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EU Green Public Procurement for Public Space Maintenance

Task 1 Report: Scope, definitions and Legislation

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Abbreviations

AC: Award Criteria

CO2: Carbon dioxide

CN: Combined Nomenclature

CPA: Classification of Products by Activity

CPV: Common Procurement Vocabulary

DG: Directorate General

EC: European Commission

EU: European Union

ESS: European statistical system

GHG: Greenhouse gas

GPP: Green Public Procurement

HDV: Heavy duty vehicle

HS: Harmonised System

ISIC: International Standard Industrial Classification

LCA: Life-Cycle Assessment

LCV : Light commercial vehicle

LDV : Light duty vehicle, i.e. a car or an LCV

NACE: Nomenclature statistique des activités économiques dans la Communauté européenne

NAP: National Action Plans

NRMM: Non-road mobile machinery

PRODCOM: PRODUCTION COMMUNAUTAIRE

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals

SC: Selection Criteria

SPP: Sustainable Public Procurement

TS: Technical Specifications

TTB: Transilluminated traffic bollards

VOCs: Volatile Organic Compounds

SCOPE, DEFINITIONS AND LEGISLATION

1 Introduction

Green Public Procurement (GPP), in which public authorities procure goods, services and works that have less environmental impact than comparable contracts, has the potential to accelerate the market introduction and market uptake of less environmentally damaging technologies. In order to support GPP, the European Commission has developed a set of common EU GPP criteria for various products and services in order to avoid a distortion of a single market and to reduce administrative burdens. The Commission has developed EU GPP criteria for approximately 20 different product groups. In order to keep the criteria as relevant to public authorities as possible, the Commission both reviews and updates the criteria on a regular basis and develops new criteria when a need for such is determined.

In this spirit, EU GPP criteria for Public Space Maintenance are currently being developed. No GPP criteria on the subject of Maintenance of Public Space have been developed by the European Commission so far. For this reason, the present study is part of the first document aiming to define EU GPP Criteria for this product group¹.

Although the maintenance of Public Space is a new product group, part of its proposed scope was previously covered in the EU GPP Criteria for Gardening Products and Services that can be found at:

- Criteria: <http://ec.europa.eu/environment/gpp/pdf/criteria/gardening.pdf>
- Technical Support Document: http://ec.europa.eu/environment/gpp/pdf/tbr/gardening_tbr.pdf

This report focuses on Task 1, which is the first part of the revision process. The aim of this task is as follows:

To provide an overview of existing statistical and technical categories, of existing relevant legislation, standards and other procurement criteria, and to propose on that basis a product/service group scope for the EU GPP criteria. To gather feedback from stakeholders regarding this product/service group scope.

The aim of the revision process is to deliver procurement criteria that reflect the latest technological development, while taking into account stakeholder opinions, current legal developments and other GPP initiatives. The criteria need to be ambitious enough to result in the 'greening' of the maintenance of public space sector, while on the other hand, barriers associated with the level of ambition should not hinder the use of the EU GPP criteria.

In the revision of the legal framework in which EU GPP for this product group will be included, mainly European policies and legislation have been considered, although similar initiatives and standards from non-EU countries have also been taken into account²

As part of Task 1, the following work has been undertaken:

¹ For further information, see project's website: http://susproc.jrc.ec.europa.eu/Public_space_maintenance/

² Interesting cases of specific policies aiming to regulate the Public Space Maintenance arrive from Australia for instance. In the research phase led to elaborate of this Report, several non-EU policies have been examined, as for instance: "Maintenance of Nature Strips in Urban Areas Policy", elaborated by Development and Economic Growth Department of Narrabri Shire, Australia; or the "Water Quality and Maintenance Costs of Constructed Waterbodies in Urban Areas of South East Queensland", a research conducted by M.L. Bayley and D. Newton in partnership with South East Queensland Healthy Waterways about maintenance activities and cost of artificial lakes.

- **Overview of existing legislation, standards and criteria.** This includes a review of EU legislation, relevant guidelines and ecolabels at the EU and national levels as well as relevant standards, guidelines and initiatives used in the private sector. This is presented in Section 3.

- **Overview of statistical and technical categories.** The focus of this review was based on the categories that can be used to define the activities and services that might be covered by EU GPP criteria for maintenance of public space. This is covered in Section 4.

- **First Stakeholder survey.** The questionnaire is the first step in the development of Public Space Maintenance EU GPP criteria and it aims to help the JRC project team in defining the scope of this product group. It is designed to identify the views of stakeholders about the topic of maintenance of public space. A second questionnaire will be sent during a second phase regarding more specific aspects of the maintenance activities that have been decided to be included in the scope. This is covered in Section 5.

- **Proposal of the scope and definitions.** As result of the research phase of existing legislation, as well as standards and criteria, of statistical and technical categories, and including the outcomes of stakeholder's reactions to the first scope questionnaire, it is possible to narrow down the precise scope and definitions of EU GPP for Public Space Maintenance. This is covered in Section 6.

2 Overview of the approach

Before entering into the details of existing legislations, standards and criteria, it seems relevant to introduce an initial consideration regarding the product group related to the Maintenance of Public Space.

The research done about existing legal, administrative and economic framework showed how complex the subject of maintenance of public space is, since it concerns several application fields, such as cleaning services, gardening and landscaping, painting and repairing, as it will be described in more detail in the following chapters of this document.

As it will be detailed in chapter 3, several policies have been developed and implemented at European and national levels in order to improve the environmental performances of many aspects that could be considered directly related with the maintenance of public space. However, until the present date no document has been specifically conceived and adopted by the European Commission on the specific subject of Maintenance of Public Space.

Both concepts of *Maintenance* and *Public Space* could have multiple definitions and generate different interpretations. For this reason, the proper fulfilment of this Task 1 has a key role in the definition of GPP Criteria for this product group.

In particular, limiting the concept of *public space* for the scope of EU GPP Criteria results to be a hard task since it could embrace a myriad of meanings including application fields such as: urban areas, pedestrian and vehicular areas, manmade green areas, public buildings, natural areas, beaches, lakes, public furniture, etc. As a first attempt to organize the application field of EU GPP for Public Space Maintenance, a precise classification of the different typologies of public spaces considered for the study has been done. These public space categories consist in one of the main points included in the first scoping questionnaire sent to possible stakeholders. For this reason, the results of the first stakeholder questionnaire have a key role in determining the definition of the scope of this EU GPP.

Also, the concept of *maintenance* materializes different interpretations. For instance, one of the focal issues related with the concept of maintenance is the difference between preventive and corrective maintenance. In fact, in some cases it could happen that the distinction between preventive and corrective maintenance is confined to a different nuance of interpretation, and the exact delimitation between them could be more or less evident depending on the fields of application.

Indeed, the possible overlapping between preventive and corrective maintenance, or even reconstruction activities in some cases, could result from an unclear definition of each typology of maintenance.

The subject of *Maintenance* is a recurrent topic in various contexts (urban management, economy, energy and sources supplies, structural behaviour of building, etc.), several definitions are available³. It could be particularly interesting at this point having a clear definition of the different categories of maintenance. The publication Reliability Engineering⁴ provides the following definitions: *Maintenance can be defined as actions to control deterioration process leading to failure of a system, and to restore the system to its operational state through corrective actions after a failure. The former is called Preventive Maintenance, the latter Corrective Maintenance.*

³ Definition of Collins dictionary: "The maintenance of a building, vehicle, road, or machine is the process of keeping it in good condition by regularly checking it and repairing it when necessary". Moreover, several maintenance typologies are conventionally recognized, as detailed in European Standard BS EN 13306:2010.

⁴ "Handbook of Reliability Engineering", Hoang Pham Editor, Rutgers University, Piscataway, New Jersey, USA. Consulted at: https://books.google.es/books?id=p4f5BwAAQBAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false

Nevertheless, the main European Reference for Maintenance in general is the European Standard EN 13306:2010. The purpose of this European Standard is to define the generic terms used for all types of maintenance and maintenance management irrespective of the type of item considered. This European Standard specifies generic terms and definitions for the technical, administrative and managerial areas of maintenance. See Figure 1.

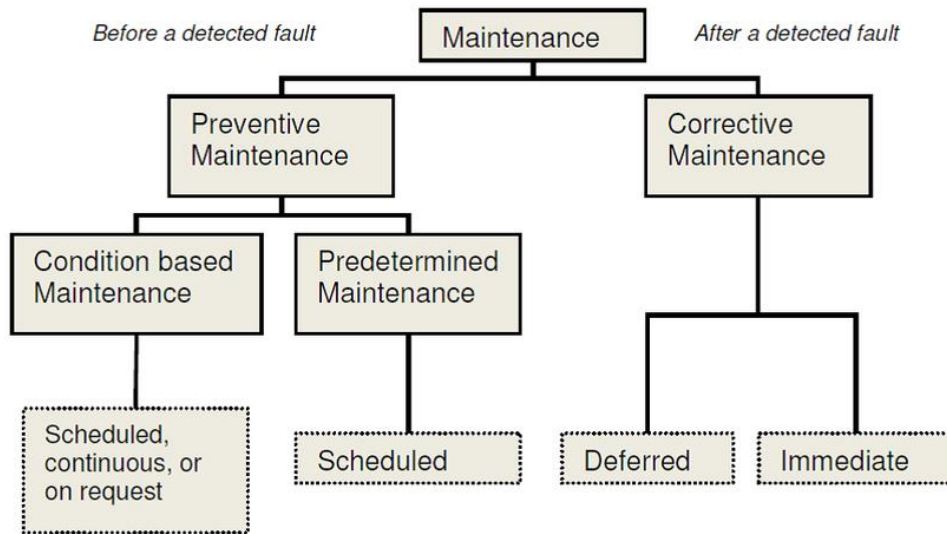


Figure 1: Overview of different type of maintenance according to BS EN 13306:2010.

The EN 13306:2010 results to be useful especially for providing a clear definition of fundamental terms related with maintenance, as follows:

Maintenance: combination of all technical, administrative and managerial actions during the life cycle of an item intended to retain it in, or restore it to, a state in which it can perform the required function

Maintenance Management: all activities of the management that determine the maintenance objectives, strategies and responsibilities, and implementation of them by such means as maintenance planning, maintenance control, and the improvement of maintenance activities and economics

Corrective Maintenance: Maintenance carried out after fault recognition and intended to put an item into a state in which it can perform a required function

Condition Based Maintenance: Preventive maintenance which include a combination of condition monitoring and/or inspection and/or testing, analysis and the ensuing maintenance actions

Maintainability: Ability of an item under given conditions of use, to be retained in, or restores to, a state in which it can perform a required function, when maintenance is performed under given conditions and using stated procedures and resources

Preventive Maintenance: Maintenance carried out at predetermined intervals or according to prescribed criteria and intended to reduce the probability of failure or the degradation of the functioning of an item.

Predictive maintenance: Condition based maintenance carried out following a forecast derived from repeated analysis or known characteristics and evaluation of the significant parameters of the degradation of the item.⁵

⁵ European Standards " EN 13306:2010" Maintenance - Maintenance terminologie

The maintenance activities, aiming to maintain the public space on usable conditions, which are to be included as scope of this EU GPP are defined chapter 6.

2.1 Overview of other existing GPP projects

As known, other GPP were previously developed for other product groups. Some of the items considered in other GPP could be possibly considered as Public Space Maintenance products or activities. In order to avoid overlapping between product groups already considered in other GPP and harmonize the Green Public Procurement scopes, a detailed analysis of other GPP scopes has been done. As it results, some of the potential scopes of this GPP for Public Space Maintenance have been discarded because they are already covered in other GPP, while other items previously included in other GPP have been integrated in this scope. In particular, the adopted behaviours are:

- + Discard the product groups included in other GPP Criteria, such as:
 - Roads, being part of the scope of EU GPP Criteria of **Road Design, Construction and Maintenance** ⁶
 - Street lighting and traffic signals being part of the scope of EU GPP Criteria of **Street lighting and traffic signals**⁷
- + Update, adapt and include product groups included in other GPP Criteria, such as:
 - Parks and gardens until present being part of the scope of EU GPP Criteria of **Gardening products and services**.⁸ This product group is now converged in the EU GPP Criteria of Maintenance of Public Space.

⁶ EU Green Public Procurement Criteria for Road Design, Construction and Maintenance. Technical Background Report available at http://ec.europa.eu/environment/gpp/pdf/report_gpp_roads.pdf EU GPP Criteria available at [http://ec.europa.eu/environment/gpp/pdf/GPP%20criteria%20Roads%20\(2016\)%20203.pdf](http://ec.europa.eu/environment/gpp/pdf/GPP%20criteria%20Roads%20(2016)%20203.pdf)

⁷ EU Green Public Procurement Criteria for Street lighting and traffic signals. Technical Background Report available at http://ec.europa.eu/environment/gpp/pdf/tbr/street_lighting_tbr.pdf. EU GPP Criteria available at http://ec.europa.eu/environment/gpp/pdf/criteria/street_lighting.pdf

⁸ EU Green Public Procurement Criteria for Gardening products and services. Technical Background Report available at http://ec.europa.eu/environment/gpp/pdf/tbr/gardening_tbr.pdf. EU GPP Criteria available at http://ec.europa.eu/environment/gpp/pdf/criteria/street_lighting.pdf

3 Overview of the existing legislation, standards and criteria

The aim of this section is to provide an overview of existing legislation, standards and other procurement criteria that are of relevance to Public Space Maintenance services. In chapter 3.1, an overview of relevant EU legislation is provided focusing on those Communications, Regulations and Directives important to regulating the different services, activities or products and tools used in relation with public space maintenance. In chapter 3.2 an overview is provided of relevant labelling and green procurement criteria at the national level, including national or international ecolabels. At chapter 3.3 a brief overview of relevant initiatives and best practices in European countries related to the topic of our EU GPP is then provided.

