

HANDBOOK FOR THE INTER-AMERICAN
NETWORK ON GOVERNMENT
PROCUREMENT (INGP)

Implementing Sustainable Public Procurement in Latin America and the Caribbean

Optimizing Value-for-Money
across asset lifecycles



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International Development Research Centre
Centre de recherches pour le développement international

Canada



Inter-American
Network on
Government Procurement



Organization of
American States



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International Institute for
Sustainable Development

ACKNOWLEDGMENTS

Authors

Liesbeth Casier, Richard Huizenga, Oshani Perera, Marina Ruete and Laura Turley

Acknowledgments

This effort could not have been undertaken without the generous support of Canada's International Development Research Centre (IDRC)¹. In particular, the authors would like to extend their gratitude to Mr. Ben Petrazzini for sharing his vision for a user-friendly handbook on sustainable procurement for the Latin American and Caribbean region, and his ongoing support throughout the process of its development.

The authors are grateful for the support of Helena Fonseca, Steven Griner and Sofia Quiñonez of the *Organisation of American States (OAS)*.

We would also like to thank the members of the Inter-American Network on Government Procurement (INGP) for their feedback and inputs into the drafting process, and their interest in and support for sustainable public procurement.

In particular we would like to thank the following members for meeting with us and sharing their views:

- Trinidad Inostroza Castro, Director, Dirección Chile Compra (Chile)
- Cra. Alicia Alonso, General Coordinator, Agencia de Compras y Contrataciones del Estado (Uruguay)
- Ana Maria Vieira Neto, Former Director of the Ministério do Planejamento, Orcamento e Gestao and former president of the INGP (Brazil)
- Abog. Hector Martín Cerrato, Director, Oficina Normativa de Contratación y adquisiciones del Estado (Honduras)
- Fabian Quiroz Álvarez, General Director, Dirección de Administración de Bienes y Contratación Administrativa, Ministerio de Hacienda (Costa Rica)
- Alejandro Luna Ramos, Head of the Policy Unit Procurement, Unidad de Política de Contrataciones Públicas, Secretaría de la Función Pública (Mexico)
- Santiago Jure, Director, Dirección Nacional de Contrataciones Públicas (Paraguay)
- Magalí Rojas Delgado, Executive President, Organismo Superior de Contrataciones del Estado (Peru)
- Yokasta Guzmán, Director, Dirección General de Contrataciones Públicas and president of the INGP (Dominican Republic)
- Henry Cisneros, Coordinador Nacional de Planificación SERCOP (Ecuador)

Finally, we would like to thank our colleagues at the Public Procurement and Infrastructure Finance Programme of the International Institute for Sustainable Development (IISD) for their valuable insights.

Pictures by Marina Ruete and Christin Tonne

Design and layout by Allegro168 Inc

¹ Please note that the views expressed in this handbook do not necessarily reflect the views of the funder and should not be attributed to it.



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BACKGROUND TO THE HANDBOOK

Sustainable Public Procurement (SPP) is about ensuring that the products and services purchased by governments are as sustainable as possible, both in the sense of generating the lowest possible environmental impact, and in the sense of producing the most positive social impacts. By re-designing procurement policies and procedures, governments can trigger multiplier benefits internally and across society, creating efficiency gains, energy and financial savings, improved access to services and better working conditions. SPP can serve as a key policy driver allowing governments to use their purchasing power and regulatory influence to reshape markets.

This handbook is a tool for implementing SPP in the Latin American and Caribbean region, developed in cooperation with the Inter-American Network for Government Procurement (INGP). The INGP is a network of directors of public procurement authorities from 34 countries in the Americas, working to raise awareness, build capacity and generate knowledge on the relevance of SPP to policy makers. Ultimately, this handbook is an effort to make public procurement a catalyst for inclusive green growth.

This handbook will guide government procurers on the design of procurement policies and preferential purchasing programs that will crowd-in SMEs, minority suppliers and women-owned enterprises. It will integrate environmental and social criteria across the public procurement cycle, from supplier qualification to technical specifications, award criteria and contract conditions.



EXECUTIVE SUMMARY:

The Why and How of Sustainable Public Procurement



Procurement is the process of acquiring goods, services and infrastructure. Procurement drives and supports the work of an organization by providing everything the organization uses—everything it hires, buys, rents or leases. Public procurement is the process of acquiring goods, services and infrastructure for public purposes.

In undertaking sustainable public procurement, governments attempt to procure on the best possible social, economic and environmental terms, and in support of national development strategies.

They attempt to optimize value-for-money across the lifecycle of the product, service or infrastructure. Public procurement can be a powerful tool for governments trying to create dynamic, innovative and sustainable markets, economies and societies.

The impact of sustainable procurement is not limited to the procuring organization. The impact is transmitted through the supply chain. Sustainable public procurement can:

- Create demand for environmentally friendly goods, services and infrastructure;
- Encourage suppliers to innovate;
- Model and provide incentives for better treatment of workers and healthier communities;
- Drive green industrial development.

The International Institute for Sustainable Development (IISD) saw a need for a compact tool that would help government procurement officials in Latin America and the Caribbean procure sustainably—a manual that would integrate neatly with their day-to-day procurement activities.

This manual contains six sections:

1. **The business case for sustainable public procurement** – the shortest section. The case is easy to make, and anyone who picks up the manual on sustainable public procurement will probably appreciate its value.
2. **Integrating sustainability into the procurement cycle** – the public procurement cycle from a sustainability perspective. The section draws on case studies from Latin American and Caribbean countries and examples from around the world.
3. **Getting started on sustainable public procurement** – strategies to help procurement officers and policymakers make the principles of sustainability part of their work. Every day.
4. **Product criteria for major areas of government spending** – mandatory or optional (rated) technical requirements to procure products with better social and environmental performance in eight major areas: Office IT equipment • Vehicles • Indoor lighting • Outdoor lighting • Paper • Air Conditioning • Furniture • Apparel
5. **Positive multipliers of sustainable public procurement** – the multiplier benefits from government spending on goods, services and infrastructure. The initial spending is important, the impact of the money as it ripples through the economy even more so.
6. **Public procurement and infrastructure** – through traditional procurement processes or public-private partnerships.

We hope we have created a tool that will help you to procure goods, services and infrastructure more sustainably. **Every day.**

LIST OF ACRONYMS AND ABBREVIATIONS

Best Available Technologies Not entailing Excessive Economic Costs	BATNEEC
Carbon Dioxide	CO ₂
Compact Fluorescent Lights	CFL
Energy Efficiency Ratio	EER
Electronic Product Environmental Assessment Tool	EPEAT
Convention on International Trade in Endangered Species of Wild Flora and Fauna	CITES
Foreign Direct Investment	FDI
Gross Domestic Product	GDP
Global Environment Facility	GEF
Agreement on Government Procurement	GPA
Green Public Procurement	GPP
Global Warming Potential	GWP
High-intensity discharge	HID
Information Communication Technology	ICT
International Organisation for Standardization	ISO
International Labour Organization	ILO
Latin America and the Caribbean	LAC
Micro, Small and Medium-sized Enterprises	MSME
Minimum Energy Performance Standard	MEP
Nationally Appropriate Mitigation Action	NAMA
Performance-based specifications	PBS
Public-Private partnerships	PPP
Research and Development	R&D
Small and Medium-sized Enterprises	SME
Sustainable Development Goals	SDGs
Sustainable public procurement	SPP
United Nations Commission on International Trade Law	UNCITRAL
Volatile Organic Compound	VOC
World Trade Organization	WTO

SECTION 1

The Business Case for Sustainable Public Procurement

SECTION 1
THE BUSINESS CASE FOR
SUSTAINABLE PUBLIC PROCUREMENT

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The primary duty of public procurers is to procure goods, services and infrastructure in a way that optimises value for public funds.

Value-for-money is often narrowly interpreted as the lowest purchase price and this is often the basis on which tenders are awarded and concessions negotiated.

Sustainable public procurement (SPP), however, challenges public procurers to go further and optimise value-for-money, not simply at the point of purchase, but over the lifecycle of every asset. This moves the entire public procurement mindset toward the total cost of ownership. Decisions consider a broad range of costs, such as management operations and maintenance costs, beyond the purchase price.

SPP also challenges procurers to consider and maximise the positive economic, social and environmental multipliers of their purchasing decisions—as the power of the public purse is substantial. Public procurement typically represents as much as 20 per cent of a country’s GDP. Table 1 indicates public procurement as a percentage of GDP across sample countries and regions.

TABLE 1:
Procurement as a percentage of GDP (approximate)

Brazil	32%
Colombia	15%
Ecuador	14%
Jamaica	10%
Mexico	7%
Chile	7%
United States	11%
Canada	12%
India	30%
South Africa	29%
China	58%
Japan	13%
European Union	16%

Sources: IISD publications; Organization for Economic Co-operation and Development (2011).

These percentages indicate significant purchasing power—which makes public procurement a crucial economic lever in all countries.

TABLE 2:
Areas of frequent government expenditure

PRODUCTS	SERVICES	INFRASTRUCTURE
Air conditioning	Management consultancy services	Roads
Information communication technologies (ICT)	IT consultancy services	Water treatment facilities
Vehicles	Software	Airports
Indoor lighting	Servers and data centres	Ports
Outdoor lighting	Electricity	Railroads and stations
Office supplies	Couriers and postal	Buildings
Fuel	Mobility	Sewage plants
Furniture	Waste management	Schools
Apparel	Food and beverage catering	Prisons
Paper	Landscaping	Power plants

The public sector buys a wide array of goods, services and infrastructure—everything from paper and paper clips to vehicles, medical equipment, roads and bridges. Table 2 outlines some major categories of regular government spending. Public procurement can be used to provide the long-term and scaled-up demand needed to change the trajectory of markets and re-align them towards more sustainable and equitable development.

All governments procure goods, services and infrastructure as a matter of course. Making public procurement sustainable should not require additional or more cumbersome processes. It requires a change in thinking about purchasing, and it requires long-term vision. SPP puts the public procurement profession in the driving seat and encourages procurers to spend in a way that yields long-term value-for-money rather than the lowest cost at the point of purchase.



DEFINING SUSTAINABLE PUBLIC PROCUREMENT (SPP) AND GREEN PUBLIC PROCUREMENT (GPP)

Sustainable Public Procurement is about the laws, policies and practices that integrate economic, social, and environmental risks into public procurement processes and decisions (Perera, Chowdhury, & Goswami, 2007).

Sustainable Public Procurement is a process “whereby organizations meet their need for goods, services and utilities in a way that achieves value-for-money on a whole-life basis in terms of generating benefits not only to the organization, but also to society and the economy, while minimizing damage to the environment. Procurement should consider the environmental, social and economic consequences of: design; non-renewable material use; manufacture and production methods; logistics; service delivery; use; operation; maintenance; reuse; recycling options; disposal; and suppliers’ capabilities to address these consequences throughout the supply chain” (U.K. Department of Environment, Food and Rural Affairs, 2006).

Green Public Procurement (GPP) is “a process whereby public authorities seek to procure goods, services and works with reduced environmental impact throughout their lifecycle when compared to goods, services and works with the same primary function that would otherwise be procured” (European Commission, n.d.).

1. WHAT IS SUSTAINABLE PUBLIC PROCUREMENT?

SPP is the purchasing of goods, services and infrastructure in a way that maximizes value-for-money across the lifecycle of the asset. This requires that public entities make choices that have lower environmental footprints and higher social benefits. The box above provides some definitions of sustainable public procurement and green public procurement. In practice, public authorities that practice SPP make more sustainable choices, such as energy efficient buildings and electronics, sustainably grown and harvested coffee, and recycled office materials.

SPP requires a commitment to purchasing the most efficient—and often innovative—products, services or infrastructure. This injects economic, environmental and social considerations into a process that might otherwise be driven

strictly by purchase price. SPP redefines value-for-money as value-for-money across the lifecycle of the asset.

SPP creates benefits for public authorities and for society as a whole. Sustainable goods, services and infrastructure are often not more expensive than their alternatives, but where the up-front costs are greater, these costs can be recovered during the lifecycle of the asset through lower operation, maintenance or disposal costs.

The results of SPP depend on the way sustainability is defined, measured and monitored. SPP’s impact can be local or global, short or long-term. Section 5 of this handbook elaborates on the multiplier effects of SPP. As an overview, some of the major benefits are:

Economic benefits

- SPP can create demand for sustainable goods and services,

supporting new, efficient industries and sectors and fostering innovation.

- Governments can use their purchasing power to support the growth of small and medium sized enterprises (SMEs) —enhancing their ability to respond to public tenders through preferential purchasing programs or by segmenting large public tenders.
- SPP can generate more and better jobs, raise production standards and create economies of scale for sustainable goods and services.
- Sustainability allows producers to compete globally. There is growing demand for high-quality products, and products and services produced and delivered to high environmental and social standards.

Environmental benefits

- SPP can result in more efficient use of natural resources, better waste management, improved air and water quality, a reduction in the use of hazardous chemicals and healthier living conditions.
- Investing in energy-efficient products and applying evaluation and selection criteria that favour energy from renewables over energy from fossil fuels can help reduce greenhouse gas emissions.

