

# GOOD PRACTICES REVIEW

## GPP STREAM PROJECT

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### GREEN PUBLIC PROCUREMENT

The GPP-Stream project has been co-financed by ERDF through the INTERREG-Europe programme

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INTERREG EUROPE- GPP STREAM project <https://www.interregeurope.eu/gpp-stream/>

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## GREEN PUBLIC PROCUREMENT AND SUSTAINABILITY TOOLS FOR RESOURCE EFFICIENCY MAINSTREAMING

The GPP-Stream project aims to improve the management, implementation and monitoring of regulatory instruments integrating green public procurement approaches, to ensure that both public and proven resources are used in an environmentally efficient manner.

The European Union defines Green Public Procurement as a process in which public authorities acquire works, goods and services with reduced environmental impact during their life cycle when compared to conventional ones;

The main objectives they pursue with the use of GPP are the following:

- Identify, collect and share good practices in resource efficiency bidding processes.
- Improve, through GPP, sector financing programmes and development plans.
- Improve the ability of different administrations to achieve alignment in the use of GPP.
- Improve control capacity through the use of GPP by implementing specific policy instruments and plans.
- To stimulate ecological demand throughout all phases of the processes of obtaining goods and services, including those not directly managed by public administrations.

Currently, GPP are voluntary instruments, governments can determine the measure they want to implement. Project members come from 5 different countries, all of them try to identify and analyse within the different public administrations the modalities of recruitment that are used to identify good practices with intentions to expand and learn how GPP works in the design, development, hiring and that can be used throughout the European Union by other administrations.

The review of these good practices, together with the analysis of their criteria, will help in the decision making and in the choice of the specific criteria to take into account in the different acquisition proposals that are proposed.

The use of these GPP obtained will be able to offer the following results to the regions and cities:

- Increased knowledge in ecological criteria.
- Unification of the measures to be taken on the basis of the results obtained from the analyses.
- Provide quantifiable criteria and examples for correct decision making.
- Increased ecological awareness in decision making processes.

This manual aims to identify good practices currently being carried out in regions or cities, to study and analyse them, creating recommendations to take into account in tendering processes.

These transfer processes are expected to take time and extend well beyond the duration of GPP-Stream cooperation. This study gathers 49 cases analysed and revised by professionals from Project Partner Countries, participants represent a knowledge base and a community of stakeholders for similar projects.

Similarities in projects will be used for the creation of a general compendium of unified proposals for the whole territory of the European Union on the same criteria. (for example, in the procurement process for electrical supplies, the aim is to standardize the decision making criteria so that they are as environmentally friendly and environmentally friendly as possible) To set, quantify objectives and needs in decision making processes at all levels of different public administrations within the European Union.

At present, other criteria where the environment is not taken into account are more important in the selection of suppliers of goods, works and services. This is why we seek to encourage a change of vision in decision making processes, starting with public administrations. So that gradually the companies that want to participate with these administrations have to take into account also these types of criteria that from the implementation of these policies will have a weight that currently they do not have.

The aim of this shift in the way decision making processes are to promote global change within the European Union, not only in public administrations but in all sectors and processes, both public and private.

*Image 1: Countries participating the project*



## CONTEXT of PARTNER COUNTRIES' GOOD PRACTICE GPP-STREAM PROJECTS

Five countries participated in this Interreg project: Bulgaria, Romania, Spain, Italy, and France. The final collection is 49 “Good Practice” cases; Romania had 5 while the others had 10-13 cases. Before classifying the 49 cases it is useful to enumerate three demographic data items, population, Real GDP per capita<sup>1</sup>, and Purchasing Power Parity<sup>2</sup> to show that the five countries span a range economic and environmental circumstances when looked from a historical and developmental perspective.

*Table 1: Three demographic data for the partner countries: Population, GDP/capita, and PPP/capita*

Country/ Data item	Bulgaria	Romania	Spain	Italy	France	EU-28 Average
Population (millions)	7.07	19.57	46.51	60.76	67.12	18.2
Real GDP/capita (€)	6500	8700	25000	26700	32800	28200
PPP (€)	14800	18800	27600	28900	31000	30000

The GPP principles are the same in each country but the kinds of ‘good practices’ selected are, of course, influenced by the country’s socioeconomic concerns. Common to all projects is minimizing climate change agents, the Green House Gases (GHG) and energy use. Thus, for example, Bulgaria would be interested in improving its buildings whose accessories –structural condition, heating, lighting –may have experienced neglect due to the lack of resources. France, at the other end of the scale, would be interested in mainstreaming GPP and effective use of resource through waste management and recycling.

The 49 cases are grouped into six generic types: (1) Built environment; (2) Waste management, recycling and service contracts; (3) GPP mainstreaming through guidelines and templates; (4) Management systems and monitoring; (5) Organic farming and food supply; and (6) Transport and sustainable mobility. Necessarily, most projects serve more purposes than implied by the class distinctions. Tables in the Annex elaborate every projects’ objectives, results and learning and transferability aspects. The classification of the 49 practices presented below is show here. A classification of the wider are more generic demands on the typology of the areas of intervention can be found in the final annex to this document

<sup>1</sup> The GDP data from: [https://ec.europa.eu/eurostat/web/products-datasets/-/sdg\\_08\\_10](https://ec.europa.eu/eurostat/web/products-datasets/-/sdg_08_10) (accessed June 15, 2019)

<sup>2</sup> GDP shows the total productive output of a country. Purchasing power parity (PPP) compares how many goods and services the country’s exchange-rate-adjusted unit of money can purchase.

Table 2: Classification of the 49 projects

Country Theme	Bulgaria (13)	Romania (5)	Spain (11)	Italy (10)	France (10)	Total (49)
Built environment	8	1	5	1	0	15
Waste management, recycling, service contracts	2	0	3	0	4	9
GPP mainstreaming guidelines and templates	1	1	1	4	4	11
Management systems and monitoring	0	0	1	5	0	6
Organic farming and food supply	0	3	0	0	1	4
Transport and Sustainable mobility	2	0	1	0	1	4

Image 2: Countries with projects

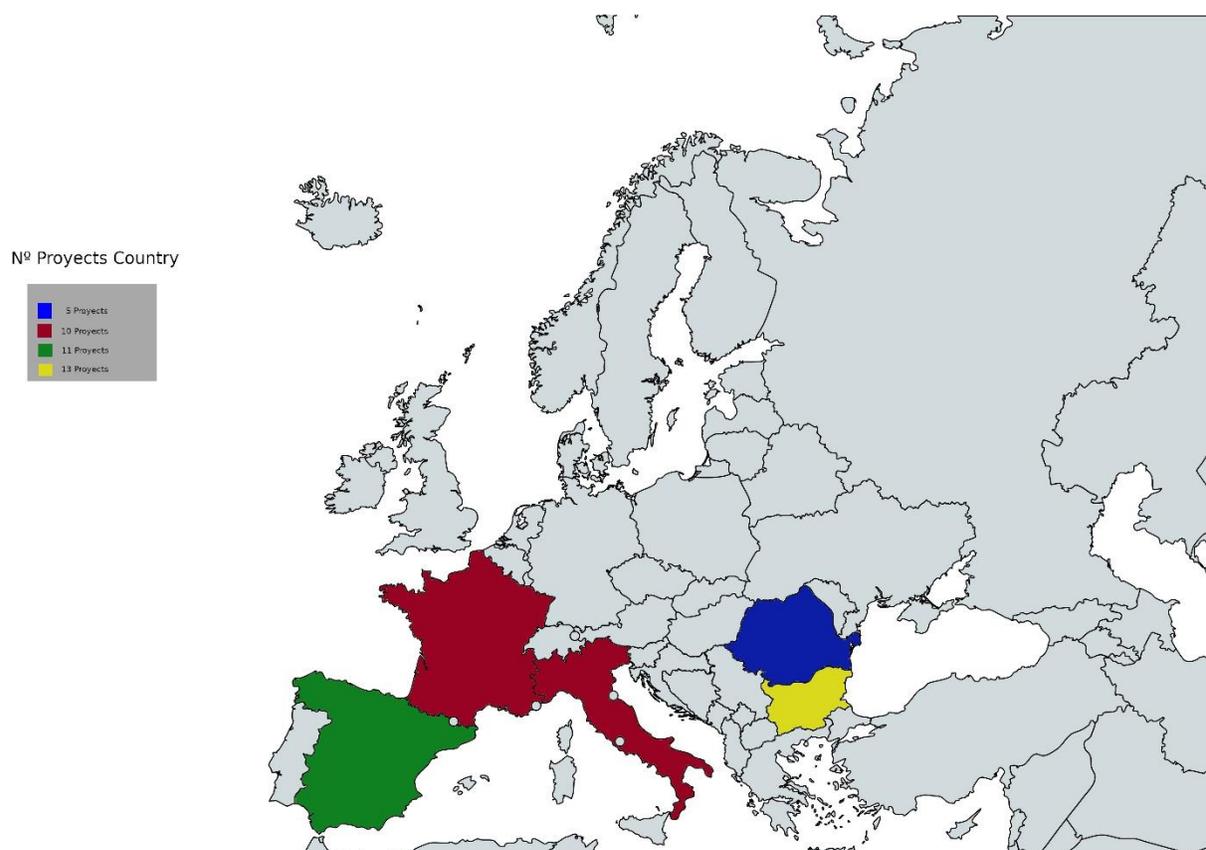
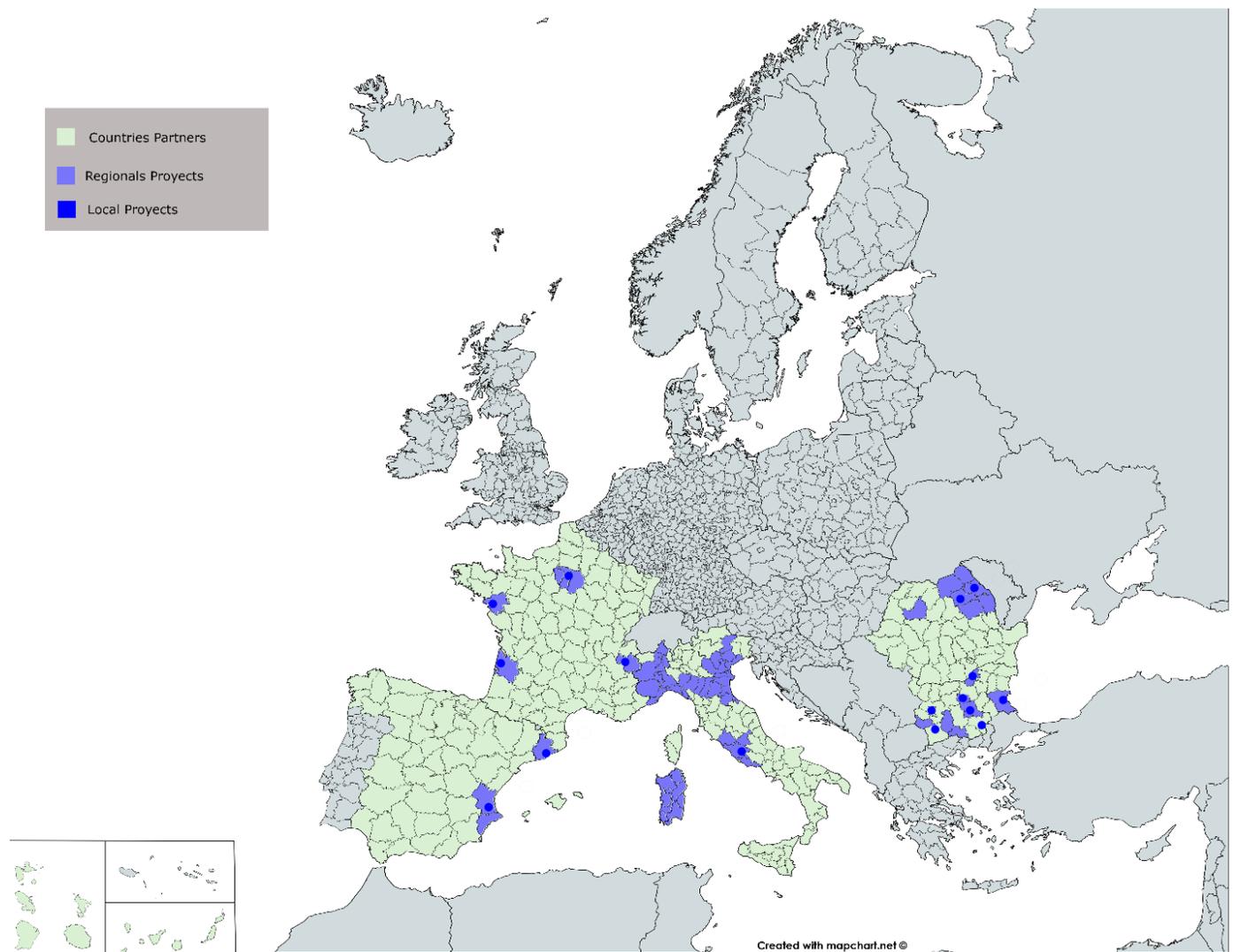


Image 3: Regions and cities with projects



The third piece of quantitative information considers the present status in the dominant themes in each partner country, table 3.



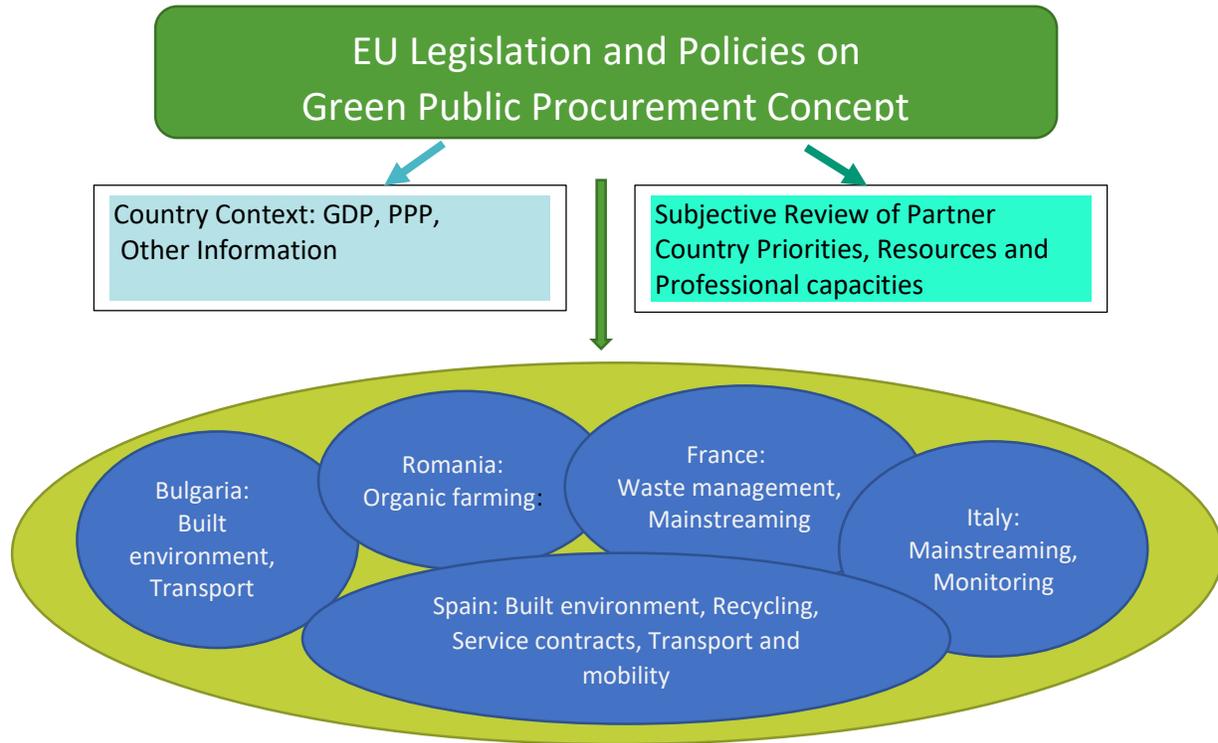
Table 3: Indicative data for each dominant class and country (data source is indicated in footnote 1)

Country Indicator	Bulgaria	Romania	Spain	Italy	France	EU-28 Average
GHG total (base 1990=100)	60.5	46.1	121.8	84.1	86.6	78.3
GHG/capita (tonnes)	8.8	5.9	7.6	7.3	7.2	8.8
Pollutants from transport (2000=100)	95.6	137.3	54.6	51.7	53.7	54.3
Waste/capita (kg)	2527	1084	1480	1799	1455	1772
Waste recycling (%)	27	30	46	68	54	57
Increase in recycling (%) in the past 5 years	0	4	2	8	5	2
Circular material use (% of total material use) <sup>3</sup>	4.3	1.5	8.2	17.1	19.5	11.7
Organic farms (number)	6914	7908	37712	66788	36691	NA
Organic farm area (% of total)	2.7	1.9	8.7	14.9	6.0	7.0

Analysis of good practices and their distribution among partners can be also be viewed as a figure in which the classification of the 49 projects is illustrated by their intercountry spread, figure 1.

<sup>3</sup> Eurostat has no direct indicator on Green Public Procurement. *Circular material use* is one suggested indicator for it. When expressed as percentage of total material use it shows effectiveness of mainstreaming and monitoring GPP adoption.

Figure 1: Dominant Project Themes in the Partner Countries



In absence of EU wide survey and specific data on GPP, both specific and proxy data in the three tables and observations in the five countries give grounds to several annotations.

