

## ECO-SCHOOLS AS RESOURCE AND INSTRUMENT FOR MUNICIPAL ENVIRONMENTAL GOVERNANCE DEVELOPMENT: TOWARDS COMMUNICATION FRAME FOR COLLABORATION PARTNERSHIPS

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**Abstract.** With more than 200 educational institutions, covering all statutory levels of education system, participating in the international eco-schools program in Latvia, there is a large potential for combining joint efforts and collaborating with external stakeholders to increase scope, range, and effectiveness of the program's aims, particularly, in relation to local communities and municipalities. On the other hand, local municipalities are faced with challenges such as administrative resource scarcity and reachout to the communities, while having to reach their targets for sustainable regional and local development. As collaboration partnerships between eco-schools and municipalities have not yet been neither widely developed nor researched, this study follows a case-study-research approach to investigate what these already existent collaborations experienced and what their benefits and limitations are. There are examples of the two, so-called, municipal Eco-councils being established in Valmiera and Ropazi municipalities as environmental institutional and collaborative governance instruments for municipalities in Latvia.

Initially focus group discussions in both municipalities, including members of the municipal Eco-council, were held and evaluated focusing on participant's perception of the council as part of Eco-schools developments and a mutual collaboration instrument. The discussions were followed by in-depth semi structured stakeholder interviews later, after Covid-19 and administratively territorial reform for municipalities, depicting the current state of the both eco-councils, its recent and future developments, in order to learn and to spread gained experiences. Also other complementary study methods of the case study research framework were applied - document studies, express survey, local visits and observations. Additionally, a practice case, where both main stakeholders actually realized their partnership - pilot food waste sorting implementation bottom-up initiated by Eco-schools - being positively valued as collaboration partnership by all stakeholders involved.

The results underline the potential of such collaboration partnerships between eco-schools and local municipalities to support and upkeep of eco-school activities, foster mutual learning and information exchange to reach wider audiences, increase program effectiveness and lower hindrances like financial constraints. They also stress the importance of intrinsic motivation, time and financial resource availability for the successful implementation of eco-school out-of-door activities as well as the continuation and overall effectiveness of multi-stakeholder collaboration platforms like the municipal Eco-council for (eco)schools and municipalities collaboration for local communities/municipality environmental governance. In order to further upgrade and sustainably develop such collaboration partnerships, there were stressed the need for more development and complementary employment of the whole set of communication instruments as not only information and participation, but particularly also additional education/training activities and pro-environmental behavior enhancement work – an action-oriented and collaborative environmental communication frame.

**Key words:** eco-schools; eco-council, municipal and community environmental governance; environmental communication; collaboration.

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### Introduction

Local municipal environmental management still has to be improved in Latvia and facing the situation that municipalities currently have limited capacities and resources and that environmental management is

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not a priority for municipal development (having priorities in socio-economic fields) the often unused potential of existing of so called eco-schools or Green Flag schools in the municipality in their relation of their high involvement into community development and environmental management in the current municipality, needs to be recognized. Unfortunately, eco-schools are often not seen as a resource nor used as an instrument to reach aims of environmental management. Even though there are different types of contacts between eco-schools and municipalities and some other local stakeholders, effective organization and management of this municipal eco-school partnership have been seen only in two municipalities in Latvia even though altogether there are more than 200 eco-schools in 119 municipalities (before the administrative-territorial reform and after the reform 43 municipalities) in Latvia (Saeima, 2020).

Ropazi and Valmiera municipalities were the only ones so far who have had the experience of establishing so-called municipal "Eco-councils", as a coordination instrument of their collaboration with eco-schools and in case of Ropazi in the Eco-council there were not only municipal and school representatives, but also representatives of non-governmental organizations. However, the positive functioning of both eco-councils was kind of interrupted during Covid-19 pandemic and also by taking the case of the administrative territorial reform in Latvia, where also both former municipalities of Ropazi and Valmiera were involved and having quite crucial changes. This study follows the thesis that collaboration between municipalities and eco-schools lies in the interest of both parties, whereas the municipality is getting new capacities and opportunities of an existing resource and the eco-schools are able to realize more impactful work, widening their scope of impact on the larger community outside their school also including partnerships with other stakeholders. This fulfills the sixth step and aim of the eco-schools 7-step-methodology to have an impact on the surrounding community and establish partnerships according to the international guidelines of the FEE standing for Federation of Environmental Education in Europe (FEE, 2003) as initiators and international coordinators of Eco-schools program.

The Green Flag certification of the eco-schools program is internationally recognized to be a best practice example for an integrative environmental governance instrument that uses education and voluntary efforts to promote pro-environmental behavior. In a previous study by Truksans et al. (2020) it is suggested that there is still a lot of unused potential of the eco-school program, especially in regard to widening its scope to further develop pro-environmental governance. In the study the action-oriented environmental communication framework is used to evaluate the eco-school program, which includes four environmental communication instruments: environmental information and education, (public) participation and pro-environmental behavior aiming to improve environmental communication in a complementary and collaborative manner. The study findings conclude that both the Green Flag program and the Blue Flag program (also coordinated by FEE) could be used in order to expand municipal pro-environmental governance and foster overall sustainable development, with the Blue Flag program laying a special focus on sustainable coastal management and environmental protection and the Green Flag program showing further potential to promote pro-environmental behavior and improve educational institutions and approaches (ibid.).

In another previous study done by Truksans et al. (2017) the limitations of the eco-school program as an example for an integrative approach of pro-environmental behavior promotion, are investigated as well as responsive governance strategies to overcome them; being infrastructure, economic-financial, communication, administrative, planning, political and legal instruments. Although the first two categories are often dominating, overcoming obstacles in communication and delivery of the four environmental communication instruments is crucial for successful environmental governance. Eco-schools activities and educational approaches have proven to be very successful in improving stakeholder's as well as public's

pro-environmental behavior, especially when the four instruments of the action-oriented environmental communication framework are used with their complementary combination, evaluated and planned using measurable indicators (ibid.).

