



SIM4NEXUS Communication and Networking Workshop: exploitation of the project products and services in the Baltic Region

Friday, 5 July 2019, Riga, Latvia

Hotel „Radisson Hotel Old Town Riga”

(Zigfrīda Annas Meierovica blv. 10, Rīga, <https://www.radisson.com/riga-hotel-lv-lv-1050/rixza>)

REPORT

The main goal of the SIM4NEXUS project “**Communication and Networking Workshop: exploitation of the project products and services in the Baltic Region**” was to introduce stakeholders from Estonia, Latvia and Lithuania (ministries, agencies, universities, NGOs, consultants, etc.) with the SIM4NEXUS project approaches and main findings as well as to collect and discuss ideas on further exploitation of project results.

The program of the workshop included presentations and an interactive session with workshop participants:

- **Introductory presentation on SIM4NEXUS approach** by Floor Brower, Wageningen Economic Research, the Netherlands
- **Policy coherence in the EU and selection of Member States** by Maria Witmer, PBL Netherlands Environmental Assessment Agency
- **Territorial Scenarios for the Baltic Sea Region 2050** by Luciane Aguiar Borges, Nordregio, Sweden
- **Approaches for addressing Nexus challenges (conceptual, thematic and SDM)** by Janez Susnik and Sara Masia, IHE Delft, the Netherlands

Interactive session on policy development: recommendations on key policy development with respect to water, energy, land, food and climate sectors and focusing towards low carbon and resource efficient Baltic Region.

Participants of the workshop shared their ideas and proposals for the policy development in the Baltic Region. The results of the interactive session are presented in Annex 1.

Case study presentations:

- **European and Global case study** by Jonathan Doelman, PBL Netherlands Environmental Assessment Agency

- **Dutch case study** by Vincent Linderhof, Wageningen Economic Research, the Netherlands
- **Latvia case study** including exploitation vision of the serious game, by Ingrida Brēmere and Daina Indriksone, BEF-Latvia

Serious Game – logics, framework, interface, demonstration by Barry Evans, University of Exeter, UK
 Demonstration of the prototype of the Serious game is available on the YouTube following the link <https://www.youtube.com/watch?v=1PmY8XfI8ms>



Interactive session on preconditions for exploitation of SIM4NEXUS project results in the Baltic Region for capacity building, policy making, research and teaching

Participants of the workshop during an interactive session in a *World Café* setting were sharing the ideas and proposals with respect to the following issues:

- What is the **essence** for exploitation of SIM4NEXUS approach?
- What **updates** (data, policies, interlinkages) are required? When to start and what shall be the frequency for the updates?
- What would be suitable **business/organizational models** for cooperation in further exploitation of SIM4NEXUS project results?

The results of the interactive session are presented in Annex 2.



Annex 1. Interactive session on policy development: recommendations on key policy development with respect to water, energy, land, food and climate sectors and focusing towards low carbon and resource efficient Baltic Region.

Participants of the workshop shared their ideas and proposals for the policy development in the Baltic Region indicating that more attention shall be paid to:

WATER:

- increase awareness and knowledge on sustainable water (re) use technologies;
- improve agricultural policies and legislation with respect to (i) efficient fertilizer use, elimination of fertilizer over-use using advanced fertilisation technologies, (ii) financial regulations and support for lake and river buffer zones;
- phosphorous removals (i) development of technologies to remove P from wastewater, (ii) increase recycling and reuse of wastewater sludge;
- sustainable use of water: (i) efficient abstraction and use, (ii) effective treatment of wastewaters (no harm to water with effluents), (iii) water use in households by pricing policy;
- Baltic Sea water quality (eutrophication);
- keep the (natural) potentials of the landscape and natural environment for carbon storage and water provision.

ENERGY:

- energy production from renewable energy (RE) sources including energy production in microgeneration at the same time finding a good balance between the benefits and the trade-offs of renewable energy, e.g., hydropower <-> biodiversity, bioenergy <-> land use;
- stimulate development of more efficient, environmentally friendly, sustainable technologies for production and use of alternative RE, e.g., 2nd and 3rd generation biomass, solar, wind, tidal energy;
- careful selection of mechanisms before supporting renewable energy sources e.g., subsidy for solar panels;
- resist the pressure on natural resources driven by the need for RE (deforestation, degradation of land, biodiversity);
- energy security in the Baltic Sea Region and reduction of dependency from energy imports e.g. natural gas and other fossil fuels from Russia (possibly consider development of a common nuclear energy policy to supplement the RE sector in the BSR);
- increase energy efficiency e.g., by urban development towards compact cities resulting in reduction in energy consumption in transport.

LAND:

- develop a dialogue with stakeholders on nature-based forestry activities;
- maintain biological diversity and preserve natural land;
- avoid planning of infrastructure and settlements in areas where soil fertility is high;
- set clear provisions for land use, keeping the balance between urban <-> rural <-> natural areas.

