversity and ecosystem services; health and wellbeing

PROGRESS

•Elaboration and announcement of the public procurement to procure preparation of 6 thematic reports on risk and vulnerability assessment *that also include identification of adaptation measures.* Procurement shall be completed in 19 October 2015.

NEXT ACTIVITIES

•Workshop on methodological approaches to risk and vulnerability assessment for adaptation to climate change (poss. December 2015)

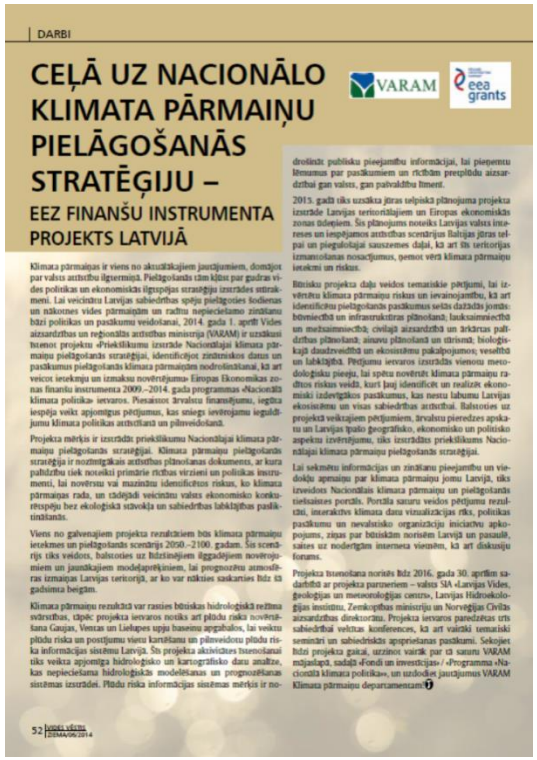
•Workshop on identification and cost-benefit analysis of adaptation measures (poss. December 2015)




Ministry of Environmental Protection and Regional Development
Republic of Latvia

ACTIVITY 2.4.
Policy proposal for National Adaptation strategy

ICELAND LIECHTENSTEIN NORWAY
eea grants


DARBI

CEĻĀ UZ NACIONĀLO KLIMATA PĀRMAIŅU PIELĀGOŠANĀS STRATĒĢIJU –
EEZ FINANŠU INSTRUMENTA PROJEKTS LATVIJĀ

VARAM

eea grants

Klimata pārmaiņas ir viens no aktuālākajiem jautājumiem, domājot par valsu attīstību ilgtermiņā. Pielāgošanās tām kļūst par gudras vides politikas un ekonomiskās ilgtspējas stratēģiju izstrādes stūrakmeni. Lai veicinātu Latvijas sabiedrības spēju pielāgoties šodienas un nākotnes vides pārmaiņām un radītu nepieciešamo zināšanu bāzi politikas un pasākumu veidošanai, 2014. gada 1. aprīlī Vides aizsardzības un reģionālās attīstības ministrija (VARAM) ir uzsākusi īstenot projektu «Priekšlikumu izstrāde Nacionālajai klimata pārmaiņu pielāgošanās stratēģijai, identificējot zināmiskos datus un pasākumus pielāgošanās klimata pārmaiņām nodrošināšanai, kā arī veicot ieteikumu un izmaksu novērtējumus Eiropas Ekonomikas zonas finanšu instrumenta 2009.–2014. gada programmas «Nacionālā klimata politika» ietvaros. Piesaistot ārvalstu finansējumu, iegūta iespēja veikt apjomīgus pētījumus, kas sniegs ievērojamu ieguldījumu klimata politikas attīstībai un pilnveidošanā.

Projekta mērķis ir izstrādāt priekšlikumu Nacionālajai klimata pārmaiņu pielāgošanās stratēģijai. Klimata pārmaiņu pielāgošanās stratēģija ir nozīmīgākais attīstības plānošanas dokuments, ar kura palīdzību tiek noteikti primārie riciba virzieni un politikas instrumenti, lai novērstu vai mazinātu identificētos riskus, ko klimata pārmaiņas rada, un izdējādi veicinātu valsts ekonomisko konkurētspēju bez ekoloģiskā stāvokļa un sabiedrības labklājības pasliktināšanās.

Viens no galvenajiem projekta rezultātiem būs klimata pārmaiņu ietekmes un pielāgošanās scenārija 2050.–2100. gadam. Šis scenārijs tiks veidots, balstoties uz līdzšinējiem ārggadējiem novērojumiem un jaunākajiem modeļaprēķiniem, lai prognozētu atmosfēras izmaiņas Latvijas teritorijā, ar ko var nākties saskarties līdz tā gadsimta beigām.

Klimata pārmaiņu rezultātā var rasties būtiskas hidroloģiskā režīma svārstības, tāpēc projekta ietvaros notiks arī plūdu riska novērtēšana Gaujas, Ventas un Lielupes upju baseinu apgabalos, lai veiktu plūdu riska un postījumu vietu kartēšanu un pilnveidotu plūdu riska informācijas sistēmu Latvijā. Šīs projekta aktivitātes īstenošanai tiks veikta apjomīga hidroloģisko un kartogrāfisko datu analīze, kas nepieciešama hidroloģisko modelēšanas un prognozēšanas sistēmas izstrādei. Plūdu riska informācijas sistēmas mērķis ir nodrošināt publisku pieejamību informācijai, lai pieņemtu lēmumus par pasākumiem un riciblām prevplūdu aizsardzībai gan valsts, gan pašvaldību līmenī.

