

YOU ARE HERE: [Home](#) → Online selection of environmental criteria for urban furniture - The Guf Tool

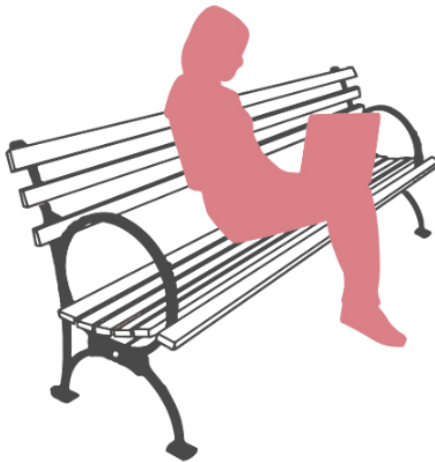

Online selection of environmental criteria for urban furniture – The Guf Tool

Samuele Nannoni November 11, 2019

The Guf Tool is an online tool developed through the Life Future Project to select and assess environmental criteria for urban furniture in green public procurement and to compare its impact.

The Guf Tool within the Life Future Project

The **European project LIFE FUTURE** ("Sustainable Urban FurniTURE: Tool Design to Perform Environmental Assessments in the Green Procurement Framework") aimed to enhance the **green public procurement of urban furniture products** through the implementation of specific environmental criteria. With this aim, an **online tool** was developed to select criteria and assess the **environmental impact of different urban furniture products** in a simple but scientifically rigorous manner: the GUF Tool ("Green Urban Furniture Tool").



GUF TOOL

[LOG IN](#)
[CREATE AN ACCOUNT](#)


The development of this tool has been co-funded with the support of the LIFE financial instrument of the European Union [LIFE14 ENV/ES/000703]

The European project LIFE FUTURE was carried out between 2015 and 2018 in Belgium, Croatia and Spain (especially the Region of Valencia). The beneficiaries of this project, which was funded by the European Union through the LIFE Environment and Resource Efficiency programme, were:

AIMPLAS, Plastics Technology Centre: based in Paterna, Spain, AIMPLAS coordinated the project and participated in the selection of environmental criteria and urban furniture products, operation and validation of the tool and dissemination of the results.

ACR+ (*Association of Cities and Regions for sustainable Resource management*): based in Brussels, Belgium, this body was responsible for the dissemination plan and interaction with other projects.

AIJU (*Technological Institute for Children's Products and Leisure*): based in Alcoi, Spain, the role of AIJU was to programme and design the online tool and validate its operation, in addition to disseminating tasks and preparing promotional materials.

LAS NAVES: based in Valencia, Spain, this innovation centre was responsible for preparing and demonstrating the tool through Valencia City Council, the green public procurement of products and the socioeconomic analysis of the project.

UPCOMING EVENTS

Expert workshop: Potential of Hydrothermal Liquefaction (HT routes for biofuel production

November 19 @ 9:00 am - 6:00 pm

[View All Events](#)


Koprivnica City Council, Croatia: the council was an active beneficiary of the process to demonstrate green public procurement through use of the tool and was also responsible for translating the contents into Croatian.

Universitat Jaume I, Castellón, Spain: this university developed the methodology for weighting environmental impacts and analysed the results of the project from an environmental perspective. It was also responsible for internal tool programming.



The Guf Tool's Methodology

The first task in developing the GUF Tool was to select and describe the criteria potentially applicable to urban furniture products and to select the type of products likely to meet these criteria.

The **40 criteria proposed** to improve the environmental impact of furniture products, including the EU directives themselves and references to indoor and outdoor furniture, were **narrowed down to 19**. These criteria were grouped into different categories and defined in depth before being classified into specifications and awards criteria (i.e. mandatory and optional).

	CATEGORY		CRITERION	
SPECIFICATION	1 Wood and wood-based materials	1	Legal Origin of Wood	
	2 Hazardous Substances	2	Preservatives in Wood	
		3	Formaldehyde Emissions of wood-based panels	
		4	Surface Coating	
		5	Cadmium and Nickel restrictions	
6	REACH Candidate List Restrictions			
3	Fitness for Use	7	Fitness for Use	
4	Packaging Materials	8	Specific characteristics for Packaging Materials	
AWARD	5 Warranty, Disassembly and Spare Parts Availability	9	Design for Disassembly and Repair	
		10	Warranty and Replacements	
	6	Recycled Materials	11	Included in product
			12	Included in Packaging
	7	Facility to Recovery	13	Recovery of Plastic Parts
	8	Extended Warranty Periods	14	Extended Warranty Periods
	9	Reduced Resource Use	15	Weight Reduction
			16	Volume Reduction
			17	Clean Energy Use
		18	Reduction of Energy Consumption	
10	Impact Reduction During Use	19	Consumables Reduction	

These environmental criteria were assigned to **different urban furniture types**, depending on their applicability. Urban furniture products that require energy to operate, such as streetlights, were excluded from this selection. The LIFE FUTURE project consortium chose **15 different urban furniture products**, in addition to a packaging category, to which these 19 environmental criteria were assigned.



Through these extensively defined criteria, which are assigned to each type of urban furniture product, public bodies can easily create a document with the criteria they want to include in an urban furniture tender and those that are potentially applicable. They simply log into the GUF Tool, choose the urban furniture product to be tendered, uncheck the criteria they want to exclude and create a PDF document with the criteria to be included in the tender documentation. The GUF Tool also provides a follow-up document to check products' compliance with these criteria.

