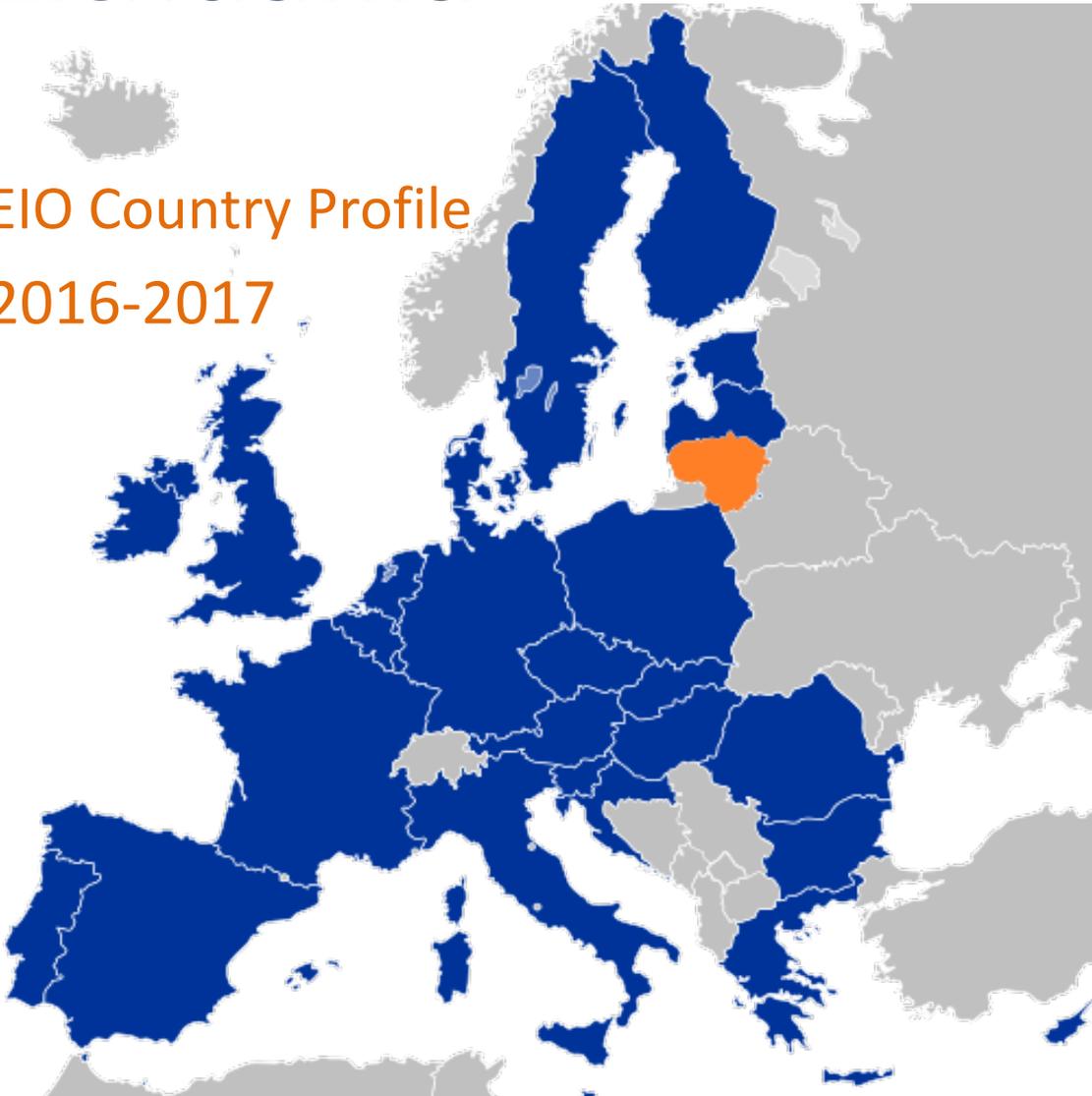




Eco-innovation in Lithuania

EIO Country Profile
2016-2017



Eco-Innovation Observatory

The Eco-Innovation Observatory functions as a platform for the structured collection and analysis of an extensive range of eco-innovation and circular economy information, gathered from across the European Union and key economic regions around the globe, providing a much-needed integrated information source on eco-innovation for companies and innovation service providers, as well as providing a solid decision-making basis for policy development.

The Observatory approaches eco-innovation as a pervasive phenomenon present in all economic sectors and therefore relevant for all types of innovation, defining eco-innovation as:

“Eco-innovation is any innovation that reduces the use of natural resources and decreases the release of harmful substances across the whole life-cycle”.

To find out more, visit www.eco-innovation.eu and ec.europa.eu/environment/ecoap

Any views or opinions expressed in this report are solely those of the authors and do not necessarily reflect the position of the European Commission.

Eco-Innovation Observatory

Country Profile 2016-2017: Lithuania

Author: Dr Reda Nausėdaitė

Coordinator of the work package: Technopolis Group

Acknowledgments

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A note to Readers

Any views or opinions expressed in this report are solely those of the authors and do not necessarily reflect the position of the European Union. A number of companies are presented as illustrative examples of eco-innovation in this report. The EIO does not endorse these companies.

