

THE ROLE OF GREEN PUBLIC PROCUREMENT AT THE EU LEVEL IN SUSTAINABLE PUBLIC ADMINISTRATION THROUGH CSR

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Abstract. *This study aims to highlight the goodness of GPP practices in response to environmental and economic problems, with special reference to experiences in European countries. After a systematic review of the documental sources and regulations, the paper presents the results of a multidimensional analysis conducted on a cluster of 108 GPP practices, identified in the European Union and implemented by governments in 27 countries at central, regional and local levels. Among the analyzed variables includes the geographical origin of the cases, concerned administrative level, implementation period, GPP criteria of implementation, environmental and economic impact. The article, therefore, has the objective to reconstruct the state of the art of green public procurement at the European level through a comparative analysis.*

Keywords: *Green procurement; sustainability; CSR; sustainable public organizations; public administration.*

Introduction: research background and method

The lack of sustainable orientation of the current consumption model, based on increasing demand for resources, requires a change of direction, so that in the long-term the economic growth is not subject to failure and do not compromise the integrity of the environment and public health. In this scenario, the role of public spending becomes important, that is able to direct the purchases and the market towards greater sustainability.

The GPP development in Europe since the early 90's, was driven by the key role played by Rio de Janeiro meeting (UNCED, 1992), which marks the birth of a compendium of directions to be followed in the twenty-first century by each State, namely Agenda 21. The latter implies, in particular, the need to review the purchasing policies of agencies and departments in order to improve, if possible, the environmental implications of public procurement (UNCED, 1992). The structure of the Agenda is divided into four parts: social and economic dimensions, conservation and resource management for development, strengthening the role of the most significant groups and implementation instruments. Likewise, the concept of sustainable development, defined in 1987, is based on four key dimensions such as economic, social, environmental and institutional sustainability, and, such as Agenda 21, has some

convergent points with the Triple Bottom Line (3BL) approach, introduced by Elkington in 1995.

The author revises the concept of Corporate Social Performance (CSP) introduced by Carroll in 1979, which defines the achievement of the social goals of the businesses as the effect resulting from the combination of four different dimensions: economic, legal, ethical and philanthropic. Specifically, Elkington (1997) focuses his attention on the first three dimensions, placing at the core choices of Corporate Social Responsibility (CSR), the economic, social and, ultimately, the environment areas, as the key to success in the long run. Ongoing research by the public authorities of useful solutions to curb their impacts on the ecosystem, along with increasing public opinion attention to the environment, have forced governments to pay attention, increase efforts and deliver resources towards sustainable development. This led to considering Green Public Procurement (GPP) as an instrument able of binding the environmental dimension to public spending, as well of changing the former consumption patterns among countries (Table 1).

Table 1. Main benefits and barriers to GPP application

	BENEFITS	BARRIERS
REGULATORY PRESSURE	The inclusion of waste disposal costs in the financial statements; energy consumption and environmental report.	Too much elasticity of the legislation on the adoption of standards, uncertainty of certain rules; voluntary adoption of green standards and regulatory.
ECONOMIC ASPECT	Reduction of energy consumption costs; improving management efficiency and process; the possibility of revenues from new partnerships; reduce the price for environmental technologies; promote green job profile.	GPP's investments could limit the financial resources making it impossible to spending some primary investment; negatively affecting the profitability in short period; high prices of environmentally friendly products; high prices for the technologies.
SUSTAINABLE INNOVATION	The incentive to develop new supply chain processes in line with the environmental and social aspects (innovation at management level and / or production and / or knowledge).	The development and implementation of these practices may take the time to CEO and managers who could lose the primary objectives.
SOCIAL AND ENVIRONMENTAL ASPECT	Decrease of environmental impact, consumer loyalty, enhancement of reputation to the civil society, enhancement of relationship and partnerships with private and nonprofit organizations; use of alternative energy sources;	Some investments in favor of the stakeholders can increase the operating costs without the expected return; lack of specific expertise; lack of information.