- Bulgaria had an outdated and neglected built environment and infrastructure service sector when it left the command economy in early 1990s. Bulgaria's focus on the "bread and butter" (mostly 'butter') issues, renovating the built environment, improving urban transport and waste management is reflected in the choice of *Good Practice* projects. Clearly, much has been accomplished since then in reducing the GHGs, and yet much remains to be done in reducing GHGs and waste and increasing recycling and circular material use through GPP. Transfer and learning about the GPP concept from the other Interreg partners, Italy, France and Spain, and its application on other sectors can be a productive outcome of this project.
- Romania was Europe's breadbasket for wheat before WW2 and determined its price in London Stock Exchange. The post war events changed that, and Romania is now gradually becoming self-sufficient in food stuffs. It is therefore not surprising that Romania's *Good Practice* projects focus primarily on agriculture. Organic farming, cooperation and direct linking of producers and consumers is experiencing rapid growth worldwide. Although Romania lags much behind its partners, the initiative can be taken as indicative of emergence of its regaining its 'bread' and farming heritage and extending it to urban areas. Again, much benefit in organic farming is possible in transfer and learning from the partner countries. Romania's low total GHG emissions and waste, both relative since 1990 and in total, are probably indicative of the intentional

collapse of coal mining executed in Petrosan region. However, very high pollutant emissions from transport would benefit from learning and transfer from the partner countries.

- Spain's *Good Practice* span a range of projects and are a transitional shift from Romania's and Bulgaria's "bread and butter" to greening of the urban environment and its furniture, reducing and reclaiming waste products and mainstreaming related practices. Overall the trends are positive in reference to the EU-28 values excepting the 20% increase in the total GHG output relative to the 1990 base.<sup>4</sup> Spain was the only country that reached out to developing non-EU countries (in two projects) for learning and technology transfer. Both learning and technology transfer from GPP-STREAM partners Italy and France would also be beneficial to Spain.
- Italy is focused on mainstreaming and providing management support to GPP, and monitoring results of that work. Most indicators point to success, even the reduction in total GHG is quite commendable though somewhat less than the EU-28 average, but certainly at par with countries in its income group. Although there were no waste management and recycling good practice projects, the trajectory in both has been strongly upward in the past five years. Italy's partner entity also undertook learning and transfer studies in other EU countries (Flanders-Belgium and Barcelona-Spain). In organic farming Italy is in the class of its own. If the *Good Practice* GPP projects are indicative of the trends in Italy, with the chosen indicators its path is certainly the right one.
- France is focusing its *Good Practice* projects on waste management and mainstreaming. Both have been done successfully in several locations. France is the best performer in both and beats the EU-28 average by clear margins. Of interest is also the growing interest in organic farming and the use of organic products in a *Good Practice* food stuff service contract.

The *Good Practice* projects in *Green Public Procurement and Sustainability Tools for Resource Efficiency Mainstreaming* represent different approaches in a variety of projects. None of them are copies of others but fitted to the specific circumstances, administrative and socioeconomic, of the country and region. There are two aspects to *GPP-STREAM*, general and specific. The general aspects relate to the principles of *GPP-STREAM* and its objectives. The specific aspects tell how these principles and objectives are applied in a specific context, which normally is complex and often not reported. These specific contexts vary from country to country and may be different in details even between regions of a country. However, one or two specific projects are described as case examples for each theme. Desiderata for a generic *Good Practice* are collected from the successfully implemented projects by implanting useful *good practices* in a summary table for each theme. Many of the identified *Good Practice* characteristics apply to all projects; nonetheless there also are distinct theme-specific features and focus on project theme is therefore retained. An important attribute of GPP is that it does not require more financial resources and that alone may foster political support, as one Minister observed "GPP should become common practice for all public authorities".

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<sup>4</sup> This is a surprise because the GHG total in tones/capita is below EU average. It may be because Spain has vast forest areas which act as sinks for the CO<sub>2</sub>. The largest forest areas in EU are in Sweden (30 million hectares), Spain (27 m), and Finland (24 m).

## GOOD PRACTICE CASES: A SYNTHETIC DESCRIPTION

Countries	<i>Good Practice Desiderata: Built Environment</i>
Bulgaria, Romania, Spain, Italy	<p><u>Project objectives:</u> Healthy environment; Conservation of energy; Minimization of pollutant emissions; Cost savings; Transparency to the citizens</p> <p><u>Project identification:</u> Market assessment of project viability and preliminary options for technical solutions; Compliance with local laws and regulations (or changes required); Involvement of citizens and both public and private sectors in fleshing out specific project alternatives;</p> <p><u>Project design:</u> Performance and Output Based Specification Contract (e.g. reduction in emissions or energy use, cost savings, energy efficiency, Life cycle costs, material reusability/recycling, warranty or maintenance period), Financing; Methodology for all calculations; Transferability</p> <p><u>Procurement:</u> Competition; Transparency to the citizens; Funding sources; Contract award criteria and reasons for them; Terms of delivery and warranties; Other quantifiable criteria (e.g. to reduce CO2 emissions, project delivery timing).</p> <p><u>Implementation:</u> Monitoring system; Post-audits: validation and verifications for compliance with project design; Performance (on-time delivery, costs, etc.); Maintenance</p> <p><u>Remaining Difficulties:</u></p> <ul style="list-style-type: none"> <li>◦ Provision of financial and technical support to local authorities</li> <li>◦ Scattered data with complex interfaces</li> <li>◦ Dealing with unforeseen (future) expenses</li> <li>◦ Digitalization and computerization of public administration</li> <li>◦ Impact of small-scale procurements with potential large benefits when mainstreamed</li> <li>◦ Consideration of benefits that cannot be monetized.</li> </ul>

*Built Environment. Example Case: Renovation of St. St. Cyril and Methodius school.* Gabrovo Municipality in Bulgaria had wanted to renovate St. St. Cyril and Methodius school for more than 5 years. Gabrovo faced many challenges to modernize the building to a much higher energy efficiency standard. St. St. Cyril and Methodius was constructed in 1970 and had four building blocks (one administrative; two for classrooms; one sports facility). The heating system used natural gas and the buildings had no cooling and ventilation systems.

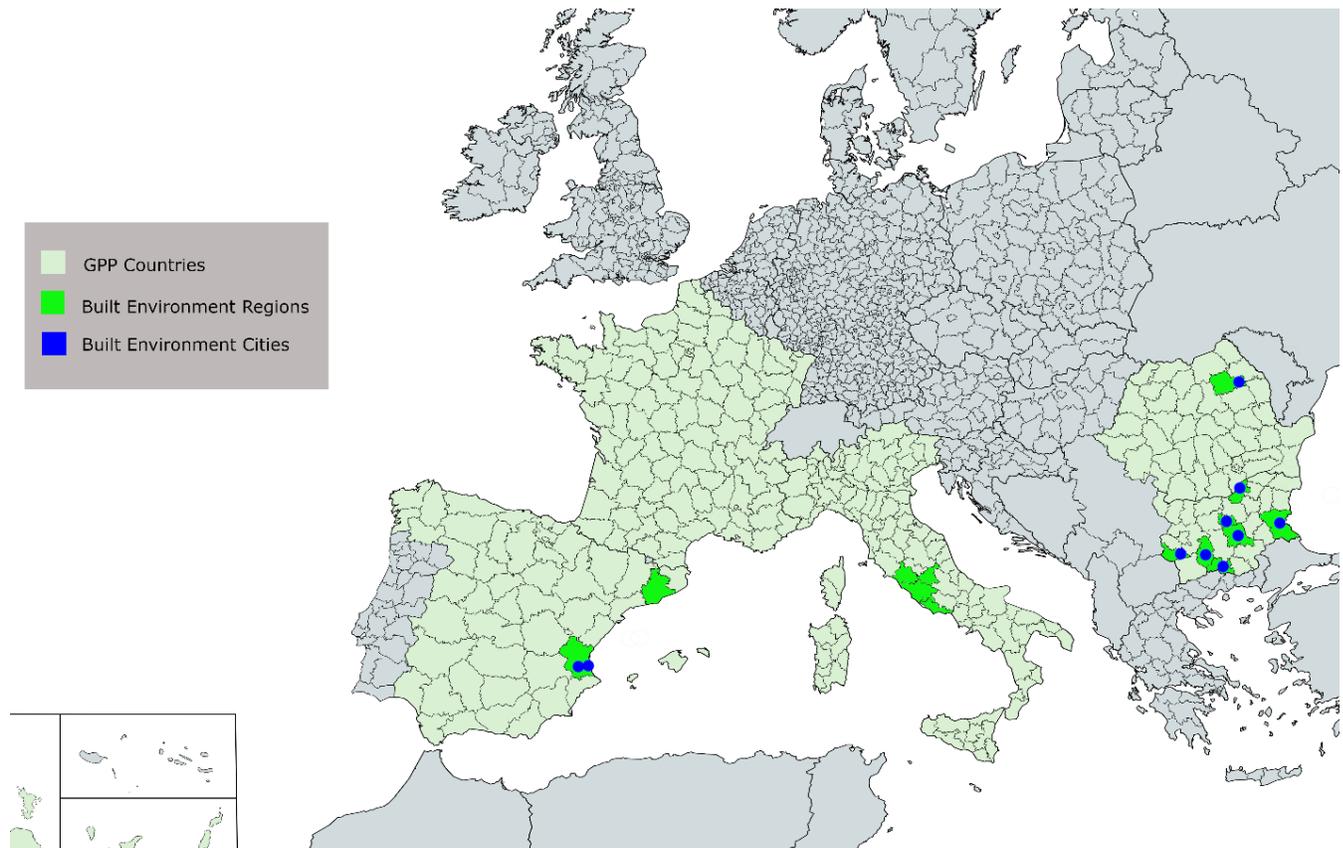
Performance and Output-Based Specification approach for minimum energy efficiency was used, the first such tender in Bulgaria to specify achievement of a minimum energy use. There also were criteria for water consumption and for a healthy environment in the rooms with automatically controlled valves.

Numerous meetings were held between stakeholders. Procurement requirements and possibilities were researched; two companies participated in the Bulgarian SPP network meetings, clarifying the benefits of building automation. In addition, individual meetings were held with four companies involved in building automation and monitoring systems (installed) during the development of the tender specifications.

The results:

- 155.3 tons/yr. CO<sub>2</sub> emissions saved (92 t compared to a conventional solution)
- Primary energy savings: 0.7 GWh/yr. (0.4 GWh/yr. compared to a conventional solution)
- Financial Savings: €25,564/yr.
- Healthier environment for school children
- Water consumption limited per minute
- Further information: [t.popov@gabrovo.bg](mailto:t.popov@gabrovo.bg)

Image 4: Built Environment projects



Countries	<i>Good Practice Desiderata: Waste Management, Recycling, Service Contracts</i>
Spain, Italy, France	<p><b>Project objectives:</b> Ensure sustainable production and waste management. Reduce generation of waste. Foster 'circular' (share-recycle) economy and eco-responsible business practices. Conserve energy. Minimize pollutant emissions. Gain cost savings;</p> <p><b>Project identification:</b> Develop projects that decrease waste by recycled/recovered materials. Seek projects in construction and demolition (C&amp;D). Examine changes required in local laws or regulations to support project objectives. Involve public and private sectors and working groups to propose projects. Motivate the bidders to improve their technology,</p> <p><b>Project design:</b> Define environmental criteria and recovery/recycling targets for different types of waste. Establish uniform criteria to all waste management entities. In (C&amp;D) waste management and reduction to focus on finishing work wastes. In service contracts define ECO-labels for products, consumables and materials to inform of supply requirements. In circular textile industry require Quality Certificates of firms (ISO/EMAS).</p> <p><b>Procurement:</b> Competition. Transparency to the citizens and firms. Publicize contract award criteria and reasons for them. Bidders to present a copy of recent quality management certificate ISO 9001: 2000, ECO labels or criteria to inform about water, CO<sub>2</sub>, SO<sub>2</sub>, and other pollutants. Information of the disposal sites of waste. Approximate Life cycle costs whenever feasible.</p> <p><b>Implementation:</b> Monitoring system. Post-audits: validation of indicators with the intentions of the project design; Verify products delivered. Performance (on-time delivery, costs, etc.); Maintenance</p> <p><b>Remaining Difficulties:</b></p> <ul style="list-style-type: none"> <li>◦ Provision of financial and technical support to local authorities</li> <li>◦ Dealing with unforeseen (future) expenses</li> <li>◦ Cooperation of big, resistant multinational firms responsible for much of the waste</li> <li>◦ How to foster citizens' and employees' behaviour changes, especially in the service contracts</li> <li>◦ Consideration of benefits that cannot be monetized.</li> </ul>

*Waste Management, Recycling, Service Contracts. Example Case 1:* The region of Valencia is engaged in a project for *reuse of clothing that would otherwise end up in a waste centre*. The application principle is the 3R rule: reduce, reuse and recycle, which is the best solution to reduce waste from the manufacture and purchase of clothing. The resources obtained from 3R projects contribute to the development of environmental programmes, cooperation, and awareness campaigns for local support.

Procurement considers environmental criteria in the contract awards to evaluate the best quality ratio, or performance. Sustainability criteria relate to the product, service and work covered in the contract.

For a tenderer on textile waste management, environmental award criteria relate to:

1. Reducing the level of greenhouse gas emissions.
  - a. The entity must be in the Carbon Footprint Register of the Ministry for the Ecological Transition.
  - b. Ownership of at least one vehicle with an environmental badge of the DGT "Zero" or "Echo".
  - c. That part of the energy consumed comes from renewable sources.
2. Possession of quality certificates EMAS or ISO 14:001
3. Promotion of circular economy for management of textile waste, with facilities for reuse.

This circular economy practice can be extended to the entire European Union and to communities in Africa, Latin America and Asia. It would improve the quality of life of millions of people and influence the use of environmentally friendly production processes.

Results: Currently,

- 15 countries participate in cooperation projects
- There is 90% increase in waste recovery
- € 9,3 million for projects were in operation between 2010 and 2014
- 90.000 people were involved in projects in 2014
- Further information is at: <https://www.humana-spain.org>

Waste Management, Recycling, Service Contracts. Example Case 2: The French project *DEMOCLES* is a collaborative platform launched in 2014 at the initiative of the eco-organization *Récylum*. It aims to improve waste management or recovery in heavy rehabilitation and demolition. The platform brings together more than 100 partners representing project owners/contractors, construction companies, waste managers and recovery chains. There is a steering committee and several working groups.

The EU 2008 Wastes Framework Directive requires that by 2020, 70% of the C&D wastes generated should be valued either by re-use, recycling or other forms of recovery, excl. energy and landfills. This rule applies to all C&D wastes except Soils and Hazardous wastes.

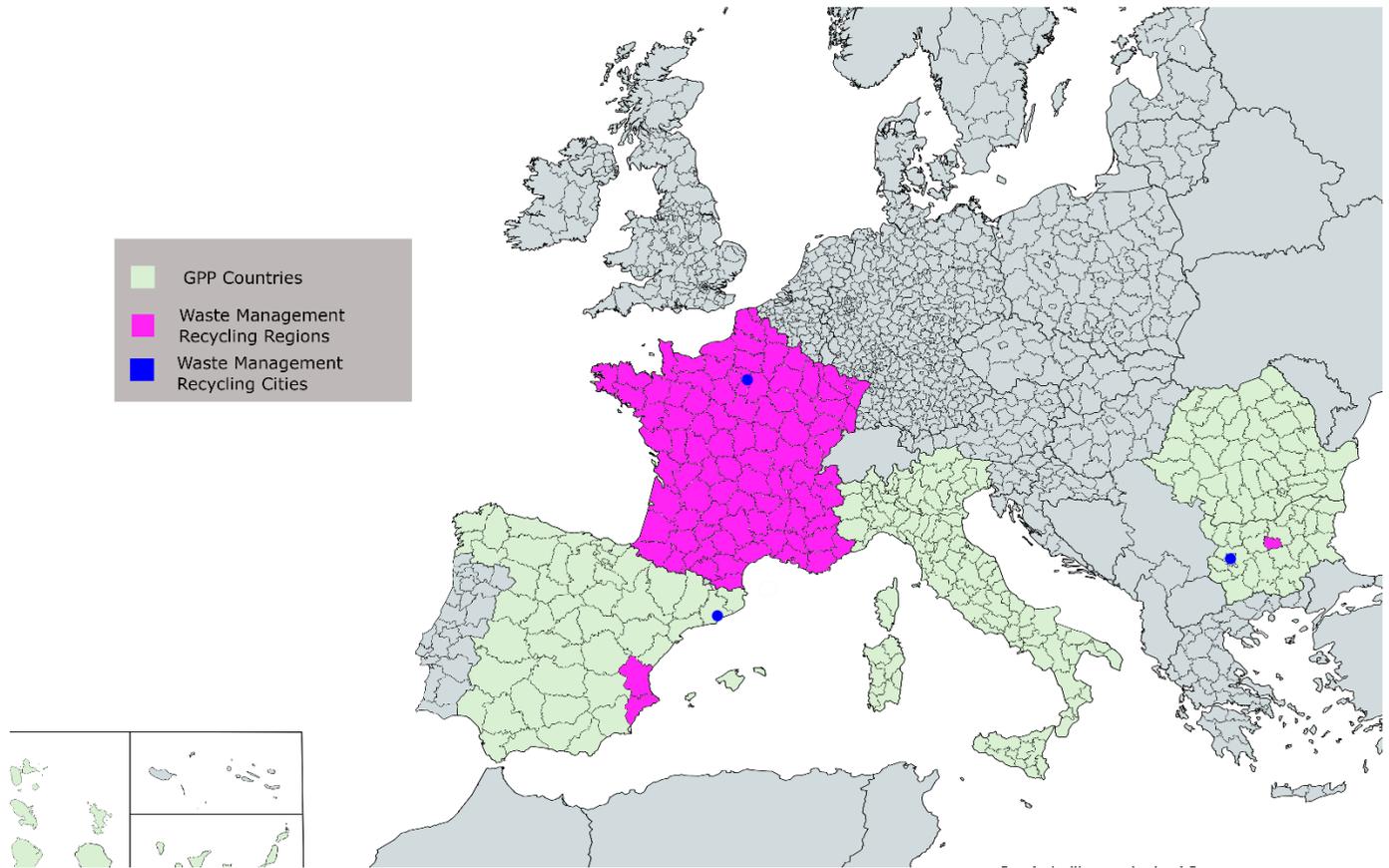
DEMOCLES provides the following tools to implement effective C&D wastes management plan and ease the development of local and regional recovery and valuation channels. The outputs mainly help the contracting authorities to:

- Control their legal liability
- Write technical specifications, consisting of
  - Pre-demolition audit
  - Reduction of wastes volume
  - Reduction of wastes hazardousness
  - Wastes technical specification
  - Wastes selective removal and sorting
  - Logistics o Processing methods to prioritize
  - Wastes recovery
  - Requirements expected from wastes contractor
  - Wastes tracking and traceability
  - Wastes management and prevention
- Enhance and value their approach
- Find the right value chains

The issues raised by DEMOCLES are common. This was evidenced in the international workshop held in Valencia (Spain) in late April 2019, as part of the Interreg EU project CONDREFF focusing on the pre-demolition audit.