If the urban furniture product that a public body wishes to purchase has selected any of these mandatory criteria in the tender, its non-compliance discards it to be ineligible for the tender. Optional criteria, on the other hand, are used to support the environmental assessment process and complement the mandatory criteria. Depending on whether the tender issued by the public body includes only mandatory criteria or both mandatory and optional criteria, it is labelled 'Silver GUF' or 'Gold GUF', respectively.

The tender issued by the public body can be viewed in the GUF Tool. Urban furniture manufacturers and suppliers can therefore log into GUF Tool, search for active tenders by product type or location, and offer their products according to the criteria established.



Environmental Criteria



Back



The development of this tool has been co-funded with the support of the LIFE financial instrument of the European Union [LIFE14 ENV/ES/000703]

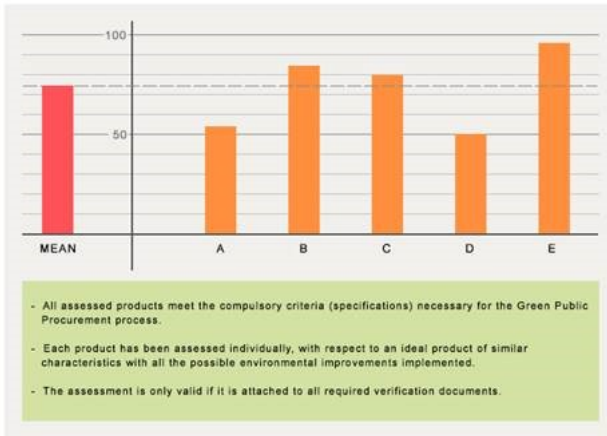
Companies that participate in tenders by offering their products must fill in a form available in the GUF Tool, where they are required to include numerical values and documentation to verify their products' compliance with the criteria.

The data provided by the supplier allows the GUF Tool to assess the environmental impact of each product by means of a life-cycle assessment (LCA) and the weighting of these impacts, thus resulting in a score worth a maximum of 100 points that reveals the product's environmental advantages.





Comparative results



- All assessed products meet the compulsory criteria (specifications) necessary for the Green Public Procurement process.
- Each product has been assessed individually, with respect to an ideal product of similar characteristics with all the possible environmental improvements implemented.
- The assessment is only valid if it is attached to all required verification documents.

Back



The development of this tool has been co-funded with the support of the LIFE financial instrument of the European Union [LIFE14 ENV/ES/000703]



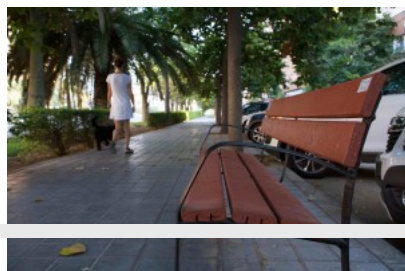
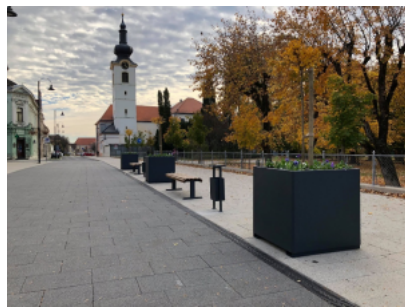
The GUF Tool works behind a visible interface and performs these calculations based on the **multi-criteria decision analysis method known as TOPSIS** (Technique for Preference by Similarity to Ideal Solution), by taking a result considered ideal for each criterion as a reference point.

When a product is given a score, urban furniture manufacturers can find out how close their product came to being the most environmentally friendly option and how others fared, although offers are anonymous. Public bodies can directly select products with a **lower environmental impact** as a criterion in addition to economic considerations, which are not assessed by the GUF Tool.

Results

Over the course of the LIFE FUTURE project, a range of urban furniture products were purchased through the GUF Tool for the cities involved in the project:

- 71 benches manufactured from recycled plastic in Valencia, Spain.
- 2 benches, 3 planters and 2 litter bins in Koprivnica, Croatia.



ABOUT

The inclusion of environmental clauses in the urban furniture procurement process **reduces the environmental impact** compared to procurement processes that do not take account of these aspects; CO₂ emissions were reduced by 40%, waste by 56% and non-renewable resources by 40%. [Sunn Hemp as biomass cover crop in rotation with food crops](#)

Acknowledgments - ENEC-Florence Renewable Energies.



This project was co-funded with support from the LIFE financial instrument [LIFE14 ENV/ES/000703] and from the regional government of Valencia through TRACC grants to strengthen the activity and develop the excellence of technology centres in the Region of Valencia [IMACID/2017/6]. [Online selection of environmental criteria for urban furniture - The Guf Tool](#) [Renewable Fuels: Advancing European Market Uptake](#)

RECENT POSTS

- [Do not take account of these aspects](#)
- [Sunn Hemp as biomass cover crop in rotation with food crops](#)
- [Online selection of environmental criteria for urban furniture - The Guf Tool](#)
- [Renewable Fuels: Advancing European Market Uptake](#)

SUBSCRIBE TO OUR NEWSLETTER

reduces the environmental impact

Last name

Email

Legal

[Assessing the impact of bioenergy on sustainability and industrial recovery](#)
Text by Vicente B. Vert, a researcher in the Sustainability and Industrial Recovery Department

[Valorising wood waste for energy and materials in Europe: BIOREG Project](#)
Share This Post      

Subscribe to our email newsletters and receive the latest news and information straight into your inbox?
 Yes