Social benefits

- SPP can improve working conditions, increase minority employment and allocate procurement contracts more fairly.
- Enhanced access of SMEs to public procurement stimulates local economies and creates jobs.
- SPP can promote local entrepreneurship and innovation, and adding value to the development of goods, services and works for local, national and export markets.
- SPP can support rural economic development.

- Improved environmental standards can result in improved air and water quality, and reduced waste—creating healthier environments for entire communities.

Financial benefits

- SPP can help drive a sustainable economy and provide better value-for-money of goods, services and infrastructure. When the long-term costs of production, use, maintenance, and disposal are considered, SPP makes more efficient use of public resources.
- Improved insulation, reduced leakage, and other water and energy saving measures may generate operational savings for utilities in electricity, heating and water.
- Choosing more environmentally friendly products may reduce the costs of waste management, pollution prevention and pollution mitigation. Choosing products with longer life-spans will reduce future procurement costs.

Contribution to global sustainability

- Public authorities that adopt SPP demonstrate a commitment to sustainability for public policies that promote sustainable development. They show a desire to be part of the international movement in support of the Sustainable Development Goals (SDGs) and the post-2015 development agenda.

Increased legitimacy

- SPP increases the legitimacy of public authorities using public funds for procurement. It also can create or reinforce a positive image for public authorities at home and abroad.

Fostering innovation

- SPP has great potential to drive innovation. Public procurement

represents roughly 20 per cent of GDP and is a powerful driver of change. Public authorities can use procurement to create demand for innovative solutions.

Policy coherence

- SPP can implement a government's industrial, environmental and social policies.

2. WHY UNDERTAKE SPP IN LATIN AMERICA AND THE CARIBBEAN NOW?

SPP can be a powerful lever for development and growth. It aligns with many of the economic and social priorities of Latin American and Caribbean (LAC) countries.

Environmental and social awareness

National development plans increasingly reflect an appreciation for environmental, social and economic sustainability. Environmental agencies are better staffed and prepared than in the past, and environmental education at all levels continues to improve.

LAC governments are encouraging the mitigation of environmental and social risks in the private sector, but the public sector must also lead by example. SPP provides governments with a valuable tool to demonstrate their commitment to sustainable development.

Environmentally friendly goods

Green goods and services are already being scaled up across the LAC private sector. Public procurers should support green entrepreneurship, using their market power to encourage companies to adopt sustainable technologies and processes.

Environmental and social regulation

Many LAC countries are developing increasingly stringent environmental

and social regulations. The more procurement policies are aligned with these other regulations, the more effective and mutually-reinforcing they can be.

Regional networking on public procurement

Many courses, workshops and meetings in the LAC region offer capacity building and knowledge sharing on SPP. These events provide LAC procuring authorities with opportunities to learn about the benefits and challenges of SPP and how to introduce and harmonize their own SPP policies and practices with existing procurement regulations.

Cost effectiveness

In many cases, SPP can save money over business-as-usual scenarios. Medium to long-term savings come from increased efficiency of inputs (e.g. lower energy demand, reduced water use, fertilizer use etc.) or due to the durability and longevity of a product or service (e.g. fewer repairs, lower maintenance). In addition, cost savings can come through bulk orders, and through reduced packaging and transport. The prudent use of taxpayers' money can channel savings towards poverty reduction and other pressing socio-economic priorities.

Joining the global cause

Procurement professionals around the world are building awareness and expertise in SPP. They have seen many promising outcomes, and initial fears of high procurement costs are disappearing. SPP professionals are learning that greener and more socially responsible products, services and infrastructure bring cost savings across their useful lives—delivering meaningful value-for-money to taxpayers.

SECTION 2

Integrating Sustainability into the Procurement Cycle

SECTION 2
INTEGRATING SUSTAINABILITY INTO THE
PROCUREMENT CYCLE

1. BASIC PRINCIPLES OF TENDERING

Public tendering, the evaluation of tenders and the award of contracts are processes strictly regulated by law. These laws are designed to protect both the procurer and the contractor. They also protect taxpayers by preventing fraud, waste, corruption and local protectionism. Procuring authorities must usually issue a public notice for tenders that exceed a specified value.

The principles of fairness, competition and transparency remain true for SPP as for traditional public procurement. Indeed governments that have good, fair and transparent procurement processes are already well on the way to implementing SPP.

Governments are becoming more sophisticated in the integration of environmental and social sustainability criteria into procurement processes. However, even tenders that do not explicitly use these criteria can still have sustainable outcomes by ensuring that the following principles are respected:

Value-for-money across the lifecycle

As mentioned in the introduction, *value-for-money* is often narrowly interpreted as the lowest purchasing price and is often the basis on which tenders are awarded and concession contracts negotiated. SPP, on the other hand, challenges public procurers to go farther and optimise value-for-money, not simply at the point of purchase, but over the lifecycle of the asset they purchase.

The principle that taxpayers' money must be used effectively and efficiently for the medium to long-term should supersede the pursuit of the lowest initial purchasing price. A lifecycle value-for-money approach favours green goods, services and infrastructure that are efficiently operated and maintained, and those that reduce—or even eliminate—end of life disposal costs.

CASE STUDY:

VALUE-FOR-MONEY UNDER PERUVIAN PUBLIC PROCUREMENT LAW

In 2014, Peru made value-for-money the central objective of public procurement. Article 1 of the new law requires that procurement be timely, balance price and quality, fulfill public objectives and improve the lives of Peruvians.

The law explicitly builds the principles of environmental and social sustainability into the design and development of public procurement processes.

Transparency

Access to information on public tendering processes ensures fair competition and ultimately increases value-for-money across the asset lifecycle. Only when procurement processes—laws, regulations, procedures and decisions—are transparent can suppliers compete on sustainability. Transparent public procurement is a prerequisite for SPP.

CASE STUDY:

CITIZEN OVERSIGHT COMMITTEES IN DOMINICAN REPUBLIC

In June 2014, as part of an effort to improve transparency and fight public sector corruption, the government of the Dominican Republic enacted Decree 188-14 to define and regulate citizens' participation in and control of public procurement. It created Citizens Oversight Committees, which are independent bodies consisting of citizens and civil society representatives. The committees monitor the procurement activities of government agencies.

Each of the 24 committees created under Public Procurement Law 340-06 monitors the procurement processes of a specific agency. The monitoring process begins with the needs analysis in the annual procurement plan and ends with the procurement of the appropriate products, services or infrastructure.

Public agencies must provide any information requested by the corresponding Oversight Committee.

Non-discrimination and fairness

Any procurement process—especially for government—must treat participants equally. Fairness in the treatment of bidders ensures true competition and value-for-money across the asset lifecycle.

Proportionality

The procuring authority must clearly connect sustainability considerations to the objective of the tender.



2. LEGAL AND POLICY SPACE FOR SPP IN LAC COUNTRIES

Public procurement laws and policies can be developed at a national or local level depending on the structure of government and the allocation of public responsibilities. Public procurement might be nestled within broader public financial management legislation, or public procurement provisions might be ‘scattered’ across the legal and policy regime of a country.

Within the context of procurement laws, it is important to have dedicated provisions that provide procurers with a mandate to purchase sustainable goods, services and infrastructure. These provisions could:

- Require that procurement decisions be based on lifecycle costs, whole-life value or the total cost of ownership;
- Require that bids be awarded on a range of criteria in addition to the purchase price. These criteria could include quality, durability, environmental performance, and value-addition in terms of domestic manufacturing and raw material sourcing;
- Support principles of environmental stewardship such as resource-efficiency and low-carbon manufacturing;
- Support broader industrial development goals such as the green economy, the circular economy and industrial ecology;
- Support the achievement of socio-economic goals such as increased employment, increased gross value-added, better education and an augmented domestic skill base;
- Promote green industrial development by increasing the demand for products with a lower environment footprint.

The above provisions can be mirrored, strengthened and further detailed in procurement regulations, standard bidding documents and model contracts. For example, they can refer to:

- Specific characteristics on environmental performance such as energy and water efficiency, lower toxicity, recycled content, reduced waste and producer responsibility;

EXAMPLES OF LEGAL PROVISIONS RELATED TO SPP

SPP in the Ecuadorian Constitution (2008)

“Nature, or Pachamama, where life is reproduced and realized, has the right to exist, maintain and regenerate its vital cycles, structure, functions and its processes in evolution.” (Article 71).

“The constitution recognizes the right of the population to live in a healthy and ecologically balanced environment, that guarantees sustainability and well-being, *sumak kawasay*.” (Article 14).

“The State will promote in the public and private sector the use of clean technologies and non-polluting alternative energies and of low impact.” (Article 15).

These three articles enable procurers to introduce environmental considerations into the procurement cycle. This means that while it may be desirable, procurers do not need specific permission to work with SPP.

The Constitution does contain a specific SPP reference: “Public procurement will follow efficiency, transparency, quality and environmental and social responsibility. National products and services will be prioritized, in particular those coming from popular and charitable economy, micro, small and medium productive units.” (Article 288).

Public procurement and waste management in Costa Rica

Article 29 of Costa Rica’s Law for the Integral Management of Waste authorizes public procurers to promote the procurement and use of materials and products with little or no environmental footprint. Procurers can use technical specifications from eco-labels as they develop evaluation criteria. Tenders that include waste management will have a 20 per cent advantage in the evaluation process.

Uruguay and obligations under the Energy Efficiency Law

In Uruguay, SPP is mandated by a number of laws. Energy Efficiency Law No. 18.597 requires procurers to consider lifecycle costs – purchase price, operating cost, management of operating waste and end-of-life disposal.

- Labour standards on working hours, overtime, pay, freedom of association and collective bargaining, and workplace health and safety;
- A preference for eco-labelled products or environmental and social standards.

It is also possible to implement SPP based on Constitutional provisions, environmental laws, labour laws or based on industrial development policies. This also includes policies to support SMEs.

SPP can be implemented through dedicated policies on SPP, even when procurement laws do not provide express provisions that support SPP. Although policy statements do not have the force of law, they can be used to guide and legitimize efforts to buy more sustainably and bring better value-for-money for taxpayers. As such, these policies can encourage the procurement of goods and services produced (or partly produced) in the domestic economy, goods and services produced by SMEs and by minority suppliers, or indeed refer to lower environmental footprints and improved whole-life value.

CASE STUDY:

VALUE-FOR-MONEY UNDER JAMAICAN PUBLIC PROCUREMENT POLICY

The Government of Jamaica deployed a public procurement policy statement to legitimize SPP. The statement places “value-for-money” in the list of principles that govern public procurement. Although the statement and policy do not have the force of law, they offer guidance and the necessary policy space for procurers to implement SPP. It defines value-for-money as “a measure of economy and efficiency with which the financial resources of the government are converted” focusing in “efficiency, effectiveness, quality and sustainable development for the long term”. The policy lists the following factors as to be included in defining value-for-money:

- The suitability of the goods/equipment/services purchased;
- The useful life of the goods/equipment/services;
- Operation, maintenance and servicing costs;
- The administrative cost of the selected purchasing method;
- The delivery/construction period;
- Onwards transportation costs;
- Storage costs;
- The time taken to complete the procurement;
- Any other factor that is related to the procurement.

The discussion on the SPP legal framework will not be complete without reference to international rules and guidelines on public procurement. Over the last decade, these rules and guidelines have been substantially strengthened on their provisions related to sustainable development. This is an important indicator that governments around the world are beginning to realize that public procurement can be a strategic and cost-effective process through which to achieve political mandates and goals on sustainable and equitable development.

Across 2011 and 2012, both the World Trade Organisation Agreement on Government Procurement (WTO GPA) and United Nations Commission on International Trade Law (UNCITRAL) Model Law on Public Procurement introduced explicit provisions on environmental and social sustainability.

The WTO GPA is a plurilateral agreement on government procurement. 45 WTO Members are party to the agreement. The fundamental aim of the GPA is to mutually open government procurement markets among its parties and establish rules requiring that open, fair and transparent conditions of competition be ensured in government procurement. While at present, no LAC country has signed the WTO GPA, it still serves as an important reference on how international legal instruments are providing increasing opportunities to implement SPP. The specific provisions of the WTP GPA that relate to SPP are given in the box below.



WTO GPA PROVISIONS FOR ENVIRONMENTAL CONSIDERATIONS IN PUBLIC TENDERING PROCESSES

Article X (6) on Tender Specifications and Tender Documentation

For greater certainty, a Party, including its procuring entities, may, in accordance with this Article, prepare, adopt or apply technical specifications to promote the conservation of natural resources or protect the environment.

Article X (9) on Tender Specifications and Tender Documentation

The evaluation criteria set out in the notice of intended procurement or tender documentation may include, among others, price and other cost factors, quality, technical merit, environmental characteristics and terms of delivery.

The 2011 UNCITRAL Model Law is aimed at achieving value-for-money in public procurement, and promoting objectivity, fairness, participation, competition and integrity (UNCITRAL, 2011a). UNCITRAL has been recognized as the core legal

body of the United Nations system in the field of international trade law. As a legal body with universal membership, UNCITRAL focuses on modernising commercial and trade laws across the world.

The box below describes environmental and social provisions of the 2011 UNCITRAL Model Law.