In this perspective, a crucial role is covered by EU GPP for Public Space Maintenance. It is important to mention that the EU GPP policies, even if they are to remain voluntary tools, are going to acquire a growing importance in the management of Public Procurement. As reported in the General Union Environment Action Programme 2020, *Living well within the limits of our planet*, “Member States and regions should take further steps to reach the target of applying green procurement criteria to at least 50% of public tenders.”⁹

On the other hand, even an accurate literature review did not show an explicit concern regarding the topic of maintenance of public space; in particular, many topics very related to the maintenance of public space are mentioned and treated in several policies and legislations (water use, reduction of the pollution of transport means, chemical products used in cleaning activities, etc.). However it resulted difficult to find specific documents focused primarily on maintenance. Actually, from the analysis conducted to fulfil Task 1 of the project, the more evident references of certain aspects related to the maintenance of public space are present in the following forms:

- **Chapters dedicated to maintenance** in documents treating about general guidelines of planning, design and realization.
 - + Example: Italian legislation UNI/PdR 8:2014 - Guidelines for sustainable development of urban and peri-urban green areas - Planning, design, realization and maintenance¹⁰
- Research projects and best practices focused on a **specific topic** related to Public Space Maintenance, often reaching the prototyping or implementation phase.
 - + Example: Life Project Redust - Best winter maintenance practice to reduce respirable street dust in urban area, implemented in Finland¹¹
- **Non-EU legislations on specific topics** related to Public Space Maintenance.
 - + Example: The document “Maintenance of Nature Strips in Urban Area Policy” adopted by the city of Narrabri Shire, Australia¹²

As previously mentioned, other EU GPP Criteria, and consequently part of the research done to establish them, will converge in the EU GPP for Public Space Maintenance and in its Technical Background Report. As important sources of information to this report, the following documents have been consulted:

- Green Public Procurement: **Cleaning Products and Services**: Technical Background Report, 2011¹³

⁹ General Union Environment Action Programme 2020, Living well within the limits of our planet. More info at: <http://ec.europa.eu/environment/action-programme/>

¹⁰ UNI/PdR 8:2014 Linee guida per lo sviluppo sostenibile degli spazi verdi - Pianificazione, progettazione, realizzazione e manutenzione. Available in Italian at: http://catalogo.uni.com/pdr/pub/uni_pdr_8_2014.pdf

¹¹ LIFE Project. More info and dissemination material at: http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3734

¹² http://www.narrabri.nsw.gov.au/index.cfm?page_id=1020

¹³ EU Green Public Procurement Criteria for Cleaning Products and Services. Technical Background Report available at http://ec.europa.eu/environment/gpp/pdf/tbr/cleaning_tbr.pdf EU GPP Criteria available at http://ec.europa.eu/environment/gpp/pdf/toolkit/cleaning_product/en.pdf

- Green Public Procurement: **Gardening Products and Services**: Technical Background Report, 2011¹⁴
- Revision of the EU Green Public Procurement Criteria for **Transport**: Preliminary report Task 1 Report: Scope, definitions and legislation, 2016¹⁵

Note about the research methodology

In order to better organize the research, it has been useful to explore existing legislations, policies or guidelines according to the following structure:

- **Activities** related with Public Space Maintenance, organized around five main services, such as:
 - + Cleaning
 - + Gardening & landscaping
 - + Repairing/Replacement
 - + Painting/Repainting
 - + Assembly and removal of temporary elements
- **Equipment Items** needed to accomplish Maintenance activities, such as:
 - + Vehicles
 - + Machinery

¹⁴ : EU Green Public Procurement Criteria for Gardening Products and Services

¹⁵ : EU Green Public Procurement Criteria for Transport. Technical Background Report available at http://ec.europa.eu/environment/gpp/pdf/tbr/transport_tbr.pdf. EU GPP Criteria available at <http://ec.europa.eu/environment/gpp/pdf/criteria/transport.pdf>. Report Task 1 available at <http://susproc.jrc.ec.europa.eu/Transport/docs/EU%20GPP%20Transport%20-%20Task%201%20Report.pdf>

3.1 Overview of EU legislation that regulates the environmental performance of maintenance of public space

In order to consider other existing EU legislations that could influence the definition of the present EU GPP Criteria, in this preliminary phase it has been established to focus the research on Public Space in general when needed, rather than specifically to Maintenance of Public Space. By doing so, a larger number of EU legislations have been consulted and taken into consideration. Nevertheless, the following overview focuses only on aspects related to Maintenance, leaving apart the analysis that features related to planning, design and construction of Public Spaces.

3.1.1 Existing EU legislation in terms of cleaning products and services

In the following chapter, considerations about existing EU legislations regarding Cleaning services will be described. In terms of Maintenance of Public Space for this research phase, it has been established to refer to Cleaning Services by including the following activities: Mechanical & manual sweeping, Litter removal, Bins' litter collection and sorting, Mechanical & manual water jet cleaning, Façade/surface cleaning, Graffiti removal, Sidewalks, Bike lanes, Road (asphalt, roadbed) and roadside (shoulders, curbs, green areas) cleaning, Snow removal from sidewalks, Beach cleaning, Water bodies cleaning. Disaster assistance: Debris removal and After event cleaning are also considered for this purpose.

European legislation to be considered for certain of these activities is more related with Transport¹⁶, Machinery¹⁷ and Waste Management¹⁸ (sweeping, litter removal, etc.), while regarding surface cleaning (graffiti removal, road and roadside cleaning, etc.) it is important to consider existing legislations especially with regards to the chemical products used for cleaning operations. For this purpose, the technical report for EU GPP Criteria for Cleaning Products and Services is a vital reference.

European legislation both provides absolute restrictions on the use of substances with certain properties, and rules on the information which producers must provide users with. In past years, the regulatory framework of the chemicals sector has been changed significantly. In particular Regulation (EC) 1907/2006¹² on the registration, evaluation, authorisation and restrictions of chemicals (commonly known as the REACH Regulation) entered into force on 1 June 2007. It provides a regulatory framework for the collection of information on the properties of substances on the European market, and also for future restrictions on their use. The European Chemicals Agency (known as ECHA), based in Finland, acts as the central point in the REACH system: it runs the databases necessary to operate the system, coordinates the in-depth evaluation of suspicious substances and maintains a public database in which consumers and professionals can find hazard information.

This framework provides not only a rigorous testing and restriction procedure for all substances on the European market, but also provides a highly valuable centralised information source which could be used by public purchasers.

Regulation (EC) No 1272/2008¹³ (commonly known as the classification, labelling and packaging or CLP Regulation) and Regulation (EC) 1907/2006 (the REACH Regulation), which amend and repeal

¹⁶: For more detailed information, refer to EU Green Public Procurement Criteria for Transport. Technical Background Report available at http://ec.europa.eu/environment/gpp/pdf/tbr/transport_tbr.pdf and Report Task 1 available at <http://susproc.jrc.ec.europa.eu/Transport/docs/EU%20GPP%20Transport%20-%20Task%201%20Report.pdf>

¹⁷: Included in the chapter 3.1.6 of this document

¹⁸: Detailed information about EU Waste Legislation available at the Official EC Web page: <http://ec.europa.eu/environment/waste/legislation/>

Directives 67/548/EEC¹⁴ and 1999/45/EC¹⁵, require producers and suppliers of dangerous substances in EU member states to classify the harmful properties of their substances and to provide industrial and professional users with detailed health, safety and environmental information and advice about their products. All chemical products sold must be accompanied by material safety data sheets (SDS). If the products contain ingredients (above a certain percentage of the weight of the final product) which are classified as dangerous, then this information must be included in the SDS and also on the product label.

The CLP Regulation introduces what is known as the Globally Harmonised System (GHS) for classification and labelling of substances and mixtures into the EU. The GHS is a UN initiative which aims to harmonise the information related to human health and environment provided by manufacturers worldwide, given the global nature of the trade.¹⁹

The requirements of the CLP Regulation were adopted in 2015. Therefore, before 1st June 2015 two different classification and labelling systems existed and operated in parallel: the recent CLP Regulation and the older systems for classification and labelling of substances (based on Directive 67/548/EEC) and preparations (mixtures) (based on Directive 1999/45/EC).

The CLP Regulation system uses for the classification of hazardous properties a series of Hazard Class and Category Codes and Hazard Statements. In addition, the CLP Regulations establish a new database, known as the classification and labelling inventory, for substances. This database contains classification and labelling information on noted and registered substances received from manufacturers and importers. The database is available on the website of the European Chemicals Agency: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database>

Many substances have already been analysed for their properties in this regard, and may be issued with a hazard warning (e.g. T+: Toxic, N: dangerous for the environment), together with a R-Phrase indicating the precise nature of the risk (e.g. R26: very toxic by inhalation, R50: very toxic to aquatic organisms). Under the CLP system Hazard Class and Category Codes (e.g. Acute Tox. 2, Aquatic Acute 1) and Hazard Statements and Codes (e.g. H330 - fatal if inhaled, H400 - Very toxic to aquatic life) are used instead.

3.1.2 Existing EU legislation in terms of gardening and landscaping

In the following chapter considerations of existing EU legislations regarding Gardening Services will be described. In terms of Maintenance of Public Space, for this research phase, it has been established to refer to Gardening Services by including the following activities: Fertilization, Weed control and pesticides use, Manual & automated irrigation, Pruning, Planting, Plant and trees replacement, Green waste composting.

Although there are no specific directives or regulations for gardening, there are some related to products (fertilisers, biocides) and machinery used in gardening. Invasive plants are also covered by the relevant national acts but also by European Directive 2000/29/EC and strategies in preparation.

For plant protection products, the European Union has established several Directives: Directive 91/414/EEC of 15 July 1991 concerning the placing of plant protection products (PPPs) on the market; Directive 79/117/EEC of 21 December 1978 prohibiting the placing on the market and use of plant protection products containing certain active substances; and Directive 76/769/EEC of 27 July 1976 on the approximation of the laws, regulations and administrative provisions of the Member States relating to restrictions on the marketing and use of certain dangerous substances and

¹⁹ EU Green Public Procurement Criteria for Cleaning Products and Services. Technical Background Report available at http://ec.europa.eu/environment/gpp/pdf/tbr/cleaning_tbr.pdf

preparations. They lay down uniform rules on the evaluation, authorisation, placing on the market and control within the European Union of plant protection products and the active substances they contain. The regulation of such products was first harmonised under Council Directive 91/414/EEC which entered into force on 26th July 1993. This Directive set agreed criteria for considering the safety of active substances in plant protection products and the safety and effectiveness of formulated products. Further, the Directive established a positive list of active substances (Annex I of the Directive) the use of which present an acceptable risk to man or the environment and a mechanism for adding further substances to Annex I, either as new active ingredients or as an existing active ingredient through a review program. The first review of existing active ingredients (these are active ingredients that were on the market on or before 25 July 1993 (or later in newer EU Member States) was completed in March 2009. Active ingredients are included in Annex I for a period of 10 years and have to undergo a second review before the end of the 10-year period in order to take account of new information and to ensure that the plant protection products can still be used safely.

The authorisation of plant protection products themselves is carried out by Member States. Directive 91/414/EEC sets out a harmonised authorisation process for the marketing and use of such products and only active substances included in Annex I can be used in such products (except where certain transitional arrangements applied).

Directive 91/414/EEC was replaced from the 14th June 2011 by Regulation (EC) 1107/2009.

This continues to harmonise the assessment and authorisation of plant protection products across the EU as well as introduces some further requirements such as the introduction of hazard based criteria (for example only active substances that are not PBT (persistent, bioaccumulative and toxic) substances or not vPvB (very persistent and very accumulative) substances can be approved), the assessment of cumulative and synergistic effects, comparative assessment and assessment of endocrine disruption.

Regulation (EC) 1107/2009 introduces for the first time the concept of “low-risk plant protection products”. Plant protection products will be authorised as such provided that they meet certain requirements including approval of the low-risk active substances, safeners and synergists contained within it, the product does not contain a substance of concern, the product is sufficiently effective and it does not cause unnecessary pain and suffering to vertebrates to be controlled. The active substances that are approved for use in the EU can be found at http://ec.europa.eu/food/plant/protection/evaluation/database_act_subs_en.htm²⁰.

Directive 2009/128/EC introduces a framework for sustainable use of pesticides, including plant protection products. This aims to reduce the risks and impacts of such plant protection products on human health and the environment and promotes the use of integrated pest management and of non-chemical alternative approaches or techniques. The Directive includes a number of measures to achieve this aim, including the following.