The research aims to sketch out the state-of-art of the Green Public Procurement (GPP) practices in the European Union countries. The documental analysis on the last two decades regulatory measures and policy, initiated by the European Commission, aims to provide a summary of the major themes in the field of green public procurement, underlying the growing attention to the instrument by the Commission and its evolution towards Sustainable Public Procurement (SPP), along with the inclusion of

social and environmental requirements, within the tendering procedures (focus of the Directives from the beginning 2014).

The empirical research part is based on an exploration of a multi-dimensional cluster of 108 GPP practices (updated in November 2015), identified by the European Commission starting with 2010 and implemented by the 27 Member States public administrations at local, regional and national levels. In particular, a systematic analysis was carried out on the published cards by the European Commission.

Each card is structured on six dimensions, and underline:

- *the objective of procurement*, i.e. the reasons behind the public administration objectives to do a tender and the aims to be pursued;
- *the background*, a summary of the already activated GPP activities by the concerned public administrations;
- *the criterion used*, the information on the environmental criteria adopted (falling into one or more categories available at Community level), as well as additional information about the tender;
- *the results*, i.e. the description of the procedure outcome;
- *the environmental impact*, resulting from the end actions undertaken;
- *the lessons learned*, gathering key points on which to set future strategies and identified mistakes to avoid in the future purchasing procedures.

The information contained in the sections of the cards have been systematized, summarized and elaborated in order to present a mapping of public administrations initiatives and their critical reading on the basis of the main theories and models analyzed (NPM, PG, 3BL). According to the theory of 3BL, the variables analyzed include in addition to the geographical origin of the cases, the implementation period and level of government concerned, as well as the criterion used and the economic and environmental factors that are closely linked with the dimensions defining this theory. In particular, each variable has been operationalised into indicators, such as the starting year of the procurement contract; the country of reference; the complexity of the administrative structure, divided by local, regional/provincial and national; the tender sector (each containing the criteria to be used); the award criterion (most economically advantageous offer; lowest price or other methods); the presence or lack of economic and environmental impacts - positive, negative or none - both in quantitative and qualitative terms.

Through the case studies analyzed it was possible to identify the overlap between the regulatory processes of the European Commission and the Public Administrations initiatives, the most active geographical areas, the main government level involved and finally, the most used environmental criteria and award criterion.

Case study analysis: Green Public Procurement Initiative at the EU level

European Commission, through the Green Paper of 2001 recognized the increased importance of corporate social responsibility. CSR policy is defined by the business ability to integrate with activities, the environmental and social awareness, albeit voluntarily. Public sector sought a multi-stakeholder approach to the process of innovation and modernization of the public administration, aimed at the whole

community, understood as a society, since the 90s. During this period the attempts were first to overcome the traditional public administration through the transfer of operating modes from the private sector to the public sector, in order to improve the government management (OECD & PUMA, 1996). The difficulty of adapting to these logics has led over time to a passage from the NPM paradigm to that of Public Governance, which through a stronger cooperation between the public, private and civil society, focuses on the need for environment protection, the development of new technologies, the culture of individuality and internationalization of issues such as migration and development cooperation. Among the useful policy instruments to address the first requirement is the GPP, which has had a remarkable development, both at legal and theoretical level (Becchetti, Bruni & Zamagni, 2010; Bertoldi, Bornás, Monni & de Raveschoot, 2010; Bettini, Masini & Ricotta, 2006; Saltari & Travaglini, 2005; Szuppinger, 2005), to become a pillar on which it can support the environmental strategies at European level (Tukker et al., 2008).

Reviewing the main regulations stages on the theme of green procurement, 1996 definitely marks a turning point, along with European Commission's Green Paper on public procurement, which introduced the environmental and social requirements at the level of national and communitarian competitions. Back in 2001, the Sixth Environment Action Programme of the European Community (European Commission, 2001), defines the Integrated Product Policy (IPP) as a new paradigm of growth which is able to create wealth and competitiveness on the basis of eco-environmental friendly products.

Furthermore, it is suggested a strategy for fostering the production policies, requiring less use of resources, therefore, inducing a reduced environmental impact, ecological risks as well as greater attention to the production of waste, starting from the design phase. All these aspects contribute to the life cycle approach to the product, which along with the stakeholder's engagement, plays a key role in fulfilling the objectives. The bottom-up engagement model of this policy converges fully with the last decade slogan initiated by the Agenda 21 - "think globally, act locally". Later, with the National Action Plan on GPP, the IPP instrument is inextricably linked to the theme of green public procurement, stipulating within the tenders the integration of environmental criteria, thus ensuring increased widespread among the Member States (European Commission, 2003).