In France C&D wastes represent 38 million tons/year with a recovery rate of about 50%, including 10 million tons of finishing work with a recovery rate below 35%. Technically and economically, much of that could be recycled or reused. The project is confident that the solutions and outputs of DEMOCLES are spreadable to all countries and actors dealing with C&D wastes management and reduction. The recovery rate of C&D finishing work wastes is increasing, testifying the spread of the good practice and the fruitfulness of training and cooperation of C&D wastes actors. The effectiveness of DEMOCLES is also proven by its relatively simple and easy to use practical tools.

Image 5: Waste Management Recycling Projects



Countries	<i>Good Practice Desiderata: GPP mainstreaming guidelines and templates</i>
Spain, Italy,	<p><b>Project objectives:</b> Dissemination and promotion of GPP and GPP plans among government administrations. Increase energy efficiency. Reduce generation of pollutants. Foster ‘circular’ economy and eco-responsible business practices. Gains in cost savings;</p> <p><b>Project identification:</b> Don’t ignore small GPP projects. Obtain data from many stakeholders by establishing working groups for project identification. Develop project guidelines to address important issues and legal requirements. Define requirements for: Power, Warranty, Energy efficiency, Pollutants, Durability. Motivate the bidders to improve their technology.</p> <p><b>Project design:</b> Develop green public purchase criteria and environment product profiles. Listen to the public, consultants, service providers and contractors on design (but remain transparent). Develop helpful templates for project design, knowledge transfer and uniformity of applications.</p> <p><b>Procurement:</b> Competition. Develop template to evaluate products from environmental perspective and sustainable development. Publicize contract award criteria and reasons for them. Define green public purchase criteria for products or services to be procured. Bidders to present proofs of their competencies. Transparency to the citizens and firms.</p> <p><b>Implementation:</b> Monitoring system. Post-audits: validation of indicators with the intentions of the project design. Verify all items in the procurement. Performance (on-time delivery, costs, etc.). Maintenance. Training, Helpdesk and Technical roundtables with contractors.</p> <p><b>Remaining Difficulties:</b></p> <ul style="list-style-type: none"> <li>◦ Design correctness. Availability of spare parts</li> <li>◦ Absence of EU regulations, especially in the urban sector.</li> <li>◦ Product certificates and legal compliance with standards</li> <li>◦ Dealing with unforeseen (future) expenses</li> <li>◦ Dealing with powerful and big multinational firms</li> <li>◦ How to foster citizens’ and employees’ behaviour changes</li> <li>◦ Consideration of benefits that cannot be monetized.</li> </ul>

*GPP mainstreaming guidelines and templates. Example Case 1: Sardinia Regional Action Plan on GPP* in Italy. The document describes the planned activities for GPP procurement within the regional administration and in the territory, also defining economic resources and funding channels. The document was disseminated among the regional administration, local authorities and regional offices.

Sectoral action plans were defined for the construction, tourism and agro-food sectors, starting from the cross-cutting nature of GPP and aiming to define the action plans in the sectors of interest. The implementation of the GPP plan was supported by extensive information campaign using leaflets and technical glossaries, industry events, and the use of media and social networks. Training seminars and technical in-depth workshops were held so that public demand became a stimulus (also dialogue between different stakeholders) for the GPP plan.

A working group has been set up consisting of the two Environmental Defense Councils and Local Authorities to monitor the implementation of planned actions. Numerous technical assistance meetings were held; training seminars, technical workshops, and coaching events took place; resulting in 22 tenders to procure the planned products, services and public works.

Further information: [www.regione.sardegna.it/sardegnaconpraverde](http://www.regione.sardegna.it/sardegnaconpraverde)

*GPP mainstreaming guidelines and templates. Example Case 2. Template for the tender of foodstuffs.* This template from France provides local entities a model for foodstuffs tenders from a quality, environment and social perspective to reduce their environmental footprint.

This tender aims to cope with the French national plan for green public procurement 2015-2020. Suppliers are expected to complete the two documentation forms, Annex A and Annex B.

Annex A: Assessment of the bids from a technical and qualitative perspective

- Qualitative aspects: quality of the samples in their physical and sensory aspects (lack of humidity, smell, taste); the freshness of the foodstuff (time between harvesting and delivery); product diversity and seasonality (ancient vs standard variety)
- Development of direct supply from agriculture: the distribution channel (producer or distributor); documented product traceability (production and storage location of proposed product)
- Farming model: conventional, organic, high environmental value certification (following a national reference with 3 different levels of requirement); measures taken to reduce resources consumption (water, energy) in the process, packing type (loose, cardboard, plastic); transportation policy
- Share and quantity: rate and number of organic products, products from fair trade

Annex B: Assessment of the bids regarding social and occupational integration.

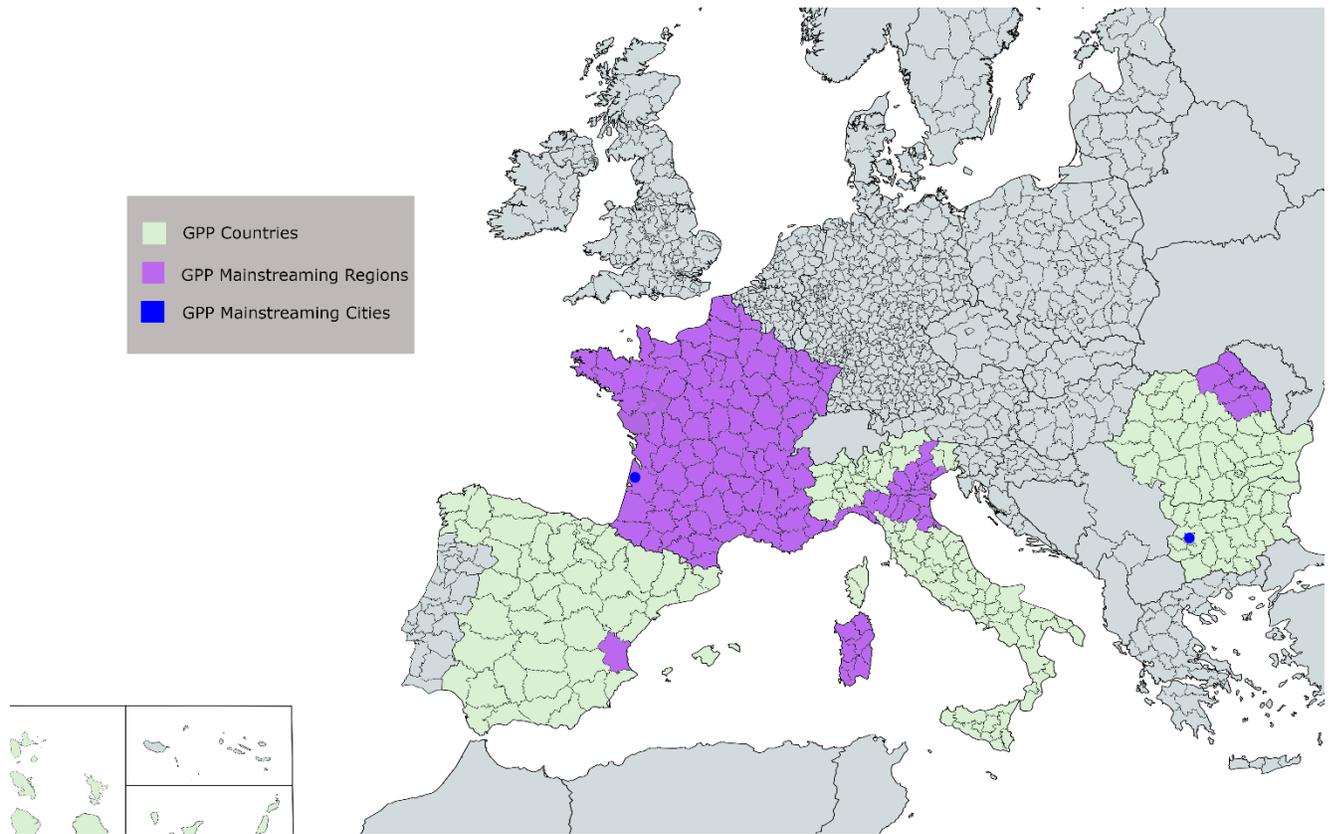
- The document provides a clear and methodical approach for first asking to the supplier the number of hours allocated to social employment integration and how these hours are managed, and second, compliance with the justification process and penalties

The document is clear about the details asked, but it could outline better the approach from circular economy view.

The template may be used to train public buyers on foodstuff, catering and services tenders. It is applicable nationwide. No results are available yet. –

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Image 6 GPP Mainstreaming Projects



Countries	<i>Good Practice Desiderata: GPP management systems and monitoring</i>
Spain Italy,	<p><b>Project objectives:</b> Dissemination of the practice of GPP. Assess and monitor attainment of GPP targets for energy and GHG products with defined environmental criteria and review the specs and criteria for them. Improve financial instruments for financial sustainability of GPP projects.</p> <p><b>Project identification:</b> Obtain data from past projects and establish working groups for information useful project management and monitoring. Develop project guidelines to organize data requirements. Motivate the bidders to improve their technology to manage projects with uniform criteria, and also in monitoring.</p> <p><b>Project design:</b> Develop a template for project management, monitoring, knowledge transfer and uniformity, including: (1) which tools are used to collect financial data; (2) how is the information for these tools collected; and, (3) what would possible changes cost?</p> <p><b>Procurement:</b> Competition. Develop template to evaluate products from environmental perspective and sustainable development. Publicize contract award criteria and reasons for them. Define green public purchase criteria for products or services to be procured. Bidders to present proofs of their competencies. Transparency to the citizens and firms.</p> <p><b>Implementation:</b> Monitoring system. Post-audits: validation of indicators with the intentions of the project design. Verify all items in the procurement. Performance (on-time delivery, costs, etc.). Training, helpdesk and technical roundtables with contractors.</p> <p><b>Remaining Difficulties:</b></p> <ul style="list-style-type: none"> <li>◦ Shortage of trained staff for writing specs and supervising work.</li> <li>◦ Access to data sources of projects' funds</li> <li>◦ Dealing with unforeseen (future) expenses</li> <li>◦ How to foster citizens' and employees' behaviour changes</li> <li>◦ Consideration of benefits that cannot be monetized.</li> </ul>

*GPP Management systems and monitoring. Example Case 1: Environmental Management Systems: Technical solvency accreditation instruments in the Public Contracts Act in Spain.* The aim is to reduce the environmental impact of activities with environmental management systems and GPP with most effective use of resources by creating a collection of environmental criteria in contracts and products. Make fact sheets containing different levels of these criteria common in projects.

The objectives are achieved through the adoption of criteria (such as in the Sustainable Public Procurement Decree of 2017), with participation of suppliers from each sector in their development of technical. Provide specific training on basic concepts, such as life cycle analysis, carbon footprint in transport, eco design and circular economy, etc.

Results: Technical experts completed decalogues and regulations for 29 product categories, including fact sheets for different levels of environmental criteria where specifications of good practice should be incorporated. The decalogues were carried out by. Contracts were concluded with 164 companies contracts worth €56,026.080 in 2016. The practice can be extrapolated to other regions of the EU because environmental problems are global

Further information at: [www.istas.net](http://www.istas.net) and <http://www.acm.cat/compres/productes>

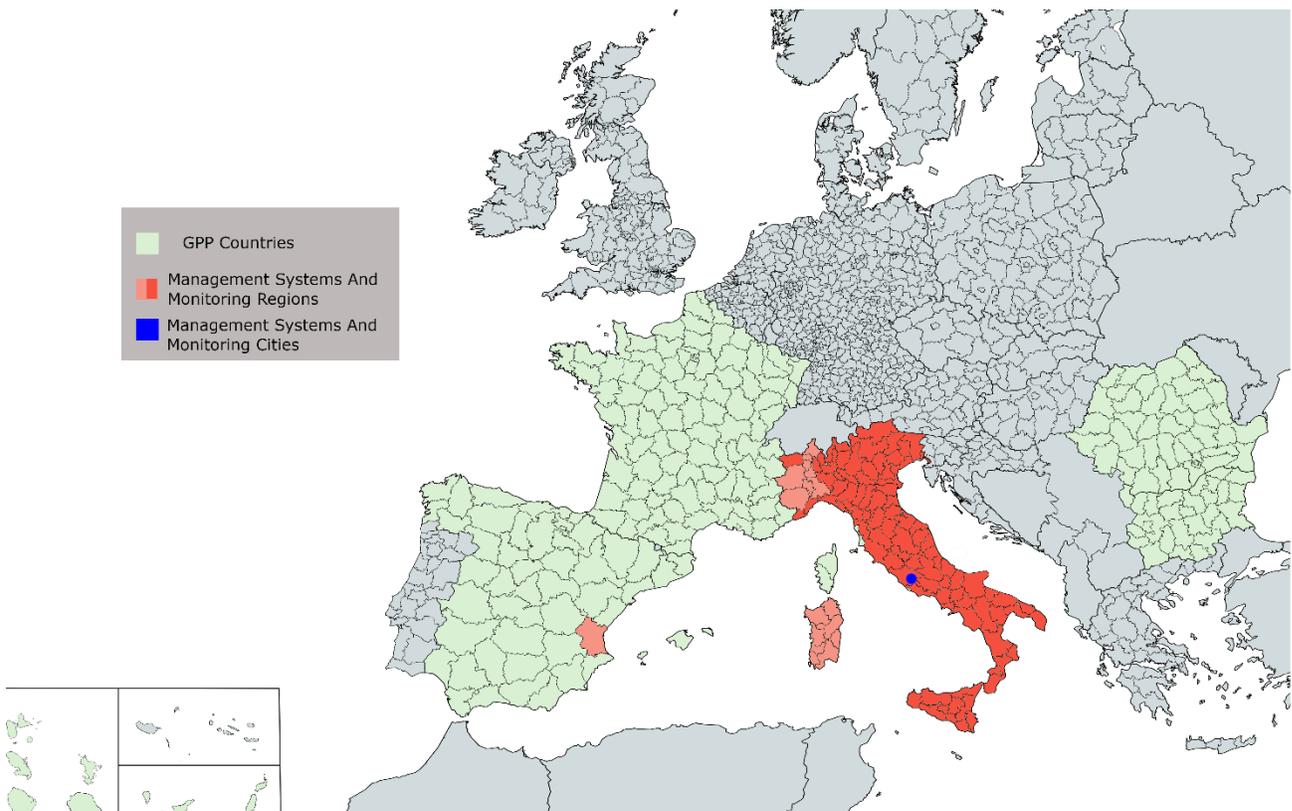
*GPP Management systems and monitoring. Example Case 2: Sustainable Public Procurement (SPP) monitoring system.* This project is an example of international “cross-fertilization” undertaken by Italy with the Government of Flanders (BE). The objective of the ongoing project is to evaluate the achievement of the SPP targets established for 11 product groups for which the minimum environmental criteria have been defined.

The monitoring system is based on the completion of an electronic form, included in the entity’s general accounting system, which the officials must obligatorily complete in order to have access to the economic resources necessary to make every expenditure of a value higher than 8500 Euros. There are three fields to fill in: first of all, it must be specified whether it is actually a purchase or another type of expense (subsidy, transfer, etc.). If it is a purchase, specify which product group it is referring to and whether the SPP criteria have been adopted. The product group is automatically assigned a project code that helps to consolidate data for final reporting.

Monitoring shows that the proportion of product groups spending for which the minimum criteria were available increased from 58% in 2014 to 72% in 2015.