Finally, the Sustainable Development Goals (SDGs), that are an integral part of the post-2015

UNCITRAL MODEL LAW PROVISIONS ON PUBLIC PROCUREMENT RELATED TO ENVIRONMENTAL AND SOCIAL CONSIDERATIONS

Article 2 (o) on Definitions clarifies:

“Socio-economic policies” means environmental, social, economic and other policies of this state authorized or required by the procurement regulations or other provisions of law of this state to be taken into account by the procuring entity in the procurement proceedings.

Article 9 (2a) on Qualifications of suppliers and contractors requires that:

They [the suppliers] have the necessary professional, technical, and environmental qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and personnel to perform the procurement contract.

Article 11 (2b) on Rules concerning evaluation criteria and procedures suggests that evaluation criteria may include:

The cost of operating, maintaining and repairing goods or of construction; the time for delivery of goods, completion of construction or provision of services; the characteristics of the subject matter of the procurement, such as the functional characteristics of goods or construction and the environmental characteristics of the subject matter [...]

Article 25 (1i) on Documentary record or procurement proceedings suggests the inclusion of:

If any socio-economic policies were considered in the procurement proceedings, details of such policies and the manner in which they were applied.

Article 30 on Conditions for the use of methods of procurement allows for procurement:

[...] from a particular supplier or contractor [when] necessary in order to implement a socio-economic policy of this State, provided that procurement from no other supplier or contractor is capable of promoting that policy.

development agenda, make reference to SPP as a means to ensure sustainable consumption and production patterns. The post-2015 development agenda builds on the Millennium Development Goals (MDGs), that consisted of eight anti-poverty targets that the world committed to achieving by 2015. The members of the United Nations are now in the process of adopting the Sustainable Development Goals (SDGs) as part of a new agenda to build on and complete the mandate of the MDGs.²

3. INTRODUCING ENVIRONMENTAL AND SOCIAL CRITERIA INTO THE PROCUREMENT CYCLE

3.1 Identifying, assessing and defining the need

Procurement laws define the processes under which public authorities meet their needs for goods, services or infrastructure. The first step of the procurement process is defining exactly what needs to be purchased. This is referred to as a needs analysis.

The procurement authority must identify and define its needs, based as much as possible on outcomes or results that the procuring authority and end-users seek to achieve, rather than focusing on the discrete products that may deliver these outcomes. For example, procurement authorities can consider if what they need to procure is 50 cars or a service to provide transport for 50 government officials. The latter option opens the door to procure the services of a transport company or to lease 50 cars - both of which could be more cost effective procurement solutions than purchasing the vehicles outright. A transport service or a leasing arrangement would also help procurers and the end users upgrade the vehicle fleet and give preference to fuel-efficient, low-emission vehicles with relative ease.

Procurers should ideally liaise with the end-users in conducting the needs analysis. It is the end users that have the necessary information on what needs they are seeking to fulfill, on how often these needs arise, on how these needs are likely to change in the medium term and on what issues prevail with

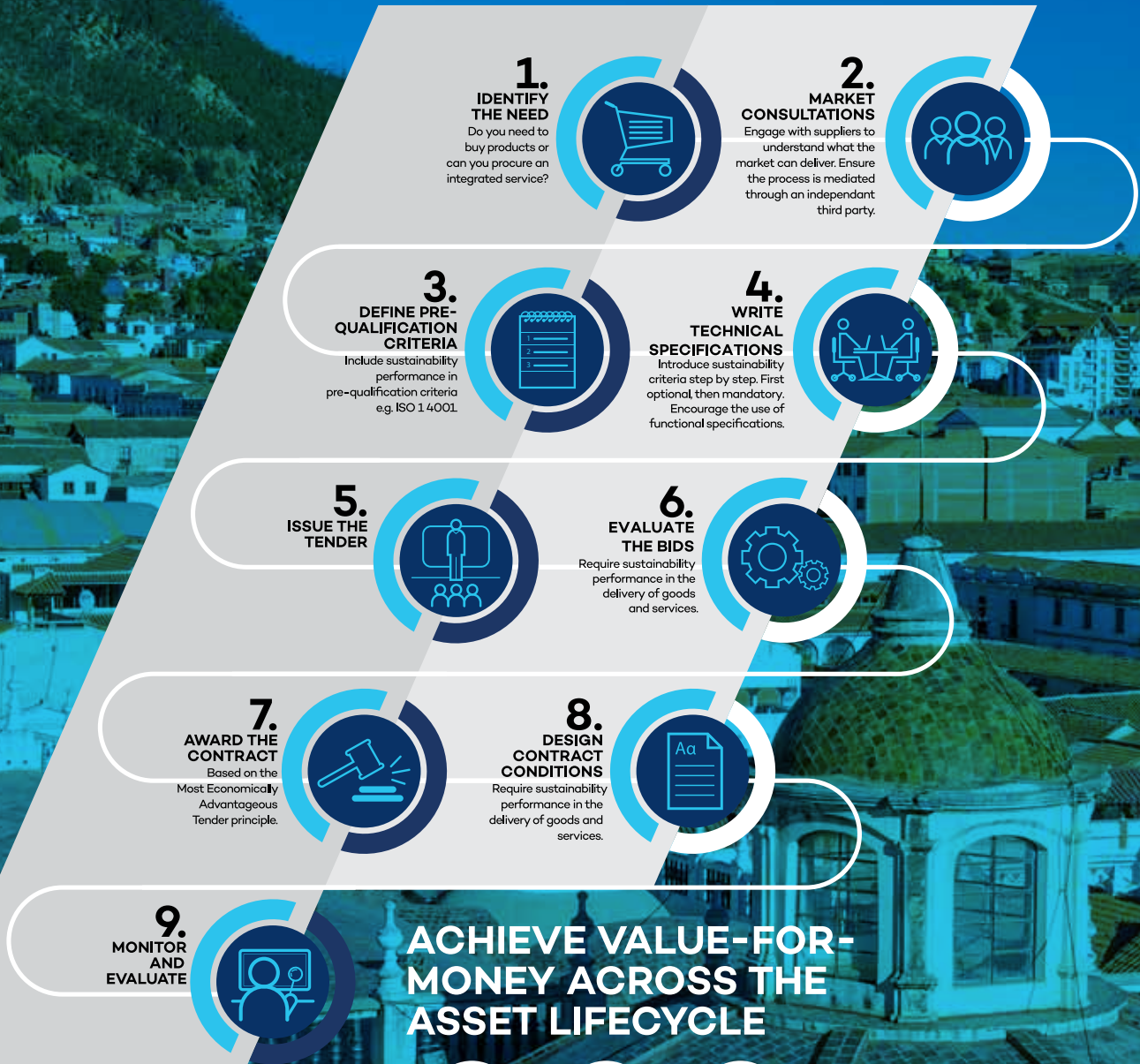
the existing products or service arrangements that are currently being used. Procurers then can work to determine how best to fulfill these 'needs'.

The needs analysis – a critical component of SPP – is one part of the procurement cycle that requires a marked difference from traditional public procurement processes. The latter traditionally focuses on buying a discrete products rather than stopping to question what needs need to be fulfilled in the first place.

² Further information on the SDGs can be found at <https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals>

SUSTAINABLE PUBLIC PROCUREMENT

Introducing sustainability into the procurement cycle



3.2 Market consultations

Market consultations refer to formal, mediated processes through which public procurers ‘engage’ with suppliers to gain insight into new products and technologies in the innovation pipeline. They can also provide procurers with an indication of the ability and appetite of suppliers to meet environmental and social conditions that are likely to feature in future tenders as the implementation of SPP gets underway.

These consultations should be facilitated by a third party, and many countries use consultants, think tanks, technology platforms and research organisations to perform this task. The benefits of market consultations can be that:

- Procurers better understand what environmentally and socially preferable options are presently available on the market, so that they can design the tender and develop specifications, award criteria and contract conditions targeted at procuring the Best Available Technologies Not entailing Excessive Economic Costs (BATNEEC);
- Suppliers have the firsthand opportunity to understand how environmental and social performance will be incrementally integrated into public tenders.

It is essential that these dialogues are transparent (open to all), non-discriminatory (granting no unfair advantage) and formally mediated (by a third party) to avoid opportunistic behaviour for the ensuing tendering process. In the European Union (EU), preliminary market consultations may be carried out as long as they do not distort any future procurement competition. It should be noted that in many countries market consultations are prohibited because of the potential to distort fair competition and grant an unfair advantage to selected suppliers.

Competitive dialogue is another form of market consultation that takes place after a tender has been launched. As its name suggests, this is a mediated dialogue between the procurers and short-listed suppliers to discuss finer technical details related to the specification, the delivery of the goods or service and also to negotiate on price.

The EU has formalized several methods for consulting the market, as shown in Table 3 below.

TABLE 3:
Methods for consulting suppliers (IISD, 2014)

METHOD	ACTIVITY
Desk-based research	<ul style="list-style-type: none"> • Acquiring basic information through online market research or reviewing reports
Preliminary market consultations	<ul style="list-style-type: none"> • Public pre-tender discussions to gather market information for later procurement • Inform potential suppliers of the procuring authority’s needs • Identify what the market can be expected to provide • Identify short- and long-term cost implications • Seek market advice on drafting of tender documentation
Competitive dialogues	<ul style="list-style-type: none"> • Discussions with selected suppliers during the procurement process (i.e. post-tender launch) • Allow suppliers to explain proposed solutions to broadly defined requirements
Trade fairs/ Industry days/ Technology updates	<ul style="list-style-type: none"> • Public or private forums at which new technologies and processes are presented
Facilitated dialogues	<ul style="list-style-type: none"> • Organizations such as clean technology clusters/ platforms and Chambers of Commerce can act as neutral third parties to facilitate exchange of information on technologies entering or approaching the market



CASE STUDY:

CHILECOMPRA AND MARKET CONSULTATIONS

In 2010, ChileCompra developed a market consultation guide for procurers. It defined market consultations as a tool for preparing tender documentation through formal consultation processes and meetings with suppliers.

ChileCompra's popular website includes mercadopublico.cl. This portal provides information on markets, prices, goods and services, and on timing of the tendering process.

In 2014, ChileCompra used this mechanism to study the ITC industry and prepare a framework agreement for ITC goods and services. The consultation gathered information on products, innovations, prices and lifecycles for computers, computer components, software licenses, software development and maintenance, digital educational resources and digital signatures.

3.3 Integrating environmental and social performance into supplier pre-qualification

The rationale for pre-qualifying suppliers for contracting with the public sector is to ensure that the selected suppliers have the legal, financial, commercial and technical capabilities to deliver on time and on budget, for large quantities of high quality goods and services.

Pre-qualification criteria traditionally include formal corporate registration, formal accounting records and audited financial statements, track records of legal compliance - including compliance with environmental and labour laws - and track records on contracting. Examples of environmental and social performance criteria that can be included into pre-qualification criteria are the following:

- Demonstrate ability to meet qualification criteria on environmental management systems stated in ISO 19011:2011 Guidelines for auditing management systems;
- Operate using Environmental Management Systems as per ISO 14001 or equivalent;
- Demonstrate compliance with International Labour Organization (ILO) core labour standards along the supply chains.

3.4 Integrating environmental and social performance into technical specifications

Integrating environmental and social performance into technical specifications is challenging and can be seen as more of an art than a science.

During the preliminary stages of implementing SPP, procurers should refrain from integrating environmental and social performance into technical specifications. This is a time when the uptake of SPP remains uncertain. Procurers and policymakers will only just begin to understand SPP, procurers may not have the experience to identify more sustainable products and services and indeed, suppliers will be adjusting and investing in the necessary upgrades to meet the emerging demand for 'green'.

Moreover, there is continuous innovation in the design, manufacturing and distribution of sustainable goods and services. As such, procurers, policy makers and the end users find it extremely challenging to keep abreast of these developments and to design technical specifications that will demand the best available technologies.

To increase the opportunities to buy the best available technologies, public procurement professionals around the globe are considering the value of functional or performance-based specifications.

In the early stages of SPP, it is best to integrate requirements on environmental and social performance into award criteria (see Section 3.5 for more details). In this way, procurers can reward proactive suppliers that prioritise the delivery of sustainable goods and services while not crowding out those that do not.

As markets for sustainable goods and services mature and an increasing array of products and services begin to appear on the market, procurers can move to include environmental and social performance in technical specifications. If domestic markets for sustainable goods and services are in their infancy, it will be best to integrate environmental and social performance into optional or additional requirements rather than make them a mandatory requirement. As markets for sustainable products and services become mainstream, performance on the same can well be integrated into mandatory requirements.

PERFORMANCE-BASED OR FUNCTIONAL SPECIFICATIONS

A PBS or functional specification describes a performance or the functionality of what procurers and end users seek to buy, rather than the product or service in itself. In other words, the specification will outline what the end users seek to realize but not how it should be realized.

For example, a technical specification for a heating system might require that the supplier provides an oil furnace made of heavy-gauge steel with fiberglass insulation, return air flow located on the top of the unit, a belt-driven fan, and so on. To address the same need, a PBS might simply require a solution that would keep a building of a particular size at an ambient 24 to 26° Celsius.

