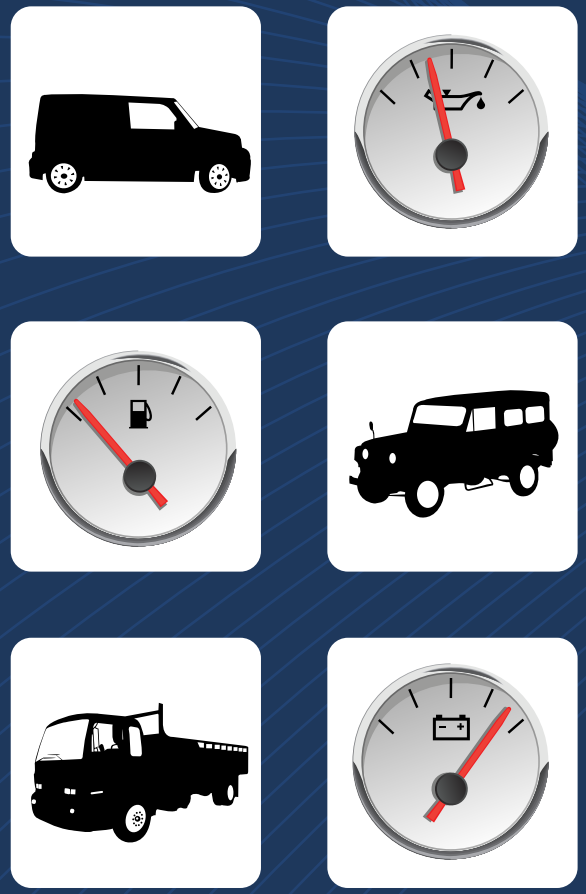
Basic and Advanced Requirements, All Regions



Sustainable Procurement Guidelines

VEHICLES
PRODUCT SHEET

Table of Contents

Acknowledgements

UNEP gratefully acknowledges the time and effort spent by those involved in producing and commenting on these Sustainable Procurement Guidelines for Vehicles.

The guidelines were prepared by Fleet Forum and UNOPS under the supervision of the UNEP Division for Technology Industry and Economics (DTIE) and UNOPS.

The set of guidelines was written by Shoa Eshani (Fleet Forum). Nives Costa (UNOPS) provided substantial input to the Product Sheet. The work builds on the extensive experiences of Fleet Forum (www.fleetforum.org/website) and of the Partnership for Clean Fuels and Vehicles led by UNEP (www.unep.org/transport/pcfv/).

On the UNEP side, the work was coordinated by Isabella Marras, Farid Yaker, Cécile Bordier and Carlos Andrés Enmanuel, all team members of the Sustainable United Nations (SUN) Unit. On the UNOPS side, it was coordinated by Niels Ramm.

The Sustainable Procurement Guidelines for Vehicles were developed thanks to the valuable input and technical advice of UN colleagues and experts outside of the UN. We would like to thank: Rose van Steijn (Fleet Forum), Rob McConnell (Consultant), Maurice Bisau (UNHCR), Said Awad (DPKO), Rob de Jong (UNEP), Finn Lundorf (UNOPS) and Thad Mermer (design).

Section 1: Introduction and Scope

Sustainable Procurement

"Sustainable Procurement practices integrate requirements, specifications and criteria that are compatible and in favour of the protection of the environment, of social progress and in support of economic development, namely by seeking resource efficiency, improving the quality of products and services and ultimately optimizing costs."[1]

Scope

The "Sustainable procurement guidelines for vehicles - Product Sheet" provides example criteria that may be used by United Nations staff to purchase sustainable motor vehicles. This document forms part of a series of guidelines on sustainable procurement for use by UN agencies.

A Background Report is also available which presents the rationale behind the development of the criteria in this product sheet and provides additional guidance on implementing sustainable procurement in the United Nations.

Level of Ambition

Two sets of sustainability criteria are presented in the Sustainable Procurement guidelines:

- **Basic sustainability criteria** address the most significant environmental and social impacts, and are designed to be used with minimum additional verification effort or cost increases.
- **Advanced sustainability criteria** are intended for use by procurers who seek to purchase the best environmental and socially-responsible products available on the market, and may require additional administrative effort or imply a certain cost increase as compared to other products fulfilling the same function.

The criteria are divided into the typical steps in a procurement action: tender subject matter, technical specifications, supplier qualification requirements, evaluation criteria, and contract clauses. For each criterion guidance is also provided on verifying compliance.

An example weighting matrix is provided in the Section 6. The criteria are also presented in the Section 7 in checklist form for use by requisitioners.