FOOD:

- reduce amounts of food packaging and food waste;
- healthy diets (reduction of meat and increasing fruit and vegetable share) and sustainable consumption of food (preferably local, eco, bio food);
- introduce principles of circular economy in food production and consumption;
- balance food systems, application of fertilisers (consider different alternatives) and biodiversity protection;
- support biological farming and crop production in biological farming.

CLIMATE:

- promotion of changing of lifestyle and thinking (towards reduction of consumption, saving of all types of resources and decrease of greenhouse gas emissions);
- develop good railway connections and encourage train use instead of planes or road traffic;
- create climate change resilient infrastructure;
- reduce consumption of biomass and avoid plantation of monocultures of energy plants.

Annex 2. Interactive session on preconditions for exploitation of SIM4NEXUS project results in the Baltic Region for capacity building, policy making, research and teaching

Participants of the workshop in a *World Café setting* were sharing the ideas and proposals with respect to the following issues:

- What is the **essence** for exploitation of SIM4NEXUS approach?
- What **updates** (data, policies, interlinkages) are required? When to start and what shall be the frequency for the updates?
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CAPACITY BUILDING

Essence:

- Targeted stakeholders with the mapped expectations and motivation to be involved
- Opportunity to get the overview on many sectors and overall impression on the various interlinkages
- Big municipalities: they could use NEXUS approach in the new projects and understand all the links and different scales (like regional or timeline related)
- Promotion of the success stories as the important part of the capacity building activities
- To find the hidden financial/ environmental/ social/ economic benefits
- Removing SILOS
- Present the complexity of the changes (by changing one element how others change as well)

Updates:

- Least frequency needed (mainly to get impression so actual data wouldn't be so crucial)
- Cross sectoral policies update would be important
- KPIS monitoring, evolving
- Financial evaluation/ assessment data update
- Social influence/ cost/ benefits data update

Business/organizational models

- Marketing of this approach would be very crucial
- Creating the space of the testing the tool
- Lessons how to use it correctly
- Interpretation of the results
- Time to get the instructions/ play/ evaluate the results
- Workshops organised to learn the game, play it and understand
- Direct consolations/ advice
- Thematic narratives

POLICY MAKING

Essence:

- Capacity building for policy makers at various levels – ministries, planning regions, municipalities
- A tool for a dialogue with other stakeholders e.g., to discuss alternative options, to compare different solutions on the same subject
- A tool for:
 - assessment of conflicting interests, impacts
 - selection of important parameters to be assessed/ included when elaborating long-term development strategies, policies
 - demonstration/utilisation of new governance methods e.g. cross-sectoral approach, decentralisation possibilities
 - conveying the messages and decisions to general public
 - promotion of “green” solutions and providing evidence for these solutions or decisions
- Simulation results shall be realistic and be based on trustful data (model should be representative).
- It would be good if there would be linkages with other projects and initiatives having elaborated projections and scenarios on a territorial level
- In an idealistic case there should be an official approval (validation) from various level administration for application of the tool

Updates:

- Data update would be needed after each 2-5 years (idealistically if the update would be on automatic basis); data accuracy depends on financial resources available (allocated)
- It would be good if e.g. after 10 years it would be possible to upgrade the SIM4NEXUS tool with newly developed models

Business/organizational models:

- New projects could be developed aiming at policy development, thus allowing to allocate financial means also for the update of data

RESEARCH

Essence:

- Strength of the modelling
- Discover new topics/ synergies
- Synergies and trade-offs
- Serious game
- Sharpen the researchers holistic thinking
- ICT element → assessing complexity
- Take also other components
- Fussy models
- New dimension of uncertainty – important!
- Machine learning technique
- Optimization of policies – Added value by close research systems

- Evidence based policy building
- Standardization of terms
- Evaluation of measures
- Test of tools → Research

Updates:

- Data accuracy
- Reliable forecasts
- Earth observations
- Expand monitoring
- Data validation, calibration
- Synergies of research projects
- Bounce research <-> policy making

Business/organizational models

- Replicability (from business, adaptation) of the framework – formulas guidance, research optimization, data; SDM
- User rights
- Status of the products
- Increase interest
- National laboratory – take care of the model, maintain the model; can be a cluster

TEACHING

Essence:

- Negotiations with universities about integration of game into program;
- Benefits of SG for building up the systemic thinking;
- To raise awareness on interrelation of various factors;
- Increase interdisciplinarity silo breaking;
- Development of SG as a tool;
- Technologies and models behind the NEXUS;
- Complexity of sciences.

Updates

- Data updates for the exploitation of SG among students it is not so important. It is crucial that students understand the essence of SG, how it works and what kind of results can be obtained. For students it is very important to understand the interlinkages and impacts on the various fields.

Business/organisational models:

- Organisation of practical field trips (action research, experience, live project methodology);
- Organisation of thematical competition, webinars, summer schools.