MUNICIPAL ENVIRONMENTAL COMMUNICATION DEVELOPMENT: COLLABORATION COMMUNICATION MODEL, NETWORKING NODES AND INSTRUMENTS

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Abstract. In order to foster sustainable development in Valmiera, the city municipality is in the process of developing an environmental communication strategy. It is being developed with the Research & Development methodology to make it a practical communication guidance documents for all its target groups. The research is going to prove that using this method of developing the target groups of the strategy will become the stakeholders of the strategy within the process of its development. Both the case of Valmiera developing its environmental communication strategy and the collaboration experiences of Latvian Eco-Schools show that collaboration communication is a practical necessity in order to make a functioning environmental governance that leads to sustainable development of a given territory. This study shows examples of networking modes and instruments.

Key words: environmental communication strategy; collaboration communication; Eco-Schools collaboration.

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Introduction

To promote sustainable development, there is the need to ensure the integration of nature governance with the development of socio-economic governance. It is necessary to promote public participation by creating a public governance that is efficient and can give a quick reaction to changes and also to foresee and direct them thus creating important and in future necessary services for the society. Nevertheless, the development of environmental governance usually runs problematically.

In order to foster sustainable development in Valmiera, the city municipality is in the process of developing an environmental communication strategy. It is being developed with the Research & Development methodology to make it a practical communication guidance documents for all its target groups. The research is going to prove that using this method of developing the target groups of the strategy will become the stakeholders of the strategy within the process of its development. Collaboration communication is the key principle promoting the transformation of the target groups into the stakeholders of this strategy and thus solving the gap of performing sound and efficient environmental governance among all the stakeholders in all environmental sectors. The examples of Ecoschools collaboration with their target groups proves already the success of collaboration in transforming target groups into active stakeholders. The paper shows also the status quo of the development of the Valmiera Environmental communication strategy outlining the instruments and networking modes as being the next steps in the meanwhile in order to foster collaboration as a practice of its implementation to promote sustainable development in Valmiera.

Research results and discussion

Participation and cooperation of the stakeholders are one of the preconditions for sustainable development both locally and globally. These are main principles that are defined in the national and global action plans and strategies. A well-known example is Agenda 21 that emphasises the importance of public participation and cooperation of different groups to solve social, economic and environmental problems. (Agenda 21, 1993) Similarly the local level Sustainable Development Strategy of Latvia until 2030 (Latvija 2030) highlights the seriousness of these principles as a

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precondition that may help raise the sustainable development potentiality of Latvia. For instance, it enables to combine resources, improve decision making and problem-solving process, increase environmental awareness of the local community (Latvija 2030, 2010). Non-governmental organisations, educational establishments and municipalities are one of the groups that may help to implement these principles.

Thus it is important to organise a pre-planned public information and education on the planning and implementation of environmental protection measures and to promote the integration and updating of environmental issues within the policies of other sectors. The planning of environmental communication strategy would serve as an environmental and development governance instrument for the implementation of the sustainability principles within the actions of municipal target groups and lifestyles. Since 2015 Valmiera city municipality has started to work on the development of the Strategy for environmental communication.

The strategy of environmental communication is a planning instrument with the help of which municipality could ensure systemic and systematic environmental management covering its three dimensions - target groups, environmental sectors and governance instruments. The strategy of environmental communication shall cover the reciprocal interaction of five target groups (state governance, municipal governance, corporative sector, households, mediators) in order to promote sustainable development by ensuring the governance of eight environmental sectors (biodiversity, natural resources, water resources, air, energy sector and climate, waste management sector, urban/rural and risk territories sector, environmental health) by mutually complementary using seven blocks of instruments of environmental governance (political and legal, planning, economic and financial, administrative and institutional, infrastructural, communication and cooperation instruments).