The report is based on an **updated methodology for calculating the Eco-Innovation Index**, which has also been applied retroactively to all previous years, hence the outcome in the Eco-Innovation Scoreboard (Eco-IS) for 2017 presented in this report **can be compared with the analysis in the previous reports to a limited extent**.

Comments and suggestions on this document can be sent to Asel Doranova asel.doranova@technopolis-group.com

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Summary

Lithuania's recent performance shows positive development in expanding eco-innovation performance. In 2015 the country had an Eco-innovation Index score of 66 and ranked 19th out of the EU-28; in contrast by 2017 the Eco-innovation Index score has risen to 82 and Lithuania now ranks 17th. The performance of Lithuania in most of the components making up the index was either close to the EU average score above the average (for socio-economic outcomes).

In 2015 waste management was identified as the most noticeable focus of eco-innovation and by 2017 this has been confirmed. Lithuania's major developments have been related to waste management infrastructure and energy efficiency, promotion of renewable energy. The proposed Circular Economy Strategy by the European Commission appears supported by the government (plans are already being made for new cogeneration plants, waste management facilities) which as a whole feels confident that the country can contribute towards EU wide results.

One the subject of circular economy, the emergence of understanding what circular economy is largely related to individual efforts of new associations, NGOs which have sprung up in the last few years. These entities have made it their goal to increase awareness on circular economy, eco-friendly practices and other areas related to eco-innovation.

Financial support from EU structural funds (ERDF, ESF, etc.) continue to be a major driver for eco-innovation (with the largest shares of funding directed to priorities linked to ecological development).

The Lithuanian Innovation Development Programme for 2014-2020 and the Smart Specialisation Strategy remain the main documents supporting eco-innovation. However, the policy landscape has seen few changes (majority of which are connected to waste management) and the challenge now is working on updating the legal system to better facilitate emergence of a circular economy.

Introduction

The 2016-2017 period for Lithuanian eco-innovation in many ways is a period of growth as well as uncertainty. The following chapters will demonstrate that the country has greatly improved its eco-innovation indicators and there is a rising number of NGOs and associations that now connect their activities, business practices either with promoting circular economy, or feature circular economy inspired design principles as their unique selling point.

The waste management infrastructure also continues to evolve towards facilitating recycling and using positive reinforcement actions to influence the public into adopting a “green” lifestyle (primarily through monetary incentives to recycle certain packages). Since 2016 special waste management booths were introduced around the country and with recyclable packaging specially labelled.

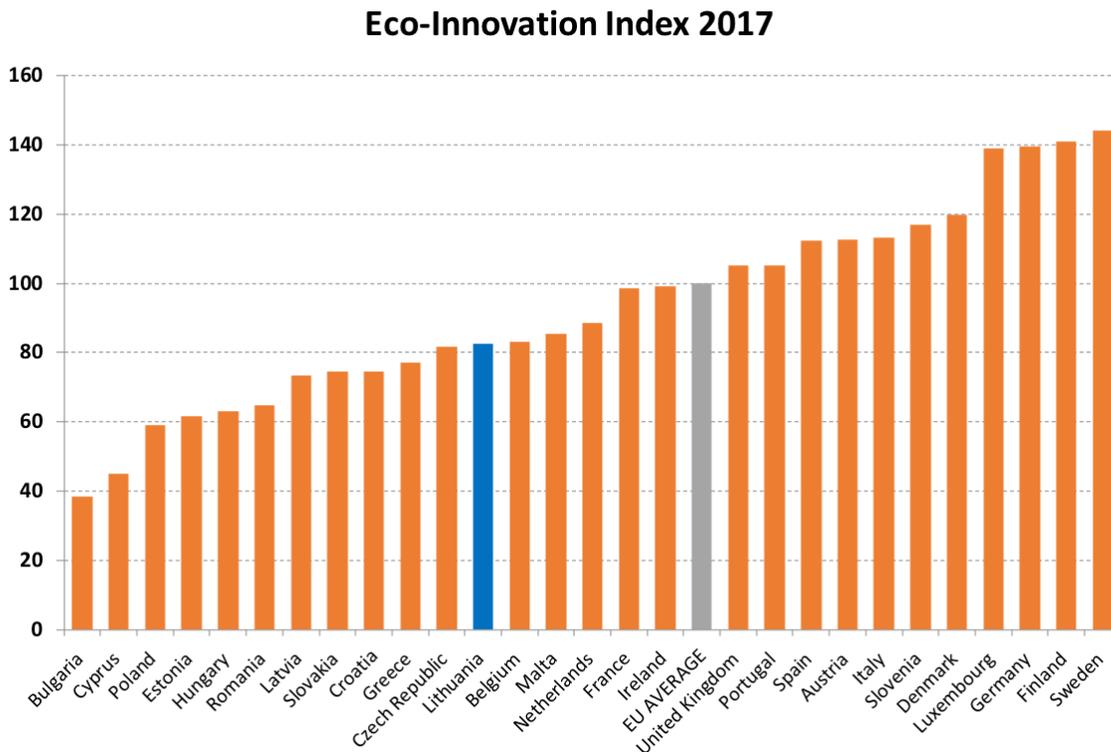
However, questions have been raised recently regarding the efficiency of the waste management sector. While from the government’s side there have been questions raised whether the existing facilities are cost-effective for further operations, other have expressed scepticism whether the existing infrastructure is enough to meet Lithuania’s ambitions of having a positive impact on the Circular Economy Strategy.

