

Procuring Sustainability – How the Public Sector Can Deliver on its Greening Potential

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I. INTRODUCTION*

A. Green public procurement – delivering on the unfulfilled promise

Public procurement offers a promising avenue to reduce greenhouse gas emissions, protect biodiversity, and support a sustainable circular economy. By procuring goods, services, and works that have smaller environmental impacts, the public sector can leverage its purchasing power on the markets and raise environmental awareness¹ for the benefit of sustainability goals.² Because public procurement represents, on average, up to 20 percent of GDP globally,³ the leverage can be very significant. Still, thus far, environmental considerations have been integrated into public procurement only to a limited degree in virtually all countries.⁴ The use of green criteria in the tendering processes, as well as the actual environmental impacts of the procured products, also remain poorly known.⁵

In this article, we address this persistent conundrum, and argue that the ability of public procurement law to contribute to environmentally sustainable development could be improved significantly through two policy approaches, regardless of the country or region in question: the creation of a dynamic list of product groups that is environmentally significant in procurement, on the one hand, and the drafting of context-specific mixes of legal instruments to govern such product groups, on the other. We further argue that from a broader socio-economic perspective, such development of the law of public procurement needs to be complemented by three elements: GPP strategies for the

* The drafting of the article has been supported by European Commission's ERASUMS+ Programme, Jean Monnet Chair "ECOvalence" (Grant 101085564).

¹ *E.g., Benefits of GPP*, EUROPEAN COMMISSION, https://ec.europa.eu/environment/gpp/benefits_en.htm (last visited Aug. 24, 2021); UNITED NATIONS ENVIRONMENT PROGRAMME, GLOBAL REVIEW OF SUSTAINABLE PUBLIC PROCUREMENT 11 (2017), https://wedocs.unep.org/bitstream/handle/20.500.11822/20919/GlobalReview_Sust_Procurement.pdf (last visited Aug 23, 2021). *But see* Sofia Lundberg, Per-Olov Marklund & Elon Strömbäck, *Is Environmental Policy by Public Procurement Effective?*, 44 PUB. FIN. REV. 478 (2016).

² *Do you know all 17 SDGs?*, THE UNITED NATIONS DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS, <https://sdgs.un.org/goals> (last visited 21 July 2021) (comprising 17 goals, divided into 169 targets on environmental, economic and social sustainability).

³ *Global Public Procurement Database: Share, Compare, Improve!*, WORLD BANK (2020), <https://www.worldbank.org/en/news/feature/2020/03/23/global-public-procurement-database-share-compare-improve> (last visited Jul 22, 2021).

⁴ UNITED NATIONS ENVIRONMENT PROGRAMME, *supra* note 1; Jordi Rosell, *Getting the Green Light on Green Public Procurement: Macro and Meso Determinants*, 279 J. OF CLEANER PROD. 123710 (2021).

⁵ Rosell, *supra* note 4; Harri Kalimo, Vrije Universiteit Brussels, Expert Address at the HILMI Workshop on the Legislation and Monitoring in Green Public Procurement (June 17, 2020).

contracting authorities (CA)⁶, long-term support structures, and proper means of measuring the environmental impacts of procurement. The focus of this article is, however, on the first two aspects of procurement law: environmentally significant product groups and diverse, context-specific policy mixes.

B. The objective, methodology and structure of the article

This article is based on an interdisciplinary research project⁷ where a review of the latest international legal and policy literature on the environmental aspects of sustainable procurement—“green public procurement” (GPP)— is combined with a comparative, legal-doctrinal analysis of the most advanced (*de lege ferenda*) law and policy instruments to govern the field globally.⁸ Findings on the most advanced instruments of GPP were further refined through semi-structured expert interviews in 10 countries.⁹ The analysis focuses mainly on the European Union (EU) and its Member States (MS) as they are in many respects leaders in developing the governance of GPP.¹⁰ GPP is an important element in the European Commission’s 2019 overall strategy, the European Green Deal, which aims at integrating environmental and economic objectives into a single, coherent approach and mobilizing the industry for a cleaner economy.¹¹ GPP is also a part of the Commission’s recent Action Plan for a Circular economy.¹² The Federal Acquisition Regulation (FAR) of the United States, for example, is, in relative terms, clearly less ambitious in integrating environmental

⁶ Contracting authorities (CAs) is the term used in the EU to refer to the State, regional, or local authorities or bodies governed by public law that are in charge of the procurement activity.

⁷ HARRI KALIMO ET AL., *Hiihi- ja ympäristöjalanjälki hankinnoissa – lainsäädäntö ja mittaaminen [Carbon and environmental footprint in procurement – legislation and measuring]* (2021), <http://urn.fi/URN:ISBN:978-952-383-097-4>.

⁸ “Sustainable procurement” incorporates also other sustainability goals such as labor rights and societal interests. See, e.g., Sönnich Dahl Sönnichsen & Jesper Clement, *Review of Green and Sustainable Public Procurement: Towards Circular Public Procurement*, 245 J. OF CLEANER PROD. 1 (2020).

⁹ Belgium, Denmark, Germany, Hungary, Japan, Latvia, Netherlands, Norway, Slovenia, and Sweden.

¹⁰ Japan and Korea can be mentioned as advanced nations in green public procurement policies. They are not included in the present analysis, as our ability to research them in detail was limited for reasons of language and differences in the legal systems.

¹¹ *Communication to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions: The European Green Deal*, at 8, COM (2019) 640 final (Dec. 11, 2019).

¹² *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A new Circular Economy Action Plan for a Cleaner and More Competitive Europe*, at 4–6, COM (2020) 98 final, (Nov. 3, 2020) [hereinafter New Circular Economy Action Plan].

considerations into federal procurement.¹³ Our analysis focused on national (and in the case of the EU, supra-national) level laws, with anecdotal references to insightful instruments from lower, state or municipal levels of governance.

In order to systematize and analyze, in detail, the identified, most advanced instruments on GPP, we used and further developed a theoretical framework on the “softness/hardness” of legal instruments.¹⁴ This legal and policy analysis was complemented by an empirical case study of an entire country: Finland, a country that is a part of the EU’s advanced public procurement regime and has a recent national procurement strategy with ecological targets.¹⁵ Finland is also a national economy of statistically robust, yet methodologically feasible size (5.5 million inhabitants) with national quantitative information and earlier studies on the environmental criteria and the environmental impacts of main procurement activities. These pre-existing data sources together with our primary quantitative data allowed us to develop a broad, preliminary overview of the environmental impacts of different types of procurement.¹⁶ Finally, the legal and empirical analyses were refined and tested with participatory research methods: two series of expert workshops with 80 international and national experts in 13 panels on key aspects of GPP.

The analysis in this article proceeds in five steps. First, we introduce in Section II our tentative classification of “Environmentally Significant Product Groups” (ESPGs). In the table, products are grouped on the combined basis of their procurement volumes and environmental impact potential in our case study country, Finland. The ESGPs contextualize our analysis on the governance of GPP. Although such a list of ESGPs will vary by country, there are likely to exist sufficient commonalities in the purchasing practices and environmental impacts of products for the systematization to be of indicative value for identifying essential product groups in many other countries and regions as well. Moreover, we develop, in Section II, a theoretical framework

¹³ Lauren Olmsted, *A Common Taxonomy for Carbon: How States and Cities Use Public Procurement to Combat Climate Change*, 49 PUB. CONT. L. J. 691, 693 (2020); Romeo N. Niyongere, *European-Style Green Public Procurement in the American Context: What it could Look Like*, 49 PUB. CONT. L. J. 785, 788 (2020); Eric Brill, *A Comparative Analysis of Green Procurement Practices as a Framework For New FAR Provisions Aimed at Combatting Climate Change*, 50 PUB. CONT. L. J. 623 (2021). The environmental aims, enshrined in various environmental statutes, executive orders—in particular Exec. Order No. 13423, 3 C. F. R. pts. 100–02 (2007) and President Obama’s Exec. Order No. 13693, 3 C. F. R. pts. 100–02 (2015)—and administrative rules, are codified in Part 23 of FAR.

¹⁴ Harri Kalimo & Tim Staal, *Softness in International Instruments: The Case of Transnational Corporations*, 42 SYRACUSE J. INT’L L. & COM. 363 (2015); *see also, e.g.*, Kenneth W. Abbott et al., *The Concept of Legalization*, 54 INT’L ORG. 401 (2000); Sebastian Oberthür & Lisanne Groen, *Hardening and Softening of Multilateral Climate Governance Towards the Paris Agreement*, 22 J. ENVIRON. POLICY PLAN. 801 (2020).

¹⁵ Hankinta-Suomi-julkiset *hankinnat vaikuttavammiksi* [National Strategy on Public Procurement], VALTIOVARAINMINISTERIÖ [MINISTRY OF FINANCE FINLAND], <https://vm.fi/hankinta-suomi> (last visited Dec 8, 2021).

¹⁶ KALIMO ET AL., *supra* note 7.

on “hardness”, which allows us to systematize a broad range of instruments that are relevant in governing GPP. The framework also provides us a theory-based tool with which to investigate in more detail the instruments and their interactions in Sections III and IV.

In Section III, we analyze advanced legal and policy instruments through which environmental considerations can be introduced into public procurement. Our central observation here is that the integration of environmental considerations should in fact not be limited to the development of procurement law in the narrow sense. It must include the entire palette of modern environmental law and policy instruments, such as product specific environmental criteria in different sectors, eco-labels, environmental footprints, eco-design requirements, and climate budgets. A wide range of instruments can add value in making procurement more environmentally sustainable, because the instruments vary widely in terms of their hardness. This type of a broad approach to regulating the environmental impacts of public procurement has thus far been largely absent. The instruments are thus best understood as combinations: policy-mixes that need to be tailored for the different environmentally significant product groups, identified in Section II. The effects that the policy instruments will have on each other must also be considered carefully. Finally, we also portray three contextual elements that are required to support the overall legal framework: sustainable procurement strategies for contracting authorities, long-term institutional structures, and a means to measure environmental impacts at different stages of procurement.

The last step of our analysis is to demonstrate and further test our findings on the interactions between different instruments when they constitute policy mixes for different sectors. Food, mobility, and electricity have been chosen as case examples; they are environmentally significant product groups in procurement, and they are quite different in terms of the applicable instruments. The in-depth analysis in Section IV leads to the conclusion that choices in the combination of instruments will indeed depend largely on the type, context, and phase of the procurement process in which the environmentally consequential decisions are made.

The article ends with our conclusions in Section V. There are many types of policy instruments to govern the greening of public procurement, and they need to be applied as tailor-made mixes that fit their respective, widely varying procurement contexts. As many of the instruments (and their combinations) would benefit from a common list of the ESPGs, we propose the development and deployment of an official list, following the logic of the classification developed herein. We conclude with brief observations about how the novel types of procurement law proposed here represent a shift of a more philosophical type, underpinning a merging of economic and environmental instruments in law and policy.

II. POLICY DESIGN FOR GREEN PUBLIC PROCUREMENT

A. Environmentally Significant Product Groups (ESPGs) at the Core of GPP

1. Determining ESGPs

Public procurement means the purchase of goods, services and works by public authorities while using public funds. The environmental impacts of these purchases can, in crude terms, be calculated by defining the types and volumes of the procured goods and services, and then extrapolating from the unit-level, life-cycle -based environmental impacts of such products the respective aggregate impacts for the entire product population in the procurement activity. The absolute, aggregate environmental impact will thus depend on the combination of the environmental impacts of the individual products and the volumes of such procured products. The aggregate impact constitutes a useful proxy for targeting measures to reduce the environmental footprint of procurement.

Somewhat surprisingly, considering the enormous environmental and economic potential, these types of calculations are not widely used in procurement so far. For example, the “Green Public Procurement (GPP) Guidelines” of the EU, which the Commission publishes to promote GPP by the CAs, targets thus far around 20 product groups—without however considering such products’ absolute, aggregate potential to reduce environmental impacts.¹⁷ The selection of products is rather determined by multiple criteria, such as the practical feasibility of the effort in an individual case, as well as political considerations between the MS’s and their industrial policies. This approach does not lead to environmentally optimal results from an overall perspective.

We therefore propose that a list of “Environmentally Significant Product Groups” (ESPGs) be determined. As we demonstrate in Sections III–IV, these ESGPs ought to be a key element of public procurement policies. We propose to integrate the ESGPs into legal instruments and procurement systems so that they can be used as a simple way to systematize the type of environmental information needed when the products are purchased.

In our research, the creation of proxy ESGPs is obviously only an initial, exploratory step. The ESGPs can, and indeed should, be further updated, e.g. with data that does not determine just the current environmental impacts, but the actually (reasonably) realizable *reductions* in such impacts. It is ultimately the amount of reductions in environmental impacts that matter, not the level from which such reductions are made, aspects of equity and capacity in the targeted organization so permitting. Moreover, considerations of static and

¹⁷ See EUROPEAN COMMISSION, EU GPP CRITERIA, https://ec.europa.eu/environment/gpp/eu_gpp_criteria_en.htm (last visited Jul. 15, 2021).

dynamic efficiency should be integrated into the analysis to optimize the focus of policy interventions.

2. A nation-state level case study on GPP

As explained in Section I.B, the definition and analysis of ESPGs in this article is based on an empirical quantitative analysis that combines data from multiple sources on the entire national economy of one country, Finland.¹⁸ The aggregate annual value of procurement in Finland is ca. EUR47 billion.¹⁹ Our estimates are based on purchases that cover a representative EUR30 billion of this overall amount. The overall volume was divided into product group specific estimates.

The carbon emissions and other environmental impacts of product groups that are procured are presented in Table 1 in a descending order of annual GHG-emissions per product group.²⁰ The product group specific data is essential for the analysis and governance of procurement, as will be elaborated further below. While it was possible to arrive at rough estimates on the product group -specific emissions of procurement in Finland, it also became obvious that there remains much room for improvement in accessing such data. Our international comparative analysis further revealed that the practice of measuring the environmental impacts of procurement remains very scarce in all countries, with few potential exceptions.²¹ It will be important to improve the measurement to better support the governance of green procurement.

¹⁸ For a full list of the sources used, see KALIMO ET AL., *supra* note 7 at 22–25, 133–45. See, in particular, ENVIMAT-analysis in JYRI SEPPÄLÄ ET AL., SUOMEN KANSANTALouden MATERIAALIVIRTOJEN YMPÄRISTÖ-VAIKUTUSTEN ARVIOINTI ENVIMAT-MALLILLA (Fin.) [ENVIRONMENTAL IMPACT ASSESSMENT OF MATERIAL FLOWS IN THE FINNISH ECONOMY USING THE ENVIMAT MODEL] (2009), <http://hdl.handle.net/10138/38010> (last visited Jul 12, 2021) and NISSINEN AND SAVOLAINEN, *Julkisten Hankintojen ja Kotitalouksien Kulutuksen Hiilijalanjälki ja Luonnonvarojen Käyttö - ENVIMAT- Mallinnuksen Tuloksia* (Fin.) [CARBON FOOTPRINT OF PUBLIC PURCHASES AND HOUSEHOLD CONSUMPTION AND USE OF NATURAL RESOURCES - ENVIMAT MODELLING RESULTS] (2019), <http://hdl.handle.net/10138/300737> (last visited Jul 9, 2021) (calculating the GHG-emissions in procurement by using an environmentally expanded input-output methodology).

¹⁹ MARIA MERISALO ET AL., *Julkiset hankinnat: Kokonaisvolyymi ja datan hyödyntäminen* (Fin.) [PUBLIC PROCUREMENT: TOTAL VOLUME AND USE OF DATA] 135 (2021), <http://urn.fi/URN:ISBN:978-952-383-267-1> (last visited Jul 12, 2021).

²⁰ See KALIMO ET AL., *supra* note 7, at 133–36 (providing information on the product group specific GHG-emissions as divided further per procuring authority).

²¹ The furthest developed countries in this respect are Japan, Korea, and Sweden.

Table 1. Types of environmental impacts and estimated annual GHG emissions by product group in procurement in Finland, i.e. Environmentally Significant Product Groups (ESPGs).²²

PRODUCT GROUPS (some combined)*	Types of verified, significant environmental impacts ²³	Emissions in total [Mkg CO _{2,ekv}]
ENERGY IN BUILDINGS		~ 3000
Heating	GHG, BIOD	1247
Electricity	GHG	1147
Renting buildings and apartments	GHG	632
CONSTRUCTION		~ 2800
Earth works and hydraulic construction; repair and maintenance	GHG	1360
Constructing and renovating buildings	GHG, BIOD	900
Construction and maintenance services for buildings and built environments	GHG, BIOD	559
TRAVEL AND TRANSPORT		~ 1200
Travel and transport services, kilometre allowances	GHG	738
Fuels and lubricants	GHG	402
Transport equipment (manufacturing, excluding fuels)	GHG	41
FOOD, CATERING AND ACCOMMODATION		~ 800
Food	GHG, BIOD, EUTR	457
Food services and accommodation	GHG	326
MACHINERY, EQUIPMENT, SUPPLIES, ARMS, AND THEIR REPAIR		~ 800

²² Based on KALIMO ET AL., *supra* note 7; NISSINEN & SAVOLAINEN, *supra* note 18.

²³ Abbreviations: GHG = greenhouse gas emissions; BIOD = biodiversity; EUTR = eutrophication of waters; CHEM = chemicals with adverse effects; MULTI = multiple confirmed environmental impacts.

Other machinery and equipment, supplies and furniture (incl. rentals)	GHG	503
Equipment for national defence, weapons systems	GHG	165
Repair and maintenance services for machinery and equipment	GHG, CHEM	109
CLEANING AND SANITATION		~ 500
Cleaning and laundry services	GHG; CHEM?	424
Cleaning materials and products	GHG, CHEM	62
MISCELLANEOUS		~ 400
Materials, equipment, goods, supplies	GHG	407
MEDICINES AND HEALTH CARE SUPPLIES	GHG, CHEM	~ 400
OFFICE, EXPERT AND RESEARCH SERVICES	GHG	~ 300
ICT AND TELECOMMUNICATIONS SERVICES; IT SERVICES	MULTI	~ 140
SOCIAL AND HEALTH SERVICES	GHG	~ 120
OFFICE AND SCHOOL SUPPLIES, PRINTING PRODUCTS	GHG, BIOD	~ 110
TOTAL Mkg CO_{2,ekv}		~ 10570

B. Systemizing the Governance of GPP

The starting point for governing the environmental sustainability of procurement is usually “procurement law proper”: legislation that, in many countries, including Finland as a part of the EU, determines the rules applicable to procurement activities to ensure a transparent and competitive purchasing process. In addition to aiming at the most economically advantageous outcome, procurement law in the EU provides various opportunities for supporting the sustainability of procurement. We argue, however, that the environmental impacts of procurement can also be usefully promoted by a wide range of other law and policy instruments. Indeed, depending on the situation, it may be more effective and efficient to address the environmental impacts through means other than procurement law itself.

1. Theory on the softness and hardness of instruments

In order to determine how this multitude of instruments can be deployed for the benefit of GPP, we apply a theoretical approach on the “softness” and “hardness” of legal instruments.²⁴ The approach is based on leading scholarship on “soft law” and normativity²⁵ and it maintains the useful binary distinction between “law” and “non-law,” which assess whether the instrument is legally binding or not.²⁶ Besides determining an instrument’s formal binding nature, we assess them along three continuum-based qualities: “obligation,” “precision,” and “delegation.” Together, these four qualities constitute an instrument’s aggregate “softness/hardness” as summarized in Fig. 1.²⁷

As to the content of the four criteria of “softness/hardness,” the first of them is, as noted, the binary notion of whether or not the measure is binding in nature. We refer to this dimension as the “*instrumentum*.” Only formal sources of law create legally binding rights and obligations on parties, capable of enforcement through judicial means.²⁸ The *instrumentum* of formal sources refers in our focal context of the EU to primary and secondary EU law. Excluded from the *instrumentum* in the EU context thus are, for example, the Commission’s guidelines, recommendations, and strategic documents such as the Commission’s Green Deal.

The *obligatory* nature of an instrument depends, besides its binding nature, on two further considerations: the *author* and the *mandatory language* of the rule. Our framework assesses the *authority* of its “author,” the key consideration being whether the addressees of the instrument have legitimately granted authority to the author.²⁹ In the EU context, the EU institutions, often the Commission, have such a position, at least indirectly. The second element of *obligation* is how *mandatory* the formulations (verbs) used in the legal text are.³⁰

The third continuum across which to assess hardness is the *precision* of an instrument. Precision consists of two parts: *accuracy* and *specificity*. *Accuracy* assesses how exactly the issue and the required conduct are defined (*ratione materiae*). *Specificity* determines how the instrument defines the actors it is directed to (*ratione personae*). The narrower and more explicit the instrument

²⁴ Kalimo & Staal, *supra* note 14. The primary basis for the approach is from Abbott et al., *supra* note 14. For the comprehensive list of sources used for creating the approach, see Kalimo & Staal, *supra* note 14).

²⁵ See Kalimo & Staal, *supra* note 14.

²⁶ *Id.* at 386.

²⁷ Determining the hardness/softness of an instrument is, like legal analyses in general, not an exact science and contains aspects of normativity.

²⁸ Kalimo & Staal, *supra* note 14, at 394.

²⁹ *Id.*

³⁰ *Id.*

is along the criteria of accuracy and precision, the harder (i.e. the less soft) it is in terms of *precision*.³¹

Finally, the quality of “*delegation*” determines the extent to which authority to enforce the instrument has been delegated. The clearer and broader the *scope* of the mandate to enforce the rules of the instrument, the harder is the delegation it establishes. In addition, softness/hardness depend on the *institution* to which the authority for enforcing it is delegated. The more powerful and independent, and the less subject to influence by the regulatees the delegated *institution* is, the harder the instrument in question.

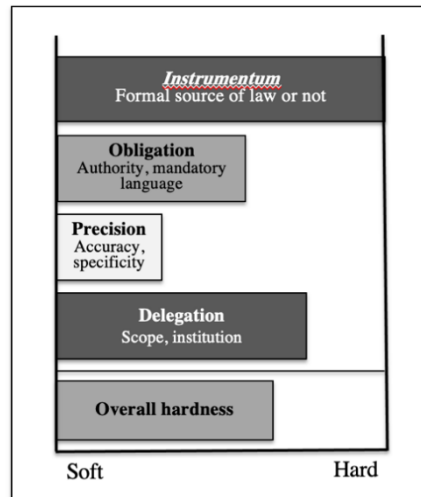


Figure 1. Analytical framework: the dimensions of “softness/hardness” as applied on a hypothetical instrument (size of the bar denotes the hardness of the instrument along a specific quality).³²

An instrument-level analysis of hardness facilitates the systematic grouping of the instruments. This serves the purposes of both legal dogmatics and practical enforcement in public procurement. The dimension of “precision” – or more exactly its component of “accuracy” – allows us to systematize the procurement instruments into four groups for their further analysis. As GPP is currently fast evolving, both the analysis and the systematization of procurement instruments seem like important, mutually reinforcing objectives.

