

MUNICIPAL ENVIRONMENTAL GOVERNANCE IN LATVIA: GOVERNANCE INSTRUMENTS' FRAMING PRACTICE

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Abstract. There is a certain positive development in Latvia, especially in particular cases, but, in general, not all environmental governance issues are regularly and sufficiently integrated into Latvian municipal development governance/planning system, since being neither substantially supported by national governance level nor everywhere taking place at the municipal planning and management self-designed practice, particularly, as instant public pressure and requirements are often limited. After governance landscape changing administrative-territorial reform (2021) in the country, researchers now were aiming to study governance dimensions' framework in municipal practice – studying governance triple dimensions as content, stakeholders, and governance instruments. Research-and-development framework has been applied, using case study research methodology, based on the analysis of documents, general municipal practice structural overview, additional expert interviews/consultations, and, three chosen detailed municipal best practice case studies in Ventspils, Kekava and Valmiera municipalities with complementary governance approaches. Based on these studies, as well as on national previous studies and international best practice comparisons, there are emphasised the two core preconditions for the improvement of municipal environmental governance in Latvia. Since there is to be seen, that municipal environmental governance comprehensive integration approach, being theoretically well thought, but is having only limited success in current pragmatic municipal practice, there is to be secured municipal task-related vertical institutional environmental governance system, covering all four inner municipal administration levels. In parallel with statutory organized ground level environmental sector municipal companies, so-called communal services (drinking/sewage water, energy/heating, sanitary etc. basic environmental sub-sectors), other and newly growing environmental governance content issues are to be also institutionalised, but at the higher local government administration and decision-making levels. Next core precondition - municipal environmental communication complementary instrumentalisation and structural development, including environmental information, education/training, involvement/participation, and pro-environmental behaviour. These improvements would provide the necessary systemic overview and co-management of the whole complexity of environmental governance processes and procedures.

Key words: environment, municipalities, institutional and communication governance instruments.

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Introduction

In recent years, the governance of socio-ecological systems has developed, as well as the study of the management of such systems has become popular – there is a great diversity of governance systems, as well as an increasing emphasis on less frequently discussed governance principles, including adaptability, collaboration between different governance bodies, as well as diversity of knowledge and enhanced learning (Karpouzoglou et al., 2016). There could be developed even theoretical toolbox (Partelow S. et al., 2020), and author is mentioning a list of known theories, e.g. polycentricity, network governance, multi-level governance, collective action, governmentality (power/knowledge), adaptive governance, interactive governance theory etc. Adaptive governance requires the perception of environmental governance as a complex, socio-ecological system, based on close links between different elements, stakeholders, and actors or the organisations involved, as well as processes and events affecting governance, including climate change (Olsson et al., 2007).

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Authors analysed literature and identified 3 basic elements: environmental governance management; environment and innovative designs, being further on divided into 14 detailed elements (Pivo G. et al., 2020); and, for example, elements of management: processes (cooperation and experimentation); power (coalitions and regimes); actors (management, change agents, technical attitude, government agencies); organisational culture (norms and institutions, learning); organisational capacity (financial, adaptive, institutional); policy and legislation (ambiguities, mandates); forms of government (functional and electorate fragmentation). Authors (Bennett N. et al., 2018), studying the governance scholarship, have proposed that environmental governance has four general aims or objectives – to be effective, to be equitable, to be responsive, and to be robust, but each of these four objectives need to be considered simultaneously across the institutional, structural, and procedural elements of environmental governance.

Comprehensive list of good municipal practices is summarised and produced by the European Commission in the report "Best Environmental Management Practice for the Public Administration Sector" (Canfora P., 2015), covering many fields or sectors under responsibility of local municipalities: sustainable energy and climate change, mobility, local ambient air quality, reducing and optimising land use, noise pollution, green urban areas, environmental education, and dissemination of information to citizens and businesses.

There are various approaches to environmental governance and its definitions. The following definition of environmental governance could be formulated and applied to this study (Nesbit M., 2019): it is an inclusive system of actors, institutions and norms that establishes responsibility and accountability, and builds trust and capacity to cooperate in policymaking, decision-making, implementation and enforcement in the field of environment. In this report, there are listed several dimensions or spheres, constituting the basis for the assessment of environment governance: transparency, public participation, access to justice, compliance assurance and accountability, effectiveness and efficiency.

Regarding mentioned environmental spheres in the Environmental Governance Assessment Report for Latvia (Brizga J., 2019), there are many positive features and trends throughout all five of them in Latvia. However, at the same time, there is still a lot of space for substantial improvement by taking into consideration good practices from other Member States. It is already shown in the previously mentioned project report that there is no single cure for all possible environmental governance shortcomings, lacks and misuses, but there are also many good practices available. These practices can be adapted either by central government, or regional, or local government, respecting current situation, needs, local traditions, financial opportunities etc. Also, in regard of Latvia, there is the EU Environmental Implementation Review 2019 Country Report – LATVIA (European Commission, 2019). According to this report, Latvia has a centralised environmental management system with stable institutions and a strong emphasis on public participation. The legal framework has been strengthened by harmonising national environmental legislation with the EU directives. However, the adoption of good practices for the implementation of environmental legislation has not been uniform, and coordination in public administration has not been enough to properly integrate environmental considerations into sectoral policy. Institutional stability is sufficient, but there is a lack of effective coordination. Regulatory requirements have been improved, but a better impact assessment is needed. Compliance monitoring, enforcement, and the elimination of the consequences of injury should be strengthened. The public opening is high, but awareness raising is insufficient.