- Training of professional users, distributors and advisors, including (by 14 December 2013) the establishment of a certification system.
- Restriction of sale of pesticides authorised for professional use to persons holding the relevant certificate.
- Inspection of pesticide application equipment.
- Prohibition of aerial spraying (with certain exceptions).
- Reduction of pesticide use or risks in specific areas including use of appropriate risk management measures and the use of low-risk plant protection products and biological control measures. The specific areas include areas used by the general public (e.g. parks and gardens, sports and recreation grounds, school grounds, children’s playgrounds and in the close vicinity of healthcare facilities).
- Ensuring that professional users do not endanger human health or the environment during operations such as:

²⁰: Official web page of EC. Path: European Commission > Food Safety > Plants > Pesticides

- o storage, handling, dilution and mixing of pesticides before application.*
- o handling of packaging and remnants of pesticides.*
- o disposal of tank mixtures remaining after application.*
- o cleaning of equipment used after application.*
- o recovery or disposal of pesticide remnants and their packaging in accordance with Community legislation on waste.*
- *Promotion of low-pesticide-input pest management, giving priority where possible to nonchemical methods.*

Council Regulation (EC) No 834/2007 on organic production and labelling of organic products is helpful in stipulating the arrangements for organic production.

For mineral fertilisers there is also EU Regulation No 2003/2003 of the European Parliament and of the Council of 13 October 2003 (as amended). It defines, in particular, the provisions relating to the placing of fertilisers on the market, i.e. the conditions for designating “EC fertilisers”, as well as provisions on their labelling and packaging. The Regulation aims to simplify harmonised Community legislation in the field of fertilisers by bringing all the existing provisions in this field under one instrument. The objective is to ensure the free movement of these products within the European Union.²¹

This last regulation is currently under revision. As previously described, it ensures free movement within the single market primarily for conventional, non-organic fertilisers, typically extracted from mines or produced chemically. Innovative fertilising products produced from organic materials are outside the scope of the current Fertilisers Regulation. Their access to the single market is therefore dependent on mutual recognition between Member States, and due to diverging national rules, this is often difficult. In 2016, a draft Regulation has been sent to the European Parliament and Council for adoption. This revised version will set out common rules on converting bio-waste into raw materials that can be used to manufacture fertilising products. It defines safety, quality and labelling requirements that all fertilising products need to comply with to be traded freely across the EU. Producers will have to demonstrate that their products meet those requirements, as well as limits for organic contaminants, microbial contaminants and physical impurities before affixing the CE-mark.²²

3.1.3 Existing EU legislation in terms of repairing and replacement of public space items

In the following chapter, considerations about existing EU legislations regarding the Repairing and Replacement of public space items will be described. In terms of Maintenance of Public Space, for this research phase, it has been established to refer to the public items that could be object of Repairing and Replacement by including the following: sidewalk/bike lane/road pavement, urban furniture element, playground element, signage and wayfinding element (excl. street lights), drinking fountains, ornamental fountains, irrigation/pumping systems, plant and trees replacement, lawn replacement, manhole cover replacement.

For the research purpose, it has been useful to further divide this public space maintenance activity into two main groups:

- + Repairing and Replacement of Sidewalk/bike lane/road pavement
- + Repairing and Replacement of public furniture items, including: urban furniture element, playground element, signage and wayfinding element (excl. street lights), drinking fountains, Ornamental fountains and Manhole cover replacement.

²¹ EU Green Public Procurement Criteria for Gardening products and services. Technical Background Report available at http://ec.europa.eu/environment/gpp/pdf/tbr/gardening_tbr.pdf.

- + Repairing and Replacement of gardening items, including: Irrigation/pumping systems, plant and trees replacement, Lawn replacement

In relation with the Repairing and Replacement of sidewalk/bike lane/road pavement detailed information about existing European legislations could be found in the Technical Background Report of Road Design, Construction and Maintenance.²³

On the subject of Gardening items, the Technical Background Report for EU GPP Criteria for Gardening Products and Services is again an important reference.

No previous background research from any existent GPP was available for the topic of repairing and replacement of public furniture items , so different sources have been consulted to describe the legislative scenario of this public space maintenance activity. After reviewing the existing literature related to the topic of design and maintenance of public furniture, it emerged that this kind of subject is mainly taken into account by National policies and regulations, rather than European legislation. In particular, it is has been noticed that there is not an unique European legislation referring to the whole product group of public furniture, while several European Standards regulate some smaller product groups contained in what is commonly defined as public furniture.

Nevertheless, several studies and pilot projects have been conducted on the subject of public furniture at the European level. In particular, a LIFE PROJECT very closely related to the scope of the EU GPP for Public Space Maintenance has been identified: LIFE FUTURE project, Sustainable Urban FURniTURE: Tool design to perform environmental assessments in the green procurement framework (LIFE14 ENV/ES/000703). The project started on October 2015 for a total duration of 30 months; updated information about the project are available on the webpage . Further details about the project are reported in the chapter 1.3.3 Other projects and ongoing initiatives

The sector study carried out in the first phase of the LIFE FUTURE project can be considered as an interesting reference for the elaboration of this chapter. Indeed, some reports elaborated in the framework of the LIFE FUTURE project have been consulted ²⁴, since they provide a quite complete overview of:

- + Legal framework, Procedures, tools and methodologies and other environmental information about urban furniture, described in the document:
 - + D1.1 Report on the current situation of the urban furniture sector related to GPP
- + Characterization of urban furniture and technical and environmental classification, described in the document:
 - + D1.2 Report on the selected products and their specifications (technical description)

The following categorization used in the LIFE FUTURE project looks appropriate also for the analysis of maintenance activities related to public space items, in particular focusing on their repairing and replacement.

Urban furniture categories	Urban furniture products
Street furniture products	Benches, seats and chairs Bicycle parking Canopies and kiosks Bins and containers Hydrants

²³ EU Green Public Procurement Criteria for Road Design, Construction and Maintenance. Technical Background Report available at http://ec.europa.eu/environment/gpp/pdf/report_gpp_roads.pdf

²⁴ Dissemination material of the project LIFE14 ENV/ES/000703 available at <http://www.life-future-project.eu/dissemination.php?op=4>

	Advertising and information panels Planters and pots Tree pits, manholes and lids
Recreational and leisure products	Playgrounds Sports courts Showers and footbaths Fountains and hydrants
Traffic management products	Traffic signs Guardrails, barriers and parapets Milestones and bollards Speed reducers

Table 1: Urban furniture categories and products as reported in the project LIFE14 ENV/ES/000703

From the studies conducted to investigate the existing technical and quality standards for public space furniture at European level, it emerged that the following Standards should be considered according to product categories.

Urban furniture categories	Technical and quality standards
Street furniture products	EN 581-1 Outdoor furniture - Seating and tables for camping, domestic and contract use - Part 1: General safety requirements. EN 581-2 Outdoor furniture - Seating and tables for camping, domestic and contract use - Part 2: Mechanical safety requirements and test methods for seating. EN 581-3 Outdoor furniture - Seating and tables for camping, domestic and contract use - Part 3: Mechanical safety requirements and test methods for tables.
Recreational and leisure products	EN 16630 Permanently installed outdoor fitness equipment - Safety requirements and test methods. EN 14877 Synthetic surfaces for outdoor sports areas – Specification. EN 14904 Surfaces for sports areas - Indoor surfaces for multi-sports use – Specification. EN 15330-1 Surfaces for sports areas - Synthetic turf and needle-punched surfaces primarily designed for outdoor use - Part 1: Specification for synthetic turf surfaces for football, hockey, rugby union training, tennis and multi-sports use. EN 15330-2 Surfaces for sports areas - Synthetic turf and needle-punched surfaces primarily designed for outdoor use - Part 2: Specification for needle-punched surfaces. EN 14384 Pillar fire hydrants.
Traffic management products	EN 12966 Road vertical signs - Variable message traffic signs. EN 12899-1 Fixed, vertical road traffic signs - Part 1: Fixed signs. EN 12899-3 Fixed, vertical road traffic signs - Part 3: Delineator posts and retroreflectors. EN 12899-4 Fixed, vertical road traffic signs - Part 4: Factory production control.

	<p>EN 12899-5 Fixed, vertical road traffic signs - Part 5: Initial type testing.</p> <p>EN 13422 Vertical road signs - Portable deformable warning devices and delineators - Portable road traffic signs - Cones and cylinders.</p> <p>EN 1790 Road marking materials - Preformed road markings.</p> <p>EN 12899-2 Fixed, vertical road traffic signs - Part 2: Transilluminated traffic bollards (TTB).</p>
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Table 2: Urban furniture categories and related technical and quality standards as reported in the project LIFE14 ENV/ES/000703

For further details please refer to the Standards above mentioned.

3.1.4 Existing EU legislation in terms of painting and repainting of public space items

In the following chapter considerations about existing EU legislations regarding the Painting and Repainting of public space items will be described. In particular, for this research phase, activities of Painting and Repainting are considered part of Public Space maintenance when applied to façades or surfaces of outdoor elements or to urban furniture items.

In relation to this specific product category no EU GPP has been developed, but a very detailed Legislation at European level is available. In particular, since the 21st of April 2004 the 2004/42/EC Directive regulates the use of paints and varnishes in relation to the maximum allowed levels of volatile organic compounds. The directive refers to the limitation of emissions of volatile organic compound due to the use of organic solvents in decorative paints and varnishes and vehicle refinishing products. Further information about this topic are available at the following webpage: http://ec.europa.eu/environment/air/pollutants/stationary/paints/paints_legis.htm²⁵

The Directive, based on Article 114 of the Treaty on the Functioning of the European Union (formerly: Article 95 of the EC Treaty), is a harmonisation directive which aims to ensure the free circulation of goods within the Internal Market.

The products covered by the Paints Directive are paints for use on buildings, their trims and fittings and structures associated to buildings and products for vehicle refinishing. The specific sub-categories of products covered are listed in Annex I of the Paints Directive.

For the decorative paints and varnishes, Annex II A to the Directive sets out two sets of limit values for the maximum contents of VOCs (in grammes per litre of the product ready for use). The first set of limit values applied from 1 January 2007 on. The second, and stricter, set of limit values apply since 1 January 2010.

For the purpose of the EU GPP Criteria of Public Space Maintenance only regulation related with paints used for construction, their trims and fittings and structures associated to buildings should be considered. Moreover, it could be considered that, excluding particular cases, the totality of paints and varnishes to be considered for Public Space Maintenance are exclusively for outdoor application.

The scope of Directive 2004/42/EC covers paints and varnishes products. In particular, some of the subcategories mentioned in the Directive that may be taken into consideration in order to inform the scope of EU GPP for Public Space Maintenance are:

²⁵: Official web page of EC. Path: European Commission > Environment > Air > The Paints Directive

- 'coatings for exterior walls of mineral substrate' means coatings designed for application to outdoor walls of masonry, brick or stucco;
- 'interior/exterior trim and cladding paints for wood, metal or plastic' means coatings designed for application to trim and cladding which produce an opaque film. These coatings are designed for either a wood, metal or a plastic substrate.
- 'interior/exterior trim varnishes and wood stains' means coatings designed for application to trim which produce a transparent or semi-transparent film for decoration and protection of wood, metal and plastics.
- 'multicoloured coatings' means coatings designed to give a two-tone or multiple-colour effect, directly from the primary application;
- 'decorative effect coatings' means coatings designed to give special aesthetic effects over specially prepared pre-painted substrates or base coats and subsequently treated with various tools during the drying period.²⁶

The values of maximum VOCs allowed for each subcategory are described in the Annex II of the directive.

²⁶ : Directive 2004/42/CE on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC. Available at this link: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32004L0042>

3.1.5 Existing EU legislation in terms of vehicles used for public space maintenance

In the following chapter considerations about existing EU legislations regarding the Vehicles used for public space maintenance will be described.

In particular, for this research phase, it has been established to refer to vehicles used for Public Space Maintenance activities by including the following items: Human-controlled vehicles, Remote controlled, autonomous or robotic vehicles, Sweepers and street cleaning vehicles (e.g., mechanical brooms).

As known, several actions and guidelines have been implemented by the European Commission to reduce the environmental impact of this sector. Moreover, ad hoc EU GPP Criteria for Transport have been published and are currently under revision.

The importance of taking action in the transport sector to reduce its environmental impacts, particularly in relation to its emission of greenhouse gases (GHGs), air pollutants and noise, has been highlighted in various EU strategic documents, including the seventh Environment Action Programme²⁷. The broader transport policy framework is set by the 2011 Transport White Paper²⁸, which underlines the need for, and a number of initiatives that will contribute to, improving the environmental performance of road transport vehicles and the way that they are used (European Commission, 2011a).²⁹

The main legislation areas related with vehicles concern the following points:

Reducing GHG emissions from vehicles

The main legislation to improve the GHG emissions performance of road transport focuses on reducing carbon dioxide (CO₂) emissions from new cars and light commercial vehicles (LCVs).