Moreover, an assessment of instruments that integrate environmental considerations into public procurement against this “hardness” framework serves two further objectives. First, the hardness framework allows us to tease

³¹ *Id.* at 395.

³² Original in *id.* at 397.

out aspects of the instruments that are relevant in understanding how they function. Further, it is possible to compare the qualities of different instruments against one another. And because these instruments are usually used in combination, the assessments facilitate the grouping of instruments in such a way that they are mutually complementary. For example, an instrument that is very precise, but soft in terms of the obligation and delegation that it creates, can be deployed together with another instrument that does oblige and does delegate authority for enforcement. This leads to a value of “hardness” that can be measured across combinations of instruments, which in turn assists in determining the optimal mix of legal and policy instruments for a particular procurement objective.

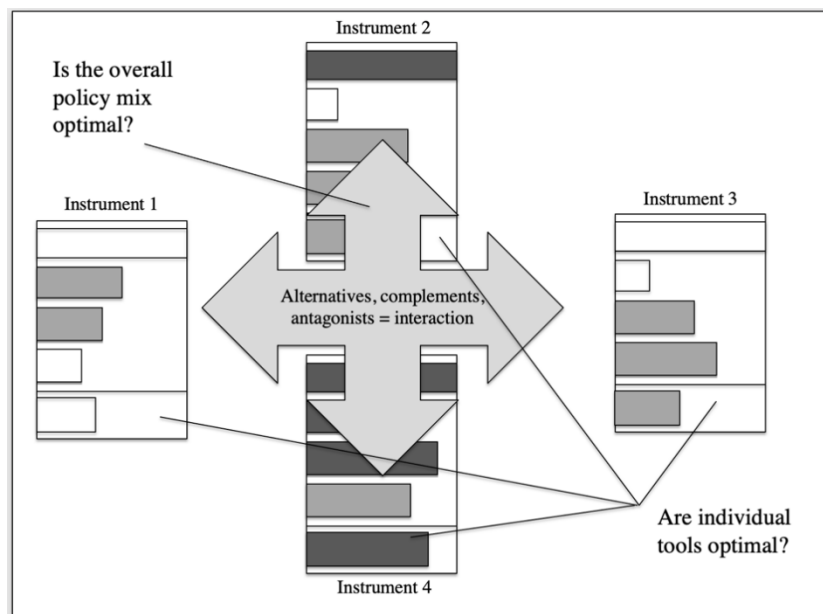


Figure 2. Interactions and coherence of instruments to govern environmental aspects of public procurement.³³

The instruments that govern the integration of environmental considerations into public procurement within a legal regime often act either as alternatives or complements to one another. It is, however, also possible that the relationship between the instruments is antagonistic, so that one instrument interferes with or hinders the application of another. Understanding an individual instrument’s softness/hardness helps in making an overall assessment about its interrelationships (Fig. 2). In Section IV, we

³³ Original in *id.* at 398.

provide concrete examples of how different mixes of instruments on GPP interact in the sectoral procurement contexts of food, mobility and electricity.

2. A taxonomy of procurement instruments

Although procurement law provides various means for controlling the environmental impacts of purchases, there is a wide range of other instruments of law and policy to complement it. Since procurement is about purchasing products (both goods and services), it is not surprising that *product policy* – i.e. the instruments that regulate the qualities of products, including their environmental impacts – offers a particularly important group of complementary instruments for GPP. There are nonetheless also other interesting types of laws and policies that can fundamentally promote GPP.

We propose to systemize the pertinent GPP instruments by introducing a classification that hinges on one sub-dimension of the above-described “softness/hardness” framework: “accuracy”. More precisely, our taxonomy of instruments considers, first, to what extent it is specific to a particular *product* as opposed to being of generic (horizontal) application. Second, the taxonomy assesses how specific the instrument is to *procurement* as an activity, instead of applying broadly to other activities as well. Four groups³⁴ emerge for a more detailed analysis in this article:

Group A: Instruments on the procurement *process*

Group B: *Product-specific procurement* instruments

Group C: *Product* policies and sectoral instruments (laws focusing on specific product groups, including their environmental qualities)

Group D: *Environmental* instruments (horizontal laws with a primary focus on various environmental impacts)

³⁴ Instruments that are less directly relevant are considered to form Group E: Other instruments. Group E includes e.g. product safety laws, economic incentives on innovative procurement and informal informational instruments. They are not included in the analysis.

The four groups of instruments are illustrated below within the taxonomy (Fig. 3).

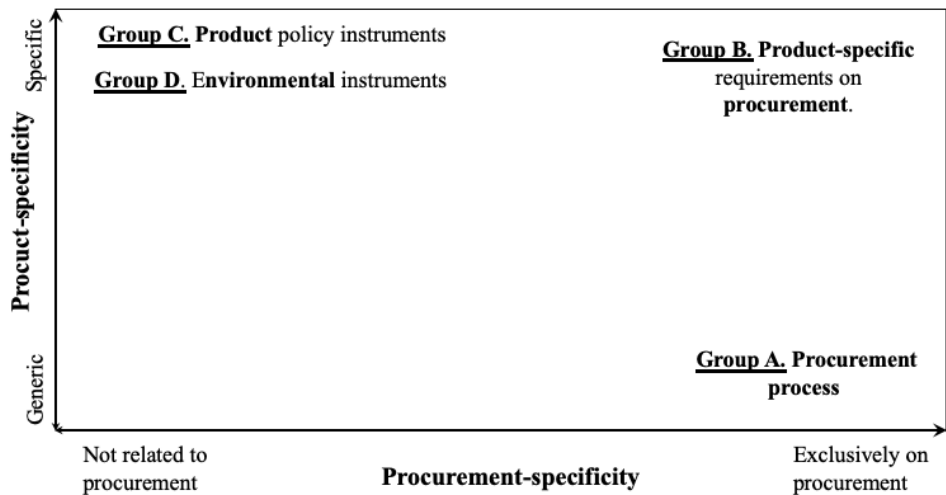


Figure 3. A taxonomy of procurement instruments along two dimensions of "accuracy".

The groups in the proposed taxonomy are overlapping. Some of the instruments that are discussed in Section III could arguably be placed in multiple groups, because they do not align perfectly with the two dimensions we use here. There are obviously also many other ways to systemize procurement instruments, making reference to the other dimensions of hardness, or otherwise.³⁵ The exact taxonomy is nonetheless not an end in itself, it is meant only as a heuristic device for assessing and better understanding the instruments of GPP and their combinations in complementary policy toolboxes.

III. LEGAL INSTRUMENTS TO INTEGRATE ENVIRONMENTAL CONSIDERATIONS INTO PUBLIC PROCUREMENT

A. Group A – The procurement process

The processes of procurement in the EU's MSs (such as Finland) have been harmonized through public procurement directives. There are seven directives that regulate the processes that the national "Contracting Authorities" ("CAs") engage in, the most essential of which are Directive 2014/24/EU on public procurement (Public Procurement Directive, PPD),³⁶ Directive 2014/25/EU on

³⁵ See, e.g., Olmsted, *supra* note 13.

³⁶ Directive 2014/24, of the European Parliament and of the Council of 26 February 2014 on Public Procurement and Repealing Directive 2004/18/EC, 2014 O.J. (L 94) 65 (EU) [hereinafter *Public Procurement Directive*].

procurement by entities operating in the water, energy, transport and postal services sectors,³⁷ and Directive 2014/23/EU on the award of concession contracts.³⁸ The EU's procurement directives in turn are the most comprehensive and stringent implementation of the World Trade Organization's (WTO) Government Procurement Agreement (GPA). This is not limited to an intra-EU law, as the EU has also integrated the largest number of provisions on the environmental considerations of procurement in its free trade agreements.³⁹

From the viewpoint of environmental protection, EU procurement law takes two distinct roles. On the one hand, it defines certain *limits* on the CAs' and the MSs' ability to make reference to environmental requirements. On the other hand, EU's procurement law clarifies where it *allows* the Member States to mandate the consideration of environmental aspects in purchases.⁴⁰

1. EU Public Procurement law delimiting the consideration of environmental aspects

Typically, the public procurement process involves a decision on what to purchase (defined in EU law as technical specifications),⁴¹ the conditions for the market actors that may participate in the tender ("exclusion grounds" and "selection criteria"),⁴² the criteria for choosing the winning offer ("award criteria"),⁴³ and the performance conditions on the winning supplier for fulfilling the contract.⁴⁴ Environmental qualifications can, in accordance with EU law, be taken into consideration by the CA at any of these stages. There are, in other words, relatively few limits in the currently applicable EU procurement law on the CA's ability to integrate environmental considerations – as long as an open and non-discriminatory procurement process is ensured.

More specifically, the first stage in the procurement process, the definition of the purchased good or service as laid out in the "technical specifications," needs to offer equal access to all economic operators and must not create

³⁷ Directive 2014/25, 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, 2014 O.J. (L 94) 243 (EU).

³⁸ Directive 2014/23, of the European Parliament and of the Council of 26 February 2014 on the Award of Concession Contracts, 2014 O.J. (L 94) 1 (EU).

³⁹ Ondrej Blažo et al., *European Environmental Policy and Public Procurement – Connected or Disconnected?*, 19 INT'L & COMPAR. L. REV. 239 (2020).

⁴⁰ For further discussion, see Marta Andrecka & Katerina Peterkova, *Sustainability Requirements in EU Public and Private Procurement – a Right or an Obligation*, 2017 NORDIC J. OF COM. L. 56 (2017).

⁴¹ *Id.*; *Public Procurement Directive*, *supra* note 36, art. 42.

⁴² *Public Procurement Directive*, *supra* note 36, arts. 57–58; Andrecka & Peterkova, *supra* note 40.

⁴³ *Public Procurement Directive*, *supra* note 36, art. 67.

⁴⁴ *Id.* at art. 70.

unjustified obstacles to competition.⁴⁵ They are allowed to refer to the environmental qualities of the good or service.⁴⁶ The environmental aspects of how the product has been produced can be a part of the technical specifications, whether or not they are visible in the end product itself. They do need to be linked to the subject matter of the procurement contract, however, and be proportionate to the product's value and objectives.⁴⁷ Moreover, in order to avoid indirect discrimination, a CA can refer to an eco-label, but it must accept equivalent labels or other means to prove the fulfilment of the underlying criteria.⁴⁸

After technical specifications, the procurer needs to define the conditions for the parties that are eligible to participate in the tender. These “selection criteria”⁴⁹ include the technical ability of the supplier,⁵⁰ which, while related and proportionate to the subject of the contract,⁵¹ can also assess the supplier's performance from an environmental perspective.⁵² If the CA requires the economic operator to comply with an environmental management system or standard, the European Eco-Management and Audit Scheme (EMAS) or an equivalent certificate is to be used as reference.

The selection criteria are complemented by “exclusion grounds.”⁵³ They allow the CA to reject bidders from the tendering process. Significant or persistent deficiencies in environmental performance would fit under this Article, including the environmental quality of activities outside of the procuring authority's home country.⁵⁴ A European CA could thus probably

⁴⁵ *Id.* at art. 42 ¶ 2.

⁴⁶ *Id.* at art. 42 ¶ 1.

⁴⁷ *Id.*

⁴⁸ PPD is in this respect jurisprudence emanating from Case C-368/10, *Comm'n v. Kingdom of the Neth.* (Max Havelaar Case), ECLI:EU:C:2012:284 (May 10, 2012).

⁴⁹ *Public Procurement Directive*, *supra* note 36 arts. 58–64.

⁵⁰ *Id.* at art. 58, ¶ 1(1).

⁵¹ *Id.* at art. 58 ¶ 1(2).

⁵² The Commission had, in fact, earlier taken such a stance, yet not all shared this viewpoint. *See Interpretative Communication of the Commission on the Community Law Applicable to Public Procurement and the Possibilities for Integrating Environmental Considerations into Public Procurement*, COM (2001) 274 final (Nov. 28, 2001); EUROPEAN COMMISSION, BUYING GREEN! A HANDBOOK ON GREEN PUBLIC PROCUREMENT (3rd ed. 2016). *Cf.* Luca Tosoni, *The Impact of the Revised WTO Government Procurement Agreement on the EU Procurement Rules from a Sustainability Perspective*, 8 EUR. PROC. & PUB. PRIV. P'SHIP L. REV. 41 (2013) (opining that sustainability cannot be considered an aspect of the ability and capacity of the supplier); MAX JANSSON, VALUE RECONCILIATION IN TRADE LAW IN LIGHT OF CRITERIA ON PROCESS AND PRODUCTION METHODS - A COMPARATIVE STUDY OF THE EU, THE U.S. AND THE WTO 497–98 (2019).

⁵³ *Public Procurement Directive*, *supra* note 36, art. 57.

⁵⁴ The EU and its Member states are parties to the Agreement on Government Procurement. Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 4B, 1869 U.N.T.S. 508 (text for the Marrakesh Agreement is available at 1915 U.N.T.S. 103). The Agreement explicitly includes such extraterritorial impacts. *Id.* at Art. VIII.

require that also the international supply chains of a seller need to fulfill the environmental criteria of participation.

Of the participants that fulfill the selection criteria and are able to supply a product meeting the technical specifications, the procuring authority will award the contract to the Most Economically Advantageous Tender (“MEAT”). The assessment of the MEAT may include qualitative criteria, such as environmental considerations.⁵⁵ The acceptability of environmental criteria, to the extent that they have been expressly mentioned in the tender documents, are linked to the subject-matter, and do not confer unrestricted choice to the CA nor discriminate against particular tenders, as has been confirmed by the Court of Justice of the EU (CJEU) earlier in the seminal *Concordia Finland*⁵⁶ and *Wienstrom*⁵⁷ cases.⁵⁸ As noted, under the award criteria, the PPD refers explicitly to the production processes at all stages of the life-cycle and including factors that are not a part of the offered product itself.⁵⁹ Finally, the CA can attach conditions, which the winning tenderer will need to perform upon conclusion of the procurement agreement. The conditions can, according to the PPD, include environmental conditions, provided once again that they are linked to the subject-matter of the contract and were indicated in the call for proposals.⁶⁰ The recitals of the PPD⁶¹ refer expressly to waste minimization and resource efficiency considerations. A distinction is nonetheless made to general corporate policies, such as Corporate Social Responsibility (CSR) programs: they do *not* bear a sufficient link to the subject-matter of the individual purchasing contract to be allowed.⁶² Overall, the MSs and their CAs enjoy of a relatively wide discretion in EU procurement law to include environmental considerations during the various stages of the process.

⁵⁵ *Public Procurement Directive*, *supra* note 36, art. 30.

⁵⁶ Case C-513/99, *Concordia Bus Fin. Oy Ab v. Helsingin kaupunki & HKL-Bussiliikenne*, 2002 E.C.R. I-07213.

⁵⁷ Case C-448/01, *EVN AG and Wienstrom GmbH v. Republik Österreich*, 2003 E.C.R. I-14527.

⁵⁸ *See also* Case C-379/98, *PreussenElektra AG v Schleswag AG*, 2001 E.C.R. I-02099.

⁵⁹ *Public Procurement Directive*, *supra* note 36, pmb. ¶ 97, art. 67 ¶ 3.

⁶⁰ *Public Procurement Directive*, *supra* note 36, pmb. ¶¶ 97, 104, art. 70; JANSSON, *supra* note 52, at 497–507; Marc Martens & Stanislas de Margerie, *The Link to the Subject-Matter of the Contract in Green and Social Procurement*, 8 EUR. PROC. & PUB. PRIV. P'SHIP L. REV. 8, 15 (2013); PUBLIC PROCUREMENT LAW: LIMITATIONS, OPPORTUNITIES AND PARADOXES (ULLA NEERGAARD, CATHERINE JACQUESON & GRITH SKOVGAARD ØLYKKE EDS. 2014); Martha Franch & Mireia Grau, *Contract Award Criteria*, in EU PUBLIC CONTRACT LAW: PUBLIC PROCUREMENT AND BEYOND 576 (Roberto Caranta et al. eds., 1st ed. 2014).

⁶¹ *Public Procurement Directive*, *supra* note 36, pmb. ¶¶ 97, 104.

⁶² *Id.*; Case C-448/01, *supra* note 57, ¶¶ 66–72; *see also* JANSSON, *supra* note 52, at 498–507; Franch & Grau, *supra* note 60; Tosoni, *supra* note 52, at 47.

2. EU Public Procurement law obliging the consideration of environmental aspects

As for EU procurement law as a *mandatory* source of environmental considerations, the situation is more complicated. One might argue that the environmental sustainability of public procurement in the EU would be promoted most directly, if the procurement directives made it mandatory for the CAs to base their purchasing decisions on environmental considerations.⁶³ However, a blanket obligation might not be effective nor politically realistic. The concern is that the CAs do not have the resources nor the knowledge to base *all* procurement on environmental grounds. The CAs fear that the inclusion of environmental criteria in all tender documents with their limited expertise risks subjecting the calls to legal challenges of discrimination.⁶⁴ Moreover, such a broad requirement is seen under this viewpoint to override, or at least affect, the *raison d'être* of EU procurement law – ensuring open and effective competition for procurement contracts between suppliers from all EU MSs and efficient use of public funds.⁶⁵ The counterargument to this viewpoint is that disregarding the life-cycle costs may also entail unfair competition and inefficient spending of public funds in the long run.⁶⁶ A more nuanced way to integrate environmental (and other sustainability) considerations is hence required.

There has indeed also been a concern that the introduction of additional considerations into the procurement process would allow the MSs another veil, under which to discriminate against non-domestic suppliers. Broad environmental requirements could offer a means to avoid the strictures of EU public procurement law.⁶⁷ The strongest concerns of hidden protectionism have nonetheless faded recently, as is evident also in the European Green Deal.

The question remains, then, how the EU procurement law can move from merely allowing, to effectively promoting, environmental considerations.⁶⁸ There are various limitations to this objective. The first is that not all procurement contracts are covered by the public procurement directives, including all that fall under the minimum threshold values. Some environmentally significant procurement contracts are also made outside the *acquis* of procurement directives. Further, making the consideration of

⁶³ *Green Paper on the Modernisation of EU Public Procurement Policy Towards a More Efficient European Procurement Market*, at 43, COM (2011) 15 final (Jan. 27, 2011) [hereinafter *Commission Green Paper*].

⁶⁴ Andrecka & Peterkova, *supra* note 40.

⁶⁵ Case C-264/18, P. M. v. Ministerraad, ECLI:EU:C:2019:472, ¶ 24 (June 6, 2019).

⁶⁶ National Public Procurement official (Sweden), *Expert interview 4 May 2020 – Governing and Measuring Green Public Procurement* (2020).

⁶⁷ Maarten Meulenbelt, *Protectionism on the Rise? Modernization of EU Public Procurement Rules During the Economic Crisis*, in *EU ECONOMIC LAW IN A TIME OF CRISIS* 57 (2016).

⁶⁸ European Commission, *Strategic Public Procurement: Facilitating Green, Inclusive and Innovative Growth*, 12 *EUR. PROCUREMENT & PUB. PRIV. P'SHIP L. REV.* 219 (2017).

environmental aspects compulsory in the current procurement directives would principally regulate the *process* of procurement, i.e. *how* to procure – but not *what* to procure.⁶⁹

Third, in the procurement directives, the addressees of the stipulations are mainly the CAs of the MS's, not the MS themselves. The directives' regulations in other words clearly differentiate between the CA and the national legislator, mainly obliging and giving rights to the former. For example, Article 42(6) of the PPD states that the technical specifications – i.e. the precise characteristics that are required of the procured good or service for it to qualify for the tender – are to be set out by the CA.⁷⁰ It is thus very probable that a national legislator cannot impose provisions that would significantly affect the CAs' discretion under the directives. It would not be possible, for example, to enact provisions in procurement law that would force the CA to use certain environmental technical specifications or require it to select the most environmentally sustainable tender.⁷¹ We revert to the issue of national and harmonized product group specific environmental requirements further in Section III.B.

The jurisprudence of the CJEU also confirms that the national legislators cannot restrict the discretion and the rights that the procurement directives grant to the CAs.⁷² The provisions on the procurement process are binding on the CAs, and they are directly effective: parties can rely directly on the rights enshrined in the directives in a dispute against the authorities, should the MS's legislation differ from the directives.⁷³ As most of the text in the procurement directives is mandatory in nature, it leaves the MSs little

⁶⁹ The directives prohibit discriminating ways of specifying the subject matter of the contract. See Case C-552/13, Grupo Hospitalario Quirón SA v. Departamento de Sanidad del Gobierno Vasco, ECLI:EU:C:2015:713 (Oct. 22, 2015).

⁷⁰ See *Public Procurement Directive*, *supra* note 36, art. 39(2).

⁷¹ See Case C-465/11, Forposta SA v. Poczta Polska SA, ECLI:EU:C:2012:801, ¶¶ 34-35 (Dec. 13, 2012); Case C-413/17, Proceedings brought by "Roche Lietuva" UAB, ECLI:EU:C:2018:865, ¶¶ 29-30 (Oct. 25, 2018); Case C-41/18, Meca Srl v. Comune di Napoli, ECLI:EU:C:2019:507, ¶¶ 37-39 (June 19, 2019); Case C-425/18, Consorzio Nazionale Servizi Società Cooperativa (CNS) v. Gruppo Torinese Trasporti Gtt SpA, ECLI:EU:C:2019:476, ¶¶ 35 (June 4, 2019); Case C-395/18, Tim SpA - Direzione e coordinamento Vivendi SA v. Consip SpA, ECLI:EU:C:2020:58, ¶¶ 51-53 (Jan. 30, 2020). *But see* Kreislaufwirtschaftsgesetz [KrWG] [Circular Economy Act], Feb. 24, 2012, BGBl I at 212, § 45 (Ger.) (on the procurement of resource efficient products). As will be explained below, a more prescriptive requirement is likely possible in sectoral law.

⁷² See Case C-41/18, Meca Srl v. Comune di Napoli, ECLI:EU:C:2019:507, ¶¶ 37-39 (June 19, 2019); Case C-425/18, Consorzio Nazionale Servizi Società Cooperativa (CNS) v. Gruppo Torinese Trasporti Gtt SpA, ECLI:EU:C:2019:476, ¶¶ 35 (June 4, 2019); Case C-395/18, Tim SpA - Direzione e coordinamento Vivendi SA v. Consip SpA, ECLI:EU:C:2020:58, ¶¶ 51-53 (Jan. 30, 2020); Case C-267/18, Delta Antrepriză de Construcții și Montaj 93 SA v. Compania Națională de Administrare a Infrastructurii Rutiere SA, ECLI:EU:C:2019:826 (Oct. 3, 2019).