Regional applicability

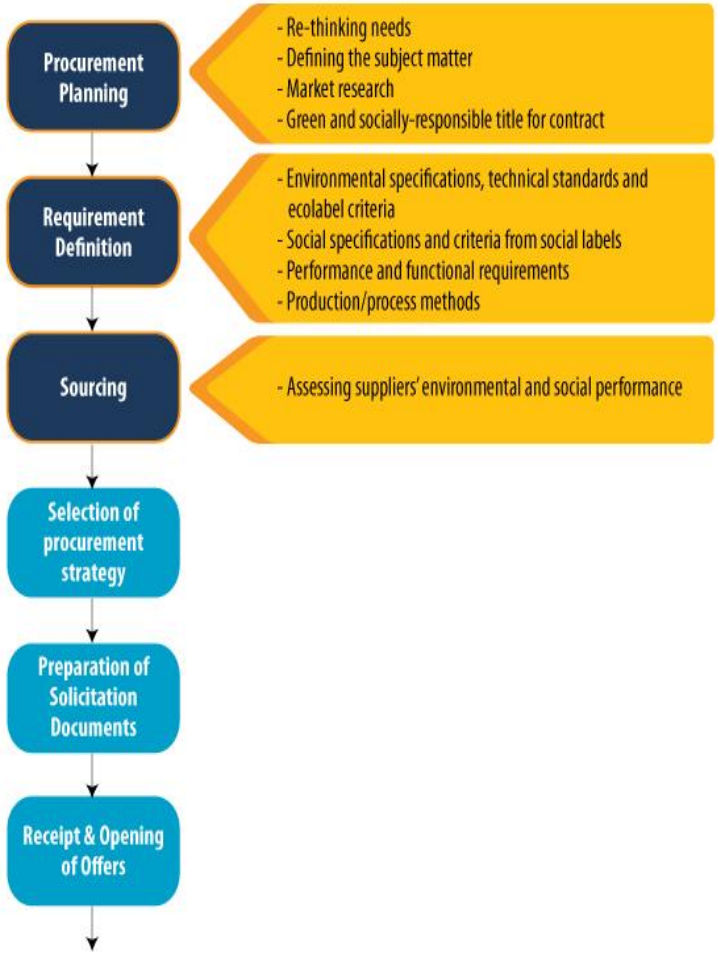
It should be possible to use these criteria in all world regions. However, it is advisable that the Basic criteria are used to begin with. The Advanced criteria are more ambitious. In Europe, North America and Japan, there will be sufficient supply on the market to ensure a competitive response. Elsewhere, it is advisable to carry out some initial market research to assess price and availability.

---

[1] Definition adopted by the High Level Committee on Management Procurement Network.

Section 2: Incorporating Sustainability into the UN Procurement Process

This diagram highlights the stages at which sustainable procurement interventions should be integrated.



A - Procurement planning

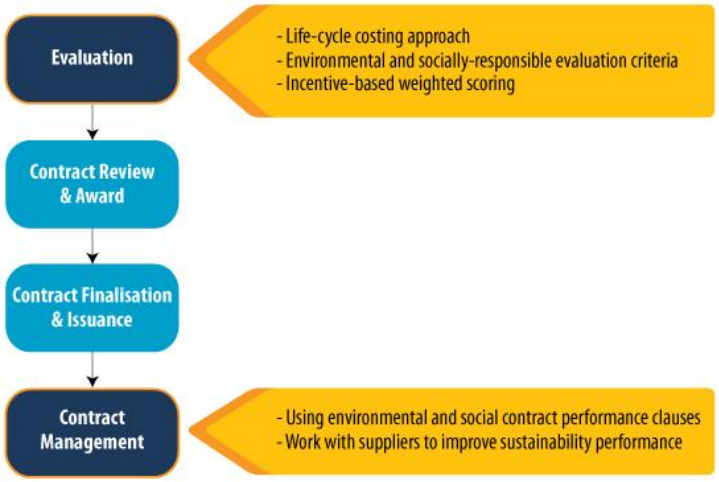
Procurement planning is essential to assess needs, define an appropriate budget and analyse the market to have a better idea of available products meeting sustainability criteria. The subject matter of the contract defines and, more importantly, communicates what the purchasing authority intends to purchase. Explicitly phrasing the subject matter of the contract in such a way that it integrates the sustainability goal to be achieved is an important first step to take in the tendering process. As all conditions stipulated in the other steps of the tendering process need to maintain a clear link to the subject matter of the contract, **clear and explicit wording of the subject matter is an effective way to ensure a sustainable purchase**.

B - Requirement definition

The tender specifications (or technical specifications) provide detailed information on the functionality, quality and other characteristics (e.g. packaging, disposal, etc.) of the product to be purchased. They provide the **opportunity to set minimum environmental and/or social requirements** which all bidders must meet.