Thus the period of 2016-2017 is a transition with developments on the horizon for 2018. The role of public organisation in raising awareness regarding circular economy has highlighted that the existing legal basis lacks specific links to eco-innovation and this lack of direct policy support is a continuing issue with which Lithuania has yet to deal with.

1 | Eco-innovation performance

The analysis in this section is based on the EU 28 Eco-innovation Index (Ecol Index) for the year 2017. The Eco-innovation index demonstrates the eco-innovation performance of a country compared with the EU average and with the EU top performers. Ecol Index is a composite index that is based on 16 indicators which are aggregated into five components: eco-innovation inputs, eco-innovation activities and eco-innovation outputs as well as environmental outcomes and socio-economic outcomes

Figure 2.1 EU27 Eco-innovation Index 2017, composite index

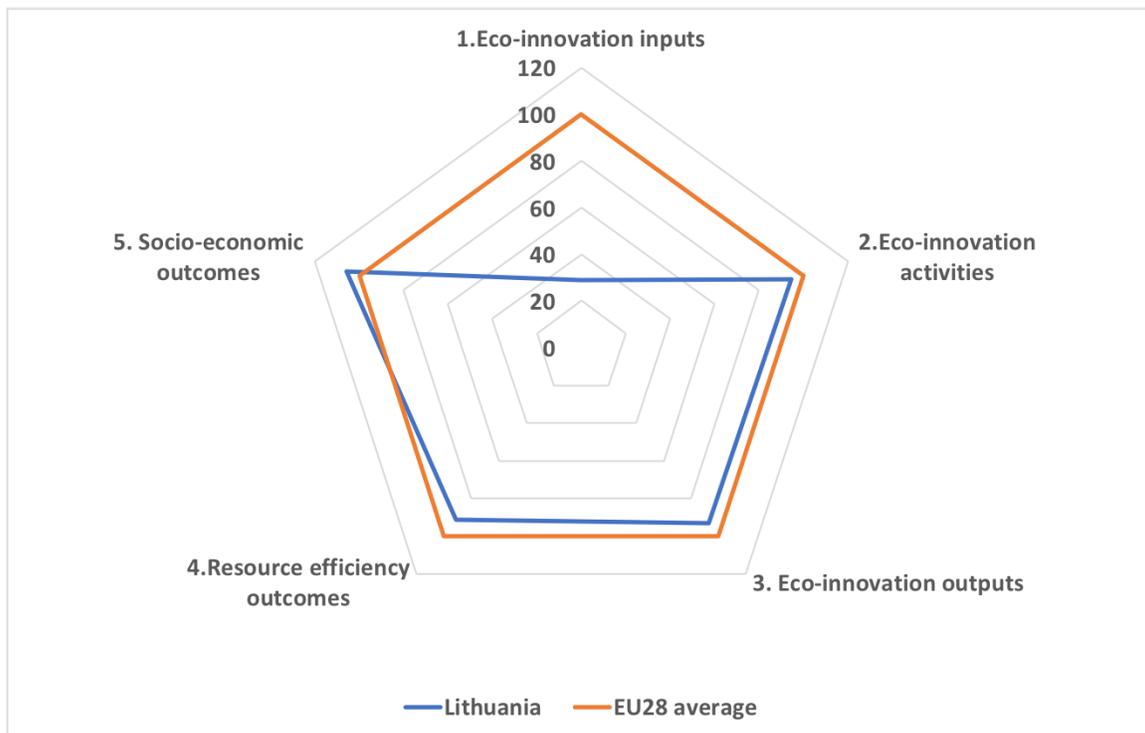


Source: EIO, 2018

Figure 2.1 showcases that in 2016 Lithuania still performs below the EU average with an overall Eco-Innovation Index score of 82 (EU average is Eco-Innovation Index score of 100) and placed Lithuania in 17th place in the overall EU rankings. These results an improvement from 2015 when the country had an Eco-Innovation Index score of 66 and ranked in 19th place in the EU28. Since 2015, Lithuania surpassed Hungary and Romania – countries which previously (in 2015) were ahead in the scoring.

Figure 2.2. presents Lithuania’s performance in 5 key components of Eco Innovation – inputs, activities, outputs, resource efficiency outcomes and socio-economic outcomes. The overall ranking is primarily influenced by the low indicator for Eco-innovation inputs (a score of 29 which ranks the country 24th out of EU28), whereas in other areas Lithuania has performed much closer to the EU average score (100) or in the case of socio-economic outcomes above the average (scoring 107 which ranks the country 10th out of EU28).

Figure 2.2 Components of the Eco-innovation index for Lithuania, 2017



Source: EIO, 2018

Regarding Lithuania's strongest indicator, the strength of socio-economic outcomes is determined less by internationalisation (the export of eco-innovation goods makes up 0,43% of total exports) and more by the strong national impacts. In 2016 employment in eco-industries had reached 4,03% of total employment and the turnover (revenue) in eco-industries constituted 3,34% of total revenue across all companies. The turnover in eco-industries is an especially noteworthy achievement, which places Lithuania among the top 4 countries in EU (only Latvia, Slovakia and the Czech Republic have demonstrated better results in 2016).