The European Commission (2014) reveals that twenty-two countries have included in their strategies and publicized their national plan of action, also sometimes in a renewed version, while, the other six do not possess any documents amenable to this plan (Table 2). In the same period, due to the considerable complexity reached by the EU administrative law, there are challenges to providing new solutions into the public procurement strategies, referring to regulatory provisions in the support of the environment. In a first stage, the Communication 274 of 2001, with which the Commission renew previous publications, describes the entire procurement process, identifying the contracts included in the directives and highlighting the possibilities offered by existing rules to structure the various stages of a procurement tender, starting with the definition of its subject to the execution and completion of the same.

Table 2. Status of implementation of PAN GPP in EU28

	Countries
PAN or equivalent document	Austria, Belgium, Bulgaria, Cyprus, Denmark, Finland, France, Germany, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Poland, Portugal, United Kingdom, Czech Republic, Slovakia, Slovenia, Spain, Sweden
No PAN exists	Croatia, Estonia, Greece, Luxembourg, Romania, Hungary

Later, the Directives 17 and 18 of 2004 support further certain decisions of the European Court of Justice, filling some gaps in legislation and providing the legal support on GPP. Both Directives, guiding the Member States currently, respectively govern the procedures of “Public procurement in water, energy, transport and postal services” and “Public procurement in work, supply, and services”. In support of the Member States efforts, the European Commission enacted the Communication 400 (2008) “Public procurement for a better environment”, which accompanies the action plan “Sustainable Consumption and Production” and “Sustainable Industrial Policy” of the same year (European Commission, 2008).

According to the first directive, the Green Public Procurement is defined as “the approach by which Public Administrations integrate environmental criteria into all stages of the acquisition process, encouraging the spread of environmental technologies and development of environmentally sound products, through research and choosing outcomes and solutions that have the least impact on the environment throughout the life cycle”. The definition, widely accepted by the literature, recognized the GPP as a tool able to guiding the market for products and services and allowing the Public Administrations to carry out their purchases with less impact on the environment, through the adoption of minimum environmental criteria. The second directive is concerned with the implementation of several measures aimed to improve the energy and environmental performance of the products throughout their life cycle and to stimulate the demand and the consumption of better quality products, creating a “virtuous circle”.

In the midst of financial and economic crisis, the European Union redefines its long-term objectives with a prospective to achieving sustainability. The objective is to “turn the crisis into an opportunity to promote the financial and ecological sustainability while developing likewise, a dynamic society with low-carbon economy, that makes efficient use of resources, both knowledge-based and socially inclusive, and to support this approach at the global level” (European Commission, 2009).