Hence, the topic of the following study is relevant because the potential of Eco-Schools to promote local environmental governance is still underutilized. By using environmental education and the Eco-Schools programme, municipalities contribute to the success of the Education for Sustainable Development objectives and to the participation of their communities in environmental issues. **The study aims** to investigate the role of existing municipal Eco-councils and their complementary participation and contribution to the both, the local municipal environmental governance and environmental education in the schools, in particular view of the recognition, cooperation and application of the local Eco-Schools programme capacity and activities as a resource and environmental management instrument in the municipalities of Valmiera and Ropazi. To achieve mentioned, the following tasks must be carried out: to develop the overview of the Eco-Schools programme's local societal contributions by mapping the out-of-school activities of existing particular Eco-Schools practice; to study the development, achieved results and perspectives of the municipal Eco-councils in both municipalities in the context of municipal environmental governance; to analyze and summarize the practice qualities of two thematic collaboration case studies realized (biodegradable waste sorting and bike a piloting case in Valmiera municipality since realized in municipal and eco-schools partnership; to gain related insights and evaluations of all involved main stakeholders, including municipalities and Eco-schools; to apply for studies the environmental communication complementary instruments frame as potential enhancement and framing instrument for mutual collaborations; lastly but not least, to propose recommendations for Eco-schools, community and municipal environmental management development.

### **Overview of international studies**

There has been an increase in literature exploring the effectiveness of eco-schools to support aims of Education for Sustainable Development (ESD) and sustainable regional development. Furthermore, improvements of pro-environmental behavior and awareness in participants were investigated in a multitude of case study research applications all over the globe (Moreno-Fernández, 2016; Truksans and Ernsteins, 2017; Sousa, 2022). The potential of extensive collaboration between teachers participating in the eco-school program, nationally and internationally, has been researched in a study by Alves and Araya (2019). Their results recognized communication and collaboration platforms, partnerships of eco-school's educators and national operators as a useful instrument for eco-school's effectiveness, program's aims and ESD (ibid.).

In Latvia, environmental education is mostly implemented through the Foundation for Environmental Education's Eco-Schools program, in which schools both observe and reduce the impact of environmental problems, involving in its activity the whole school, municipality, and community. Eco-Schools work according to the principles of the environmental governance system (ISO 14000 series (EEA, n.d.)) and use environmental education as a tool to inform pupils about important skills such as critical thinking, problem-solving and decision-making. Eco-school programs and environmental education are also used as an instrument to broaden students' local-global perspective as these skills mentioned before can encourage not only students but also municipal residents to be aware of planetary citizenship roles, taking action beyond the school surrounding environment (Moreno-Fernández, 2017). The ideas and information that schools learn about environmental education also influence children's families and the local community, often changing their habits. This benefit also has a potential impact on the local community, as school

projects and activities tend to involve the local municipality by providing information on the benefits of the local economy, how the community contributes to climate change and, of course, how the community can mitigate it (Díaz-López et al., 2023), which can contribute effectively to the development of environmental governance principles. We have to look for ways to change parents' and local interest groups' attitudes, and build local communities that are aware of their habits and reduce their impact on the environment.

Research on the effectiveness of education for sustainable development has shown that it works at a theoretical level, with young people gaining knowledge about the SDGs and understanding possible solutions to environmental problems, but it is difficult to observe how young people can apply and promote this knowledge in practice (Boeve-de Pauw et al., 2015). The practical application of knowledge can be enhanced by the involvement of local authorities in the implementation of environmental education. Local authorities can use ESD as a tool for their environmental governance, involving young people and helping them to achieve their sustainable development goals, and they can improve their local communities through participatory action.

Currently, 59 000 schools from 74 countries in the world do participate in the Eco-Schools programme (Eco-Schools global, n.d.), including above 200 Latvian educational institutions, at all levels of education — from pre-schools to universities. Schools that receive Eco-schools status actively implement environmental education in their schools, promoting and integrating sustainable development principles into the school curriculum, as well as actively involving and informing the surrounding community about environmental issues. Such cooperation, involving the local community, can contribute to awareness and behavior change on environmental issues, however, in Latvia, schools are still the most proactive in establishing cooperation, and most Latvian municipalities do not make much use of environmental education instruments as a potential environmental management tool. Currently, only two municipalities are known and both case studies of Valmiera and Ropazi, discussed in this paper.

In order to build such a cooperation platform, not only is it important to involve the local community and young people, it is also important to support teachers, who are willing to coordinate the process. Currently, there is no platform that allows Eco-school teachers and students to communicate with other Eco-School representatives outside their region or other parts of the world to exchange with experience and good practice examples, even though this program has shown great impact on teachers' professional development in ESD. To encourage further support for teachers it would be significant to not only adjust the teaching methodologies to be more focused on public involvement and community action (Moreno-Fernández, 2017), it would also be suggested to update the Eco-school concept, as to empower schools to stay active for long (Lysgaard et al., 2015).

In order to study cases, but also eventually to ensure the success of eco-school's activities, the **model of action oriented environmental communication and collaboration** can be applied (Truksans and Ernsteins, 2020). This model defines four complementary instruments for enhancement of environmental governance at all decision making levels and sectors, but also for collaboration and overall communication developments. These four instruments are (i) environmental information, (ii) environmental education and training, (iii) environmental (public) involvement and participation (iv) pro-environmental actions and behavior. These four groups of instruments are to be used complementary and interactively and, obviously, shall include selective targeting of a multitude of all related stakeholders from all key governance segments; state, municipality, businesses, local society/citizens and four groups of mediators, that each can be further split into selective subgroups depending on the aims of the environmental communication in particular cases of municipalities. The group of Mediators' is composed of media stakeholders, NGOs, formal/non-formal educators (including libraries,

information centers etc.) and researchers/scientists, also particularly at the local level etc. (Truksans and Ernsteins, 2020).

In the policy planning cycle communication is a key element to ensure the effectiveness of governance approaches. Recent research in Latvia has investigated the growing application of the environmental communication collaboration model in practice, e.g. in the last Latvian Environmental Policy Guidelines 2014-2020, and demonstrates positive changes in environmental governance effects for example in public environmental awareness (Truksans et al., 2017). Unfortunately, implementation of the environmental communication framework in practice is limited due to several factors. On the one hand, environmental information, education, and monitoring that includes participatory elements are limited. On the other hand, public participation in environmental decision-making, integration of sustainability principles in development planning, experience sharing and peer learning at the municipal level as well as incentives and information flow promoting pro-environmental behavior are still insufficient on all governance levels (ibid.).