Some of most relevant existing legislations on this topic:

- Regulation (EC) No 443/2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO₂ emissions from light duty vehicles
- Regulation (EU) No 510/2011 setting emission performance standards for new light commercial vehicles as part of the Union's integrated approach to reduce CO₂ emissions from light duty vehicles
- Directive 98/79/EC relating to the quality of petrol and diesel fuels, as amended by Directive 2009/30/EC
- Directive 2006/40/EC relating to emissions from air conditioning systems in motor vehicles

Reducing the air pollutant emissions from vehicles

Separate legislation limits the emissions of air pollutants from light duty vehicles (LDVs, i.e. cars and LCVs) and from HDVs.³⁰

Some of most relevant existing legislations on this topic:

- Regulation 715/2007 on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information

²⁷ General Union Environment Action Programme 2020, Living well within the limits of our planet. More info at: <http://ec.europa.eu/environment/action-programme/>

²⁸ Transport White Paper, Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system

²⁹ EU Green Public Procurement Criteria for Transport. Technical Background Report available at http://ec.europa.eu/environment/gpp/pdf/tbr/transport_tbr.pdf.

- Regulation 595/2009 on type approval of motor vehicles and engines with respect to emissions from heavy duty vehicles (Euro VI) and on access to vehicle repair and maintenance information, as amended by Commission Regulation (EU) No 582/2011

Reducing the noise from vehicles

European legislation also directly regulates the noise levels of vehicles.

Some of most relevant existing legislations on this topic:

- Regulation (EU) No 540/2014 on the sound level of motor vehicles and of replacement silencing systems

For more detailed information, please refer to EU Background Technical Report of Green Public Procurement Criteria for Transport.

3.1.6 Existing EU legislation in terms of machinery used for public space maintenance

In the following chapter considerations about existing EU legislations regarding the Machinery used for public space maintenance will be described.

In particular, for this research phase, it has been established to refer to machinery used for Public Space Maintenance by including the following items: lawn-mowers (including lawn tractors) and scarifiers, chainsaws, brush saws, strimmers, hedge trimmers, pruners and similar hand-operated machines, leaf collectors and leaf blowers, auto-hoes, rotary cultivators, compost shredders, high pressure cleaning machines (water/sand).

Machineries included in the product group of Public Space Maintenance are mainly related with gardening activities. For this reason, a good reference also in this case is the research made for the Background Technical Report of the EU-GPP for Gardening and Landscaping.

Machinery used for Public Space Maintenance activities are part of so called Non-Road Mobile Machinery (NRMM). As reported on European Commission webpage³⁰, NRMM covers a very wide variety of machinery typically used off the road in many ways. It comprises, for example:

- small gardening and handheld equipment (lawn mowers, chainsaws, etc.)
- construction machinery (excavators, loaders, bulldozers, etc.)
- agricultural & farming machinery (harvesters, cultivators, etc.)
- even railcars, locomotives and inland waterway vessels.

For machinery, it is important to mention:

- *Directive 2000/14/EC of the European Parliament and of the Council of 8 May 2000 on the approximation of the laws of the Member States relating to the noise emission in the environment by equipment for use outdoors. The aim of the Directive is to promote the smooth functioning of the internal market and to improve the health and well being of the population by reducing the noise emitted by the equipment used outdoors.*³¹
- Regulation (EU) 2016/1628³² of the European Parliament and of the Council of 14 September 2016 on requirements relating to gaseous and particulate pollutant emission limits and type-approval for internal combustion engines for non-road mobile machinery, amending Regulations (EU) No 1024/2012 and (EU) No 167/2013, and amending and repealing Directive 97/68/EC.

³⁰ At this link https://ec.europa.eu/growth/sectors/automotive/environment-protection/non-road-mobile-machinery_en

³¹ : EU Green Public Procurement Criteria for Gardening products and services. Technical Background Report available at http://ec.europa.eu/environment/gpp/pdf/tbr/gardening_tbr.pdf.

³² <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32016R1628>

3.2 Overview of relevant national guidelines and labels

Environmental labels and national guidelines on green public buying are valuable tools for implementing green procurement, as they bridge the competency gap existing between procurement practitioners and environmental experts. One of the consequences of the increasing attention paid to environmental issues is the multiplication of environmental labelling schemes and different national guidelines. Environmental labelling schemes are numerous and multifaceted throughout many European countries. It is necessary to distinguish between several environmental labels. According to the International Standards Organisation (ISO) there are three environmental labels typologies: Type I (eco-labels), Type II (green claims) and Type III (environmental impact labels).³³ .

Furthermore, over the years several EU Member States have developed multiple national and trans-national tools aiming to guarantee the sustainability of products and services produced, bought and consumed in their countries. This section aims to review national guidelines that are in place for activities attributable to Public Space Maintenance, with a focus on most active EU Member States.

3.2.1 National guidelines

At the national level, most EU Member States have now published GPP National Action Plans (NAPs) which outline a variety of actions and support measures for green public procurement³⁴. In 2003, the European Commission in its [Communication on Integrated Product Policy](#) (IPP)³⁵ encouraged Member States to draw up publicly available National Action Plans (NAPs) for greening their public procurement. Many have set targets for GPP or SPP, either in terms of overall procurement, or for individual product and service groups. A number of countries and regions have also developed GPP or SPP criteria sets. In many cases these are similar to the EU GPP criteria, with adjustments to reflect the particular circumstances or priorities of the authorities developing them. Most of the criteria sets rely upon life-cycle assessment (LCA) where it is available, together with eco-labels and the evidence which these are based upon³⁶, such as the Final Report of Assessment and Comparison of National Green Public Procurement Criteria and Underlying Schemes³⁷.

The document [National GPP Action Plans policies and guidelines](#)³⁸ contains a comprehensive overview of the state of affairs in the 28 EU Member States (last updated in November 2016).

A Member State that showed to be very active in terms of National Guidelines for Sustainable Public Procurement is the **Netherlands**. Since 2014, the web platform [PIANOo](#)³⁹ (available in Dutch and English), is the main contact point for Sustainable Public Procurement for Dutch procurers. The Netherlands defined their National GPP around six thematic areas: Energy and climate, Materials and raw materials, Water and soil, Quality of life (disruption, air and noise), Natural environment,

³³ Standard Catalogues for Ecolabelling: ISO 14024:1999, Environmental labels and declarations – Type I environmental labelling – Principles and procedures; ISO 14021:1999, Environmental labels and declarations – Self-declared environmental claims (Type II environmental labelling); ISO 14025:2006, Environmental labels and declarations – Type III environmental declarations – Principles and procedures

³⁴ Official Web page of EC http://ec.europa.eu/environment/gpp/action_plan_en.htm

³⁵ Communication from the Commission to the Council and the European Parliament, Integrated Product Policy Building on Environmental Life-Cycle Thinking, 2003. Available at: <http://ec.europa.eu/environment/ipp/ippcommunication.htm>

³⁶ : Buying Green! A handbook on green public procurement. 3rd edition, 2016. Available at this link:

http://ec.europa.eu/environment/gpp/buying_handbook_en.htm

³⁷ Assessment and Comparison of National GPP/SPP Criteria and Underlying Schemes, Report to the European Commission, ENV.G.2/SER/2009/0059r, 2010. Available at:

<http://regi.kozbeszerzes.hu/static/uploaded/document/A%20nemzeti%20z%C3%B6ld%20C%C3%A9s%20fenntarthat%C3%B3%20k%C3%B6zbeszerz%C3%A9si%20k%C3%B6vetelm%C3%A9nyek.pdf>

³⁸ Complete list of National GPP for each member state updated in November 2016. Available at:

http://ec.europa.eu/environment/gpp/pdf/national_gpp_strategies_en.pdf

³⁹ <https://www.pianoo.nl/public-procurement-in-the-netherlands>

biodiversity and space, Health and welfare (working conditions, human health, animal welfare). Dutch National Guidelines are particularly interesting because they treat subjects and topics that are not yet considered by the EU GPP tool. Indeed, particularly related with the topic of Public Space Maintenance the following environmental criteria have been developed:

Environmental Criteria for Sustainable Public Procurement of Green Spaces⁴⁰

An interesting aspect is included in this document, pointing out the importance of making a distinction between the procurement criteria that are related to products and materials and procurement criteria that are related to services. This is due to the fact that some authorities have their own green space services, and they purchase only plant material, machines and tools, while other authorities outsource green space management and purchase both labour-hours and products for this. The Dutch criteria are developed following the Sustainable Groundwork, Road and Hydraulic Engineering Approach⁴¹ and are classified according to the three different levels of the Ambition Web⁴². For Green Spaces Public Procurement only the first two levels of the Ambition Web are considered: Level 1, including Selection criteria (SC) Technical specifications (ME) Contract provisions (CB) and Level 2, including Award criteria (AC). The Criteria consider services and products for 3 phases: design, completion and management and maintenance. For our research purpose only criteria related with the third phase will be considered.

Technical Specifications:

1. Acquiring nursery products and flower bulbs
2. Acquiring plant material of genetic quality (rural areas)
3. Use of fertilisers/soil improvers
4. Controlling unwanted weeds, diseases and pests

Award criteria (optional for Management and Maintenance):

1. Acquiring nursery products and flower bulbs
2. Acquiring plant material of genetic quality (rural areas)
3. Sustainable plant containers
4. Green space design where plant and soil fit in with each other
5. Sustainability action plan

Contract provisions:

1. Planning and reporting on fertilisation, soil improvement and control

Detailed descriptions about the technical specifications and the awards criteria are reported in the above-mentioned document.

Environmental Criteria for Sustainable Public Procurement of Public Space Cleaning Services⁴³

From an analysis of the 28 State Members, the Netherlands seems to be one of the few countries provided with Environmental Criteria centred in Public Space Cleaning Services. For this product group the Dutch Environmental Criteria consider the following aspects:

Technical Specifications:

⁴⁰ Environmental criteria for SPP of Green spaces, Version 7 May 2015. Available at:

<https://www.pianoo.nl/sites/default/files/documents/documents/greenspaces-environmentalcriteria.pdf>

⁴¹ The Sustainable Groundwork, Road and Hydraulic Engineering Approach offers practical tools for the implementation of sustainability in civil engineering projects and linking it to organisational objectives. More info at:

<https://www.pianoo.nl/sites/default/files/documents/documents/sustainablepublicprocurementthisishowitsdone.pdf>

⁴² The Ambition Web is a tool that helps organisations identify their ambitions, draw up criteria and monitor their progress in working towards achieving those ambitions

⁴³ Environmental criteria for SPP of Public Space Cleaning Services, Version 7 May 2015. Available at:

<https://www.pianoo.nl/sites/default/files/documents/documents/publicspacecleaningservices-environmentalcriteria.pdf>

1. Weed control on paved surfaces
2. Removal of graffiti

Award criteria:

1. Use of pest management (Integrated Pest Management) to prevent pest nuisance

In order to establish precise criteria for this national SPP, the legislations taken into account are mainly national.

Environmental Criteria for Sustainable Public Procurement of Preservation Works⁴⁴

Even if the scope of the Dutch Environmental Criteria for Preservation Works does not exactly correspond with what we described Public Space Maintenance as meant in this document, it represents an interesting reference for the scenario of National guidelines available for this product group. In fact, although it is stated in the document that *Preservation Works mainly apply to the completion, management and maintenance of civil engineering constructions such as bridges, locks, viaducts, hydraulic engineering constructions and pumping stations, ships and other systems*, many of the services included in the scope, could be also referred to Public Space elements. In a Dutch Public Procurement, the aspects influencing the result are the following:

Technical Specifications:

1. Application of low-solvent preservation systems
2. Prevention of products with lead or chromate-containing pigments
3. Processing/removal of waste arising

Environmental Criteria for Sustainable Public Procurement of Winter Maintenance⁴⁵

Besides the Netherlands, other European countries such as **Austria** have developed their National GPP Strategies following the scheme of existing EU GPP. Some of the product groups that are touched by Austrian GPP Criteria and can be considered as references for EU GPP for Public Space Maintenance are: cleaning products and services, furniture, gardening products and services. Further information is available at <http://www.nachhaltigebeschaffung.at/>

Belgium is another country that shows a concrete engagement towards the implementation of National Guidelines for Green Public Procurement. For instance, GPP target for Brussels Capital Region by 2017 is to cover the 20% of financial volume of public procurements and 20% of the (number of) public procurement with environmental clauses.⁴⁶ In most of the cases the EU GPP criteria are the start of discussion at national level with stakeholders. Currently, sustainable criteria for about 70 product and service groups are available, and GPP for Construction materials, Food and catering services, Paints and varnishes are at the moment under development. An overview on all product groups is available at <https://overheid.vlaanderen.be/productgroepen>

Italy is also a EU Member actively engaged in supporting GPP at the national level; since 2008 a national action plan on GPP has been adopted by Ministerial Decree⁴⁷, then updated in 2013. 17 product groups have been included in the Italian GPP⁴⁸. Particularly interesting for the EU GPP for Public Space Maintenance is the GPP for Urban Furniture (Arredo Urbano)⁴⁹. The document mainly

⁴⁴ Environmental criteria for SPP of Preservation Works, Version 7 May 2015. Available at: <https://www.pianoo.nl/sites/default/files/documents/documents/preservationworks-environmentalcriteria.pdf>

⁴⁵ Environmental criteria for SPP for Winter Maintenance, Version 7 May 2015. Available at: <https://www.pianoo.nl/sites/default/files/documents/documents/wintermaintenance-environmentalcriteria.pdf>

⁴⁶ : Source: Complete list of National GPP for each member state updated in November 2016. Available at: http://ec.europa.eu/environment/gpp/pdf/national_gpp_strategies_en.pdf

⁴⁷ Available at: <http://www.minambiente.it/pagina/il-piano-dazione-nazionale-il-gpp-pan-gpp>

⁴⁸ complete list at: <http://www.minambiente.it/pagina/criteri-vigore>

⁴⁹ Criteri ambientali minimi per l'acquisto di articoli per l'arredo urbano. Available at: http://www.minambiente.it/sites/default/files/archivio/allegati/GPP/2017/allegato_arredo_urbanopdf.pdf

focuses on design and installation of new urban furniture items, but a concise reference to maintenance is also included, specifying that paints and surface cleaning products should respect EU Ecolabel requirements.