For further information, contact: [els.verwimp@lne.vlaanderen.be](mailto:els.verwimp@lne.vlaanderen.be)

*Image 7: GPP Management Systems and Monitoring*



Countries	<i>Good Practice Desiderata: Organic farming</i>
Romania, France	<p><b>Project objectives:</b> Farming without chemical agents. Shorten the supply chain by establishing direct relations between producers and suppliers. Product diversity. Community development. Sustainable execution (no waste, organic cleaning of products). Raising awareness on organic farming.</p> <p><b>Project identification:</b> Educational activities to foster behaviour change. Market surveys at schools, restaurants and stores for organic food. Promotion of social interactions and other positive social and economic goals.</p> <p><b>Project design:</b> Improve air and soil quality, health, and biodiversity; promote social interactions and other positive social and economic goals. Motivate potential bidders through Community Associations (e.g. “For the Better”) to improve their products and product diversity. Require that a certain percentage of foodstuffs in the target markets come from organic farming</p> <p><b>Procurement:</b> Define green public purchase criteria for products to be procured. Bidders to present proofs of the sources of their products (ECO labels). Transparency to the citizens and firms.</p> <p><b>Implementation:</b> Monitoring system. Post-audits: validation of indicators with the intentions of the project design. Verify ECO labels all items in the procurement. Performance (on-time delivery, costs, etc.). Training, Helpdesk and Technical roundtables with interested farmers.</p> <p><b>Remaining Difficulties:</b></p> <ul style="list-style-type: none"> <li>◦ Behaviour change to emphasize health benefits of balanced and varied organic meals</li> <li>◦ Dealing with unforeseen “fake news”.</li> <li>◦ Dealing with powerful and big multinational firms</li> <li>◦ How to foster citizens’ behaviour changes</li> <li>◦ Consideration of benefits that cannot be monetized.</li> </ul>

*GPP for Organic farming. Example Case 1: Sustainable food.* The objective of this Romanian project is adoption of responsible consumption and production of food. Eating is responsible for over a quarter of the impact of human activity on the environment. Food production requires enormous amounts of water and energy, often depends on use of pesticides and pollutes watercourses, and causes erosion. On the field-to-store route, food accounts for 20% of global greenhouse gas emissions.

There are currently many controversies for defining sustainable food. Concepts in dispute include: organic, local cultures, healthy food, kilometre food, CO2 emissions, food sovereignty, or considerations on reducing meat consumption, use of pesticides, use of herbicides, farmers' rights, free trade rules, etc.

Awareness and interest are fostered amongst small scale farmers who do not label their products by bio or eco, but who use sustainable methods of working with the ecosystem. However, large commercial farms have negative effects on the natural environment, and on animal welfare and even on societies. Organic products require a trading partnership and certification system, and behaviour change by consumers.



The principal results are presented in the 2014 report by Friends of Earth, 'Who benefits from OGM crops'? Another report 'The Sustainable Nutrition Guide' discusses the following issues:

- natural foods
- genetically modified organisms; pesticides
- local and seasonal foods
- buying and reducing food waste
- products from fair trade.

For further information: [contact@maibine.eu](mailto:contact@maibine.eu)

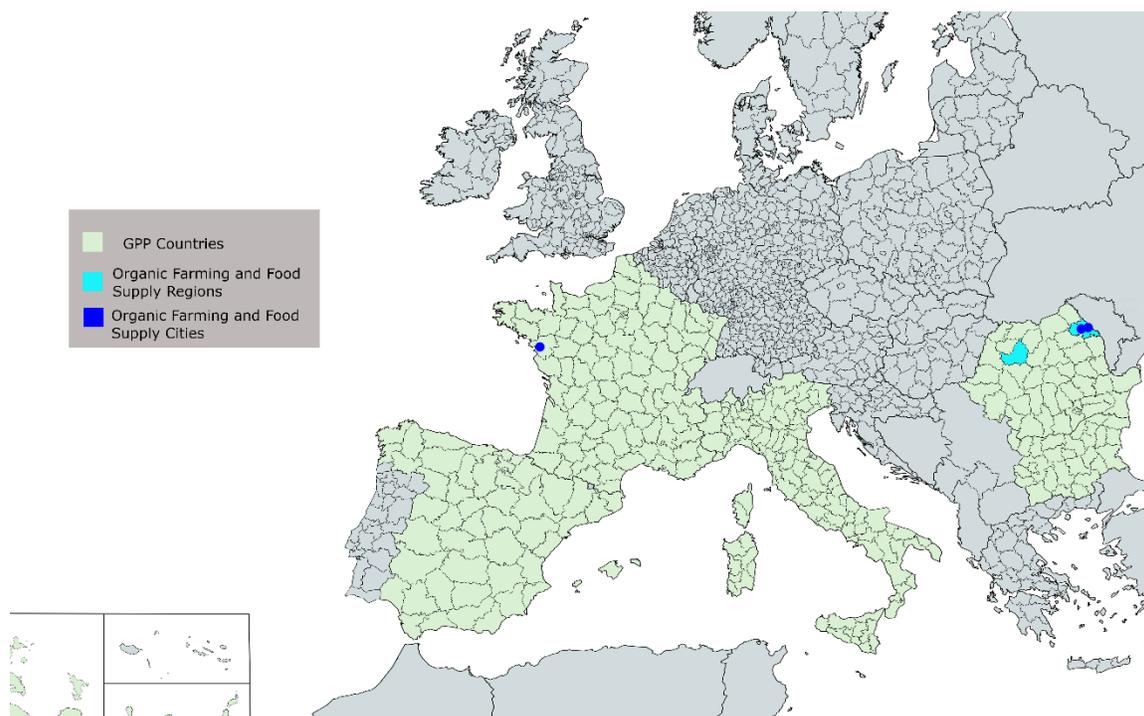
*GPP for Organic farming. Example Case 2: Supply market and meal preparation in school restaurants, leisure and multi-accommodation centres.* This French project aims at supplying products from organic farming to specific consumption centres where a least 25% of foodstuffs from organic farming are in the menus from the first year of the market onward; and integration of sustainable development into the execution of the service (fight against waste, waste treatment, use of cleaning products with ecological qualities, etc.).

The practice is a part of an approach to promote sustainable development through the provision and preparation of meals at three sites; school catering, leisure facilities and early childhood facilities. This service includes the establishment of balanced, varied, digestible menus, served in enough quantities to support good health. But also, educational and communication actions aimed at guests and families in order to raise their awareness of the fight against food waste and respect for the seasonality of products involving product diversity and a balanced diet. And finally, staff training, hygiene and health control. More specifically, in its approach to promoting sustainable development, the practice aims to set up the search for products from organic farming, labelled and short circuits, sorting waste at source and their biological recovery.

One contract is concluded for an initial period of 12 months, renewable twice for the same period. The market services for each period start and end on the last day of the school at the Loire Atlantique Academy. A real effort and special attention is made to the establishment of healthy, balanced and varied meals for the benefit of students, faculty and guests.

For further information: [www.sainte-luce-loire.com](http://www.sainte-luce-loire.com)

Image 8: Organic Farming Projects



Countries	Good Practice Desiderata: Transport and sustainable mobility
Bulgaria, Spain, France	<p><b>Project objectives:</b> Fleet renewal. Lower emissions and energy use. Health and safety. Community development. Cost savings.</p> <p><b>Project identification:</b> Current environmental concerns. Modal mix in transport and mobility. Student transport and mobility. Activities to foster behaviour change. Promotion of social interactions and other positive social and economic goals.</p> <p><b>Project design:</b> Requirements for emission characteristics, energy use and price of vehicles. School curricula for students' sustainable mobility. Life cycle costs. Delivery and warranties on vehicles. Performance and output-based contract (POBC). Costs.</p> <p><b>Procurement:</b> Competition. Term of the contract. Define criteria for services or vehicles to be procured, (POBC). Publicize contract award criteria and reasons for them. Delivery and warranties on vehicles. Costs. Transparency.</p> <p><b>Implementation:</b> Monitoring system. Post-audits: validation of indicators with the intentions of the project design. Verify warranties all items in the procurement. Performance (on-time delivery, costs, etc.).</p> <p><b>Remaining Difficulties:</b></p> <ul style="list-style-type: none"> <li>◦ Behaviour change to emphasize health benefits of sustainable mobility</li> <li>◦ Maintenance of vehicles</li> <li>◦ Unforeseen costs</li> <li>◦ Consideration of benefits that cannot be monetized.</li> </ul>

*Transport and sustainable mobility. Example Case 1: Sustainable in-City Transport in Stara Zagora, Bulgaria.* The project seeks to promote of sustainable environment-friendly modes of transport, including the development of a bicycle network, as well as the purchase of new, safer, public transport vehicles; building-up a sustainable urban environment within the city.

The current transport conditions in Stara Zagora, evaluated by different methods using field surveys and other information sources, showcased the need for the modernization of transport. The current needs of the Stara Zagora urban environment (in terms of public transportation, as well as in terms of road network infrastructure) were identified and alternative scenarios that would contribute to the modernisation and development of a sustainable urban environment for the city, were proposed.

To encourage participation in the tendering process, the tender was divided into two lots; LOT 1 for diesel articulated buses (5 units), and LOT 2 for diesel solo buses (50 units). The option for bidding for one or both lots was also available. The contract was awarded with the best-value-for-money approach. The criteria used were in line with Directive 2004/17/EC:

- Methodological quality
- Operational lifetime cost (Life Cycle Costs)
- Organization of work, incl. the timely delivery of the procured services
- Warranty period
- Safety and environmental equipment
- Quality control measures

All 9 bidders fulfilled the sustainability criteria prescribed in the bid. The application of Life-Cycle Costing (LCC) as a part of the award criteria and setting requirements for maximum levels of CO<sub>2</sub>. Overall, this tendering process was successful from the environmental and cost perspectives and improved the quality of life in the city of Stara Zagora. It gave priority to environmentally friendly passenger transport (urban transport, bicycle and pedestrian lanes), traffic congestion and emissions were reduced, and transport safety was increased. The 55 buses have up-to-date technical equipment.

Similar tendering practices have already been adopted in four Bulgarian cities. A key factor behind Stara Zagora's success story was public authorities' expertise in applying environmental criteria into tendering procedures, and the award of long term and high value contracts.

Further information: <https://www.infoz.bg/region/stara-zagora/1099-stara-zagora-nai-moderniya-gradski-transport>

*Transport and sustainable mobility. Example Case 2: Methodological guide on green criteria for sustainable mobility in schools.* This project coordinated by the Spanish partner had two associated countries (Poland, Croatia and France) to give it international flavor. The main objective is to change the perception about school trips. The design and implementation of school routes and awareness campaigns on sustainable mobility were carried out during the project.

One of the main issues is the number of people who use the car on short trips (less than 3 km) to take their children to school with negative climate change effects and reduce safety at school entrances and exits. Methodology for promoting sustainable mobility in is geared toward influencing a change in

attitudes and behaviour in short journeys by encouraging schools to use walking or bicycle. To these ends, student mobility routes are drawn on a map from house to school using a participatory process.

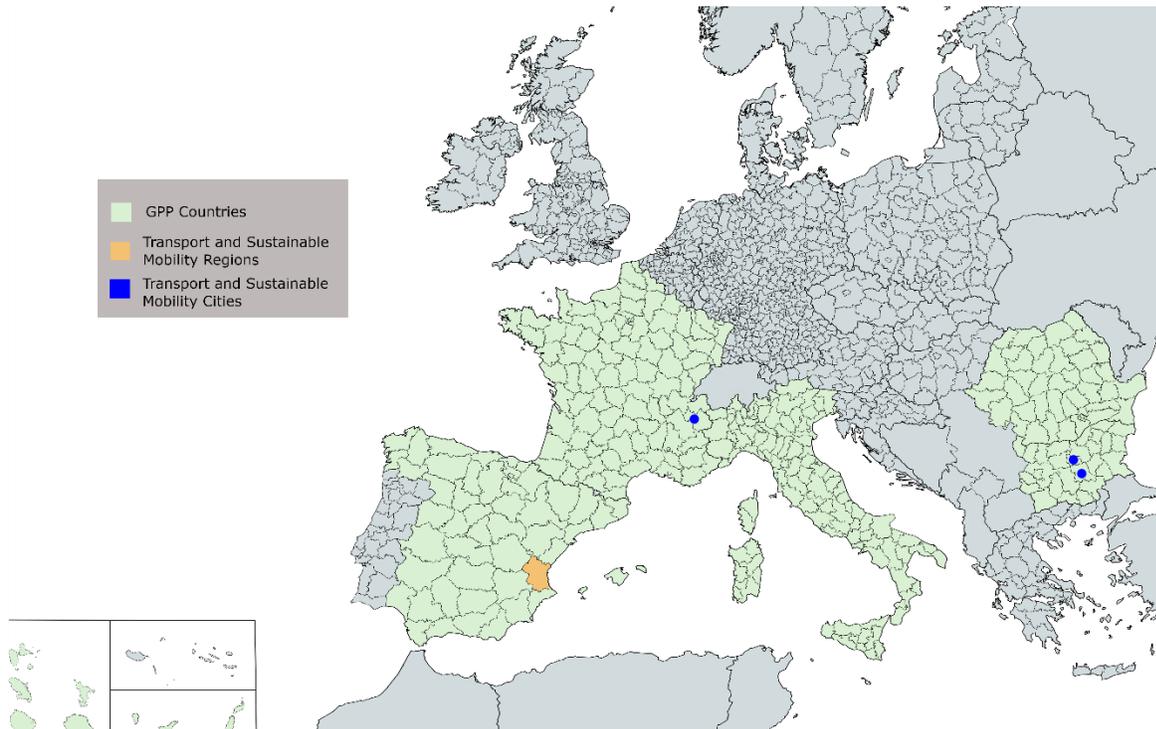
Mobility audits will be carried out to evaluate safety, obstacles and hazardous locations. The project has been carried out in 15 centres in 4 countries with a total of 5127 students. Participation and motivation have been very positive, the centres have exchanged information promoting relations between students and teachers. Mobility problems associated with school trips were the same in the four countries analysed and the approach used is transferable.

The benefits of the project are:

- Increased daily physical activity to help reduce childhood obesity.
- Increased safety in the school environment.
- Increase of the autonomy of the students and improve the visual knowledge of the area.
- Improving relations between students.
- Inclusion of sustainability in the school curriculum.
- Energy savings through the modal change of the car on foot and bike.
- Reduction of carbon dioxide emissions.
- Road awareness in sustainable displacement.

Further information at: [www.walktoschool.vic.gov.au](http://www.walktoschool.vic.gov.au) and [www.saferoutestoschools.org/greenways.html](http://www.saferoutestoschools.org/greenways.html)

*Image 9: Transport and Sustainable mobility Projects*



## SUMMARY CONSIDERATIONS OF THE GOOD PRACTICES REVIEW

**Green Public Procurement and Sustainability Tools for Resource Efficiency Mainstreaming** project, GPP-STREAM for short, aspires to improve the management, implementation and monitoring of policy instruments that integrate green public procurement approaches to ensure efficient use of resources. GPP-STREAM further wishes to institutionalize ‘Good Practice’ examples from the five Partner countries and transfer the human capital accumulated in implementing the policy instruments.

The GPP-STREAM project prospected a cooperative work of five countries’ research centres, non-government organizations acting in sync with local governments to showcase a range of goods and service, and styles and processes how GPP has been used to advance its core content: reduction of climate change agents, reduction of energy use, recycling, circular economy and prudent use of resources with transparent stakeholder participation to advance the case for sustainable environment.

Public procurement encompasses a variety of goods and services. This is demonstrated by the 49 projects described in the report. The projects are classified into six groups: (1) Built environment; (2) Waste management, recycling and service contracts; (3) GPP mainstreaming through guidelines and templates; (4) Management systems and monitoring; (5) Organic farming and food supply; and (6) Transport and sustainable mobility. For each, one or two projects are described to highlight the wide range of projects and approaches. The project classification did reduce variance within the groups, most variance remains between the groups. This is demonstrated by the *Desiderata*, collected from project descriptions, for (i) Objectives; (ii) Identification; (iii) Design; (iii) Procurement; (iv) Implementation; and (v) Annotations for difficulties that were encountered or remain. These desiderata can also be viewed as guidelines that would apply in all EU countries (and beyond).

It is worth spelling out the common desiderata for the different product or service groups. Taking the broad objectives *Green Public Procurement and Sustainability* given as enumerated earlier the shared generic characteristics of the different groups are the following:

### Identification:

- Market survey or Working groups to inform of demand for products or services
- Involvement of citizenry at large
- Scoping of possible projects; possible upside or rewards from a project
- Statement of project requirements, including educational aspects
- Ways to motivate technical or technological innovations
- Legal review of project characteristics

### Design:

- Performance and Output-based design whenever possible
- Designation of technical specifications and product or service requirements
- Degree of material reuse or recycling
- Public-private participation or partnership
- Life cycle costs and project financing
- Uniformity and ease of understanding of requirements (e.g. ECO labels, ISO certificates)

Procurement:

- Transparency of process
- Identification of bidder competence, capability and past performance
- Green public purchase criteria for products or services to be procured
- Clear project award criteria and reasons for them
- Terms of delivery, cost and warranties/maintenance

Implementation:

- Monitoring system for project progress to comply with procurement terms of delivery
- Validation that appropriate indicators were chosen to reflect the intentions of project design
- Verification that the products and services delivered matched the procurement specifications
- Helpdesk or Technical roundtables with product or service providers
- Post implementation audits to ensure project benefits as intended

Remaining difficulties

- Unforeseen costs and difficulty to estimate Life Cycle Costs
- Small-scale procurements with potential large benefits when mainstreamed
- Dealing with powerful, big multinational firms
- Fostering behaviour change
- Consideration of benefits that cannot be monetized
- Shortage of trained staff to write technical performance specifications

Many of the *Good Practice* projects have already delivered great sustainable benefits, for example in Bulgaria 'Renovation of St. St. Cyril and Methodius School' has reduced CO<sub>2</sub> annual emissions by 62 tons and delivered cost savings of over €25000; the purchase of 55 modern buses are providing environment-friendly quality public transport service; the performance-based procurement approach is replicated in six other Bulgarian cities.

In Romania organic farms with farm-to-table concept are being introduced with positive environmental and health benefits documented in *Sustainable Nutrition Guide*; a micro-hydropower plant was built (with EU co-funding) that delivers enough power to cover the electricity demands in schools and for public lighting and buildings.

