Public Procurement and the Circular Economy

Orsolya Diófási-Kovács

Corvinus University of Budapest, Budapest, Hungary

Introduction

The European Union adopted the Circular Economy Package at the end of 2015 and two directives part of European Public Procurement Reform in 2014, which was to be implemented by the Member States by April 2016. Both of them have significant effect on the EU economy and are strongly connected to the concept of green public procurement (GPP).

„Public authorities are major consumers in Europe: they spend approximately 1.8 trillion euro annually, representing around 14 % of the EU's gross domestic product. By using their purchasing power to choose goods and services with lower impacts on the environment, they can make an important contribution to sustainable consumption and production"(GPP Europe).

The aim of this paper is to examine the connection between the possibilities provided by the new public procurement directives (2014/24/EU, 2014/25/EU) for greening procurement and the program of the Circular Economy Action Plan. In the followings the Circular Economy Action Plan will be described and the concept of GPP linked to ecolabeling. In the discussion phase possibilities provided by the public procurement directives will be highlighted among with the comparative analyses of GPP criteria and the circular economy phases.

The EU action plan for the Circular Economy and links to GPP

The document titled „Closing the loop – An EU action plan for the Circular Economy" (COM (2015) 614) was adopted by the European Commission in December 2015. "The Circular Economy Package consists of an EU Action Plan for the Circular Economy that establishes a concrete and ambitious program of action, with measures covering the whole cycle: from production and consumption to waste management and the market for secondary raw materials" (Circular Economy, EU).

The concept of circular economy is a relatively new term, only appearing in the last few years within the EU policy-making and other sustainability related literature. However „…the general concept

underlying the circular economy has been developed by many schools of thought, such as Regenerative Design, Performance Economy, Cradle to Cradle, Industrial Ecology, Biomimicry, Blue Economy, Permaculture, Natural Capitalism, Industrial Metabolism and Industrial Symbiosis..." (Lewandowski, 2016).

Murray et al define Circular Economy as "an economic model wherein planning, resourcing, procurement, production and reprocessing are designed and managed, as both process and output, to maximize ecosystem functioning and human well-being" (Murray et al., 2015).

At the same time, the EU Action plan gives the following, slightly simpler definition: „circular economy, where the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste minimized…" (COM (2015) 614).

In my opinion the Action Plan seems like a framework for integrating all sustainability related EU level policies and regulations from production, consumption to waste management and many other topics. This is a great step towards coherent policy making, and ensures the system thinking and coordinated actions. "Maybe Europe moves slowly but the EU will create a policy framework that will impact the full value-chain from producer to consumer to waste manager" (Acceleratio, 2016) which gives good ground for a systemic shift towards circular economy. The action plan is built up according to the following structure:

- Production
- Consumption
- Waste management
- From waste to resources, secondary raw materials
- Priority areas
- Innovation, investment, and other horizontal measures
- Monitoring

The action plan specifies policy measures in order to transform our current system towards a circular one. The *production* phase is divided into product design and production process. The design part is focusing on eco-design (e.g reparability, upgradability, durability, and recyclability of products) and producer responsibility. The production process related actions are focusing on furthering the uptake of EMAS (EU Eco-Management and Audit Scheme), providing BREFs (Best Available Techniques reference documents) and environmental technology verification (ETV). ETV is a pilot project of the Commission and "offers a verification procedure to cutting edge environmental technologies that may otherwise find it difficult to establish their environmental added value. The verification procedure allows for an independent assessment and validation of the manufacturer's claims on the performance and environmental benefits of their technology" (ETV Europe).

The *Consumption* phase focuses on influencing consumer choices: „The choices made by millions of consumers can support or hamper the circular economy. These choices are shaped by the information to which

consumers have access, the range and prices of existing products, and the regulatory framework."

The problem of ever growing number of green claims, which can confuse consumers who lack the needed knowledge to sort out the trustworthy labels, should be addressed. The effectiveness of the EU Ecolabel should also be increased and the improvement of the energy labelling system is also a priority. The EU is currently testing the Product Environmental Footprint methodology which is for measuring and communicating each products' environmental performance.

There is a short mention of price of sustainable products, since it is an important factor in influencing purchasing decisions. „Member States are therefore encouraged to provide incentives and use economic instruments, such as taxation, to ensure that product prices better reflect environmental costs" (COM, 2015:614).

The topic of „planned obsolescence" and waste management are also mentioned among with „innovative forms of consumption… e.g. sharing products or infrastructure (collaborative economy), consuming services rather than products, or using IT or digital platforms" (COM, 2015:614).