C - Sourcing

Criteria for sourcing (or pre-selecting) suppliers, vendors and manufacturers assess the technical and professional qualifications of vendors to produce and/or supply the requested products. **Sourcing criteria can be included that assess the sustainability performance of bidders** to ensure that only bids from 'eligible' companies are considered in the evaluation stage. They can assess the bidding company's operations (and the companies it subcontracts or uses) as a whole, rather than only the end products purchased. The criteria included in this stage can address issues such as the availability of information on products, (sustainability) experience of the bidder, and security of supply. This can be a useful approach to improve the general environmental management and corporate social responsibility of companies contracted by the UN.



Source: Adapted from UNDP Environmental Procurement Practice Guide, 2008

D - Evaluation

Evaluation criteria are used to evaluate and compare the bids received which meet the minimum specifications (i.e. compliant bids). In sustainable procurement, it is essential to indicate that the contract will be awarded to the offer that provides "**best value for money**" – the term used if criteria other than just the price will be assessed when comparing bids. Evaluation criteria evaluate the performance of a bid both in terms of price and other criteria, such as environmental performance.

As with all phases of the tendering process, the tender documents published by the purchasing authority must clearly set out the various evaluation criteria that will be used to evaluate bids (such as price, technical quality, environmental quality, social performance, etc.) as well as the weight in percentage terms allocated to each aspect. **In sustainable procurement, evaluation criteria can be used to encourage higher levels of sustainability performance than those demanded in the specifications**, without risking significant increases in cost.

E - Contract management

Contract clauses are binding on any company winning the bid, and should therefore be possible for any company to comply with. **It makes sense to include sustainability criteria in the contract clauses only if they are not included in other sections of the tender**. Contract clauses also include reference to penalties for non-compliance with the specifications or for cases where a supplier has provided a false written guarantee.

Section 3: Sustainability criteria and verification

Sustainability criteria	Verification	Basic	Advanced
A – Procurement Planning			
Purchase of vehicles with higher sustainability performance		●	●
B – Requirement definition **B.1 Product lifetime and quality**			
Warranty and Durability Minimum years of guarantee and availability of replacement parts for the vehicle			
Bidders must provide a guarantee for a period of at least 1 year or 20,000 km, whichever occur first.	The offer of the bidder has to include the required guarantee/ warranty	●	
Bidders must provide a guarantee for a period of at least 3 years or 100,000 km, whichever occur first.	The offer of the bidder has to include the required guarantee/ warranty		●
Quality, Reparability and availability of Parts Vehicles and parts must meet national, international quality standard or equivalent regarding serviceability (e.g. safety, ergonomics).			
Bidders shall demonstrate the availability of parts for the specific vehicle model for at least 5 years from the time production ceases on the particular model. Bidders shall also demonstrate the geographic availability of parts, per country or region.	Bidder must provide a written guarantee that this criterion will be met.	●	●

Sustainability criteria	Verification	Basic	Advanced
Vehicle Safety Vehicles and parts must meet national, international safety standards			
Bidder must state if their vehicle safety standards complies with the 1958/1995 ECE agreement on the same issue.	The bidder must indicate which of the ECE safety code(s) is met by the vehicle and provide a written guarantee that this criterion will be met. For a list of these criteria and the corresponding documents, please see the appendix.	●	●
Maintenance Vehicles need to have detailed operation and maintenance instructions.			
Bidders must provide information regarding operation and maintenance. They must also identify affiliated institutions in the country of intended operation that can perform maintenance to standard and keep vehicle warranty intact.	The offer of the bidder has to include the required guidance on operation and maintenance.	●	●
B – Requirement definition **B.2 Vehicle Performance**			
Fuel Economy Efficiency of vehicles, also known as fuel economy.			
Bidders shall provide information on the fuel efficiency of their vehicles. This must be expressed as kilometres per litre, or litres per 100 kilometres or as miles per gallon. Fuel efficiency figures shall be provided for both city and highway driving. Apart from actual manufacturer's data on fuel economy, bidders are to indicate the independent organizations/governmental bodies where fuel economy tests for their vehicles have been carried out.	The bidder must provide fuel economy data from independent testers, such as the US EPA or the FIA Foundation, or equivalent.	●	●

Sustainability criteria	Verification	Basic	Advanced
Emission Control Technology The supply of aftertreatment technology for vehicles to treat the engine effluent[2].			
Bidders shall state • what type of emission control technology is pre-fitted on their vehicles (if any), and • what national emission standards are met by the vehicle (normally stated in "Euro" standards or equivalent) Bidders shall outline the fuel specifications needed for specific emission control devices to run effectively.	The bidder must present the technical sheet of the vehicle where this information is displayed.	●	●
The vehicle shall comply with the *Euro III* standard or equivalent[3], provided that the fuel specifications needed for specific emission control devices to run effectively are compatible with the fuel available in the country/region of intended use.	The bidder must present the technical sheet of the vehicle where this information is displayed.		●

[2] For gasoline vehicles this is generally standard (except if unleaded gasoline is being used). For diesel vehicles after-treatment technologies are many and not always supplied.
[3] Procurers/requisitioners may choose to specify lower or higher Euro standards, depending from the local availability of quality fuels necessary for the engine to function properly.