High-quality living environment and environmental protection as a precondition for such a living environment is a priority for Latvia and, accordingly, for policies of local municipalities. The implementation

of policy priorities and legislation at all administration levels requires appropriate governance instruments, whose availability and level of use are determined by actual current problems locations, and, also environmental governance approaches and capacities are different for different type, level and location of municipalities throughout Latvia. Such different approaches were planned to make optimal use of all available type of local resources. However, it makes it also problematic not only to access and compare environmental governance in municipalities, but, importantly, to increase experience exchange and cooperation between municipalities in the region. There are much less differences in traditional, statutory environmental governance sectors in communal management (water, wastewater, waste, energy, and other sectors), whereas in other, less traditional environmental management sectors and issues they vary significantly and are instantly growing. The formal setting of any type of environmental governance institutionalisation in municipalities in Latvia was optional and close to optimal, as per pragmatic views of most municipalities, neither national environmental nor administration legislation or law on municipalities (last since 2022) determine necessary existence of the environmental administration/enforcement body/-ies.

As a result of the administrative-territorial reform and related local government elections in 2021, there are 43 local administrative territories in Latvia instead of the previous 119 (9 urban and 110 rural/mixed municipalities). At the end of the reform, the municipal administrative structures for the merging municipalities are more similar now, but not so in environmental administration organisation, often still not having a single environmental enforcement body model. The reform resulted in bigger municipal area, bigger population, and increased diversity of environmental problems for the newly-formed joint municipalities, having also a new level of their combined budgets that now need to be planned and divided. Also, now there are more options and capacities for real environmental management staffing development, which were very limited or not existent at municipal administration/planning level for most of municipalities before reform. Besides that, there is now a ground environmental staff, employed by municipal communal companies (company limited status introduced in 2009) for basic environmental services in the field of any municipality. Local government expenditures on environmental issues could increase now, but there will be a possibility for optimal use (even not in all municipal cases) of the common environmental infrastructure, following the merger of municipalities. Inner/outside investment opportunities, such as investment in energy efficiency improvement and the extension of the public service networks etc., are also increasing.

Also, considering that municipal environmental governance has been rarely studied, researchers were aiming to renew former studies, after governance landscape changing administrative-territorial reform in the country, by employing governance dimensions' framework – studying **environmental governance content, stakeholders and governance instruments dimensions** (Ernsteins R., 2017a). Particularly, in this post-reform case there could be introduced the two-task orientations for current research-and-development framework studies, based on two eventually decisive governance instruments – additional environmental governance institutional instruments, as it is already now newly-decided in the several former/new municipalities, and wider emphasis on environmental communication instruments developments and usage – as both instruments are especially relevant for the introduction of any whole municipal environmental management systemisation and towards the better achievement of the main objectives, set out in the statutory local level municipal development planning documents, which also shall be theoretically based on socio-ecological system (SES) approach and sustainability principle.

Methodology

Overall, projected studies have been done within research-and-development framework, including action policies design, with eventual local approbation, as well as according to the local conditions, as the main emphasis is on municipal governance. There are various diverse environmental governance instruments to be studied, and the **model of six groups of environmental governance instruments** (Ernsteins R., 2017a) has been applied – political and legal instruments; planning instruments; economic and financial instruments; administrative and institutional instruments; infrastructure and technology instruments; and communication instruments, which altogether are to be seen as complementary set of instruments that need to be designed and implemented. **The set of the environmental communication instruments**, consisting of information, education/training, involvement/participation and pro-environmental behaviour groups of instruments (Ernsteins R., 2017b) is also to be recognised.

This framework of governance instruments has been applied for current study for the both interdependent administration levels in Latvia – national and local/municipal. There is also the third level, placed in-between the mentioned ones – there are five planning regions in Latvia, having small administrative capacity and limited number of prescribed regional level duties to be done, being represented by the Regional Council, automatically build by the elected leaders (mayors) of the local municipalities in each particular region. Besides the instrumental frame of the governance as one of the governance dimensions, two other complementary governance dimensions also need to be taken into account – governance content dimension and governance stakeholders' segments dimension – altogether these **three governance dimensions are framing environmental governance system** (Ernsteins R., 2017a).

Research-and-development framework has been applied, using **case study research methodology**, based on the analysis of documents, including general municipal practice overview. There were expert interviews/consultations conducted, and, particularly, three chosen detailed municipal case studies performed in Ventspils, Kekava and Valmiera municipalities, approaching the set of tasks-orientation of the research programme. Those three and theoretically complementary case studies at the local municipal level, each representing specific environmental governance institutionalisation approach (branch/integration approaches), have been emphasised and studied:

- Kekava Municipality – environmental governance integration approach;
- Ventspils Municipality – environmental governance branch (department) approach;
- Valmiera Municipality – environmental communication governance integration approach.

After studying national documents, by applying governance instruments framework and pre-scribing municipal environmental governance developments, the local municipal document on studies of environmental governance institutionalisation situation was also performed. It contains information about availability of environmental administrative units/divisions and/or other environmental staffing options, environmental committees/commissions etc. in 32 municipalities out of 43 recently (re)established. Acknowledgement goes for University of Latvia Environmental Science bachelor's/master's students, realising project works as part of Environmental governance study course. Besides this general local document studies, also detailed document studies in the three case territories were taking place, as well as expert/specialist evaluations and judgements, using participatory research application elements, as most of this research co-authors are also working as environmental governance experts in the municipalities. Further studies, using stakeholder interviews and surveys, are planned for the second studies stage.

1. National framework for municipal governance instruments' development

There are many environment governance instruments, provided at the national level, for which the model of six groups of environmental governance instruments could be used – political and legal instruments; planning instruments; economic and financial instruments; administrative and institutional instruments; infrastructure and technology instruments; and communication instruments (Ernsteins R., 2017a). Local governments as entities in the field of public law, may rely solely on regulatory enactments, which define the functions, rights and duties of local governments in detail. There is less political influence at the local municipal level in comparison with national level. Economical aspects and strong personalities prevail at the local level, irrespective of their political "homeland".