The consumption related section includes the topic of green public procurement, and the Commission makes commitments to give special emphasis to durability and reparability in the GPP criteria setting process, and to the support of spreading GPP more widely among the Member States. A goal is to reinforce GPP in the Commission's own procurement and EU funded projects as well.

According to the Action Plan "*waste management* plays a central role in the circular economy: it determines how the EU waste hierarchy is put into practice. The waste hierarchy establishes a priority order from prevention, preparation for reuse, recycling and energy recovery through to disposal, such as landfilling." The waste generated by households, the public and the private sector should also be considered in the policies and infrastructure provided for at least the initial separate collection systems. This part focuses on recycling infrastructure, certification of recycling operations, illegal waste transport and "waste to energy" solutions. Among many other actions „the Commission is adopting … long-term recycling targets for municipal waste and packaging waste, and to reduce landfill, provisions to promote greater use of economic instruments and general requirements for extended producer responsibility schemes" (COM, 2015:614).

A circular economy is based on *secondary raw material*, which means that recycling, (not downcycling) plays a crucial role in supply security. Waste management practices are strongly connected to the available supply of secondary raw materials and the quality of the recycled materials determine the demand for these materials. For this reason the EU is planning to develop EU wide standards for recycled material. The Action Plan also highlights the importance of recycled nutrients in connection with fertilizer use, address the ever growing problem of water scarcity and the tracking of chemicals.

The Action Plan defines priority areas, which need special focus in connection with the circular economy and are currently causing the biggest environmental problems. These are plastics, food waste, critical raw materials, construction and demolition, biomass and bio based products.

"The transition to a circular economy is a systemic change. In addition to targeted actions affecting each phase of the value chain and key sectors, it is necessary to create the conditions under which a circular economy can flourish and resources can be mobilized." (COM, 2015:614) The possible solutions are listed in the part of the Action Plan which is about *innovation, investment and other horizontal measures* (e.g support of SMEs, education of workforce etc.) The evaluation of the change towards a circular economy is also very important on the EU and Member State level as well. The EU is committed to develop a framework and a set of indicators for the *monitoring* process.

In the following part the concept of GPP will be briefly described, the connection with ecolabeling explained and the way GPP can support circular economy will be highlighted.

Green Public Procurement criteria supporting the circular economy

Green Public Procurement is defined in the Communication (COM, 2008:400) as "a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured." (COM, 2008:400)

According to this definition GPP criteria should take the whole life cycle of the product/service into consideration, which would mean full support for the circular economy. The EU GPP Toolkit provides information for procurement officers about criteria setting in tenders.

"The basic concept of GPP relies on having clear, verifiable, justifiable and ambitious environmental criteria for products and services, based on a life-cycle approach and scientific evidence base. The criteria used by Member States should be similar to avoid a distortion of the single market and a reduction of EU-wide competition. Having common criteria reduces considerably the administrative burden for economic operators and for public administrations implementing GPP" (GPP Europe). The product groups are selected based on "scope for environmental improvement; public expenditure; potential impact on suppliers; potential for setting an example to private or corporate consumers; political sensitivity; existence of relevant and easy-to-use criteria; market availability and economic efficiency" (GPP Europe).

There are 21 criteria sets available in the following product groups: transport, waste water infrastructure, wall panels, water-based heaters,

textiles, sanitary tapware, office building design, construction and management, indoor lighting, road design, construction and maintenance, street lighting and traffic signals, toilets and urinals, gardening products, food and catering services, computers and monitors, cleaning products and services, electrical and electronic equipment for the Health Care sector, imaging equipment, electricity, copying and graphic paper, combined heat and power and furniture (GPP Europe).

The sets of criteria contain *core GPP criteria* that "address the most significant environmental impacts, and are designed to be used with minimum additional verification effort or cost increases" (GPP Toolkit) and *comprehensive criteria* which are „intended for use by authorities who seek to purchase the best environmental products available on the market, and may require additional administrative effort or imply a certain cost increase as compared to other products fulfilling the same function" (GPP Toolkit).

This means that in reality - even when the set of criteria takes life cycle considerations into account - in the public procurement process criteria is usually simplified. The concept of GPP is a voluntary tool for public authorities and even within the possibility of buying green, the set of criteria that describes a "green" product can differ significantly in each procurement process.

As an example the GPP criteria for copying and graphic paper is demonstrated. We can see that the criteria is organized matching the structure of the procurement process aiming at providing ready to use support for purchasing officers. It can be seen from the example that procurement is mainly a linear process, which gives ground for further research on alternative business methods in order to give more significant support for circular economy solutions (e.g sharing economy, leasing solutions etc.).