2015. gadā tiks uzsākta jūras telpiskā plānojuma projekta izstrāde Latvijas teritoriālajiem un Eiropas ekonomiskās zonas ūdeņiem. Šis plānojums noteiks Latvijas valsts intereses un iespējamos attīstības scenārijus Baltijas jūras telpai un piegulošajai sauszemes daļai, kā arī šīs teritorijas izmantošanas nosacījumus, ņemot vērā klimata pārmaiņu ietekmi un riskus.

Būtisku projekta daļu veidos tematiskie pētījumi, lai izvērtētu klimata pārmaiņu riskus un ievainojamību, kā arī identificētu pielāgošanās pasākumus sešās dažādās jomās: būvniecībā un infrastruktūras plānošanā; lauksaimniecībā un mežsaimniecībā; civilajā aizsardzībā un ārkārtas palīdzības plānošanā; ainavu plānošanā un tūrismā; bioloģiskajā daudzveidībā un ekosistēmu pakalpojumos; veselībā un labklājībā. Pētījumu ietvaros izstrādāts vienots metodoloģisku pieeju, lai spētu novērtēt klimata pārmaiņu radītos riskus veidā, kurā ļauj identificēt un realizēt ekonomiski izdevīgākos pasākumus, kas nestu labumu Latvijas ekosistēmu un visas sabiedrības attīstībai. Balstoties uz projektā veiktajiem pētījumiem, ārvalstu pieredzes apskatu un Latvijas īpašo ģeogrāfisko, ekonomisko un politisko aspektu izvērtējumu, tiks izstrādāts priekšlikums Nacionālajai klimata pārmaiņu pielāgošanās stratēģijai.

Lai sekmētu informācijas un zināšanu pieejamību un viedokļu apmaiņu par klimata pārmaiņu jomu Latvijā, tiks izveidots Nacionālais klimata pārmaiņu un pielāgošanās tīmekļavietes portāls. Portāla sastāvu veidos pētījumu rezultāti, interaktīvs klimata datu vizualizācijas rīks, politikas pasākumu un nevalstisko organizāciju iniciatīvu apkopojums, ziņas par būtiskām norisēm Latvijā un pasaulē, saites uz noderīgām internesa vietnēm, kā arī diskusiju forums.

Projekta īstenošana norisēs līdz 2016. gada 30. aprīlim sadarbībā ar projekta partneriem – valsts SIA «Latvijas Vides, ģeoloģijas un meteoroloģijas centrs», Latvijas Hidroekoloģijas institūtu, Zemkopības ministriju un Norvēģijas Civilās aizsardzības direktorātu. Projekta ietvaros paredzētas trīs sabiedrībai vaktas konferences, kā arī vairāki tematiski semināri un sabiedriskās apspriešanas pasākumi. Sekojiet līdzi projekta gaitai, uzzinot vairāk par tā saturu VARAM mājaslapā, sadaļā «Fondi un investīcijas»/ «Programma «Nacionālā klimata politika», un uzdodiet jautājumus VARAM Klimata pārmaiņu departamentam!

52 VIDES VĒSTIS ZIEMA/06/2014

OBJECTIVE

•Development of policy proposal for Latvia's National Climate Change Adaptation Strategy

PROGRESS

•Participation in the 4th Round Table of Baltic Sea Region Climate Change Dialogue Platform (April 2015) to gather experience of other countries

•Elaboration of the public procurement documentation to procure preparation of the adaptation strategy

NEXT ACTIVITIES

•Announcement of the public procurement

•Participation in the 5th Round Table of Baltic Sea Region Climate Change Dialogue Platform (October 2015) to gather experience of other countries and share Latvia's experience

•Workshop on adaptation measures – multi-level governance and policy design (poss. January 2016)

Ministry of Environmental Protection and Regional Development
Republic of Latvia

ACTIVITY 2.5.
Climate change web portal

ICELAND LIECHTENSTEIN NORWAY
eea grants

OBJECTIVE

•Development od Climate change web portal

PROGRESS

•Developed general concept of the web portal (goal, target-audience, structure, design etc.)

•Consultations with experts in order to ensure functionality and maintenance the web portal

•Adjusted activity implementation plan (schedule, budget plan) in order to contract detailed elaboration of technical specification of the web portal

•Elaboration of the public procurement documentation to procure the preparation of technical specification of the web portal

NEXT ACTIVITIES

•Announcement of public procurement entering into the agreement with contractor and execution of respective tasks

•Procurement of the technical elaboration of the web portal

Ministry of Environmental Protection and Regional Development
Republic of Latvia

Activity 3. Publicity

ICELAND LIECHTENSTEIN NORWAY
eea grants

PROGRESS

- Inclusion and regular update of information about the Project in project promoter's and partners' web pages
- Production of representative materials
- Dedicated publication in press
- Developed climate change logo

NEXT ACTIVITIES

- Continuation of regular updating of information of the Project in www and communication with media in relation to project milestones and deliverables
- Dedicated publication in press

Ministry of Environmental Protection and Regional Development
Republic of Latvia

Mayors Adapt initiative

MAYORS ADAPT
THE COVENANT OF MAYORS INITIATIVE ON ADAPTATION TO CLIMATE CHANGE

- Launched: Officially on 15 October 2015, with the Covenant of Mayors
- Part of Covenant of Mayors
- Promotion of adaptation action in municipalities
- Based on EU Strategy on Adaptation
- From Latvia one municipality:
  - Valka (acceded: 2015)
  - Jurmala has raised interest
- Requirements for municipalities:
  - Develop adaptation strategy (in 2 years)
  - Report on progress (every 2 years)

Ministry of Environmental Protection and Regional Development
Republic of Latvia

Thank you for your attention!