The case for using PBS is that it provides suppliers with the opportunity to bring forward and supply the best available technologies that will increase efficiency in the delivery of public goods and services and thereby optimize value-for-money across the asset lifecycle. The private sector is continuously innovating and improving the efficiency and indeed, the environmental and social footprints of their products and services. Hence, they have the necessary intelligence to suggest how a particular requirement can be fulfilled in the most cost effective and efficient manner.

Procurers and end users on the other hand, are not likely to be informed of the most recent technological innovations. Therefore, in developing non-performance based specifications, procurers may well be tendering for yesterdays' technologies rather than the newest and most efficient one. This risk – the performance risk – can be mitigated through using PBS.

TECHNICAL SPECIFICATIONS: GETTING FROM THEORY TO PRACTICE

While the arguments made above are relevant in theory, in practice markets are far from predictable. Indeed, the SPP experiences of many industrialised countries indicate that public procurement plays a large part in creating the demand for sustainable goods and services, and that supply eventually follows at a subsequent stage. In this context, policymakers and political leaders need to be courageous and support procurers in taking the first bold steps to include environmental and social performance into optional or additional requirements in technical specifications and mirror them in award scorecards. This will send a powerful signal to markets that political leadership for SPP is visible and long-term. Only then will suppliers take the risk to invest, innovate and to deliver on sustainability.

Procurers face challenges in understanding what makes products and services sustainable, what constitutes environmental and social performance and how this performance can be continuously improved. To implement SPP, procurers need to purchase goods and services that bring best value-for-money across the lifecycle. Hence they need to have baseline information and expertise on what constitutes environmental and social performance. To close this information gap, many countries have developed guidance materials and product criteria checklists that describe the environmental and social attributes of products and services. These checklists are extremely helpful to procurers to differentiate sustainable goods and services from their less sustainable counterparts. Section 4 provides guidance on environmental and social product criteria on major areas of public spend.

TECHNICAL SPECIFICATIONS: THE USE OF VOLUNTARY STANDARDS AND LABELS

In addition to these tools and checklists developed by national governments, procurers can seek information on environmental and social performance by studying the requirements and attributes of voluntary standards and eco-labels. This does not mean that procurers should refer to a given eco-label in the specification – indeed in some countries, this is expressly prohibited on the ground that it prevents open and fair competition in public tenders. In the European Union, for example, procurers are bound by law to not refer to eco-labels by name. Instead, they can design specifications that require that the criteria underpinning a given eco-label must be met, and that the eco-label may be used as one form of proof of compliance. In the USA on the other hand, the Federal Acquisition Regulations refer to explicit voluntary standards and eco-labels. For example, all federal entities are required to purchase office electronics that are EPEAT registered.



CASE STUDY:

PROCEL AND ENERGY LABELLING IN BRAZIL

Brazil's government has long emphasized energy efficiency in products, services and buildings. Its product catalogue sets out mandatory technical specifications for energy efficiency based on environmental labels for commodities such as cleaning products and paper.

Electrobras, the national electrical utility, operates a mandatory energy efficiency labeling system. Procel is intended to develop and serve a Brazilian market for more energy efficient products.



Procurers have a wide array of choice in selecting which eco-label or which voluntary standards they can choose as a baseline for identifying sustainable goods and services.

The International Organisation for Standardization (ISO) assigns eco-labels in three categories:

Type I labels (ISO 14024) are based on the life-cycle impact of a product or service. Third-party verification makes these labels, which include the Forest Stewardship Council (FSC), Energy Star, the Rainforest Alliance (RA) and Brazil's ABNT (Rótulo Ecológico), more credible. In Latin America labels are often used in the forestry sector. In Brazil and Chile PEFC and CERTFOR are the dominant labels and guide procurers as they develop sustainability criteria for timber products.

Type II labels (ISO 14021) are used by manufacturers to inform consumers about the environmental characteristics of a particular component, product or process. These labels are not subject to third party verification.

Type III labels (ISO 14025) contain information on a product's lifecycle impact on the environment. The labels may, for example, list the chemicals used in production. These labels inform consumers but provide a weak basis for comparing the environmental impacts of products.

Some eco-labels also cover performance on social sustainability. The Rainforest Alliance, for example, requires compliance with biodiversity criteria as well as with standards for the well-being of families and communities. The Max Havelaar Fairtrade label and the label of the World Fair Trade Organization are designed to protect worker's rights and ensure fair wages. They require compliance with International Labour Organization (ILO) conventions and the principles of fair trade, focussing more on the social than the environmental dimension of sustainability.

ENERGY-EFFICIENCY LABELS

Argentina, Chile, Mexico, Brazil, Colombia and Ecuador are among the LAC jurisdictions where enterprises apply labels to rate the energy efficiency of products such as air conditioners, refrigerators, heaters, light bulbs and motor vehicles. The ratings run from A to G or from A+++ to E, with A being the most efficient. Procurers could specify a minimum energy efficiency rating of, for example, C in a procurement document. This makes it easy to verify compliance of a bid with a procurer's energy efficiency requirement.



EXAMPLES OF INTERNATIONAL ECO-LABELS

<p>Forest Stewardship Council (FSC)</p> <p>www.fsc.org</p>		<ul style="list-style-type: none"> • FSC standards for responsible forest management, include both environmental and social criteria. • The FSC Recycled label is applied to products that are produced from 100% recycled material. • An FSC Mixed label indicates the percentage of recycled material.
<p>Program for Endorsement of Forest Certification (PEFC)</p> <p>www.pefc.org</p>		<ul style="list-style-type: none"> • The PEFC endorses national forest certification systems that promote sustainable forest management. • Independent verification ensures that the label's ecological, social and ethical standards are met.
<p>Rainforest Alliance</p> <p>http://www.rainforest-alliance.org</p>		<ul style="list-style-type: none"> • The Rainforest Alliance certifies sustainable agricultural products according to social and environmental standards governing the product, the production process and the farmer. • The standards relate to issues of deforestation, climate change, protection of wildlife and alleviation of poverty.
<p>Electronic Product Environmental Assessment Tool (EPEAT)</p> <p>http://www.epeat.net</p>		<ul style="list-style-type: none"> • EPEAT is a global rating system for PCs, displays, imaging equipment and televisions. • EPEAT-certified products comply with strict criteria for design, production, energy use and recycling. • Independent third party verification ensures compliance with the EPEAT requirements.
<p>TCO Certified</p> <p>http://tcodevelopment.com/tco-certified</p>		<ul style="list-style-type: none"> • TCO is a sustainability certification for IT products that includes both social and environmental considerations over the lifecycle of a product. • Compliance is by third party verification.



EXAMPLES OF BRAZILIAN ECO-LABELS

<p>Associação Brasileira de Normas Técnicas <i>http://www.abnt.org.br</i></p> 	<ul style="list-style-type: none"> • The ABNT Eco-label certifies products based on their lifecycle environmental performance. • The label is granted by the Brazilian Organisation of Technical Standards
<p>SustentaX <i>http://www.selosustentax.com.br/selos.php</i></p> 	<p>The SustentaX label is based on the ISO 14024 and certifies that products, materials, equipment and services:</p> <ul style="list-style-type: none"> • are sustainably provided; • comply with quality and safety standards; • are provided by socially and environmentally responsible suppliers.

3.5 Evaluating tenders and awarding contracts

The evaluation and award stage involves examining the bids proposed by the short-listed suppliers and selecting the one that offers the best value-for-money across the product or service lifecycle.

In many countries, tenders are evaluated and awarded based on the lowest price at the time of purchase. When implementing SPP however, tenders should be evaluated based on the Most Economically Advantageous Tender (MEAT).

The MEAT principle allows for these considerations of costs other than purchase price. It provides more scope for the inclusion of environmental and social criteria:

- MEAT considers the full lifecycle of a product or service. This includes the full cost of acquisition (including the raw materials), costs of operation, maintenance and management, and the waste and disposal costs;

- MEAT allows procurers to consider qualitative factors if they can be assessed transparently.

Many jurisdictions use scorecards and matrixes' to determine the best value-for-money amongst the shortlisted bids. When implementing SPP, it is important to allocate a sufficiently significant score to environmental and social performance, to signal to the market the demand for sustainable goods and services is sincere and long-term. Only then will environmental and social performance become main-

stream business priorities. Indeed, only then will suppliers understand that they will not win tenders unless they pay due regard to environmental and social attributes of their products and production processes. During the early implementation of SPP, lower scores can be awarded to sustainability performance. In time, as environmental and social performance moves into 'additional' criteria and subsequently, into the 'mandatory' criteria of technical specifications, the value of the scores can increase in tandem.

Example: Award criteria for the procurement of printers

	TENDER A	TENDER B
Financial criterion: lowest purchasing price (50 points)	USD 10,000 50 points	USD 13,000 35 points
Financial criterion: operating cost (10 points)	4 points	8 points
Environmental criterion: energy efficiency (20 points)	10 points	20 points
Environmental criterion: use of recycled paper (10 points)	5 points	10 points
Social criterion: 5% of employees are from vulnerable groups (10 points)	0 points	10 points
Total	69 points	83 points

The example on the previous page illustrates how sustainability criteria can be used to evaluate a tender for the procurement of office printers. The highest score possible is 100 points.

In this sample tender evaluation, the financial, environmental and social criteria are given different evaluation weightings, based on their relative importance for the procuring authority. Note that price only counts for 50 per cent in the evaluation, so a more costly product that scores better on the social and environmental criteria can still win. This simple example shows how sustainability can be integrated into the award criteria, and how it is a relatively straightforward approach that can be attempted even before writing environmental and social technical specifications.

3.6 Contract conditions

Winning bidders enter into service, sales or management contracts with the public sector. These contracts are often overlooked as an opportunity to compel suppliers to deliver on the environmental and social performance aspects stipulated in the tender. Contracts can also be designed to require that suppliers deliver on their contracts in a manner that reduces environmental impact. For example, operational contracts can require that:

- Goods be delivered in bulk rather than as individual units to minimise packaging and transport-related emissions;
- Suppliers collect the packaging of their products for recycling or re-use;
- Suppliers collect their products at the end-of-life for recycling or re-use;

- Fuel-efficient vehicles are used for delivery to minimise carbon emissions.

4. DEVELOPING SUSTAINABLE PURCHASING PROGRAMS TO STRENGTHEN SMALL AND MEDIUM ENTERPRISES

SMEs are the backbone of the Caribbean and Latin American economy, and governments can use the power of the public purse to strengthen SMEs' competitiveness and thereby the skills of the workforce, their labour practices, and the eco-efficiency of their products and services.

SMEs often find it difficult to participate in public tenders because of the high transaction costs involved in applying for pre-qualification and in the preparation of bids. A heavy emphasis on price, performance guarantees, technical requirements, large volume contracts and complex bidding processes are all difficult barriers for SMEs to overcome in tender processes.

Public procurement can support SMEs in different ways. A margin of preference can be reserved for SMEs. For example, policymakers can opt to mandate that a minimum share or a given percentage of public spend is reserved for contracting with SMEs. Public procurement can further support social inclusion by stipulating that a minimum share or a dedicated percentage of public spend be disbursed via contracts with SMEs that are owned and operated by women, minorities or disabled persons.

CASE STUDY:

MEXICO ALLOWS AGENCIES TO MAKE SUSTAINABLE PROCUREMENT DECISIONS

In 2009, the Government of Mexico restructured the evaluation criteria used by public procurement authorities. Previously, there had been no consistent evaluation system for tenders and procurement agencies had great latitude. The new law explicitly goes beyond the lowest-price evaluation and implements the MEAT principle.

Three forms of evaluation are permitted under the Mexican procurement system: lowest-price, cost-benefit comparison and a points or percentage system that includes both technical and financial evaluations. Proposals must show the technical capacity and experience of the supplier, local content, training and knowledge transfer, in addition to the characteristics of the good, which may include function, durability and eco-friendliness. Such a system allows procurement agencies to reward more sustainable tenders.

During the period from September 2010 to April 2014, 58% of tenders were evaluated on the point or percentage system (Unidad de Política de Contrataciones Públicas, 2014)



In implementing public procurement policies to crowd-in SMEs, governments will be well served if they also put in place strategies to increase the efficiency of the tendering and contracting process. Contracting with a large number of smaller firms can be expensive and cumbersome.

Framework agreements are an important tool in this process. These are agreements that can be used to purchase recurring items of frequent spend that are supplied by SMEs or a consortium of SMEs. They are considered a smarter way to procure than placing ‘one-off’ orders for frequent purchases from different government agencies. The advantage is that framework agreements can set-out the terms and conditions under which specific purchases, often referred to as ‘call outs’ can be made throughout the terms of the agreement. These terms and conditions should include price, environmental and social performance, quantity, and other such attributes to ensure that ‘call outs’ can be carried out quickly and easily, and ensure that the goods or services delivered are always homogenous and fit-for-purpose. They also help public buyers work with a large SME supply base and negotiate volume discounts.

Segmenting larger public tenders into smaller ‘lots’ can also facilitate contracting with SMEs. This then enables smaller firms to collaborate, form consortia and submit joint bids.

CASE STUDY:

PREFERENTIAL PURCHASING PROGRAMS FOR WOMEN IN DOMINICAN REPUBLIC

The Dominican Republic has developed a preferential purchasing program to support Micro, Small and Medium-sized Enterprises managed or owned by women. This program is a response to the priority on gender that was set out by the national government.