The research results suggest that more interest and support from local governments is needed and not only for environmental education, but also communication, in order to succeed. By using environmental communication as one of the instruments of environmental governance, municipalities are able to promote a change in the habits of citizens, greening of urbanized areas, participation of citizens in community building and protection of the surrounding environment.

### **Case studies areas and research methodology**

Initially there were chosen two municipalities as the only ones in Latvia have had developed municipal Eco-councils as cooperation and eventual partnership platform (institutional governance instrument), where municipal staff (mainly environmental sector, but not only) and local Eco-schools (also known as Green Flag schools) eco-coordinators were jointly working. Those municipalities are Valmiera town municipality, but later after administrative territorial reform being now county municipality, as well as, Ropazi rural municipality, but also increasing its size in 2021.

**Valmiera town municipality** (later county). After the *Law of the Administrative Territories and Populated Areas* was passed in 2020 an administrative-territorial reform took place in all of Latvia in 2021 (Saeima, 2020), this reform also affected Valmiera, as its city municipality was expanded and joined with eight surrounding rural municipalities to one administrative county municipal body. The county municipality of Valmiera centers around its Hanseatic city of Valmiera located 110 km from national capital and around the river *Gauja* and the *Gauja national park* in Latvia's east-north Vidzeme region. Valmiera city have 24,750 inhabitants and as a strong industrial center is shaping the city's development (Valmieras Novads, 2021). Sustainability is an integrated sector of the municipality's governance. Environmental sustainability and environmental education are mostly dealt with in the following four units of municipality; Branding and public relations unit (position: manager of environmental communication projects), Development unit, Natural resources management unit and the Department of Education. In 2015 it was initiated and Valmiera's council members signed an Environmental Declaration which expresses commitments towards the city's sustainable development. The declaration also included the aim to promote environmental education in educational institutions of Valmiera municipality and using the municipality's capacities to inform, educate and involve the public in environmental issues etc. and environmental education in cooperation with all interest groups (Environmental Declaration of the City of Valmiera, 2015).

There are a total of nine educational institutions in Valmiera that participate in the international eco-school program and have been awarded with the Green Flag award in the past years. The participating institutions range from all educational levels starting at the preschool level, over primary and secondary education to one higher education institution certified as an "eco-university". The participating educational institutions are mainly from the public sector, with one exception of a private school. The eco-schools are all following the seven steps to successfully complete the eco-school program, which includes conducting a variability of projects and activities to keep the Green flag status. They are covering all areas of possible topics provided by the national head organization FEE and are working on e.g. developing competencies and habits revolving the conscious and sustainable usage of scarce resources like water or learning about the concept of circular economy or renewable energies using a multitude of educational approaches (FEE, 2003).

**Ropazi rural municipality.** In 2021, after the law of Administrative Territorial Reform passed in Latvia, Ropazi municipality along with Garkalne and Stopini rural municipalities, and Vangazi city municipality were united, and Ropazi county municipality was established. The center of Ropazi county municipality is Ulbroka village located just 34 km outside the capital city Riga, along the left coast of the river *Liela Jugla*. The municipality is now new developments oriented — the department for development is practicing community involvement, sustainability and environmental management in the municipality. Environmental impact assessments are carried out by the municipality and subsequently discussed in public consultations. The current Ropazi municipality's sustainable development strategy 2022-2038 ensures the continuity of the former municipality plans, inherited defined values and strategic objectives. Current strategy states a long term goal — Ropazi municipality will become "a greener region", by setting a priority to contribute to climate change mitigation. It will be done by emission reductions: renewable energy introduction for resource saving, sorting waste and water management, upgrading heating installations, introducing zero-waste technologies in manufacturing for public sector and households, thus contributing to the transition to a circular economy (Ropazu novads, 2022). There are four educational institutions participating in the eco-school program from Ropazi municipality (Ekoskolas, n.d.), that are working in the environmental sector and raising awareness of environmental issues. Currently, eco-schools as such are not used as an instrument in the sustainable development strategies, but in the sustainable development strategy for 2022-2028, using municipality, state and EU budget funds, environmental education will be promoted by giving outdoor space and equipment for environmental education activities, it will help to development a modern learning environment for expanding the range of programmes in nature sciences and environmental education as such. (Ropazu novads, 2022)

**Research methodologies.** There were planned a **set of complementary research activities**, framed by case study research methodology and starting with related municipal and other document studies, visits and observations in the eco-schools and related outdoors, and particularly, initial **focus group interviews with both municipal Eco-schools**, followed in the time distance by **individual semi-structured interviews** in both municipalities and with both main parties of stakeholders – specialists of municipalities and Eco-councils members, directors, and coordinators of eco-schools at various education levels in the municipalities. To investigate the current state of the municipal Eco-council and recent activities of Valmiera's eco-schools, eight **in-depth semi-structured stakeholder interviews** (around 45 minutes) were conducted with representatives of both parties, including one representative from Eco-school of each educational level (kindergarten, primary and secondary education, tertiary education). Related in Ropazi municipality four in-depth semi-structured interviews (around 40 minutes long) and one express interview were conducted.

Also, there was performed related two case studies investigations of real practice cases of Eco-councils coordinated activities in Valmiera municipality as part of the mutual collaboration, where all parties were involved: the annual Eco-Schools Friendship Bike Ride "Bicycle Unites" case and Biodegradable waste sorting piloting case. The first case study – there is a yearly kind of flash-mob activity "A bike unites" as a bike ride crossing most of the town and performing also additional promotional activities aiming to promote the use of bikes in everyday mobility and general traffic system. Not only this, but also other various activities (awarding of everyday bike riders, the "Car-free day", awarding of bike friendly employers, citizen surveys and other school-flash mobs) are a part of the yearly European Mobility Weeks' activities. The other practice example case was the current waste management system upgrading implementation in Valmiera town and, particularly, the **pilot food waste sorting implementation** bottom-up case. There are three multi-floor dormitory buildings (two municipal ones, but third – university one) in Valmiera. University of Latvia designed research-and-development (R&D) project and research methodologies and approaches used for this R&D project were especially combined, foremost, the **Case Study Research framework** shall be mentioned, incl. document studies, student surveys, semi-structured stakeholder interviews, observation studies, also waste audit/weighting studies, as well as, basic **approach of Living Laboratory** as youth from Eco-schools in partnership with all other project stakeholders developed this study and implemented waste sorting. Also, Participatory Research and action research components were necessarily applied.