3.2.2 Labels

. Some countries have extensive ecolabel programmes at the national level. Very well-known ecolabels at the European level are: the European Ecolabel (the Flower), the Nordic Swan and the Blue Angel. There are many other ecolabel schemes in developed countries. Procurers may consider the following list of reliable ecolabels:

- Good Environmental Choice (Australia)
- Environmental Label (Croatia)
- Green Mark (Taiwan)
- Ecologo/Environmental Choice (Canada)
- Korean Ecolabel (South Korea)
- Ecomark (Japan)
- Green Seal (United States)

However, this overabundance of label schemes can be an obstacle for procurers, who may not know which scheme is more suitable for their needs.

3.2.2.1 EU Ecolabel

As aforementioned, many environmental labels exist all over Europe and elsewhere. Some of them focus on particular environmental concerns such as recyclability, biodegradability or energy efficiency. Others are valid and recognized in specific countries only. The European Ecolabel Scheme is a voluntary tool that promotes environmentally sound goods and services by awarding them with a distinctive symbol of environmental quality (a green flower). The label goes only to the most environmentally friendly brands in each product group. The Flower is a valuable tool to public purchasers, as it helps them identify green products. Alone among similar initiatives, the European Eco-label Scheme meet the following features:

- is recognized throughout the European Union, Norway, Liechtenstein and Iceland;
- requires product screening by an independent party; and
- assesses a product's total environmental impact, from extraction of the raw materials to eventual disposal (the "cradle to grave" approach)

Categories considered for product groups of EU Ecolabel do not exactly match with the categories used in this document for this research phase. The complete list of EU Ecolabel categories is available at the following link: <http://ec.europa.eu/environment/ecolabel/products-groups-and-criteria.html>. Among those product groups included within the framework of EU Ecolabels relevant for the scope of this study, it is necessary to quote:

EU Ecolabel Cleaning Up / All purpose cleaners and cleaners for sanitary facilities

Further information <http://ec.europa.eu/ecat/category/en/1/all-purpose-cleaners-and-> :

For more information about this product group:

- + Full criteria document, including product group definition (Article 1): [Commission Decision 2014/893/EU](#)
- + Summary of the criteria document: [Factsheet](#)

- + Technical background reports, calculation sheets, application forms, User Manuals and more: Under the product group tab on the [Product Group and Criteria](#) page

EU Ecolabel Furniture / Wooden furniture.

Further information: <http://ec.europa.eu/ecat/category/en/34/wooden-furniture>

For more information about this product group:

- + Full criteria document, including product group definition (Article 1): [Commission Decision 2009/894/EC](#)
- + Summary of the criteria document: [Factsheet](#)
- + Technical background reports, calculation sheets, application forms, User Manuals and more: Under the product group tab on the [Product Group and Criteria](#) page

EU Ecolabel Gardening / Growing Media, soil improvers and mulch

Further information: <http://ec.europa.eu/ecat/category/en/23/growing-media>

For more information about this product group:

- + Full criteria document, including product group definition (Article 1): [Commission Decision 2015/2099/EC](#)
- + Summary of the criteria document: [Factsheet](#)
- + Technical background reports, calculation sheets, application forms, User Manuals and more: Under the product group tab on the [Product Group and Criteria](#) page

EU Ecolabel Do-It-Yourself / Indoor and outdoor paints and varnishes

Further information: <http://ec.europa.eu/ecat/category/en/44/indoor-and-outdoor-paints>

For more information about this product group:

- + Full criteria document, including product group definition (Article 1): [Commission Decision 2014/312/EU](#)
- + Summary of the criteria document: [Factsheet](#)
- + Technical background reports, calculation sheets, application forms, User Manuals and more: Under the product group tab on the [Product Group and Criteria](#) page

EU Ecolabel Lubricants / Chainsaw oils, concrete release agents, wire rope lubricants, stern tube oils and other total loss lubricants

Further information: <http://ec.europa.eu/ecat/category/en/49/chainsaw-oils--concrete-r>

For more information about this product group:

- + Full criteria document, including product group definition (Article 1): [Commission Decision 2011/381/EU](#)
- + Summary of the criteria document: [Factsheet](#)
- + Technical background reports, calculation sheets, application forms, User Manuals and more: Under the product group tab on the [Product Group and Criteria](#) page

3.2.2.2 Nordic Swan – Denmark, Finland, Iceland, Norway and Sweden

The Nordic Swan Ecolabel is the official Nordic Ecolabel since 1989. It is administered on consignment of the Swedish government by the non-profit state-owned company Ecolabelling Sweden. The Nordic Swan Ecolabel is a tool to help consumers choose environmentally-sound products. Today there are 63 product groups that can receive the Nordic Swan Ecolabel. The Nordic Swan Ecolabel is a voluntary, positive ecolabelling of products and services with a common Nordic registered trademark, the Nordic Swan Ecolabel. Its purpose is to give consumers a clear and concise environmental product information, as well as promoting the development of products that are environmentally-sound.

To decide which products can be Nordic Swan Ecolabelled, they do environmental analyses to determine which product groups to develop criteria for. Products that are chosen are judged from a lifecycle perspective. Among several factors taken into account are the following: environmental problem of the product group, opportunity for product development, and potential influences of the product's development.

As happens with EU Ecolabel, categories considered for product groups of the Nordic Swan Ecolabel do not exactly match with the categories used in this document. The complete list of Nordic Swan Ecolabel categories is available at the following link: <http://www.svanen.se/en/Find-products/> Among those product groups and services included within the framework of Nordic Swan relevant for the scope of this study, it is necessary to quote the criteria for the following categories:

Nordic Ecolabelling of Cleaning products

Nordic Ecolabelled cleaning products are amongst the least environmentally harmful products within their category, the substances they contain have the lowest impact on the environment possible, and strict requirements are imposed with regard to the chemicals used in the products. The environmental requirements include strict requirements as to the content of environmentally harmful substances and substances not readily degradable in aquatic environments. Account is also taken of health factors; for example, the content of fragrance and other allergenic substances is restricted. The products are discharged into water after use. Properties such as biodegradability, bioaccumuability and toxicity to aquatic organisms are accordingly key considerations with regard to all constituent components. The effect of the products on the environment will also depend on the way in which they are used.

Accordingly, the consumer must be provided with dosage information. The required performance testing must demonstrate that the specified dose of the product has a cleaning effect that is satisfactory.

Furthermore, packaging requirements are imposed in order to reduce the quantity of packaging used and to increase recycling and re-use.

Further information: <http://www.svanen.se/en/Criteria/Nordic-Ecolabel-criteria/Criteria/?productGroupID=15>

For more information about this product group:

- + Nordic Ecolabelling of Cleaning Products Background to ecolabelling. [Background document](#)
- + Nordic Ecolabelling of Cleaning products. [Criteria](#)

Nordic Ecolabelling of Cleaning services

A Nordic Ecolabelled cleaning service provider offers its customers environmentally-friendly cleaning. The Nordic Ecolabelled cleaning service has a low consumption of chemicals and uses a high proportion of environmentally-friendly chemicals. The environmental impacts of greenhouse gases are minimised by means of stringent requirements as to transport and the use of refuse bags. All of this is combined with high cleaning quality and well trained staff.

Further information: <http://www.svanen.se/en/Criteria/Nordic-Ecolabel-criteria/Criteria/?productGroupID=43>

Additional information on this product service:

- + Nordic Ecolabelling of cleaning services. [Criteria](#)
- + Nordic Ecolabelling of Cleaning Services background to ecolabelling. [Background document](#)

Nordic Ecolabelling of Compost bins

Criteria for awarding an environmental labelling licence for compost bins have been drawn up for containers intended to compost organic household waste and garden waste. Both year-round compost bins (group A) and bins which can only operate during the warmer part of the year (group B) are included in the criteria document. The central objective of the criteria is to ensure satisfactory performance of the compost bins. The year-round compost bins must undergo a thorough performance test over a three month period in temperatures down to - 3°C. Chemicals which are particularly hazardous to the environment may not be used during the manufacturing of the container. The requirement to use recycled materials for compost bins with frames of plastic will increase the utilization of available recycled raw material. Comprehensive user instructions make it easier to control the biological process taking place in the container, thus minimizing adverse effects on the performance while in use. Material descriptions will make it easier to recycle or dispose of the materials of the composting container at the end of its life cycle. A warranty and a spare part service can extend the working life of compost bins.

Further information: <http://www.svanen.se/en/Criteria/Nordic-Ecolabel-criteria/Criteria/?productGroupID=11>

Additional information on this product service:

- + Nordic Ecolabelling of Compost bins. [Criteria](#)

Nordic Ecolabelling of Durable/resistant wood for outdoor use

Nordic Ecolabelled durable wood is an alternative to conventionally impregnated wood and is recognized by:

- + no heavy metals or biocides are added
- + problem-free as waste
- + produced from sustainable forestry wood
- + has sufficient biological durability

Further information: <http://www.svanen.se/en/Criteria/Nordic-Ecolabel-criteria/Criteria/?productGroupID=49>

Additional information on this product group:

- + Nordic Ecolabelling of Durable/resistant wood for outdoor use. [Criteria](#)
- + Nordic Ecolabelling of Durable/resistant wood for outdoor use background to ecolabelling. [Background documents](#)

Nordic Ecolabelling of Machines for parks and gardens

Nordic Ecolabelling of Machines for parks and gardens includes requirements on manufacturing, operation and end-of-life. The purpose is to identify the most environmentally friendly options in this field. Both personal and professional machines can be Nordic Ecolabelled.

A Nordic Ecolabelled Machine for parks and gardens is energy efficient and generates only minimal emissions of substances that are harmful to health and the environment. It should also contribute less to the greenhouse effect and the spread of hazardous substances than a non-Nordic Ecolabelled machine.

Further information: <http://www.svanen.se/en/Criteria/Nordic-Ecolabel-criteria/Criteria/?productGroupID=21>

Additional information on this product group:

- + Nordic Ecolabelling of Machines for parks and gardens. [Criteria](#)
- + Nordic Ecolabelling of Machines for parks and gardens background to ecolabelling. [Background document](#)

Nordic Ecolabelling of Outdoor furniture and playground equipment

The purpose of the criteria is to secure low environmental impact in the production and use of outdoor furniture and playground equipment. The environmental requirements have been drawn up from a life cycle perspective and have been formulated to ensure minimum environmental impact during production, use and in the waste phase. Requirements have accordingly been primarily imposed with respect to the following:

- + Wood raw materials from sustainable forestry operations.
- + The use of recycled plastic and metal raw materials and a design that permits the re-use of plastic and metal.
- + The use of chemicals with a lower environmental impact.
- + Good performance properties (safety, strength and stability).

The Nordic Ecolabelled product must be accompanied by information on how to maintain the product and recommended maintenance of products. This information must also include instructions on how to proceed when the product comes to the end of its useful life.

Further information: <http://www.svanen.se/en/Criteria/Nordic-Ecolabel-criteria/Criteria/?productGroupID=40>

Additional information on this product group:

- + Nordic Ecolabelling of Outdoor furniture and playground equipment. [Criteria](#)
- + Nordic Ecolabelling of Outdoor furniture and playground equipment background to ecolabelling. [Background document](#)

3.2.2.3 Blue Angel – Germany

The Blue Angel was used as the role model for the ISO 14024 standard (so-called Type-1 ecolabels), an international standard upon which many global environmental labels are based. It is a Type-1 ecolabel in addition to the EU Ecolabel and the Nordic Swan. This environmental label was created in 1978 on the initiative of the German Federal Minister of the Interior and approved by the Ministers of the Environment for the German federal states. The Blue Angel is a market-based, voluntary instrument of environmental policy. It was created with a scientific and holistic approach, involving in its creation many professional and commercial groups and the Environmental Label Jury. The standards set by the Blue Angel provide guidance for manufacturers and commercial companies when they want to improve the environmental performance of their products and services. Consumers can base their purchasing decisions on the Blue Angel and consciously choose the more environmentally-friendly alternative. The Blue Angel has achieved several successes within Germany, in fact it has become a recognised label delivering a high level of guidance: 92% of those surveyed were aware of the Blue Angel. 37% of those surveyed stated that the environmental label influences their purchase decision (Study on Environmental Awareness in Germany 2014).