Spain is spearheading projects to reduce waste and apparel consumption and to sustain circular economy in the textile industry. Contracts worth €9.3 million involving 90,000 people were executed in 15 countries between 2010-2014; from 2016 to 2020 the city of Alzira is engaged in innovative green public procurement to improve energy efficiency of public buildings, 250 Small and Medium size Enterprises (SME) have expressed interest and three SME bids are currently in evaluation.

Italy has a major interest in mainstreaming GPP and has introduced it in (at least) four regions since 2013. A major effort in Italy is the development of management systems and monitoring project execution. For example, in City of Turin and Arpa Piedmont €86.5 million (60% of total) was used in GPP in 2014 with 17,700 tons of GHG emissions, 585 tons of plastic and 3,577 tons of CO<sub>2</sub> emissions avoided.

France advanced *waste management, recycling and service contract* agenda in several regions and mainstreamed templates and guidelines for GPP. There is a pilot project for a service contract in City of Sainte Luce on Loire on menus of deliver organic food in schools, restaurants and multifunction centres.

An innovative procurement to supply a fleet of cars in the City of Chambéry was begun since 2012. All these projects have significant environmental benefits and are both sustainable and transferable.

Design and public procurement of projects is a lengthy process and several of the *Good Practice* projects are still in operation and their benefit stream cannot yet be quantified. Evidence to-date is that the *Good Practice GPP* concepts are transferable and will yield a significant benefit stream to sustain environmental wellbeing.

## STAKEHOLDER RECOMMENDATIONS AND VIEWS

A transnational meeting with five project partners was recently held at MANRA, in Alzira, Spain, to discuss the GPP-STREAM to solicit their views and recommendation. The participants represented a National authority, a regional authority, two local authorities and one for the private sector. The principal findings follow:

*Cooperation fosters GPP mainstreaming.* The participants opined that interregional cooperation can help mainstream GPP policies at different levels of government and promote communication of top down guidance of fit-for-purpose local rules. Of elevated interest were experiences in circular economy, introduction of innovative processes for the recycling of products and waste, the application of life cycle costs in public procurement, and simple and practical ways to integrate the environmental criteria into public tenders.

*Imprecision of environmental criteria creates uncertainty.* The lack of practical knowledge in the application of environmental criteria emerged as a recurrent issue in the case studies. A common problem was the unavailability of documents or labels that certify the conformity of the product or service with the project intentions. In that regard, GPP-STREAM experiences made available new information and tools to improve the awareness on adoption of environmental criteria in the policy instruments. Interregional collaboration provided opportunities and a platform to learn good practice experiences and to discuss their details directly with project partners to gain practical knowledge how to make effective regional actions in a local area.

*Training about GPP of stakeholders raises competence at all levels.* Improving competences in the Administrations was the key to accelerate implementation of GPP and to encourage adoption of green technologies in policy instruments in the tenders to secure efficient use of resources. To this end up-to-date training is especially important to actors who promote the GPP concept at national and regional levels. At the local levels, information, awareness campaigns and nuts-and-bolts training are the important issues. At all levels provision of training and training opportunities to public officials and private firms—the contractors or product and service suppliers—are necessary because they foster comparisons of different national and regional practices and learning through experience exchange. This is especially important to get perspectives on how GPPs were incorporated in the national public procurement laws.

*Recurrent learning events are useful.* Overall, GPP-STREAM was a learning experience to the participants. A directive that social and environmental criteria should be incorporated in a cross-cutting and binding manner in all public procurements was enjoined in the belief that their inclusion provides a better

quality/price ratio in the contracts and a better use of public funds. This is because GPP concept is underpinned by clear, verifiable, justifiable and even ambitious environmental criteria for products and services based on life-cycle approach.

*Embracing and putting GPP into practice is not easy.* There also was sober reflection. A lesson learned was the importance the stakeholders gave to the workshops among the partners, which facilitated the exchange of experiences how environmental criteria were introduced in public tenders. It was felt that the criteria in the EU Member States should be alike to avoid the single market distortion and a reduction in EU-wide competition. Common criteria and specifications, adjusted to climate or other exigencies, were necessary to reduce administrative burden in public administrations and for service or product suppliers. Exchange of experiences revealed differences in the implementation or application of GPP. In some regions the legal framework for compulsory inclusion of environmental criteria in the of tenders is not yet effective. In others GPP readiness was greater and environmental criteria were categorized by sectors: urban furniture, waste management and recycling, transportation, vehicle specifications, construction and demolition, materials, product labelling (ECO- ISO-, etc.). Technically, weighing the environmental criteria is not easy. Many service or product suppliers are not ready or even competent to calculate emissions, or reduction in CO<sub>2</sub>, or the life cycle cost of products, or environmental effects from their activity.

*Transnational cooperation creates confidence on GPP.* The participants uniformly confirmed that the transnational learning event was useful for sharing experiences and to learn how GPP was implemented in the partner countries at different levels of government. This was true regardless of knowledge, competence and experience in GPP applications. The event also boosted confidence of project owners to assure the procuring entities and the service providers, the contractors, that GPP was a Europe-wide approach which is here to stay because it ensures consistency in criteria and fit-for-purpose requirements, reduces or eliminates technical and trade barriers within the EU, avoids the risk of having no bidders for a project, expressly supports sustainable environment, reduces administrative burdens and provides the best quality-weighted value for money.



GPP Good Practices Synopsis

id	Thematic category	Title	Country, Area	Start/ End dates	Objectives or contract criteria	Results	Learning/ Transferability	Comments
BG-1	Built environment	Renovation of St. St. Cyril and Methodius School	Bulgaria Gabrovo Municipality	2017/2018	<ul style="list-style-type: none"> <li>◦ Healthy school environment</li> <li>◦ Conserve energy and water use</li> </ul>	<ul style="list-style-type: none"> <li>◦ 63 tons CO2 emissions saved (net)</li> <li>◦ Energy savings 0.3 GWh (net)</li> <li>◦ Water use limited to “green” criteria</li> <li>◦ Savings €25,564</li> <li>◦ Monitoring system implemented</li> </ul>	<ul style="list-style-type: none"> <li>◦ GPP process and analysis</li> <li>◦ Output specifications</li> <li>◦ Transparency to the citizens</li> <li>◦ Transferable in Bulgaria and to like countries</li> </ul>	Performance and Output Based Specification Contract (POBS)
BG-2	Transport: sustainable mobility: Vehicles	Three urban electric buses for Gabrovo	Bulgaria Gabrovo Municipality	2018/ Current	<ul style="list-style-type: none"> <li>◦ Air quality (NO<sub>x</sub>, Dust, CO<sub>2</sub>)</li> </ul>	<ul style="list-style-type: none"> <li>◦ No results available yet</li> </ul>	<ul style="list-style-type: none"> <li>◦ Municipal and its public bus company staff learned POBS and how to write the specs for the buses.</li> <li>◦ Transferable in towns in Bulgaria</li> </ul>	ERDF funded 80%. POBS contract. A demonstration program has been organized for dissemination
BG-3	Waste management, recycling and service contracts	Recycling /separation and disposal of HH waste in Gabrovo region	Bulgaria Gabrovo Region	Will be published	<ul style="list-style-type: none"> <li>◦ Increase waste recycled/recovered</li> <li>◦ Improve the present contract</li> <li>◦ Motivate the bidders to improve their technology</li> </ul>	<ul style="list-style-type: none"> <li>◦ No results available yet</li> <li>◦ Rather large savings and improved environment expected</li> <li>◦ 3+2 yr contract for good performance</li> </ul>	<ul style="list-style-type: none"> <li>◦ Municipal owned enterprise (MOE) is on a learning curve</li> <li>◦ Transferable in towns in Bulgaria (possibly elsewhere)</li> </ul>	Gabrovo’s MOE runs the landfill for non-hazardous waste. Private contractor runs the separation service.
BG-4	Built environment Renovation: Improved lighting system	Automated light system in Trakia University	Bulgaria, City of Stara Zagora	2012/2013	<ul style="list-style-type: none"> <li>◦ Energy efficiency</li> <li>◦ Light luminosity</li> <li>◦ Life cycle costs</li> <li>◦ Material reusability</li> <li>◦ 5-year warranty</li> </ul>	<ul style="list-style-type: none"> <li>◦ 5308 light fixtures replaced by LED units</li> <li>◦ Large energy savings and improved environment expected at the same luminosity</li> <li>◦ Project cost €130,000</li> </ul>	<ul style="list-style-type: none"> <li>◦ The initiative addressed common BG legal req’s</li> <li>◦ The contracting process has been transferred</li> <li>◦ Practice already used in schools, hospitals and public buildings in SZ</li> </ul>	Trakia U has 9000 students and 1000 staff. Competitive procurement in 2 lots: LED fixtures and automation
BG-5	Transport sustainable mobility Vehicles,	Sustainable urban transport	Bulgaria, City of Stara Zagora	2012/2016	<ul style="list-style-type: none"> <li>◦ Bid quality</li> <li>◦ Life cycle costs</li> <li>◦ On-time delivery</li> <li>◦ Env. (CO<sub>2</sub>)</li> <li>◦ Other environmental performance stds</li> <li>◦ Warranty period</li> <li>◦ Quality control plan</li> <li>◦ Cost €30,000,000</li> </ul>	<ul style="list-style-type: none"> <li>◦ Promotion of env friendly transport</li> <li>◦ Bicycle network</li> <li>◦ 55 new buses</li> <li>◦ Efficient, quality public transport service</li> <li>◦ Better urban environment</li> <li>◦ 9 bidders</li> </ul>	<ul style="list-style-type: none"> <li>◦ Practices adopted in large BG cities (Sofia, Plovdiv, Varna and Burgas) to procure environment-friendly vehicles.</li> <li>◦ Participatory (working group) procurement for transparency</li> </ul>	A key factor in SZ success was the application of environmental criteria in procurement and the award of long term, high value contract

## Synopsis of Green Public Procurement and Sustainability Tools Projects

id	Thematic category	Title	Country, Area	Start/End	Objectives or contract criteria	Results	Learning/Transferability	Comments
BG-6	Built environment	Electricity supply from renewable energy sources in a hospital	Bulgaria Hospital in Bratzigovo Municipal (pop 9798)	2015/ongoing	<ul style="list-style-type: none"> <li>◦ Decrease CO<sub>2</sub> emissions</li> <li>◦ Improve public health</li> <li>◦ Stable energy supply</li> <li>◦ Technical specs for high system efficiency</li> <li>◦ Financial feasibility (low price, pay-back with installments)</li> <li>◦ Quick completion</li> </ul>	<ul style="list-style-type: none"> <li>◦ 27.52 tons CO<sub>2</sub> emissions saved (net)</li> <li>◦ Energy production 33.60 MWh/yr.</li> <li>◦ Pay-back period 10 yr.</li> <li>◦ Annual savings €3008</li> <li>◦ Project cost €41,795</li> </ul>	<ul style="list-style-type: none"> <li>◦ There were useful GPP trainings, consultations and workshops</li> <li>◦ Participatory project design with working group, enterprises, hospital administration, employees, doctors, patients and the public</li> <li>◦ Transferable in small Bulgarian cities</li> </ul>	Bratzigovo's goal is to reduce emissions by > 20% by 2020, using Sustainable Energy Action Plan (SEAP) for energy in both public and private sectors.
BG-7	Waste management, recycling and service contracts	100% recycled paper use in the Ministry of the Environment	Bulgaria Sofia (the Capital)	2009/ongoing	<ul style="list-style-type: none"> <li>◦ Supply of 8000 packages of 100% recycled copy paper in A4 format</li> <li>◦ Bidders should present a copy of quality management certificate ISO 9001: 2000 or equivalent; issued within the last six months</li> </ul>	<ul style="list-style-type: none"> <li>◦ Ministry of Environment and Water (MEW) has proposed to the Central Purchasing Unit (in Ministry of Finance) to procure recycled paper.</li> <li>◦ The paper must be produced from recovered paper fibres (post-consumer waste and pre-consumer recycled) and elemental chlorine-free (ECF) bleached.</li> </ul>	<ul style="list-style-type: none"> <li>◦ Participatory stakeholder process: Working groups, enterprises, citizens, public administration, employees of the Ministry.</li> <li>◦ Transferable to other Ministries and public entities in Bulgaria</li> </ul>	Because GPP does not require more financial resources, it fostered political support for it. In MEW's view "GPP should become common practice for all public authorities".
BG-8	GPP mainstreaming Awareness	Sustainable project management, incl. events	Bulgaria Agency for Social Assistance (ASA) in the Ministry of Labor and Social Policy	2011/ongoing	<ul style="list-style-type: none"> <li>◦ Create awareness amongst participants, the procuring agency and suppliers for environmentally friendly alternatives</li> <li>◦ Strict requirements for sound equipment; paper, pens and bags for documents from recycled materials with a minimum of 65-80% recycled material; and so on.</li> </ul>	<ul style="list-style-type: none"> <li>◦ The contracts awarded are for seals, logistics for organizing seminars, and office supplies.</li> <li>◦ Minimal direct impact of small-scale procurements.</li> <li>◦ Contracts concluded for all lots. The supply of seals from recycled plastic was most difficult (1 bid). An average of three bids was received for the other lots.</li> </ul>	<ul style="list-style-type: none"> <li>◦ Successful GPP in these small contracts, made ASA the leading institutions in Bulgaria with a targeted policy for the purchase of environmentally friendly products and services.</li> <li>◦ Currently ASA is implementing two new projects in which ten green tenders have been launched.</li> </ul>	Gabrovo's MOE runs the landfill for non-hazardous waste. Private contractor runs the separation service. 3+2 yr contract for good performance

### Synopsis of Green Public Procurement and Sustainability Tools Projects

id	Thematic category	Title	Country, Area	Start/End	Objectives or contract criteria	Results	Learning/Transferability	Comments
BG-9	Built environment	Building a green flora exposition center in Burgas—Bulgaria's Greenest Capital for 2011	Bulgaria City of Burgas	2014/ 2015	<ul style="list-style-type: none"> <li>◦ Replacement of the existing textile pavilion with a multifunction building,</li> <li>◦ Protect the environment during and after the reconstruction</li> <li>◦ Energy savings, and increased user comfort.</li> </ul>	<ul style="list-style-type: none"> <li>◦ Flora Exposition Centre has photovoltaic (PV) panels, a green roof, wall features, rain-fed irrigation, natural and LED lighting, and energy efficient building systems and materials.</li> <li>◦ Procurement was a successful combination of energy efficiency and attractive design</li> <li>◦ Project cost €1,429,575</li> </ul>	<ul style="list-style-type: none"> <li>◦ Passive measures can lead to energy savings, increased user comfort, and create a sustainable and economically viable building in LCC sense</li> <li>◦ Approach transferable at Black Sea coastal areas</li> </ul>	Construction works of Flora Burgas Expo Centre ensured less energy consumption and use of renewable energy resources.
BG-10	Built environment Improved street lightning	Purchasing energy efficient street lightning in Zlatograd	Bulgaria City of Zlatograd (pop 11,471)	2016/ 2016	<ul style="list-style-type: none"> <li>◦ More efficient maintenance</li> <li>◦ Reduce energy use</li> <li>◦ Reduce CO2 emissions</li> <li>◦ Improve living standard</li> <li>◦ Save money.</li> </ul>	<ul style="list-style-type: none"> <li>◦ CO2 savings 178 t/yr.</li> <li>◦ Energy savings 260.78 MWh/yr.</li> <li>◦ Cost savings €23,275/yr.</li> <li>◦ 860 pcs sodium bulbs and 309 lamps replaced with LED bulbs</li> <li>◦ Project cost €93,425</li> </ul>	<ul style="list-style-type: none"> <li>◦ Sustainable energy management policy with clear identification of options</li> <li>◦ Project design and based on local skills</li> <li>◦ Transferable to small cities</li> </ul>	Procurement in compliance with the Procurement Law. Market research defined the technical specs and other parameters
BG-11	Built environment	Improvement of energy efficiency in seven schools	Bulgaria City of Ruse	2010/ 2012	<ul style="list-style-type: none"> <li>◦ Decrease the energy and CO2 emissions</li> <li>◦ To improve the educational infrastructure</li> <li>◦ To creates jobs (104 added)</li> </ul>	<ul style="list-style-type: none"> <li>◦ Energy savings 26,763 MWh/year.</li> <li>• CO2 emission savings 1,158.51 t CO2/year.</li> <li>• Improved infrastructure in 7 schools, 36,603 m<sup>2</sup></li> <li>• Reduction of GHG emissions 11,585 kt/yr.</li> <li>◦ Project cost €1,262,985</li> </ul>	<ul style="list-style-type: none"> <li>◦ Design using modern thermal insulation</li> <li>◦ Efficiency of new windows and heating systems</li> <li>◦ Transferable in towns in Bulgaria (possibly elsewhere)</li> </ul>	The project was supported by ERDF funds (85%). More than 4000 students and staff were affected