⁷³ See Case C-391/15, Marina del Mediterráneo SL v. Agencia Pública de Puertos de Andalucía, ECLI:EU:C:2017:268, ¶¶ 38-41 (Apr. 5, 2017); Case C-46/15, Ambiente e Sistemas de Informação Geográfica SA v. AICP – Associação de Industriais do Concelho de Pombal, ECLI:EU:C:2016:530, ¶¶ 16-25, 27 (July 7, 2016) [hereinafter AMBISIG]. This stems from the fact that EU's directives can have direct effect. Procurement directive's, preamble 29 states that the directive is specifically applied to Member States contracting authorities.

discretion regarding the process of procurement.⁷⁴ For the most part, the MSs can deviate from the text of the directives only where the articles in question expressly state so⁷⁵ and need to respect the EU law principle of proportionality while so doing.⁷⁶ On the other hand, the national legislator may impose a general obligation to take environmental considerations into account during the procurement process. Further, the adoption of substantive rules in sector-specific legislation is also entirely possible, and the EU legislator even seems to encourage this if they are compatible with the EU's internal market.⁷⁷

While it is important to encourage the procurement of the most sustainable products in given calls for tenders, a broader, more fundamental issue is to ensure that the applicable environmental, social and labor law provisions are complied with at the relevant stages of the procurement procedure.⁷⁸ CJEU has specified that national legislators can nonetheless not impose provisions or requirements that are likely to restrict or reduce the opportunities or willingness of foreign economic operators to participate in public procurement procedures.⁷⁹

An important issue in terms of EU procurement law are the appropriate divisions of competence between the national CA, the national legislator, and the EU level legislator.⁸⁰ During the drafting of the 2014 Procurement Directives, it was stated⁸¹ that an EU-level procurement strategy would be premature. The idea to set target quotas for the CAs for the strategic procurement of specific goods or services was discarded. There was not yet enough information on how the national action plans work, nor on whether

⁷⁴ Case C-387/19, *RTS infra BVBA v. Vlaams Gewest*, ECLI:EU:C:2021:13, ¶¶ 44–49 (Jan. 14, 2021)

⁷⁵ See *Commission Staff Working Paper - Impact Assessment Accompanying the document Proposal for a Directive of the European Parliament and of the Council on Public Procurement and the Proposal for a Directive of the European Parliament and of the Council on procurement by entities operating in the water, energy, transport and postal sectors*, at 169, SEC (2011) 1585 final (Dec. 20, 2011) [hereinafter *European Commission 2011 Impact Assessment*].

⁷⁶ Not to be confused with the possibility for the national legislature to apply procurement directives to areas and subjects that the directive does not require to be opened to competition. See e.g. *Joined Cases C-496/18 & C-497/18, HUNGEOD Közlekedésfejlesztési, Földmérési, Út- és Vasúttervezési Kft. v. Közbeszerzési Hatóság Közbeszerzési Döntőbizottság*, ECLI:EU:C:2020:240 (Mar. 26, 2020).

⁷⁷ *Commission Green Paper*, *supra* note 63, at 42–45. See also Beatriz Martinez Romera & Roberto Caranta, *EU Public Procurement Law: Purchasing Beyond Price in the Age of Climate Change*, 12 EUR. PROCUREMENT & PUB. PRIV. P'SHIP L. REV. 281 (2017).

⁷⁸ *Public Procurement Directive*, *supra* note 36, pmb. ¶ 40. The Public Procurement Directive's preamble, at 41, seems to enable the use of exceptional measures. However, the exceptions need to be necessary and proportional.

⁷⁹ See, e.g., *AMBISIG*, *supra* note 73, ¶¶ 50–54, 56 (classifying the requirement of a signature as such).

⁸⁰ Steen Treumer, *The Discretionary Powers of Contracting Entities: Towards a Flexible Approach in the Recent Case Law of the Court of Justice*, 3 PUB. PROCUREMENT L. REV. (2006).

⁸¹ *European Commission 2011 Impact Assessment*, *supra* note 75, at 66–69; *European Commission Green Paper*, *supra* note 63, at 15–17, 44.

public procurement is the most effective way to promote the broad diffusion of environmentally superior technologies or solutions. The impact assessments conducted by the Commission nevertheless raised the possibility to develop sectoral legislation, taking into account that different sectoral markets tend to develop at their own pace.⁸² The intention is to monitor the evolution of the national trends from the EU level.

Despite all the above hesitations, generally the attitudes towards integrating strategic green objectives to public procurement have turned considerably more favorable. There is a realization that the environmental and economic objectives are intrinsically interlinked, and can, when carefully construed, be mutually beneficial. The European Green Deal, the Circular Economy Action Plan, and, globally, the UN Sustainable Development Goals,⁸³ all illustrate this thinking.⁸⁴ The Commission thus has proposed to set compulsory minimum criteria and objectives in sector-specific legislation, as well as mandatory reporting and monitoring requirements on GPP.⁸⁵ Our analysis, which follows below, largely supports the Commission's objectives.

3. Environmental considerations in different kinds of procurement processes

European procurement law foresees various procurement procedures, of which the CA can choose the one best suited for its objectives. The choice of the procedure is regulated only to a limited degree and is largely left to the discretion of the CA.⁸⁶ The effectiveness of the environmental criteria on procurement can be improved by choosing the procedure that is best adapted to the purchase from an environmental perspective.

Both the "open procedure" and "restricted procedure" suffer from a similar weakness from an environmental perspective: it is exclusively the CA that determines the requirements that the tenderers need to fulfil.⁸⁷ The CA must therefore be well aware of environmental innovations and standards to be able to include them in the specifications. Because the specifications define exhaustively the requirements to be met, the CA is not allowed to consider alternative, potentially more environmentally-sound, solutions that are different from the defined specifications and/or not included in the tender documents as awarding more points. Because the open and restricted procurement processes are rigid and do not enable negotiations between the CA and the tenderers, they can best promote GPP when used for large-volume,

⁸² *European Commission 2011 Impact Assessment*, *supra* note 75, at 90, 192.

⁸³ UN SDGs, *supra* note 1.

⁸⁴ *Cf. European Commission 2011 Impact Assessment*, *supra* note 75, at 90, 192 *with* The European Green Deal, *supra* note 11 at 21; New Circular Economy Action Plan, *supra* note 12 at 6.

⁸⁵ New Circular Economy Action Plan, *supra* note 12 at 6.

⁸⁶ *Public Procurement Directive*, *supra* note 36, art. 26.

⁸⁷ *Id.* arts. 27–28.

standardized products with clear differences in their environmental characteristics.

A “competitive procedure with negotiation⁸⁸” offers a better chance for the tenderer to extend beyond the minimum requirements and require the latest environmentally sustainable solutions. The procedure is well adapted for complex, environmentally ambitious tenders with special needs. It also suits life-cycle costing, and through that methodology offers a way to include environmental considerations. Similarly, the “competitive dialogue⁸⁹” aims at mapping the optimal solutions by allowing the CA to determine the weighing and the ranges of the award criteria, which include the environmental considerations.⁹⁰ Because the contract must be awarded on the sole basis of the best price-quality ratio, this procedure should be promoted for procuring goods and services that have potential for considerable environmental improvements.⁹¹ Finally, when tendering for completely new solutions of strategic use, the collaborative nature of the “innovation partnership” procedure is well suited, as it allows for integrating ambitious environmental considerations as well.⁹²

4. Enhancing the hardness of the EU’s procurement processes

It is next possible to assess EU public procurement law against the framework of softness/hardness, introduced above in Section II.B. Each dimension of hardness is given a value (1–9) and (Soft, Medium, Hard) where 1/S represents the soft end of the dimension and 9/H the hard end, with 4–6/M marking medium. For *instrumentum*, the choice is dichotomous (yes/no) so the score is either 1/S or 9/H. We calculate an overall score of hardness as the arithmetic average of the four dimensions. It becomes evident that the EU public procurement law as it currently stands is in the middle, between soft and hard, as an instrument for introducing environmental considerations in procurement (average 5/M). Our analysis is summarized in Table 2 and the results in Fig. 4.

⁸⁸ See, e.g., *Id.* at art. 29; Laki julkisista hankinnoista ja käyttöoikeussopimuksista [Act on Public Procurement and Concession Contracts] (Suomen säädöskokoelma [Säädäk] 1397/2016) § 34–35 (Fin.) [hereinafter Finnish Public Procurement Act].

⁸⁹ See, e.g., *Public Procurement Directive*, *supra* note 36, art. 30; Finnish Public Procurement Act, *supra* note 88, § 36–37.

⁹⁰ ELISE PEKKALA ET AL., HANKINTOJEN KILPAILUTTAMINEN JA SOPIMUSEHDOT [Procurement Competition and Contract Terms] 219–37 (2019).

⁹¹ See Kedar Uttam & Caroline Le Lann Roos, *Competitive Dialogue Procedure for Sustainable Public Procurement*, 86 J. CLEANER Prod. 403–16 (2015); EUROPEAN COMMISSION, *supra* note 52, at 22–23.

⁹² *Public Procurement Directive*, *supra* note 36, art. 31; Finnish Public Procurement Act, *supra* note 88, § 38–39.

Table 2. Assessing the hardness of EU Procurement Directives (A summary).			
Aspect of softness/hardness	Analysis	Score (1–9) (S / M / H)	Combining sub-dimensions
<i>Instrumentum</i> : Formal source of law or not?	Seven Directives, which themselves are binding, but require transposition by the MS. Many provisions are directly effective.	9 (H)	9 (H)
<i>Obligation</i> – Authority	EU law enjoys a high level of authority towards all stakeholders.	9 (H)	5.5 (M)
<i>Obligation</i> – Mandatory language	The rights and obligations target mostly the CAs. There is very limited mandatory language that would oblige them to include environmental considerations in procurement.	2 (S)	
<i>Precision</i> – Accuracy	Mostly on very general terms. The rules focus on the <i>process</i> of procurement (“how”), not on the (environmental) qualities (“what”).	2 (S)	4 (M)
<i>Precision</i> – Specificity	The language refers to the CAs as the relevant regulatees.	6 (M)	
<i>Delegation</i> – Scope	The Directives delegate to the CAs wide authority to integrate environmental considerations. Their competence and resources may be limited, however.	8 (H)	7 (H)
<i>Delegation</i> – Institution	The CAs are a part of the public administration, and as such have high authority to enforce the environmental standards that they choose to set. Their competence and resources may be quite limited, however.	6 (M)	
Overall hardness	Variance between the criteria; the <i>instrumentum</i> , the authority of the instrument and the scope of delegation are hard, but the mandates in the language are soft, as are the accuracy and specificity of the language. Hardness overall is at medium level.		6 (M)

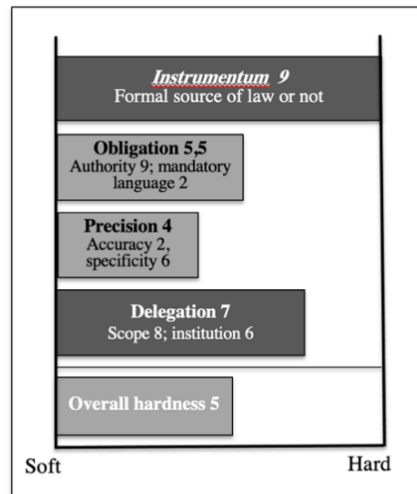


Figure 4. A summary of an assessment of the hardness of EU Procurement Directives.

Overall, environmental aspects can be considered both when defining the procured product and choosing the applicable procedure. Still, the obligations are procedural and defined in a rather vague, non-mandatory language.⁹³ Technical specifications may include environmental considerations, but much will depend here, and in procurement processes in general, on the proactivity, expertise and in particular the resources of the CA. The mere *possibility* of taking into account environmental considerations or of exceeding mandatory minimum requirements does however not usually lead to action in practice. EU procurement law thus should be developed from merely allowing, to actively incentivizing and in certain cases even mandating, the consideration of environmental aspects.

Various countries within and beyond the EU have experimented with ways to integrate environmental considerations into law beyond what the EU procurement directives mandate. Three of such approaches are analyzed further in this Section. Product and sector specific requirements are a particularly interesting sub-group and are dealt with separately in Section III.B.

⁹³ See, e.g., *Id.* art. 42 and Annex VII.

a. Adding sustainability as an objective of procurement law

Sustainability considerations are secondary objectives in the EU public procurement directives; their inclusion is recommended,⁹⁴ but they are not mentioned amongst the primary objectives of efficiency, non-discrimination, and open competition.⁹⁵ Their inclusion in the objectives would mean an explicit requirement to take environmental considerations into account in procurement.

A general obligation to take environmental considerations into account in all procurement has been implemented in the procurement laws of Austria,⁹⁶ Slovenia,⁹⁷ and outside of the EU in Australia.⁹⁸ The *specificity* of national procurement laws is quite high across countries, because the CAs are a relatively clearly defined group of actors. They could be further specified to apply to authorities of the central and/or local government.⁹⁹ The *accuracy* of the obligation can also be increased qualitatively in procurement law. The Berlin local government statute¹⁰⁰ requires that contracting entities must document how they have considered the environmental criteria before each procurement. The effectiveness of such requirements may however be reduced where the contracting entities can copy standard declarations without actually engaging in an assessment.

A slightly different approach is to set a concrete target, such as the moderately *accurate* general obligation in Lithuania that at least 45% of public

⁹⁴ *Public Procurement Directive*, *supra* note 36, Recital 91. *See also* Kleoniki Pouikli, *Towards mandatory Green Public Procurement (GPP) Requirements under the EU Green Deal: Reconsidering the Role of Public Procurement as an Environmental Policy Tool*, 21 ERA FORUM 699 (2021).

⁹⁵ *Cf.* Meulenhelt, *supra* note 67, with Beate Sjøfjell & Anja Wiesbrock, *Why Should Public Procurement be about Sustainability?*, in SUSTAINABLE PUBLIC PROCUREMENT UNDER EU LAW: NEW PERSPECTIVES ON THE STATE AS STAKEHOLDER 1 (2016).

⁹⁶ VERGABERECHTSREFORMGESETZ 2018 [PROCUREMENT LAW REFORM ACT 2018], BUNDESGESETZBLATT BGBl NO. 65/2018, § 20 ¶ 5, <https://www.ris.bka.gv.at/eli/bgbl/I/2018/65/20180820> (Austria).

⁹⁷ ZAKON O JAVNEM NAROČANJU [PUBLIC PROCUREMENT ACT], (ZJN-3), URADNI LIST RS, ŠT. 91/15 (2015)(as amended), § 3 <http://www.pisrs.si/Pis.web/pregledPredpisa?id=ZAKO7086> (Slovn.).

⁹⁸ AUSTRALIAN GOVERNMENT DEPARTMENT OF FINANCE, COMMONWEALTH PROCUREMENT RULES 2020 (CTH) para. 4.5. In Germany, there is also a general obligation to take quality, innovation, environmental and social considerations into account in procurement. Gesetz Gegen Wettbewerbsbeschränkungen [GWB] [Act Against Restraints of Competition], June 26, 2013, BUNDESGESETZBLATT TEIL I BGBl I at 1750, § 97(3) (as amended). But such requirement is apparently not mandatory. Vergaberechtsmodernisierungs-verordnung [VergRModG] [Law on the Modernization of Public Procurement Law], Apr. 14, 2016, BGBl I at 203, § 58.

⁹⁹ The noted Austrian and Slovenian laws are currently amongst the hardest in terms of their *accuracy (ratione materiae)*.

¹⁰⁰ Neufassung Verwaltungsvorschrift Beschaffung und Umwelt [VwVBU] [Administrative Regulation on Procurement and the Environment], October 19, 2021 SenUVK I B 12, ¶6.3 [hereinafter Berlin City Statute]. This obligation applies only if there are no obligatory 'information sheets' (Leistungsblätter) to be used. *Id.*

procurement in 2017 and 2018 and at least 50% in 2019 and 2020 needed to include environmental criteria.¹⁰¹ Experiences from the Netherlands indicate nevertheless that it may be difficult to formulate a general requirement with sufficient *precision* for it to be successfully enforceable in a court of law. The Dutch contracting authorities have a general, relatively imprecise obligation in Article 1.4(2) of the Dutch procurement law to provide “as much societal value as possible.”¹⁰² This obligation has been interpreted by Janssen and Bouwman¹⁰³ to mean a procurement-by-procurement assessment of the ratio between the price and the quality, where the latter also includes environmental considerations. The Dutch adjudicator has ruled in all legal cases raised so far, that the CA did take the social values into account adequately. For the plaintiffs, the provision has thus mainly had symbolic value. Still, although the cases have not been successful, they have at least provided possibilities for economic operators to review whether as much societal value as possible is being created.¹⁰⁴ The approach can be seen to “nudge” procurement in a more sustainable direction. Janssen and Bouwman further argue that if the Dutch legislature wishes article 1.4(2) to become a means to achieve societal value through public procurement, the substantive and procedural implications must be clarified in the law. This implies an increase in the hardness of the general obligation by improving the requirement’s *accuracy* and *specificity*. Alternatively, Janssen and Bouwman suggest including societal value creation in the objectives of the procurement law. Kalimo et al. have made a similar proposal¹⁰⁵ in regard to the Finnish Procurement Act. Such a provision would further spur CAs to use their purchasing power to promote sustainability.¹⁰⁶

¹⁰¹ DEL NACIONALINĖS ŽALIŲJŲ PIRKIMŲ ĮGYVENDINIMO PROGRAMOS PATVIRTINIMO [NATIONAL GREEN PROCUREMENT IMPLEMENTATION PROGRAMME] NO. 1133, VALSTYBĖS ŽINIUS [STATE NEWS] NO. 91-4824 (2010) (Lith.) (citing *Commission Staff Working Document: The EU Environmental Implementation Review 2019, Country Report - Lithuania*, SWD (2019) 125 final at 23 (July 31, 2019)). In Norway, the Parliament has adopted a decision in principle that wherever environmental factors can be used as award criteria, they should have a weighting of at least 30%. (ENDR. I ANSKAFFESESFORSKRIFTEN, FORSYNINGSFORSKRIFTEN, KONSESJONSKONTRAKTFORSKRIFTEN OG FORSKRIFT OM KLAGENEMND FOR OFFENTLIGE ANSKAFFELSER [Amendments to the Procurement Regulation] 24 Apr. 2017 nr. 0372, <https://lovdata.no/dokument/LTI/forskrift/2017-04-20-484> (last visited Jul 14, 2021)(Nor.).

¹⁰² Wet van 1 november 2012 houdende nieuwe regels omtrent aanbestedingen [PROCUREMENT ACT 2012], STB. 2012, 542, art. 1.4. para. 2, <https://zoek.officielebekendmakingen.nl/stb-2012-542.html> (Neth.).

¹⁰³ Willem Janssen & Gerrieke Bouwman, *Legislating Societal Value into Dutch Public Procurement Law*, 2 PUBLIC PROCUREMENT L. REV. 91 (2020).

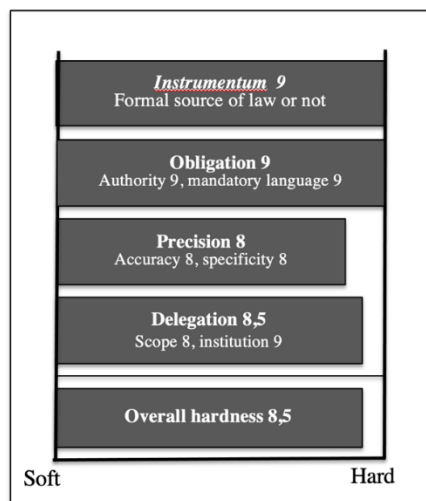
¹⁰⁴ *Id.* at 101–102.

¹⁰⁵ KALIMO ET AL., *supra* note 7, at 66–7.

¹⁰⁶ *Id.* at 102; Willem Janssen, Utrecht University, Expert Address at the HILMI Workshop on the Legislation and Monitoring in Green Public Procurement (June 16, 2020).

In Sweden, often considered one of global leaders in green procurement, the Procurement Law only states¹⁰⁷ that sustainability considerations may be taken into account, if they are related to the subject of the procurement. The Swedish procurement system's hardness indeed emanates rather from the high *authority* that the Swedish government enjoys,¹⁰⁸ and the subsequent *delegation* of that power that is very broad in *scope*. The delegation is also hard *institutionally*, as it engages the Swedish National Agency for Public Procurement,¹⁰⁹ a governmental agency specifically created and well-resourced to govern and to assist in public procurement.

Overall, if one were able to combine the “best (in this assessment the “hardest”) practices” internationally into a single procurement law, the



resulting instrument would receive a very high score on its hardness, as Fig. 5 indicates.

Figure 5. Hardness of a hypothetical combination of “best practice qualities” from various national procurement laws.

Although there may be difficulties in enforcing environmental aspects as an objective of public procurement, the same can be stated of other objectives of procurement law as well. The inclusion of this objective would provide a political statement of support for environmental considerations as a part of the

¹⁰⁷ LAG OM OFFENTLIG UPPHANDLING [LAW ON PUBLIC PROCUREMENT], (Svensk författningssamling [SFS] 2016:1145) at ch. 17 § 1, https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/lag-20161145-om-offentlig-upphandling_sfs-2016-1145 (Swed.).

¹⁰⁸ REGERINGSFORMEN [RF] [CONSTITUTION] 12:2 (Swed.).

procurement process. As a horizontal, procedural requirement it could be combined with sector or product specific requirements, discussed below. The inclusion thus would complement the *authority* of the regulator.¹¹⁰

Finally, the impact of the procurement process could be extended even further through the exclusion grounds of procurement law. Eligibility to tenders could namely be denied from suppliers that have committed environmental crimes. While the EU procurement law already allows the CAs to use environmental crimes as exclusion grounds,¹¹¹ this optional provision could be made obligatory and more accurate in its language.¹¹²

b. Life cycle costing

Life-cycle costing (LCC) means that the costs of procurement are calculated across the procured product's entire life cycle, which includes, in EU procurement law¹¹³ for example, the costs of the acquisition, operating, maintenance, recycling and waste phases, as well as climate adaptation. Life-cycle costs also cover costs arising from external environmental impacts that are related to the subject matter of the procurement during its life cycle. The use of LCC would thus allow the integration of environmental considerations in purchases through the market; through prices, the invisible externalities are made visible. In EU procurement law, the use of life-cycle costs as a criterion for the award of a contract is optional. An exception is the Clean Vehicles Directive (2009/33/EC),¹¹⁴ as amended by directive (EU) 2019/1161.¹¹⁵ Article 1 requires that the life-cycle energy and environmental impacts of vehicles be considered in procurement. Where a methodology for calculating life-cycle costs is laid down at the EU level, such methodology must be used if life-cycle costs are to be used for the award of the contract.¹¹⁶

Compulsory use of LCC is challenging. There are rather limited uniform methods and consistent criteria for calculating life-cycle costs, and so they are considered difficult to estimate correctly and with reasonable effort. A mandatory requirement, especially relating to environmental externalities, would increase the workload and costs for both the CAs and the tenderers. This

¹¹⁰ Janssen & Bouwman, *supra* note 103, at 102; KALIMO ET AL., *supra* note 7, at 62-67.

¹¹¹ *Public Procurement Directive*, *supra* note 36, art. 57 para. 4.

¹¹² *Id.* art. 57 para. 1.

¹¹³ *Id.* art. 68.

¹¹⁴ Directive 2009/33, of the European Parliament and of the Council of 23 April 2009 on the Promotion of Clean and Energy-Efficient Road Transport Vehicles, 2009 O.J. (L 120) 5 (EC) [hereinafter clean Vehicles Directive].