The legislative framework is exhaustive and detailed, but it is too fragmented in relation to the environment protection. In terms of the planning framework, documents at national level are detached from the local level. The ambitious targets set lack a clear identification of implementation mechanisms and financing (amount of waste disposed, CO2 reduction etc.). The economic and financial framework at national level defines the source of municipal finances – real estate tax, population income tax, natural resources tax, but there is no financial mechanism for local governments of municipalities to stimulate business development in their territory, to promote sustainable forms of business, to promote the use of renewable energy sources (e.g. wind parks). Regarding the institutional and administrative framework and the framework of communication instruments, there are separate restrictions, imposed by regulatory enactments (e.g. the need for public consultations in certain cases, restrictions on the handling of municipal property etc.), leaving the local government level with a relatively large freedom of choice within the financial resources, available for activities. The development of infrastructure framework at national level is mainly linked to existing standards, regulations and procedures for construction, exploitation, etc., as well as the distribution of available EU funds, monitoring and control of use.

Legislative framework instruments. As regards environmental protection and environmental management, the following mandatory requirements, regulatory enactments, voluntary initiatives and standards may be applied to municipalities as one of the levels of public administration. Key regulatory enactments, governing the development process, procedures and general content of municipal planning documents, are: Law on Municipalities; Law on Spatial Development Planning; Regulations regarding local government development planning documents; Methodical Recommendations for the Development Programmes at regional and local level (integrated approach). According to the Environmental Protection Law (02.11.2006), the local government shall carry out environmental controls. The legislation framework should include binding rules for local governments, which are in force in a specific area, and apply to environmental management, such as waste management, waste water discharge, management of public areas, as well as incentives for energy efficiency measures taken, works to combat invasive plant species etc. Article 4 of the new Law on Local Governments, entered in force from 2023, states that local governments have the following autonomous functions in the nature/environmental fields:

- to organise water, heating, and municipal waste management services for the population, regardless of the ownership of the housing stock;
- to take care of the improvement and sanitary cleanliness of the administrative territory of the municipality (lighting and maintenance of areas, intended for public use; establishment and maintenance of parks, squares and green areas; flood prevention measures; establishment and maintenance of cemeteries and burial grounds for dead animals), as well as to establish requirements

for the maintenance of areas and structures, as this is related to public safety, maintenance of sanitary cleanliness and preservation of the urban landscape;

- to promote sustainable management and stewardship of natural capital, and to determine the use of municipal property, held for public use;
- contribute to climate change mitigation and adaptation.

The latter function – to contribute to climate change mitigation and adaptation – is brand new, as it was included in the newly-approved Law on Local Governments in 2022, comparing to the old, even regularly updated version of this law from 1994, which until now was the main piece of legislation, regulating the activities of municipalities. While most of the legal municipal functions, prescribed by this law, could be considered universal/traditional, this law does not include a number of activities or functions that municipalities carry out on a voluntary basis, depending on their actual needs, for instance: protecting and improving air quality, remediating polluted sites, monitoring and ensuring water quality in bathing areas, combating poachers etc.

Planning framework instruments. The municipal environmental governance in general, being in practice understood as nature and environmental protection sectorial components that are to be necessarily provided, has actually integrated into the three statutory municipal development planning documents: Sustainable Development Strategies (strategic planning for 25 years' period), Development Programmes (mid-term planning for 7 years' period), and Spatial Plans, the general/overall content of which is governed by national regulatory enactments and planning documents. The main planning documents at national level to be considered are: Latvia's Strategy for Sustainable Development by 2030; National Development Plan for 2021–2027; Regional Policy Guidelines for 2021–2027; Environmental Policy Guidelines 2021–2027; Strategic Plan for the Common Agricultural Policy of Latvia 2023–2027 etc. Local governments may adopt voluntary additional planning documents at local level, e.g. sectoral development plans and programmes in regard of mobility development, sustainable energy and climate change impact mitigation, solid household waste management, communication, territory improvement plan etc.

Economic and financial framework instruments. Local governments shall act at the level of the budget, available to themselves, including the so-called special budget, consisting of contributions from the Natural Resources Tax, which can only be used (spent) to finance measures and projects, related to environmental protection, such as education and awareness raising in the field of environmental protection, environmental monitoring, preservation of biodiversity and protection, air protection, climate change, environmental and natural resources research, assessment, recovery, water protection, soil protection and rehabilitation, strengthening the performance of environmental authorities and public environmental inspectors, waste management, and radioactive waste management. The European Union has committed itself to becoming the first climate-neutral part of the world by 2050. This requires significant investments from the EU, the national public sector, and the private sector. The proposed European Green Investment Plan – Sustainable Europe Investment Plan – will stimulate public investment and give access to private funds through the EU financial instrument. The European Investment Bank's lending mechanism to the public sector, supported by EU budget funds, could raise EUR 25–30 billion in investments. This will be used for loans to public sectors, such as investments in district heating networks and building renovation. The European Union Recovery and Resilience Mechanism Plan is available from June 2022, with investments to be made by 31 August 2026. The maximum amount of funding, available to Latvia, is projected at EUR 2.02 billion. The main priority of the plan is climate change and sustainability, through which financing will be available for: (1) reducing emissions in the transport sector, including greening measures of the Riga

metropolitan area transport system, road and public transport, as well as Rail Baltica multimodal points (small stations); (2) improving energy efficiency, including energy efficiency in multi-apartment houses, business, municipal buildings and the public sector – warming, refurbishment; (3) adaptation to climate change, including adaptation of the disaster management system to climate change, flood risk mitigation, forest growing.