To summarize all described research steps and activities, it should be recognized that within the frame and size of this paper only qualitative and summary types of results were applied.

## **Research results and discussion**

### **1. Developments of municipal Eco-councils: municipalities and eco-schools**

This chapter introduces and describes both Ropazi and Valmiera municipalities Eco-council cases, explaining core information of their establishment, initiation, community involvement and description of their work and activities.

#### **1.1. Ropazi municipal Eco-council**

Ropazi municipality Eco-council started its work back in 2014, as an initiative from Ropazi secondary school to form a collaboration platform with the local authorities. Coordinated by Ropazi Secondary schools' eco-council meetings generally took place on municipal or school premises once a month or more depending on the planned activities and objectives. It was learned from the interviews with the Council's former members, that council's work was rather active involving not only young people and schools and municipalities personnel but also community's families and schools parent council. Admitted by the former members, Municipality Eco-councils' greatest achievement is giving a platform to young people to express their ideas and learn about community involvement in municipalities work.

This collaboration resulted in implementing an Erasmus+ project with schools in Moldova who are not active members of the Eco-school program. During the project, students from Ropazi shared their best practices in environmental education and management and these environmental education practices were introduced in local Moldovan school planning (Ropazi Secondary school Eco Council, 2018). Ropazi municipalities eco-council was partly coordinated by municipalities public relations specialists, which led to almost every collaboration and activity organized by Ropazi municipalities eco-council to be published in the local newspaper. Ropazi municipality's first meeting was minuted, during which the coordinators of

the Council were nominated. No official document of council existence was established, making it a platform of volunteer involvement from all parties.

### **1.2. Valmiera municipal Eco-council**

The Valmiera municipal eco-council was established in 2017 as an initiative from the environmental communication specialist at Valmiera municipality and in collaboration with the University of Latvia to implement the four sectors of an action-oriented collaborative environmental communication in Valmiera effectively (Truksans et al., 2019). Focussing on the aspect of promoting environmental education, public participation and pro-environmental behavior in Valmiera's citizens, the environmental communication strategy included the formation of the informal eco-council as a collaboration platform for all Valmiera eco-schools. This strategy was not adapted in official municipal planning documents, thus making the eco-council an informal governance instrument. Since its formation there have been four official municipal eco-council meetings taking place in the Valmiera city municipality building and a shared online communication platform has been established. Participants include representatives, mainly the designated eco-coordinators, from each educational institution that is part of the eco-school program. Currently, the group consists of nine members. There have also been some external, non eco-school stakeholders invited to meetings from institutions with similar interests, like members of local environmental groups. The council members have organized activities together like for example during the European Mobility Week the council had joint bicycle rides through the city and along the river shore including mutual exchange between representatives from all eco-schools, including both pupils and teachers, as well as municipality representatives.

## **2. Evaluation and planning of Eco-councils developments**

In 2019, to learn about both municipality eco-council work and community involvement, focus groups in both establishments were conducted. The aim was to understand the way eco-councils operate and work, who were the involved members, how cooperation with the municipality is developed and how potential cooperation partners can be obtained to broaden their core audience. In the time of discussion motives of creation, main achievements and challenges, development history of both municipal eco-councils were learned.

### **2.1. Ropazi focus group discussion**

The motives for creating a municipal Eco-Council in Ropazi were to create a platform for cooperation between local authorities and educational institutions, also involving and reaching other target groups that would help achieve both individual and collective goals and more efficiently implement plans and get support in the process. With a platform like this, introduction of diversified activities, innovations, raising awareness, changing attitudes and habits is easier implemented. Ropazi municipality Eco-Council was coordinated by Eco-Schools representatives and the municipality's public relations specialist. The members are Ropazi municipality Secondary Schools students, director, Eco-school coordinator and deputy director in the field of education; Ropazi municipality pre-school "Annele" deputy director in the field of education/ Eco-school coordinator; Municipal Executive Director, specialists of landscapes, environmental management and public relations, head of the day center, head of the development department, youth specialist; Local NGO representative; Representatives of the Eco-Schools Parent Council and other parents.

Ropazi municipality Eco-Council's main features are described by cooperation on different levels, enthusiasm, local patriotism, active young people and people involvement. Their long-term goals are to

educate and promote public knowledge, understanding of environmental issues to the local community and practically implement environmental initiatives, reducing human impact on the environment by preserving and conserving it. Target audience (depending on the activity) are local residents, visitors of the city, parents and other adults, preschool children, students, members of Ropazi municipality Eco-Council. The main challenges that the Eco-council experiences are finding ways to engage and reach more people - the public is not always willing to change habits, learn about the benefits, the challenges, the importance. Also, Public representatives' knowledge and expressed attitudes of their environmental values do not always result in environmentally friendly actions.

Eco-Councils key achievements are more effective addressing of environmental issues, increase in community involvement — from problem identification to improvement, monitoring and awareness increase, children's knowledge, skill, attitude and behavior change, that's affecting family behavior, getting young people interested in local government, seeing it as an opportunity to make a difference, the focus of local government has changed – when planning and realizing activities, environmental protection and sustainable development aspects are taken into account, an opportunity to do practical activities, projects, and link Ropazi municipality Eco-Council's activities to the school learning process, implementing school initiatives as community activities.

It was learned that the municipality's eco council was initiated by local eco-schools in 2014, there were common things both at school and in the municipality. Schools are encouraged to meet and to cooperate on a regular basis. National scale event the Eco-Schools Winter Forum was an external factor that led to regular cooperation. In the beginning, the initiative came from the school and the municipality supported it, cooperation developed further on both sides, the municipality came up with project ideas and saw Eco-Schools as a real cooperation partner, and schools came up with concrete ideas, a timetable of activities that encourage public participation. Until 2019 the Eco-Council involved broader society groups in their work. Ropazi municipality Eco-Council's future plans include municipality websites improvement, targeted planning, situational awareness, setting priorities, assigning responsibilities, promotion of good practice and exchange of experience. Ropazi municipality eco-council includes a broad range of local and school representatives, this collaboration has led to a great community involvement and has increased awareness of environmental issues to not only municipal residents, but also to eco-school representatives.