For other scores, Lithuania has significantly improved its overall score for eco-innovation activities (98) as compared to the one it achieved in 2015 (64). This also makes Lithuania the leading country in the Baltic region where the neighbouring countries have achieved lesser activity scores (Latvia at 49; Estonia at 88, Poland at 16). This growth can be primarily attributed to the increase in enterprises that introduced an innovation with environmental benefits obtained within the enterprise and enterprises that introduced an innovation with environmental benefits obtained by the end user.

Eco-innovation outputs has demonstrated positive signs of growth during the 2015-2016 period with a score of 75 (up from 52 in 2015). However, even with 2016 showing the best output indicator for the past 5 years, Lithuania is still among the worst performers behind more than half of the EU28 (Lithuania holds the 19th ranking). While eco-innovation related patents remain a low point, there have been positive developments regarding eco-innovation related publications (with 13,69 publications per million population) and eco-innovation related media coverage (where Lithuania ranks as 7th out of EU28).

Lastly, much as was the case in 2015, Lithuania continues to show positive development regarding resource efficiency outcomes. With an aggregated score of 92, Lithuania compares positively with

prior years: a score of 82 in 2015 and a score of 80 in 2014. An area where improvement has not been registered was GHG emissions intensity index which has decreased from 2015 where it was 5% behind the EU average score; in 2016 it is now 7% behind the EU average score. On the other hand, for water productivity (GDP/total fresh water abstraction, €/m³) and energy productivity (GDP/gross inland energy consumption, €/toe) Lithuania is above the EU average (scoring an index of 0,27 and 0,67 respectively).

2 | Selected circular economy and eco-innovation areas and new trends

In Lithuania 2016-2017 is a period of continuing progress towards circular economy becoming an established concept among businesses and government. The Lithuanian Smart Specialisation Strategy remains the main document related to facilitating both eco-innovation and emergence of circular economy. Priority areas related to eco-innovation include: Energy and sustainable environment; Agricultural innovation and food technologies; and New production processes, materials and technologies. One of the expected future developments encouraged by the strategy is connected to development of bio-refinery plants in Lithuania.

Lithuania has been in talks with the European Commission regarding waste management and utilisation of waste as bio-fuel. The Lithuanian government is confident that by 2020 the country will have suitable infrastructure to burn 30% of household waste, recycle 65% and dispose of the remaining 5% at existing waste dumps (EU goals in this area are to burn 25%, recycle 65% and dispose of 10% at dumps). To facilitate these plans 2 new cogeneration plants are expected to be build in the capital Vilnius and Kaunas.

This is just one example of Lithuania continuing the expansion of its waste management sector with government actions and business initiatives. In 2016 special waste management booths were introduced around the country to help collect plastic, glass and metal drink containers. By the end of 2017 there have been 2618 such booths around the country. The collection booths function as an incentive system to encourage recycling. The recyclable packaging is specially labelled and for returning such containers the buyer receives monetary compensation, essentially turning part of the price paid for the product a deposit for the recyclable container.

However, perhaps the biggest new trend in Lithuania was the emergence of either business-led or NGO-led initiatives, designed to support recycling and waste management. Of particular note is the fact that “circular economy” as a concept is beginning to be introduced through these initiatives to business and citizens alike.

This is perhaps the largest development when compared to the outlook of eco-innovation and circular economy in 2014-2015. While 2016-2017 undoubtedly has larger technological expansion towards recycling and efficient use of waste, it is the fact that the concept of “circular economy” is expanding into the public discourse that should be understood as a major turning point. While previously circular economy was primarily used within academic work or mentioned in brief by media covering government work, particularly since the end of 2017 media coverage of what is circular economy has been rising.

NGO "Žiedinė ekonomika"

The NGO "Žiedinė ekonomika" focuses its efforts on expanding awareness of circular economy among Lithuanian business and the government. The NGO offers several options for business looking to introduce circular economy sensibilities to their operations, including:

- Staff training on circular economy principles in the work place
- Evaluations of how much the business practices match circular sensibilities
- Evaluation of the impacts introducing circular principles would have on a business

"Žiedinė ekonomika" also produces studies, videos and video seminars on circular economy.

The NGO a partner of Zero Waste Europe and European Environmental Bureau.

Keywords: NGO, circular economy, awareness raising

Internet link: <http://www.circulareconomy.lt/>

Contacts for further information: Domantas Tracevičius (founder), domantas@circulareconomy.lt

Association for ecologic design "EKODA"

The association for ecologic design united Lithuanian artists, designers, business whose work heavily incorporate sensibilities of ecologic design, renewable resources and circular economy. The association currently focuses on raising awareness for ecologic design work by Lithuanian artists as well as organising seminars and conferences on circular economy.

Additionally, the association organises events, exhibitions that showcase the latest Lithuanian designer work based on ecologic design principles. Of these the most recent has been the festival "Perdirbinys" featuring expositions for goods made out of recycled material as well as conference on circular economy.