New Law on Local Governments introduces new financial tool at the local level – **participatory budgeting**, amounting to at least 0.5 % of the total municipality budget and provided for grassroots initiatives from local communities. It will be mandatory for all municipalities from 2025.

Institutional and administrative framework instruments. Besides statutory responsibility on municipal utilities, being institutionalised in every municipality – water/waste water, heating, municipal waste, sanitation, and other statutory issues – and being organised as Environmental Utilities and Services departments, and/or most often as related municipal capital companies, there is need and space for various other environmental sector/issues responsibilities and everyday duties at the administration/planning/decision making levels of municipality. In opposite to the more or less similar structure of disciplinary/branch/sector-based governmental institutions at the national level (e.g. Environmental and Regional Development Ministry), the administrative structures, responsible bodies vary widely and differently in the fields of nature and environmental protection and resources management in municipalities. In Latvia, there is no any uniform pattern of such executive body, which in municipal practice may be either:

- a separate Environmental Governance/management department/division;
- Environmental Governance Division within another department;
- an individual/several environmental specialist/-s within one/another general departments;
- also, there could be the case of having neither separate Environmental department/division nor particular environmental specialist. It was the case in most of municipalities (particularly rural and small size municipalities), where general environmental responsibilities (mandatory and voluntary as decided by municipality, e.g. coastal issues for coastal municipalities, etc.) are to be shared between several other general sector employees and departments (e.g. Development, Planning, Project Management, Building, Municipal Property Management etc.).

There shall also be more powers in the environment management to be delegated to the Planning Regions, that are presently suffering from insufficient financial means and, accordingly, lack of administrative (human) resources. This could be especially important after the administrative territorial reform.

There are only several self-governments in Latvia, that during the last years have introduced an individual position in their administrations, regarding energy management. Most of the municipalities have elaborated different energy management plans (especially those of the European Mayors Pact), that are of great importance in the light of national objectives towards energy resources saving, use of renewable energy resources, and reduction of greenhouse gas emissions in atmosphere. However, these plans are far from good management and implementation, if there are no persons, responsible for monitoring of the plan implementation. Energy management is really cross-sectoral issue with involvement of different stakeholders and consisting of a wide spectrum of activities – insulation of heating pipelines, change towards sustainable fuel (wood pellets for boiler houses, electricity or biomethane for vehicles, wind parks, solar energy use etc.), reconstruction and insulation of public buildings and dwelling houses, change of existing street lighting and room lighting towards smart LED lighting systems, building of bike roads, thus

reducing transport intensity by cars and emissions thereof, awareness raising of general public, and many others.

Infrastructure and technology framework instruments. The environmental management system includes, of course, infrastructure and technology components: centralised water supply, waste water collection pipeline networks, waste water treatment plants, landfill sites, bathing sites, and other components. When designing, constructing and installing infrastructure and technology frameworks, it is essential to include elements of innovation and energy savings, which are almost always a necessary prerequisite for external financing. The involvement of private companies, private-public partnership projects could, on the one hand, reduce the number of financial resources to be invested on the part of the municipality for infrastructure and technological development, and, on the other, promote public involvement, co-responsibility for the decisions taken, careful and responsible maintenance results of projects carried out, such as bathing sites, waste collection sites etc.

Communication framework instruments. Citizens' rights to receive correct environment information are set in the Article 115 of the Constitution of the Republic of Latvia (Satversme) in the following way: *The State shall protect the right of everyone to live in a benevolent environment by providing information about environmental conditions and by promoting the preservation and improvement of the environment.* Furthermore, this requirement is described more detailed in the Law on Environment protection and Regulations on Elaboration of Development Programmes and Spatial Planning, requiring a minimum set of public consultation before approval of the planning documents.

Communication shall include all possible means, used by the local government for communication with citizens, natural persons and legal persons. The inclusion of citizens in decision-making shall be implemented through printed and electronic media, meetings with citizens, public consultations, etc. Cooperation between municipality and non-governmental sector, which can also take part of the responsibility for good environmental management for the municipality, should also be added here. At least, non-governmental sector shall participate in the development of public opinion on the implementation of a specific approach to one of the above instruments.

2. Municipal environmental governance instruments framing the practice – case studies

Cases studies, performed in three comparatively diverse municipalities, could be seen also as complementary examples in relation to their environmental institutions based instrumental, as well as other practices at the local level environmental governance. To ensure the successful implementation of the environmental governance framework, certain resources and the whole selection of governance instruments are needed. They may vary from one municipality to another and the most important environmental governance instruments in the municipality are examined below.

2.1. Kekava Municipality with Municipal Property Management department: environmental governance integration approach

Kekava Municipality is situated next to the capital city of Riga. The area of municipality is 443.91 km², the number of inhabitants – around 32000. The main natural resources are: forest, taking approximately half of the whole territory of the municipality, rivers – Daugava River along the coast of the whole municipality, including the Riga Hydroelectric power station dam and many smaller rivers, used for boating, and lake Titurga. The main challenges of Environment management in the Kekava Municipality are linked to preservation of natural quality of surrounding environment for good living and working conditions,

availability of places – forests, parks, river banks – for public use and development of local tourism, also avoiding large polluting industries and development of local handicraft and agriculture.

In the implementation of environmental management, the Kekava Municipality actively forms cooperation with all target groups (stakeholders governance dimension) – State institutions (ministries, Lielrīga Regional Environmental Board), private companies (Business Council, Real Estate Tax Discounts, Support of Local Home Producers, Brand “Made in Kekava”), co-financing of non-governmental organisations (NGO projects, co-projects, joint projects with associations and participation in associations – Daugava Union, Daugavkrasts Partnership), society as a whole, and neighbouring municipalities (Rīga, Marupe, Olaine, Salaspils, Baldone).