Sustainability criteria	Verification	Basic	Advanced
Fuel Types Fuel specifications for the vehicle			
Suppliers to provide information[4] showing that the offered vehicles are compatible with available specific fuels and standards in the country/region of intended use. Octane and cetane standards for proper engine function shall be outlined by bidders, as well as any other specific fuel needs.	As above.	●	●
B – Requirement definition **B.3 Recycled content and recyclability**			
Recyclability and re-use			
The total weight of recycled material must be provided as a percentage of total vehicle weight.	Bidders must provide the appropriate documentation that indicates the amount of recycled material.	●	●
Vehicles and their parts are to be recyclable or adequate for reuse. The components must be made of materials that can be easily separated for recycling purposes.	Bidders must provide appropriate documentation to demonstrate that this criterion is met.		●

[4] The supplier, after having verified the quality of fuel available in the country/region in which the vehicle is to be operated, should make sure that the vehicle is fit to operate using the region's fuel standards.

Sustainability criteria	Verification	Basic	Advanced
Metal parts Recycled content of the aluminium/steel components			
25% of the aluminium and/or steel used for the production of the vehicle shall be recycled (second fusion). The manufacturer must be able to provide information as to what percentage of the aluminium and/or steel content in their vehicles is recycled[5].	Bidders must provide the appropriate documentation that indicates the amount of recycled material.	●	
75% of the aluminium and/or steel used for the production of the vehicle shall be recycled (second fusion). The manufacturer must be able to provide information as to what percentage of the aluminium and/or steel content in their vehicles is recycled[6].	As above.		●
B – Requirement definition **B.4 Vehicle ergonomics**			
Vehicles and vehicle design are to meet national/ international ergonomic standards, such as ISO 16121-1 to16121-4 or alike[7].	Bidders must provide the appropriate documentation to demonstrate compliance with these standards.		●

[5] This will vary by plant/ country; in such cases, an average value can be accepted.
[6] This will vary by plant/ country; in such cases, an average value can be accepted.
[7] The procurer can choose to require compliance with one or more of the existing ergonomic standards (for example, ISO 16121-1 to16121-4 and others, please see Annex Section 6).

Sustainability criteria	Verification	Basic	Advanced
C – Sourcing **C1 -Social criteria: Production according to international labour standards**			
Production of the product according to international labour standards, self-declaration The bidder shall provide proof that the producers and manufacturers of the vehicle pieces comply with the international working standards (ILO Core Conventions) listed below throughout the whole supply chain. The supply chain includes producers and manufacturers of all vehicles and parts that are the subject of this contract. Furthermore it includes contracted labour (contract manufacturers) that may design, market, manufacture and/or provide goods and services that are used to manufacture and supply the final product. • Freedom of Association and Protection of the Right to Organise (No. 87) • Right to Organise and Collective Bargaining (No. 98) • Forced Labour (No. 29) • Abolition of Forced Labour (No. 105) • Discrimination (Employment and Occupation) (No. 111) • Equal Remuneration (No. 100) • Minimum Age (No. 138) • Worst Forms of Child Labour (No. 182)	The bidder is required to submit appropriate proof that these requirements have been met, such as a written self-commitment/declaration (such as a current industry code of conduct declaration	•	

Sustainability criteria	Verification	Basic	Advanced
<u>Production according to international labour standards, independent third party certified</u> The bidder shall provide proof from an independent third party certification body that the manufacturer of the product complies with the international working standards (ILO Core Conventions) throughout the whole supply chain listed below. The supply chain includes producers and manufacturers of all vehicle pieces that are the subject of this contract. Furthermore it includes contracted labour (contract manufacturers) that may design, market, manufacture and/or provide goods and services that are used to manufacture and supply the final product. • Freedom of Association and Protection of the Right to Organise (No. 87) • Right to Organise and Collective Bargaining (No. 98) • Forced Labour (No. 29) • Abolition of Forced Labour (No. 105) • Discrimination (Employment and Occupation) (No. 111) • Equal Remuneration (No. 100) • Minimum Age (No. 138) • Worst Forms of Child Labour (No. 182)	The bidder is required to submit independent third party verification that the requirements are met.		•