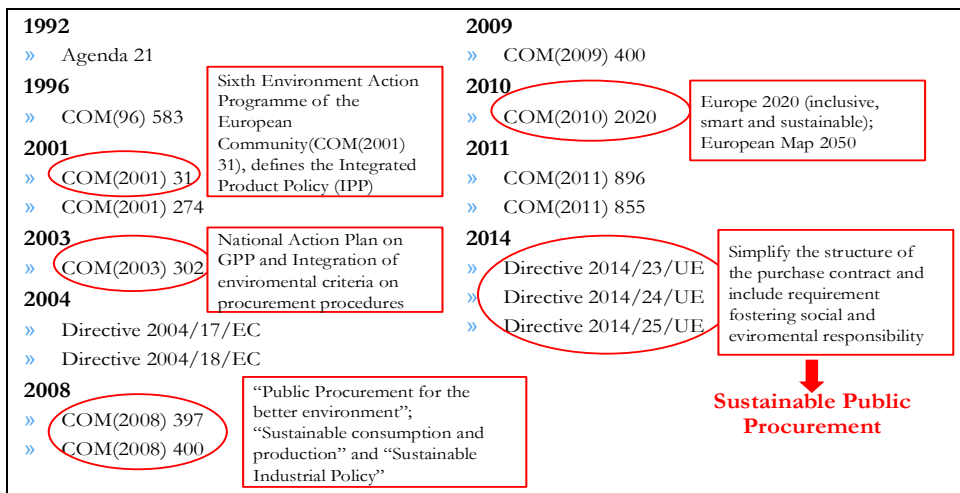


Figure 1. Relevant Regulations on Green Public Procurement

In March 2010, European Commission launched the Europe 2020 Strategy, which, in line with the provisions of the Kyoto Protocol, providing three approaches of growth (inclusive, smart and sustainable) to be implemented in the Member States, reaffirms the importance of public procurement as an element to “foster the transition to efficient economy in terms of resources and low-carbon emissions” (European Commission, 2010). The Strategy is inserted, in turn, into a larger project of long-run in which the European Union is involved, the “European Roadmap”, which requires the transition to a low carbon economy by 2050: -25 % in 2020, - 40% in 2030, -60% in 2040 and -80% in 2050.

In reaching targeted objectives, there is a need for a paradigm shift in the public authorities culture, that, enforcing the support to the future strategies and the European Union norms (European Commission, 2011), will be able to substitute, at the criteria of policy assignment of the “lowest price” to that of the “lowest cost”, taking into account the life cycle of the procurement (European Commission, 2014). The life cycle of the environment, make reference to the concept of Life Cycle Assessment (LCA), linked also to the Life Cycle Costing (LCC), which is the core of the Green Public Procurement (European Commission, 2003). A Life Cycle Assessment is defined by the European Commission, as a method of assessment of the product, process or activity impact on the environment throughout the life cycle. The public procurement norms identify a set of contracts, including those containing environmental considerations, seen as “particularly complex”, providing two alternative methods of assessment: lowest price and most cost-effective offer. In the second stage, defined by the situation in which the client undertakes a competitive dialogue phase, can be used for the costs calculation the criteria of Life Cycle Costing, a tool that allows considering the entire life cycle of the works, services or supplies covered by the procurement and not just their price. The traditionally used method by businesses and governments to calculate the life cycle cost is based on a purely financial analysis with four dimensions: the cost of investment, management, services and final disposal. The LCC method proposed within the environmental strategies, adds a fifth dimension, such as the external environmental costs, calculated by assigning a monetary value to the externalities detected by the analysis of the life cycle of the product (European Commission, 2014).

A diversified framework of practices is observed through the multidimensional analysis of the 108 GPP practices identified by the European Union. Specifically, concerning the research first dimension, namely the geographic origin, it is possible to observe that, although 42 cases of the total sample are from the Green-7: Austria (4), Denmark (4), Finland (6), Germany (8), Netherlands (5), Sweden (6), UK (9) (Table 3). The second dimension analyzed was the levels of government mostly engaged in activities of GPP. Such indicator underlines the predominant engagement of the local government (58%) (Municipalities, universities, schools, museums and other organizations or local authorities), which, often supported by political level, are engaged in environmental causes since early 2000s: Barcelona (Spain), Budapest (Hungary) and Dunkerque (France) or, more rarely, from the 90s, as in the case of the city of Esbjerg, Kolding (Denmark) and Stockholm (Sweden) and Vienna (Austria).

Table 3. Geographic origin of the cases analyzed

Countries	Numbers of cases for each Country
Spain	14
Italy, UK	9
Germany, France	8
Sweden, Finland	6
Netherlands, Ireland	5
Denmark, Austria	4
Malta, Slovenia, Portugal, Belgium, Norway	3
Estonia, Switzerland, Bulgaria, Hungary	2
Luxembourg, Cyprus, Lithuania, Iceland, Romania, Greece, Latvia	1
Total	108

The 23% of best practices comes from the regional/provincial level; several cases highlights the engagement of regional commissions of Spain, Belgium and Italian, such as the Department of the Environment and Territorial Policy of the Basque Government (IHOBE), the Regional Agency for Environmental Protection of Tuscany (ARPAT), the Lombardy Central Regional Agency of Purchases and Valle Aosta Region (the last active on environmental issues since the mid-2000s) and some County Councils in the United Kingdom (Gloucestershire, Cornwall and East Ayrshire). The last 19% is represented by the national public administration, such as ministries (Hungary, Latvia and France) and commissions (Italy, Ireland, Lithuania, and Germany), introducing environmental criteria with the aim to encourage its application to lower government levels and facilitate their introduction within the procurement tenders (Figure 2).