The local government's work in sectoral terms (content governance dimension) on environmental management is not limited to classical sectors – water management, waste collection, district heating – but is also implemented in the direction of improving energy efficiency, promoting micro-mobility, planning of landscapes, e.g. the municipality's unified territorial and thematic/sectorial signs branding system was elaborated. Campaigning, where all political parties are stressing, inter alia, the necessity of energy transition from fossil fuels to renewable sources, mobility improvement, greening of public areas, and other measures for improving of living quality and environment in the municipality as part of their political declarations, may be mentioned as sectorial governance perspectives and also as political instrument, one of those to be studied.

Legislative and planning instruments in the Kekava Municipality correspond to the national and regional priorities, that are complemented at local level, starting with compulsory planning documents – Sustainable Development Strategy 2030, Development Programme 2021–2027, Spatial Plan – and complemented by voluntary initiatives, such as the Local Regulations on “Prohibition of the Growing of Genetically Modified Plants in the Administrative Territory of the Kekava Municipality”, the Kekava Municipality Improvement Plan, Kekava Municipality Energy and Climate Action Plan, the organisational plan for measures to limit the spread of hogweed for the period 2021–2025.

Within the limits of the economic and financial instruments, the local government of Kekava Municipality is acting basically on the local government budget, but also stressing outside funded projects developments. Payments of the Natural Resources Tax for extraction/use of natural resources or environmental pollution are to be transferred in proportion of 40 % to the basic budget of the local self-government, in the territory of which the activity is carried out. The funds of the municipality's basic budget, derived from tax payments and the funds of the environmental protection fund, established by the municipality, shall be used only for financing activities and projects, related to environmental protection, such as environmental education; environmental monitoring; biodiversity conservation and protection; air protection and climate change; environmental and natural resource research, assessment, restoration; water protection; soil and ground protection and remediation; capacity building of environmental authorities and public environmental inspectors; waste management; radioactive waste management.

The institutional and administrative instruments is characterised by the division of the local government administration into 5 departments, established in the Central administration. There are **several environment management specialists** in the **Municipal Property Management Department**: Chief Environmental Manager, Landscape Specialist, Forestry Specialist, Environmental and Melioration Engineer. The main aspects of its work are participation in development, implementation and coordination of environmental protection documents of the local government; participation in development and implementation of local government development planning documents (Development Strategy, Development Plan, Investment Plan, Spatial Plan); development of projects, related to green structures

and natural sites, etc. It is complemented with some specific aspects of activities in sectors of waste management (including communication with stakeholders regarding the sorting of waste), water supply and wastewater collection (including registering of decentralised wastewater treatment individual solutions). Activities also include consulting inhabitants and companies, preparing documentation for tree falling outside territories of town, implementing of activities in the field of land melioration, drainage of rainwater.

One of several Committees (elected councillors) of the Council of Kekava Municipality – the Development Committee – reviews environmental issues. Also, several Council Commissions (councillors and invited municipal representatives, experts from outside institutions), taking care of related environmental issues, have been established at the Council: Civil Protection; Wood Felling Outside the Forest Land; Hunting Coordination, and after the administrative reform also **Environmental commission**. Working groups are set up to manage projects and to address certain topical issues by inviting specialists from other institutions (not just municipality administration).

Environmental management-related municipal companies are taking care of environmental infrastructure functioning – companies being 100 % owned by municipalities (limited liability companies/LLC), provide district water management centralised services, centralised heating, territory improvement and development.

The infrastructure instruments of the Kekava Municipality are best characterised by cooperation with neighbouring municipalities for the provision of environmental services. For example, collected waste water has been pumped from Kekava to Riga, and directed for treatment in the waste water treatment plant in Riga. In the closest villages to Riga – Valdlauci, Ramava and Katlakalns – centralised drinking water supply is provided from two sides, including from Riga. Also, collected municipal waste is delivered for disposal at the municipal landfill "Getlini" in the Stopini Municipality. Riga city residents are using municipal forests, parks, infrastructure for recreational purposes, swimming, walks, fishing etc.

One of the tasks of the municipality in the field of communication instruments framework is informing population about the work of the municipality administration and the Council, explaining the decisions taken, and the topical issues to implement them. The Kekava Municipality uses different information channels according to the needs of each audience. In the light of developments in communication, there is a increase in communication between citizens and the municipality through social media – Facebook and Instagram. The local government actively uses public consultations; residents can also watch the Council meetings live on the website of Kekava Municipality.

Summing-up, the governance of the environment in the Kekava Municipality is generally considered to be very good and continues to develop based on the planning documents. Environmental specialists, as local government employees, are part of the integrated municipal Property Management Department, and all environmental issues are integrated into different areas of local government activity, since the long-term vision of the municipality is to create the best environment for people, families, young families, based on a good natural and social environment. Example from the Kekava Municipality shows that complementary supportive collaboration between all three dimensions of environmental governance is necessary to achieve the best results. Of course, there are still many challenging issues to be addressed in the nearest future, e.g. improved sustainable mobility; energy transition from fossil fuels to renewable energy sources, i.e. in sector of private households and industries; reduction of produced waste amount, etc. This can be achieved by wider communication and involvement of stakeholders like researchers, private companies, government institutions, neighbouring municipalities, establishment of active local communities. Many of these activities most likely are wider than one area of one local municipality, and

require regional approach with involvement of several municipalities, forming a cluster of similar grouped and structured activities for better environmental governance in regional perspective.