## **2.2. Valmiera focus group discussion**

The motives for creating a municipal Eco-Council in Valmiera were to involve and gather like-minded people and partners from local Eco-Schools and society in general. Established to implement easier planning and realization of activities, exchange with experience, get ideas, support and motivation, to do bigger activities at community level and reach a wider audience. Valmiera municipality Eco-Council is coordinated by the municipality's environmental communication specialist. The members are Valmiera Secondary School nr. 2 eco-school coordinator; Valmiera Viestura Secondary School eco-school coordinator; Valmiera elementary school eco-school coordinator; Private primary school "Green School" Eco-Schools Coordinator, Valmiera preschool "Valodzite" and its branch "Kracites" deputy chief executives; Vidzeme University of Applied Sciences event organizer; Municipal environmental communication specialist; Representatives of the Eco-Schools Parent Council, other parents. Valmiera municipality Eco-Council's main features are cooperation, open mindedness, support, sense of community, opportunities, resources. Their long-term goals are to cooperate with each other, involving as much of society as possible, making their target audience pre-school and school children, families, and society. Eco-council's key achievements and contribution is community development. There is communication with the public and Valmiera has become

an environmentally friendly city. Jointly implemented actions have covered a broader audience than individually when holding events at school. It is seen as an opportunity for growth and a platform for cooperation, where you can meet like-minded people. Main challenges experienced are attracting additional partners, getting much broader public involvement. Opportunities to announce more widely planned events, to get a better response, have caused activity overlapping. Connection at all stages of education — from pre-schools to university, to get more students involved.

In 2017 the initiator was the municipality's environmental communication specialist and the formation was also driven by cooperation with the University of Latvia. In the beginning there is a cooperation between a few schools; Later, the whole eco-council planned and implemented activities together, they were aimed to raise public awareness, understanding, and involvement. In 2019 Valmiera municipality Eco-Councils future plans are targeted planning – schools and municipality's alignment of objectives, focusing more on pre-schools involvement and linking all stages of education — from preschool to university and Valmiera municipality Eco-Council activity coordination with educational process, e.g. project weeks and also learn about potential cooperation partners and member attraction, e.g. cooperation with the education authorities, youth council. By involving most community groups into their activities, Valmiera municipality's eco-council has driven Valmiera city to become a greener place, where families are learning from their children and adapting environmentally friendly habits.

### **3. Administrative-territorial reform: partnership changes and further activities**

This chapter looks at the results of the school interviews, analyzing their current situations and learning how their eco-councils continue working after external events like Covid-19 pandemic and administrative-territorial reform in 2021. Their collaboration with the municipality is recognised before and after the external events mentioned studying about activities that eco-councils are planning or implementing now.

#### **3.1. Ropazi Eco-schools**

Ropazi Secondary School has been a part of the eco-school program since 2009, making it 14 years of active work in the environmental education field. In 2019 Ropazi secondary school and Zakumuiza Primary school were united and both are now called Ropazi secondary school, they organize their work in two buildings – in the Zakumuiza primary school building organizing pre-school and primary school while in Ropazi Secondary School grades from first to twelfth. Both parties are organizing their own separate eco-council, following the exact corresponding objectives and criteria by having a general meeting once a month, discussing implemented activities and future plans by giving presentations which help them collect data and activity reviews for Eco-school programs' yearly report. Both parties admit that organizing eco-council in both schools is helpful, for example each eco-school works by the 7-step program, one of them being schools surrounding and nature audit. By organizing eco-councils in both schools, it is simpler for them to gather data of Ropazi territory and plan activities to decrease identified problems.

Before the territorial reform, Ropazi Secondary school had a very great partnership with the municipality, as the school's eco council was the one who expressed the need for a municipal level cooperation platform. Situation changed when the territorial reform was passed, it caused changes not only at municipal level but also at schools. Teachers that used to work at Ropazi Secondary school and were active members of the eco-council started to work at different schools in the municipality. As learned from the interview with the school's director, they see it as an opportunity to connect and collaborate with other schools in the municipality.

Ropazi Secondary school in their 14 years of work in the eco-school program have covered all topics of interest and currently are working in the field of waste. As learned from the interview with Ropazi secondary school eco-council, this year's main goal is to decrease their school's carbon footprint by focusing on minimizing food and resource waste by implementing activities that encourage people to reflect on their actions. Ropazi Secondary school's eco-council has shown that they are not only working in the interest of their school but also for their local community's benefit by collaborating with the local authorities and implementing recycling programs in Ropazi and its surrounding areas. Current eco-school plans that require municipal involvement are introducing vegetarian days at school, activity is yet to be implemented because it depends on not only municipal but also national laws. As described from Ropazi Secondary school, this activity would effectively help them decrease their school's carbon footprint and promote healthier habits to not only children but also their families. Another project, influenced by the participation in the Eco-School Winter Forum 2023 in Valmiera, that could potentially renew schools' collaboration with the municipality is to work on infrastructure improvement around the school, as there are no safe pavements to walk on, especially in winter time. It was admitted by the school's eco-council that they currently feel unsafe to get off the bus and cross the motorway to get to school.

Annual campaigns that are run by the school, such as tree planting in April in the territory of Ropazi and Foundation for Environmental Education Latvia promoted Environment Day events in collaboration with Ropazi pre-school "Annele" are also implemented this year. This school year's biggest plan is to implement an activity – a hackathon, inviting schools in the region of Ropazi to take up the challenge for Ropazi municipality improvement. Young people would generate ideas on how to alleviate visible problems: improving infrastructure, getting involved in environmental issues, waste management etc. Ropazi Secondary school after the union with Zakumuiza primary school has shown great collaboration skills which were also used when Ropazi municipality eco-council was actively working. After the reform, the school has not given up and is still trying to re-establish connection with the municipality, in the meantime identifying their potential cooperation partners.