¹¹⁵ Directive 2019/1161, of the European Parliament and of the Council of 20 June 2019 amending Directive 2009/33/EC on the Promotion of Clean and Energy-Efficient Road Transport Vehicles, 2019 O.J. (L 188) 116 (EU).

¹¹⁶ *Public Procurement Directive*, *supra* note 36, art. 68, ¶ 3.

could deter, in particular, smaller companies from tendering.¹¹⁷ Some commentators have lamented the state of affairs at the EU level and argued for the Commission to step in and develop a harmonized LCC methodology – a framework to be employed by all CAs. This would also assist local municipalities, who often lack the resources or who are too risk averse to choose an LCC methodology for the fear of contravening the principles of transparency and/or undisrupted competition.¹¹⁸ The Commission has developed voluntary sectoral life-cycle cost tools to assist in the calculations, with five sectors included thus far.¹¹⁹ The tools help harden the *precision* and *delegation* dimensions of LCCs.

Some countries experiment with the mandatory use of LCC practices. In Germany, the Climate Change Act¹²⁰ provides that, at least provisionally, the central government should always use LCC when considering the reduction of GHG emissions in the tenders. For some products, such as energy-consuming equipment, the requirement is more explicitly stated in the legislation. The procurement units would benefit from support structures, discussed in Section III.E, in the application of LCC.

Because the CAs' purchases are usually a part of the institutional budgets of public authorities, the preparation of such public budgets may offer opportunities to include LCC already in the early, planning stages of using public funds. The preparation of municipalities' multi-annual budgets is a good example of far-reaching decisions, which could more explicitly integrate procurement activities, including estimates about their life cycle based environmental costs. Many public authorities already prepare specific carbon budgets on their estimated GHG footprints, as discussed in Section III.D.2. The laws regulating these budgeting activities could thus be amended to make explicit the connection to procurement and LCC as means to enhance the integration of environmental considerations.

For example, in Finland the Act on municipalities (410/2015) § 110 would in this way complement, and thus harden, the Finnish Procurement Act. Reversely, when a municipal budget is prepared on a life-cycle cost basis, the contracting authority of a municipality (or other unit of government) would later be well prepared to request from the tenderers information specifically

¹¹⁷ Harri Kalimo, Vrije Universiteit Brussel, Expert Address at the HILMI Workshop on Policy Recommendations (Nov. 21, 2020) (reflecting on the findings of the panel).

¹¹⁸ Lennard Michaux & Joris Gruyters, *Life Cycle Costing: The Final Step towards a True Rule of Reason in Public Procurement Law?*, 15 EUR. PROCUREMENT & PUB. PRIV. P'SHIP. L. REV. 61 (2020).

¹¹⁹ *Life-Cycle Costing*, EUR. COMM'N, <https://ec.europa.eu/environment/gpp/lcc.htm> (last visited Dec. 8, 2021).

¹²⁰ BUNDES-KLIMASCHUTZGESETZ [KSG] [Climate Change Act], Dec. 12, 2019, BGBL. I at 2513, § 13 (Ger.) (stating that if a procurer at the federal level has more than one option, they have to prefer the one with the most stringent target in mitigating GHGs over the whole life cycle of the product/service with least costs). The Act follows a recent decision by the German Federal Constitutional Court, which states that the measures to achieve Climate Neutrality are too weak and thus endanger future generations.

on the costs of the environmentally relevant stages of the life cycle.¹²¹ The link between the rules on procurement and on municipal budgeting and planning is crucial, because the most environmentally significant decisions are often *de facto* already made during the planning and preparation of activities.

Overall, current procurement laws could be hardened by requiring the CAs to determine the environmental impacts of the purchases and assess the means to reduce them. In view of the constantly changing situation on many product markets, and the knowledge needed to apply LCC, support for the CAs is essential,¹²² and it seems advisable to maintain some softness in the rules. This could mean a 'best efforts' requirement instead of a *mandatory* provision to use LCC. The best efforts requirement could be hardened to a mandate if experiences so suggested. LCC could also be initially hardened in terms of its *accuracy*, targeting gradually the Environmentally Significant Product Groups (ESPG), defined in Section II. The requirements could be further hardened by requiring the CAs to explain the reasons for *not* integrating the environmental considerations along these lines.

c. Mandatory consideration of environmental requirements in the tendering process

Intuitively, a straightforward way to promote environmental considerations in public procurement is to include them as mandatory minimum requirements in the technical specifications of a tender. This approach can provide predictability and economies of scale for the suppliers. Moreover, a leading argument for GPP is that ambitious requirements in procurement offer a means for “market creation” for (environmentally) innovative products and services. For instance, the public sector could lead by example by committing to purchase only electric vehicles with low life-cycle GHG emissions, already before zero emissions are feasible as a general market access requirement for vehicles.

Ambitious environmental requirements in a tender can, however, also make a particular procurement market so narrow that sufficient supply, and thereby efficient competition, is effectively removed. The supply may also shift from the public to the private markets, if there the requirements are significantly lower.¹²³ Lack of competitive bids entails higher costs and lower quality. The problems are exacerbated in small and peripheral procurement

¹²¹ Tommi Oikarinen, *Tietohallinnon Hankintojen Ennakoidun Arvon Laskennan Oikeudellinen Säätely* [Legal Regulation of the Calculation of the Estimated Value of IT Procurements], EDILEX 3, 21 (Feb. 12, 2018), <https://www.edilex.fi/artikkelit/18511.pdf> (last visited Aug 24, 2021).

¹²² There are municipalities, such as *Multnomah County* (Oregon, U.S.) that offer support specifically on LCC. Olmsted, *supra* note 13, at 704–05.

¹²³ Sofia Lundberg et al., *Using Public Procurement to Implement Environmental Policy: An Empirical Analysis*, 17 ENV'T ECON. AND POL'Y STUD. 487 (2015).

markets such as our case study country, Finland.¹²⁴ On the other hand, in the longer term, companies usually adapt to the new market situation. New solutions are developed to meet the requirements, and competition can be expected to intensify again, putting downward pressure on prices. For this to happen, public demand needs to constitute a significant part of the overall demand on the market. It is important to assess the often manifold positive and negative impacts of minimum standards on the procurement market case by case, before introducing the rules.¹²⁵ The level of minimum requirements should not be raised so high that the increase in prices exceeds the benefit of reducing the negative externalities.

Resources for these demanding assessments of the supply and demand on the markets are needed, and we would recommend prioritizing the assessments of the ESPGs. Moreover, a gradual process for setting the product-specific requirements seems usually preferable: the impacts should be assessed soon after implementation and while considering the long-term cost-efficiencies across the entire life cycles. The requirements may lead to structural changes in the markets that benefit the innovativeness and competitiveness of industries on a more permanent basis.

Sweden is a good example of how all of the elements of hardness mentioned in this article need to be considered. They include delegated authority and not merely the mandates or the precision of the instrument. The implementation of a product-specific approach requires commitment, resources and, above all, tools that are easy and quick to apply in practice. ESPGs are a priority in these assessments.

d. Environmental considerations as mandatory award criteria

As an alternative to minimum requirements as technical specifications, discussed above, the CAs can be obliged to take environmental impacts into account when comparing the bids during the award of tenders. The environmental criteria could in other words be made award criteria and given a weight among other criteria. Mandatory use of environmental award criteria is rare, but in use in, for example, Latvia.¹²⁶

Addressing environmental impacts as award criteria rather than (overly ambitious) requirements would alleviate the risk of shrinking the market. Nevertheless, the weighing of environmental qualities would need to remain reasonable not to scare off suppliers. Environmental award criteria can be effective in incentivizing innovative environmental solutions and could, in

¹²⁴ Jan Jääskeläinen & Janne Tukiainen, *Anatomy of public procurement*, 118 VATT INST. FOR ECON. RSCH. 1 (2019), <https://ideas.repec.org/p/fer/wpaper/118.html> (last visited Jul 15, 2021).

¹²⁵ *European Commission 2011 Impact Assessment*, *supra* note 75, ¶¶ 5.3.3.1.–5.3.3.2.; Lundberg et al., *supra* note 123, at 489, 512.

¹²⁶ Prasības zaļajam publiskajam iepirkumam un to piemērošanas kārtība [Requirements for Green Public Procurement and Procedures for Application], Latvijas Vēstnesis [The Official Gazette Of The Government Of The Republic Of Latvia] 129 (5956), June 30, 2017, 1.2, Annex 1.

theory at least, take into account negative externalities at their true cost, avoiding over- or under-compensation for environmental performance.

Award criteria do not guarantee, in the same way as the minimum requirements, that a solution of a certain environmental quality will be selected. They thus create a softer mandate than specifications, and they can also be slightly more challenging and expensive to set with sufficient accuracy in practice. A CA may also fear a legal challenge from unsuccessful tenderers, if it does not routinely apply environmental considerations in the award criteria. The criteria for the environmental award should therefore be developed so that the CA can easily select and apply them and they should, at least initially, have only a moderate weighting. The core criteria in the EU's GPP model criteria can be used for this purpose, and to increase the accuracy of award criteria.¹²⁷ A delegation of authority to support structures, such as the Commission, or, in Sweden, the Swedish National Agency for Public Procurement,¹²⁸ for guidance, adds hardness to the instrument along that dimension. Subject to the preconditions described in the previous sub-section, mandatory environmental award criteria would thus seem a suitable approach in procurement in sectors where the overall impact of setting environmental minimum requirements would be negative.

e. Priority for easily standardizable and verifiable performance-based environmental criteria

A further consideration on product-specific environmental requirements or award criteria is whether they should target the (technical) characteristics of the products or their environmental impacts (performance). Environmental (performance) criteria would be preferable in that they would give the suppliers the freedom to develop the best, innovative means to reduce the impacts efficiently. Performance is nonetheless more difficult to measure, and hence softer in terms of *accuracy*, than technical characteristics. Various commonly accepted tools to measure the impacts need to be developed to avoid an undue softening of the law. We revert to this point in Section III.D.

B. Group B – Product-specific procurement instruments

1. The rationale for product-specific requirements for procurement

While public procurement law may allow, or even mandate, the CAs to consider the environmental qualities of purchases as technical specifications or award criteria, an even harder mandate would be to set in law the mandatory environmental requirements on the products themselves, requirements that all CAs must follow in their procurement. But would mandatory product-specific requirements for procurement be preferable to a

¹²⁷ EU GPP CRITERIA, *supra* note 17.

¹²⁸ UPPHANDLING MYNDIGHETEN, <https://www.upphandlingsmyndigheten.se/en/> (last visited Aug 12, 2021)

general, but perhaps less demanding requirement as a precondition for market access on all products, not only for procurement? Although the impact of a generally applicable market access law would obviously be broader, there are political, economic and social constraints as to how ambitious the different requirements can be. The matter is elaborated in more detail below in the context of the EU's EcoDesign Directive (2009/125/EC),¹²⁹ which sets general minimum requirements on energy-related products across the EU.

2. Setting product-specific environmental criteria in sectoral laws

Second, the mandatory requirements on products can be set either in public procurement law itself (Group A) or in instruments belonging to the other groups that are applicable to public procurement as defined in this article. The instrument of governance needs to be suitable for setting detailed requirements efficiently, while ensuring that market players become easily aware of the requirements and can apply them in practice.

Mandatory criteria that a product must meet to access a market are set in sector-specific "substance laws." Such substance laws can also contain mandatory minimum requirements that are applicable explicitly, or even exclusively, to public procurement. Procurement law, as may be recalled, is fundamentally a law that focuses on procurement as a *process*. Some countries, such as Slovenia¹³⁰ and Lithuania,¹³¹ have nonetheless enacted "green" or "sustainable" public procurement laws that also contain product-specific environmental requirements. The advantage of this approach is that the requirements are collected in a single piece of procurement law for the stakeholders to find and apply them. The disadvantage of a separate "green procurement law" that is parallel to generic procurement law is duplication. It could also risk blurring the focus of the procurement law on the process and on transparency and neutrality. Blurring reduces the *accuracy*, and hence the hardness, of procurement law.

Whichever the legal framework, in practice, the mandatory requirements seem far too dynamic to be set timely as a part of normal legislation. The requirements are better suited for lower-level decrees¹³² and implementing measures, or, while admittedly softening the *binding* nature and *mandatory*

¹²⁹ Directive 2009/125, of the European Parliament and of the Council of 21 October 2009 Establishing a Framework for the Setting of Ecodesign Requirements for Energy-Related Products, 2009 O.J. (L 285) 10 (EC) [hereinafter EcoDesign Directive].

¹³⁰ ZAKON O JAVNEM NAROČANJU (ZJN-3) [Public Procurement Act], URADNI LIST RS, ŠT. 91/15 (2015) (Slovn.).

¹³¹ DĖL NACIONALINĖS ŽALIŲJŲ PIRKIMŲ ĮGYVENDINIMO PROGRAMOS PATVIRTINIMO [On the Approval of the National Green Procurement Implementation Program] NO. 1133 (2010) (Lith.).

¹³² An example in the Finnish context are Decrees of the State Council, such as the *Valtioneuoston periaatepäätös kestävien ympäristö- ja energiaratkaisujen (Cleantech-ratkaisut) edistämisestä julkisissa hankinnoissa* [Decision-in-Principle on the Promotion of Sustainable Environmental and Energy Solutions (Cleantech Solutions) in Public Procurement] (2013) [hereinafter *Cleantech Resolution*].

language of the rules, in mere guidelines such as the EU GPP criteria.¹³³ The challenge of communicating the environmental requirements to the CAs and the suppliers can be addressed through the electronic procurement systems that are becoming prevalent, and that, in the EU for example, increasingly integrate the product-specific CPV-codes. In Latvia, the CAs must confirm in the contract notice portal that they have taken the mandatory product-specific criteria into account.¹³⁴

All in all, we observe and endorse the trend of setting product-specific environmental requirements for public procurement. This can be done while combining the expertise of the procurement, sectoral¹³⁵ and environmental branches of administration and the procurement stakeholders. Sector-specific framework laws, based on which the exact requirements are set in lower-level provisions such as Governmental Decisions and Ministerial Decrees, seem widely applicable. This collaborative governance approach can be supported by a further institutionalization of the procurement processes.

3. Product-specific procurement law with environmental criteria – the Clean Vehicles Directive

Already the EU's PPD acknowledges that generic mandatory environmental requirements across all product groups will not optimize intelligent, sustainable, and inclusive growth in Europe.¹³⁶ Product-specific procurement rules are required, an approach that is also aligned with the development of life-cycle costing.¹³⁷ The CAs in the EU have the EU's GPP model criteria. As voluntary guidelines, they are however very soft on the dimension of *mandatory* language. These product-specific environmental criteria for procurement currently cover around 20 products. The EU is in the Circular Economy Action Plan¹³⁸ and the Green Deal Investment Plan contemplating on expanding the range of product specific requirements.¹³⁹ We have identified a quickly growing selection of product-specific environmental requirements for procurement at national and sub-national levels. Criteria exist for at least 40 product groups, with countries such as Lithuania and Slovenia leading the way. Construction, heating, and food, which we too have

¹³³ EU GPP CRITERIA, *supra* note 17.

¹³⁴ Prasības zaļajam publiskajam iepirkumam un to piemērošanas kārtība [Requirements for Green Public Procurement and Procedures for Application], Latvijas Vēstnesis [The Official Gazette Of The Government Of The Republic Of Latvia] 129 (5956), June 30, 2017, Part II, para. 13.

¹³⁵ Such as transport, energy, and agriculture.

¹³⁶ *Public Procurement Directive*, *supra* note 36, pmb. ¶¶ 95.

¹³⁷ *Id.*

¹³⁸ New Circular Economy Action Plan, *supra* note 12, at 6–8, 26.

¹³⁹ *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Sustainable Europe Investment Plan: European Green Deal Investment Plan*, at 12, COM (2020) 21 final (Jan. 14, 2020).

identified as ESPGs in Section II, are examples addressed by these requirements.¹⁴⁰

Sweden, a global leader in procurement, provides an interesting reminder; softness in one dimension of an instrument may be compensated for in another dimension. For example, the Swedish National Agency for Public Procurement has developed and supports the use of a large set of requirements that are applicable to multiple product groups—yet at three levels of environmental ambition. They are just soft model criteria, not mandatory requirements. Compliance with the soft, voluntary criteria has been wanting.¹⁴¹ But, the country’s soft approach on obligation is at least partly offset by its very hard dimension of delegated authority. This country, with a population of 12 million, has invested in a specialized procurement Agency with a staff of 80 people.

Instruments belonging to Group B are few and far apart. The EU’s Clean Vehicles Directive¹⁴² is perhaps the most prominent example of product-specific environmental requirements that apply expressly to procurement. Article 1 of the Directive, as originally enacted in 2009, required the MSs to ensure that, when the CAs purchase vehicles, they take into account at least one of the following operational life-time energy and environmental impacts: energy consumption or the emissions of CO₂, NO_x, NMHC and of particulate matter.¹⁴³ The language was clearly *mandatory*. The requirements were also hard in terms of their *precision*. As for *accuracy*, they included considerable technical details in the calculation of operational life-cycle costs, details such as the energy contents of various motor fuels or costs for different kinds of emission in euros. The directive was also *accurate* in how the environmental considerations were to be integrated in the tendering process: as technical specifications, award criteria or by calculating operational life cycle costs. *Precision* of the instrument was quite high also regarding its *specificity ratione personae*: the law focused on “contracting authorities” and “contracting entities” as defined in specific laws¹⁴⁴ and on various types of operators in charge of public service obligations.¹⁴⁵

However, the hardness of Directive 2009/33/EC was strongly criticized.¹⁴⁶ It was felt that the Directive’s *mandatory* language was at the same time over-

¹⁴⁰ See KALIMO ET AL., *supra* note 7, at 79–80 (plotting environmental requirements across 39 products groups in Italy, Latvia, Lithuania, Slovenia and the City of Berlin).

¹⁴¹ Public Procurement Official (Latvia), *Expert interview – Governing and measuring green public procurement* (June 10, 2020).

¹⁴² Clean Vehicles Directive, *supra* note 114.

¹⁴³ *Id.* arts. 1, 5 ¶¶ 1–3, 6, annex.

¹⁴⁴ *Id.* arts. 3, 4 ¶ 1.

¹⁴⁵ *Id.* art. 3. ¶ 1(b).

¹⁴⁶ Brannigan, Charlotte et al. *Ex-post Evaluation of Directive 2009/33/EC on the promotion of clean and energy efficient road transport vehicles*. FINAL REPORT. EUROPEAN COMMISSION – DIRECTORATE-GENERAL FOR MOBILITY AND TRANSPORT (2015), at 116–122, 125–126.

prescriptive (on the monetization options) and under-prescriptive (on establishing a “clean vehicle”), and its application to *all* purchases of vehicles by *all* CAs overly strict.¹⁴⁷ As a result, the language was amended by Directive 2019/1161/EU so that the procurement of clean vehicles “complies with a minimum target” relative to all transport vehicles in the country.¹⁴⁸ The move from the procurement process-related requirements on the CAs to a MS level target, which trickles down to the CAs as a “semi-mandate,”¹⁴⁹ changes the *specificity* of the law, yet does not necessarily soften it.¹⁵⁰

The *delegation* of authority remains similar in both the old and current versions of the directive in that the CAs are the obliged *institutions*, whose actions the MSs are to monitor. The Commission has been granted limited oversight in this regard, given that it has only the authority to review the MSs’ measures *post fact*. The enforcement of the Directive, as amended by Directive 2019/1161/EU, required the MS to self-report on their progress, without, however, clear legal consequences for a failure to meet these targets or the requirements under the Directive.

Applying the theoretical framework on the hardness of environmental considerations, the Clean Vehicles Directive thus can be considered to be in the higher end of the spectrum (S/H), even though it has been recently softened on its precision. We continue the analysis of the Clean Vehicles Directive in Section IV.B (Procurement of mobility).

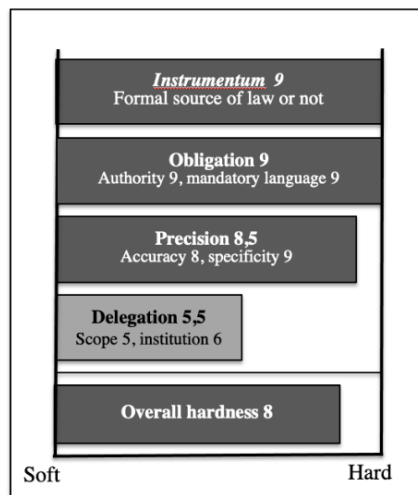


Figure 6. Hardness of the EU Clean Vehicles Directive in GPP.

¹⁴⁷ *Id.* at 84–85.

¹⁴⁸ See Directive 2019/1161 *supra* note 115, at art. 5(1); see also Recitals 10, 11, and 24).

¹⁴⁹ Romera and Caranta, *supra* note 77.

¹⁵⁰ *Id.*

C. Group C – Product policies and sectoral instruments

The general and product specific *procurement* legislation on the sustainability of purchases can be complemented by general product policy instruments. These instruments are not originally procurement specific, but they contain environmental objectives and environmental criteria that address product groups that are important in public procurement. While useful already as they are, they can be further developed to support GPP, for example, by creating minimum environmental quality standards for products to access the market in general.

The Directives on Energy Efficiency (2012/27/EU, EED)¹⁵¹ and Energy Performance of Buildings (2010/31/EU, EPBD)¹⁵² as well as the EcoDesign Directive are prominent instances from this group. In fact, they also contain specific rules on procurement. Conceptually, parts of these laws could thus be categorized as belonging to Group B. Other important instruments from this Group C on instruments setting product-specific environmental requirements are in the EU the Directive on batteries and accumulators (2006/66/EC),¹⁵³ the Regulations on timber products ((EU) 995/2010),¹⁵⁴ on organic food (2018/848/EU),¹⁵⁵ and on the fuel efficiency of car tires (2020/740/EU).¹⁵⁶

1. The Energy Efficiency Directive

The EED sets a wide range of measures that MSs must take to promote energy efficiency. The Directive contains also various *precise* provisions on public procurement. It is *specific* in determining that the CAs of the central government shall choose the best performing products in terms of various energy and environment-related qualities. The obligations are also defined with *accuracy*; products to be preferred by the CAs are listed and include commodities, tires of the highest energy efficiency class, and buildings of a specified efficiency level.¹⁵⁷ The MSs are also to encourage the CAs to enter into long-term energy efficiency contracts when procuring services with a significant energy content.

¹⁵¹ Directive 2012/27, of the European Parliament and of the Council of 25 October 2012 on Energy Efficiency, Amending Directives 2009/125/EC and 2010/30/EU and Repealing Directives 2004/8/EC and 2006/32/EC, 2012 O.J. (L 315) 1 (EU) [hereinafter EED].

¹⁵² Directive 2010/31, of the European Parliament and of the Council of 19 May 2010 on the Performance of Buildings, 2010 O.J. (L 153) 13 (EU) [hereinafter EPBD].