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id	Thematic category	Title	Country, Area	Start/End	Objectives or contract criteria	Results	Learning/Transferability	Comments
BG-12	Built environment Improved street lighting	Environment friendly street lighting	Bulgaria, City of Sapareva Banya	2012/2013	<ul style="list-style-type: none"> <li>◦ Requirements for: Power, Warranty, Light efficiency, Durability (hrs), Dimming, Protection level</li> <li>◦ EN and AI standards are applied</li> </ul>	<ul style="list-style-type: none"> <li>◦ CO2 savings 306 t/yr.</li> <li>◦ Costs savings €40,055/yr.</li> <li>◦ Electricity savings 447MWh/yr.</li> <li>◦ Project cost €227,000 includes maintenance contract for 7 years</li> </ul>	<ul style="list-style-type: none"> <li>◦ Importance of green criteria for light efficiency</li> <li>◦ Audits to specify the technology, financing and methodology for all calculations.</li> </ul>	LED bulbs with a monitoring and control system reduced power needs and solved electricity theft, and leakage in public buildings
BG-13	Built environment	Energy efficiency in hospital 'Dr. K Chilov'	Bulgaria, City of Madam	2015/2016	<ul style="list-style-type: none"> <li>◦ Installation of new heating system</li> <li>◦ Change to LED bulbs</li> <li>◦ The criteria: price completion time; energy savings and reliability.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction CO2 emissions 94.60 t/yr.</li> <li>• Energy savings 224 MWh/yr.</li> <li>• Cost savings of €9,690</li> <li>• Energy for heating the hospital is renewable</li> <li>◦ Project cost €259,343</li> </ul>	<ul style="list-style-type: none"> <li>◦ Evaluation of many options for energy efficiency offers the basis for costs and benefits; lower price is not a guarantee for project success</li> <li>◦ The idea is transferable</li> </ul>	Importance of market assessment and options for technical solutions in project design. This procurement approach requires qualified experts

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id	Thematic category	Title	Country, Area	Start/End	Objectives or contract criteria	Results	Learning/Transferability	Comments
RO-1	Organic farming and food supply	Organic farming supported by the community	Romania Iasi North-east Romania	2014/ongoing	<ul style="list-style-type: none"> <li>◦ Farming without chemical agents</li> <li>◦ Shorten the supply chain to establish direct relations between producers and consumers.</li> <li>◦ Product diversity is important.</li> </ul>	<ul style="list-style-type: none"> <li>◦ Results are qualitative and based on the emerging concept of biological, biodynamic farming as key to sustainable agriculture.</li> <li>◦ Organic farming is believed to provide healthy and tasty food</li> <li>◦ No project cost available</li> </ul>	<ul style="list-style-type: none"> <li>◦ Criteria for good practice exist and a guidebook is in the works (see RO-2)</li> <li>◦ Similar communities have evolved world-wide.</li> <li>◦ The idea is transferable world-wide.</li> </ul>	Association "For the Better" is the driving force. At present 18 consumers are working with interested farmers. Organic farming is small scale farming
RO-2	Organic farming and food supply	Sustainable food	Romania Iasi North-east Romania	2014/ongoing	<ul style="list-style-type: none"> <li>◦ As in RO-1</li> </ul>	<ul style="list-style-type: none"> <li>◦ Same as in RO-1 above</li> <li>◦ No project cost information is available</li> </ul>	<ul style="list-style-type: none"> <li>◦ Project's <i>Sustainable Nutrition Guide</i> has been published with broad coverage applicable world-wide</li> </ul>	Organic food employs more labor because it involves rotating crops to keep a healthy soil. (See RO-1)
RO-3	Organic farming and food supply	Urban gardens	Romania Iasi /Cluj Romania	2014/ongoing	<ul style="list-style-type: none"> <li>◦ The project seeks to contribute to the development of the communities holistically.</li> </ul>	<ul style="list-style-type: none"> <li>◦ Same as RO-1, 2, to reduce: CO<sub>2</sub>; improve air quality, health, and biodiversity; promote social interactions and other positive social and economic goals.</li> <li>◦ No project cost available</li> </ul>	<ul style="list-style-type: none"> <li>◦ "Adopt a Green Space" is the first community project in the public space of Cluj thought and sustained by the citizens on their own</li> <li>◦ The idea is transferable.</li> </ul>	Garden Court--Young people <30, of "Romania in Transition" teach urban students about nature, food and how to protect the environment
RO-4	GPP mainstreaming Guidelines/ Templates	Energy efficiency Public Procurement (EEPP) guidelines	Romania North-East Regional Development Agency (NGO)	2013/ongoing	<ul style="list-style-type: none"> <li>◦ Obtain data from all stakeholders</li> <li>◦ Deliver fair and clear contract</li> <li>◦ Ensure verification of all items in the procurement</li> </ul>	<ul style="list-style-type: none"> <li>◦ No quantitative or qualitative evidence</li> <li>◦ However, the EEPP Guideline document appears thoughtful</li> <li>◦ Project cost €162400</li> </ul>	<ul style="list-style-type: none"> <li>◦ The guidelines are addressing important issues and legal req's that are common in RO</li> <li>◦ The EEPP guidelines will be transferable in Romania</li> </ul>	Difficulties remain: <ul style="list-style-type: none"> <li>◦ Design correctness</li> <li>◦ On time delivery</li> <li>◦ Spare parts</li> <li>◦ Product certificates</li> <li>◦ Legal compliance with standards</li> </ul>
RO-5	Built environment Energy supply to public buildings	Micro-hydropower plant on Moldova River, Municipality of Roman	Romania Municipality of Roman	2015/ongoing	<ul style="list-style-type: none"> <li>◦ To build micro-hydropower plant on Moldova River to serve Roman and its periurban areas</li> <li>◦ To ensure electric energy needs of the Municipality of Roman.</li> </ul>	<ul style="list-style-type: none"> <li>◦ During the 2 years operation, the plant produced 2,900 MWh (demands of public lighting, schools and local pub. Institutions). Projected annual energy output 3,000 MWh (580 kW) Valued in the first half of 2017, ~€ 65.000.</li> </ul>	<ul style="list-style-type: none"> <li>◦ The Municipality of Roman is preparing a new project for establishing a 2<sup>nd</sup> hydro-power plant.</li> <li>◦ The concept may be transferable if the geography and climate permit it.</li> </ul>	Total project value: ~ €5.1 million. (a mix of European (SOP), national and local budget), <ul style="list-style-type: none"> <li>◦ The output is intended solely for community's consumption</li> </ul>

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ES-1	Built environment	Saving and Energy Efficiency Plan of the Ribera Region	Spain Valencia Region	2013/ ongoing	<ul style="list-style-type: none"> <li>◦ Reduce regional carbon emissions</li> <li>◦ New strategies at EU and national levels</li> <li>◦ Analysis of Energy Efficiency at Ribera</li> <li>◦ Study implanting new energy systems in public buildings</li> <li>◦ Revision of thermal systems in schools for energy efficiency.</li> </ul>	<ul style="list-style-type: none"> <li>◦ The objectives are achieved by studying the possibility of improving energy efficiency and reducing energy consumption in different types of buildings</li> <li>◦ This practice allows access by civil servants, external technicians and non-specialized citizens</li> <li>◦ No project cost available</li> </ul>	<ul style="list-style-type: none"> <li>◦ Advice for the analysis of the different energy needs of buildings.</li> <li>◦ Audits to show if energy is wasted and need for insulation or other remedies.</li> <li>◦ Selective transferability Energy and remedies are the same for public buildings in Greece or Poland.</li> </ul>	<p>Difficulties remain:</p> <ul style="list-style-type: none"> <li>• Lots of data difficult to handle.</li> <li>• The information is very scattered</li> <li>• Extant interfaces are complicated</li> <li>• Future actions are difficult and there can be unforeseen future expenses</li> </ul>
ES-2	GPP mainstreaming Guidelines and templates	Tools to support Environmental Procurement of Green Urban Furniture (GUF TOOLS)	Spain Valencia Region (Several beneficiaries, private and public)	2013/ ongoing	<ul style="list-style-type: none"> <li>◦ Review legislation and environmental info on urban furniture.</li> <li>◦ Develop green public purchase criteria and environmental profiles of urban furniture</li> <li>◦ Develop multicriteria method for “green purchase” contracts</li> <li>◦ Implement simplified method for public entities to compare urban furniture products.</li> </ul>	<ul style="list-style-type: none"> <li>◦ Decrease in the generation of CO<sub>2</sub> and generated waste, derived from the use of the Tool, at all stages of project implementation</li> <li>◦ No project cost available</li> </ul>	<ul style="list-style-type: none"> <li>◦ The developed criteria could be united for the whole of the EU.</li> <li>◦ This could improve all Member States “green” decision-making</li> <li>◦ With this project GUF tool Member States could use the same criteria in UF decisions</li> </ul>	<ul style="list-style-type: none"> <li>◦ Absence of regulations for environmental criteria in public GUF procurement</li> <li>• Increased involvement of the private sector is needed for ecological and environmental criteria for creating sustainable urban furniture products</li> </ul>
ES-3	Built environment	Technical Instruction for Application of Sustainability Criteria in the Electricity Sector for Public Buildings of Barcelona	Spain Barcelona Region	2013/ ongoing	<ul style="list-style-type: none"> <li>◦ Definition of concept green electricity</li> <li>◦ Definition of Priorities in Electrical Contracts</li> <li>◦ Environmental criteria in procurement docs</li> <li>◦ Establish monitoring systems to track electricity consumption</li> </ul>	<ul style="list-style-type: none"> <li>◦ The project is success. Analyses showed decreased energy use and adjustments in the power contracts and compensation CO<sub>2</sub> emissions.</li> <li>◦ The results can be applied on the private sector in the future.</li> </ul>	<ul style="list-style-type: none"> <li>◦ The criteria should be defined in advance for green procurement in EU by country or area</li> <li>◦ This project practice is highly suited to other EU regions, because green criteria can be established for all public buildings.</li> </ul>	<p>Barcelona City Council made a plan to improve air quality and committed to sustainability to minimize adverse impacts from energy use in public buildings..</p>

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id	Thematic category	Title	Country, Area	Start/ End	Objectives or contract criteria	Results	Learning/ Transferability	Comments
ES-4	Waste management, recycling, service contracts Paper conservation	Technical Instruction for the Application of Sustainability Criteria in the use of paper in the municipal administrations in Barcelona	Spain City of Barcelona	2013/ ongoing	<ul style="list-style-type: none"> <li>◦ Characterization of types of paper.</li> <li>• Def.of procurement priorities.</li> <li>• Def environmental criteria on different types of paper.</li> <li>• Establish monitoring systems.</li> </ul>	<ul style="list-style-type: none"> <li>◦ This practice is good because the same criteria can be carried out in administrations</li> <li>◦ The use of electronic administration facilitates “diminishing” systems, including the use of paper.</li> </ul>	<ul style="list-style-type: none"> <li>◦ This measure and computerization of the public administration makes progressive decrease in paper</li> <li>◦ Sustainable paper management could be applied in all EU administrations.</li> </ul>	Barcelona made an analogous decision regarding paper as with electricity (see above).
ES-5	Built environment	TEESCHOOLS Creation of investment acceleration instruments to promote low carbon economies.	Spain/Italy/Croatia/Bosnia Herzegovina	2017/ 2020	<ul style="list-style-type: none"> <li>• Creation of Low Carbon EU Union</li> <li>• Improved energy management of public buildings</li> <li>• Provide innovative technical and financial solutions to enable school energy renewal</li> </ul>	<ul style="list-style-type: none"> <li>◦ The project tools are intended to calculate the carbon footprint of public buildings to establish technical and construction criteria for new or rehabilitated buildings to lower emission of GHGs</li> </ul>	<ul style="list-style-type: none"> <li>◦ Project will establish low carbon criteria for school buildings.</li> <li>◦ A regulation will be different to EU States. We will always work with the premise of with near zero emission concept (NZEB)</li> </ul>	TEESCHOOLS aims to develop innovative technical and financial solutions for the renovation of schools to achieve buildings NZEB buildings.
ES-6	Built environment	Improve energy efficiency of public buildings by using green public purchase criteria.	Spain City of Alzira	2016/ 2020	<ul style="list-style-type: none"> <li>◦ Promote energy efficiency to improve public services.</li> <li>◦ Incorporate purchase criteria to reduce CO<sub>2</sub> emissions from municipal facilities</li> <li>◦ Improve services by municipalities through new products and reduce energy demand</li> </ul>	<ul style="list-style-type: none"> <li>◦ Contacts are made with more than 250 SMEs. There are 15 interested parties</li> <li>◦ Currently there are 3 SME bids</li> <li>◦ There are difficulties in preparing the bid documents that include innovation</li> <li>◦ Total sum to be contracted €200.000</li> </ul>	<ul style="list-style-type: none"> <li>◦ Innovative public procurement is one way to encourage areas in EU with problems such depopulation, lack of opportunities/resources.</li> <li>◦ To help these small or medium sized localities to improve efficiency of their buildings and thereby save economic resources</li> </ul>	<p>Different methods are used</p> <ul style="list-style-type: none"> <li>◦ Minimize heat absorption in summer and maximize it in winter</li> <li>◦ Minimize heat loss</li> <li>◦ Improve ventilation</li> <li>◦ Maximize natural light</li> <li>◦ Soundproofing</li> <li>◦ Quality of assembly</li> </ul>
ES-7	Built environment	Purchase of urban furniture by using ecological purchase criteria in Phase II of the Green Ring of Alzira.	Spain City of Alzira	2014/ ongoing	<ul style="list-style-type: none"> <li>◦ Introduction of new procurement approach</li> <li>◦ Selection of materials and services through the GUF Tool decision-making module for efficient contracts</li> <li>◦ Innovation using new materials thanks to GUF Tool.</li> <li>◦ Define environmental specifications to improve sustainability of materials used..</li> </ul>	<ul style="list-style-type: none"> <li>◦ Reduction of the environmental impacts in the life cycle of urban furniture</li> <li>◦ Foster and incentivize sustainable product markets.</li> <li>◦ Redesign of tenders to create a circular product chain.</li> <li>◦ Encourage use of green criteria</li> </ul>	<ul style="list-style-type: none"> <li>◦ GUF TOOL makes the practice is transferable within EU</li> <li>◦ GUF TOOL can be used by both the public and private sectors</li> <li>◦ With a greener view in procurement the carbon footprint is reduced, in particular in ‘share and recycle economy’.</li> </ul>	Adoption of GUF criteria requires a change in vision that not only the economic aspect is important but also the indirect benefits that cannot be monetized would be considered.

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id	Thematic category	Title	Country, Area	Start/ End	Objectives or contract criteria	Results	Learning/ Transferability	Comments
ES-8	Waste management, recycling, service contracts	Good Practices in Green Public Procurement in Regional Waste Management.	Spain Consortium CREA in Alicante	2018/ ongoing	<ul style="list-style-type: none"> <li>◦ Classification of waste hierarchy</li> <li>◦ Fostering 'Circular' (share-recycle) economy</li> <li>◦ Minimize pollutant emissions or discharges</li> </ul>	<ul style="list-style-type: none"> <li>◦ The uniform criteria apply to all waste management entities</li> <li>◦ They would help create networks in circular economies and trigger new priorities to minimize carbon footprint in waste mgt</li> </ul>	<ul style="list-style-type: none"> <li>◦ Practice will help areas with serious waste management problems with a new approach in a circular economy.</li> <li>◦ A behavioral change in waste management makes this GPP practice transferable</li> </ul>	The current economic model is discordant with circular economy. Big power generation firms are resistant to citizens' own renewable power supplies.
ES-9	Waste management, recycling, service contracts: Reduction of waste in textile industries	Public procurement for an inclusive Circular Economy in terms of environmental criteria	Spain Valencia Region	2010/ 2014	<ul style="list-style-type: none"> <li>◦ Reduce waste and apparel consumption in textile industry</li> <li>◦ Foster sustainable textile production and waste management</li> <li>◦ Quality certificates of firms in circular textile industry ISO/EMAS</li> </ul>	<ul style="list-style-type: none"> <li>◦ Value of €9.3 million in projects 2010-2014</li> <li>◦ 90,000 people involved in cooperation projects</li> <li>◦ 15 countries, incl. in Africa and Asia cooperate in the Practice</li> <li>◦ &gt;90% rate of utilization of the Practice criteria</li> </ul>	<ul style="list-style-type: none"> <li>◦ Circular economy approach in textile industry would improve the cost and life quality of millions of people, especially in the developing world.</li> <li>◦ The practice can be extrapolated to all EU</li> </ul>	The main difficulty is gain cooperation of the multinational firms take concrete measures, because they are responsible for the most waste generated in the industry.
ES-10	Management systems and monitoring	Environmental Mgt Systems: Technical solvency accreditation in Public Contracts Act	Spain Valencia Region	2014/ ongoing	<ul style="list-style-type: none"> <li>◦ Requirements for: Power, Warranty, Light efficiency, Durability (hrs), Dimming, Protection level</li> </ul>	<ul style="list-style-type: none"> <li>◦ Contracts were signed with 164 firms worth &gt;€56million in 2016</li> <li>◦ Since 2018 technicians have been GPP trained.</li> <li>◦ In Catalonia, 122 local authorities have GPP contracts for low voltage electrical services</li> </ul>	<ul style="list-style-type: none"> <li>◦ This practice is transferable within EU because environmental management systems and uniform technical codes can be used in public procurement</li> </ul>	Despite training the main obstacle is the shortage of staff who can work for drafting the specs, monitoring or supervision
ES-11	Transport: Sustainable mobility	Methodological guide on green criteria for sustainable mobility in schools	Spain Valencia Region (4 partners in 4 countries)	3 school courses 2018 / 2021	<ul style="list-style-type: none"> <li>◦ Increased physical activity, health, safety; autonomy and visual knowledge of the area.</li> <li>◦ Better student relations</li> <li>◦ Sustainability in the school curriculum.</li> <li>◦ Energy savings via modal change</li> <li>◦ Reduction of CO<sub>2</sub></li> </ul>	<ul style="list-style-type: none"> <li>◦ The project has been carried out in 15 centers in 4 countries with a total of 5.127 students.</li> <li>◦ Participation and motivation have been very positive, the centers have exchanged information between students and teachers from different countries.</li> </ul>	<ul style="list-style-type: none"> <li>◦ The problems in the 4 countries are similar. Therefore methodology developed on mobility studies is transferable.</li> <li>◦ The interventions applied would benefit not only the students but people of all ages.</li> <li>◦ Behavioral changes are required for success.</li> </ul>	Benefits of school projects are high, some unknown. The known ones are health; reduced motorized traffic, CO <sub>2</sub> emissions and other pollutants; better academic success of ~20% and social skills