Table 1.

	GPP CRITERIA FOR COPYING AND GRAPHIC PAPER (GPP TOOLKIT)	
	Core Criteria	**Comprehensive criteria**
Subject matter	Purchase of office paper based on virgin fibre stemming from legally and/or sustainably harvested sources	Purchase of office paper based on virgin fibre stemming from legally and/or sustainably harvested sources
Specification	The virgin fibre for pulp production shall come from legal sources. The paper must be at least Elementary Chlorine Free (ECF).	The virgin fibre for pulp production shall come from legal sources. The paper must be at least Elementary Chlorine Free (ECF). Totally Chlorine Free (TCF) will also be accepted.
Award criteria	Additional points will be awarded for sustainable forestry sources	Additional points will be awarded for: Sustainable forestry sources Products which meet the ecological criteria of the EU Ecolabel directly related to paper production

Source: own compilation based on the GPP Toolkit

Ecolabelling was already mentioned in the previous part by describing the consumption focuses of the Action Plan. Ecolabelling is another voluntary tool for furthering sustainable consumption and can support GPP processes significantly. The International Standard Organization developed the 14020 family of standards which define three different type of environmental claims. "The most valuable labels from a GPP perspective are those which are based on objective and transparent criteria and which are awarded by an independent third party. These labels can play a particular role in developing technical specifications and award criteria, and in verifying compliance." (GPP Europe) These are ISO Type-I labels (ISO 14024:1999) (e.g Eu Ecolabel, Blue Angel, Nordic Swan etc.), which are based on life cycle considerations and are third party certified. There are other Type I-like labels (UNGM, 2009) which are also certified by a third party, but are only single issue labels (e.g. FSC-sustainable forestry, Energy Star, EU Organic label).

"By providing a means of third party verification, labels can help to save time while ensuring that high environmental standards are applied in public procurement" (GPP Europe). Another advantage of the use of ISO Type-I labels is that criteria is set for each step of the product life cycle.

The new public procurement directives (2014/24/EU, 2014/25/EU) „allow public purchasers to refer to a specific label or eco-label when laying down the environmental characteristics of the works, goods or services they wish to purchase…" (PPR FS 7, 2014) under the following conditions: requirements should be linked to the product or service, the label is developed in a transparent procedure by an independent body with the contribution of a wide range of stakeholders; the criteria is objective and non-discriminatory, available for all interested parties, and other equivalent means of proof should be accepted (PPR FS 7, 2014).

The next image shows the connection between the circular economy model, the EU Ecolabel criteria and the GPP toolkit criteria. The EU Ecolabel criteria address all stages of the life cycle only distribution is missing. The reason for this is that the certification is usually done by the producer, who has impact on the raw material use, the design, and the production, manufacturing phases. When the product reaches the end consumer the producer has an indirect impact on use and recycling by providing information to the consumer. Although there is no direct criteria for design, but considering all ecolabel criteria by the product development can be considered as eco-design. There is an interesting element, Criterion 6. Fitness for use. This criteria ensures that the quality of the "green" product is as good as the market leading conventional product's.

Figure
1.
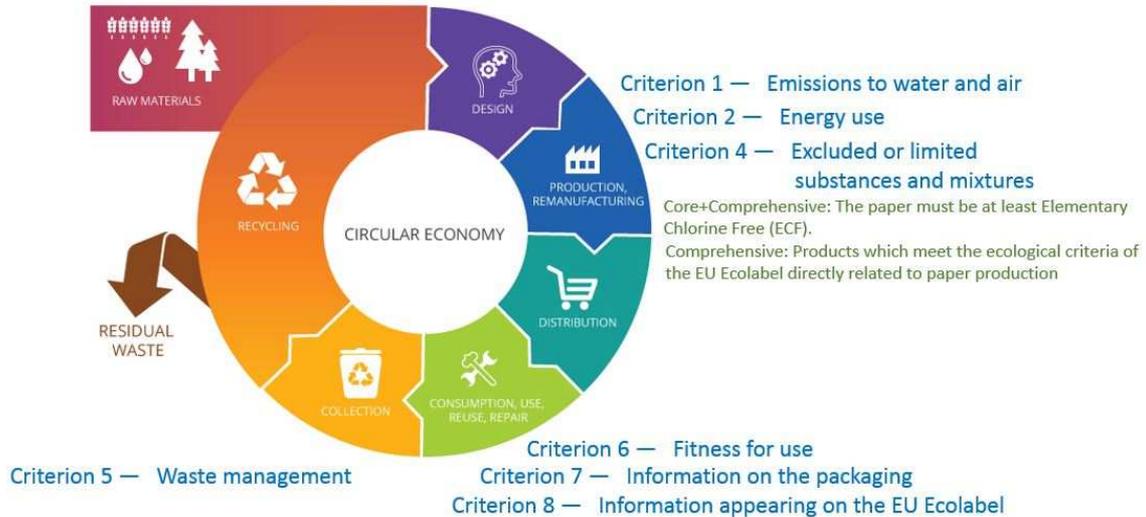
Source: own compilation based on: Anastasio 2016, Eu Ecolabel criteria 2011/332/EU, GPP Toolkit