2.2. Ventspils Municipality with Environment Supervision division: environmental governance branch approach

Ventspils state city is located in north-western part of Latvia, at the mouth of the Venta River to the Baltic Sea. Ventspils is the 6th largest city in Latvia having around 37 000 inhabitants, covering 58 km², 38 % of which is forests, parks and waters. The Freeport of Ventspils is providing business infrastructure and favorable environment for investment, and, the growth rate of the manufacturing industry in Ventspils is currently the highest in Latvia.

The environmental governance system in the municipality is organized with the aim of balancing the interests of businesses and citizens. Therefore, Ventspils City Council has adopted a decision that requires all operators of category B polluting activities to inform the public about the planned activities and their possible impact on the environment before obtaining a permit from the State Environmental Service. In cases of particular significance, a public consultation should be organized by means of a meeting with the residents. This ensures that the basic principles of informing the public, creating a dialogue and involving the public in environmental decision-making are respected. Other political and legal instruments, used in Ventspils Municipality, range from international and national to specific rules, binding on local government fields. For example, in the field of water management, these are the "Regulations on use of Ventspils City Water Pipeline and Sewer Networks", while in the field of coastal management there are the Regulations for the Management of the Beach etc.

Planning instruments, that are used in the development of local government development documents, are the most relevant in the main work of the local government environmental specialists. There are strategic environmental impact assessments (EIA) and the specific planning document's Environmental Report, the nature conservation plans of the specially protected areas, the development and implementation of which are closely linked to the cooperation with the national authority – the Nature Protection Board. Such plans are developed in Ventspils for geological and geomorphological nature monuments "Staldzene Stand Bank" and "Dampeli Outcrop", as well as the nature conservation area "Shore of the Lake Busnieki", included in the European network of specially protected nature sites Natura 2000.

Economic and financial instruments determine the way, in which the funds are placed at the disposal of the local government (tax on natural resources), and the use of such funds for environmental protection purposes. It is not only the annual environmental budget as a separate section in the municipal budget, but also the cash flow for the longer term, as municipal funds are planned for a period of 5 years.

The most important institutional and administrative instruments are the **Environment Supervision Division** of the Ventspils state city administration as a separate unit under the authority of the Executive Director, as are all the city departments. There is established the **Environment Protection Commission** of Ventspils state city Council, which includes representatives of the elected City Council, municipal departments and invited experts from outside the municipal administration. The Commission's decision is of a recommending nature.

The Environment Supervision Division of the state city Council of Ventspils is an essential instrument for ensuring municipal environmental management, the main tasks of which are to follow that projects, investments, plans do not have an adverse effect on the quality of the city environment, and to find solutions to mitigate the negative impact. The main aspects of its work are:

- participation in the development, implementation and coordination of environmental protection documents of the local government;
- participation in the development and implementation of local government development planning documents (Development Strategy, Development Plan, Investment Plan, Spatial Plan);
- development of projects, related to urban green structures and natural sites;
- preparation and processing of orders, necessary for the performance of studies, related to nature objects and their protection;
- essential work in preparation of documents of the national authorities by preparing the opinion of the local government regarding the Permits for polluting activities to be issued by the Regional environment authority of Kurzeme;
- representing the local government in the Risk Commission of the State Environmental Impact Assessment Bureau, assessing the safety reports of potentially dangerous undertakings and the programmes for the prevention of industrial accidents;
- development and coordination of the International Environmental Education Fund in Latvia (NGO), essential for the local government. Both management and communications instruments of "Blue Flags" and "Eco-Schools" are used.

Other main environmental communication aspects in the operation of the Division are:

- internal cooperation with all staff members of the Division and specialists in other institutions/businesses of the Council departments;
- external cooperation with the employees of the Ministry of Environment, State Environmental Impact Assessment Bureau, State Environment Service, Kurzeme Regional Environment Administration, Latvian Environment, Geology and Meteorology Centre, Health Inspectorate, State Labour Inspection, Food and Veterinary Service, State Fire and Rescue Service, representatives of public organisations, and employees of other institutions.

There are multiple infrastructure instruments in Ventspils, starting with the city's green areas, outdoor traversers, and, finally, the Baltic Sea coast (it is almost 12 km long in Ventspils). Major local government departments (authorities/companies) are involved in the environmental management implementation, with which the Environment Supervision Division has the closest cooperation as they are realising infrastructure and technological instrumentation in Ventspils.

The local government authority "Communal administration" performs the functions of the local government by organising the autonomous functions of the local government, specified in Section 15(2) of the Law "On Local Governments": improvement and sanitary cleanliness of the administrative territory (construction, reconstruction and maintenance of streets, roads and areas; lighting of streets, squares and other areas intended for public use; improvement and maintenance of squares and green zones; control of the collection and transport of municipal solid waste; anti-flood measures; establishment and maintenance of burial sites for cemeteries and dead animals; management public forests and waters).

Local government established and 100 % owned companies, being bond with the City Council by the function delegation agreements:

- Municipal LLC "Udeka" – organises the supply of drinking water and the collection of municipal waste water, operation of waste water treatment plant;
- Municipal LLC "Ventspils labiekartosanas kombinats" – municipal solid waste management (collection, delivery to the municipal landfill, maintenance of waste sorting places, etc.); road maintenance; road

construction and/or repairs; greening; grooming of plants and lawns; transportation services (not secured by the local government, participating in procurement in the same way as private operators);

- Municipal LLC "Ventspils Siltums" – performs an economically justified provision of thermal energy – production, transmission, distribution and selling of thermal energy, ensuring environmentally friendly and efficient production and supply of thermal energy to the residents chosen centralised district heating connections.