Keywords: Ecologic design, circular economy, awareness raising

Internet link: <http://www.ekoda.lt/>

Contacts for further information: Vaida Griškevičienė (director), vaida@ekoda.lt

3 | Barriers and drivers to circular economy and eco-innovation in Lithuania

The following examples are identified as the strongest drivers for eco-innovation in Lithuania:

- Evolving innovation and entrepreneurial culture impacting eco-innovations. Lithuania's businesses have continued to invest both in non-technology innovation (a reported increase of 157% between 2010 and 2016) and venture capital investment, while on the academic side international publications have also continued to increase in number. The impact of entrepreneurial culture is reflected in the eco-innovation Index where Lithuania's position (12th) closely matches the overall ranking in the European Innovation Scoreboard (which reached 16th by 2017).
- Increasing media coverage of "green" economy continues to expand awareness not only of eco-innovation but circular economy as well. The latter has in particular begun to be featured more heavily in media discourse, most recently connected to renewable energy and efficiency in waste management. Public awareness is also facilitated through NGO and association initiatives and associations that connect entities working with renewable resources and waste management.
- Of specific note are initiatives targeting schools which support the emergent of "green sensibilities" since a young age. The aforementioned NGO involvement has seen smaller actions taken to bring seminars, presentations about circular economy to classrooms. On a larger scale there are examples of municipalities organising competitions themed around ecological development. An example included one programme in Kaunas city ("Kaunas – ecologic city") where those presenting the best ideas for ecological development were awarded with educational class excursions; thus, creating a snowball effect for an eco-mindset.
- Two major programmes or strategies continue to support national actions for eco-innovation. Of these documents, the promotion of eco-innovation in Lithuania is covered under the general innovation policy agenda – Lithuanian Innovation Development Programme for 2014-2020. The strategic aim of the programme is to promote Lithuania's global competitiveness by establishing an effective innovation system. Growing potential in eco-innovation is expected in construction, solar energy, waste management and green transport.
- The second strategy, adopted in 2015, is the Smart Specialisation Strategy, which offers important opportunities for joining forces in matching roadmaps to find business and science potential to boost Lithuanian prosperity. The Smart Specialisation Strategy promotes economic growth and the contribution of knowledge-intensive economic activities to GDP, in particular, biotechnology, which is a priority area for agro-innovation and food technologies. The programme includes an action plan for sustainable use of agro-biological resources and safe food. Sustainable use of resources.
- EU funds - European Regional Development fund (ERDF), European Social Fund (ESF), Cohesion-fund – continue to support business development towards innovations. Of the innovation-development actions being funded during the 2014-2020 period, 35% of the

funds are directed towards 3 priority axis related to eco-innovations: sustainable transport (13,7% of all funds), environmental protection, sustainable use of natural resources and adaptation to climate change (10% of all funds) and energy efficiency and development of sustainable energy resources (11,5%). These 3 priorities receive the largest shares of the EU funding directed towards innovation.

However, despite continuing positive development, a number of barriers and obstacles still remain.

- With progress being made towards circular economy being a known concept the key barrier still remains the lack of policy measures for the promotion of eco-innovation – a situations which has been a continues barrier. As previous reports have stated, eco-innovation, innovation related to circular economy is covered by general innovation policy measures and has no separate regulations.
- Perhaps as a lack of specific policy measures, the reactions towards some government actions have been lukewarm. Of note is the growth of waste management industry, which has been subject to less than positive observation from the Association for Dangerous Waste Managers of Lithuania. In particular, the expansion of waste management sector has been criticised – either due to overambitious goals or lack of policy development.
- While recycling has been one of the most visible eco developments to the public, the rate of recycling (up to 7% of all waste in Lithuania is recycled) is noted as sill being behind other major European eco-innovators. This is again tied to slow policy development that would regulate more efficient use of waste as recyclable god and energy source.

All in all, when compared to previous years, Lithuania’s major developments are less related to large scale policies and more with separate actions that correlate into a larger whole when viewed from a distance. Positive developments in expanding recycling across the country are offset with statistics for the actual rate of recycling that is being carried out (s opposed to waste burning and dumping). For the emergence of circular economy individual NGOs, associations, media organisations are contributing more towards rising awareness than government policies or actions at the moment.

4 | Policy landscape in Lithuania

Lithuania has no singular document outlining the eco-innovation policy for the country, and instead eco-innovation is covered under various general innovation policy programmes and measures, and involves different institutions. The main document for innovation strategy – Lithuanian Innovation Development Programme 2014–2020 – mentions eco-innovation only in the context of the previous Eco-Innovation Scoreboard 2012 findings. However, the Development Programme does not contain any measures that would address eco-innovation specifically.

Since the 2015 report eco-innovation has continued to be supported through EU funding schemes in which Lithuania participates. As mentioned previously, innovations linked to sustainable development, energy efficiency and environment (collectively and separately) receive the largest shares of EU funding for innovation.