### **3.2. Valmiera eco-schools**

The in-depth semi-structured interviews with selected eco-schools coordinators of each level of Valmiera's educational institutions indicate a great potential in the field of environmental education and ESD in Valmiera but also identify challenges that are currently hindering the continuous active involvement of teachers and students in the eco-school program. The nine schools have continued to participate in the program for many years and some schools have even already covered all the thematic areas and are now starting with their second round, while trying to come up with innovative approaches. Current topics cover a wide range of action areas from water, energy, waste management to circular economy. The Covid-19 pandemic has unfortunately also impacted the eco-school activities, especially coordinator's personal motivation to continue and student's engagement in the eco-committees has plummeted. While students are still eager to participate in activities, the organization and following documentation is perceived as particularly burdensome to the organizers, who are declaring this as their least favourite part about the eco-coordinator position. Time and resource constraints as well as changes in personnel have even led to the temporary discontinuation of two of Valmiera's eco-schools in the Green flag certification. Nevertheless, they were still internally motivated to continue the course towards a whole-institution greening approach of the school and its surroundings and aim to gain back the green flag certification as soon as possible.

School representatives state that their students as well as the overall institution can benefit greatly by participating in the program. Increases in pro-environmental behavior and overall environmental awareness

were noted by participants in the program, as well as a transfer of acquired knowledge and behaviors from students of eco-schools, concerning sustainability problems and solution approaches, to their surrounding environment like their parents. The education beyond the classroom, targeting also the wider public and especially families and educators of eco-schools, was stressed as an integral part of the larger impact the eco-school program can have on regional sustainable development. Applying the action-oriented collaboration environmental communication model, the current eco-school activities in Valmiera can be grouped according to the four sectors.

In the field of environmental information flows, eco-schools in all levels treat environmental issues in their curricula and as an example for informing the public, students from Valmieras 2. Secondary school did an activity educating bystanders about plastic pollution in water bodies in the local shopping centre. During the eco-school winter forum 2023, an interactive activity organized by the local eco-college took place, where eco-school teachers walked around Valmiera to note down ideas they had for improvements as well as things they liked as inspiration for their own municipalities. These ideas were then collected digitally and transferred to the municipal planning agencies. Furthermore, future visions of a utopian, green Latvia in 2050 were developed jointly between students and teachers during the creative forums. The outcomes of this visioning activity were displayed in two public buildings of Valmiera, university building and local shopping center, to inform the public about the eco-school activities.

Regarding environmental education and training, students of Valmieras Viestura secondary school have for example received waste sorting training in a series of workshops revolving around recycling, organized by the eco-schools teachers. The active waste sorting in recycling bins provided in all of Valmiera's eco-schools falls under both categories; environmental education and training as well as pro-environmental actions and behavior. In the field of pro-environmental actions and behavior, Valmieras eco-pre-schools are also doing yearly surveys for parents, where their pro-environmental behavior and habits in the respective households are observed and monitored over the years. Educators have stated that as a result of these surveys, they could conclude which behaviors should be treated more. Overall they noted a significant improvement of pro-environmental behavior and actions in the parents, but also in themselves as educators.

Inter-institutional networking events, like the yearly eco-school forums, are an example for the area of environmental (public) involvement and participation. The eco-school winter forum took place in February 2023 in Valmieras 2. Secondary School and was organized jointly in cooperation with the Valmiera eco-schools, Valmiera municipality and FEE Latvia. The recent forum, which had been the first one taking place after February 2020, was seen as a successful instrument to improve management and communication among eco-schools within the municipality but also nation-wide eco-schools as well as external stakeholders. Additionally, ideas that were generated during the forum were exchanged to be used from the Valmiera municipality in city planning and further developments. Another example in the area of environmental participation and involvement was the presentation of a fashion show with clothes made by eco-school students out of upcycled waste.

Overall, research has shown that although external factors like the Covid-19 pandemic and internal factors like changes in management positions have caused some setbacks to eco-schools activities and collaborations among each other, eco-school activities are being picked up again and Valmiera's eco-schools are continuing to further extend their scope of actions in all areas of the environmental communication model, while closely collaborating with the local municipality.

#### **4. Current development state of municipal eco-councils**

This chapter looks at the current situation of both municipal eco-councils and updates since focus groups are done in 2019. Interview results explain how internal (school union, municipality administrative structure and personality change) and external (Covid-19 pandemic, administrative territorial reform in Latvia) events have affected municipality eco-council work and activity, and former eco-council member opinions on current municipality situations.

**Ropazi municipality.** In 2023 Ropazi municipality's eco council stopped its work due to multiple external and internal reasons. Main reasons being, as learned from the interviews, passing of the law of administrative territorial reform, and complete change of municipality leaders and deputies, meaning almost all the original members of Ropazi municipality's eco council are not working in the municipality anymore. Ropazi secondary school recognizes that currently it's more difficult to establish connection with the new municipality, due to reasons of moving the municipality's center from Ropazi to Ulbroka villages, having infrastructure deficiencies is causing the municipality's center not to be as accessible as it used to be. Schools have expressed that this matter is causing communication and bureaucratic issues, making document exchange and formal meetings cumbersome. Ropazi secondary school admits that they must again initiate the renewal of the Council to the municipality's new leaders. They have already started to establish new connections with different schools (both regular and other eco-schools) in the new municipality to work on projects and to educate other students about environmental issues at municipal level.

It was expressed from every interviewee that municipality level Eco-council should be renewed. It was learned from interviewing former council members that this cooperation platform led young people to be more involved in the local community life and were more invested in getting their ideas and opinions heard, it was an excellent way of developing understanding of nature issues and finding innovative solutions to them. Furthermore, it is seen as a loss because Ropazi municipality eco-council was a great cooperation platform example nationwide, where every community member was welcomed to actively learn and participate in activities. After the passing of the law of administrative territorial reform Ropazi municipality is yet to find a way to collaborate and educate about environmental issues with all the united parishes, municipality representatives admit that it is still a formal process and environmental issues are not proposed as a priority currently.

**Valmiera municipality.** Due to an interplay of internal and external hindrances, the municipal eco-council in Valmiera has also been inactive since the start of the Covid-19 pandemic in the beginning of 2020. Communication via a shared online chat has continued among nine members, although it has been described as very one-sided and less fruitful from the organizing municipal agent's perspective. The issue of changes in personnel at the municipality for environmental communication and hence shift of responsibility for the municipal eco-council, has been named by all former and current eco-council members to have had a substantial impact on its development. In September 2022 the position for municipal environmental communication specialist and project manager was changed, and as the formation of the municipal eco-council had been formerly initiated by the municipalities side, responsibilities for its continuation were transferred to the new municipal agent. Getting all stakeholders together and re-defining the goals and plans of the eco-council to ensure its continuation have been challenges named by both sides, which have further led to the delay of continuation. This emphasizes the importance of shared responsibility, multi-stakeholder collaboration and the availability of financial and personal resources like

time and internal motivation to ensure the success of the municipal eco-council and effectiveness of the eco-school program.