The development of Valmiera environmental communication strategy in Valmiera city municipality was started using the Research & Development methodology, which started on 29th of January 2015 when the Council of Valmiera city municipality adopted an act of good will to develop the city in a sustainable and environmentally friendly manner – the Valmiera Environmental Declaration (Valmiera Environmental Declaration, 2015). The further development of Valmiera environmental communication strategy consists of 6 stages including the promotion of different networking modes and use of different communication instruments (Table 1).

Table 1

The research-and-development stages of environmental communication strategy in Valmiera

No	Time	Developing stage of environmental communication strategy
1.	2016	Document studies of Valmiera municipality planning documents Structured household interviews and sociological survey of the households on environmentally friendly actions Structured all stakeholder groups' interviews
2.	2017	Field research on municipal environmental collaboration communication (information, education, participation, pro-environmental actions, communication integration)
3.	2017 – 2018	Focus groups/seminars with the internal and external target groups of Valmiera municipality
4.	2019	Seminars of promoting cooperation Development of Environmental Governance Review

Structured household interviews and sociological survey of the households. In June 2016, there were 10 structured household interviews made in the frame of the project SUSTINNO.

In September and October 2016, there was also a regional survey on environmentally friendly actions in Valmiera performed. 373 fully filled questionnaires were received. The aim of the research stage was to evaluate the friendliness towards the environment within the households. The results were based on the comparison with the results of the same sociological survey on national and on regional (Liepaja and Valmiera) results. The results of this research allows to conclude that the greatest part of the respondents considers themselves as environmentally friendly but the high environmental consciousness not always results with environmentally friendly actions. The reasons for these values-actions discrepancies are related to psychological, social and physical barriers that limit the developments and popularity of environmentally friendly actions within the society. Thus in order to promote environmentally friendly actions, formal spreading of environmental information is not sufficient. Events need to be planned by considering the socio-psychological factors of decision-making and by foreseeing the demonstration of good practice examples, encouragement and stimulating mechanisms and eradication of harmful actions.

Document studies. In order to evaluate the planned actions of four blocks of environmental communication that are included within the action policy documents of Valmiera city municipality, the following policy documents were analysed: Environmental Declaration of Valmiera (2015); Valmiera Development programme for 2015-2020; the aims and tasks of Branding management and public relations department within the sector of environmental communication. In Table 2, the formulations of each of the five environmental communication sectors are summed up that are included within the Valmiera Development programme.

The results of Table 2 allow to indicate that all sectors of environmental communication are covered within Valmiera Development programme. In Table 3, the formulations of each of the five environmental communication sectors are summed up that are included within the aims and tasks of Branding management and public relations department for the sector of environmental communication (Regulation of Valmiera city municipality Branding management and public relations department, 2015).

Table 3 allows to conclude that that tasks of all five sectors of environmental communication are included among the duties of the Branding management and public relations department of Valmiera City municipality. Therefore, Valmiera municipality is the only municipality in Latvia having an environmental communication specialist as a position. The tasks of environmental communication are assigned to the environmental communication specialist.

The case study research – four sectors of environmental communication in Valmiera

On 17th and 18th of March 2017 in Valmiera using the case study method of research an environmental communication audit was made by the 1st year Environmental science masters' students of the Faculty of Geography and Earth Sciences in Latvian University. They were analysing environmental information, education, public participation and environmentally friendly actions in Valmiera. The main target groups that were covered were Valmiera municipality and its institutions, private sectors (companies) and inhabitants. Also media and non-governmental sector were analysed. The methods of research for exploring the case were the analysis of data bases, analysis of documents, analysis of target groups, observation, partly structured expert interviews, using questionnaires in environment and online.