Products and services awarded with the Blue Angel cause less damage to the environment and, at the same time, protect people's health by e.g.:

- Saving resources during their production
- Being manufactured from sustainably produced raw materials
- Using less resources during their use or disposal because they are, for example, particularly energy efficient
- Avoiding dangerous substances for the environment and/or people's health or limiting them to a minimum
- Being especially durable and easy to repair

- Being easy to recycle
- Causing low emissions to the soil, water and air, as well as low noise emissions
- Nevertheless fulfilling their intended function (fitness for use) to a high level of quality

As happens with the EU Ecolabel and the Nordic Swan Ecolabel, categories considered for product groups of Blue Angel do not exactly match with the categories used in this document. Complete list of Blue Angel Ecolabel categories is available at the following link: <https://www.blauer-engel.de/en/products>

Among those product groups and services included within the framework of Blue Angel relevant for the scope of this study, it is necessary to quote the criteria for two following categories:

Blue Angel for Garden and Leisure products

The Blue Angel identifies garden equipment with especially low noise emissions. This includes:

- + lawnmowers,
- + lawn trimmers,
- + lawn edge trimmers,
- + brush cutters,
- + chain saws,
- + grass trimmers,
- + hedge trimmers,
- + scarifiers and compost shredders.

In addition, the Blue Angel Ecolabel for garden and leisure products also focus on mobile toilets being used increasingly frequently – in camping vehicles and sport boats, as well as at construction sites, motorway service areas and major events or in tour buses, aircraft, passenger trains and passenger ships. The alternative to standard products promoted by Blue Angel criteria are sanitary additives and flushing-water additives compatible with clarification plants that have been awarded the Blue Angel Ecolabel. It is not permitted for them to contain, for example, any biocidal properties against microorganisms in clarification plants or to have any other negative effects when disposed of in clarification plants.

Further information: <https://www.blauer-engel.de/en/products/garden-leisure>

Blue Angel for Construction products

The products labelled by Blue Angel include within the category of construction products the environmentally-friendly painting product group,

Further information: <https://www.blauer-engel.de/en/products/construction>

3.2.2.4 MPS Environmental Programme for Horticulture

MPS <https://www.my-mps.com/en/> (Milieu Programma Sierteelt or 'Environmental Programme Floriculture' in English) is an international organisation created in 1993 which develops and manages certificates that allow employees in the horticulture sector to implement sustainability in their companies. The MPS standards are internationally accepted and serve as a guide in the horticultural sector. The product certificates MPS (Environmental Programme for Horticulture) with sustainability certificate are assumed to satisfy all components of the technical specification "Acquiring nursery products and flower bulbs" for Dutch Public Procurements of Green Spaces.

3.3 Other projects and ongoing initiatives

By reviewing the available information primarily through the Internet, the existence of several national and international initiatives aiming to pursue similar objectives as the EU GPP for Public Space

Maintenance have been noted. Particularly interesting initiatives are represented by projects developed under the framework of European Union LIFE Programme. LIFE is the EU's financial instrument supporting environmental, nature conservation and climate action projects throughout the EU. Since 1992, LIFE has co-financed 4306 projects.⁵⁰ Two LIFE projects considered the most interesting for the scope of this EU GPP are described in this section.

3.3.1 LIFE FUTURE - Sustainable Urban FURniTURE

One of the analysed projects that present many common points with the EU GPP for Public Space Maintenance is the previously mentioned ongoing *LIFE FUTURE: Sustainable Urban FURniTURE*. On the project's website <http://www.life-future-project.eu/> detailed information about the aims of the project and other background studies are available.⁵¹ Partners of the project are from Spain (AIMPLAS, Plastics Technology Centre, AIJU Instituto Tecnológico de producto infantil y ocio, Las Naves, Universitat Jaume I), Belgium (Association of Cities and Regions for Recycling and sustainable Resource management (ACR+)) and Croatia (City of Koprivnica). Detailed information below:

The main objective of the LIFE FUTURE project is to develop a tool – the Green Urban Furniture (GUF) Tool – to perform an accurate and simplified environmental analysis of urban furniture to facilitate Green Public Procurement (GPP). The GUF Tool will be based on the methodology of Life Cycle Assessment (LCA). The project will study different elements of urban furniture, focusing on two categories selected to validate the functionality of the tool. Moreover, the tool will be used by public bodies for real-life procurement processes to demonstrate its effectiveness and practical applicability for GPP, with at least 200 urban furniture items being acquired using the GUF Tool. The use of the tool will help ensure a range of environmental benefits, for example, in terms of climate change, eco-toxicity and resource depletion. In particular, the project will:

- *Help users to understand GPP criteria;*
- *Aid in the selection of the best solutions in terms of GPP; and*
- *Encourage public bodies to include green procurement clauses, based on GUF Tool results, in their tenders.*

Expected results:

- *Updated analysis of GPP for urban furniture in the EU, in particular focusing on Spain and Croatia;*
- *Validation and demonstration of the economic advantages of the proposed system for analysis and evaluation (GUF Tool); and*
- *Reduction of the environmental impacts of urban furniture using the GUF Tool. The average environmental impact benefits of urban furniture after applying eco-design criteria are predicted as follows: - Global warming: 26.5% (reduction of 1 870 kg CO2 equivalent per urban furniture item); - Acidification: 28.7% (reduction of 51 kg SO2 equivalent per urban furniture item); - Eutrophication: 25.5% (reduction of 0.9 kg PO4 equivalent per urban furniture item); - Energy consumption: 15.5% (reduction of 27 000 MJ per urban furniture item); and - Amount of waste: 10.8% (reduction of 116 kg of waste per urban furniture item).*

3.3.2 REDUST - Winter Maintenance Strategy with feasible additional measures

The REDUST Life project (LIFE09 ENV/FI/000579) developed by the City of Helsinki Environment Centre in partnership with other Finnish entities (City of Espoo, City of Vantaa, Nordic Envicon Oy,

⁵⁰ More detailed information about LIFE Projects available at: <http://ec.europa.eu/environment/life/>

⁵¹ More detailed information and project documents available at: http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5297

Helsinki Metropolia University of Applied Sciences, Helsinki Region Environmental Services Authority) aimed to:

- + find best winter practices in the fields of traction control, dust suppression and street cleaning, and accelerate their implementation in order to reduce levels of respirable street dust (PM10) in urban areas and to
- + develop and implement a strategy to reduce levels of respirable (PM10) street dust by means of better winter maintenance practices in urban areas in Finland.

The project started in January 2011 and was finished in 2014. Due to the detailed studies conducted in order to analyse the existing winter maintenance services and products, and the research developed to improve their environmental performances, this best practice could represent a precious source to develop EU GPP Criteria related with the aspect of Public Space Maintenance.⁵²

⁵² : Further information about the project and technical reports available at:
http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3734#RM

4 Overview of statistical and technical categories

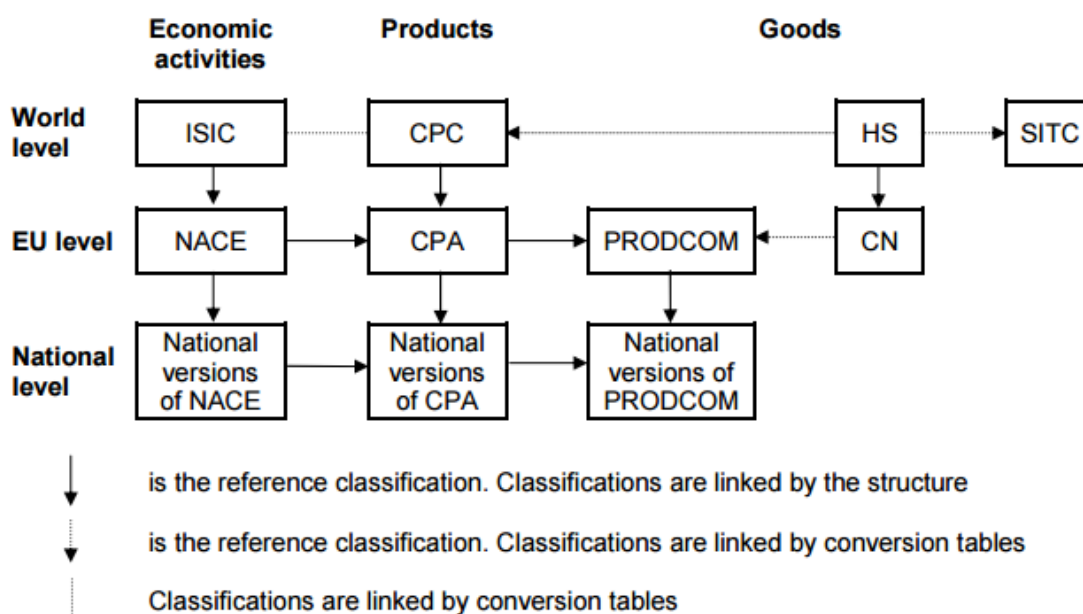
The main purpose of this section is to provide an overview of existing statistical and technical categories that could be used to define categories of product service and groups for the revised EU GPP criteria. Hence, this section investigates agreed definitions of potentially relevant services for the maintenance of public spaces that could be applied EU-wide for the purpose of defining the EU GPP criteria.

4.1 The need for statistical and technical categories

One of the basic requirements for statistical work is the existence of a recognised framework which can accommodate the vast range of statistical data available so that they can be presented and analysed in a meaningful way. Classifications provide that common language for both the compilation and the presentation of statistics. To achieve an effective single market, it is essential, for both macro- and microeconomic analysis and for commercial marketing, to have a single, up-to-date classification system that can be used in all Member states and by the Community institutions.

Economic statistics require different classifications for different purposes. Hence, international classifications have been developed on this basis. These range from the branch classification that is embodied in the System of National Accounts (SNA) to the International Standard Industrial Classification of All Economic Activities (ISIC) and the very detailed commodity classification of the Harmonised System (HS).

Under the auspices of the United Nations Statistical Division, an integrated system of statistical classifications has been developed. This system makes it possible to compare statistics produced in different statistical domains. From the European point of view, the system can be represented as follows:



Where:

- ISIC is the United Nations International Standard Industrial Classification of all Economic Activities.
- NACE is the statistical classification of economic activities in the European Communities.
- CPC is the United Nations Central Product Classification.
- CPA is the European Classification of Products by Activity.
- HS is the Harmonized Commodity Description and Coding System, managed by the World Customs Organisation.

- CN is the Combined Nomenclature, a European classification of goods used for foreign trade statistics.
- SITC is the United Nations Standard International Trade Classification, an international classification of goods used for foreign trade statistics.
- PRODCOM is the classification of goods used for statistics on industrial production in the EU.

In order to study the different European classifications more in detail we will focus on the following: NACE, CPA, PRODCOM and finally the Common Procurement Vocabulary; not included as part of the European statistical system (ESS) but essential for the public procurement of goods and services within the European context.

4.1.1 NACE

NACE is the acronym used to designate the various statistical classifications of economic activities developed since 1970 in the European Union. The word NACE derives from the French Nomenclature statistique des activités économiques dans la Communauté Européenne. NACE is a four-digit classification providing the framework for collecting and presenting a large range of statistical data according to economic activity in the fields of economic statistics (e.g. production, employment and [national accounts](#)) and in other statistical domains developed within the [European statistical system \(ESS\)](#).

NACE consists of a hierarchical structure described in the NACE Regulation as follows:

- a first level consisting of headings identified by an alphabetical code (sections),
- a second level consisting of headings identified by a two-digit numerical code (divisions),
- a third level consisting of headings identified by a three-digit numerical code (groups),
- a fourth level consisting of headings identified by a four-digit numerical code (classes).

Hence, statistics produced on the basis of NACE are comparable at European and, in general, at world level. The use of NACE is mandatory within the European statistical system. The latest version adopted by Eurostat, NACE Rev. 2, is to be used for statistics referring to economic activities performed from 1 January 2008 onwards.

4.1.2 CPA

The Statistical classification of products by activity, abbreviated as CPA, is the classification of products (goods as well as services) at the European Union level. CPA product categories are related to activities as defined by the Statistical classification of economic activities in the European Community (NACE). Each CPA product - whether a transportable or non-transportable good or a service - is assigned to one single NACE activity. This linkage to NACE activities gives the CPA a structure parallel to that of NACE at all levels.

As stated, the CPA is part of an integrated system of statistical classifications, developed under the auspices of the United Nations Statistical Division. As NACE, CPA has a hierarchical structure but, instead of four levels, CPA has six levels, each of them identified with a specific code.

- first level: 21 sections (alphabetical code);
- second level: 88 divisions (two-digit numerical code);
- third level: 261 groups (three-digit numerical code);
- fourth level: 575 classes (four-digit numerical code);
- fifth level: 1 342 categories (five-digit numerical code);
- sixth level: 3 142 subcategories (six-digit numerical code).

4.1.3 PRODCOM

PRODCOM is the abbreviation for the EU system of production statistics for mining and manufacturing (i.e. excluding services, other than “industrial services”). The product classification (PRODCOM list), upon which production statistics are based, is drawn up each year by the PRODCOM committee. The headings of the PRODCOM list are derived from the Combined Nomenclature, but their code is a further breakdown of the European Classification of Products by Activity (CPA) code. PRODCOM headings are coded using an eight-digit numerical code, the first six digits of which are identical to those of the CPA code. The PRODCOM list is therefore linked to, and therefore consistent with, CPA. The link with CPA emphasises the link with NACE, enabling the enterprises producing the products to be identified, while the link with the CN allows comparisons between production statistics and foreign trade statistics

4.1.4 CPV

The common procurement vocabulary (CPV) establishes a single classification system for public procurement aimed at standardising, by means of a single classification system for public procurement, the terms used by contracting authorities and entities to describe the subject of contracts, by offering an appropriate tool to potential users (contracting entities/authorities, candidates or tenderers in contract award procedure). Thus, this classification tool consists of a main vocabulary for defining the subject of a contract, and a supplementary vocabulary for adding further qualitative information. The main vocabulary is based on a tree structure comprising codes of up to 9 digits (an 8-digit code plus a check digit) associated with a wording that describes the type of supplies, works or services forming the subject of the contract.