Conclusions

Using ecolabels in GPP ensures life cycle considerations the most and makes procurement processes significantly easier. This is valuable from the circular economy point of view and from purchasing technique side as well.

We can conclude that GPP can best support circular economy goals by using full sets of ISO Type-I ecolabel criteria or by requiring ecolabel certification for the product/service.

There of course are some other important connections between ecolabels and GPP in practice. The availability of ecolabelled products and the possible improvement methods are not subject of this paper. In the future the aim of the Commission is to examine how to increase the effectiveness of the EU Ecolabel and thus create greater contribution to the circular economy (COM, 2015:614).

References

2014/24/EU Directive 2014/24/Eu of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC. Retrieved from http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32014L0024&from=EN [29.11.2016].

2014/25/Eu Directive 2014/25/Eu of the European Parliament and of the Council of 26 February 2014 on procurement by entities operating in the water, energy, transport and postal services sectors and repealing Directive

2004/17/EC. Retrieved from http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32014L0025&from=EN [29.11.2016].

Acceleratio, B. V. (2016). Retrieved from http://www.acceleratio.eu/circular-economy/ [27.12.2016].

Anastasio, M. (2016). The circular economy: practical steps to enhance the EU package. Retrieved from http://green-budget.eu/wp-content/uploads/GBE-Circular-Economy-policy-briefing-.pdf [29.11.2016].

Circular Economy EU Circulat Economy website of the European Commission. Retrieved from http://ec.europa.eu/environment/circular-economy/index_en.htm [29.11.2016].

COM (2008). Communication from the Commission to the European Parliament, The Council, the European Economic and Social Committee and the Committee of the Regions, Public Procurement for a Better Environment.

COM (2015) 614 "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Closing the loop - An EU action plan for the Circular Economy. Retrieved from https://ec.europa.eu/transparency/regdoc/rep/1/2015/EN/1-2015-614-EN-F1-1.PDF [29.11.2016].

ETV Europe. Environmental Technology Verification and Eco-Innovation website of the EU. Retrieved from https://ec.europa.eu/environment/ecoap/etv/about-etv_en [19.12.2016].

Eu Ecolabel criteria 2011/332/EU"COMMISSION DECISION of 7 June 2011 on establishing the ecological criteria for the award of the EU Ecolabel for copying and graphic paper. Retrieved from http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:149:0012:0024:EN:PDF [31.12.2016].

GPP Europe. *European Union on Green Public Procurement*. Retrieved from http://ec.europa.eu/environment/gpp/index_en.htm [29.11.2016].

GPP Toolkit. Green Public Procurement Toolkit of the EU. Retrieved from http://ec.europa.eu/environment/gpp/eu_gpp_criteria_en.htm [21.12.2016].

ISO 14024:1999 ISO 14024:1999 (1999). Environmental labels and declarations -- Type I environmental labelling -- Principles and procedures. Retrieved from https://www.iso.org/obp/ui/#iso:std:iso:14024:ed-1:v1:en [29.11.2016].

Lewandowski, M. (2016). Designing the Business Models for Circular Economy—Towards the Conceptual Framework. *Sustainability*, *8* (1), 43.

Murray, A., Skene, K., & Haynes, K. J. (2015). *The Circular Economy: An Interdisciplinary Exploration of the Concept and Application in a Global Context*.

Public Procurement Reform (2014). Factsheet No. 7: Green Public Procurement. Retrieved from http://ec.europa.eu/internal_market/publicprocurement/docs/modernising_rules/reform/fact-sheets/fact-sheet-07-environmental_en.pdf [29.11.2016].

UNGM Ecolabels, 2009 UNGM (2009). *A Guide to Environmental Labels - for Procurement Practitioners of the United Nations System*. United Nations Global Marketplace. Retrieved from http://www.ungm.org/SustainableProcurement/toolsUN/Env%20Labels%20Guide_v9.pdf#page=27 [29.11.2016].