The program mandates positive discrimination to empower women in the economy. Law 488-08 mandates to allocate 20% of the public procurement for MSMEs to women-owned enterprises.

In 2014 this program increased the participation of women in public procurement by 15%. In 2015 the program aims at increasing the registration of women-owned enterprises as public suppliers with 15%.

CASE STUDY:

FRAMEWORK AGREEMENTS TO BUY TORTILLAS FROM MICRO-ENTERPRISES IN HONDURAS

The Honduran public procurement authority and ministry of health encourage microenterprises to supply food to hospitals. Through framework agreements and the Honduran hospital network, many hospitals have been buying tortillas—a Honduran staple produced mostly by small companies—from microenterprises. This preferential purchasing helps microenterprises access the market, increasing their competitiveness and their participation in government procurement.

CASE STUDY:

DIRECTIVE 17 ON PREFERENTIAL PURCHASING FROM VULNERABLE GROUPS IN CHILE

In Chile, only 29 per cent of employment-aged people with disabilities are actively employed. The Chilean government enacted Directive 17 to encourage vulnerable people and groups to participate in public procurement.

Articles 6 and 23 of Procurement Law 19.886 already grant extra points to suppliers that offer better employment conditions or pay and provide incentives to contract with disabled people.

Directive 17 helps procurers to buy from vulnerable groups. It proposes specifications that promote equal opportunities. Evaluation criteria include guidelines relating to disabled and indigenous people, youth employment, gender equality and employment conditions. The directive also covers guidelines for performance monitoring, including the requirement of documentation and defining sanctions for non-compliance.

SECTION 3

Getting Started on Sustainable Public Procurement

Determining where to start implementing SPP can be a daunting task. This section is designed to guide policy-makers and procurers through the preliminary phases of implementing SPP and provide for the development of a robust SPP programme moving forward.

1. THE VALUE OF VISIBLE POLITICAL COMMITMENT

Vocal and visible support from a senior political figure can be critical for launching and rolling out a successful programme. Political leadership is also useful to send the right signals to the entire domestic economy – that green and social economic transformation is a political priority, that the government seeks to lead by example and that long-term and scaled-up demand for sustainable goods and services is here to stay.

CASE STUDY:

IMPACT OF POLITICAL COMMITMENT IN DOMINICAN REPUBLIC

In 2012 President Danilo Medina launched a national policy and plan to support the growth of MSMEs as a tool for poverty alleviation.

The strategy involved:

- Setting priorities to improve access to markets, financial inclusion and business development (particularly access to new technologies) for MSMEs.
- Placing procurement at the centre of MSME policy, because public procurement is a strong driver of growth.
- Developing a preferential purchasing program to support MSMEs. The program was the result of a top-down decision recognizing the potential of preferential purchasing to support MSMEs and social inclusion.

With presidential support, the Public Procurement General Directorate (Dirección General de Contrataciones Públicas – DCGP) leads the promotion of MSMEs. Since 2012, 43,691 contracts for more than RD\$26 billion (approximately US\$596 million) have been awarded to MSMEs.

2. ASSIGNING RESPONSIBILITY IN GOVERNMENT

Having an SPP “champion” within the government will make implementation easier as it assigns the SPP programme with an institutional home and dedicated leadership. Ministries of Finance, Planning or Environment are all good candidates, but continued liaison and oversight from the Ministry of Finance should be assured at all times. As responsibility is assigned, the designated team must be provided with the budget, training and the mandate to work with all stakeholders – policymakers, procurers, suppliers and public accountants – to make implementation a reality.

3. IDENTIFY THE POLICY SPACE FOR IMPLEMENTING SPP

The SPP champions need to be able to refer to both the explicit and implicit provisions on sustainability that are encompassed in the national public procurement law. Today, modernised public procurement and concession laws do provide preliminary space for SPP, albeit the fact that they may not contain explicit references to “sustainable development” or the “green economy”. Instead, many laws refer to “value-for-money across the lifecycle” or suggest that public procurement is conducted in a manner that yields “whole-life value” or is based on the “total cost of ownership”.

Many laws also provide the space for procurers to award tenders based on a range of criteria in addition to purchase price. For example, in the EU, procurers are mandated to award tenders based on the MEAT principle, as explained above in section 3.5. In India, tenders can



be awarded on price, quality and environmental performance. In Chile, public purchasing has to bring whole-life value for the public purse and in Peru the new procurement law embeds the value-for-money principle.

Many procurement laws also provide explicit space for using performance-based or functional specifications. This enables procurers to make environmental and social performance an integrated part of the 'performance' or the 'functionality' that is being purchased. Procurers then have the mandate to award higher scores to environmental and social performance when evaluating bids.

4. SETTING GOALS

The global experience on SPP demonstrates two broad approaches to establishing SPP goals:

- Establish an SPP target. This will require that a given share (or percentage) of public procurement would need to integrate sustainability performance. For example, Belgium has established a 50% target on GPP and implementation is prioritized on the following products: transport, food and catering, green electricity, sustainable wood and buildings and toxic products.
- Establish the areas of spend that need to integrate environmental and social performance. For example, in the USA, 95% of federal purchasing contracts must refer to products that are energy-efficient, water efficient, bio-based, environmentally preferable, non-ozone depleting, made with recovered materials, and that encourage lower carbon footprints.

5. INFORMING SUPPLIERS AND THE WIDER MARKET

Once the decisions to implement SPP are made, policymakers and political leaders need to announce this intent to the domestic economy. This will provide critical lead-time for suppliers to upgrade their sustainability performance and for public procurers to increase their expertise in integrating the same in tender decisions. Therefore, when tenders are launched in subsequent months, many more suppliers will be ready to bid and the bidding price can be substantially lower, perhaps even comparable to the purchasing costs of lesser-sustainable alternatives.

6. PRIORITIZING WHERE TO START

Prioritizing where to start the implementation of SPP is always subject to much discussion and debate.

Many jurisdictions prefer to take an incremental or a staged approach, beginning with a shortlist of products and services and, over time, increasing its scope.

It is, however, very important that procurers prioritize the right products and services to kick-start implementation. Commentators and stakeholders will be paying particular attention to the preliminary phase of SPP and those leading the SPP effort will be under due pressure to demonstrate theory in practice. To this end, it is best to select the 'pilot' products and services based on the following considerations:

- Which products and services have the largest environmental and social footprint? If early

efforts on SPP can be associated with tangible benefits in terms of better air quality, reduced waste, creation of greener jobs and indeed lowered operational expenditure, the credibility of the impending SPP effort will be greatly enhanced.

- What is the share that public procurement represents in the overall demand for a given product or service? The larger this share, the more SPP will serve as an incentive for green industrial competitiveness and the greater the influence it can have on the behaviour of suppliers in the market.
- What is the purchasing cost of sustainable goods and services? Are these goods and services, easier and cheaper to use, maintain and dispose of? Do they increase productivity?
- What products and services can be sourced from and are manufactured in the domestic economy? Can SPP trigger the adoption of cleaner production, resource efficiency and improved health and safety? Can public demand help augment green industrial and knowledge economy skills across supply chains? Can SPP help increase domestic green industrial competitiveness?
- What are the priority sectors (or target sectors) for foreign direct investment (FDI)? Do these sectors align with the goods, services and infrastructure that the public sector seeks to procure? If they do, SPP can serve as a complimentary strategy for increasing FDI and industrial development.

- What are the pressing environmental and social issues facing the domestic economy? Can SPP help address these issues? For example, in a jurisdiction where electronic waste is an issue, public tenders can be designed to include requirements on producer responsibility.
- To what extent can the procurement of discrete products be replaced by the procurement of services? Can this decrease both the purchasing and operating costs for the public purse? For example, in China, public entities have shifted from procuring vehicles to leasing vehicles and more recently, leasing fuel-efficient vehicles to improve urban air quality. Similarly in Germany, the Netherlands and the UK, public entities seek to purchase integrated building management and facility management services rather than procuring light bulbs, heating systems and air conditioners as discrete products.

7. INTEGRATING ENVIRONMENTAL AND SOCIAL PERFORMANCE INTO TENDERS

As explained in detail in Section 2, the demand for environmental and social performance can be integrated in various stages of the procurement cycle: at the pre-qualification stage, in technical specifications and award criteria, and in the contract conditions.

At the preliminary stages of implementing SPP, procurers are advised to begin by introducing environmental and social performance into supplier pre-qualification and into the model sales and service contracts.

Including performance criteria into pre-qualification can immediately raise the bar on sustainability performance. For example, if pre-qualification criteria are expanded to include compliance with performance standards such as ISO 14001 Environmental Management Systems or reporting on environmental and social performance in accordance with the Guidelines of the Global Reporting Initiative, SPP implementation will be greatly facilitated as the public sector would be working with a supplier base that has expertise on sustainable production and consumption by default.

Environmental and social performance can also be included in sales and service contracts. The general provisions of these contracts can contain conditions related to broad performance conditions that are applicable to categories of spend. For example:

- Proof of compliance with occupational health and safety standards;
- Attestations that raw materials have not been sourced from old growth forest or a forest with high conservation value (except as permitted by national conservation regulations);
- Evidence that raw materials and the production process do not endanger species covered by the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES).

The specific provision can relate to baseline product or performance characteristics that are too fundamental to be included in specifications. For example, in the procurement of paper and paper products, while the tender specifications can award higher scores for recycled pulp, the contract conditions can

require that the bleaching of the pulp is performed elemental chlorine free (ECF).

As the SPP expertise of procurers increase and suppliers are able to provide more environmentally and socially-preferable alternatives, sustainability performance can be included in the optional (or additional) criteria in specifications and indeed, be awarded sufficiently significant award scores to make performance a priority for suppliers. In time, sustainability performance can be included as mandatory criteria in technical specifications, and thereby increase the sophistication in use of SPP as a driver of inclusive green growth.

Ultimately, SPP should move towards lowering the total cost of ownership for the public purse and increasing value-for-money across the product or service lifecycle. In this vein, moving from the purchasing of products to the leasing of services, and moreover, the design of functional or performance-based specifications becomes relevant. These strategies are discussed in Section 2 of this handbook.

8. WHAT CAN PROCURERS DO WHEN SUSTAINABLE GOODS AND SERVICES COST MORE TO PURCHASE?

Procurers are often reluctant to include sustainability features in tenders because the environmentally and socially-preferable goods and services often cost more to purchase than their less sustainable alternatives. Procurers and policy makers are also challenged by tight budgets, and ever-growing demands to deliver better services in critical areas such as education, health, water and sanitation, electricity, public trans-



EXAMPLE:

HOW TO INTEGRATE ENVIRONMENTAL AND SOCIAL PERFORMANCE INTO THE PROCUREMENT OF TEXTILE PRODUCTS

Pre-qualification criteria:

Pre-qualification of suppliers is typically based on evidence of sound corporate governance, legal and contractual compliance and financial stability. Integrating social and environmental factors into pre-qualification should therefore require evidence of corporate commitment to the principles and practices of sustainability. For example, pre-qualification criteria could include evidence of:

- Commitment to broad principles or codes of conduct on sustainable development;
- An active corporate social responsibility programme and public reporting on the same;
- Certification on ISO 14001 Environmental Management Systems;
- Implementation of ISO 26000 Social Responsibility guidance standard.

Contract conditions:

This should include environmental and social performance that is directly related to the design, manufacture and delivery of the product or service being procured. In the procurement of textile products contract conditions could refer to:

- Avoiding the use of heavy metals in the manufacture of yarns and the weaving, dyeing and production of textiles;
- Active engagement with suppliers on the abolition of child labour and forced labour and the conditions under which youth labour is used;
- Evidence on following ILO core labour standards on wages, occupational health and safety, working hours and overtime in own facilities and in the first and second tiers of the supply chain.

Technical specifications:

Procurers need to ensure that when including environmental and social performance in technical specifications, these aspects should be directly relevant to the performance and/or functionality of the product being procured.

At the onset of SPP, it is best to include sustainability requirements as optional criteria and award significant scores on their performance. In the production of textiles, optional criteria could be the reduced use of chlorine and phthalates. These criteria should be introduced as optional as suppliers have to undertake upgrades on production processes to remove these substances and also pass down this requirement through the supply chains. As such, these changes require lead-time.

As SPP gets underway, the optional criteria can be made mandatory. In tandem, higher performance requirements can be introduced as optional criteria. For example, while the avoidance of chlorine and phthalates are being made mandatory, the supply of organic fibres can be made optional.

Extensive guidance on the environmental and social characteristics on major areas of spend are provided in Section 4.

portation, and nutrition. In these circumstances, spending more on 'expensive greener alternatives' can be perceived to be an unnecessary luxury.