- The first two digits identify the divisions (XX000000-Y);
- The first three digits identify the groups (XXX00000-Y);
- The first four digits identify the classes (XXXX0000-Y);
- The first five digits identify the categories (XXXXX000-Y);

Each of the last three digits gives a greater degree of precision within each category. The supplementary vocabulary may be used to expand the description of the subject of a contract. The correspondence between the CPV and the Statistical Classification of Products by Activity (CPA), the General Industrial Classification of Economic Activities within the European Communities (NACE Rev. 1) and the Combined Nomenclature (CN) could be found in the Official Journal of the European Communities ([COMMON POSITION \(EC\) No 60/2002 adopted by the Council on 7 June 2002](#))

The use of the CPV is mandatory in the European Union as from 1 February 2006. The CPV version 2008 is the current CPV version to:

- Fill the notices of calls for competition
- Search business opportunities in TED
- Find contract notices in the archive of TED

4.2 Overview per maintenance of public spaces

Regarding the maintenance of Public Spaces, after a comprehensive analysis of the several technical categories included within the [European statistical system](#), we conclude that the most appropriate system to analyse the features of the maintenance of public spaces sector seems to be the Common Procurement Vocabulary (CPV). In addition to the recommendation of the European Commission inviting the contracting entities and authorities to use it, this classification might help to measure more accurately the size and characteristics of the maintenance of public spaces sector than the remainder technical categories more focused on commercial transactions. By contrast, the CPV classification enables the gathering with greater exactitude all of the information registered on public procurement, by which public authorities, such as government departments or local authorities, purchase work, goods or services from companies.

Thus, the previous section described the various classification systems existing within the European context and their structure and correspondence with other classification systems. This section focuses on the relevant statistical definitions for those categories which could potentially be included in the EU GPP criteria, i.e.:

- **Activities.** Organized around main services, such as:
 1. Cleaning
 2. Gardening & landscaping
 3. Repairing/Replacement
 4. Painting/Repainting
 5. Assembly and removal of temporary elements

- **Equipment Items**, such as:
 1. Vehicles
 2. Machinery

4.2.1 Cleaning Activities

The relevant CPV-codes for cleaning activities are mostly listed in: *Division 90 Sewage, refuse, cleaning and environmental services*. Specifically, under the group *9060 Cleaning and sanitation services in urban or rural areas, and related services*, within which are included the following categories:

- 90610000, Street-cleaning and sweeping services
- 90620000, Snow-clearing services
- 90630000, Ice-clearing services
- 90640000, Gully cleaning and emptying services
- 90650000, Asbestos removal services
- 90660000, Deleading services
- 90670000, Disinfecting and exterminating services in urban or rural areas
- 90680000, Beach cleaning services
- 90690000, Graffiti removal services

In addition, three classes of the group *9091 Cleaning services* could be included within the cleaning activities for the maintenance of public spaces:

- 90911300, Window-cleaning services
- 90914000, Car park cleaning services
- 90918000, Bin-cleaning services

Moreover for Winter Maintenance the following categories should be considered:

- 34144420-8, Salt spreaders
- 34144710-8, Shovel loaders
- 43313000-0, Snow ploughs and snow blowers
- 44113910-7, Material for winter maintenance
- 90620000-9, Snow clearing services
- 90630000-2, De-icing services
- 34927100-2, Purchase of salt Spreading salt

NACE cleaning services fall under division *81 Services to buildings and landscape facilities*. This division includes the provision of a number of general support services, such as the exterior cleaning of buildings of all types, cleaning of industrial machinery, cleaning of trains, buses, etc., cleaning of the inside of roads, disinfecting and exterminating activities for buildings, street sweeping, and snow

and ice removal. PRODCOM is not relevant for this category, because it only covers the classification of products and not of services.

4.2.2 Gardening and landscaping activities

Regarding the gardening and landscaping activities, the relevant CPV-codes are listed under three main divisions: *Division 77 Agricultural, forestry, horticultural, aquacultural and apicultural services*, *Division 03 Agricultural, farming, fishing, forestry and related products* and *Division 45, Construction work*. Specifically, under the groups *7731 Planting and maintenance services of green areas*, *7734 Tree pruning and hedge trimming*, *0345 Tree-nursery products* and *4511 Building demolition and wrecking work and earthmoving work*. Within these divisions are included the following categories:

- 77341000, Tree pruning
- 77342000, Hedge trimming
- 77313000, Parks maintenance services
- 77314000, Grounds maintenance services
- 45236230, Flatwork for gardens
- 45236250, Flatwork for parks
- 77311000, Ornamental and pleasure gardens maintenance services
- 77330000, Floral display services
- 77312000, Weed-clearance services
- 03121100, Live plants, bulbs, roots, cuttings and slips
- 03440000, Forestry products
- 03441000, Ornamental plants, grasses, mosses or lichens
- 03451000, Plants
- 03451100, Bedding Plants
- 03451200, Flower bulbs
- 03451300, Shrubs
- 03452000, Trees
- 77314100, Grassing services
- 77315000, Seeding services
- 45112710, Landscaping works for green areas
- 45112711, Landscaping work for parks
- 45112712, Landscaping work for gardens
- 45112713, Landscaping work for roof gardens
- 45112714, Landscaping work for cemeteries

Besides these three divisions, all of these services can also be classified as gardening and landscaping activities:

- Landscape gardening services, which are found in class *7142 Urban planning and landscape architectural services*
- Miscellaneous gardening equipment, found in group *1610 Agricultural and forestry machinery for soil preparation or cultivation*

NACE gardening services fall under division *81 Services to buildings and landscape facilities*. This division includes the provision of a number of general support services, such as the provision of

gardening care and maintenance services and provision of these services along with the design of landscape plans and/or the construction (i.e. installation) of walkways, retaining walls, decks, fences, ponds, and similar structures. Within PRODCOM, category 28.30 *Manufacture of agricultural and forestry machinery* represents forestry products, but no specific definition of gardening and landscaping activities is included.

4.2.3 Repairing/Replacement activities

Given the crosscutting perspective of this category, relevant CPV-codes for the activity Repairing/Replacement of public spaces are distributed between several divisions in accordance with its main features and typologies. Among these typologies, we found the following: Urban furniture replacement, Signage and wayfinding elements and Gardening and parks replacement.

The Urban furniture replacement and repairing typology is listed under the CPV category 349284, *Urban furniture*. Within this category are included the following sub-categories:

- 34928410, Marker Posts
- 34928420, Road-Danger Lamps
- 34928430, Beacons
- 34928440, Bus-stop Posts
- 34928450, Bollards
- 34928460, Road cones
- 34928480, Waste and rubbish containers and bins

Regarding the Signage and wayfinding elements typology, the CPV system included under the categories 349920, *Signs and illuminated signs* and 349920, *Signs and illuminated signs*; the following sub-categories:

- 34928470, Signage
- 34928471, Sign materials
- 34928472, Signposts
- 34992200, Road Signs
- 34992300, Street Signs

Under the CPV category 163110, *Lawnmowers* and its sub-category 16311100, *Lawn, park or sport-ground mowers* is collected all of the activities included in the gardening and parks replacement category.

Within NACE, repairing and replacement activities fall under one of the following categories: group 33.1 "Repair of fabricated metal products, machinery and equipment" and division 43 "Specialised construction activities". PRODCOM is not relevant for this category, because it only covers the classification of products and not of services.

4.2.4 Painting/Repainting activities

The common procurement vocabulary (CPV) classification does not distinguish between outdoor painting and repainting activities and those activities set up indoor public spaces or buildings in general. Therefore, many of the painting work developed under the category 454421, *Painting work* concern the painting works of building and infrastructures not necessarily included under the scope of the study. However, the following represent some crucial categories that can mainly be associated with Maintenance services of outdoor spaces:

- 45442120-4, Painting and protective-coating work of structures

- 45442200-9, Application work of anti-corrosion coatings
- 45442300-0, Surface-protection work
- 50232200-2, Traffic-signal maintenance services

NACE painting services fall under division *43 Specialised construction activities*, this division includes the provision of services for exterior painting of buildings and painting of civil engineering structures. PRODCOM is not relevant for this category, because it only covers the classification of products and not of services.

4.2.5 Equipment items: vehicles

Regarding the vehicles employed for the maintenance of public spaces, we identify the following CPV-groups included under the division *16, Agricultural machinery*:

- 16311000, Lawnmowers
- 16311100, Lawn, park or sport-ground mowers
- 16500000, Self-loading or unloading trailers and semi-trailers for agriculture
- 16510000, Self-loading trailers for agriculture
- 16520000, Unloading trailers for agriculture
- 16530000, Self-loading semi-trailers for agriculture
- 16540000, Unloading semi-trailers for agriculture
- 16700000, Tractors

Except for the first two categories, the rest include many statistical items that could not be considered within the public space maintenance sector. Thus, many of the statistical items considered under this statistical frame could be committed to agricultural or livestock purposes. On the other hand, when considering the study of the vehicles involved in the maintenance of public spaces sector, the EU Green Public Procurement Criteria for Transport developed in 2016, should be taken into account. Many of the statistical categories collected under these criteria are devoted to the maintenance of public spaces.

In this regard, as stated in the EU Green Public Procurement Criteria for Transport, the relevant CPV codes for cars and Light Commercial Vehicles (LCVs) are listed under the division *34, Transport equipment and auxiliary products to transportation*. Motor vehicles for the transport of machinery, goods and services used on the maintenance of public spaces fall within category *3413, Motor vehicles for the transport of goods*. Thus, we identify the following groups:

- 34131000, Pick-ups
- 34134200, Tipper trucks
- 34136000, Light vans
- 34136200, Panel vans

On the other hand, specific vehicles employed on the maintenance of public spaces as parks, streets or gardens; could be identified under the group *341440, Special-purpose motor vehicles*:

- 34144410, Gully emptiers
- 34144420, Salt spreaders
- 34144430, Road-sweeping vehicles
- 34144431, Suction-sweeper vehicles
- 34144440, Gritter vehicles
- 34144450, Sprinkler vehicles

- 34144510, Vehicles for refuse
- 34144900, Electric vehicles

Within NACE there is no specific partition between vehicles used for the maintenance of public spaces and other categories such as agriculture and forestry. In addition, as NACE only describes economic activities and not products, there are no relevant definitions for cars and LCVs in NACE. The manufacturing of vehicles falls under *C Manufacturing*, which includes different definitions for motor vehicles, bodies for motor vehicles and part and accessories. However, within public procurement procedures transport related criteria are only likely to define the end characteristics of vehicles and will not cover manufacturing processes.

The PRODCOM list uses various technical characteristics to define vehicles, such as the type of combustion and cylinder capacity. The relevant categories are included under code *29.10*. Note that the codes for good vehicles only differentiate between the type of combustion and do not include any reference to the purpose of the vehicle. Therefore, differentiating among those used on the maintenance of public spaces and the rest of vehicles it will be unfeasible.

4.2.6 Equipment items: machinery

The relevant CPV-codes for machinery used for the maintenance of public spaces are listed under one main division 16, Agricultural machinery. 39, Furniture (incl. office furniture), furnishings, domestic appliances (excl. lighting) and cleaning products and 42, Industrial machinery. The division 16, Agricultural machinery includes the following groups 1610, Agricultural and forestry machinery for soil preparation or cultivation; 1640, Spraying machinery for agriculture or horticulture and finally the group 1680, Parts of agricultural and forestry machinery. Additionally, each category contains the following groups:

- 16120000, Harrows, scarifiers, cultivators, weeders or hoes
- 16130000, Seeders, planters or transplanters
- 16150000, Lawn or sports-ground rollers
- 16160000, Miscellaneous gardening equipment
- 16820000, Parts of forestry machinery

The pertinent groups for the study of the cleaning products and machinery used on the maintenance of the furniture within the public spaces are under division 39, *Furniture (incl. office furniture), furnishings, domestic appliances (excl. lighting) and cleaning products*:

- 39830000, Cleaning products
- 39713400, Floor-maintenance machines
- 39713430, Vacuum cleaners
- 39224000, Brooms and brushes and other articles of various types

Finally, the division 42, *Industrial machinery* contains the last categories under study:

- 42924730, Pressurised Water Cleaning Apparatus;
- 42924740, High-Pressure Cleaning Apparatus;

As happens with the vehicle equipment items, it is necessary to take into account that each of these categories includes many statistical items that should not be considered within the public space maintenance sector, since items included under this scope could be used as well for the maintenance of indoor public spaces, or agricultural and livestock purposes. Nevertheless, all the agricultural and forestry machinery, and the cleaning machinery procured by the public authorities could not be distinguished from the machinery used in the maintenance of public spaces when the study is based on the CPV-system classification. Similar to the vehicles category, within NACE and PRODCOM, there is no specific separation between machinery used for the maintenance of public spaces and other categories such as agriculture and forestry, cleaning products or reparation services.

5 First Stakeholders Questionnaire: Scope, definitions and criteria areas

As a result of previous described activities, the first document elaborated has been the First Stakeholders Questionnaire.