Table 2

Tasks for environmental communication within Valmiera statutory municipal Development Programme (2015-2020)

Sectors of collaboration communication	Action directions for environmental communication in Action policy planning of Valmiera city: Development Programme as medium term planning document and action plan
1. Environmental communication framework	To develop a medium term strategy of environmental communication, annual action plan and to implement them; Public information, education and awareness building on environmental issues and environmentally friendly lifestyle; To coordinate, make popular and promote the creation of new environmental communication events within the territory of the municipality; According to the competency to involve within the initiatives and projects related to environmental communication.
2.Environmental information	Available, clear and topical information on the formation of environmental consciousness available; research of natural areas and promotion of bio-diversity; research on environmental consciousness and regular monitoring; introduction, geographic information systems, development, maintenance and updating of city database; introduction of the spatial development planning information system TAPIS; informative, educational events on energy efficiency.
3. Environmental education and training	To promote environmental education and the popularity of environmental education of interests and availability of education within educational institutions of all levels; implementation of educational system on waste management; education on use of water resources; the raising of municipal competency in environmental governance and development of environmental policy; to develop a technical creativity, environmental education and interest education programmes for creative industries.
4. Environmental (public) involvement and participation	Public networking, creation of inter-institutional and interdisciplinary cooperation; marketing measures to raise the farmers and handcrafters markets; the promotion of environmental interest groups that act towards the society; organisation of diverse environmental events; provision of public and public non-governmental sector in environmental governance and the solving of environmental issues; ensuring public participation for the identification and conservation of cultural and natural heritage; involvement of the inhabitants at the decision making process and performance of different activities; promotion of environmentally friendly entrepreneurship.
5. Pro-environmental actions	Creation of multifunctional environmental science centre and development of its infrastructure; development of the conception and the technical project of a multifunctional environment and science centre; development of interactive and innovative content for a multifunctional environment and science centre; creation of cooperation network with other environmental centres in the world; creation of research within the environmental sector; restoration and creation of freely available active recreation and sports infrastructure, use of the potential of the natural areas for the promotion of active recreation; to promote the usage of energy efficient and environmentally friendly transportation vehicles.

Analysing environmental information, environmental education, public participation and environmentally friendly actions in Valmiera by the method of observation Valmiera city was checked and there was also the analysis of international, state and municipal legal acts and policy planning documents made. The results of annual Valmiera city inhabitants survey were analysed. The employees and officials of Valmiera city municipality were interviewed. In order to find out the opinion of inhabitants surveys in Valmiera and online surveys were performed. Five companies were interviewed (Valmiera Glass Jsc., ZAAO Ltd., Valmiera Water Ltd.) The educators from Valmiera 2. Highschool and from Vidzeme University of Applied Sciences were interviewed.

The field visit case study research proves that activities are taking place within all sectors of environmental communication in Valmiera. But in order to improve the sustainable development of

Valmiera with the environmental communication actions a coordinated governance of all sectors of environmental communication is necessary.

Table 3

Action directions of environmental communication in work description of environmental communication specialist of Valmiera municipality

Sectors of collaboration communication	Action directions of environmental communication
1. Environmental communication framework	To summarize and systemize information on environmental communication events taken place in the territory of Valmiera city.
2.Environmental information	To ensure the flow of information on nature and environmental protection issues between municipality and Valmiera society. To prepare and publish educative information materials on environmental education.
3. Environmental education and training	To coordinate environmental education activities for a particular target group. To plan and to implement activities of environmental education initiated by municipality for particular target groups. To take part at public education and information activities that are implemented by different institution/ organisation/ company; in the frame of its competency to represent municipality.
4. Environmental (public) involvement and participation	To promote the implementation of environmentally friendly events in municipal institutions and units.
5. Pro-environmental actions	To promote the implementation of environmentally friendly events in municipal institutions and units.