¹⁵³ Directive 2006/66, of the European Parliament and of the Council of 6 September 2006 on Batteries and Accumulators and Waste Batteries and Accumulators and Repealing Directive 91/157/EEC, 2006 O.J. (L 266) 1 (EC).

¹⁵⁴ Regulation 995/2010 2010 O.J. (L 295) 23 (EU).

¹⁵⁵ Regulation 2018/848 2018 O.J. (L 150) 1 (EU) [hereinafter Organic Products Regulation].

¹⁵⁶ Regulation 2020/740 2020 O.J. (L 177) 1 (EU).

¹⁵⁷ EED, *supra* note 151, art. 5 ¶ 1(5), art. 6 ¶ 1, and annex III (listing the energy-efficient solutions to be preferred in annex III).

The hardness of the *mandatory language* of the directive from an environmental perspective is however reduced by the requirement that the purchases also be consistent with “cost-effectiveness, economic feasibility, wider sustainability, technical suitability as well as sufficient competition.”¹⁵⁸ This leaves room for *in-casu* balancing between environmental and other objectives. The EED provides also medium levels of *delegation*: the Commission is given broad powers to adopt delegated acts to define energy efficiency requirements in relation to public procurement,¹⁵⁹ while its enforcement powers are limited to reviewing the effectiveness of the MSs’ acts post fact. Compliance with the energy requirements of buildings is verified through energy performance certificates.¹⁶⁰ The Directive does not specify the imposition of penalties or corrective actions for a failure to comply with its obligation to procure highly efficient products, unlike what it does for negligence with other obligations in the directive. Overall, the Directive is indeed quite hard an instrument of GPP (8/H) (Fig. 7), and the Commission has recently published a proposal that recasts the EED, including its provisions relating to public procurement.¹⁶¹

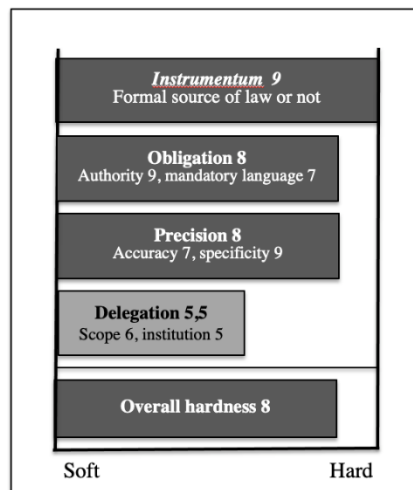


Figure 7. Hardness of the EU Energy Efficiency Directive (EED) in GPP.

¹⁵⁸ *Id.* annex III.

¹⁵⁹ *Id.* at art. 24, ¶ 8. Also see *Id.* at Recital 3, on national targets and reform programmes.

¹⁶⁰ EED, *supra* note 151, annex III, para. 2. The requirements on buildings are set by Article 11 of the EPBD. EPBD, *supra* note 152.

¹⁶¹ See *Commission Proposal for a Directive on Energy Efficiency (Recast)*, at art. 7, COM (2021) 558 final (Jul. 14, 2021).

2. The Directive on the Energy Performance of Buildings

The EED is closely linked to the EPBD. The EPBD contains rather hard minimum requirements and rules for calculating and certifying energy performance of buildings. Like EED, it has rules overlapping with Group B, as it requires all buildings occupied and owned by public authorities to be near-zero energy buildings from 2019 onwards (Fig. 8).¹⁶² It requires MSs to set *accurate* requirements for building contracts, requiring a very high energy performance (kWh/m²/year) calculated according to the general reference framework formula set out in the Annex to the directive.¹⁶³ The building's energy must be, to a large extent, from renewable sources to meet the definition of a nearly zero-energy building. The *accuracy* and *specificity* of the obligations are further hardened by the above noted EED,¹⁶⁴ but softened because they are weighed against technical and economic functionality.¹⁶⁵ The EPBD shows well how procurement can promote the creation of green markets: while the zero-energy requirements applied to new public buildings from 2019, they apply to all new buildings in the EU from 2021. Thus, the requirements for public CAs and other purchasers of buildings have converged through transitional provisions. There is a clear and broad *delegation* of enforcement obligations and power on the Commission to review the implementation by MSs, even the authority to develop action plans, provide suggestions and measures to MSs to ensure compliance with the directive.¹⁶⁶ The MSs, for their part, verify and monitor the energy performance of buildings, and also penalize

¹⁶² EPBD, *supra* note 152, pmb. ¶ 17, arts. 6, 7, 9, 11.

¹⁶³ *Id.* at annexes I and III.

¹⁶⁴ *See* EED, *supra* note 151, art. 6, annex III.

¹⁶⁵ EPBD, *supra* note 152, art. 6.

¹⁶⁶ *Id.* art. 9; art. 10 ¶¶ 3–5; art. 19 and art. 20 ¶¶ 2, 4.

non-compliant buildings, including buildings supplied by procurement processes that have already been concluded.¹⁶⁷

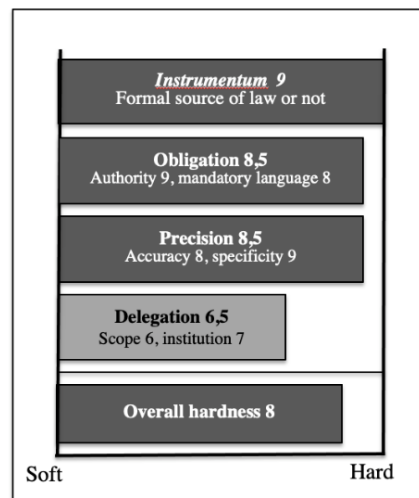


Figure 8. Hardness of the Energy Performance of Buildings Directive (EPBD) in GPP.

3. Eco-design and the circular economy policies

The EcoDesign Directive is probably the most prominent regulatory instrument that the EU has enacted to govern the environmental qualities of products.¹⁶⁸ It sets mandatory market access requirements on the minimum energy efficiency and some material efficiency related qualities for energy-related products that cause significant environmental impacts and are sold in large quantities on the EU market. There are two ways in which the EcoDesign Directive could be made more supportive of GPP. On the one hand, the minimum requirements of the directive could be extended to product groups that are of high environmental importance in procurement. Thus, implementing regulations could be drawn up for the ESPGs. On the other hand, consideration should be given to those environmental characteristics that are relevant *specifically* for improving the sustainability of procurement. The EcoDesign Directive could thus create a very hard element on governing procurement: by setting a floor, i.e. a minimum standard, the directive mandates the removal of those products and product qualities that, from the

¹⁶⁷ See *id.* arts. 11–18, and 27.

¹⁶⁸ PREBEN KRISTENSEN, NORDIC COUNCIL OF MINISTERS, INTEGRATED PRODUCT POLICY 2020 – A NORDIC DISCUSSION PAPER REGARDING A COHERENT EUROPEAN PRODUCT POLICY 75 (2019), <https://norden.diva-portal.org/smash/get/diva2:1384958/FULLTEXT01.pdf> (last visited Jul 15, 2021); Davide Polverini & Ugo Miretti, *An Approach for the Techno-Economic Assessment of Circular Economy Requirements Under the EcoDesign Directive*, 150 RES., CONSERVATION AND RECYCLING 104425 (2019).

specific viewpoint of procurement, are the most detrimental. When setting the environmental floor, maintaining sufficient supply on the market at large is important. Indeed, by setting demanding, common minimum environmental requirements, the directive would also improve the functioning of the EU's internal market of procurement.

Because the *mandatory language* is put in practice through the Commission's implementing regulations, the instrument is hard also in terms of the *delegation* of *institutional* authority (Fig. 9). EcoDesign adds a further element of hardness as it *delegates* the responsibility of monitoring compliance with the essential product requirements, including the environmental ones, to national Market Surveillance authorities.

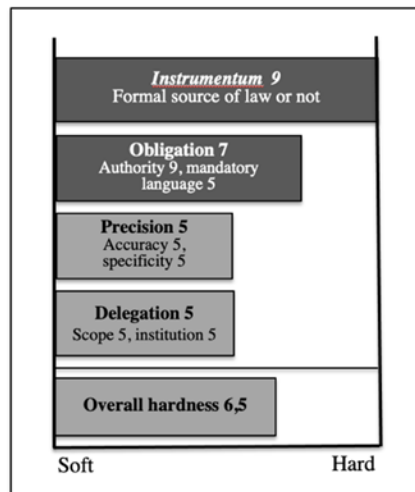


Figure 9. Hardness of the EcoDesign Directive in GPP.

D. Group D – Instruments on particular environmental impacts

There are also broader, horizontal policies and laws that have emanated from a particular environmental impact or type of an environmental instrument, rather than a specific product or sector. On the other hand, multiple product specific rules have been subsequently promulgated on the basis of these laws as implementing measures or other rules of lower status. Group D includes the Energy Labelling Regulation (2017/1369/EU), Type 1 eco-labels,¹⁶⁹ Type 3 eco-declarations,¹⁷⁰ the EU's Product Environmental Footprint (PEF),¹⁷¹ and tools to determine the carbon foot- and handprints of products. New standards are also emerging as a part of the new Circular Economy Action Plan of 2020 on product durability, reparability, and recyclability.

1. Eco-labels and energy markings

While the EcoDesign Directive in Group C can harden procurement law by setting a regulatory floor on environmentally problematic products, there are means to harden procurement also from the opposite direction: creating incentives and requirements that pull the market beyond the products' minimum requirements and average environmental performance. Type I Eco-labels such as the EU Eco-label and the Nordic Swan are ISO 14024 compliant voluntary labels that independent third-party verifiers can award to applicants who meet the demanding environmental criteria that have been set for a particular product group. The EU Energy Labelling Regulation sets criteria that determine the energy efficiency of various products, using categories A–G. The use of the Energy Label is mandatory in applicable product groups. Both eco-labels and energy labels can contribute to purchase decisions by providing a basis of accurate environmental information.

Also, Eco-labels overlap with Group B, as they are explicitly taken into account in EU procurement law.¹⁷² They harden the *accuracy* of the EU's PPD by describing the rationale and the ways to use the eco-labelling criteria when procuring products for which criteria have been established.¹⁷³ While an eco-label thus can be used for defining the specific, applicable environmental criteria, a tenderer can prove compliance with such criteria also by means

¹⁶⁹ As defined by the ISO 14020 standard. International Organization for Standardization, *14020:2000 Environmental labels and declarations*, (Sep. 2000).

¹⁷⁰ *Id.*

¹⁷¹ *The Environmental Footprint transition phase*, EUR. COMM'N, https://ec.europa.eu/environment/eussd/smgp/ef_transition.htm; *Commission Recommendation of 16 December 2021 on the Use of the Environmental Footprint Methods to Measure and Communicate the Life Cycle Environmental Performance of Products and Organisations*, at 5, COM (2021) 9332 final (Dec. 12, 2021).

¹⁷² *Public Procurement Directive*, *supra* note 36, pmbl. ¶ 75, art. 43.

¹⁷³ *Id.*

other than obtaining that particular label. The flexibility in proving compliance is important to avoid discrimination between suppliers or labels.

Reversely, the EU Eco-labelling Regulation (66/2010/EU)¹⁷⁴ stipulates¹⁷⁵ that the MSs are to encourage their CAs to use the EU procurement manual, which in turn refers to Eco-labels. The EU MSs are to consider setting targets for the procurement of products that fulfil the criteria of the manual. This provision hardens, to a degree, the mandate on the MSs. The cross-reference also hardens the rules by making the consideration of environmental aspects more *precise*, both in terms of their *accuracy* (by determining the eco-label criteria for a particular product) and their *specificity* (by explicit reference to the CA' use of the manual). The labels could, from the viewpoint of procurement, be further leveraged by setting criteria on ESPGs.

In contrast to Eco-labels, the Energy Labelling Regulation delegates the drafting of detailed rules on the labels to the Commission. The regulation adds *accuracy* to procurement law, as CAs can refer to the labels' energy efficiency requirements in the tender documents, and the energy efficiency of the supplied products can be checked on the basis of the labelling (Fig. 10). For products that are defined in delegated acts, the regulation allows the MSs to offer incentives only for products that are from the two best energy efficiency classes, assuming there are significant numbers of products available. Hardness is further added via the link to above-described EED, which stipulates that CAs can only procure goods with the best energy label.¹⁷⁶ Finally, the mandate in the law could be hardened to a fuller, more *accurate* obligation to translate selected environmental qualities into technical requirements or award criteria. This obligation should nonetheless be subject

¹⁷⁴ Regulation 66/2010, 2010 O.J. (L 27) 1 (EU).

¹⁷⁵ *Id.* at art. 12 ¶ 3.

¹⁷⁶ *Public Procurement Directive*, *supra* note 36, annex III ¶ a.

to the preconditions set for drafting product specific requirements (Section III.B above).

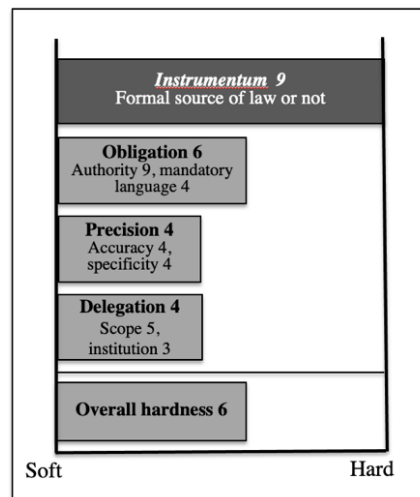


Figure 10. Hardness of the Energy Labelling Directive in GPP.

2. Instruments to measure the environmental impacts of procurement

The hardness of procurement law can be improved by increasing the accuracy of the requirements that apply to the purchased products. Information-based environmental law instruments, such as eco- and energy labels, have developed multiple requirements to this effect. There is also growing interest to develop more horizontal, standardized means and tools to measure the carbon and environmental footprints of products and even organizations. They seem very useful for creating product specific requirements for procurement, to compare the bids in the tenders, and to predict and assess the realized environmental impacts of a procurement.

The Product Environmental Footprint (PEF) is a prominent example of such a method. It is a life-cycle based multi-criteria measure developed under the auspices of the Commission to provide information on the many environmental impacts of products. The 16 environmental impact categories included rely on scientifically sound impact assessment methods that are agreed upon at an international level.¹⁷⁷ The Commission is piloting PEF and has recommended that MSs should use the PEF “while ensuring that such

¹⁷⁷ LUCA ZAMPORI & RANA PANT, EUROPEAN COMMISSION, SUGGESTIONS FOR UPDATING THE ORGANISATION ENVIRONMENTAL FOOTPRINT (OEF) METHOD 24 (2019), <https://publications.jrc.ec.europa.eu/repository/handle/JRC115960> (last visited Jul. 19, 2021).

policies do not create obstacles to the free movement of goods in the EU.”¹⁷⁸ The PEF Category Rules (PEFCRs), developed by the product group specific technical secretariats for the ESPGs, would find in procurement an important area of application, as long as they are easily accessible and feasible to apply for the CAs and the suppliers.¹⁷⁹

The carbon *handprint* is another method that takes the *accuracy* of the instrument one step further by still allowing the CAs to measure and compare the reductions achieved by different product choices in a specific, actual use scenario, not just in the abstract. They are currently only suitable for specific procurement cases and require considerable expertise.

All in all, further development of the methods and skills for assessing impacts from the viewpoint of products, tenders and organizations is required.¹⁸⁰ The assessments are essential because they will allow governments and purchasing authorities to include procurement in institutional GHG reports and carbon budgets. That, in turn, will incentivize organizations to unleash the full potential of procurement-related environmental savings. This is already the case in Norway¹⁸¹ and in the Netherlands¹⁸² as a part of the local climate budgeting and planning. The often voluntary carbon budgets could be hardened by setting GHG-emissions reduction targets in climate legislation. Many organizations prepare climate budgets already on a voluntary basis, so climate law-based mandates may be the closest proxy for explicit targets for improving the environmental sustainability of public procurement.

E. Contextual elements

To achieve the economic and ecological objectives of public procurement, three contextual building blocks are required for the legal and policy

¹⁷⁸ Commission Recommendation of 16 December 2021 on the Use of the Environmental Footprint Methods to Measure and Communicate the Life Cycle Environmental Performance of Products and Organisations, at 5, COM (2021) 9332 final (Dec. 12, 2021).

¹⁷⁹ Results and Deliverables of the Environmental Footprint Pilot Phase, EUROPEAN COMMISSION, https://ec.europa.eu/environment/eussd/smgp/PEFCR_OEFSR_en.htm (last visited Jul 24, 2021).

¹⁸⁰ See UPPHANDLINGSMYNDIGHETEN [PROCUREMENT AUTHORITY], MILJÖSPENDANALYS - BESKRIVNING AV EN METOD FÖR ATT INTEGRERA KLIMATPÅVERKAN I ALLMÄNNA INKÖPSANALYSER [ENVIRONMENTAL SPENDING ANALYSIS - DESCRIPTION OF A METHODOLOGY TO INTEGRATE CLIMATE IMPACT INTO GENERAL PURCHASING ANALYSES], (Dec. 2019), https://www.upphandlingsmyndigheten.se/globalassets/dokument/publikationer/miljospendanaly-s-rapport_2019_4.pdf (last visited Jul 16, 2021); AURE ADELL ET AL., UNITED NATIONS ENVIRONMENT PROGRAMME, GREEN PUBLIC PROCUREMENT IN THE REPUBLIC OF KOREA: A DECADE OF PROGRESS AND LESSONS LEARNED 29–36 (2019), <https://wedocs.unep.org/bitstream/handle/20.500.11822/32535/GPPK.pdf?sequence=1&isAllowed=y>.

¹⁸¹ Public Procurement Expert (Norway), *Expert interview – Governing and Measuring Green Public Procurement* (May 7, 2020).

¹⁸² Public Procurement Expert (The Netherlands), *Expert interview – Governing and Measuring Green Public Procurement* (May 8, 2020).

instruments of Groups A–D: green public procurement strategies, long term support structures, and information-based support and monitoring.¹⁸³

First, the successful implementation of GPP is contingent upon the establishment of concrete procurement strategies, both by the state and its municipalities, as well as the CAs.¹⁸⁴ When sustainability objectives are included in procurement strategies, they become a better part of a proactive value creation process and get implemented in practice.

Second, sufficient institutionalized support for the CAs seems essential to accelerate environmentally sustainable procurement. The support for CAs encompasses, for example, information on environmental products and requirements, best practices, and the enhancement of green procurement skills.¹⁸⁵ An agency or other organization of a more permanent nature and with sufficient resources, such as the National Agency for Public Procurement¹⁸⁶ in Sweden, is one option. A more decentralized approach, like the KEINO competence center for sustainable and innovative public procurement¹⁸⁷ in Finland, appears like another alternative. GPP 2020 is an example of an EU-level project, where support structures were created or further enhanced in eight EU Member States.¹⁸⁸

Third, it is important to generate and provide reliable information about the observed environmental impacts at each of the three stages of the procurement processes: input (environmental aspects of tenders (see Section III.A above)), output (environmental aspects of the actual selection) and impacts (of the selected products on the biophysical environment).¹⁸⁹ Without monitoring and verification, the legislative and regulatory provisions cannot be developed and implemented properly. The EU is introducing compulsory reporting on the uptake of GPP by the CAs¹⁹⁰ to update the scant scientifically proven data on the environmental impacts of procurement.¹⁹¹ Norway has ambitious plans in digitalizing the procurement process, including the

¹⁸³ Katriina Alhola, Finnish Environment Institute, Expert Address at the HILMI Workshop on the Legislation and Monitoring in Green Public Procurement (June 16, 2020). Finland for example has a national procurement strategy (*infra* note 198).

¹⁸⁴ *Id.*

¹⁸⁵ *Id.*

¹⁸⁶ UPPHANDLINGSMYNDIGHETEN [PROCUREMENT AUTHORITY], <https://www.upphandlingsmyndigheten.se/en/> (last visited Aug 12, 2021).

¹⁸⁷ HANKINTAKEINO [PROCUREMENT], <https://www.hankintakeino.fi/en/about-keino> (last visited Aug 12, 2021).

¹⁸⁸ *About GPP 2020*, GPP 2020: PROCUREMENT FOR A LOW-CARBON ECONOMY, <https://gpp2020.eu/about-gpp-2020/> (last visited Dec 8, 2021).

¹⁸⁹ KALIMO ET AL., *supra* note 7 at 115–16.

¹⁹⁰ New Circular Economy Action Plan, *supra* note 12.

¹⁹¹ KALIMO ET AL., *supra* note 7 at 125–26.

information flows.¹⁹² Also the economic upside of a better-informed procurement process seems very promising.

IV. POLICY MIXES FOR GPP: A STUDY ON THREE ESPGS

This article has thus far provided a systematization of legal and policy instruments to govern the environmental aspects of public procurement and analyzed prominent examples of instruments in these groups against the theoretical framework of hardness. There is a wide variety of instruments available, and many ways to develop these instruments further along the four dimensions of “hardness” (Fig. 1). This “hardening” of instruments seems to typically shift them in our “accuracy”-based systematization (Fig. 3), towards, and in some cases right into, Group B: instruments that are specific both to a particular group of products and to procurement as a process.

Moreover, the instruments can be closely intertwined, as highlighted e.g. by the nexus between the Energy Efficiency Directive and Energy Labelling Regulation. The instruments can be combined into complementary policy and legal mixes that together reach considerably higher marks on “hardness” than they do individually. To illustrate this combined effect, and to show the practicability of our approach, we next test it on three Environmentally Significant Product Groups (ESPGs)—food, mobility, and electricity—in our case study country, Finland.

A. Food and catering

1. The procurement and the environmental impacts of food and catering

The value of public procurement of food and catering in Finland is approximately EUR 350 million annually. This entails more than 380 million meals each year in schools, hospitals, and other public organizations. Food and catering account for 1–3 percent of all public purchases.¹⁹³

The most significant environmental impacts of food and catering in Finland are their GHG emissions, the loss of biodiversity and the use of natural resources.¹⁹⁴ They occur mostly during the phase of primary food production.¹⁹⁵

¹⁹² See *About the Norwegian Digitalisation Agency*, DIGDIR, <https://www.digdir.no/digdir/about-norwegian-digitalisation-agency/887> (last visited Dec 10, 2021). See also *Our New Digital World*, REGJERINGEN.NO [NORWEGIAN GOVERNMENT], <https://www.regjeringen.no/contentassets/00493dd2f00347098f15274e9302d392/en-gb/pdfs/our-new-digital-world.pdf> (last visited Dec 10, 2021).

¹⁹³ MAA- JA METSÄTALOUSMINISTERIÖ, LOCAL FOOD – BUT OF COURSE!: THE LOCAL FOOD PROGRAMME AND LOCAL FOOD SECTOR DEVELOPMENT OBJECTIVES FOR 2025 13 (2021), <https://julkaisut.valtioneuvosto.fi/handle/10024/163175> (last visited Aug 12, 2021).

¹⁹⁴ For fruit and vegetables, cereals, oils and fats.

¹⁹⁵ *Commission Staff Working Document: EU green public procurement criteria for food, catering services and vending machines*, at 4, SWD (2019) 366 final (Sep. 27, 2019) [hereinafter *EU GPP Criteria for Food*].