Procurers can however employ a number of strategies to reduce the purchasing costs of sustainable alternatives:

- Buying in bulk: aggregating demand of several procurement agencies can help increase the

volume of demand and hence enable the negotiation of volume discounts;

- Establishing central procurement platforms that will continuously negotiate volume discounts, and stock with delivery to public entities on requisition;
- Establishing framework agreements under which guaranteed demand can be associated with discounted prices;

- Providing suppliers with lead-time: informing suppliers that future tenders will include environmental and social criteria. Formal and facilitated consultation with suppliers is also instructive for suppliers to understand the expectations around SPP and for policymakers and procurers to appreciate the challenges in scaling up environmental and social performance;

- Employing reversed auctions: in jurisdictions where e-procurement is practiced, procurers can use reversed auctions to realise efficient price discovery. The State of Sao Paulo (Brazil) operates reverse auctions in the procurement of 'green' goods and services;
- Seeking to purchase services as opposed to goods: attempt to reduce to total cost of ownership and hence seek to buy services rather than own goods. Can procurers not use service contracts for facilities management, catering, landscaping, use of office IT services, use of cloud computing services and even use of office furniture? In China, procurers have suspended the purchasing of vehicles to lease them from manufactures with the condition that they are replaced with more fuel-efficient models as they become commercially available;
- Focusing on products that have already been earmarked as priorities for foreign direct investment, domestic industrial development or for addressing domestic environmental and social challenges. Procurers are more likely to be able to negotiate volume discounts on these products given that they have been already targeted by ancillary policies. If through SPP, procurers were able to increase the demand for these products, the political-buy in for SPP will be greatly enhanced. For example, in Ecuador a 2009 decree required Ecuadorian state agencies to use hybrid or other fuel-efficient vehicles. The government placed the focus on vehicles through this decree and hence, the implementation of SPP was piloted on tenders for public vehicle fleets.

9. RECORD KEEPING ON SPP

As the implementation of SPP gathers momentum, policy makers and procurers would do well to maintain reliable records on the values and volumes of public spend and the corresponding share of SPP. Indeed, it would be ideal if these records could also track the incremental uptake of SPP over time. This information will be critical for political leaders, policymakers and procurers as they seek to demonstrate the value-added of SPP and its role as a driver of sustainable economic development.

A good example on the importance of maintaining disaggregated records on values and volumes of public spend comes from the European Union. As a part of the 2006 Sustainable Development Strategy, the European Commission proposed that Member States work towards a 50% GPP target by 2010. In tandem, in September 2008, work began to develop a methodology to measure progress on GPP. One of the biggest challenges in doing so was the lack of reliable and disaggregated data on spend.

When maintaining records on SPP, it is best that volumes and values on spend are recorded in a disaggregated form, in direct correlation to the unit costs and quantities being procured. This level of record keeping can however be cumbersome and expensive. The issue is that to monetise the multiplier gains afforded by SPP, disaggregated data is always preferable.³

10. PROVIDE PROCURERS WITH INCENTIVES TO IMPLEMENT SPP

Procurers and policymakers need to be rewarded for leading and implementing SPP. Procurers' job descriptions should therefore expressly link purchasing decisions to whole-life value, the total-cost-of-ownership and most importantly, the optimisation of value-for-money across the asset lifecycle. Implementing SPP should also be integrated into performance and salary reviews – so that procurers become the agents of change in the quest towards a more sustainable economy.

The pace of change and innovation in the development of sustainable goods and services is ever increasing. To be effective, procurers and policymakers must therefore have the opportunity to continuously upgrade their skills, to understand the fundamental of design-for-the environment and eco-innovation and integrate cutting-edge thinking into the procurement process.

11. RAISING THE PROFILE OF THE PUBLIC PROCUREMENT PROFESSION

Procurers are often considered to be administrators – those that occupy the back offices, issue requisitions and execute the paper work. They are rarely credited as a profession that make spending decisions or decisions involving large sums of money that can shift the direction of countries' economic development.

The implementation of SPP provides the first step to empower procurers and compel them to add value to purchasing decisions. This will help upgrade the 'branding' and image of the procurement profession as leaders and drivers of change.

³ The International Institute for Sustainable Development has developed a model to enable procuring entities monetise the environmental, social and economic multipliers realised through implementing GPP.

SECTION 4

Product Criteria for Major Areas of Government Spending

SECTION 4
PRODUCT CRITERIA FOR MAJOR
AREAS OF GOVERNMENT SPENDING

Mandatory or optional technical specifications or award criteria can guide procurers to products with better social and environmental performance.

Procurers must always be aware of the laws, regulations or guidelines governing their activities. There may be country-specific provisions (such as minimum wage regulations, environmental requirements, energy-efficiency standards or workplace health and safety rules) that make certain criteria mandatory. These must be included in the mandatory technical specifications of the tender.

The annex includes specifications for the main areas of public procurement. It consists of the following products or product categories:

- Office IT equipment
- Vehicles
- Indoor lighting
- Outdoor lighting
- Paper
- Air Conditioning
- Furniture
- Apparel

1. Office IT Equipment

The products under this category are of PCs, notebook computers (including keyboards, displays and graphic processing units supplied with a computer) and monitors. Reflecting the environmental impact of these products, the criteria focus on energy efficiency and recycling.

MANDATORY REQUIREMENTS

ENERGY EFFICIENCY

In Brazil, Uruguay, Mexico and Argentina, products must comply with the Minimum Energy Performance Standard (MEPS) defined under each country's laws. In countries without MEPS, demand a high-energy efficiency level (minimum level B on the energy efficiency label) for IT equipment.

MONITOR BACKLIGHTS

Monitor backlights must not contain more than 3.5 mg of mercury.

OPTIONAL REQUIREMENTS

ENERGY EFFICIENCY

Products comply with Energy Star Standards.

MONITOR BACKLIGHTS

Monitor backlights do not contain mercury.

RECYCLING

Products are easy to disassemble and recycle at the end of their lifespan.

AVAILABILITY OF SPARE PARTS

Spare parts will be available for at least three years after production to extend the lifespan of the full product.

PACKAGING

- Cardboard packaging consists of 50 per cent recycled material and does not contain PVC or other chlorinated plastics;
- Packaging is separable into mono-material parts; and
- Packaging contains at least 80 per cent (by weight) materials that are recyclable (with locally available recycling systems) or compostable.

LABELS



EPEAT

<http://www.epeat.net/>



TCO Certified

<http://tcodevelopment.com/tco-certified/>



Energy Star

<http://www.energystar.gov/>



Blue Angel

<https://www.blauer-angel.de/en/home>



Nordic Ecolabel

<http://www.nordic-ecolabel.org>



2. Passenger Cars and Light-Duty Vehicles

MANDATORY REQUIREMENTS

The tenderer must provide a vehicle specification sheet documenting compliance with tender criteria. Warranty documentation must also be provided. Additional information, including third-party verifications, may be requested from the tenderer.

EMISSIONS

Many Latin American countries have adopted the EU or U.S. emissions standards by reference, so these standards must be incorporated into the vehicle procurement process. Some countries have developed their own emission standards, such as Brazil's PROCONVE. These are the EU standards for CO₂ emissions:

VEHICLE TYPE ⁴	CO ₂ g/km
Mini	110
Small	120
Compact	130
Mid	150
Large	170
High/Exclusive	270
Offroad/Family Wagon	210
Small vans (N1, class I)	150
Other vans (N1, class II and class III)	220

EXHAUST EMISSIONS

Vehicles must comply with the EURO 5 exhaust emissions standard, the US TIER 2 Ban 5 standard or an equivalent standard. These standards regulate pollutants such as carbon monoxide, oxides of nitrogen, particulates and hydrocarbons.

ECO DRIVING

Appropriate driving practices help reduce fuel consumption and emissions. Operators must be provided with vehicle-specific driving instructions.

RECYCLED CONTENT

25 per cent of the aluminium and steel used in the production of the vehicle must be recycled (second fusion), and the amount of recycled material must be provided as a percentage of total vehicle weight.

SOURCING

The tenderer must provide proof of compliance with the international working standards (ILO Core Conventions) listed below throughout the supply chain:

- 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)

WARRANTY AND DURABILITY

- A guarantee for a period of at least one year or 20,000 km, whichever occurs first, must be provided.
- Availability of parts must be guaranteed for at least five years from the time production ceases on the particular model. Bidders must also demonstrate the availability of parts by country or region.

⁴ See www.cleanvehicle.eu for vehicle type examples

OPTIONAL REQUIREMENTS

EMISSIONS

Optional CO₂ emissions requirements can be more stringent than the mandatory requirements.

Emissions do not exceed the following values:

VEHICLE TYPE ⁵	CO ₂ g/km
Mini	90
Small	100
Compact	110
Mid	130
Large	150
High/Exclusive	200
Offroad/Family Wagon	170
Small vans (N1, class I)	130
Other vans (N1, class II and class III)	180

Tenders of vehicles with even lower emissions, such as those powered by alternative fuels, can be awarded a higher score in the evaluation by making emissions part of the award criteria.

EXHAUST GAS EMISSIONS

Vehicles comply with the EURO 6 exhaust emissions standard or equivalent.

GEAR SHIFT INDICATORS

Vehicles are equipped with a gear shift indicator that increases efficiency by telling drivers when to shift gears up or down.

TIRE PRESSURE MONITORING SYSTEMS (TPMS)

Vehicles are equipped with TPMS. (Tire pressure influences fuel consumption through its impact on rolling resistance of the vehicle.)

FUEL CONSUMPTION DISPLAY

Vehicles are equipped with a mechanism that displays fuel consumption information to the driver and assists the driver in more eco-efficient driving.

AIR CONDITIONING GASES

There are various types of air conditioning gases, some of which have damage the ozone layer and/or contribute to climate change.

If the vehicle is fitted with an air-conditioning system designed to contain fluorinated greenhouse gases, the specific gas has a global warming potential (GWP) ≤ 150 (related to CO₂ and a time horizon of 100 years). If the GWP is higher, the leakage rate from the system does not exceed 40g of fluorinated greenhouse gases per year for a single evaporator system, or 60g of fluorinated greenhouse gases per year for a dual evaporator system.

The tenderer provides the name, formula and GWP of the refrigerating gas used in the air conditioning system. If a mixture of gases is used, the GWP is calculated as follows, with:

- $GWP = \sum (\text{Substance X1 \%} \times GWP(X1)) + (\text{Substance X2 \%} \times GWP(X2)) + \dots + (\text{Substance Xn \%} \times GWP(Xn))$ -
- where n is the number of gases and % is the contribution by weight with a weight tolerance of +/- 1 %.⁶
- If GWP is > 150, leakage tests results must be provided.

RECYCLED CONTENT

75 per cent of the aluminium and/or steel used for the production of the vehicle is recycled (second fusion).

RECYCLABILITY

Vehicles and their parts are recyclable or reusable. The components are made of materials that can be easily separated for recycling.

SOURCING

The tenderer provides proof of compliance with international working standards (ILO Core Conventions), as under the mandatory requirement but verified through an independent third-party.

WARRANTY AND DURABILITY

The supplier guarantees the vehicle for at least three years or 100,000 km, whichever occurs first.

Professional end-of-life service maximizes efficiency and value. The tenderer offers:

- An end-of-life take back and recycling service within the country/region of use of the vehicle; and/or
- A used vehicle refurbishment program.

⁵ See www.cleanvehicle.eu for vehicle type examples

⁶ Information on GWP of gases can be found at: http://www.grida.no/publications/other/ipcc_tar?src=/climate/ipcc_tar/wg1/248.htm



3. Indoor Lighting

MANDATORY REQUIREMENTS

TYPE OF LAMP

The lamps must be of any type (compact fluorescent [CFLs], tubular fluorescent, circular, LED, discharge, tungsten halogen, etc.) other than incandescent filament.

Minimum performance requirements for CFLs:

- Minimum lamp life: 6000 hours
- Minimum efficacy (lumens/W) matching the lamp configuration and lamp power (W) as follows:

LAMP CONFIGURATION	LAMP POWER RATING (WATTS)	MINIMUM EFFICACY (LUMEN/W)
Bare lamp	Less than 15	More than or equal to 45
	More than or equal to 15	More than or equal to 60
Covered lamp without reflector	Less than 15	More than or equal to 40
	More than or equal to 15 but less than 19	More than or equal to 48
	More than or equal to 19 but less than 25	More than or equal to 50
	More than or equal to 25	More than or equal to 55
Lamp with reflector	Less than 20	More than or equal to 33
	More than or equal to 20	More than or equal to 40

MERCURY CONTENT

The mercury content must not exceed the values specified below:

TYPE OF LAMP	MERCURY CONTENT (MG/LAMP)
Compact fluorescent lamps	3
T5 tubular fluorescent lamps	4
T8 tubular fluorescent lamps	5

SOURCING

The tenderer must provide proof of compliance throughout the supply chain with the international working standards (ILO Core Conventions) listed below:

- 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)

OPTIONAL REQUIREMENTS

MINIMUM PERFORMANCE REQUIREMENTS

Minimum lamp life is:

TYPE OF LAMP	LAMP LIFE (HOURS)
Tungsten halogen lamps	2,000
Circular lamps	7,500
Tubular fluorescent lamps	15,000
High-intensity discharge (HID) lamps	9,000
LEDs	15,000

Minimum efficacy is:

TYPE OF LAMP BASED ON EU ENERGY LABEL FOR LAMPS	ELECTRICAL CONSUMPTION RELATIVE TO AN INCANDESCENT FILAMENT LAMP PRODUCING THE SAME AMOUNT OF LUMEN ⁷
Self-ballasted fluorescent lamps (CFLs)	A
Tungsten halogen lamps	C
All lamps other than halogen lamps with colour rendering index Ra>=90	B
All other compact fluorescent lamps with integral ballast	A
15W T8 tubular fluorescent lamps, and miniature tubular fluorescent lamps	B
Circular lamps	B
Other tubular fluorescent lamps	A
All other lamps including LEDs and discharge lamps	A

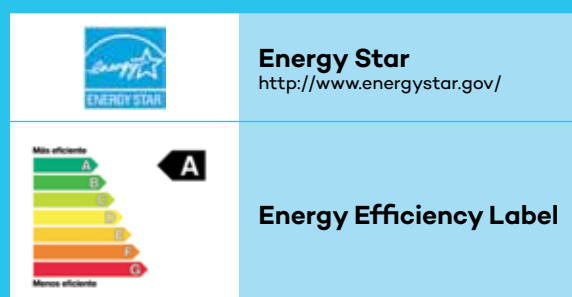
Source: Core criteria in EU GPP Criteria for Indoor Lighting, 2012

PACKAGING

The lamp's packaging does not include laminates and composite plastics:

- Cardboard and corrugated paper boxes are made of at least 50 per cent post-consumer recycled material.
- Plastic packaging materials are made of at least 50 per cent post-consumer recycled material.