Seminars for Valmiera inner and outer target groups

In order to develop and to implement Valmiera environmental communication strategy, in 2017 and 2018 three types of seminars took place in Valmiera municipality: **1)** workshops on the development of environmental action plans: 28th of June 2017 for the municipal outer target groups. 16 participants were taking part. They represented the educators (Vidzemes University of Applied Sciences, Valmiera primary school, GREEN SCHOOL, Valmiera 2. highschool, Latvian University), the municipal corporations (ZAAO Ltd., Valmiera Water Ltd.), inhabitants, non-governmental organisations (Valmiera Development Agency), companies (Valmiera Glass Ltd.). On 17th of October 2017 a preparatory discussion and on 15th of November 2017 a discussion with municipal internal target groups were taking place. Municipal specialists and representatives from municipal corporations took part. 10 participants all together joined this seminar; **2)** On 28th June 2017 a workshop with Valmiera city municipality leadership and managers of the departments was held where an agreement on the interest of the municipality in developing the Valmiera Environmental review as an environmental communication instrument for environmental information was reached; **3)** on 15th of November 2017 a meeting with the representatives from Valmiera Ecoschools was held. The participants of this meeting agreed to create an informal Valmiera Eco-board for further cooperation in organising events of environmental education. The current activities of environmental communication governance have promoted that the development of environmental communication management in environmental information (municipal environmental communication specialist as a coordinator; agreement on the development of environmental governance review) and in environmental education (board of Eco-coordinators). In 2019, there is a plan on realisation of environmental communication strategy fifth and sixths stage. The fifth stage defines the need to organise seminars in order to strengthen environmental communication cooperation and to create collaboration network for the environmental public participation. This is planned with the involvement

of non-governmental organisations. The sixth stage sets the tasks for promoting and developing environmental participation. Here for the crucial role are the municipal corporations seen.

In 2019, it is planned also to complete the development of Environmental communication governance commons system.

Cooperation examples: Eco schools as education networking node

As an example of the study where collaboration is crucial in reaching the goals of cooperation is chosen the Eco-Schools programme that is led by a non-governmental organization and is implemented through cooperation between schools and municipalities. It is necessary here to clarify more what is the Eco-Schools programme and the aim of it. The Eco-Schools programme internationally is coordinated by the world's largest environmental education organisation the Foundation for Environmental Education (FEE) whose aim is to promote sustainable development in schools and local communities. The programme is an official partner in the United Nations Environment Programme (UNEP). The main goal is the promotion of environmental management and Education for Sustainable Development (FEE – UNEP, 2003). A central idea of the programme is the formation of an environmental management system in schools that help reach sustainable development goals, promote pro-environmental behaviour and empower youth to act by informing and involving not only school but also the local community, thus developing environmental awareness generally (FEE Latvia, 2019).

Previous studies that reviewed environmental education programmes in the schools such as Eco-Schools programme highlights cooperation as key aspect for successful implementation of Education for Sustainable Development. Moreover, participation and cooperation are important not only among the school representatives but also in the community between school and different target groups such as a municipality (Tilbury and Henderson, 2004). In addition, participation and cooperation among school and the local community may help to develop action competence and pro-environmental behaviour of the pupils (Mogensen and Mayer, 2005). However, Mercedes et al. (2016) point out that apart from a few studies, there is a general lack of information related to cooperation between schools and the local community in the aim of development.

This study aims to evaluate the Eco-Schools programme experience in Latvia regarding participation and cooperation of different target groups and identify possible preconditions and limitations.

The chapter analyses the results of the focus group discussion undertaken during Eco-Schools Winter forum in February 2017. Out of 103 participants seven were invited to focus group discussion. Before focus group discussion, all participants filled out the preliminary survey where they asked to describe target groups that schools as a participant of the Eco-Schools programme cooperate with and characterize the best practice of cooperation with local target groups that aims to develop and implement environmental education initiatives and promote pro-environmental behaviour in the local community. Focus group respondents were selected based on their experience in the Eco-School programme and especially school cooperation practice. All of them are practising teachers and at the same time the Eco-Schools programme coordinators that are responsible for the implementation of the programme in school. Two out of seven respondents also represented the school administration. Respondents were arranged in two groups – experts that have 3 to 10 years' experience as a coordinator and beginners that have 1 to 2 years' experience. In focus group discussion, four experts and three beginners participated. Based on answers in the preliminary research and the view gained