All the set of four environmental communication instruments are present in the Ventspils Municipality (Ernstens R., 2017b) – environmental information and education, public participation, environmentally friendly behaviour, and all of them are worth of mentioning. Twice a year, the municipality local government organises sociological surveys of the population, including issues, related to the quality of the environment, its importance and the sources of information (present and desired). For example, in the field of environmental development and education, the following communication instruments should be mentioned: various information booklets; participation of the municipality in the "Blue Flag", "Green Key" and "Eco-Schools" movements of the International Environmental Education Foundation; information stands in protected areas and nature trails. It is worth mentioning that there is a continued dialogue with citizens on the www.ventspils.lv portal. It contains permanent environmental information, publishing the results of weekly bathing water testing, answers to citizens' questions, and weekly reports on topical environmental issues.

To sum-up, Ventspils city municipality have established separate Environmental division (incl. necessities of coordinating work with other divisions/departments) and elaborated (first in Latvia) municipal Environmental Policy Plan as particular voluntary sectorial planning document already straight after Latvia regaining independence in early 90-ties. After the Environmental Commission was established, also actively developed Blue Flag tradition, what created also Green Flag schools movement, and etc. activities could be mentioned, altogether clearly emphasizing the indispensable role of Environmental division and the whole vertical environmental governance system.

2.3. Valmiera Municipality with Public Relations department: environmental communication governance integration approach

After municipal reform, the Valmiera Municipality consists of Valmiera city (around 25 000 inhabitants, covering the area of 19.35 km², being the 8th biggest city in Latvia), several towns and parishes. Valmiera is an economically active city, being the economic and social centre of Vidzeme planning region, but around 30 % of the territory is covered by plantings and nature areas and 25 % are forest areas. Valmiera's slogan is *Evergreen City*. It includes well-being, joy of life, preservation of nature values, and developing pro-environmental industrial activities. Further in the text the three environmental governance dimensions will be shortly introduced.

Environmental sectors in Valmiera city are best characterised by the following facts: 99 % of heat-networks in Valmiera city are reconstructed and energy efficient. The unsorted Valmiera municipal waste is being deposit in the regional landfill "Daibe", where the nature education centre "Urda" is also operating. To support those Valmiera's inhabitants, who perform in an environmentally sound manner, Valmiera city is annually financing special waste management campaigns for dealing with spring green waste (tree branches and bushes), autumn leaves and bulky waste. Up to 84 % of Valmiera city central heating energy is produced by using wood chips as a renewable energy source. In order to battle climate change in 2020, Valmiera city was implementing smart energy efficiency street-lightning project, exchanging and implementing street reconstruction projects, as well as building cycling and pedestrian paths. Energy

efficiency measures in multi-apartment dwelling houses, as well as in industrial and municipal buildings, are being performed.

Stakeholder segments is another environmental governance dimension. Environmental governance at municipal level before the administrative reform was performed, using the integrative approach – having only a public relations specialist in environmental communication. Nevertheless, environmental issues are a part of agenda in all segments of environmental governance, cooperating and interacting upon need. Depending on the environmental sector, cooperation is taking either a pre-regulated form (e.g. the municipal quality management standard regulates the process of environmental communication) or a free development, reacting to up-to-date needs and spotlights (e.g. the organisation of the course "Balanced life" in cooperation between library and municipality). Environmental governance is performed using all governance instrument groups, described above.

Political and legislative instruments. Valmiera Municipality council has adopted a good-will act – the Environmental Declaration. Its energy management is performed with an Energy policy and ISO 50001 standard. The Declaration has environmental impact assessments for its spatial planning documents. Also, it has adopted several binding regulations for the management of the communal environmental sectors (waste management, water management, trees cutting, as well as management of degraded areas and buildings as legislative environmental governance instruments). The political governance instruments are: the municipal council, development committees and expert commission on the management of issues like evaluation of trees, degraded areas, public procurements.

Planning instruments. Moreover, Valmiera Municipality has developed three integrated statutory planning documents (instruments). Previously, before the municipal reform, the thematic Valmiera City Transport Infrastructure Development Conception and the Environmental Communication programmes for each calendar year were developed as disciplinary planning instruments for environmental governance.

Economic and financial instruments. There is a certain number of financial resources foreseen for environmental projects, related to environmental protection, environmental communication and promotion of participation within the annual municipal budget. Outer resources are being obtained for the implementation of environmental protection related projects.

Administrative and institutional instruments. Before administrative reform, environmental governance was the integrated performance duty of the municipal Real Estate Management and also City's Development departments. For last decade already, Valmiera Municipality has a separate **public relations specialist in environmental communication**, belonging to the municipal Branding and Public Relations department. Operational Information Centre is a useful support in coordinating environmental governance issues, offering the united phone number 8484 for dialling, if needed. Municipal police office is another environmental governance instrument that is worth mentioning. It serves as an instrument of direct information and mediation, as well as a coercive instrument. Since the administrative-territorial reform with seven rural municipalities joining, Valmiera Municipality has established the new **Natural Resource Management Division**, employing four environmental/nature and forest resource specialists, who ensure the implementation of the legal requirements for the management of environment and natural resources.

Infrastructure instruments. Valmiera Municipality has two large waste sorting areas for the collection of separately collected waste, and 61 Eco-points – smaller units for collection of the basic separately collected waste. Sorting infrastructure for biodegradable waste is in the process of development. Separate waste collection is available in individual containers at private dwelling houses. 84 of total 169 multiapartment dwelling houses have gone through complete renovation, improving their energy efficiency. There is the 99% availability for Valmiera city households to use centralised water supply service, and 98% availability

for Valmiera city households to use the centralised sewage. About 500 households in total are not connected to centralised sewage. Valmiera city is steadily improving its cycling infrastructure and taking care of its green areas. The following social environmental infrastructure is available in Valmiera city: educational nature trail of the river Gime, and nature and amusement park "Sajutu parks" ("Park of Senses").