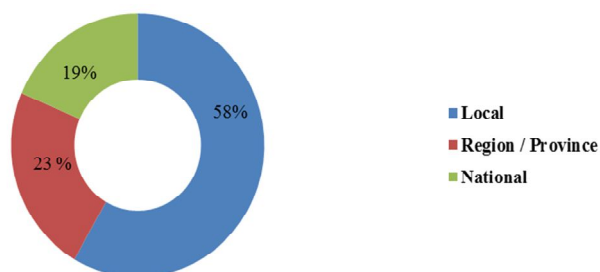


Figure 2. Administrative level of the case studies

In terms of reference year of implementation, all cases covers the period 1999-2014 (Figure 2), with a peak in 2009 and 2010 (36%) (Figure 3), which coincides with the EU enactment period of most significant regulatory actions and policy in terms of GPP, including: COM(2008) 397 “Sustainable consumption and production” and “Sustainable industrial policy”, COM(2008) 400 “Public procurement for a better environment”, COM(2009) 400 “Mainstreaming the sustainable development into EU policies: 2009 Review of the EU Strategy for Sustainable Development”, COM(2010) 2020 “A strategy for smart, sustainable and inclusive growth”.

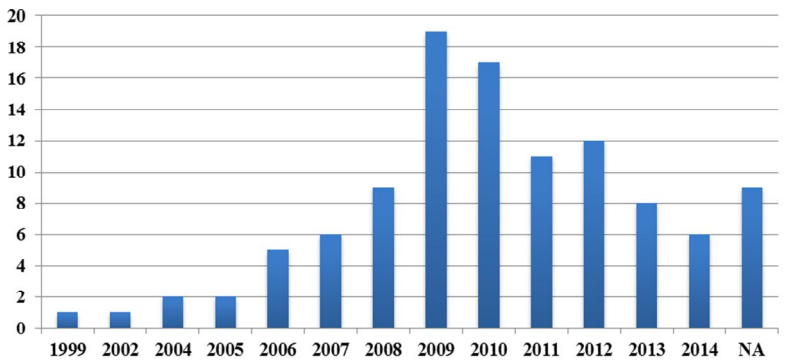


Figure 3. Number of cases ranked by reference year

Among the 108 cases of procurement the key priority sectors identified are: Construction, Copying and graphic paper and Transport as per, respectively, 23, 14 and 15 cases; followed by Electricity and Cleaning products and services (10 cases), Office equipment (9 cases), Furniture (7 cases), Food and Catering services (10 and 12 cases), Street lighting and traffic signals (4 cases), Gardening products and services (5 cases), Wall panels, Textiles and Imaging equipment (3 cases), Water management and Cogeneration (2 cases), Hard floor coverings and Roads construction and traffic signs (1 case); while, remaining sectors are not mentioned in any case practice examined.

The European Commission emphasizes the need to distinguish between two categories: “core” and “comprehensive” criteria. The first criteria are designed to allow easy application of GPP, focusing on the specific area of the product environmental performance and aimed at keeping the administrative and economic costs; while the second criteria take into account more aspects or higher levels of environmental performance, with consequent higher costs. In fact, the first should be based on the European Eco-label criteria, which address the main environmental impacts and are easier to fulfill, while the second resume additional criteria of the Eco-label that can be considered important for the definition of a specific product. Considering that 25 out of 108 cases analyzed are multi-sector procurement GPP, of which 10 include the “product scheme” which have not been reported by the EU Commission as a sector, in the research has been considered as such because of its recurring presence. In a similar vein is the particular case of the construction, office equipment, and furniture sectors.