Sustainability criteria	Verification	Basic	Advanced
C – Sourcing **C2 - Written corporate environmental policy**			
Written corporate environmental policy The bidder and the manufacturer of the final product(s) are required to demonstrate the existence and public availability of a written corporate environmental policy, consistent with ISO 14001 (International Organisation for Standardisation), or equivalent.	Proof of compliance is the written corporate environmental policy, consistent with ISO 14001 (International Organisation for Standardisation), or equivalent. Bidder should also state if they have a Greenhouse Gas (GHG) inventory and an emission reduction plan for GHGs in place.	●	
Operational, third-party certified, environmental management system The bidder shall provide certificates from the manufacturer(s) that they and all companies throughout the whole product supply chain engaged in the design or manufacture of the product have an operational, third-party certified, environmental management system such as ISO 14001, European EMAS, U.S. EPA Performance Track or equivalent.	The bidder is required to provide certificates for all the companies in the supply chain of the third-party certified environmental management system such as ISO 14001, European EMAS, U.S. EPA Performance Track or equivalent.		●
D – Evaluation: award/evaluation criteria **D1 – Product lifetime and quality**			
2 additional points will be awarded to offers • that offer availability of parts for a period of time that exceeds the minimum requirement, and • with supply centers within the country of intended operation of the vehicle.	Bidder must provide a written guarantee that this criterion will be met.	●	●

Sustainability criteria	Verification	Basic	Advanced
D – Evaluation: award/evaluation criteria **D2 – Vehicle Performance**			
Fuel economy Efficiency of vehicles			
Additional points will be awarded for: • vehicles that have a better average fuel economy (average of city and highway driving values), expressed in litres per 100 kilometres driven, according to the following scoring: ≤ 5 l/100 km: 8 points 6 ≤ x > 5 l/100 km: 6 points 8 ≤ x > 6 l/100 km: 4 points 10 ≤ x > 8 l/100 km: 2 points >10 l/100 km: 0 points	The bidder must provide fuel economy data from independent testers, such as the US EPA or the FIA Foundation, or equivalent.	●	●
Emission Control Technology The supply of after-treatment technology for vehicles to treat the engine effluent.			
3 additional points will be awarded: • for **diesel** vehicles[8] with emission control technology fitted as standard; and/or • for vehicles that meet emission standards (normally stated in "Euro" standards or equivalent) higher than the legal minimum requirement in the country of operation, provided that the fuel specifications needed for specific emission control devices to run effectively are compatible with the fuel available in the country/region of intended use	The bidder must present the technical sheet of the vehicle where this information is displayed.	●	

[8] For diesel vehicles after-treatment technologies are many and not always supplied.

Sustainability criteria	Verification	Basic	Advanced
3 additional points will be awarded: • for **diesel** vehicles[9] with emission control technology fitted as standard; and/or • for vehicles that exceed minimum emission standards, according to the following scoring: Euro V: 3 points Euro IV: 2 points provided that the fuel specifications needed for specific emission control devices to run effectively are compatible with the fuel available in the country/region of intended use	As above.		●
D – Evaluation: award/evaluation criteria **D3 – Recycled Content**			
Recycled content of the aluminium/steel components			
Additional points will be awarded: • for recycled part of aluminum and/or steel components used for the production of the vehicle, according to the following scoring[10]: Over 75%: 5 points 60-75%: 4 points 40-59%: 3 points 26-39%: 2 points	Bidders must provide the appropriate documentation that indicates the amount of recycled material.	●	

[9] For diesel vehicles after-treatment technologies are many and not always supplied.
[10] This will vary by plant/ country; in such cases, an average value can be accepted.

Sustainability criteria	Verification	Basic	Advanced
Additional points will be awarded: • for recycled part of aluminum and/or steel components used for the production of the vehicle, according to the following scoring[11]: Over 75%: 5 points	As above.		●
D – Evaluation **C4 – End of life vehicle service**			
Refurbishment and recycling options[12]			
2 additional points will be awarded to bidders that will provide the option for: • an end-of-life take back and recycling service within the country/region of use of the vehicle, and/or • an used vehicle refurbishment programme	The offer of the bidder must include the end-of-life take back option and/or details of the vehicle refurbishment programme.		●
E - Contract Management **E-1 Fundamental labour standard (For systems contracts only)**			

[11] This will vary by plant/ country; in such cases, an average value can be accepted.
[12] Nearly all vehicles have an end-of-life value. Vendors accepting to recycle or refurbish vehicles bought back for reuse should be awarded extra points.