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id	Thematic category	Title	Country, Area	Start/End	Objectives or contract criteria	Results	Learning/Transferability	Comments
IT-1	GPP main-streaming	Emilia-Romagna Regional Action Plan on GPP (2013-2015)	Italia Emilia-Romagna	2013/2015	<ul style="list-style-type: none"> <li>◦ Dissemination of GPP among the regional administration, local authorities and regional offices</li> </ul>	<ul style="list-style-type: none"> <li>◦ An ad hoc working group was set up which interfaces with all the parties involved in the initiative. The WG defines the “Annual Implementation Program” and provides Vademecum for sustainability</li> </ul>	<ul style="list-style-type: none"> <li>◦ Procurement is through the central purchasing body. Training was carried out using the following: Toolkit; Guidelines for local authorities; E-learning course; GPP seminars; GPP FAQs – all transferable in Italy</li> </ul>	Regional strategy for the introduction of GPP in regional administration and local authorities. Includes behavior change, training and monitoring by the Working Group (WG)
IT-2	GPP main-streaming	Sardinia Regional Action Plan on GPP (2009-2013), named PAPERS (per its Italian acronym)	Italy Sardinia Region	2009/2013	<ul style="list-style-type: none"> <li>◦ Dissemination of GPP among the regional administration, local authorities and regional offices</li> </ul>	<ul style="list-style-type: none"> <li>◦ 59 TA and preparatory meetings and follow-ups</li> <li>◦ 14 address documents</li> <li>◦ 24 days of coaching</li> <li>◦ 70 technical workshops</li> <li>◦ 24 training seminars</li> <li>◦ 22 “standard” tenders to procure public works, products and services</li> </ul>	<ul style="list-style-type: none"> <li>◦ A working group was set up consisting of the two Environmental Defense Councils and Local Authorities. The planned actions have been implemented and monitored</li> <li>◦ Transferable in Italy</li> </ul>	Implementation of was supported by information campaign and dissemination of information leaflets, and media and social networks.
IT-3	GPP main-streaming	Veneto Regional Action Plan on GPP (2016-2018)	Italy Veneto Region	2016/2018	<ul style="list-style-type: none"> <li>◦ Dissemination of GPP among the regional administration, local authorities and regional offices</li> </ul>	<ul style="list-style-type: none"> <li>◦ 224 subscribers to GPP newsletter</li> <li>◦ 4 training/info seminars</li> <li>◦ 71 fair trade vending machines</li> <li>◦ 30% recycling rate in many areas</li> <li>◦ 100% GPP purchases in (6) categories</li> </ul>	<ul style="list-style-type: none"> <li>◦ Training and refresher courses; helpdesk; technical roundtables and consultations with providers.</li> <li>◦ Roles of actors defined</li> <li>◦ Intersectoral WGs have been established under the Steering Committee</li> </ul>	The project was supported by ERDF funds (85%). More than 4000 students and staff were affected

## Synopsis of Green Public Procurement and Sustainability Tools Projects

id	Thematic category	Title	Country, Area	Start/End	Objectives or contract criteria	Results	Learning/Transferability	Comments
IT-4	GPP mainstreaming	Liguria Regional Action Plan on GPP (2017-2019)	Italy Liguria Region	2017/2019	<ul style="list-style-type: none"> <li>◦ Dissemination of GPP among the regional administration, local authorities and regional offices, and the development of markets for green products.</li> </ul>	<ul style="list-style-type: none"> <li>◦ 2 training seminars for 110 participants.</li> <li>◦ Monitoring system set up for green public tenders in the region.</li> <li>◦ GPP WGs with the professional associations</li> <li>◦ Surveys conducted with local purchasing bodies</li> </ul>	<ul style="list-style-type: none"> <li>◦ Round table discussions with the main professional associations</li> <li>◦ Training seminars to firms to support GPP</li> <li>◦ Information campaign on environmental policies in the region</li> </ul>	A WG on GPP in several Liguria regional purchasing bodies has been organized to coordinate the implementation of the Action Plan.
IT-5	GPP Management systems and monitoring	Green Public Procurement (GPP) monitoring system of the Metropolitan City of Rome	Italy Rome Metropolitan Capital	3 years Monitoring projects 2016 / 2018	<ul style="list-style-type: none"> <li>◦ Quantifying the implementation of GPP in Metropolitan City to assess the achievement of the objectives set in the GPP Action Plan</li> </ul>	<ul style="list-style-type: none"> <li>◦ No results reported. Presumed successful, see Comment</li> </ul>	<ul style="list-style-type: none"> <li>◦ The system provides for the interaction between the procurement and accounting managers, and the heads of Department IV (GPP Coordination Group)</li> </ul>	During the years the system has been applied, tested and improved to achieve a shared system between the departments active in procurement
IT-6	GPP Management systems and monitoring	APE project monitoring system of the Metropolitan City of Turin and Arpa Piedmont (APE = GPP in Italian)	Italy City of Turin and Arpa Piedmont	2003/ On going	<ul style="list-style-type: none"> <li>◦ Disseminating the practice of GPP within the two institutions and in the territory. (City of Turin Region of Piedmont)</li> </ul>	<ul style="list-style-type: none"> <li>◦ €86.5 million (60% of total) was used in 2014 for the purchase of goods and services that meet the GPP criteria</li> <li>◦ 17,731 tons of GHG emissions avoided 2014</li> <li>◦ 585 tons of plastic and 3,577 tons of CO<sub>2</sub> emission avoided 2014</li> </ul>	<ul style="list-style-type: none"> <li>◦ Numerous entities (45) in the region, including 19 authorities and Park entities, have signed a memorandum of understanding to promote GPP</li> </ul>	The APE project monitors execution of its commitments. Since 2004, Network members have participated in annual survey to highlight the importance of GPP
IT-7	GPP Management systems and monitoring	Sustainable Public Procurement (SPP) monitoring system	Italy But reviewing the system performance in Flanders, Belgium	2014/ On going	<ul style="list-style-type: none"> <li>◦ To assess attainment of SPP targets for 11 product groups with defined environmental criteria</li> </ul>	<ul style="list-style-type: none"> <li>◦ Proportion of product group spending with minimum criteria increased from 58% in 2014 to 72,40% in 2015.</li> </ul>	<ul style="list-style-type: none"> <li>◦ The review addressed:</li> <li>◦ Which tools are financial data</li> <li>◦ How are data collected</li> <li>◦ What are the costs of desirable changes</li> </ul>	The monitoring system requires that access to funds is necessary for all procurements of more than €8500
IT-8	GPP Management systems and monitoring	Sustainability specifications for criteria for 12 groups of products and services in City of Barcelona	Italy, But reviewing the specifications and criteria in Barcelona, Spain,	2015/ On going	<ul style="list-style-type: none"> <li>◦ To consolidate and establish GPP specifications in Barcelona City Administration for 12 product groups (see Comment)</li> </ul>	<ul style="list-style-type: none"> <li>◦ Execution of the “Strategic Plan for Internal Sustainability” is a good example of how common rules contribute to the mainstreaming of GPP.</li> </ul>	<ul style="list-style-type: none"> <li>◦ Italy’s Good Practice study of Barcelona GPP was a learning and transferability exercise (as was the study of Flanders monitoring system)</li> </ul>	Catering, electricity supply, messaging and paper products, IT, office furniture, textiles, vehicles public works, and cleaning/recycling

### Synopsis of Green Public Procurement and Sustainability Tools Projects

id	Thematic category	Title	Country, Area	Start/End	Objectives or contract criteria	Results	Learning/Transferability	Comments
IT-9	Built environment	Guidelines to formulate and weight criteria in contracts to improve energy efficiency funded by Lazio Region	Italy Lazio Region	2016/ongoing	<ul style="list-style-type: none"> <li>° To provide financial and technical support to local authorities in public tenders to improve energy efficiency of public buildings using Italian GPP criteria for buildings</li> </ul>	<ul style="list-style-type: none"> <li>° No results available</li> </ul>	<ul style="list-style-type: none"> <li>° The guidelines include:</li> <li>° Technical specs in the Italian GPP for supply contracts, public works, and services</li> <li>° Contract award criteria</li> <li>° Reasons for the criteria, their env objectives and checks of compliance</li> </ul>	The guidelines provide beneficiaries funds within “ENERGIA SOSTENIBILE 2.0” and a tool to include Italian GPP criteria in the procurement docs
IT-10	GPP Management systems and monitoring	Minimum environmental criteria in public tenders in Sardinia Region for innovations in the Regional Environmental Action Plan	Italy Sardinia Region	2009/2013	<ul style="list-style-type: none"> <li>° To improve financial instruments in interventions for environmental sustainability</li> </ul>	<ul style="list-style-type: none"> <li>° No results available yet</li> </ul>	<ul style="list-style-type: none"> <li>° The bidding documents financing innovative projects must consider sustainable and efficient use of natural resources in various urban sectors (mobility, building, events, green areas, etc.)</li> </ul>	The beneficiaries of the funds must include the Italian minimum environmental criteria in all the purchases/works in the project.

## Synopsis of Green Public Procurement and Sustainability Tools Projects

id	Thematic category	Title	Country, Area	Start/End	Objectives or contract criteria	Results	Learning/Transferability	Comments
FR-1	Waste management, recycling, and service contracts	DEMOCLES, the keys to sustainable demolition	France	2014/ongoing	<ul style="list-style-type: none"> <li>Construction and demolition (C&amp;D) waste management and reduction – focus on finishing work wastes</li> </ul>	<ul style="list-style-type: none"> <li>The recovery rate of C&amp;D finishing work wastes is increasing, testifying the spread of its Good Practice and the profitability of training to C&amp;D wastes actors. The effectiveness of DEMOCLES is also proven by its practical tools, relatively simple and applicable to all.</li> </ul>	<ul style="list-style-type: none"> <li>Today 35% of waste from the finishing works, valued at €10 million in France, is recovered. However, the target is set at 70%</li> <li>The C&amp;D waste issues were discussed in workshop in Valencia</li> <li>There is experience and extensive material for learning and transfer</li> </ul>	The platform now brings together over seventy partners of the Contracting Authority/Project Owner, and firms for Construction, Works, and Waste management and Recovery chains. This is good model for Good Practice
FR-2	Waste management, recycling, and service contracts	Demolition of a collective nursery and construction of a 99-seat multifunction facility	France City of Paris	2016/ongoing	<ul style="list-style-type: none"> <li>C&amp;D wastes management and reduction – building demolition</li> </ul>	<ul style="list-style-type: none"> <li>The level of detail given in the tender minimizes improper management of C&amp;D wastes. The interested companies would know precisely what the expectations are and what they must do to get the contract.</li> </ul>	<ul style="list-style-type: none"> <li>This case can easily serve of a Good Practice to train project owners how to manage the wastes generated by building demolition activities.</li> <li>Extensive available documentation in bid annexa.</li> </ul>	This is an application of FR-1 framework for demolishing and repurposing a building.
FR-3	GPP mainstreaming guidelines and templates	Template of tender for foodstuffs	France	2015/2020	<ul style="list-style-type: none"> <li>The template for food services deals with social inclusion and environment to select a bidder using technical and qualitative criteria</li> <li>Bids docs deal with social integration and occupational integration</li> </ul>	<ul style="list-style-type: none"> <li>No results yet. The template for them has been circulated to local authorities. This Good Practice was transferred from other associations that support local authorities in designing and implementing sustainable development in their procurements</li> </ul>	<ul style="list-style-type: none"> <li>The template for food services may be used to train public buyers of any region on foodstuff, catering and service tenders. It can be applied nationwide.</li> </ul>	The template helps to improve food service tenders from quality, environment and social perspective. It complies with the National GPP plan to reduce the food services' env footprint.

## Synopsis of Green Public Procurement and Sustainability Tools Projects

id	Thematic category	Title	Country, Area	Start/End d	Objectives or contract criteria	Results	Learning/Transferability	Comments
FR-4	GPP mainstreaming guidelines and templates	Template for computer and laptop procurement	France	2011/ongoing	<ul style="list-style-type: none"> <li>◦ The aim is to renew computers and laptops and get them aligned with requirements of sustainable development.</li> <li>◦ Six 'axes of requirement' were identified (seen Results column).</li> </ul>	<p>No results but there are requirements for:</p> <ul style="list-style-type: none"> <li>◦ Energy efficiency</li> <li>◦ Warranty and disposal</li> <li>◦ Packaging and waste</li> <li>◦ Hazardous substances and chemical pollutants</li> <li>◦ Electromagnetic radiation</li> <li>◦ Working conditions at production</li> </ul>	<ul style="list-style-type: none"> <li>◦ The concept is valid and transferable, but the specs must be updated to today's computer and IT environment.</li> </ul>	<p>The original template is outdated as regulatory framework has evolved since then. The concept is good.</p>
FR-5	Waste management, recycling and service contracts	Paper for printing	France	2010/ongoing	<ul style="list-style-type: none"> <li>◦ Increase waste recycled/recovered</li> <li>◦ Improve the present contract</li> <li>◦ Motivate the bidders to improve their technology</li> </ul>	<p>No results; three options:</p> <ol style="list-style-type: none"> <li>1. 50% recycled paper at no extra cost</li> <li>2. ECO label for water, CO<sub>2</sub>, SO<sub>2</sub> pollution recycling, , at &lt;15% cost</li> <li>3. ECO labels, 100% recycling, 15% extra cost</li> </ol>	<ul style="list-style-type: none"> <li>◦ For each option, examples are given for ECO labels to inform of supply requirements</li> <li>◦ References are given on past achievements and existing best practices.</li> </ul>	<p>The original options and ECO labels are outdated as regulatory framework has evolved. The concept is good.</p>
FR-6	GPP mainstreaming guidelines and templates	Supply of cleaning and, hygiene products and cleaning accessories	France Three cities	2009/ongoing	<ul style="list-style-type: none"> <li>◦ A template tool for comparing cleaning products, hygiene products and cleaning accessories and choosing goods to reduce environmental footprint.</li> </ul>	<ul style="list-style-type: none"> <li>◦ The template requires product information on nine things: Potential for recycling, Actual recycling, Product concentration, Avoided waste, % Vegetable material, Toxicity, Biodegradability, ISO material ECO labels.</li> </ul>	<ul style="list-style-type: none"> <li>◦ The concept and the template are transferable</li> </ul>	<p>The original template may be outdated as regulatory framework has evolved since then</p>

## Synopsis of Green Public Procurement and Sustainability Tools Projects

id	Thematic category	Title	Country, Area	Start/End	Objectives or contract criteria	Results	Learning/Transferability	Comments
FR-7	GPP mainstreaming guidelines and templates	Supply of cleaning products: 2012-2015	France Saint-Médard-en-Jalles area	2007/2014	<ul style="list-style-type: none"> <li>◦ The objective is to design a framework to evaluate products from environmental perspective and commitment to sustainable development</li> </ul>	<ul style="list-style-type: none"> <li>◦ No results available</li> <li>◦ The tenders consist of 10 batches of products with a variety of requirements (see FR-6)</li> </ul>	<ul style="list-style-type: none"> <li>◦ The suppliers know precisely what is of expected of them and how every specification is measured.</li> <li>◦ Certain amount of freedom is permitted for suppliers' creative and eco-friendly offers.</li> </ul>	The original template may be outdated as regulatory framework has evolved since then. The concept is good.
FR-8	Sustainable mobility and transport	Supply of vehicle fleet	France City of Chambéry	2012/ongoing	<ul style="list-style-type: none"> <li>◦ This tender aimed at renewing the fleet of vehicles of the city, to reduce by 30% the environmental impacts generated by the vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>◦ The breakdown of the price is:</li> <li>◦ 50% comes to the price of the vehicles</li> <li>◦ 10% comes to the delivery time</li> <li>◦ 10% comes to the power of the vehicles</li> <li>◦ 30% comes from (CO<sub>2</sub>; fuel economy; other)</li> </ul>	<ul style="list-style-type: none"> <li>◦ Municipal and its public bus company staff learned POBS and how to write the specs for the buses.</li> <li>◦ Transferable in towns in Bulgaria</li> </ul>	Decision with 30% weight on environmental impacts was a forward-looking criterion in 2008.
FR-9	Waste management, recycling and service contracts	Cleaning service	France	2019/2019	<ul style="list-style-type: none"> <li>◦ Ecological quality products, consumables and materials</li> <li>◦ Socio- and eco-responsible business practices</li> </ul>	<ul style="list-style-type: none"> <li>◦ Improvements in the following dimensions are expected:</li> <li>◦ Environment-friendly maintenance products and equipment</li> <li>◦ Eco-responsible work practices</li> <li>◦ Improved waste and resource management</li> </ul>	<ul style="list-style-type: none"> <li>◦ The parties have contractual freedom since the conditions simply establish a contractual framework.</li> <li>◦ Training helps educate maintenance staff to adopt environment-friendly behaviors and use of products.</li> </ul>	The objective fosters employees' behavior changes at work to improve environment-friendly working and living conditions
FR-10	Organic farming and food supply	Supply market and meal preparation in school restaurants, leisure and multi-function centers	France City of Sainte Luce on Loire	2019/ongoing	<ul style="list-style-type: none"> <li>◦ Offer products from organic farming</li> <li>◦ At least 25% of foodstuffs from organic farming</li> <li>◦ Sustainable execution (no waste, waste treatment, use of organic cleaning products, etc.).</li> </ul>	<ul style="list-style-type: none"> <li>◦ No results are available yet</li> </ul>	<ul style="list-style-type: none"> <li>◦ Raising awareness among young people is key to sustainable behavior and development</li> <li>◦ Special attention to healthy, balanced and varied organic meals                             <ul style="list-style-type: none"> <li>◦ Transfer the idea of consuming products from organic farming</li> </ul> </li> </ul>	Educational actions and activities must be innovative for the benefit of students and the public. To give visibility to the ideas a link with families must be created for both fun and communication