All interview partners have expressed a desire to continue the meetings, regular activities and mutual exchange in the municipal eco-council. Council members described how exchange among the other eco-coordinators helped them with realizing joint activities and projects, gaining additional resources and made them feel less alone in the process, in turn increasing their intrinsic motivation to continue with the eco-school program. Interviewees from the side of eco-schools expressed to continue the eco-council in a similar manner, with meetings initiated and organized by the municipality roughly on a quarter-yearly basis. The wish of sharing more responsibility and opening up the council to a wider variety of stakeholders from different domains like companies, NGOs or different municipal and developmental agencies, was expressed by the municipality side in order to ensure its sustainability and increase its effectiveness. Perceived benefits of this approach were for example that eco-schools could widen their scope of collaborations to increase not only opportunities for financial support and support in organizational matters but also improve the mutual learning process and generation and exchange of ideas to foster sustainable regional development.

### **5. Municipal Eco-councils in practice: food waste management piloting**

Following and in parallel to our overall studies about experience and perspectives of the first two municipal Eco-councils in Latvia there was implemented an Eco-council work in practice – the food waste management piloting case in Valmiera county municipality, being clearly appreciated by all partnership parties involved, and as first, Eco-schools and municipality as to be seen in this short case summary. In Latvia, from January 2024, waste management operators and municipalities have to ensure the **collection and management of sorted biodegradable waste (BDW)** as requested by the National waste management plan for 2021-2028. There have been several pilot projects/studies to prepare municipalities for this date. Initially in 2022-2023 there were unanswered questions how to implement the separate collection of biodegradable waste in practice locally, e.g. whether collection service will be mandatory for all, incl. for those living in rural areas, also and particularly, how to organize BDW sorting in multi-apartment buildings and more successfully compared to the former experiences. As well as, how to implement BDW sorting in service hotels (dormitories for schools/universities etc.) and also, having in mind that most of such dormitories are to some extent similar to multi-apartment buildings in the municipality.

Subsequently, numerous municipal Eco-schools and, particularly Eco-council of Vidzeme University of Applied Sciences in Valmiera town, together with Valmiera county municipality and researchers from University of Latvia, expressed interest to learn about the current waste management system in Valmiera dormitories and **to pilot food waste sorting implementation** there. University of Latvia designed research-and-development (R&D) project for this partnership as a Latvia national case study for the Baltic region and Germany joint project "ESD for 2030 – Learning for and in sustainable and resilient communities" funded by the Deutsche Bundesstiftung Umwelt, Germany, led by Leuphana University Luneburg. Also, regional waste management company ZAAO (100% owned municipal enterprise of 8 regional municipalities) was invited to cooperate and all together joined for the aim to study the existing situation, incl. student perceptions and understanding etc., and then to pilot food waste sorting in three multi-floor dormitory buildings, also having in mind to develop recommendations to the Valmiera county municipality for the implementation of the BDW sorting process in multi-apartment buildings.

**Main findings** in short could be summarized like this. The issue of BDW management at the national level has been developed late. Lack of data on the actual amount of food waste in Latvia.

The implementation of biodegradable waste management in the entire county is a challenge for the municipality of Valmiera county. ZAAO's experience in food waste management is limited, but their Daibes BDW factory in the regional landfill would be able to process the biodegradable bags. Knowledge of BDW among different target groups is low. In order to involve multi-apartment residents in a wide collection of FW, the active information and training actions are necessary and quality active work of each house manager.

Dormitories require convenient and hygienic indoor food waste management. Until now, there has been formal or no waste accounting and monitoring in service hotels and quality waste management service in dormitories was underdeveloped, incl. missing in-house mutual cooperation, division of responsibility, information, training. The most common reasons for what prevents FW from sorting waste are the lack of knowledge, lack of information about sorting (pictures of waste bins, easy-to-read material), sorting takes extra time, the outdoor sorting container is not easy reachable or even waste sorting doesn't make sense as per student answers in survey. But the majority of students from the surveyed respondents in dormitories are ready to start sorting FW.

**Main actions proposed** have a set of several basic components to be adequately planned and finally implemented: Promoting the awareness of students/pupils; Promotion of employee awareness; Proper and variety of information sources/resources as well as practice training for students and employees; Improvement of infrastructure; Arrangement of management administration, all in all, being aimed towards both reducing and sorting of food waste. And particularly, for the development of FW sorting - a special container, availability of biobags, complementary signage, also strategic approach to the penalty and bonus system, regular monitoring.

**Municipality was very positive** for this pilot case full scale realization initiated by non-formal Eco-council in Valmiera municipality for school youth involvement to contribute to the local/municipal society everyday practice developments, particularly, being implemented by Eco-schools and results achieved in partnership with municipality and other stakeholders. Municipality also agreed on basic outcomes-recommendations for municipal BDW sorting complementary instruments management system necessary development. Such system shall include these but not the least activities: Training for managers and residents of apartment buildings; The work of waste managers and municipalities in the field of information and education in order to build citizens' understanding of BDW management; Punishment does not motivate, but to explain the benefits to the population; Determine organic waste containers in the city; Searching for an approach to biodegradable bags; Organize training for residents of private houses on proper home composting.

## **6. Municipal Eco-councils in practice: the annual Eco-Schools Friendship Bike Ride**

As part of the tradition of mutual collaboration during the Eco-Council's activities in the Valmiera municipality, the annual Eco-Schools Friendship Bike Ride "Bicycle Unites" was introduced in 2018 – a sizeable group of youngsters' bike ride intentionally planned across most of the town, having particular bicycling developments related tasks-activities of that year, but also performing promotional activities being yearly a kind of flash-mob activity too, organized at the end of September, with around 40 young people participating from all Valmiera Eco-Schools. The number of participants remained consistent each year, as by number of practical and schools representing reasons as also existent youngsters interest, but being offered as a special privilege to the most active participants of Eco Schools who also engage in the work of school's Eco-Council. The bike ride starts at one Eco-school (Valmiera Secondary School No. 2) and each year it had a different route, cycling through the city of Valmiera. The ride concludes with final camping at

the municipal recreation areas near the town's main Gauja River. The "Bicycle Unites" bike ride was always an activity organized by the municipality during European Mobility Week, but purposely together with Eco-schools.