Sustainability criteria	Verification	Basic	Advanced
Production of the product according to international labour standards, self-declaration The contractor shall ensure that the producers and manufacturers of the vehicle pieces comply with the international working standards (ILO Core Conventions) listed below throughout the whole supply chain during the term of the contract. The supply chain includes producers and manufacturers of all vehicle pieces that are the subject of this contract. Furthermore it includes contracted labour (contract manufacturers) that may design, market, manufacture and/or provide goods and services that are used to manufacture and supply the final product. 1 Freedom of Association and Protection of the Right to Organise (No. 87) 2 Right to Organise and Collective Bargaining (No. 98) 3 Forced Labour (No. 29) 4 Abolition of Forced Labour (No. 105) 5 Discrimination (Employment and Occupation) (No. 111) 6 Equal Remuneration (No. 100) 7 Minimum Age (No. 138) 8 Worst Forms of Child Labour (No. 182)	Upon demand the contractor is required to submit appropriate proof that these requirements have been met. A self-commitment/declaration that the requirements are met together with documentary support of the implementation and monitoring of measures will deem to comply.	•	
E - Contract Management **E-2 Transport (For systems contracts only)**			
The contractor shall calculate annually the amount of CO_2 emissions caused directly by the transportation of products supplied for the contract, and report this information to the contracting organisation. By the end of the contract, the contractor shall demonstrate the efforts made of trying to reduce the emissions of CO_2 through transportation of products.	Report shall be provided annually by the contractor calculating the CO2 emissions from transportation of products for the contract. A final report indicating reduction measures undertaken shall be submitted before the end of the contract.		•

Section 4: Implementation notes

B – Requirement definition:
Quality, reparability, fitness for use

Quality standards that either refer to or are in line with international or European standards such as ISO and EN standards are usually in place at the national/federal level of each country.

Fuel type and economy

Clean Fuels: Fuel adulteration is a common problem in developing countries. Apart from leading to issues with vehicle operation, the use of the wrong fuel may also lead to the redundancy of the vehicle warranty. Some old refineries in developing countries produce gasoline and diesel that do not meet the minimum octane/cetane standards for today's vehicles.

Please note that although the emission amounts of carbon dioxide per kilometre drive (stated as g/km) is not listed explicitly as a criterion, it is implied and is inversely proportional to the fuel efficiency (stated as km/litre) of the vehicle; essentially, the better the vehicle fuel economy, the less carbon dioxide (a Green House Gas) it emits per kilometre driven.

D – Evaluation:
End of life vehicle service

A take-back system is an effective way to guarantee the recycling of products; however its effectiveness would depend on the recycling options available to suppliers regionally. Therefore, it is recommended that the purchaser make an assessment prior to beginning the purchasing or tendering process to obtain information from potential suppliers about take-back schemes.

C & D – Sourcing & Evaluation:
Recycled Content of Materials used for the products

Recycled metal can typically account for up to 90% of a new vehicle metal content, especially if its aluminium.

Section 5: Information sources

- *Automotive Life Cycle Economics and Replacement Intervals*, David V. Spitzley, Darby E. Grande, Timothy Gruhl, Gregory A. Keoleian and James C. Bean, Center for Sustainable Systems, 2004
- *Life Cycle Assessment of Vehicle Fuels and Technologies*, Ben Lane, Ecolane Transport Consultancy, London Borough of Camden, March, 2006
- The Health Effects Institute, http://www.healtheffects.org/
- *Opening the Door to Cleaner Vehicles in Developing and Transition Countries: The Role of Lower Sulphur Fuels*, Report of the Sulphur Working Group of the Partnership for Clean Fuels and Vehicles (PCFV), 2007
- United States Environment Protection Agency (US EPA) http://www.epa.gov/air/urbanair/
- *Detailed Assessment of Air Quality in Salford,* Salford City Council, 2001
- Vehicle Emission Factors, Danish Environmental Protection Agency, http://www2.mst.dk/
- *World Wide Emission Standards, Passenger Cars and Light Duty Trucks*, Delphi, 2009
- UNEP/TNT Toolkit for Clean Fleet Strategy Development, Partnership for Clean Fuels and Vehicles, http://www.unep.org/tnt-unep/toolkit/
- A *Balanced Approach to Octane Replacement,* L. Khean, Asian Clean Fuels Association, May 2006
- *Worldwide Fuel Charter, 4th Edition,* Engine Manufacturers Association (EMA), Alliance for Automobile Manufacturers, Japanese Automobile Manufacturers Association (JAMA), European Automobile Manufacturers Association (ACEA), 2006
- Wikipedia, European emission standards http://en.wikipedia.org/wiki/European_emission_standards
- **www.autoalliance.org/recycling_facts.htm**
- Ford Motor Corp **www.ford.com/en/goodWorks/environment/recycling/vehicleRecycling.htm**
- ISO Site: **http://www.iso.org/iso/**

Section 6: Example of Weighting Matrix

In the evaluation of bids complying with the technical specifications, the sustainability criteria outlined above should be given a weighting of at least 20%. The following evaluation criteria should be considered alongside other evaluation criteria such as price and quality.