The carbon footprint of publicly served meals consists mainly of the content of the food (over 80%) and of the food leftovers (around 10%). Energy consumption in the cooking phase as well as transportation represent less than 10% of the carbon footprint.¹⁹⁶ Food packaging also has a small impact on the environment.¹⁹⁷

2. Integrating environmental considerations in the procurement of food and catering

Food and catering offer an excellent example of a sector where the relevant legal and policy mix on GPP is only emerging. It remains quite heterogeneous and soft. There are multiple ways to influence behavior, yet, for environmental effectiveness, it is also essential to maintain the focus on the most significant environmental impacts. Figure 11 is a non-exhaustive illustration of the

¹⁹⁶ LOUNASHEIMO, J., HELONHEIMO, T. & KALJONEN, M., TURUN RUOKAPALVELUIDEN HIILJALANJÄLJEN VÄHENTÄMINEN [REDUCING THE CARBON FOOTPRINT OF TURKU'S FOOD SERVICES] (2019), https://www.turku.fi/sites/default/files/atoms/files//turun_ruokapalveluiden_hiilijalanjaljen_vaehentaminen.pdf.

¹⁹⁷ Further noteworthy impacts include the soil degradation, emissions of methane, nitrous oxide and nitrate (in several food categories), declining fish stocks, harmful substances in aquaculture and the generation of waste.

essential policy instruments and contextual elements in the procurement of food.

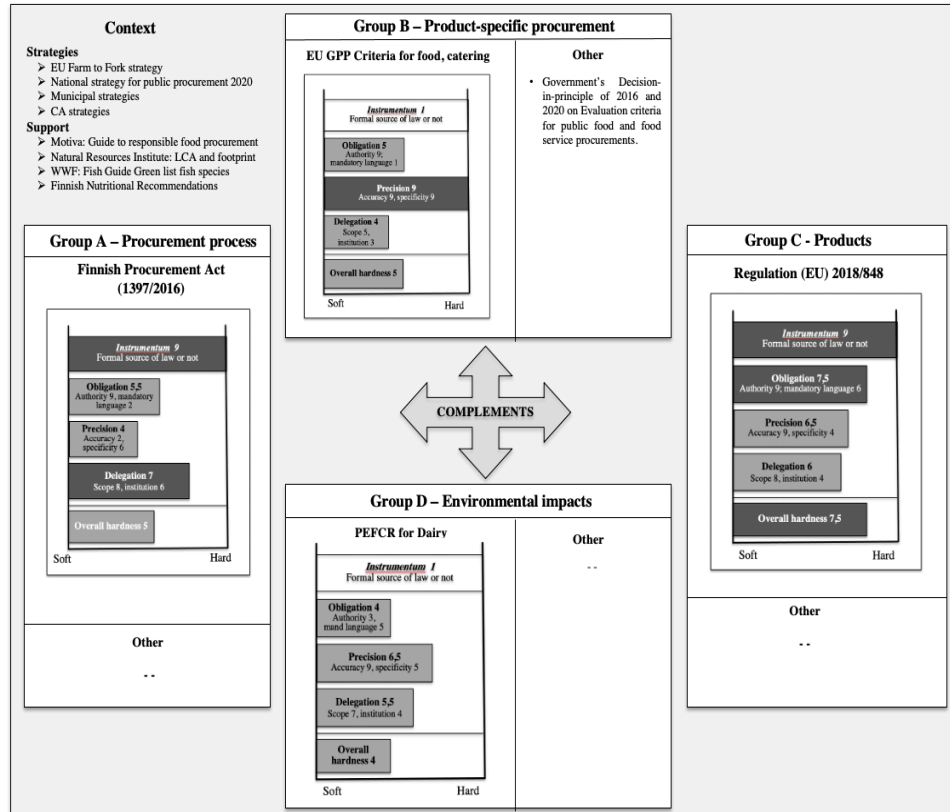


Figure 11. Overview of the principal instruments in the GPP of food.

GPP strategies at different levels of governance are important for the greening of food procurement. At the EU level, the food sector is included in the European Green Deal and has been addressed in the Farm to Fork Strategy.¹⁹⁸ The strategy recognizes that food systems remain one of the key drivers of climate change and environmental degradation in the EU.¹⁹⁹

The EU level strategy is connected with the national level, where in Finland the Government's decision-in-principle establishes the National public

¹⁹⁸ *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system*, COM(2020) 381 final (May 20, 2020) [hereinafter European Commission, Farm to Fork Strategy].

¹⁹⁹ *Id.* at 3, 5, 13.

procurement strategy of 2020.²⁰⁰ The strategy sets high quality and overall economic sustainability as objectives in the procurement of food and catering.²⁰¹ The target share for organic food in 2030 is 25% of food service purchases. The aim is pursued by requiring that the procured food and catering are produced with environmentally sound farming and in ways that promote animal welfare and food safety. Following the Finnish constitutional tradition, the national strategy is only a recommendation for the municipalities, whose large competences cover procurement. Municipal GPP strategies are nonetheless increasingly enacted and start to cover food relatively well. In particular, Finland's largest cities have proven an essential, and quite a hard contextual element, as they rate high both in terms of the necessary authority to oblige the CAs and their accuracy.²⁰² The strategic procurement goals of the municipal CA's flow from the respective municipal strategies on food, where such exist. There is very limited information on how well environmental considerations have been included in the input, output and impact phases of procuring food (or other products) in Finland, or elsewhere. A recent study in Sweden²⁰³ indicates that public organic food purchases can have a significant positive impact on organic farmland. The impact in Sweden was attributed to the common purchasing strategy of municipalities' CAs, which had joined their market power to minimize transaction costs and streamlined their tenders around a single set of criteria.²⁰⁴

Overall, procurement strategies at different levels play an important role in defining and implementing responsible food choices.²⁰⁵ Their accuracy is further increased by the various procurement guidelines described below, as well as by more detailed implementation plans. They identify the categories of food products that are particularly important for achieving the environmental objectives

²⁰⁰ VALTIOVARAINMINISTERIÖ [FINNISH GOVERNMENT], *Valtioneuvoston periaatepäätös kansallisesta julkisten hankintojen strategiasta* [Decision-in-Principle on the National Public Procurement Strategy] (VM/2020/156) (Sep. 10, 2020), <https://valtioneuvosto.fi/paatokset/paatos?decisionId=0900908f806d890d> (last visited Aug 12, 2021).

²⁰¹ *Id.* at 3, 12, and app. 3.

²⁰² *Id.* Municipal strategies seem to best fit the “contextual elements” in the systematization of instruments of this article.

²⁰³ Hanna Lindström, Sofia Lundberg & Per-Olov Marklund, *How Green Public Procurement can Drive Conversion of Farmland: An Empirical Analysis of an Organic Food Policy*, 172 *ECOLOGICAL ECON.* 106622, 10 (2020).

²⁰⁴ Kirsi-Maria Halonen, *Is Public Procurement Fit for Reaching Sustainability Goals? A Law and Economics Approach to Green Public Procurement*, 28 *MAASTRICHT J. OF EUR. AND INT'L L.* 535, 552 (2021).

²⁰⁵ EKOENTRIA, LISÄÄ LÄHIRUOKAA JULKISTEN KEITTIÖIDEN ASIAKKAILLE [MORE LOCAL FOOD FOR PUBLIC KITCHENS' CUSTOMERS] 11 (2017), <https://sakky.fi/sites/default/files/2021-03/L%C3%A4his.pdf> (last visited Aug 12, 2021).

Within this strategic context, the Finnish Public Procurement Act (PPA) is a central tool in integrating environmental considerations into food procurement. The PPA is a Group A instrument (see Section III.A), which enables the procuring entity to consider environmental aspects in several phases of the procurement process on food and catering. Already in the planning phase, the description of the procurement object²⁰⁶ can include the environmental aspects over the entire life cycle of the food and catering. This extends to the production processes and methods, if they are related to the subject matter of the procurement.²⁰⁷ Production processes and methods are important for the *precision* of the requirements to procure food, because the environmental impacts of food concentrate on the production phase. EkoCentria,²⁰⁸ a national development unit for promoting sustainable food in Finland, recommends that wherever possible, at least minimum environmental requirements be included in the procurement.²⁰⁹ Environmental aspects, such as low use of plant protection products, can also be used as award criteria in the assessment of the most economically advantageous food tender.²¹⁰ The PPA offers, overall, a medium hard means (5/M) to govern the GPP of food (Fig. 12).

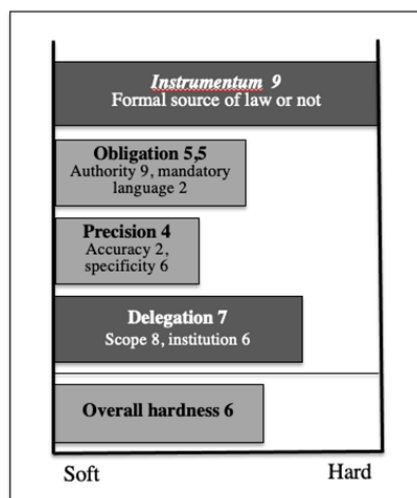


Figure 12. The hardness of Finnish Procurement Act in food procurement.

²⁰⁶ Finnish Public Procurement Act, *supra* note 88, § 71.

²⁰⁷ *Id.* § 94.

²⁰⁸ See EkoCentria, SAVON AMMATTIOPISTO, <https://sakky.fi/fi/ekocentria>.

²⁰⁹ EKO-CENTRIA, ELINTARVIKKEIDEN HANKINTAOPAS [A GUIDE TO FOOD PROCUREMENT] 5 (2017), <https://sakky.fi/sites/default/files/2021-03/Elintarvikkeiden%20hankintaopas.pdf> (last visited Aug 12, 2021).

²¹⁰ Finnish Public Procurement Act, *supra* note 88, § 93–94.

The procuring entity could further harden the use of the Finnish Public Procurement Act by making reference to existing labels (Group D) as a more accurate means of setting and proving requirements,²¹¹ as award criteria, or for defining the responsibilities of the supplier during the contract period.²¹² However, certified labelling systems have thus far been developed only for a few types of foodstuffs. Practical benchmarks for integrating environmental considerations are, on the other hand, increasingly available in Finland.

A further instrument of Group D that brings hardness to procuring food (services) are Product Environmental Footprints (PEF) as a general, consistent method to measure, communicate, and compare the potential life cycle environmental impacts of products within a product category.²¹³ Product category-specific methodological requirements for the calculation of PEFCRs have so far been developed for 19 product groups,²¹⁴ one of which are dairy products.²¹⁵ The PEFCR for dairy products (Fig. 13) cover liquid milk, dried whey products, cheeses, fermented milk products, and butterfat products.²¹⁶ Using PEF routinely in the public procurement of food and catering would require that PEFCR have been developed for the main product categories in question.²¹⁷ Research on the use of PEF in Finland has found that the costs of using PEFCR databases may hinder the use of PEF.²¹⁸

²¹¹ *Id.* § 72.

²¹² *Id.* § 98.

²¹³ Commission Recommendation, *supra* note 178, at 3, 9; ZAMPORI & PANT, *supra* note 177, at 27.

²¹⁴ Results and Deliverables of the Environmental Footprint Pilot Phase, *supra* note 179.

²¹⁵ THE EUROPEAN DAIRY ASSOCIATION, PRODUCT ENVIRONMENTAL FOOTPRINT CATEGORY RULES (PEFCR) FOR DAIRY PRODUCTS (2018), https://ec.europa.eu/environment/eussd/smgp/pdf/PEFCR-DairyProducts_2018-04-25_V1.pdf (last visited Jul 19, 2021).

²¹⁶ *Id.* at 3–4.

²¹⁷ JOHANNA SUIKKANEN & ARI NISSINEN, THE FINNISH ENVIRONMENT INSTITUTE, PRODUCT ENVIRONMENTAL FOOTPRINT (PEF) METHOD: USE FOR EVALUATING THE CLIMATE IMPACTS OF PUBLIC PROCUREMENT 10 (2020), <http://hdl.handle.net/10138/314111>.

²¹⁸ JOHANNA SUIKKANEN, ARI NISSINEN & MARIANNE WESNÆS, NORDIC COUNCIL OF MINISTERS, NORDIC SWAN ECOLABEL AND PRODUCT ENVIRONMENTAL FOOTPRINT: FOCUS ON PRODUCT ENVIRONMENTAL INFORMATION (2019), <http://norden.diva-portal.org/smash/get/diva2:1354808/FULLTEXT01.pdf>; *see also* VALTION RAVITSEMUSNEUVOTTELUKUNTA, TERVEYTTÄ RUOASTA: SUOMALAISET RAVITSEMUSSUOSITUKSET 2014 [HEALTHY FOOD: FINNISH NUTRITION RECOMMENDATIONS 2014] at 40–41 (5th ed. 2014), https://www.ruokavirasto.fi/globalassets/teemat/terveytta-edistava-ruokavalio/kuluttaja-jamattilaismateriali/julkaisut/ravitsemussuositukset_2014_fi_web_versio_5.pdf (last visited Jul 19, 2021) (encouraging reductions in the carbon footprint).

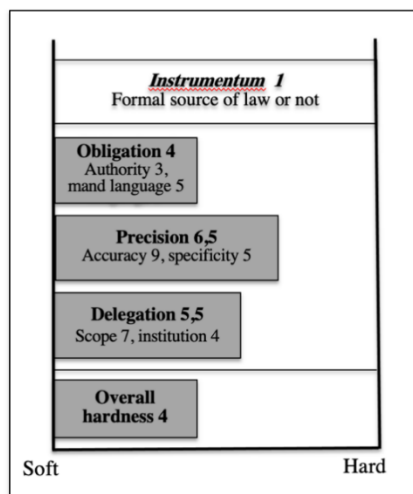


Figure 13. Hardness of PECFR for dairy products.

The Finish Natural Resources Institute (NRI),²¹⁹ a research institute under the Ministry for Agriculture and Forestry, is another organization to provide support and Group D type instruments in the Finnish context for assessing the environmental aspects of products to be procured. NRI has developed life cycle analysis and footprint calculation methods that can improve the accuracy for the agricultural and the food sectors.²²⁰ The use of a carbon footprint as a way to increase *accuracy* in food procurement remains nonetheless very challenging, as the generality and the descriptiveness of the input data of the calculations vary widely.²²¹

There exist also GPP instruments that are specific both to procurement and to food as a product group, and thus fall under Group B. The most prominent of them are the European Commission's voluntary GPP criteria.²²² Recently, the GPP criteria have been updated on food procurement and

²¹⁹ NATURAL RESOURCES INSTITUTE FINLAND, <https://www.luke.fi/en>.

²²⁰ One method is the EcoModules tool, which has been developed to assess the life cycle environmental impact of bioeconomy products in production chains. See EcoModules. biotaloustuotteiden elinkaaristen ympäristövaikutusten arviointi tuotantoketjuissa, LUKE LUONNONVARAKESKUS [ASSESSMENT OF LIFETIME ENVIRONMENTAL EFFECTS OF BIOECONOMY PRODUCTS IN PRODUCTION CHAINS], <https://www.luke.fi/fi/palvelut/ecomodules-biotaloustuotteiden-elinkaaristen-ymparistovaikutusten-arviointi-tuotantoketjuissa> (last visited Nov 16, 2022).

²²¹ Finnish Guide on Responsible Food Procurement, *infra* note 223 at 4–5.

²²² EU GPP Criteria for Food, *supra* note 195; A. BOYANO LARRIBA ET AL., EU GPP CRITERIA FOR FOOD PROCUREMENT, CATERING SERVICES AND VENDING MACHINES (2019), <https://publications.jrc.ec.europa.eu/repository/handle/JRC118360> (last visited Jul 19, 2021).

catering services,²²³ and further amendments are expected during 2022.²²⁴ The CAs can take advantage of these, thus far voluntary criteria, at least as points of reference during the various steps of procurement procedure. Although very soft in terms of their *instrumentum* and mandatory language, their precision, authority and delegation are hard (Fig. 14). They can harden the law on food procurement by making the requirements more accurate and placing the authority of the Commission behind them.

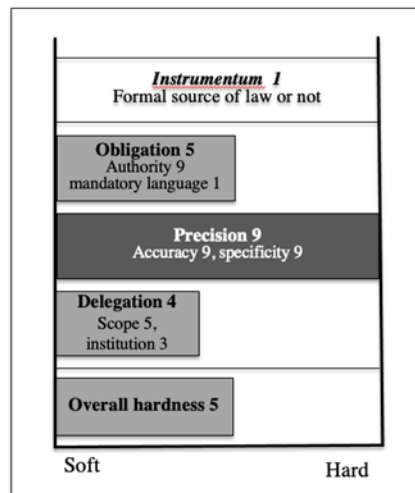


Figure 14. Hardness of GPP Guidelines in the GPP of food and catering services.

Another instrument from Group B is the Finnish Government's Decision-in-principle of 2016 on the Evaluation criteria for public food and catering procurement.²²⁵ The Decision-in-principle of 2016 was integrated with the 2020 strategy, mentioned above, and served also as the basis for a further

²²³ BOYANO LARRIBA ET AL., *supra* note 22222.

²²⁴ European Commission, Farm to Fork Strategy, *supra* note 198, at 8.

²²⁵ MAA- JA METSÄTALOUSMINISTERIÖ [MINISTRY OF AGRICULTURE AND FORESTRY], *Valtioneuvoston periaatepäätös julkisten elintarvike- ja ruokapalveluhankintojen arviointiperusteista (ympäristöyönteiset viljelytavat, elintarviketurvallisuutta ja eläinten hyvinvointia edistävät tuotanto-olosuhteet)* [The Government's decision in principle on the evaluation criteria for public food and food service procurement (environmentally friendly farming methods, production conditions that promote food safety and animal welfare)] (MMM/2016/115) at 1, (June 29, 2016), [https://valtioneuvosto.fi/paatokset/paatos?decisionId=0900908f804cfc99\(Fin.\)](https://valtioneuvosto.fi/paatokset/paatos?decisionId=0900908f804cfc99(Fin.)). The decision-in-principle of 2016 is now included as an appendix in Government's decision-in-principle of 2020 on a national public procurement strategy (Annex 3). See *supra* note 200. The Guide includes sustainability criteria (including environmental considerations) and procurement guidelines for seven product groups, *infra* note 226, at 2.

instrument: the Finnish Guide on responsible food procurement²²⁶ published by Motiva Ltd, a fully government-owned company that acts as a focal point for sustainable public procurement in Finland. The Guide, and Motiva in general, support the CAs when they set the criteria for responsible procurement of food in their strategic objectives. The example shows how the contextual element of general support structures transcends into specific instruments.

The Finnish Guide advises, for example, that the reporting on the use of antibiotics in fish farming may be required by the CA.²²⁷ For fish products specifically, a further support structure and instrument from Group B, namely the WWF and its “WWF Fish Guide”²²⁸ lists sustainable fish species. The Guide adds hardness due to the *de facto authority* of WWF and the *accuracy* of its contents in defining the environmental qualities of the (fish) products in the specific context of procuring them. The support structures and soft instruments again merge. This blurs their exact classification from a theoretical perspective, yet what counts in practice is the effectiveness of the policy mixes.

Finally, there is also a relevant instrument of Group C, product specific yet not procurement-focused instruments: Regulation (EU) 2018/848 on organic production and labelling of organically produced products (Fig. 15).²²⁹ This Regulation applies from January 1, 2021 in all MSs. It sets *mandatory* production and labelling rules for organic production in the EU. The Regulation lacks in terms of *obligation* and *accuracy*, as it does not set requirements specific for public procurement. The Commission has been *delegated authority* to amend the list of products set out in Annex 1.²³⁰ The Commission aims to put forward an Action plan on organic farming as one of the Farm to Fork Strategy’s initiatives.²³¹

²²⁶ MOTIVA, OPAS VASTUULLISIIN ELINTARVIKEHANKINTOIHIN – SUOSITUKSIA VAATIMUKSIKSI JA VERTAILUKRITEEREIKSI [GUIDE ON RESPONSIBLE PROCUREMENT] (2020), https://www.motiva.fi/files/18215/Opas_vastuullisiin_elintarvikehankintoihin_-_suosituksia_vaatimuksiksi_ja_vertailukriteereiksi.pdf (last visited Jul 19, 2021) [hereinafter Finnish Guide on Responsible Food Procurement].

²²⁷ *Id.*

²²⁸ WWF Fish Guide, WWF, <https://wwf.fi/kalaopas/> (last visited Aug. 17, 2021).

²²⁹ Organic Products Regulation, *supra* note 155.

²³⁰ *Id.* art. 2 para. 6.

²³¹ European Commission, Farm to Fork Strategy, *supra* note 198, at 8.

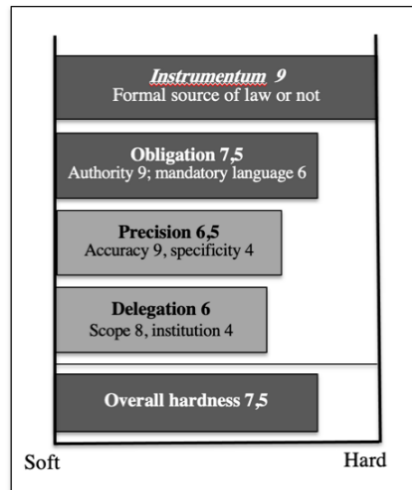


Figure 15. The hardness of Regulation (EU) 2018/848 in GPP of food.

Overall, there are instruments in all Groups–A, B, C and D–that complement one another on the procurement of specific food products in Finland. Although an advanced country in applying GPP, the Finnish legal and policy framework is nevertheless still far from a comprehensive, coherent setting on procuring food. The greening of procurement in food and catering relies on soft instruments in terms of their obligations. Support is available via contextual elements, such as Motiva and KEINO Competence centers, the Natural Resources Institute, and WWF. These institutions have been delegated authority and/or have claimed it and have been able to develop information and instruments that, while soft for lacking mandatory language, increase the hardness of the instruments to procure food along the criteria of authority, precision (mainly accuracy) and delegation.

The essential challenge of GPP of food remains understanding and raising awareness of the complicated and diverse product value chains, especially the origin of the raw materials.²³² Because environmentally sustainable procurement requires new types of skills and capabilities from food services,²³³ the long-term support structures for the procurers and awareness raising will need to be further improved. Developing and resourcing monitoring would also

²³² MOTIVA, VASTUULLISTEN ELINTARVIKEHANKINTOJEN STRATEGISEN JOHTAMISEN MALLI [STRATEGIC MANAGEMENT MODEL FOR RESPONSIBLE FOOD PROCUREMENT] 2 (2020), https://www.motiva.fi/files/18235/Vastuullisten_elintarvikehankintojen_strategisen_johtamisen_malli.pdf (last visited Aug 12, 2021).

²³³ MINNA KALJONEN ET AL., SYKE, ENVIRONMENTAL IMPACT NEEDS TO BE CONSIDERED IN NUTRITION RECOMMENDATION (2020), [https://www.syke.fi/en-US/Current/SYKE_Policy_Brief_Environmental_impact_n\(58421\)](https://www.syke.fi/en-US/Current/SYKE_Policy_Brief_Environmental_impact_n(58421)) (last visited Aug 12, 2020).

speed up the mainstreaming of environmental and social criteria in the purchases of food and catering.