from the literature analysis, a focus group discussion survey which comprised five main questions was developed. Answers provided information about the role of the school and interaction with the local community, municipality; schools expectations from municipality and possible contribution from the school itself related to environmental education and environmental protection; best practice examples with local target groups and the main preconditions and limitations regarding participation and cooperation with the aim to address topical environmental issues. In order to find the best practices, also other qualitative research methods were used. The schools submitted documents and municipality meeting minutes were analysed with a focus on Eco-Schools and the local community cooperation.

The results of this study show a large variety of the target groups that schools as a participant of the Eco-Schools programme cooperate with – municipalities, neighbourhood and other region schools, pre-schools, educational centres, non-governmental organizations, companies, local media, residents and families, households as a specific group. When the respondents were asked about the role and interaction with the municipality and the local community, the majority commented that first of all schools are directly dependent of the municipality and now when schools are being reorganised municipality decide on the need for school. Therefore, the Eco-Schools programme adds the additional value for the school and also give an opportunity to develop cooperation with the municipality and improve the situation in the local community by improving understanding of local and global environmental problems, increasing participation level and pro-environmental behaviour. For instance, in the Ogre municipality local Eco-School cooperate with a project manager, work on the shared vision of the school, plan and implement common projects such as waste sorting infrastructure in the school and cycling lines in the local area that are useful also for others. In turn, as a central role of the school was mentioned educational function not only in school but also in society. Especially in rural areas there are No other educational organizations. So, Eco-Schools may become an environmental educational centre also for residents, but for this to happen an involvement and support from the municipality also is needed.

Collaboration case between Valmiera Eco-Schools and Valmiera City municipality certifies the above statement also by organising the meetings of the informal Board of the Eco-coordinators and Valmiera City municipality. Since the establishment of the informal board 4 meetings of the board have been taking place that resulted in organising common public events in Valmiera city target groups of which were Valmiera general public and the students of Valmiera Eco-schools in the meantime. The Eco-coordinators of Valmiera Eco-schools are reporting back the usefulness of having the board and collaboration in organising common activities.

Latest success in organising common activities was the event *Valmiera Environmental Forum „Living green!“* that was organised on 1st of November 2018. The target group of the forum was the general public of Valmiera city and the students of Eco-Schools. The forum was organised by collaborating Valmiera Eco-Schools, Valmiera municipality and the experts from University of Latvia. The programme of this event provided practical workshops managed by the Eco-schools, information on the status quo of environmentally friendly life-style in Valmiera households and a discussion with the participants on the further actions needed.

Conclusions, proposals, recommendations

- 1) Creation of a collaboration network among the stakeholders and stressing on particular **networking nodes** in every of four collaboration communication model components

(instruments) is a practical necessity to create a functioning municipal **environmental communication governance system** for environmental governance backgrounding and enhancement, complementary with socio-economic dimensions of sustainable development.

- 2) Information networking node - municipality can act as the main coordinator of the targeted flow of environmental information within its territory. For this the development of the Environmental governance review might be a useful inner information environmental communication instrument.
- 3) Education networking node - Eco-Schools, being established at almost all education levels, may become an environmental educational networking node also for other schools and both formal and non-formal education systems/organizations, also for residents, but for this to happen an involvement and support from the municipality also is needed.
- 4) Participation networking node - To foster the successful collaboration of the stakeholders of environmental communication in Valmiera city seminars, educational activities and cooperation basis between municipality and the non-governmental sector shall be established. The public participation might be promoted through this collaboration.
- 5) Pro-environmental behaviour networking node - To foster environmentally friendly actions, the collaboration between municipality and its corporations shall be fostered by organising common promotion actions of environmentally friendly practices, solutions and habits.

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