LABELS



⁷ The letter shows the classification of the lamp's electrical consumption relative to an incandescent filament lamp that produces the same number of lumens:

A 20-50%	B 50-75%	C 75-90%	D 90-100%	E 100-110%	F 110-125%	G >125%
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Source: Europe's Energy Portal, <http://www.energy.eu/>



4. Outdoor Lighting: Fixed Installations for Functional Lighting

MANDATORY REQUIREMENTS

TYPE OF LAMP

The lamps can be of any type (discharge [HID], compact fluorescent [CFLs], tubular fluorescent, circular, LED, tungsten halogen, etc.) but incandescent filament lamps may only be used if they are of one of the following types:

- Motor vehicle lights
- Flood lights
- Halogen lights
- Spotlights or searchlights
- Airport runway lights;
- Streetlights
- Special purpose lights, including theatre or stage lights.

MINIMUM PERFORMANCE REQUIREMENTS FOR HID LAMPS:

HID lamps must meet specific efficacy requirements depending on their colour rendering index, as listed below. Lamps that comply with the specifications must be procured for existing outdoor lighting systems where compatible with existing systems. All new systems must include fittings for lamps that meet the stated specifications.

High pressure sodium lamps with a colour rendering index $Ra < 60$ have the following minimum luminous efficacy:

NOMINAL LAMP WATTAGE (W)	RATED LAMP EFFICACY (LM/W) – CLEAR	RATED LAMP EFFICACY (LM/W) – COATED
$W \leq 45$	≥ 62	≥ 60
$45 < W \leq 55$	≥ 80	≥ 70
$55 < W \leq 75$	≥ 91	≥ 82
$75 < W \leq 105$	≥ 105	≥ 95
$105 < W \leq 155$	≥ 114	≥ 107
$155 < W \leq 255$	≥ 125	≥ 120
$255 < W$	≥ 138	≥ 133

High pressure sodium lamps designed to function on high pressure mercury ballasts are exempt from the requirement that new systems include fittings for lamps that meet the above efficacy specifications.

Metal halide lamps with a colour rendering index $Ra < 80$ have the following minimum luminous efficacy:

NOMINAL LAMP WATTAGE (W)	RATED LAMP EFFICACY (LM/W) – CLEAR	RATED LAMP EFFICACY (LM/W) – COATED
$W \leq 55$	≥ 85	≥ 80
$55 < W \leq 75$	≥ 100	≥ 85
$75 < W \leq 105$	≥ 105	≥ 90
$105 < W \leq 155$	≥ 110	≥ 95
$155 < W \leq 255$	≥ 100	≥ 92
$255 < W$	≥ 92	≥ 100

Metal halide lamps with a colour rendering index $Ra \geq 80$ have the following minimum luminous efficacy:

NOMINAL LAMP WATTAGE (W)	RATED LAMP EFFICACY (LM/W) – CLEAR	RATED LAMP EFFICACY (LM/W) – COATED
$W \leq 55$	≥ 85	≥ 65
$55 < W \leq 75$	≥ 94	≥ 70
$75 < W \leq 105$	≥ 95	≥ 75
$105 < W \leq 155$	≥ 96	≥ 75
$155 < W \leq 255$	≥ 97	≥ 80
$255 < W$	≥ 98	≥ 80

Ballasts of high intensity discharge lamps must meet these minimum efficiency specifications:

NOMINAL LAMP WATTAGE (W)	MINIMUM BALLAST EFFICIENCY (η BALLAST) %
$W \leq 55$	≥ 85
$55 < W \leq 75$	≥ 94
$75 < W \leq 105$	≥ 95
$105 < W \leq 155$	≥ 96
$155 < W \leq 255$	≥ 97
$255 < W$	≥ 98

The ballast efficiency (η_{ballast}) refers to the ratio of lamp power (ballast output) to the input power of the lamp-ballast circuit with sensors, network connections and other auxiliary loads disconnected. Ballasts that function at multiple wattages must comply with the requirements for each wattage at which they operate.

MINIMUM PERFORMANCE REQUIREMENTS FOR CFLS:

The minimum required lamp life is 6,000 hours. Minimum efficacy (lumens/W) matching the lamp configuration and lamp power (W) is:

LAMP CONFIGURATION	LAMP POWER RATING (WATTS)	MINIMUM EFFICACY (LUMEN/W)
Bare lamp	Less than 15	More than or equal to 45
	More than or equal to 15	More than or equal to 60
Covered lamp without reflector	Less than 15	More than or equal to 40
	More than or equal to 15 but less than 19	More than or equal to 48
	More than or equal to 19 but less than 25	More than or equal to 50
	More than or equal to 25	More than or equal to 55
Lamp with reflector	Less than 20	More than or equal to 33
	More than or equal to 20	More than or equal to 40

MERCURY CONTENT

The mercury content must not exceed the values specified below:

TYPE OF LAMP	MERCURY CONTENT (MG/LAMP)
High pressure sodium lamps ($W \leq 155$)	25
High pressure sodium lamps ($155 < W \leq 405$)	30
High pressure sodium lamps ($W > 405$)	40
Metal halide lamps ($W \leq 95$)	5
Metal halide lamps ($95 < W \leq 245$)	15
Metal halide lamps ($W > 245$)	30
Compact fluorescent lamps	3
T5 tubular fluorescent lamps	4
T8 tubular fluorescent lamps	5

SOURCING

The tenderer must provide proof of compliance with the international working standards (ILO Core Conventions) listed below throughout the supply chain:

- 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)



OPTIONAL REQUIREMENTS

MINIMUM PERFORMANCE REQUIREMENTS

Minimum lamp life must be as follows:

TYPE OF LAMP	LAMP LIFE (HOURS)
HID lamps	9,000
Tungsten halogen lamps	2,000
Circular lamps	7,500
Tubular fluorescent lamps	15,000
LEDs	15,000

Minimum efficacy is:

TYPE OF LAMP	RELEVANT ENERGY CLASS, BASED ON EU ENERGY LABEL FOR LAMPS ⁸
Self-ballasted fluorescent lamps (CFLs)	A
Tungsten halogen lamps	C
All lamps other than halogen lamps with colour rendering index Ra >= 90	B
All other compact fluorescent lamps with integral ballast	A
15W T8 tubular fluorescent lamps, and miniature tubular fluorescent lamps	B
Circular lamps	B
Other tubular fluorescent lamps	A
All other lamps including LEDs and discharge lamps	A

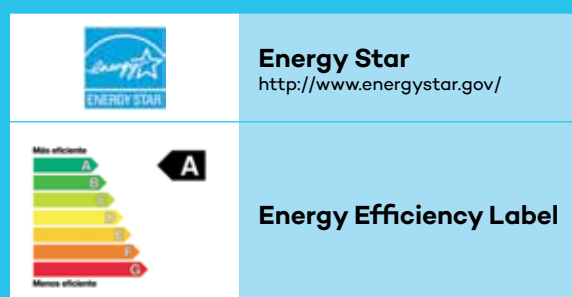
Source: Core criteria in EU GPP Criteria for Indoor Lighting, 2012, http://ec.europa.eu/environment/gpp/pdf/criteria/indoor_lighting.pdf

PACKAGING

The lamp's packaging does not include laminates and composite plastics:

- Cardboard and corrugated paper boxes are made of at least 50 per cent post-consumer recycled material.
- Plastic packaging materials are made of at least 50 per cent post-consumer recycled material.

LABELS



⁸ The letter shows the classification of the lamp's electrical consumption relative to an incandescent filament lamp that produces the same number of lumens:

A 20-50%	B 50-75%	C 75-90%	D 90-100%	E 100-110%	F 110-125%	G >125%
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Source: <http://www.energy.eu/#energy-focus>

5. Paper

Plain, unused paper for writing, printing and copying purposes (up to 170g/m²) sold in sheets or reels.

MANDATORY REQUIREMENTS

FIBRE ORIGIN FOR PAPER FROM RECOVERED PAPER FIBRES

Paper must be made from the highest possible percentage of recovered paper fibres. Recovered paper fibres include post-consumer recycled fibres and pre-consumer recycled fibres from paper mills.

FIBRE ORIGIN FOR PAPER FROM VIRGIN FIBRES

Fibres for pulp production must be sourced from timber that has been logged legally in areas that are neither protected nor in the official process of being designated for protection. It must not have been logged in an old growth forest or a forest with high conservation value, except as permitted by national conservation regulations. The use of species covered by CITES (The Convention on International Trade in Endangered Species of Wild Flora and Fauna) is also prohibited.

SOURCING

Pulp should be sourced domestically and be at least Elementary Chlorine Free (ECF).

The tenderer must provide proof of compliance throughout the supply chain with the international working standards (ILO Core Conventions) listed below:

- 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)

OPTIONAL REQUIREMENTS

FIBRE ORIGIN FOR PAPER FROM VIRGIN FIBRES

Fibres for pulp production are harvested from sustainably managed forests. Forest management must at a minimum meet the UNCED Forest Principles (Rio de Janeiro, June 1992) and, where pertinent, to criteria or guidelines for sustainable forest management adopted under international and regional initiatives.

The paper must be totally chlorine free (TCF).

PACKAGING

The packaging adheres to the following guidelines:

- The packaging for the paper does not contain PVC or other chlorinated plastics.
- The packaging material is separable into mono-material parts

- At least 80 per cent of the packaging by weight consists of materials that are readily recyclable (with locally available recycling systems) or that can be composted
- Cardboard packaging consists of 50 per cent recycled material



6. Air Conditioning (Non-Ducted Air Conditioners)

MANDATORY REQUIREMENTS

MINIMUM PERFORMANCE REQUIREMENTS

Purchased appliances must have a minimum energy efficiency ratio (EER) of 5. In some countries, including Brazil, Uruguay, Mexico and Argentina, Minimum Energy Performance Standards (MEPS) are defined by law for some products with generally high energy use (air conditioners, lighting, screens, etc.)

HAZARDOUS SUBSTANCES

These maximum levels are stipulated in the EU RoHS Directive and other “RoHS” laws worldwide:

- Lead (Pb): < 1000 ppm
- Mercury (Hg): < 100 ppm
- Cadmium (Cd): < 100 ppm
- Hexavalent Chromium (Cr VI) < 1000 ppm
- Polybrominated Biphenyls (PBB): < 1000 ppm
- Polybrominated Diphenyl Ethers (PBDE): < 1000 ppm

SOURCING

The tenderer must provide proof of compliance with the international working standards (ILO Core Conventions) listed below throughout the supply chain:

- 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)

OPTIONAL REQUIREMENTS

ENERGY EFFICIENCY

Purchased appliances have a minimum EER of 9.

Energy efficiency labels that rank appliances from A to G can guide procurers in determining whether the air conditioners comply with the required EER. Air conditioners carrying the Energy Star label have an EER of at least 9.

BUY NEW

Energy constitutes the biggest share of air conditioners’ environmental impact. Governments should always seek to purchase new air conditioners in order to have the most energy-efficient technologies.

MATERIAL REQUIREMENTS: PLASTICS

Plastics of the casing or inner components of the air-conditioner must not contain principal parts made from substances classified as carcinogenic, mutagenic, or reprotoxic⁹.

These parts must also not be made from persistent, bioaccumulative and toxic (PBT substances) or very persistent and very bioaccumulative (vPvB substances).¹⁰

⁹ For each of these three: In categories 1 or 2 according to Table 3.2 of Annex VI to EC Regulation No 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation), available at: <http://ec.europa.eu/enterprise/sectors/chemicals/documents/classification> [SITE ARCHIVED]

¹⁰ For PBT and vPvB substances: According to the criteria of Annex XIII to the REACH Regulation or particularly alarming for other reasons and included in the Candidate List of Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH), available at: <http://echa.europa.eu/web/guest/candidate-list-table>

Halogenated polymers are prohibited, and halogenated organic compounds and certain other flame retardants must not be added.¹¹

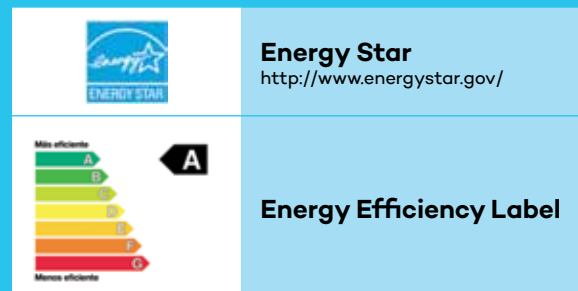
Exempt from the plastic material requirements above are: process-related, technically unavoidable impurities; fluoroorganic additives (such as anti-dripping agents) used to improve the physical properties of plastics, provided that they do not exceed 0.5 percent by weight; and plastic parts weighing less than 25 grams.