B. Mobility

1. The procurement and the environmental impacts of mobility

The public procurement of mobility can be generally divided into the procurement of public transportation services and the procurement for the internal mobility needs of the public authority, including the purchases of vehicles.²³⁴ Public road transport services amounted to €1.4 billion in Finland in 2019-20. A further €350 million was spent on various transport services by taxi in 2017.²³⁵

The transport sector represents a quarter of Europe's²³⁶ and about 20% of Finland's²³⁷ greenhouse gas emissions and is one of the major contributors to climate change. Road transport accounts for 70% of the total emissions in the overall transport sector and is the leading cause of air pollution in cities.²³⁸ Life-cycle assessments on the environmental impacts of (road) transport vehicles and services generally consider three key components: fuel, vehicles, and infrastructure.²³⁹ Fossil fuel-based modes of urban transport are the most significant driver of emissions,²⁴⁰ yet full LCAs are demanding because mobility constitutes a complicated bundle of interrelated activities and significant infrastructural investments.

²³⁴ Passenger transport in Finland consists of both market-based services and services provided by public authorities pursuant to Regulation 1370/2007, 2007 O.J. (L315) 1 (EC).

²³⁵ See Road Transport Services (CPV 601), OpenTender Finland, <https://opentender.eu/fi/sector/601> (last visited Aug 17, 2021) for the full breakdown. The database uses CPV codes to distinguish the categories.

²³⁶ *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A European Strategy for Low-Emission Mobility*, COM (2016) 501 final (Jul. 20, 2016) [hereinafter *European Strategy for Low-Emission Mobility*].

²³⁷ Liikenteen Kasviuonekaasupäästöt ja Energiankulutus [Greenhouse Gas Emissions and Energy Consumption in Transport], LIIKENNEFAKTA (May 25, 2021), <https://www.liikennefakta.fi/fi/ymparisto/liikenteen-kasviuonekaasupaastot-ja-energiankulutus> (last visited Aug 17, 2021).

²³⁸ *European Strategy for Low-Emission Mobility*, *supra* note 236, at 2; Liikenne ja liikkuminen [Traffic and Mobility], MOTIVA, https://www.motiva.fi/julkinen_sektori/liikenne_ja_liikkuminen (Aug. 1, 2019).

²³⁹ INTERNATIONAL TRANSPORT FORUM, GOOD TO GO? ASSESSING THE ENVIRONMENTAL PERFORMANCE OF NEW MOBILITY 15 (2020), <https://www.itf-oecd.org/good-go-assessing-environmental-performance-new-mobility> (last visited May 28, 2021).

²⁴⁰ *Id.* at 23.

2. Integrating environmental considerations in the procurement of mobility

Figure 16 offers a non-exhaustive summary of the legal and policy mix to govern GPP in the area of mobility. The mix is quite comprehensive. As regards the contextual elements, various strategies have an important role in defining the essential environmental considerations and overarching objectives. Similar to the strategies on food, the targets cascade through different vertical levels of governance while increasing in specificity.

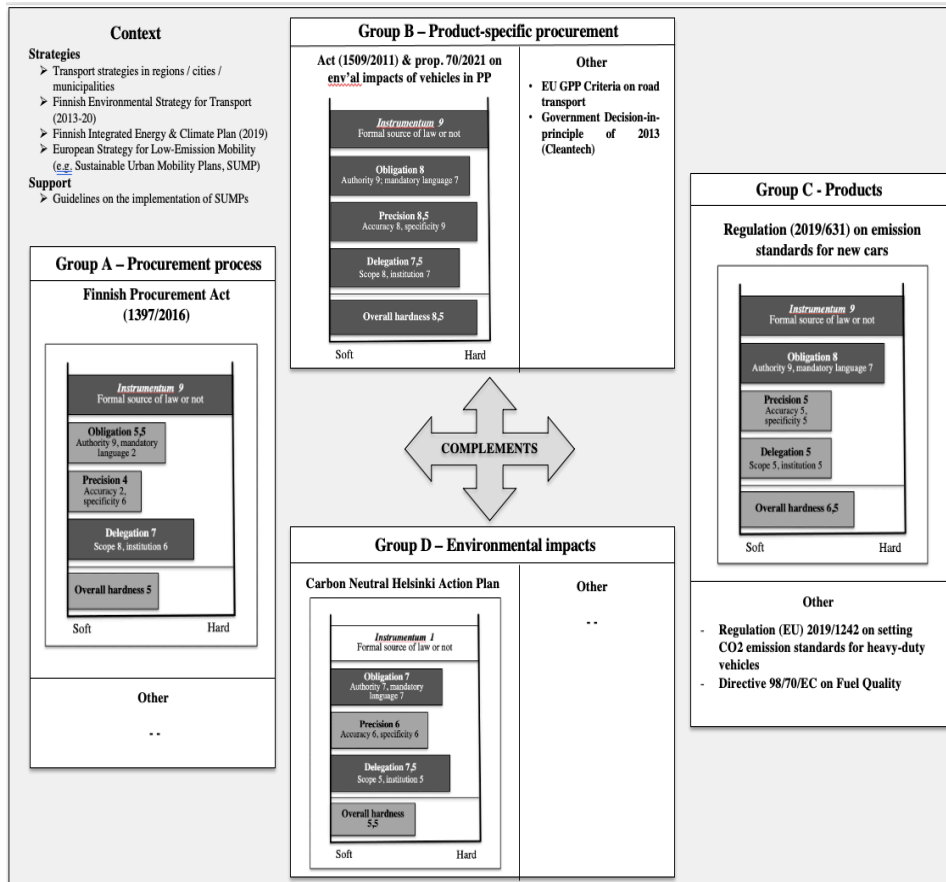


Figure 16. Overview of principal instruments in the GPP of mobility in Helsinki region.

At the EU level, the transport sector has an important role in achieving the Union's climate objectives. The overarching framework and priorities for reducing emissions in the sector are set out in the European Strategy for Low-Emission Mobility (EU Mobility Strategy):²⁴¹ (1) increasing the efficiency of the transport system and leveraging the use of digital technologies to support low-emission transport modes (2) use of low-emission alternative energy sources; and (3) moving towards zero-emission vehicles. Within this strategy, public procurement is a key instrument in supporting the market uptake of innovative, sustainable transport-related goods and services²⁴².

The EU's Mobility Strategy emphasizes the role of regions and cities in green mobility,²⁴³ and not least for their significant share in public procurement in the field. The EU Commission promotes the adoption of Sustainable Urban Mobility Plans (SUMP) in European towns and cities, setting guiding principles on how to develop urban areas in a more sustainable way.

At the national level, in Finland, there are several strategic documents that set environmental goals for the transport sector. The Finnish Integrated Energy and Climate Plan (2019)²⁴⁴ determines the overarching climate-related goals, including emissions and efficiency targets for the entire transport sector.²⁴⁵ The Finnish Environmental Strategy for Transport,²⁴⁶ unlike the other strategic documents, contains *specific* requirements and some *mandatory* language on the incorporation of environmental considerations in public procurement. The strategy translates the targets of the Integrated Energy and Climate Plan into more specific sub-targets and sets out the different mechanisms to achieve these objectives, thereby increasing the Plan's *accuracy* and *specificity*.²⁴⁷ The Strategy notes different CAs to whom its

²⁴¹ *European Strategy for Low-Emission Mobility*, *supra* note 236, at 3–9.

²⁴² *Id.* at 7–8.

²⁴³ *Id.* at 11–12.

²⁴⁴ TYÖ- JA ELINKEINOMINISTERIÖ [MINISTRY OF ECONOMIC AFFAIRS AND EMPLOYMENT], FINLAND'S INTEGRATED ENERGY AND CLIMATE PLAN (2019), <http://urn.fi/URN:ISBN:978-952-327-478-5> (last visited Aug. 18, 2021).

²⁴⁵ The target is to increase the share of renewable energy in the final energy consumption in the road transport to 30% by 2030 and at minimum 250,000 electric and 50,000 gas-powered vehicles/cars. *Id.*

²⁴⁶ LIIKENNE- JA VIESTINTÄMINISTERIÖ [MINISTRY OF TRANSPORT AND COMMUNICATIONS], LIIKENTEEN YMPÄRISTÖSTRATEGIA 2013-2020 [FINLAND'S ENVIRONMENTAL STRATEGY FOR TRANSPORT] (2013), <http://urn.fi/URN:ISBN:978-952-243-378-7> (last visited Jun 10, 2021) [hereinafter *Finland's Environmental Strategy for Transport*].

²⁴⁷ *See* LIIKENNE- JA VIESTINTÄMINISTERIÖN [MINISTRY OF TRANSPORT AND COMMUNICATIONS], KÄVELYN JA PYÖRÄILYN EDISTÄMISOHJELMA [WALKING AND CYCLING PROMOTION PROGRAM] (2018), <http://urn.fi/URN:ISBN:978-952-243-549-1> (last visited Aug. 18, 2021).

requirements apply,²⁴⁸ but remains softer on *specificity*, i.e. on what exactly they are mandated to do.²⁴⁹

At the lowest levels of governance in Finland are the transport strategies in regions, cities and municipalities and the city-level climate action plans. Most large and medium sized cities have their own Transport System Plans,²⁵⁰ which include priorities and goals on environment sustainability. Further, the city Climate Action plans provide an important impetus for incorporating environmental considerations in public procurement, with specific and ambitious targets attributed to selected undertakings in the mobility sector. The Action Plans can be classified as Group D as addressing a specific environmental objective, climate change, yet they can also include procurement specific elements, which moves them towards Group B. The Carbon-Neutral Helsinki's 2035 Action Plan²⁵¹ offers a best practice example: it aims at incorporating climate-focused considerations in all competitive bidding processes for the procurement of mobility-related services and vehicles.²⁵²

Although not a formal source of law, the Action Plan of Helsinki can be considered quite hard, with open-ended obligations²⁵³ and containing both horizontal and transport-specific environmental considerations on the use of life-cycle costing and how to increase shared use in procurement.²⁵⁴ The environmental criteria are *specific* and *accurate* in that they include an environmental bonus system²⁵⁵ and for the Helsinki Region Transport targets of 90% renewable fuels by 2020 and 30% electric buses by 2025.²⁵⁶ The Action Plan *delegates* a broad *scope* of procurement-related responsibilities to different city institutions, departments and agencies and requires the monitoring of procurement at the City Council level, not just by each CA.²⁵⁷ (Fig. 17).

²⁴⁸ Finland's Environmental Strategy for Transport 2013-2020, *supra* note 246 at 10–12.

²⁴⁹ *Id.* at 58.

²⁵⁰ Finland, ELTIS, <https://www.eltis.org/mobility-plans/member-state/finland> (last visited Aug. 18, 2021).

²⁵¹ CITY OF HELSINKI, THE CARBON-NEUTRAL HELSINKI 2035 ACTION PLAN (2018), http://carbonneutralcities.org/wp-content/uploads/2019/06/Carbon_neutral_Helsinki_Action_Plan_1503019_EN.pdf (last visited Aug. 18, 2021).

²⁵² *Id.* at 93.

²⁵³ *Id.* at 46.

²⁵⁴ *Id.* at 94, 96.

²⁵⁵ *Id.* at 46.

²⁵⁶ *Id.*; INTERNATIONAL ENERGY AGENCY, GLOBAL EV OUTLOOK 2020: ENTERING THE DECADE OF ELECTRIC DRIVE? 120 (2020), <https://www.iea.org/reports/global-ev-outlook-2020> (last visited Aug. 17, 2021).

²⁵⁷ *Id.* at 115–17; *see also* analysis in Annex 1.

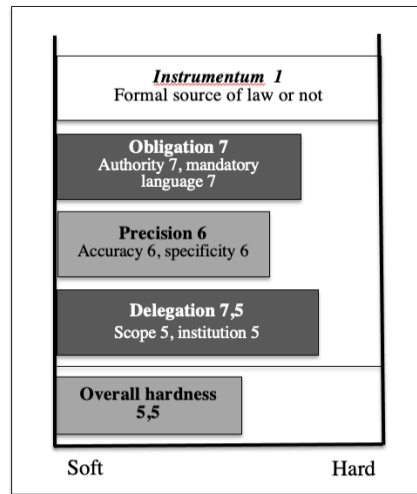


Figure 17. Hardness of Carbon Neutral Helsinki Action plan.

The multiple transport-related strategies are the context for legal and policy instruments, which set specific requirements for incorporating environmental considerations in the procurement of mobility. The Finnish Public Procurement Act²⁵⁸ is a widely applicable Group A instrument that provides, as discussed in the previous sections, an overarching, horizontal legal framework that enables and encourages CAs to incorporate environmental considerations in the procurement process.

Finland also issued the Cleantech Resolution in public procurement to promote sustainable environmental and energy solutions 2013–2020.²⁵⁹ The Cleantech Resolution falls under Group B: its goal was to reduce the consumption of materials and energy and environmental impacts across the life cycles of goods and services through the procurement of new cleantech solutions.²⁶⁰ The Resolution provided horizontal and transport sector *specific* requirements; the latter were identified as a priority in public procurement.²⁶¹ Further requirements were more prescriptive on vehicles than on transport services, setting a 100 g/km CO₂ emission limit and a 30% target for vehicles with new motive power solutions.²⁶² The Resolution also prescribed the criteria used for awarding an eco-label or the highest efficiency ratings as benchmarks

²⁵⁸ Finnish Public Procurement Act, *supra* note 88.

²⁵⁹ *Cleantech Resolution*, *supra* note 132.

²⁶⁰ *Id.* at part 2.

²⁶¹ *Id.* at part 1.

²⁶² *Id.*

in procurement.²⁶³ Although quite hard in terms of baseline environmental requirements, their transposition in the procurement processes by CAs remains more vague.

There are further rules of Group B that apply specifically to GPP in the transport sector. These rules can be found in the Act on the Procurement and Concessions of Entities Operating in the Water, Energy, Transport and Postal Services Sectors,²⁶⁴ and were also in the Act on the Consideration of the Energy and Environmental Impacts of Vehicles in Public Procurement (1509/2011).²⁶⁵ The latter implemented the EU's Clean Vehicles Directive 2009/33/EC, which was discussed under (3.2.3). Indeed, when using environmental criteria as a part of the bid evaluation, and where the environmental impacts are to be quantified in financial terms as the vehicle's lifetime environmental costs, the Act referred to the provisions of the Clean Vehicles Directive.

Notably, although a Group B instrument, ACT 1509/2011 was neither *mandatory* nor *specific*: it did *not set* any standard or level of energy consumption, emissions or particulate emissions that should be subscribed to in procurement. The *specificity* could be increased however, by making reference to other instruments, such as the requirements under relevant ecolabels, environmental legislation or the EU voluntary GPP criteria of Group D. It also should be noted that many baseline environmental requirements are set in the laws, rules and regulations that prescribe the minimum applicable standards on vehicles (Fig. 18) and on the fuels they use.²⁶⁶ These Group C instruments are applicable regardless of the Clean Vehicles Directive and its implementation.

²⁶³ *Id.*

²⁶⁴ Laki vesi- ja energiahuollon, liikenteen ja postipalvelujen alalla toimivien yksiköiden hankinnoista ja käyttöoikeussopimuksista [Act on acquisitions and concession agreements of units operating in the field of water and energy supply, transport and postal services], (Suomen säädöskokoelma [Säädk] 1398/2016), ch. 2 § 8 (Fin.).

²⁶⁵ LAKI AJONEUVOJEN ENERGIA- JA YMPÄRISTÖVAIKUTUSTEN HUOMIOON OTTAMISESTA JULKISISSA HANKINNOISSA, [Act on taking into account the energy and environmental impacts of vehicles in public procurement]. (Suomen säädöskokoelma [Säädk] 1509/2011) (Fin.).

²⁶⁶ See Regulation 2019/631, 2019 O.J. (L 111) 13 (EU) (setting emission performance standards on passenger cars and light commercial vehicles); see also Regulation 2019/1242, 2019 O.J. (L 198) 202 (EU) (setting CO₂ emission standards for heavy-duty vehicles); Regulation 540/2014, 2014 O.J. (L 158) 131 (EU) (setting sound level requirements); and see Directive 98/70, 1998 O.J. (L 350) 58 (EC) (as amended) (setting fuel quality standards and promoting the use of energy from renewable sources).

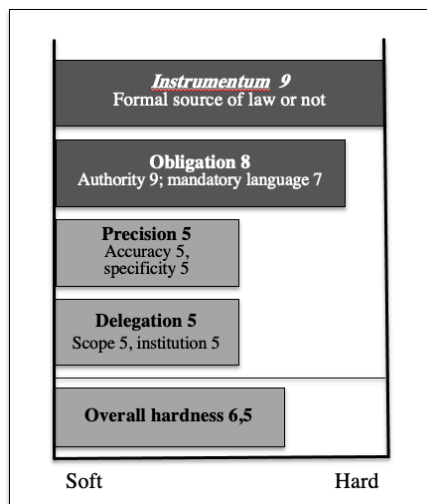


Figure 18. Hardness of Regulation (2019/631) on emissions standards for new cars.

The approach of the ACT 1509/2011 was however repealed by Act 740/2021²⁶⁷, which transposes the amendments of the new Clean Vehicles Directive.²⁶⁸ The new legislation defines what specifically would be considered as environmentally friendly vehicles and *mandates* the procurement targets on these clean vehicles for specific CAs. Around 5000 vehicles will fall under the scope of the law, and amended Clean Vehicles Directive 2019/1161 requires that in Finland, at least 38.5% (1700) are low emission vehicles (max 50g/km) in 2021-2025 and fully electric in 2026-2030.²⁶⁹ ACT 1509/2011 also referred to, but did *not mandate*, the CAs' use of criteria from eco-labels (Group D) when setting environmental requirements in the technical specifications.²⁷⁰ Currently the Nordic Ecolabel and the EU ecolabel do not have any criteria directly applicable on vehicles or on mobility services.²⁷¹ The most comprehensive and relevant supplementary instrument would be the EU GPP criteria on road transport.²⁷² The latter criteria provide for specific CO₂ and air pollutant emission thresholds and energy efficiency requirements for

²⁶⁷ Laki ajoneuvo- ja liikennepalveluhankintojen ympäristö- ja energiatehokkuusvaatimuksista [Act on the environmental and energy efficiency requirements for procuring vehicles and mobility services], (Suomen säädöskokoelma [Säädk] 740/2021) (Fin.).

²⁶⁸ Directive 2019/1161, *supra* note 115.

²⁶⁹ *Id.* §§ 1, 2, 6, and 9.

²⁷⁰ Act 1509/2011, *supra* note 265, § 4.

²⁷¹ The EU ecolabel covers lubricants applicable to vehicles, while the Nordic Ecolabel covers car (and boat) care products and vehicle wash installations.

²⁷² *Commission Staff Working Document: EU Green Public Procurement Criteria for Road Transport*, SWD (2019) 2 final (Jan. 8, 2019).

electric vehicles. The EU GPP criteria are by themselves *soft* in that they are voluntary. Due to the Commission’s *authority* and the criteria’s *specificity*, they are a useful reference point for CAs. Finally, the monitoring of the procurement obligations and progress toward reaching minimum targets is, in Act 740/2021, delegated to Traficom, the Finnish Transport and Communications Agency. In sum, the Act is one of the hardest instruments discussed in this article (Fig. 19).

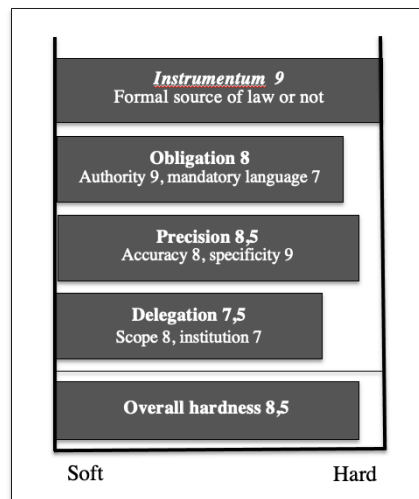


Figure 19. Hardness of the Finnish Act 740/2021.

Overall, procurement in mobility is characterized by a hard Group B core: the EU’s Clean Vehicles Directive, as transposed into Finnish law. There are multiple mobility procurement related instruments around the core. The city-level Climate Action Plans target the environmental impacts of vehicles from a horizontal perspective. These instruments are shifting from Group D to Group B, as they increasingly have procurement specific provisions. Group C (product specific rules on vehicles and their emissions) lower the level of emissions, generally speaking, in the background. The instruments of Groups B–D in turn are complemented by the Procurement Act (Group A), on the one hand, and by rich, multi-layered network of strategies as contextual elements, on the other. The strategies underline the societal importance of the sector and push the CAs towards environmentally sustainable procurements.

C. Electricity

1. The procurement and environmental impacts of electricity

The unique characteristics of the third sector studied here, electricity markets, is that the procured product is largely uniform, the number of suppliers is limited and the product falls under special regulation as an essential service. The public sector accounted for around 7% of electricity consumption in Finland in 2020,²⁷³ valuing ca. EUR 570 million. The CA typically concludes a contract with an energy company, which procures the electricity on the Nordic electricity exchange on behalf of the CA. The national and municipal CAs are mostly covered by their respective joint procurement agreements, managed by the non-profit joint procurement unit Hansel Ltd.

The environmental impacts of electricity are caused mostly during the production phase.²⁷⁴ In 2019, about 47% of Finland's electricity production was generated from renewable energy sources, about 12% from fossil fuels, 35% from nuclear power, and 4% from peat.²⁷⁵ The main environmental impacts of electricity are greenhouse gas emissions, other emissions (e.g. affecting air quality) and the use and depletion of non-renewable resources, as well as biodiversity loss and land use in building the infrastructure.²⁷⁶ Public procurement can play an important role in stimulating the demand for renewable electricity, but also in reducing the consumption of electricity through more electricity-efficient technologies and equipment.

2. Integrating environmental considerations in the procurement of electricity and electricity-using devices

The policy mix on regulating the environmental considerations of electricity procurement in Finland is quite comprehensive, as the overview of the essential instruments in Figure 20 illustrates. Electricity is, first of all, covered by the Finnish Public Procurement Act (PPA).²⁷⁷ As discussed above, the PPA as a Group A instrument that mainly regulates the process of how the tendering is carried out, so its hardness in the procurement of electricity is

²⁷³ Energy: Total Energy Consumption, OFFICIAL STATISTICS OF FINLAND, https://www.stat.fi/tup/suoluk/suoluk_energia_en.html (last visited Aug 18, 2021); Sähkö [Electricity], MOTIVA, https://www.motiva.fi/julkinen_sektori/kestavat_julkiset_hankinnat/tietopankki/sahko (last visited 11 Nov 11, 2021). The value is calculated using an average price and consumption in (2010/2020), ca. 10 eurocents / kWh for a total of 5,7 TWh.