[*This text should be included as an annex in tender documents. Please note that only the advanced evaluation criteria are included as an example below.*]

Sustainability of the offered products and services (bonus points/ weighting of criteria) Advanced evaluation criteria		
Sustainability evaluation criteria for Vehicles	**Bonus points (max. 20)**	**Product Scoring**
1. Product lifetime and quality Exceed minimum requirement for availability of parts	**2 additional points** Fulfilment of criteria: 2 points Non-fulfilment of criteria: no points	
2. Vehicle Fuel Efficiency Bidders shall indicate the average fuel economy of the vehicle in litres per 100 kilometres driven	**Maximum 8 points** ≤ 5 l/100 km: 8 points 6 ≤ x > 5 l/100 km: 6 points 8 ≤ x > 6 l/100 km: 4 points 10 ≤ x > 8 l/100 km: 2 points >10 l/100 km: 0 points	
3. Vehicle Emission Profile Bidders shall indicate the emission standard the vehicle meets or surpasses.	**Maximum 3 points** Euro V: 3 points Euro IV: 2 points	
4. Recycled Metal Percentage by weight of recycled metal content in the vehicle	**Maximum 5 points** Over 75%: 5 points	
5. End of life vehicle service End-of-life take back and recycling	**2 additional points** Fulfilment of criteria: 2 points Non-fulfilment of criteria: no points	
SUM		

Section 7: Checklist for selection of sustainable vehicles

The following checklist is designed to help UN requisitioners in the preparation of product or service criteria and UN procurers when selecting potential contractors and products. It is recommended to first read the Product Sheet and the Background Report "Sustainable procurement guidelines for vehicles" as these documents explain each criterion more comprehensively.

Check-list - Vehicles	
B - Requirement definition	**Yes/No**
C - Sourcing	**Yes/No**
D – Evaluation	**Yes/No**
E – Contract Management	**Yes/No**

Section 8: Some Standards for Vehicle Ergonomics and Safety

There is currently an ongoing international effort to harmonise all motor vehicle standards globally. The World Forum for Harmonization of Vehicle Regulations is a working party (WP.29) of the United Nations Economic Commission for Europe (UNECE). It is tasked with creating a uniform set of regulations for vehicle design to facilitate international trade. The forum works on regulations covering vehicle safety, environmental protection, energy efficiency and theft-resistance.

Safety ECE 1958 Agreement

Originally, the 1958 Agreement allowed participation of UNECE member countries only, but in 1995 the agreement was revised to allow non-ECE members to participate. As of today, 58 countries worldwide apply the vehicle safety regulations below:

- R11 — door latches and door retention components
- R13-H — braking (passenger cars)
- R14 — safety-belt anchorages
- R16 — safety-belts and restraint systems
- R27 — advance-warning triangles
- R42 — front and rear protective devices (bumpers, etc.)
- R43 — safety glazing materials and their installation on vehicles
- R94 — protection of the occupants in the event of a frontal collision
- R95 — protection of the occupants in the event of a lateral collision
- R116 — protection of motor vehicles against unauthorized use

For more detailed and documentation on these standards, please go to:

http://www.unece.org/trans/main/wp29/wp29regs.html?expandable=0&subexpandable=0

and: http://oica.net/category/safety/

ISO Standards for Vehicle Ergonomics

ISO Standard	Description
ISO 15008:2009	Road vehicles -- Ergonomic aspects of transport information and control systems -- Specifications and test procedures for in-vehicle visual presentation
ISO 16121-1:2005 to ISO 16121-4:2005	Road vehicles -- Ergonomic requirements for the driver's workplace in line-service buses Part 1 - 4
ISO/TR 16352:2005	Road vehicles -- Ergonomic aspects of in-vehicle presentation for transport information and control systems -- Warning systems
ISO/TS 16951:2004	Road vehicles -- Ergonomic aspects of transport information and control systems (TICS) -- Procedures for determining priority of on-board messages presented to drivers
ISO 26022:2010	Road vehicles -- Ergonomic aspects of transport information and control systems -- Simulated lane change test to assess in-vehicle secondary task demand
ISO 3409:1975	Passenger cars -- Lateral spacing of foot controls
ISO 4040:2009	Road vehicles -- Location of hand controls, indicators and tell-tales in motor vehicles

ISO Standards for Vehicle Ergonomics

ISO Standard	Description
ISO 11096:2002	Road vehicles -- Pedestrian protection -- Impact test method for pedestrian thigh, leg and knee
ISO 15830-1:2005 to ISO 15830-4:2005	Road vehicles -- Design and performance specifications for the WorldSID 50th percentile male side-impact dummy -- Part 1 though 4: Terminology and rationale
ISO/TS 22240:2008	Road vehicles -- Vehicles safety information model (VSIM)

For further ISO standards on vehicle ergonomics or safety please go to:
http://www.iso.org/iso/ and make a search of the appropriate topic.