Such assumption raises the complexity of the above-mentioned sectors and therefore the support of a “product scheme” specification, as the Commission itself points out in the Directive COM(2008) 400, along with the “ten priority sectors” for GPP, that have been selected on the basis of the importance of the relevant sector in terms of the

scope for environmental improvement; public expenditure; potential impact on the supply side; example setting for private or corporate consumers; political sensitivity; existence of relevant and easy-to-use criteria; market availability and economic efficiency, such as: Construction (covering raw materials, such as wood, aluminium, steel, glass, as well as construction products, such as windows, wall and floor coverings, heating and cooling equipment, operational and end-of-life aspects of buildings, maintenance services, on site performance of works contracts), Food and catering services, Transport and transport services, Energy (including electricity, heating and cooling coming from renewable energy sources), Office machinery and computers, Clothing, uniforms and other textiles, Paper and printing services, Furniture, Cleaning products and services, Equipment used in the health sector (European Commission, 2008). Not having found a high repeatability between the multi-sector associations is not possible to affirm a particular behavior in the last years, by the public authorities, during the tenders.

By and large, within the enlisted case samples analyzed, it is possible to identify many features that characterize Green Public Procurement. Firstly, there is the use of criteria and eco-brands, based on the Life Cost Assessment (Figure 4) that assures the inclusion of environmental aspects in the tendering products throughout the entire lifecycle, from the extraction to the end life of the product. Secondly, in respect of the competition, in the application of public procurement directives, the PA is given free options to promote environmental protection, through the introduction of specific technics in the procurement tender documents.



Figure 4. Life Cost Assessment Process

It constitutes a barrier to participation in the tendering competition but also an innovative stimulus to competitors; examples are the minimum environmental criteria and the eco-brands, particularly present in the 108 cases. To it is added the consideration of Life Cycle Costing, applied in some of the case projects examined, with the aim to achieve cost reduction and the assessment phase of the offers prices received. Within the schemes, yield information is also referring to the criterion award used during the tender. In most cases has been adopted the award mechanism based on the most economically advantageous tender (MEAT), which suppose the simultaneous evaluation of the price and other quality and technical aspects, including the environmental dimension. In few cases, PA makes use to the lowest price, and in

others, cases are presented alternative methods that not necessarily relates to the previous ones.

The criterion of most economically advantageous tender has allowed various public entities, through a fair approach to weighting the score, to reach a good compromise between price and quality. In fact, this method has awarded, in procurement, the competitive actors with respect to the environmental policies but weaker in terms of the economic proposal. The use of most economically advantageous tender (MEAT) helps to ensure the compliance of core requirements for the award procedure, such as: the connection between the criterion award and subject of the contract, a limited choice options for the PA customers, prior notification of the award criterion within the tender documents, the distinction between selection and award criterion and, finally, the respect of EU law (European Commission, 2011). In terms of the economic and environmental impacts was necessary to differentiate the results of the qualitative and quantitative cases, distinguishing the presence of information and numerical data. In terms of economic impact, in 43 cases out of 108, there is not information about financial results; of which 50% of cases are Mediterranean countries. In the left 46 cases, in 16 cases there was a costs reduction (quantified in euros) or in reduced percentage, comparatively to previously concluded contracts by traditional procedures (Figure 5).

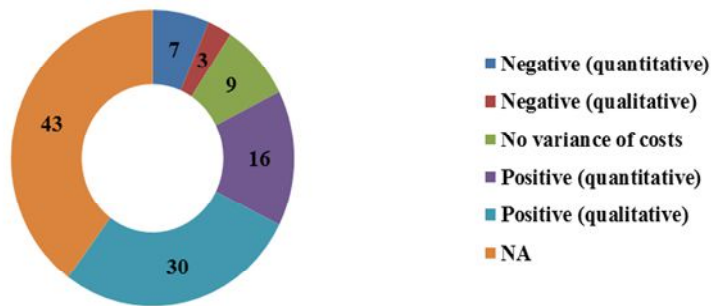


Figure 5. The economic impact in the cases examined

In terms of environmental impact, worth noting the positive contribution recorded in almost all cases studied (102 cases out of 108), such aspect being the central element of European Commission published cards (Figure 6). In particular, 46 cases are distinguished by the inclusion of quantitative details in terms of reduction of CO2 emissions (in tons), and greenhouse gas (GHG), electricity use (in kWh), water saving (in liters). In the other 56 cases, there is the generic description of the environmental benefits by linking the importance of actions promoted by European Commission about the relevance of the environmental impact and just one negative (case study from Germany, but it is negative because in CO2 emission are accounting old and new emission).