²⁷⁴ EUROPEAN COMMISSION, EU GPP CRITERIA FOR ELECTRICITY 2 (2012), <https://ec.europa.eu/environment/gpp/pdf/criteria/electricity.pdf> (last visited Aug 18, 2021).

²⁷⁵ Appendix figure 1. Electricity generation by energy source 2019, STATISTICS FINLAND (Nov. 3, 2020), https://www.stat.fi/til/salatuo/2019/salatuo_2019_2020-11-03_kuv_001_en.html (last visited Aug 18, 2021).

²⁷⁶ EU GPP CRITERIA FOR ELECTRICITY, *supra* note 274, at 2.

²⁷⁷ Finnish Public Procurement Act, *supra* note 88.

similar (medium level (5)) to that of purchasing food, mobility-related or other products.

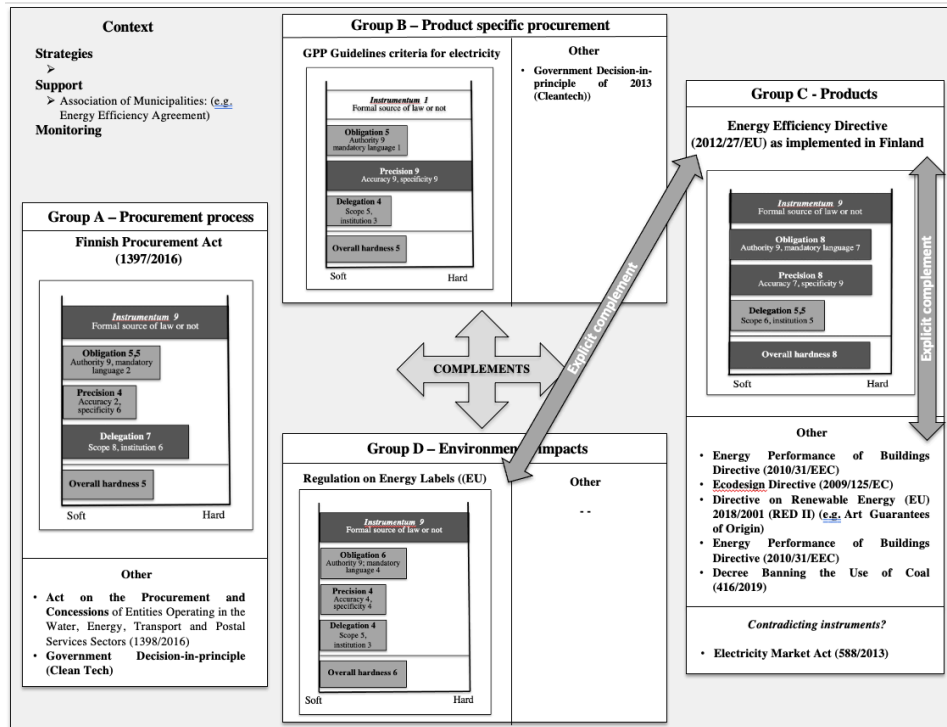


Figure 20. Overview of principal instruments in the GPP of electricity and electricity-using devices in Finland.

Second, in principle the method of generating electricity, which is the main environmental consideration on electricity, can be regulated either by determining the source(s) of electricity that are fed into the grid or by prescribing the conditions under which the CA (including the intermediating Tendering agent) purchase electricity from the electricity company. At the EU level, the central piece of legislation on the energy markets is the Directive on Renewable Energy (EU) 2018/2001 (RED II).²⁷⁸ This sector-specific law falls under Group C in our categorization of GPP-related instruments. It allows Member States to grant subsidies to promote the production of electricity from

²⁷⁸ Directive 2018/2001, of the European Parliament and of the Council of 11 December 2018 on the Promotion of the use of Energy From Renewable Sources, 2018 O.J. (L 328) 82 (EU) [hereinafter RED II].

renewable energy sources.²⁷⁹ The Member States retain however the competence to determine their energy mix and to choose the means to achieve the targets²⁸⁰ and Finland has not set any specific targets for the generation of electricity from renewable resources under RED II. This limits the guiding effect of RED II on procurement.²⁸¹ Although implemented in Finland as a legally binding *instrumentum* and hard also in terms of the *authority*, RED II is soft on many aspects relating to procurement, i.e. mandatory language, precision, and delegation.

Another key piece of energy legislation in Group C in Finland is the Electricity Market Act.²⁸² Under the Act, all electricity producers that meet the technical requirements must have access to the grid on a non-discriminatory basis and without regard to the type of electricity generation or the energy source. This Act thus seems more contradictory than complementary to the policy mix for GPP. However, in the EU, whether the procured electricity is from renewable sources can be verified from the Guarantees of Origin,²⁸³ which must accompany the sale. The Finnish national government entities have with their Joint Purchase Agreement procured energy exclusively from renewable sources, while with municipalities there is variance.²⁸⁴ From 2029 onwards, however, coal-based electricity generation will be prohibited:²⁸⁵ the Decree Banning the Use of Coal for Energy Purposes is a product-specific, Group C instrument that alters from the supply side the GPP of electricity in a notable and definitive way. In general, the current electricity related acts, like the implementation of RED II, are quite soft along the dimensions of obligation, precision and delegation as far as environmental considerations in procurement are concerned.

²⁷⁹ See, e.g., Laki uusiutuville energialähteillä tuotetun sähkön tuotantotuesta [Act on Support for the Production of Electricity from Renewable Energy Sources] (Suomen säädöskokoelma [Sääd.] 1396/2010) (Fin.); see also FINLAND'S INTEGRATED ENERGY AND CLIMATE PLAN, *supra* note 244, at 93–95.

²⁸⁰ TALUS KIM, EU-ENERGIAOIKEUDEN PERUSTEET [INTRODUCTION TO EU ENERGY LAW] 56 (2016); Case C-573/12, Ålands vindkraft AB v. Energimyndigheten, ECLI:EU:C:2014:2037 (July 1, 2014); Joined Cases C-204/12 to C-208/12, Essent Belgium NV v. Vlaamse Reguleringsinstantie voor de Elektriciteits- en Gasmarkt, ECLI:EU:C:2014:2192 (Sept. 11, 2014).

²⁸¹ Commission Staff Working Document: Assessment of the final National Energy and Climate Plan of Finland, SWD (2020) 925 final 9 (Oct. 14, 2020).

²⁸² SÄHKÖMARKKINALAKI [ELECTRICITY MARKET ACT], (Suomen säädöskokoelma [Sääd.] 588/2013 § 20. The Electricity Market Act is supplemented by regulations. See, e.g., VALTIONEUVOSTON ASETUS SÄHKÖMARKKINOISTA [DECREE ON ELECTRICITY MARKET], (Suomen säädöskokoelma [Sääd.] 65/2009) (Fin.).

²⁸³ RED II, *supra* note 278, art. 19.

²⁸⁴ E-mail from Hansel.fi. to Harri Kalimo, Professor of L., Vrije Univ. Brussels - Brussels Sch. of Governance, (Nov. 15, 2021, 10:59 CET) (on file with author).

²⁸⁵ Laki hiilen energiakäytön kieltämisestä [Law Banning the Use of Coal for Energy Purposes], (Suomen säädöskokoelma [Sääd.] 416/2019) § 5 (Fin.).

Further, because electricity is a form of energy, it falls under the EU's Energy Efficiency Directive (EED) as well as the Directive on the Energy Performance of Buildings (EPBD). As discussed earlier, the EED and EPBD are hard instruments of Group C. The EPBD contains hard minimum requirements and rules for calculating and certifying energy performance. All public buildings have been required to be nearly zero energy buildings since 2019, and the MSs are to set *accurate, demanding* requirements for building contracts, including an ambitious energy performance target.²⁸⁶ The rules promote not only savings in electricity, but also the supply of electricity from renewable sources. The combination of Articles 5, 6, and Annex III of EED require specifically the procuring authorities of central governments to choose for products covered by another instrument, the Energy Labelling Regulation of Group D, those that belong to the highest efficiency class possible in the light of the need to ensure sufficient competition. Moreover, for products that fall under the implementing measures of the EcoDesign Directive (in Group C), the central authorities are only to purchase products that comply with the energy efficiency benchmarks of these measures. As may be recalled from Section III.C, the EcoDesign Directive and its implementing measures as well as the Energy Labelling Regulation constitute (very) hard instruments, so their combinations with the EED and EPBD form a very hard (8.5/H) governance mix of instruments from different Groups for greening the procurement of electricity (Figures 20 and 21).

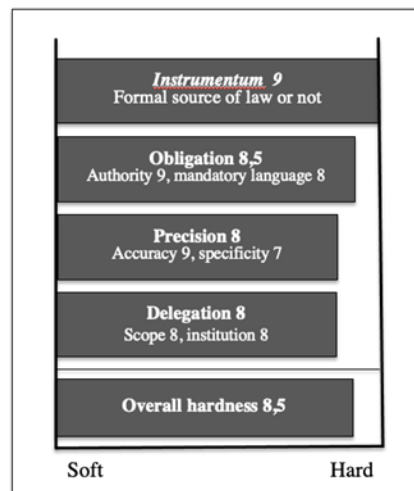


Figure 21. Hardness of the (explicitly) complementary Energy Efficiency Directive (EED), Energy Performance of Buildings Directive (EPBD), Energy

²⁸⁶ EPBD *supra* note 152, pmb. 17, arts. 6, 7, 9, 11.

Labelling Regulation, and EcoDesign Directive in the regulation of electricity procurement in Finland.

Moreover, the EcoDesign Directive influences the procurement of electricity also in more general terms by completely excluding from the market the most energy consuming equipment. Because this aspect of the law is not procurement specific but applies horizontally as a market access requirement on all electricity using products, it remains rather *inaccurate ratio materiae*. The Energy Labelling Regulation complements the governance by obliging the displaying of the energy consumption of the products on an A–G scale. This assists the CAs beyond the mandatory link to the EED, because it allows the CAs to refer to the criteria underlying the scales when preparing and implementing the environmental aspects of the tenders on electricity consuming products.

Further electricity-consumption related information is provided by the European Commission’s GPP criteria for electricity in 2012.²⁸⁷ The GPP belong to Group B, because they are specific both to the product and to procurement activities. The “core criterion” set by GPP is that at least 50% of electricity is produced from renewable energy sources while the more ambitious, “comprehensive criterion” sets a requirement of 100%. The core criteria also allow for efficiently combining heat and power production from renewable energy sources, with additional points awarded in proportion to the percentage of electricity produced above the 50% renewables threshold. While the CAs cannot require the product to have an eco-label, they can require compliance with the requirements of the eco-label related to the characteristics of the product or service.²⁸⁸ Similar to GPP criteria on food, the instrument complements procurement by adding *authority* and *precision* (Fig. 22).

²⁸⁷ EU GPP CRITERIA FOR ELECTRICITY, *supra* note 274.

²⁸⁸ *Id.* at 5.

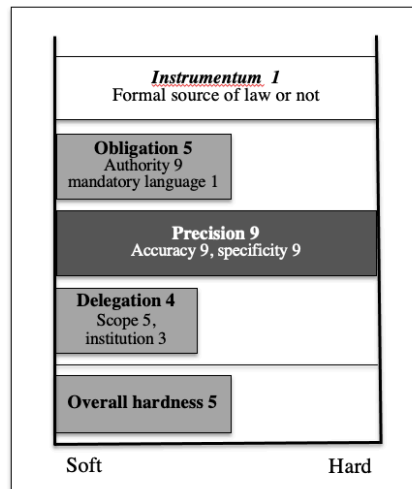


Figure 22. Hardness of the Commissions's GPP Guidelines on electricity.

The closest to regulating specifically the environmental aspects of public procurement of electricity in Finland is the above noted Government's "Cleantech Resolution". Although not a formal source of law (*Instrumentum*) strictly speaking, this Group B instrument applies to the public procurement of national (but not of municipal) authorities. The national CAs are, according to the Resolution, required to take into account the origin of electricity, with the objective to purchase electricity in particular from renewable energy sources. As a governmental decision, the requirements are rather hard in terms of their *authority*. Still, while rather precise in terms of its *accuracy* and *specificity*, the exact wording of the decision does not *mandate* the purchase of electricity produced from renewable energy sources as it indeed only states that "[w]hen purchasing electricity, *account shall be taken* of the origin of the electricity and *efforts shall be made* to purchase electricity produced in particular from renewable energy sources."²⁸⁹

The above mix of instruments on the GPP of electricity operates in a context that includes certain support structures. The municipalities can join the Energy Efficiency Agreement²⁹⁰ on more efficient use of energy. The

²⁸⁹ *Cleantech Resolution*, *supra* note 132, at 2. (Emphasis added)

²⁹⁰ ENERGY EFFICIENCY AGREEMENTS, <https://energiatehokkuussopimukset2017-2025.fi/en/agreements/> (last visited Aug 19, 2021). The Agreement is concluded between the Ministry of Economic Affairs and Employment, the Energy Agency and the Association of Municipalities ("Municipalities' Energy Efficiency Agreement 2017-2025").

Agreement commits the municipalities to increasing their energy efficiency and share of electricity from renewable sources as evidenced through Guarantees of Origin.²⁹¹ The Government supports the activity by granting energy saving subsidies to the contracting municipalities, although not direct aid for the purchase of more environmentally friendly energy.²⁹² The softness of this type of support means that the municipalities have the choice on how to implement the agreement. Of the 44 notifications made thus far by CAs on the procurement of electricity, only two CAs had explicitly required electricity produced from renewable energy sources, when given the final choice.²⁹³

In conclusion, the procurements of electricity and energy-using equipment illustrate a case with multiple, rather hard instruments of Group B (the Cleantech solutions), C (EED, EPBD and EcoDesign Directive) and D (Energy Labelling Regulation) which also have many close interconnections between them. This leads to a hard combined mix of legal and policy instruments at the core of GPP of electricity. The overall governance framework extends beyond this core through the Finnish Public Procurement Act, which remains relevant as an overall procedural framework (Group A), and not forgetting contextual elements, either.

D. Policy mixes in the sectoral governance of environmental procurement

Our case studies assessing the instruments that integrate environmental considerations into public procurement demonstrate that procurements in a specific sector can rarely be governed by a single instrument. While a procurement law to regulate the process of tendering is important, multiple tools are needed in combination. In the food sector, the combination currently consists of multiple softer instruments, and the instruments vary greatly because the sector itself is so fragmented. Close collaboration between the stakeholders, i.e. the CAs, the industry, and regulators seems like the most promising way toward sustainability. The procurement of electricity is quite different: the sector consists of a single commodity and hard instruments of groups B, C, and D that are closely intertwined, creating a hard policy mix. Mobility falls somewhere in-between food and electricity in terms of diversity. There are many soft strategies, but also the harder core of an instrument from the product-specific procurement Group B: the Clean Vehicles Directive.

It could be seen from the examples of the Clean Vehicles Directive (CVD) (mobility) and Cleantech Resolution (electricity) that merely belonging to Group B is only one step, however. For an instrument to be hard, the language also needs to be mandatory and precise, and the aspect of delegation properly

²⁹¹ *Id.* ¶ 6.9.

²⁹² Valtioneuvoston asetus energiätuen myöntämisen yleisistä ehdoista vuosina 2018–2022 [Government Decree on the general conditions on energy subsidies 2018-2022] (Suomen säädöskokoelma [Säädök] 1098/2017) art. 5 (Fin.).

²⁹³ Public Procurement official (Finland), e-mail communication, 15 November 2021 (on file with the authors).

addressed. Moreover, the 2009 CVD showed that an instrument may also prove too hard for its prescriptiveness, and so its language was softened in 2019. This is an important reminder that while related, the “hardness” of an instrument is distinct from its effectiveness. Effectiveness is also influenced by the legitimacy of the instrument – a quality which (excessive) hardness thus can also *decrease*. Finally, the Finnish examples highlight how support structures are essential in providing knowledge and skills to the CAs.

V. CONCLUSION

The public sector can support low-carbon, bio-diverse circular economy solutions by using its substantial purchasing power to buy goods, services, and works with a lower environmental impact. However, our international analysis confirms that so far, environmental considerations have in practice been integrated into public procurement only to a limited degree in most cases, and there is a lack of monitoring the use of the set criteria and the achievement of the environmental objectives in practice.

The limited progress comes as no surprise, because designing procurement practices that take environmental considerations into account is a demanding process that requires a good understanding of the procured products and their economic and environmental impacts, the processes and drivers of procurement decisions, and the potential for different policy instruments to effectively influence the situation. Our research aimed to contribute to responding to these challenges by providing a framework to systemize the massive governance work that still awaits in GPP. Our comparative analysis and case studies focus on GPP in the EU, and Finland more specifically. Still, while making proposals on how to develop these leading GPP regimes even further, our findings seem, substantively speaking, generalizable also to similar societal settings such as the United States.²⁹⁴

A. Tailored policy-mixes for ESPGs

We are able to conclude that addressing the environmental impacts and the longer-term economic sustainability of the public sector hinges on the development and integration of multiple instruments into policy mixes that are tailored to governing the most environmentally significant product groups (ESPGs) in different sectors of public procurement.

²⁹⁴ Our proposals can, e.g., harden the May 2011 amendments to the fragmented FAR Part 23, and the EPA’s rather weak Environmentally Preferable Purchasing Programme (EPP). Our proposal offers a systemic overview, as well as tools to make the instruments more obliging and precise, and with opportunities for further delegation. See KATE MANUEL & L. ELAINE HALCHIN, ENVIRONMENTAL CONSIDERATIONS IN FEDERAL PROCUREMENT: AN OVERVIEW OF THE LEGAL AUTHORITIES AND THEIR IMPLEMENTATION (2013), <https://sgp.fas.org/crs/misc/R41297.pdf> [<https://perma.cc/W65K-KN72>]. The *political* feasibility of our proposals in any given system is quite a different question, not addressed in this article. On the EU-US legal transplants on GPP, see e.g. Brill, *supra* note 13; Niyongere, *supra* note 13.

This means, as the first, important step, that the product groups that are indeed most significant from the *combined* perspective of procurement volumes and of reducing environmental impacts are determined. The list in Table 1, developed as a single-country case study in our research, offers exploratory insights on this demanding endeavor, adding a novel perspective to EU GPP Criteria or US EPA's EPP. Second, while Procurement Acts—laws on the *process* of procurement—are important, they alone are an insufficient means of guiding the greening of public procurement. The uptake of a wide range of other instruments, such as product-specific regulations, eco-labelling, and climate reporting are essential complements in incorporating environmental considerations into public procurement.

Further, the legal and policy instruments need to be developed gradually and with a strategic oversight on how to combine them in effective policy mixes. The policy instruments can complement, but may also hinder, each other in their interactions. Our research also demonstrated how the mixes of instruments to make procurement more environmentally friendly will vary considerably by product group and sector. Considering the international nature of many public procurement value chains and their environmental impacts, benchmarking and common requirements across the global markets and legal regimes seems essential.

The implementation of our two main findings, the definition of ESPGs and the development of policy mixes address them, necessitates proper support. First of all, a further institutionalization of procurement through permanent, adequately resourced structures and networks seems indispensable, as demonstrated by the Finnish and Swedish examples.²⁹⁵ The scope and complexity of the environmental and economic issues are significant, and so is the need for knowledge, skills, and simply resources in the CAs and companies on the ground. Second, and much related, the governance of the environmental impacts of procurement requires much closer monitoring and measurement than is currently the case. Measurement is needed throughout the procurement process, from the planning and preparation of the bid (input), to the tendering process (output) and the follow-up during the practical implementation (impacts). Norway's digitalization work on procurement processes is a leading example to keep an eye on.²⁹⁶ Third, it seems vital to ensure that the objectives on green procurement are also operationalized in the strategies of CAs. The City of Berlin provided an example²⁹⁷ of this practice by setting an obligation on the CAs to report on the purchases of ESPGs once the latter have been determined. Reporting is important already at the pre-procurement planning stage, and concern in particular reasons where a CA has *not* taken environmental factors into account in the procurement process. Importantly, any reporting duties on the CAs need to be developed hand in

²⁹⁵ The Keino network and the Upphandlingsmyndigheten, respectively (see Section III.E).

²⁹⁶ *Norwegian Digitalisation Agency*, *supra* note 192.

²⁹⁷ Berlin City Statute, *supra* note 100.

hand with the development of adequate institutional structures to support the CAs in their work.

B. Towards product group specific requirements

Our conclusion to approach public procurement from the viewpoint of the ESPGs paves the way for moving toward mandatory, product group or sector specific environmental requirements. Caution is however called for, following the three principles we proposed for drafting such rules. First, the benefits of setting environmental minimum requirements must be proven to outweigh the disadvantages in a product group specific assessment. Second, there should already be, or expected to soon be, sufficient competition in the affected markets between solutions that (will) meet the environmental requirements. Third, the share of public sector demand in the market must be significant in relation to total market demand. Alternatively, the public sector may seek to create new markets and lead by example as an early adopter. Close cooperation among several sectors of the public administrations is called for in drafting and implementing sector-specific rules. The EU's EcoDesign directive²⁹⁸ and its implementing regulations offered an example of a broader legal framework where requirements are set flexibly yet broadly through lower-level rule making. This work can be supported in a flexible and more binding way through different instruments of governance.

In sectors where the use of mandatory minimum standards as technical specification within an ESPGs would clearly have a negative societal impact overall, mandating the use of award criteria offers an alternative. Again, considerations of practical feasibility are important: the environmental award criteria need to be easy to apply by the CAs and suppliers and should, initially, have a moderate weighting. A gradual introduction, after assessing the criteria's actual *ex post* impacts on the economy and the environment in policy sandboxes, seems advisable. Criteria that are based on environmental performance rather than on technical characteristics are preferable for promoting eco-innovation.

Our case studies also highlight how already existing—yet rarely applied— instruments could be used to address an important bottleneck, the knowledge gap in the CAs and the suppliers. EU-level and international environmental criteria, such as those underlying the Type I eco-labels (ISO 14024), EU GPP model criteria or even more broadly the Product Environmental Footprints (PEFs) could, with better guidance, complement procurement much more extensively. International and regional criteria would also avoid unnecessary fragmentation and nationality-based discrimination on the procurement markets. The latter point epitomizes the potential that GPP has in integrating the economic and environmental objectives of more sustainable societies. This way, public procurement can finally better deliver on its significant potential to green the economy.

²⁹⁸ EcoDesign Directive, *supra* note 129.

C. GPP – a transformation in environmental and economic law?

The integration of sustainability into procurement law has long faced resistance on the grounds that it risks undermining the primary objective of procurement: efficient competition. Our observation is that this is changing. The political context is shifting, as is demonstrated for example by the European Green Deal. With it, even the classic demarcation lines between what is environmental law and what is economic law are becoming more fluid. Indeed, sustainability as a notion already integrates economic and environmental (and social) objectives. Our analysis of public procurement law demonstrates that there is a lot to be learned and achieved in addressing the environmental and economic objectives through a common legal framework. Besides its empirical importance for sustainability, procurement law may thus also be a vanguard of broader currents that may be transforming even the traditional systematization of ‘environmental’ and ‘economic’ law and policy.