The main strategies, programmes, regulations for innovation policy, ecological resource efficiency, industrial development and/or individual economic sectors, products, etc. have remained the same as indicated in the 2015 report. These strategies, programmes, regulations are listed below in chronological order:

- **Law on Taxes on State Natural Resources (1991)** – aims to increase the responsibility for the effective and economical utilisation of the natural resources.
- **National Environmental Protection Strategy (introduced in 1996, latest version since 2015)** – aims to allow the preservation of clean, healthy natural environment, biological and landscape diversity and optimal nature use.
- **Lithuanian Forestry Policy and Its Implementation Strategy (2002-2015)** – aims to manage the forest resources according to the sustainable development principle.
- **Lithuanian National Strategy for Sustainable Development (2003, 2009, latest version since 2011)** – identifies the internal and external factors and processes influencing Lithuania’s sustainable development.
- **National Housing Strategy (2004)** – aims to ensure efficient use, maintenance, renovation and modernisation of existing housing, as well as efficient energy use.
- **Programme for Modernisation of Multi-Apartment Buildings (2004, 2009)** – aims to increase the efficiency of energy consumption in multi-apartment buildings.
- **Natural Resources Protection and Sustainability Programme (2007)** – aims to optimise the use of natural resources and minimise a negative environmental impact.
- **Drinking Water Supply and Wastewater Management Development Strategy for 2008-2015 (2008)** – sets goals and targets of drinking water supply and management.
- **National Strategy for the Implementation of the United Nations Framework Convention on Climate Change (2009)** – aims to upgrade the waste management system.
- **Programme for Implementation of Green Public Procurement (2013-2015)** – aims to promote green public procurement and ensure that purchased goods and services are environmentally friendly.

- **Baltic Sea Environmental Protection Strategy (2010) and Action Plan 2010-2015 for the Strategy for the Baltic Marine Environment Protection (2010)** – aims to achieve and maintain the good environmental state of the Baltic Sea by the year 2020.
- **National Strategy for the Development of Renewable Energy Sources (2010)** – seeks to promote the use of local renewable and waste energy resources.
- **Green Industry Innovation Programme (2012-2015)** – grants assistance to projects with activities related to the development of new, innovative, environmental technologies and processes.
- **Law on Energy from Renewable Sources (2011, latest version since 2014)** – aims to ensure sustainable development of the renewable energy resources.
- **Lithuanian Innovation Development Programme 2014–2020 (in the beginning of 2014)** – aims to promote Lithuania’s global competitiveness by establishing an effective innovation system. Growing potential in eco-innovation is expected in construction, solar energy, waste management and green transport.
- **Lithuanian Smart Specialisation 2020 (2015)** – Addresses both eco-innovation and circular economy in the fields of sustainable environment, agro-innovation, manufacturing processes.

Specific legal documents for promoting and using the principles of circular economy are still in development. As of 2018 with the EU Circular Economy Strategy there have already been developments in understanding the current situation of Lithuania in reaching the 2030 goals and possible actions to facilitate them. In regards these targets proposed for EU circular economy Lithuania still has areas to be improved.

In terms of circular economy, legal documents that cover aspects of circular economy (because no specific document for circular economy exists) are:

- **Lithuanian Law for Waste Management (1998)** – the main law that regulates waste management, which includes recycling;
- **Lithuanian Law for the Management of Packages (2001)** – which specifically addresses the management of package waste and the provision of information to society on how to properly recycle packages, as well as the responsibilities of the manufacturers and recycling institutions. Since 2016 includes regulation for compensation (deposit) when returning specially-marked drink container;
- **The National Waste Management Plan 2014-2020 (2014)** – which outlines the need to move towards better waste management and addresses plans for effective recycling of waste.

In summary, Lithuanian policies, strategies and regulations support solutions seeking to promote innovation, increase the usage of renewable resources, control pollution, regulate waste management and address other economic and environmental issues. Furthermore, policies related to innovations, environmental protection, resource efficiency, etc. are harmonised with European Union policy and the respective rules and regulations.

Deposit for one-time-use drink containers

Since 2016 Lithuania has adopted the best practices from countries where one-time-use drinking containers are collected at specified locations and buyers receive monetary compensation (deposit). This is specifically linked to Danish practices in the field.

By the end of 2017 there are now 2618 booths set up in Lithuania to collect specially-marked drinking containers (see picture below).



Source: <http://www.am.lt>

It is estimated that this system results in 80-90% of the marked packages being returned by buyers, greatly reducing the impact on the environment.

Keywords: deposit, recycling, one-time-use drinking containers

Internet links: <http://grazintiverta.lt/>

Eco-innovation LT +

The policy measure Eco-innovation LT+ was an expansion of prior initiatives aiming to facilitate rational resource usage, prevent pollution and apply various eco-design measures. These processes include the introduction of environmental management and governance systems, in accordance with the requirements of international protection standards, and/or the performance of production technology and environmental audits.

SMEs taking advantage of the measure's support are expected to demonstrate the development of product design using eco-design measures, taking into account economic, environmental and social aspects, sustainable design marketing solutions, and the registration of such designs.