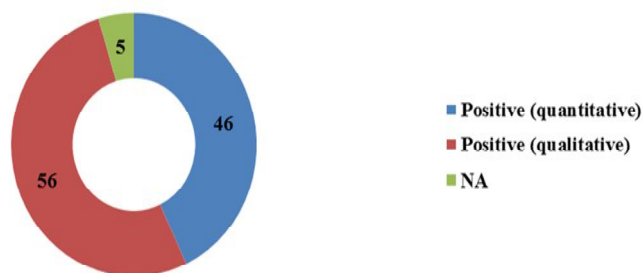


Figure 6. The environmental impact in the cases examined

Conclusions

From the analysis of regulatory measures and policy promoted by the European Commission is observed a high degree of maturity and attention to GPP. In line with the context of the analyzed case practices, research findings underline the specific trajectories of green development practices. In some cases, depending on the complexity and the economic dimension of the contract, the promoters have used characteristic features of GPP, such as the joint procurement adopted mainly by local governments (small dimension) with the aim to get favorable condition in the tender; the division into sections of smaller technical complexity and cost, therefore, allowing the participation of small and medium enterprises, by not restricting competition; finally, the provision of the pre-commercial phase, useful to investigate on the market, the products or services to be included in the tender, and to assess the needs to be met through the purchase process. It is not clear, within the sample of the case practices analyzed, the attention given to social impacts resulting from the purchasing practices, which, however, are most recent actions taken by the European Commission (24 and 25 Directives of 2014). In addition, it is possible to connect the existence of the National Action Plan on GPP and the case practices of the countries analyzed with EU policies. Specifically, 71 cases out of 108 are implemented in the Member States, which in line with the European Commission Communications, adopted the NAP's GPP, provided by COM(2003) 302 and 2005 implementation guidelines. In fact, during 2007-2010 the largest number of countries adopted the plans, while a large number of them did so in 2007. In this period were realized most of the case practices examined in the research, and recalls the Communications 397 and 400 of 2008 and 400 of 2009.

The findings underline that GPP is an effective tool for the rationalization of public spending in the Member States, contributing to the reduction of environmental impacts, energy savings and the promotion of technological innovation. During the process of data gathering of background information, useful for mapping GPP practices, the authors faced the incompleteness of the criteria with which have been selected the best practices cases. Due to such rationales, the analytical framework of the mapped cases does not allow to draw conclusions on the progress of green procurement policies in individual countries. The European Commission, in fact, in promoting the best practices, does not provide aggregate information or evaluation judgments but merely presents the procurement activities, by highlighting the 'excellence' of each procedure in the application of environmental criteria promoted in EU. The set of indicators identified throughout the research, laying on the sampled cases examined, aimed to be, in a broader further research agenda, the first step in

understanding GPP evolution and practice. The model tends to be replicated to more generic samples and not necessarily to European Union space.

In conclusion, the latest EC policies requires an increasingly strong orientation towards transparency, competition, reduction of consumption and likewise, an economic and socio-environmental return as stated by European Commission Directives “on the adjudication of the concession contracts” (2014/23/EU), in the matter of “procurement and which revoke the Directive 2004/18/EC” (2014/24/EU), “on procurement procedures of the service delivery entities operating in water, energy, transport and postal services and which repeal the Directive 2004/17/EC” (2014/25/EU). Through these directives on public procurement, the EU Parliament tries to simplify the structure of the purchase contracts, in order to include requirements fostering social and environmental responsibility. One of the directive objectives is to guide the public authorities toward specific social goals at the national and international level. The recent developments raise, therefore, increasing attention to the social dimension within procurement and its subsequent transition towards Sustainable Public Procurement (SPP), a broader concept of GPP, meaning the government’s attempt to strike the right balance between the three pillars of sustainable development - economic, social and environmental, in all phases of the procurement purchase of goods, services and works, (3BL approach), with the objective to integrate competitiveness and sustainability within the supply chain, along with the attention through the process, to human and workers’ rights.

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