

# Science for Environment Policy

## Embedding sustainable thinking in public procurement could support circular economy

**A circular economy (CE) is one in which materials retain their value and are reused, minimising waste.** Cities and councils could act as CE trailblazers by embedding this approach whenever possible into their public purchase of products, services and works. This study explored different approaches to circular public procurement (CPP), and identified possible opportunities to promote CE via appropriate procurement policy and criteria.

**Climate change, resource depletion and pollution are issues at the forefront of the global policy agenda.** CE is receiving increased attention in many countries as a way to overcome current unsustainable production and consumption patterns whilst allowing economic growth. Such circular business models and approaches to managing materials could potentially be driven by public procurement. At present, public procurement accounts for an average 14% of gross domestic product in the EU, and so offers a sizeable opportunity to progress the transition to CE in Europe.

The EU is working towards CE; it has a Circular Economy Action Plan<sup>1</sup> in place, and in 2014, a new EU Directive on public procurement<sup>2</sup> allowed purchasing and pricing criteria to be based on a lifecycle perspective.

The findings of this study will further inform the EU by clarifying the concept of CPP and how it relates to existing green public procurement (GPP) and sustainable public procurement (SPP) practices and criteria, and also presents case studies that could be shared on the EU Circular Economy stakeholder platform<sup>3</sup> or added to existing guidelines for circular practices<sup>4</sup>.

The researchers identified the main aspects of CE — material cycles — and used these to create an analysis framework. To investigate how existing SPP and GPP criteria support CE they used a 'closed loop model' of criteria analysis in conjunction with the ReSOLVE framework<sup>5</sup>. This framework identifies six action areas for those working towards CE: **Regenerate** (e.g. renewable energy); **Share** (e.g. sharing of assets and designing for reuse); **Optimise** (e.g. improved product efficiency); **Loop** (e.g. recycling and remanufacturing of materials); **Virtualise** (e.g. dematerialising — delivering the same product or service using a percentage or none of the mass or material types); and **Exchange** (e.g. replacing old materials and technology with new).

The study analysed different approaches to CPP using 18 European case studies from the public procurement for innovation platform and other data sources — this also allowed an examination of different sectors, markets, and business models that are applicable to CPP. Case studies were selected to show a diversity of approaches to CPP, including life-cycle assessment tools for calculating costs, tendering with CE requirements, reporting of CE procurement benefits and innovative solutions by supplier to procurer. Procurement activities in the chosen case studies covered the construction of buildings and infrastructure, water, sewage and waste management, vehicles and logistics, food and catering, furniture and textiles.

*Continued on next page.*



**31 January 2019  
Issue 520**

**[Subscribe](#) to free  
weekly News Alert**

**Source:** Alhola, K.,  
Ryding, S., Salmenperä, H.  
and Busch, N. (2018).  
Exploiting the Potential of  
Public Procurement:  
Opportunities for Circular  
Economy. *Journal of  
Industrial Ecology*.

**Contact:**  
[katriina.alhola@ymparisto.fi](mailto:katriina.alhola@ymparisto.fi)

**Read more about:**  
[Environmental  
economics](#), [Resource  
efficiency](#),  
[Sustainable business](#),  
[Sustainable  
consumption and  
production](#), [Waste](#)

1. [Closing the loop - An EU action plan for the Circular Economy: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015DC0614>](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015DC0614)
2. Directive 2014/24/EU on public procurement: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0024>
3. European Circular Economy Stakeholder Platform: <https://circulareconomy.europa.eu/platform/>
4. e.g. European Union (2017) *Public Procurement for a Circular Economy: Good Practice and Guidance*: [http://ec.europa.eu/environment/gpp/pdf/cp\\_european\\_commission\\_brochure\\_en.pdf](http://ec.europa.eu/environment/gpp/pdf/cp_european_commission_brochure_en.pdf)
5. [https://www.ellenmacarthurfoundation.org/assets/downloads/publications/EllenMacArthurFoundation\\_PolicymakerToolkit.pdf](https://www.ellenmacarthurfoundation.org/assets/downloads/publications/EllenMacArthurFoundation_PolicymakerToolkit.pdf)

# Science for Environment Policy

## Embedding sustainable thinking in public procurement could support circular economy (continued)

**31 January 2019**  
**Issue 520**  
**[Subscribe](#) to free**  
**weekly News Alert**

**Source:** Alhola, K., Ryding, S., Salmenperä, H. and Busch, N. (2018). Exploiting the Potential of Public Procurement: Opportunities for Circular Economy. *Journal of Industrial Ecology*.

**Contact:**  
[katriina.alhola@ymparisto.fi](mailto:katriina.alhola@ymparisto.fi)

**Read more about:**  
[Environmental economics](#), [Resource efficiency](#), [Sustainable business](#), [Sustainable consumption and production](#), [Waste](#)

The study categorised the CPP approaches shown in the case studies into four areas:

1. **procurement of improved products or services** by adding GPP-based 'circular criteria' to the tender competition, such as for recyclability and reuse of materials;
2. **procurement of services and use of new business** concepts that promote CE and efficient material cycles, such as product-service systems, leasing concepts, shared use, buy-per-use, and buying and selling back — for example furniture leasing or car hire;
3. **procurement of new and innovative products, services, and materials** promoting CE, to stimulate innovation and create new associated business and markets — products of better quality in terms of recyclability, recycled materials, lifespan, disassembly, and so on;
4. **procurement that promotes industrial symbiosis and circular ecosystems**, which can provide efficient platforms for supporting closed loops and creating networks in which the waste from one stakeholder can be used as a raw material for another (for example, buses running on locally produced bioenergy).

The researchers found that SPP and GPP criteria can support CPP in a closed-loop model, particularly in product groups that include criteria to promote the circles concerning maintenance, reuse, redistribution, refurbishment, and recycling. They also suggest that the use of certain tools — such as lifecycle analysis and criteria concerning the reuse and recycling of materials — could promote CPP, and that market dialogue and cooperation between procurers and actors throughout supply chains are important for the future development of CPP.



The contents and views included in Science for Environment Policy are based on independent, peer-reviewed research and do not necessarily reflect the position of the European Commission. Please note that this article is a summary of only one study. Other studies may come to other conclusions.

To cite this article/service: "[Science for Environment Policy](#)": European Commission DG Environment News Alert Service, edited by SCU, The University of the West of England, Bristol.