Section 9: Vehicle life cycle costing

During the financial evaluation stage of the procurement process, procurers compare the cost of the vehicles offered. However, not always whole life costing considerations are taken into account at this stage. Even more critical to integrate are the externality costs of the pollutants and CO_2 emissions caused by the vehicle operations. Some of these costs are manifest over the lifecycle of the vehicle (cost of fuel), others are indirectly paid by the society (damage to health and the environment from pollution).

According to the 2010 EU Clean Vehicles Directive, energy and environmental impacts linked to the operation of vehicles over their lifetime have to be taken into account in purchase decisions. This means that public procurers in the European Union will have to quantify the cost of environmental externalities when purchasing vehicles.

To assist procurers in this task, the European Commission has developed a calculation tool, which can be used to account for the cost of fuel, but also for environmental costs.

The tool – or Lifetime cost calculator - is freely accessible on the internet and can be used by UN procurers and requisitioners wishing to unveil the real cost of the vehicles they are purchasing on their agency budget, as well as on the environment and society:

http://ec.europa.eu/transport/urban/vehicles/directive/calculator_en.htm

SUSTAINABLE UNITED NATIONS

Sustainable United Nations (SUN) is a UNEP initiative that provides support to UN and other organisations to reduce their greenhouse gas emissions and improve their sustainability overall.

SUN was established in response to the call from UN Secretary General Ban Ki-Moon at the World Environment Day 2007 (5 June), to all UN agencies, funds and programmes to reduce their carbon footprints and "go green". This call was echoed in October 2007 in a decision of the UN Chief Executives Board (CEB/2007/2, annex II) to adopt the UN Climate Neutral Strategy, which commits all UN organisations to move towards climate neutrality. Within this context, SUN is working with the UN Environment Management Group – the UN body coordinating common environmental work within UN – to provide guidance, and develop tools and models for emission reduction within organisations.

FLEET FORUM

Founded in 2003 as a joint initiative of the International Federation of the Red Cross and Red Crescent Societies (IFRC), the UN World Food Programme (WFP) and World Vision International (WVI), the Fleet Forum is an interagency association of more than 40 members, including NGOs, international organisations, the UN, academic institutions, donors and corporate partners.

The Fleet Forum is the first independent knowledge centre, focused on issues surrounding humanitarian fleets within the aid and development community. It is the vision of the Fleet Forum to support efficient and effective humanitarian action by catalysing the professionalisation of fleet operations, increasing road safety and security, and improving the environmental impact of fleets. A voluntary association, the Fleet Forum serves as an interface between stakeholders, bringing together humanitarian organisations, donors, governments, and the private sector.

UNOPS

UNOPS mission is to expand the capacity of the UN system and its partners to implement peacebuilding, humanitarian and development operations that matter for people in need. Our partners range from UN organisations, international financial institutions to governments, non-governmental organisations and intergovernmental organisations and our services include project management, procurement, human resources management and financial management.

Working in some of the world's most challenging environments UNOPS vision is to always satisfy partners with management services that meet world-class standards of quality, speed and cost effectiveness.

As a leading procurement agency, UNOPS intends to mainstream sustainability in procurement processes and infrastructure construction throughout the supply chain, working towards Millennium Development Goal 7: to ensure environmental sustainability.

About the Sustainable Procurement Guidelines

The UN operates to achieve the goals of peace, equality, sustainable development and respect for human rights. The way the UN manages its operations and procures products and services should reflect these goals.

Ensuring lowest environmental and most positive social impact of procurement does not only build on the international community commitments. It also manages the reputational risks associated with labour exploitation or environmental damage in the supply chain; it gives a strong signal to the market and encourages the innovative production of cleaner and more ethical products enhancing an economy based on social and environmental responsibility.

These guidelines are designed to assist UN procurers and requisitioners in their choice to include sustainability considerations in their procurement work. They are built on the recognition that market situations are different from one country to another and thus provide advice based on research made about availability of more sustainable products in world regions. Overall, the guidelines provide a comprehensive overview of the specific factors affecting the sustainability of a given product category and suggest a language and specific criteria to include sustainability in tenders.

Guidelines are specifically provided for the areas of:
- IT equipment
- Cleaning
- Furniture
- Stationary
- Vehicles
- Cafeterias, Food and Kitchen equipment.
- Freight Forwarding
- Generators and Batteries
- Carbon Credits

They are available at: **www.greeningtheblue.org** and **www.ungm.org**

For more information

UNEP DTIE
Sustainable Consumption and Production Branch
15 Rue de Milan
75441 Paris CEDEX 09, France
Tel: +33 1 4437 1450
Fax: +33 1 4437 1474
E-mail: sustainable.un@unep.org
www.unep.org/sun