**A4. MATRIX FOR THE IDENTIFICATION OF GPP AREAS OF INTERVENTION**

Planning-programming tool/instrument	Managing/intermediary authority	Deployment stage-phase of the tool/instrument	Industry/domain invested by the tool	Intervention foreseen	Natural resources on which the instrument/tool has an impact	Investment priority	GPP possible criteria to be adopted
ROP-EFRD ACTION PLAN GRANT PUBLIC PROCUREMENT LAW OTHER...	<input type="checkbox"/> EC - Directorates General <input type="checkbox"/> European Parliament <input type="checkbox"/> National Governments <input type="checkbox"/> Regional Governments <input type="checkbox"/> Local Authorities <input type="checkbox"/> Executives Agencies <input type="checkbox"/> Public bodies	<input type="checkbox"/> Creating new specialized working group, drafting documents <input type="checkbox"/> Interministerial Committee <input type="checkbox"/> Ex ante evaluation <input type="checkbox"/> Discussion and adoption at local institution level <input type="checkbox"/> Checking at EC level <input type="checkbox"/> Approval at EC level <input type="checkbox"/> Approval at national level <input type="checkbox"/> Approval at regional level <input type="checkbox"/> Approval at local level <input type="checkbox"/> Under approval <input type="checkbox"/> Definition of subject <input type="checkbox"/> Implementation <input type="checkbox"/> Transposition <input type="checkbox"/> Monitoring <input type="checkbox"/> Evaluation of economic benefits <input type="checkbox"/> Impact assessment	1. Road transport, Vehicles and Services	<input type="checkbox"/> Public transport fleet renovation <input type="checkbox"/> Private transport circulation <input type="checkbox"/> Renew of urban road network <input type="checkbox"/> Fuel regulation <input type="checkbox"/> Electric and hybrid vehicles circulation <input type="checkbox"/> End-of-life of public transport fleet <input type="checkbox"/> Eco-driving vehicles regulation <input type="checkbox"/> Sustainable Mobility plan <input type="checkbox"/> Improvement of transport for employees (bus company, promotion of the use of public transport, bicycle and walking).	<input type="checkbox"/> Ecosystem services <input type="checkbox"/> Biodiversity <input type="checkbox"/> Commodities : minerals and metals <input type="checkbox"/> Fresh water <input type="checkbox"/> Wind <input type="checkbox"/> Land and soil <input type="checkbox"/> Sea resources <input type="checkbox"/> Energy <input type="checkbox"/> Fuel <input type="checkbox"/> Forestry <input type="checkbox"/> Solar <input type="checkbox"/> Gas <input type="checkbox"/> Forestry	<input type="checkbox"/> City centre circulation <input type="checkbox"/> Eco-friendly transport lanes <input type="checkbox"/> Environmental marketing <input type="checkbox"/> Tax benefits <input type="checkbox"/> Recycled materials <input type="checkbox"/> Pollutant emissions <input type="checkbox"/> Bio-fuels <input type="checkbox"/> Waste collection/treatment/management	<input type="checkbox"/> Minimum environmental criteria in building industry <input type="checkbox"/> Minimum environmental criteria on public roads material <input type="checkbox"/> Optimization of freight transport, practicing a sustainable logistics. <input type="checkbox"/> Reuse, recycling and reuse of packaging. <input type="checkbox"/> External costs evaluation. <input type="checkbox"/> Eco-design measures. <input type="checkbox"/> Environmental Impact Assessment <input type="checkbox"/> Environmental Impact Statement.
			2. Construction	<input type="checkbox"/> Construction works <input type="checkbox"/> Buildings <input type="checkbox"/> Civil engineering works <input type="checkbox"/> Demolition <input type="checkbox"/> Materials and transport <input type="checkbox"/> Reduction of noise and emissions to air <input type="checkbox"/> New construction <input type="checkbox"/> Renovation <input type="checkbox"/> Waste minimisation <input type="checkbox"/> Management and selective waste collection	<input type="checkbox"/> Ecosystem services <input type="checkbox"/> Biodiversity <input type="checkbox"/> Commodities : minerals and metals <input type="checkbox"/> Fresh water <input type="checkbox"/> Wind <input type="checkbox"/> Land and soil <input type="checkbox"/> Sea resources <input type="checkbox"/> Energy <input type="checkbox"/> Fuel <input type="checkbox"/> Forestry	<input type="checkbox"/> Renovation public buildings <input type="checkbox"/> Legal framework new buildings <input type="checkbox"/> Local Ecology <input type="checkbox"/> Supply of related services: cooling, heating, ventilation, electricity. <input type="checkbox"/> Recycled construction materials <input type="checkbox"/> Efficiency construction material.	<input type="checkbox"/> Minimum environmental criteria in building industry <input type="checkbox"/> Minimum environmental criteria on public roads material <input type="checkbox"/> Optimization of freight transport, practicing a sustainable logistics. <input type="checkbox"/> Reuse, recycling and reuse of packaging. <input type="checkbox"/> External costs evaluation. <input type="checkbox"/> Eco-design measures.
			3. Energy	<input type="checkbox"/> Sewage treatment plant gas <input type="checkbox"/> Hospital <input type="checkbox"/> Schools <input type="checkbox"/> Offices <input type="checkbox"/> Street lighting <input type="checkbox"/> CHP technologies <input type="checkbox"/> Public buildings <input type="checkbox"/> Historical public buildings	<input type="checkbox"/> Ecosystem services <input type="checkbox"/> Biodiversity <input type="checkbox"/> Commodities : minerals and metals <input type="checkbox"/> Fresh water <input type="checkbox"/> Wind <input type="checkbox"/> Land and soil <input type="checkbox"/> Sea resources <input type="checkbox"/> Energy <input type="checkbox"/> Fuel <input type="checkbox"/> Forestry	<input type="checkbox"/> Wind RES <input type="checkbox"/> Solar RES <input type="checkbox"/> Aerothermal RES <input type="checkbox"/> Geothermal RES <input type="checkbox"/> Hydrothermal RES <input type="checkbox"/> Ocean RES <input type="checkbox"/> Hydropower RES <input type="checkbox"/> Biomass RES <input type="checkbox"/> Landfill gas RES <input type="checkbox"/> Biogas RES	<input type="checkbox"/> Minimum % of supplied electricity from RES <input type="checkbox"/> Waste management of electrical o electronic equipment requirements <input type="checkbox"/> Energy Labelling Regulations. <input type="checkbox"/> Reuse, recycling and reuse of packaging. <input type="checkbox"/> External costs evaluation. <input type="checkbox"/> Eco-design measures.

Planning-programming tool/instrument	Managing/intermediary authority	Deployment stage-phase of the tool/instrument	Industry/domain invested by the tool	Intervention foreseen	Natural resources on which the instrument/tool has an impact	Investment priority	GPP possible criteria to be adopted
ROP-EFRD ACTION PLAN GRANT PUBLIC PROCUREMENT LAW OTHER...	<input type="checkbox"/> EC - Directorates General <input type="checkbox"/> European Parliament <input type="checkbox"/> National Governments <input type="checkbox"/> Regional Governments <input type="checkbox"/> Local Authorities <input type="checkbox"/> Executives Agencies <input type="checkbox"/> Public bodies	<input type="checkbox"/> Creating new specialized working group, drafting documents <input type="checkbox"/> Interministerial Committee <input type="checkbox"/> Ex ante evaluation <input type="checkbox"/> Discussion and adoption at local institution level <input type="checkbox"/> Checking at EC level <input type="checkbox"/> Approval a EC level <input type="checkbox"/> Approval at national level <input type="checkbox"/> Approval at regional level <input type="checkbox"/> Approval at local level <input type="checkbox"/> Under approval <input type="checkbox"/> Definition of subject <input type="checkbox"/> Implementation <input type="checkbox"/> Transposition <input type="checkbox"/> Monitoring <input type="checkbox"/> Evaluation of economic benefits <input type="checkbox"/> Impact assessment	4. Food and catering services	<input type="checkbox"/> Food production <input type="checkbox"/> Catering service <input type="checkbox"/> Food waste <input type="checkbox"/> Food transportation <input type="checkbox"/> Animal welfare standard <input type="checkbox"/> Equipment <input type="checkbox"/> Cleaning products <input type="checkbox"/> Paper products <input type="checkbox"/> Service management	<input type="checkbox"/> Ecosystem services <input type="checkbox"/> Biodiversity <input type="checkbox"/> Commodities : minerals and metals <input type="checkbox"/> Fresh water <input type="checkbox"/> Wind <input type="checkbox"/> Land and soil <input type="checkbox"/> Sea resources <input type="checkbox"/> Energy <input type="checkbox"/> Fuel <input type="checkbox"/> Forestry	<input type="checkbox"/> Organic labels <input type="checkbox"/> Food safety management system <input type="checkbox"/> Staff training <input type="checkbox"/> Packaging <input type="checkbox"/> Waste management	<input type="checkbox"/> Minimum environmental criteria in food industry <input type="checkbox"/> Minimum environmental criteria on organic food <input type="checkbox"/> Optimization of freight transport, practicing a sustainable logistics. <input type="checkbox"/> Reuse, recycling and reuse of packaging. <input type="checkbox"/> External costs evaluation. <input type="checkbox"/> Eco-design measures.
			5. Cleaning products and services	<input type="checkbox"/> Cleaning products <input type="checkbox"/> Waste management <input type="checkbox"/> Water treatment	<input type="checkbox"/> Ecosystem services <input type="checkbox"/> Biodiversity <input type="checkbox"/> Commodities : minerals and metals <input type="checkbox"/> Fresh water <input type="checkbox"/> Wind <input type="checkbox"/> Land and soil <input type="checkbox"/> Sea resources <input type="checkbox"/> Energy <input type="checkbox"/> Fuel <input type="checkbox"/> Forestry	<input type="checkbox"/> Non-hazardous substance <input type="checkbox"/> Bio-degradable products and packaging <input type="checkbox"/> Hygiene standards <input type="checkbox"/> Cleaning agents	<input type="checkbox"/> Minimum environmental criteria in cleaning industry <input type="checkbox"/> Minimum environmental criteria on cleaning products. <input type="checkbox"/> Optimization of freight transport, practicing a sustainable logistics. <input type="checkbox"/> Reuse, recycling and reuse of packaging. <input type="checkbox"/> External costs evaluation. <input type="checkbox"/> Eco-design measures.
			6. Textiles and uniforms	<input type="checkbox"/> Purchase of textile clothing and accessories <input type="checkbox"/> Use of pesticides <input type="checkbox"/> Useful life of textile products. <input type="checkbox"/> Chemical and processing methods. <input type="checkbox"/> Recycling fibres <input type="checkbox"/> Ethical trading <input type="checkbox"/> Energy and water consumption <input type="checkbox"/> Transportation of raw materials	<input type="checkbox"/> Ecosystem services <input type="checkbox"/> Biodiversity <input type="checkbox"/> Commodities : minerals and metals <input type="checkbox"/> Fresh water <input type="checkbox"/> Wind <input type="checkbox"/> Land and soil <input type="checkbox"/> Sea resources <input type="checkbox"/> Energy <input type="checkbox"/> Fuel <input type="checkbox"/> Forestry	<input type="checkbox"/> Energy consumption <input type="checkbox"/> Air emissions <input type="checkbox"/> Solid waste <input type="checkbox"/> Residues impact <input type="checkbox"/> Early failure <input type="checkbox"/> Organic production methods	<input type="checkbox"/> Minimum environmental criteria in textile industry <input type="checkbox"/> Minimum environmental criteria on textile material <input type="checkbox"/> Optimization of freight transport, practicing a sustainable logistics. <input type="checkbox"/> Reuse, recycling and reuse of packaging. <input type="checkbox"/> External costs evaluation. <input type="checkbox"/> Eco-design measures.

Planning-programming tool/instrument	Managing/intermediary authority	Deployment stage-phase of the tool/instrument	Industry/domain invested by the tool	Intervention foreseen	Natural resources on which the instrument/tool has an impact	Investment priority	GPP possible criteria to be adopted
ROP-EFRD ACTION PLAN GRANT PUBLIC PROCUREMENT LAW OTHER...	<input type="checkbox"/> EC - Directorates General <input type="checkbox"/> European Parliament <input type="checkbox"/> National Governments <input type="checkbox"/> Regional Governments <input type="checkbox"/> Local Authorities <input type="checkbox"/> Executives Agencies <input type="checkbox"/> Public bodies	<input type="checkbox"/> Creating new specialized working group, drafting documents <input type="checkbox"/> Interministerial Committee <input type="checkbox"/> Ex ante evaluation <input type="checkbox"/> Discussion and adoption at local institution level <input type="checkbox"/> Checking at EC level <input type="checkbox"/> Approval at EC level <input type="checkbox"/> Approval at national level <input type="checkbox"/> Approval at regional level <input type="checkbox"/> Approval at local level <input type="checkbox"/> Under approval <input type="checkbox"/> Definition of subject <input type="checkbox"/> Implementation <input type="checkbox"/> Transposition <input type="checkbox"/> Monitoring <input type="checkbox"/> Evaluation of economic benefits <input type="checkbox"/> Impact assessment	7. IT equipment	<input type="checkbox"/> Recycling equipment. <input type="checkbox"/> Purchases of IT equipment based on a life-cycle cost. <input type="checkbox"/> Using renewable raw materials <input type="checkbox"/> Green management on IT products <input type="checkbox"/> Recycling packaging	<input type="checkbox"/> Ecosystem services <input type="checkbox"/> Biodiversity <input type="checkbox"/> Commodities : minerals and metals <input type="checkbox"/> Fresh water <input type="checkbox"/> Wind <input type="checkbox"/> Land and soil <input type="checkbox"/> Sea resources <input type="checkbox"/> Energy <input type="checkbox"/> Fuel <input type="checkbox"/> Forestry	<input type="checkbox"/> Plan for recovery and reuse of IT components <input type="checkbox"/> Energy efficiency standards <input type="checkbox"/> Raw materials <input type="checkbox"/> Cardboard and plastics recycled material <input type="checkbox"/> Waste management	<input type="checkbox"/> Minimum environmental criteria in building industry <input type="checkbox"/> Minimum environmental criteria on public roads material <input type="checkbox"/> Optimization of freight transport, practicing a sustainable logistics. <input type="checkbox"/> Reuse, recycling and reuse of packaging. <input type="checkbox"/> External costs evaluation.
			8. Paper	<input type="checkbox"/> Purchase of recycled fibres <input type="checkbox"/> Legal origin of wood <input type="checkbox"/> Reduction of paper use <input type="checkbox"/> Energy and fuel consumption <input type="checkbox"/> Waste management <input type="checkbox"/> Ecolabel for paper production	<input type="checkbox"/> Ecosystem services <input type="checkbox"/> Biodiversity <input type="checkbox"/> Commodities : minerals and metals <input type="checkbox"/> Fresh water <input type="checkbox"/> Wind <input type="checkbox"/> Land and soil <input type="checkbox"/> Sea resources <input type="checkbox"/> Energy <input type="checkbox"/> Fuel <input type="checkbox"/> Forestry	<input type="checkbox"/> e-procurement platforms <input type="checkbox"/> e-tendering platforms <input type="checkbox"/> On-line quotations <input type="checkbox"/> Environmental impacts of forest utilization and mitigation practices	<input type="checkbox"/> Minimum environmental criteria in paper industry <input type="checkbox"/> Minimum environmental criteria on wood/paper material <input type="checkbox"/> Optimization of freight transport, practicing a sustainable logistics. <input type="checkbox"/> Reuse, recycling and reuse of packaging. <input type="checkbox"/> External costs evaluation.
			9. Gardening	<input type="checkbox"/> Soil improvers <input type="checkbox"/> Ornamental plants <input type="checkbox"/> Irrigation systems <input type="checkbox"/> Garden machinery <input type="checkbox"/> Lubricant oils <input type="checkbox"/> Herbicides and pesticides <input type="checkbox"/> Invasive plants	<input type="checkbox"/> Ecosystem services <input type="checkbox"/> Biodiversity <input type="checkbox"/> Commodities : minerals and metals <input type="checkbox"/> Fresh water <input type="checkbox"/> Wind <input type="checkbox"/> Land and soil <input type="checkbox"/> Sea resources <input type="checkbox"/> Energy <input type="checkbox"/> Fuel <input type="checkbox"/> Forestry	<input type="checkbox"/> Soil improvers with low env. impacts. <input type="checkbox"/> Procurement of automatic irrigation systems <input type="checkbox"/> Pro.t of garden machinery with reduced env. impact <input type="checkbox"/> Purchase of readily biodegradable lubricants <input type="checkbox"/> Gardening services using products and practices with reduced env. impacts	<input type="checkbox"/> Minimum environmental criteria in paper industry <input type="checkbox"/> Minimum environmental criteria on gardening material <input type="checkbox"/> Optimization of freight transport, practicing a sustainable logistics. <input type="checkbox"/> Reuse, recycling and reuse of packaging. <input type="checkbox"/> External costs evaluation.