Keywords: eco-design, resource rationalisation, environment

Internet links:

Measure's website: <http://www.esinvesticijos.lt/lt/naujienos/priemones-eco-inovacijos-lt-kvietimas-teikti-paraiskas>

Contacts for further information: Deividas Petrulevičius, communication specialist, d.petrulevicius@lvpa.lt

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ANNEX: Policy measures addressing circular economy and eco-innovations in Lithuania

	Group of policy measures	Type of policy measure	Specific measure	Focus of policy measure (ticked if relevant)					
				Circular economy	Generic focus on eco-innovation	Resource efficiency improvement	Energy efficiency improvement	Reduction of emissions incl. CO ₂	Other relevant areas (e.g. renewable energy, etc.)
SUPPLY SIDE FOCUS	Equity/business support	Publicly co-funded venture capital funds	- The JEREMIE venture capital fund in Lithuania was established by using funding from the ERDF and the Government of Lithuania. JEREMIE operates five smaller funds: Verslo angelų fondas I, BaltCap, LitCapital, Practica Seed Capital, and Practica Venture Capital. These funds target innovative businesses and eco-innovation funding is possible through them.		x				
		Public guarantee funds	<p>- Agricultural Credit Guarantee Fund was established by the Government with the purpose of providing guarantees for loans issued by credit institutions to businesses and individuals working with agriculture. Eco-innovation support is possible through the fund.</p> <p>- Investment and Business Guarantees (Lithuanian acronym – INVEGA) provides guarantees for credit institutions when loans are taken by enterprises and administers one of the state support mechanisms – partial compensation of the credit interest. Moreover, INVEGA administers provision of micro-credits to SMEs. INVEGA potentially can cover guarantee for eco-innovations.</p>		x				

	Support for R&D in public sector and industry	R&D funding	<p>- Policy measure Eco-Consultant (part of EU structural funding period 2014-2020). Consultancy on more efficient use of resources, preservation of natural resources, eco-technologies and eco-related issues provided to SMEs.</p> <p>- Policy measure Eco-innovation LT (part of EU structural funding period 2014-2020). The objective of the measure is to promote the introduction of process and organisational eco-innovation by SMEs in order for them to more rationally use the resources, ensure pollution prevention and apply various eco-design measures.</p> <p>- Policy measure Eco-innovation LT+ (part of EU structural funding period 2014-2020). Introduction and promotion of technology eco-innovation in SMEs seeking to reduce the negative impact of economic activities on the environment, to promote industrial symbiosis and ensure environmental protection.</p> <p>- Policy measure Audit for the Industry LT (part of EU structural funding period 2014-2020). Performance of audit procedures of energy consumption in industrial companies will be funded under this measure.</p>		x					
		Collaborative grants	<p>- EUREKA – a platform for R&D-performing entrepreneurs in Europe and beyond – provides support for collaborative projects. EUREKA promotes international, market-oriented research and innovation through support to SMEs, large industry, universities and research institutes. EUREKA's Eurostars programme is another source for collaborative grants. It aims to stimulate SMEs to lead international collaborative research and innovation projects by easing access to support and funding. Potentially, eco-innovation collaborative grants can be covered by EUREKA and the Eurostars programme.</p>		x					
		R&D infrastructure	<p>- National Programme for the Development of Studies and R&D for 2013–2020 encourages sustainable development through innovation, improving studies and raising human capital.</p>		x					x
	Fiscal measures	Tax incentives for R&D and start-ups	The amended Law on Corporate Income Tax of the Republic of Lithuania of April 2008 has enabled enterprises to deduct their costs for R&D from		x					

			income three times. Potentially, this law can cover incentives for companies developing eco-innovations.						
		Tax incentives for R&D personnel	No specific tax incentives for R&D personnel exist. However, financial measures targeted at Foreign Direct Investments offer to cover part of the costs incurred by a potential investor in the investment project as well as in training or requalification of needed personnel. This might include R&D personnel.		x				
Education, training and mobility	Tailored training courses for companies, entrepreneurs	- Enterprise Europe Network (EEN) in Lithuania organises seminars, workshops, conferences etc. for all Lithuanian SMEs. One of the topics for these events is eco-innovations.		x					
		- Lithuanian Innovation Centre (LIC) is another organisation providing innovation support services to companies, research institutions and industry associations. Training courses on eco-innovation and various events are covered by LIC, e.g.: Vilnius Innovation Forum (which had a green economy session), Baltic Sea region event, Eco-innovation days.		x					
	Advise/consulting for start ups, companies, entrepreneurs	- EEN covers the entire territory of Lithuania, so any SME, start-up, valley or university representatives can and already do get advice/consultations from EEN.		x					
		- The Agency for Science, Innovation and technology (MITA), LIC, science and technology parks provide consulting for start-ups, companies, and entrepreneurs.		x					
	Placement schemes for students	- None were found							
Support for R&D workers recruitments	- The National Programme for the Development of Studies, Scientific Research and Experimental (Social and Cultural) Development for 2013–2020 offer support for staff development and HR related infrastructure			x					