The main double goal of this one day open and publicly disposed activity was to attract wider attention from the local community and promote environmentally friendly mobility, as well as, to investigate along bike ride route particular elements of bicycling developments. However, it also served as a joint opening event for the new general school and particular Eco-school program year, fostering camaraderie among Valmiera Eco-Schools and students. Each year, the "Bicycle Unites" bike ride also had its own thematic priority. For example, in 2018, the focus was on a youth bike ride through Valmiera, visiting both residential neighbourhoods and courtyards. The goal of this year's event was to draw the attention of residents in residential neighbourhoods to the bicycle as an environmentally friendly mode of transportation and to play a courtyard game in each courtyard, encouraging residents to come together in a friendly manner, organize their own friendship events, and take collective action to care for the environment and improve courtyard landscaping.

In 2019, the special thematic emphasis of "Bicycle Unites" was on encouraging initiative among the participants by meeting with preschool students from Valmiera's early childhood education institutions. The bike ride route was planned so that participants also visited two Valmiera Eco-Kindergartens during the ride. The youth led outdoor games and engaged in play activities with the preschool students. This ensured mutual collaboration between the preschool education institutions involved in the Eco-School education program and the secondary education institutions. Following this positive experience, visiting kindergartens became a part of future "Bicycle Unites" rides. In 2020, the special theme of "Bicycle Unites" was related to safety and safe cycling. Therefore, an event was organized in collaboration with the State Police, and during the kindergarten visits, participants were joined by the State Police's special safety character, - a cat named Rudis. But in 2021, the thematic emphasis of "Bicycle Unites" was on safe and convenient cycling infrastructure. During the ride, the youth assessed the existing town's cycling infrastructure and participated in evaluation discussions.

## **Conclusions**

Although the both municipal eco-councils, being under the study now, are currently not yet re-established, after the Covid and also administrative reform changing municipal borders, they are in stand-by status as after the overcoming the external and internal limiting factors, **municipal eco-councils continuation is anticipated by both main parties** – municipalities and eco-schools. Both parties have recognized many benefits noted, but, in particular, eco-school note that participants like simplifying the participation, increasing environmental awareness and pro-environmental behavior, increasing intrinsic motivation to continue efforts.

There is still a need **to improve the collaboration partnerships** among eco-schools and municipalities and other external stakeholders to improve collaboration and outcome effectiveness for all actors involved-multi-stakeholder collaboration approach and practice, what also requires, actually, mandatory, the collaboration-development approach, environmental communication action-oriented collaboration model widely application.

Both a kind of complementary short and long term practice based case studies shortly described and summarized during current study – short one day but annual flash-mob alike youngsters bike tour and PR action, being also with investigation function and, other, long term very practical multi-type step-wise practice project-based biodegradable waste sorting piloting work in student's dormitories of the town –

they were positively evaluated by the both mutual partners and invited other stakeholders as being **municipal environmental success stories** in relation to the aims and tasks proposed, and most importantly, finally confirming for municipal decision-making, that also long term, and, even complex, collaboration activities/projects can make a **impactful difference in municipal environmental management practice being done by outside municipal administration assigned capacities**. This is to be planned more systemically according to the existent municipal environmental shortcomings and eco-schools seasonal programs, even that also requires some municipal administrative and other capacities to be necessary involved. Relatedly, municipal Eco-Council, as also has been experienced during other activities, could be the **necessary administrative and coordinating instrument**.

The same positives are the general conclusions about existent practice experience and future possibilities of municipal Eco-councils as we can summarize after individual and focus group interviews with the main municipal Eco-Councils related stakeholders. From both sides there were recognized several factors, which we can compile into **three groups of preconditions for municipal environmental management** developments as it could be done via further enhancement of municipal Eco-councils and relatedly Eco-schools activities:

1) governance instruments-based formalized and also non-formal preconditions for successful development of municipal Eco-councils:

- due to the municipal functioning system first are to be mentioned **institutional-administrative instruments** and **political-legal instruments** as possibly formalized legal status of the Municipal Eco-council (even in Valmiera it is not the case yet), also formalized prescriptions into the duty functions list (and annual work plan) of municipal environmental specialist/s (as known from other municipal experiences in Latvia) and into the their whole municipal department statutory functions list – to have local **Eco-schools supportive and/or coordinative function** (and thematic working sector) established in the municipality;
- more difficult and seldom seen, accordingly to the former documented experience of the Eco-schools in Latvia and also for both municipalities studied, is to manage the same approach - **integration approach** - to be used for the integration of Eco-councils (and eco-schools) related work's components into the following municipal governance instruments' groups – **planning instruments** (integration into municipal statutory and/or voluntary planning documents) and closely related **economic-financial instruments** (integration into environmentally friendly purchases, especially into municipal budget, investment program and various projects, incl. 15% municipal co-financing assigned by Eco-schools outside granted projects),
- also the same with **infrastructure and technologies instruments** as directly depending on municipal budget and, particularly, projects assigned for upgrading Eco-school's grounds and buildings infrastructure impact also on Eco-school's content and field works necessary, as well as Eco-schools are contributing to the overall municipal infrastructure, particularly, to educational nature trails, citizen based monitoring activities etc.
- **Four environmental communication complementary instruments** shall be planned, coordinated and implemented as a system, where all main stakeholders are involved as a network and as each one separately – environmental information and education-training as well as environmental involvement-participation and pro-environmental behavior as **environmental communication frame for collaborative partnerships**.

2) **governance stakeholders-based precondition** – there was suggested to include as municipal Eco-council members/participants a **wider diversity of stakeholders** from current municipality as external, non-education institutions, environmental NGOs, entrepreneurs, public opinion leaders etc., but according to the specific situation of a particular municipality.

3) **governance sectors-based precondition** – to include representatives not only from nature/environmental sectors, but also eventually **from the health, economic, social, and culture** sectors (as partially in Ropazi municipality) according to the specific situation of a particular municipality to widen the scope and impact of the Eco-council and education process towards municipal sustainability management aspects.

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