Communication instruments. Municipal homepage and its social networks, publications in local media (newspaper "Liesma", portal "Valmieras Ziņas"), non-formal educational programmes ("Balanced life" as a cooperation programme between library and municipality), as well as information stands in city environment are being used for environmental information and education. The public hearings, population surveys and participation promoting events are being organised for the promotion of public participation. The following initiatives, promoting pro-environmental behaviour, are regularly taking place: municipal participation and the promotion of environmentally friendly lifestyle, promotion of fairs with local producers' products, performance of energy efficiency measures in public municipal buildings, tap-water drinking, duplex paper printing, use of electric cars and bikes in municipal mobility.

Collaboration instruments. Due to the perceptible size of municipality and its personal familiarities, cooperation in the environmental governance is taking place naturally. Still those collaboration instruments like a non-formal eco-board, consisting of the coordinators of Eco-Schools and municipal environmental cooperation, or involvement of municipal representative within the eco-board of each Eco-school, are to be highlighted.

To sum up, there in those communal environmental sectors, where municipal companies are active service providers (water, waste etc. management), the governance was reaching higher governance consistency of the sector, but before the administrative reform, the lack of highly disciplinary environmental approach (missing environmental unit) brought a certain disorder and unsystematic development of the field, and only the already existent environmental communication officer could also assist interdepartmental environmental information flow and coordination. After the establishment of the separate Environmental division, the process of environmental governance in Valmiera Municipality is performing well in all environmental governance sectors, step-wise involving more stakeholder segments and using/developing whole range of governance instruments.

Discussion

The introduction of the environmental management institutional systemisation in Latvian municipalities is still optional, besides communal management sectors statutory developments, and local governments are free to choose, which institutional management components should be introduced in a specific location to address specific needs and problems. In general, not all environmental governance topics/issues are still sufficiently integrated into Latvian municipal development governance/planning system, neither by top-down (national governance) nor bottom-up (local decision-makers and/or local public) approaches, also because of limited instant public pressure, but there are to be seen certain positive developments in Latvia, especially in particular municipalities after administrative reform (2021).

Not only legal requirements, but also national governance, supporting methodological documentation and training, are still limited, particularly for environmental governance integration statutory approach realisation. Self-deciding environmental practice of local governments is bound by very pragmatic necessary socio-economic budgetary expenditures, and subsequent environmental budgetary limitations, comparing to the growing needs and limited staffing capacities. There is also no clear requirement at least to monitor and review environmental governance situation as an integral part of the overall development

planning/monitoring, in order to overview the implementation of environmental governance and sustainability integration principle as requested for municipal environmental practice development.

During the studies performed, it could be recognised that after reducing number of municipalities during administrative-territorial reform in the country in 2021, now there can be seen a growth of certain environmental governance capacities and qualities in several municipalities. However, there is still space for important improvement. Related developments depend, of course, on the budget availability, the public attitude/support, on the extent of environmental problems, and climate change adaption needs in the municipalities. Given that the complexity and importance of environmental issues are increasing as well as the administrative area of municipalities, number of inhabitants and budgetary resources of the municipality increased after administrative-territorial reform, it is likely that in the future the creation of the particular municipal Environment Division will be indispensable.

The involvement of private companies and non-governmental organisations, associations and, in general, the development of cooperation and adaptive management, the introduction of innovative and complementary instruments, public education and involvement in environmental management are also further preconditions for effective development of environmental governance. In order to work successfully, it is necessary to be able to integrate environmental governance instruments into different areas and to attract public interest, since without a clear shared vision and public participation it is difficult to carry out any kind of environmental projects and further developments.

Conclusions and recommendations

Based on the studies, as well as on national and international best practice evaluations, there are also emphasised several main action-oriented development proposals in order to speed-up the quality of solving, preventing and predicting of environmental and climate change issues at the municipal level and, traditionally, there is prescribed use of diverse and possibly complementary environmental governance instruments, existing and innovative ones.

In the case of municipal development in Latvia, the main core precondition for the qualitative and also quantitative improvement of municipal environmental governance practice is to secure **municipal tasks-related vertical institutional environmental governance system**, since municipal environmental governance comprehensive integration approach, being theoretically well thought, but having only limited success in current pragmatic municipal practice. In parallel with statutory organized **ground level environmental sector municipal companies**, so-called communal services (drinking/sewage water, energy/heating, sanitary etc. basic environmental sub-sectors), other and newly growing environmental governance content issues are to be also institutionalised, but at the higher local government administration and decision-making levels. First, as the **separate or integrative administrative units/departments** - as a separate unit at local government administration level, or, at least, to expand existing Development, Planning, Project and/or Property management and other departments in order to include a separate environmental specialist/manager.

Further on, as additionally established and to be then **statutory municipal environmental committees or/and commissions** at decision-making level. Also, various existing municipal institutions, usually not or just occasionally involved for environmental activities could be further developed as **non-environmental institutions with additional environmental assignments** – municipal police, tourism information centres, libraries, eco-schools etc. Subsequently, in the perspective, there is to be seen **environmental or/and related institutions complementary at the all four municipal governance**

levels, as well as, in eventual partnership with public/NGO, business, also various content based consultative councils at municipal decision-making level and outside stakeholder groups.

Another core precondition that should also be mentioned is **inner/outer municipal environmental communication development** (information, education/training, participation and pro-environmental behaviour). Implementation of both instruments would improve the better overview and, subsequently, better co-management of the whole complexity of environmental governance process steps and components, which are now spread between various environmental sectors, diversity of already participating stakeholders and those who are still to be involved, and, finally, also multitude of environmental instruments. That altogether means the supervision and collaborative coordination of all three environmental governance dimensions mentioned.

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