			- Lithuanian Smart Specialisation 2020 – Addresses both eco-innovation and circular economy in the fields of sustainable environment, agro-innovation, manufacturing processes.		x	x	x		x
		Market intelligence and other forms of information sharing	- Lithuanian Innovation Centre supports internet website www.inovacijos.lt providing information on possibilities for innovation financing, non-financial support for innovation, innovation policy, innovation protection, innovation statistics, and innovation management. - Internet website www.paramaverslui.eu supported by EEN provides information on EU common market issues, SME and innovation policy issues and initiatives, opportunities in international markets.		x				
DEMAND SIDE FOCUS	Regulations and standards	Regulations, targets, cap & trade schemes	<ul style="list-style-type: none"> - Law on Taxes on State Natural Resources (1991); - National Environmental Protection Strategy (1996); - Lithuanian Forestry Policy and Its Implementation Strategy (2002); - Lithuanian National Strategy for Sustainable Development (2003, 2009r); - Lithuanian National Strategy for Sustainable Development (2003, 2009r); - National Housing Strategy (2004); - Programme for Modernisation of Multi-Apartment Buildings (2004, a2009) - Natural Resources Protection and Sustainability Program (2007); - Operational Programme of the Lithuanian Fisheries Sector 2007-2013 (2007, a2008); - Drinking Water Supply and Wastewater Management Development Strategy for 2008-2015 (2008, a2009); - National Strategy for the Implementation of the United Nations Framework Convention on Climate Change (2009); - Baltic Sea Environmental Protection Strategy (2010) and Action Plan 2010-2015 for the Strategy for the Baltic Marine Environment Protection (2010); - National Strategy for the Development of Renewable Energy Sources (2010); - Law on Energy from Renewable Sources (2013); 	x	x	x	x	x	x

			<ul style="list-style-type: none"> - Lithuanian Innovation Development Programme 2014–2020 (in the beginning of 2014); - Lithuanian Law for Waste Management (1998); - Lithuanian Law for the Management of Packages (2001); - The National Waste Management Plan 2014-2020 (2014) 						
		Performance standards, labelling, certification	<ul style="list-style-type: none"> - Lithuanian national eco-label Water Lily introduced in 1996. From 2003 it has more or less the same meaning as the EU ‘flower’ eco-label. It can be used on all products (excluding food products, drinks and medicine). As far as it is known, this eco-label has not yet been used. - The Blue flag label for certification by the foundation for environmental Education certifying that a beach or marina meets certain standards. - The Innovation Prize was established in 2015 by the Lithuanian Confederation of Industrialists. The prize is awarded to businesses that pursue innovation and technological development. 		x				
	Public procurement	“Green“ public procurement of goods and services	<ul style="list-style-type: none"> - National programme for implementation of green procurement measures in 2016-2020: the programme’s objective is to promote green procurement and ensure that the goods, services or works purchased through public procurement procedures are as environmentally friendly as possible. 			x	x	x	x
		R&D procurement	<ul style="list-style-type: none"> - Governmental Resolution of June 2011 on R&D procurement. Procurement of R&D oriented at eco-innovation potentially can be covered by this resolution. 		x				
		Pre-commercial procurement	<ul style="list-style-type: none"> - Not accepted as yet 						

	Technology Transfer	Advisory support for technology adopters	- MITA, LIC, science and technology parks, Valleys, universities provide advisory support for technology adopters. Support for eco-innovative technology adopters potentially can be covered by these organisations.		x					
		Financial or fiscal support for technology adopters (e.g. grants for purchasing new technology)	Amended Law on Corporate Income Tax of the Republic of Lithuania of December 2008 has provided that enterprises that invest in essential technological renewal will get a corporate income tax incentive: such enterprises may reduce their taxable profits up to 50%. Support for eco-innovative technology adopters potentially can be covered by this law.		x					
	Support of private demand	Tax incentives for consumers (e.g. for purchasing environmentally efficient products)	- Deposits for one-time-use drink containers. while not directly tax incentives due allow consumers to regain part of the purchase cost if the specially-labelled containers are returned to specific collection points.	x	x	x				
		Tax reductions for products and services (e.g. VAT reductions)	- Tax exemption for blended biofuels (2005).						x	
		Demand subsidies (e.g. eco-vouchers, consumer subsidies)	- In 2017, the Ministry of Economy of the Republic of Lithuania began the latest cycle for innovation vouchers to encourage cooperation between business and research institutions. An innovation voucher is a small credit that entitles SME's to buy R&D expertise or knowledge from research and educational institutions. The decision was based on prior success of the 'Inno Vouchers LT' programme.			x				
		Awareness raising and information provision	- MITA disseminates information on the Entrepreneurship and Innovation Programme under the Competitiveness and Innovation Framework Programme (CIP), established by the European Commission, including the 'Eco-innovation' initiative, which provides funding for projects in various sectors that mitigate environmental impacts or promote a more efficient use of resources.		x	x	x	x	x	

		<ul style="list-style-type: none"> - EEN prepares and disseminates fact sheets, regularly renews information about innovation and other initiatives on the project website www.paramaverslui.eu, prepares relevant articles for entrepreneurs and distribute the articles to them twice a month with an e-newsletter, organises business panels if there is need, informs companies about new regulations by using above mentioned tools and organise seminars, conferences etc. Information provision on eco-innovations potentially can be covered by EEN. - The integrated science, studies and business centres (valleys), beyond working with innovations directly, also disseminate information and raise the awareness of society to eco-innovation. - NGO "Circular Economy" has awareness raising activities related to circular economy in the form of staff training, seminars, etc. - Project „KITA FORMA“ (organised and managed by RV Agentūra) has several initiatives aiming at awareness raising through education programmes. 			x	x	x	x	x	
						x				
				x	x	x	x	x		
				x	x					

About the Eco-Innovation Observatory (EIO)

The Eco-Innovation Observatory (EIO) is the initiative financed by the European Commission's Directorate-General for the Environment. The Observatory is developing an integrated information source and a series of analyses on eco-innovation trends and markets, targeting business, innovation service providers, policy makers as well as researchers and analysts.

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