The complete questionnaire is available at the following link http://susproc.jrc.ec.europa.eu/Public_space_maintenance/documents.html

The First questionnaire consists in the following sections:

+ Section A - Your Company or Organisation details

General questions aiming to collect personal and professional information from the participants, in order to understand if the participant is to be considered a stakeholder from supply side, demand side or a third side.

+ Section B - Background information

Four questions asking about previous knowledge of GPP Criteria, concerning in detail: previous use of environmental criteria in procurements, knowledge of the existence of guidelines or GPP for the maintenance of public space, previous experiences with GPP in general and knowledge of key data about the product group.

+ Section C - Scope and Definitions

A check list organized in three parts around three main categories, described as followed:

- **Places.** To mention a few: Gardens and parks (manmade), Streets, roads, avenues and boulevards, Street vegetation, Sidewalks, Bike lanes, Parking lots, Pedestrian areas, pathways and plazas, etc.
- **Activities.** Organized around main services, such as:
 1. Cleaning (including Mechanical & manual sweeping, Litter removal, Bins' litter collection and sorting, etc.),
 2. Gardening & landscaping (including Fertilization, Pruning, Planting, Plant and trees replacement, etc.),
 3. Repairing/Replacement (of element such as: Sidewalk/bike lane/road pavement, Playground elements, Signage and wayfinding element, etc.)
 4. Painting/Repainting (Façade/surface painting, Urban Furniture painting)
 5. Assembly and removal of temporary elements (Seasonal shading system, Temporary fairs and pavilions)
- Equipment Items, such as Human-controlled vehicles, Remote controlled, autonomous or robotic vehicles, Sweepers and street cleaning vehicles (e.g., mechanical brooms), Sweepers and street cleaning vehicles (e.g., mechanical brooms), etc.

For each item participants are asked to specify if they believe it should be included, modified or discarded in the scope of GPP Criteria.

+ Section D - Close

Contacts and deadlines for submission (17th March)

For a more detailed description of the items included in the questionnaire, please refer to the complete text, available at http://susproc.jrc.ec.europa.eu/Public_space_maintenance/documents.html

5.1 Results

Stakeholders involved in this first scoping phase of the definition of EU GPP Criteria for Public Space Maintenance represent the main geographical areas of EU. The total number is 14 that were in detail from: Spain (4), Romania, Ireland, Sweden, Belgium, Portugal, Italy, Netherlands, Finland and Albania. Although the stakeholder list included in almost equal percentage possible stakeholders from supply side, demand side and third side (academia, NGOs, researchers, professionals involved in European projects, etc.), it is remarkable that most of respondents represent the demand side, being public procurers or policy makers. Indeed, almost half of participants to the survey reported previous experience with GPP (section B of the questionnaire), detailing their knowledge and even in some cases engagement with EU GPP policies, in particular at the national level.

From the analysis of received responses to the section C of the questionnaire the following assumptions are remarked:

Places:

- + From different stakeholders, it is suggested to exclude Playgrounds and Public Sport Facilities from the scope of this EU GPP due to the complexity of these topics. It is suggested to consider them as separate product groups.
- + Canopies and shadow elements as well as Advertising Columns are also suggested to be excluded from the scope
- + Doubts about public furniture in general also have been expressed. In particular, it has been suggested to stick to services related with public space maintenance, and not to include products or public furniture elements, that should be considered as a separate category (e.g. outdoor furniture)

Activities:

- + Several stakeholders propose to discard Disaster assistance: debris removal and After event cleaning. It should be clarified that "After event cleaning" refers to events of a social nature like concerts, festivals, fairs, etc. Natural weather events (like storms or heavy rain/snow fall) also require cleaning in their aftermath and these activities will be under the scope.
- + Assembly and removal of temporary elements, such as Seasonal shading system and Temporary fairs and pavilions, also has been marked as excludable by different participants
- + Some respondents have suggested that certain elements of Repairing/Replacement services should be excluded from the scope. In particular, the repairing and replacement of the following items: Irrigation and Pumping systems and Sidewalk/bike lane/road pavement.

Equipment items:

- + Almost all stakeholders agree about the items proposed in the questionnaire

It is important to mention that a number of respondents showed a deep awareness and knowledge of GPP policies and therefore were able to provide very significant and helpful feedback.

6 Proposals for the scope and definitions of Public Space Maintenance

The proposals of the scope and definitions of the categories that might be covered in the EU GPP criteria for Public Space Maintenance are based on the findings and the survey carried out to develop the Task 1 of the project.

In accordance with the maintenance definitions reported at the beginning of this Report, it is established that this EU GPP Criteria will take into account mainly preventive (known also as ordinary) maintenance services, while corrective maintenance activities will be generally excluded. .

Public Space Maintenance will cover routine maintenance activities and equipment, either of preventive or corrective character, done in either green or built public spaces. In order to limit the scope of this EU GPP, an ad-hoc definition of routine maintenance in the context of public space maintenance is provided below.

Routine maintenance: work undertaken on a regular basis or as an exceptional activity to preserve or restore serviceability and to extend the service life of an existing Public Space. Routine maintenance is typically applied to green areas, surfaces such as paved areas or public space elements in good condition having significant remaining service life, without significantly altering their structural capacity, appearance, functioning.

As previously mentioned, public space could refer to a multitude of urban and rural areas. In order to limit the scope of this EU GPP, only certain public spaces will be considered.

Specifically, the public spaces that are covered under the scope are:

- + Streets, roads, avenues and boulevards
- + Bike lanes
- + Pedestrian areas including Sidewalks, Underways, Stairways, Plazas, etc.
- + Man-made gardens and parks
- + Beaches
- + Fountains, lakes and ponds

The spaces that are excluded from the scope are:

- Natural parks and forests,
- Ports, canals, coastal lines, etc...

6.1 Proposed scope

An overview of the specific activities and equipment considered as part of the scope is considered necessary before dividing them in more detailed categories.

The specific **activities covered** under the scope are:

- Cleaning, including manual or mechanical sweeping and water jet cleaning, graffiti removal, façade cleaning, litter removal, etc...
- Snow removal
- Pruning, Trimming, Planting, Lawn replacement, irrigation
- Fertilization, Weed control and pesticides use
- Repairing of pavement

The **activities** that are **excluded** from the scope are:

- Replacement of pavement and urban furniture
- Repairing or replacement of irrigation systems, fountains, street signs, urban furniture and mechanical equipment (e.g., gates)

- Maintenance of sewage
- Painting and repainting activities

The specific **equipment covered** under the scope are:

- Vehicles (human controlled or autonomous) for the transport of workers and equipment
- Sweepers and street cleaning vehicles
- Machinery used for gardening (Lawn-mowers, Chainsaws, trimmers; Leaf collectors and leaf blowers, etc.)

The following **equipment** are explicitly **excluded** from the scope:

- Waste collection vehicles

As the first step in the definition of the scope of the EU GPP for Public Space Maintenance the following four categories are proposed:

1. Cleaning Services and Cleaning Products

As preface to the Cleaning services included in this category, it results essential to define which type of public space should be taken into consideration and defined as part of the scope of EU GPP for Public Space Maintenance. From the first stakeholder questionnaire, it emerged that the places requiring cleaning services that should be considered as part of the scope are the following built urban areas:

- + Streets, roads, avenues and boulevards
- + Sidewalks
- + Bike lanes
- + Parking lots
- + Pedestrian areas, pathways and plazas
- + Underways
- + Stairways

Public furniture and façade/surface also have to be considered a target of cleaning services.

Following the suggestion of different stakeholders, it seems appropriate to exclude Playgrounds and Public sports facilities from the scope of this EU GPP.

Cleaning services include:

- + Mechanical & manual sweeping of sidewalk, bike lane, road (asphalt, roadbed) and roadside (shoulders, curbs, green areas): corresponding to CPV code 90610000, Street-cleaning and sweeping services
- + Litter removal from the ground.
- + Bins' litter collection and sorting: corresponding to CPV code 90918000, Bin-cleaning services
- + Mechanical & manual water jet cleaning: corresponding to CPV code 42924730, Pressurised Water Cleaning Apparatus and 42924740-8, High-Pressure Cleaning Apparatus
- + Façade/surface cleaning
- + Graffiti removal: corresponding to CPV code 90690000, Graffiti removal services
- + Snow and ice removal from sidewalks, bike lanes and roads, corresponding to CPV code 90620000, Snow-clearing services and 90630000, Ice-clearing services
- + Beach cleaning: corresponding to CPV code 90680000, Beach cleaning services
- + Cleaning of fountains, lakes and ponds

Some Cleaning services remain outside of the scope of EU GPP for Public Space Maintenance, due to their occasional nature. In fact, following the suggestions of certain stakeholders it has been established that services as “Disaster assistance: debris removal” and “after event cleaning” are out of the scope since these can't be defined as routine maintenance services. It should be clarified that "After event cleaning" refers to events of a social nature like concerts, festivals, fairs, etc. Natural

weather events (like storms or heavy rain/snow fall) also require cleaning in their aftermath and these activities will be under the scope.

Cleaning products:

- + All-purpose cleaners
- + Substances for snow and ice removal: (Salt and sand-and-salt-mixture – called grit - used for removing and calcium chloride (CaCl₂) as a dust binder for spring cleaning)

Other supplies/accessories/ machinery parts:

- + Brushes, rolls,

2. Gardening and Landscaping Services and Products

As preface to the Gardening services included in this category, it results essential to define which type of green areas should be taken into consideration and defined as part of the scope of EU GPP for Public Space Maintenance. From the first stakeholder questionnaire, it emerged that the places requiring gardening and landscaping services that should be considered as part of the scope are the following green areas:

- + Man-made Gardens and Parks
- + Street vegetation

More in detail it is possible to define different configurations of green areas by considering different vegetation typologies. The following classification derives from the Dutch Criteria for Sustainable Procurements of Green Spaces⁵³, and it is considered well appropriated also for the EU GPP of Public Space Maintenance purpose.

- Trees: Trees that stand on their own, in rows or in small groups, not as part of a forest or small cluster of trees and bushes.
- Cluster of trees and bushes: Contiguous area covered by planted bushes possibly with scattered trees.
- Hedges and shrubs: Bushes, on their own, in small groups or in rows, usually closely maintained by trimming or closing off.
- Plant patches: Patches of permanent and annual herbaceous plants (usually decorative) and bulbous plants.
- Lawns: Short grass that is frequently mowed.
- Rough grass and herbage: Grass and rough herbage that is mowed at most twice per year.
- Banks and water: Open water and the areas that border dry land.

N.B. Two items originally included in the Dutch Criteria have been removed from the scope of EU GPP of Public Space Maintenance. These are: Forest, defined as “Contiguous area covered by trees that may or may not have bushes (larger than 2 500 m²)”, excluded for not being man made green area; and Sports and playing fields (grass) defined as “Grass fields primarily intended for sports and play activities”, excluded for being associated with public sports facilities, previously excluded from the scope.

For general landscaping services the statistical categories used as reference correspond to 77313000, Parks maintenance services, 45112710, Landscaping works for green areas, 45112711, Landscaping work for parks, 45112712, Landscaping work for gardens; 45112713, Landscaping work for roof gardens; 77311000, Ornamental and pleasure gardens maintenance services

Gardening and Landscape Services include:

- + Pruning: corresponding to CPV code 77341000, Tree pruning

⁵³ Criteria for the sustainable procurement of Green Spaces Version: 1.5 Date: October 2011. Available at : <http://english.rvo.nl/sites/default/files/2013/12/Criteriadocument%20Green%20Spaces.pdf>

- + Trimming: corresponding to CPV code 77342000, Hedge trimming
- + Planting and Plant and trees replacement: corresponding to CPV code 77330000, Floral display services; 03121100. Live plants, bulbs, roots, cuttings and slips; 03440000, Forestry products; 03441000. Ornamental plants, grasses, mosses or lichens; 03451000, Plants; 03451100, Bedding Plants; 03451200, Flower bulbs; 03451300, Shrubs; 03452000, Trees; 77314100, Grassing services; 77315000, Seeding services
- + Fertilization
- + Weed control and pesticides use: partially corresponding to CPV code 77312000, Weed-clearance services
- + Lawn replacement
- + Manual & automated irrigation

Gardening Products include:

- + Soil improvers
- + Ornamental plants
- + Irrigation systems
- + Lubricant oils
- + Herbicides and pesticides

3. Vehicles used for Public Space Maintenance

- + Human-controlled vehicles
- + Sweepers and street cleaning vehicles (e.g., mechanical brooms)
- + High Pressure cleaner vehicle (water/sand)
- + Snow removal vehicles (with plough blades and salt spreader)
- + Maintenance utility vehicles for public green spaces
- + Maintenance utility vehicles for watering green spaces
- + Maintenance utility vehicles for transporting goods and branches
- + Remote controlled, autonomous or robotic vehicles

4. Machinery used for Public Space Maintenance

- + Lawn-mowers (including lawn tractors) and scarifiers
- + Chainsaws
- + Brush saws
- + Strimmers
- + Hedge trimmers
- + Pruners and similar hand-operated machines
- + Leaf collectors and leaf blowers
- + Auto-scythes
- + Auto-hoes
- + Rotary cultivators
- + Compost shredders

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