PACKAGING

The air conditioner must not be packaged in laminates or composite plastics:

- Cardboard and corrugated paper boxes must be made of at least 50 per cent post-consumer recycled material.
- Plastic materials must be made of at least 50 per cent post-consumer recycled material.

LABELS



¹¹ When labelled with the Risk Phrase R 50/53 pursuant to Table 3.2 of Annex VI to EC Regulation 1272/2008, available at: <http://ec.europa.eu/enterprise/sectors/chemicals/documents/classification>[SITE ARCHIVED]

7. Furniture

This category includes all types of free-standing or built-in furniture units, including chairs, tables, wardrobes, shelves and cupboards. It does not include building products (such as steps, walls, mouldings and panels), sanitary equipment, carpets, fabrics or office supplies. The specifications provide generic guidance for purchasing furniture and focus on the most common components of office furniture: wood, metals and plastics and finishes.

MANDATORY REQUIREMENTS

VIRGIN WOOD

Legally logged timber must be used for all virgin wood and wood-based materials (including solid, laminated, veneer and wood used for the production of plywood).

Wood must not be harvested in areas that are protected (or in the official process of being designated for protection), old growth forests or forests with high conservation value, except as permitted by national conservation regulations. The use of species covered by CITES is forbidden.

SOURCING

The tenderer must provide proof of compliance with the international working standards (ILO Core Conventions) listed below throughout the supply chain:

- 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)



OPTIONAL REQUIREMENTS

RECYCLED MATERIALS

The furniture consists of recycled wood, metal or plastic materials.

VIRGIN WOOD:

At least 50% of the virgin wood or wood-based materials (including solid, laminated, veneer and wood used for the production of plywood) shall come from forests that are certified as being managed so as to implement the principles and measures aimed at ensuring legal and sustainable forest management.¹²

ADHESIVES AND GLUES

The volatile organic compound (VOC) content of adhesives used in the assembly of furniture does not exceed 10 per cent by weight.

SURFACE COATING OF WOOD, PLASTIC OR METAL PARTS

The products used for the surface coating does not contain:

- hazardous substances that are classified as carcinogenic, harmful to the reproductive system, mutagenic, allergenic when inhaled or harmful to the environment according to national or international classification standards;
- halogenated organic flame retardants, phthalates, aziridine and polyaziridines or lead, cadmium, chrome, mercury and their compounds;
- heavy metals; or
- more than 5 per cent by weight of VOCs.

PLASTIC PARTS FREE OF CERTAIN SUBSTANCES

Plastic parts do not contain halogenated flame retardants, phthalates or substances based on lead, cadmium, chrome (VI), mercury and their compounds.

RECYCLING AND RE-USE

The furniture pieces are recyclable or adequate for reuse. To ensure this, the pieces must be made of materials that can be easily separated for recycling purposes.

PACKAGING

- The packaging for the furniture does not contain PVC or other chlorinated plastics.
- The packaging materials are separable into mono-material parts.
- At least 80 per cent of the packaging by weight consists of materials that are readily recyclable (with locally available recycling systems) or that can be composted
- Cardboard packaging consists of 50 per cent recycled material

LABELS



Forest Stewardship Council (FSC)
www.fsc.org



Program for Endorsement of Forest Certification (PEFC)
www.pefc.org

¹² International Tropical Timber Organization (ITTO); Lepaterique Process of Central America on Criteria and Indicators for Sustainable Forest Management; Montreal Process on Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests; The Tarapoto Proposal of Criteria and Indicators for Sustainability of the Amazon Forest; CIFOR.

8. Apparel

Apparel includes:

- Textile clothing and accessories: clothing and accessories (such as handkerchiefs, scarves, bags, shopping bags, rucksacks, belts etc.) consisting of at least 90 per cent by weight textile fibres;
- Interior textiles: textile products for interior use consisting of at least 90 per cent by weight of textile fibres. Wall and floor coverings are excluded;
- Fibres, yarn and fabric: intended for use in textile clothing and accessories or interior textiles.

For 'textile clothing and accessories' and for 'interior textiles': down, feathers, membranes and coatings need not be taken into account in the calculation of the percentage of textile fibres.

Except where otherwise indicated, conformity with the suggested requirements can be verified through the provision of a Type 1¹³ Ecolabel certificate that shows that the specific criteria have been met.

MANDATORY REQUIREMENTS

PESTICIDES

For products made from cotton or other natural cellulosic fibres, the final product must not contain more than 0.05 ppm (parts per million) of each of the following substances, and the total content of these substances must not exceed 0.75 ppm:

- 2,4,5-T
- Aldrin
- Captafol
- Chlordane
- Chlordimeform
- DDT
- Dieldrin
- Dinoseb and salts
- Endrine
- Heptachlor
- Hexachlorobenzene
- Hexachlorocyclohexane, α
- Hexachlorocyclohexane, β
- Hexachlorocyclohexane, δ
- Metamidophos
- Monocrotophos
- Parathion
- Parathion-methyl
- Propethamphos
- Toxaphene

Dyes classified as sensitising/allergenic, carcinogenic, mutagenic or toxic to reproduction:

The following dyes must not be used in the manufacture of any final product:

- C.I. Basic Red 9
- C.I. Disperse Blue 1

- C.I. Acid Red 26
- C.I. Basic Violet 14
- C.I. Disperse Orange 11
- C.I. Direct Black 38
- C.I. Direct Blue 6
- C.I. Direct Red 28
- C.I. Disperse Yellow 3
- C.I. Disperse Yellow 23
- C.I. Disperse Yellow 149

The following dyes must only be used if the fastness to perspiration (acid and alkaline) of the dyed fibres, yarn or fabric is at least 4:

- C.I. Disperse Blue 3 C.I. 61 505
- C.I. Disperse Blue 7 C.I. 62 500
- C.I. Disperse Blue 26 C.I. 63 305
- C.I. Disperse Blue 35
- C.I. Disperse Blue 102
- C.I. Disperse Blue 106
- C.I. Disperse Blue 124
- C.I. Disperse Orange 1 C.I. 11 080
- C.I. Disperse Orange 3 C.I. 11 005
- C.I. Disperse Orange 37
- C.I. Disperse Orange 76 (previously designated Orange 37)
- C.I. Disperse Red 1 C.I. 11 110
- C.I. Disperse Red 11 C.I. 62 015
- C.I. Disperse Red 17 C.I. 11 210
- C.I. Disperse Yellow 1 C.I. 10 345
- C.I. Disperse Yellow 9 C.I. 10 375
- C.I. Disperse Yellow 39
- C.I. Disperse Yellow 49

¹³ According to ISO standard 14024, i.e. voluntary, multi-criteria, independent third-party verification.



ARYLAMINES (CARCINOGENS)

The final product must not contain the following arylamines:

- 4-aminodiphenyl (CAS no. 92-67-1)
- Benzidine (CAS no. 92-87-5)
- 4-chloro-o-toluidine (CAS no. 95-69-2)
- 2-naphthylamine (CAS no. 91-59-8)
- o-amino-azotoluene (CAS no. 97-56-3)
- 2-amino-4-nitrotoluene (CAS no. 99-55-8)
- p-chloroaniline (CAS no. 106-47-8)
- 2,4-diaminoanisole (CAS no. 615-05-4)
- 4,4'-diaminodiphenylmethane (CAS no. 101-77-9)
- 3,3'-dichlorobenzidine (CAS no. 91-94-1)
- 3,3'-dimethoxybenzidine (CAS no. 119-90-4)
- 3,3'-dimethylbenzidine (CAS no. 119-93-7)
- 3,3'-dimethyl-4,4'-diaminodiphenylmethane (CAS no. 838-88-0)
- p-cresidine (CAS no. 120-71-8)
- 4,4'-methylene-bis-(2-chloroaniline) (CAS no. 101-14-4)
- 4,4'-oxydianiline (CAS no. 101-80-4)
- 4,4'-thiodianiline (CAS no. 139-65-1)
- o-toluidine (CAS no. 95-53-4)
- 2,4-diaminotoluene (CAS no. 95-80-7)
- 2,4,5-trimethylaniline (CAS no. 137-17-7)
- 4-aminoazobenzene (CAS no. 60-09-3)
- o-anisidine (CAS no. 90-04-0)

FLAME RETARDANTS

The following flame retardants must not be used in the final product:

- PBB (Polybrominated biphenyls) CAS no. 59536-65-1
- pentaBDE (Pentabromodiphenylether) CAS no. 32534-81-9
- octaBDE (Octabromodiphenyl ether) CAS no. 32536-52-9
- decaBDE (Decabromodiphenyl ether) CAS no. 1163-19-5

PENTACHLOROPHENOL

For products made from cotton or other natural cellulosic fibres, the final product must not contain more than 0.5 parts per million of Pentachlorophenol.

PHTHALATE SOFTENERS

For products that come into direct contact with the skin the following phthalate softeners must not make up more than 0.1 per cent by weight of the final product:

- DEHP (Di-(2-ethylhexyl)-phthalate) CAS no. 117-81-7
- BBP (Butylbenzylphthalate) CAS no. 85-68-7
- DBP (Dibutylphthalate) CAS no. 84-74-2
- DNOP (Di-n-octylphthalate)
- DINP (Di-isononylphthalate)
- DIDP (Di-isodecylphthalate)
- DIBP (Diisobutylphthalate)
- TCEP (Tris(2-chlorethyl)phosphate)

FORMALDEHYDE

The amount of free and partly hydrolysable formaldehyde in the final product must not exceed 70 ppm for products that come into direct contact with the skin and 300 ppm for all other products.

HEAVY METALS

The amount of the following heavy metals in the final product must not exceed:

- Cadmium (Cd): 0.1 ppm
- Chromium (Cr): 2.0 ppm
- Nickel (Ni): 4.0 ppm
- Lead (Pb): 1.0 ppm
- Copper (Cu): 50.0 ppm

SOURCING

The bidder must demonstrate compliance with the following International Labour Organization core conventions throughout the supply chain, including all parties whose goods, services and infrastructure help to supply the 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)

VERIFICATION

The tenderer is required to submit proof of compliance, such as a written declaration or an industry code of conduct.

OPTIONAL REQUIREMENTS

PESTICIDES

For products made from wool fibres, the final product must not contain more than the totals specified of each of the following substances:

The total content of the following substances does not exceed 0.5 ppm:

- γ -hexachlorocyclohexane (lindane),
- α -hexachlorocyclohexane,
- β -hexachlorocyclohexane,
- δ -hexachlorocyclohexane,
- aldrin,
- dieldrin,
- endrin,
- p,p'-DDT,
- p,p'-DDD.

The content of the following substances does not exceed 2 ppm:

- diazinon,
- propetamphos,
- chlorfenvinphos,
- dichlorfenthion,
- chlorpyrifos,
- fenchlorphosq,
- ethion,
- pirimphos-methyl.

The content of the following substances does not exceed 0.5 ppm:

- cypermethrin,
- deltamethrin,
- fenvalerate,
- cyhalothrin,
- flumethrin.

The content of the following substances does not exceed 2 ppm:

- diflubenzuron,
- triflumuron,
- dicyclanil.

FLAME RETARDANTS

The following flame retardants are not used in the final product:

- Tri-(2,3Dibromopropyl-)Phosphate, CAS-Nr. 126-72-7
- HBCDD (Hexabromocyclododecane) CAS. 25637-99-4 and 3194-55-6

PENTACHLOROPHENOL

For products made from cotton or other natural cellulosic fibres, the final product must not contain more than 0.05 parts per million of pentachlorophenol.

FORMALDEHYDE

The amount of free and partly hydrolysable formaldehyde in the final product must not exceed 20 ppm in products for babies and children under three years old, 30 ppm for products that come into direct contact with the skin and 75 ppm for all other products.

HEAVY METALS

The following are the maximums for the indicated substance:

- Antimony (Sb): 30 ppm
- Arsenic (As): 1.0 ppm (outerwear), 0.2 ppm (others)
- Cadmium (Cd): 0.1 ppm
- Chromium (Cr): 2.0 ppm (outerwear), 1.0 ppm (others)
- Chromium VI (Cr-VI): 0.5 ppm
- Cobalt (Co): 4.0 ppm (outerwear), 1.0 ppm (others)
- Mercury (Hg): 0.02 ppm
- Nickel (Ni): 4.0 ppm (outerwear), 1.0 ppm (others)
- Lead (Pb): 1.0 ppm (outerwear), 0.2 ppm (others)
- Copper (Cu): 50.0 ppm (outerwear), 25.0 ppm (others)



SOURCING

The tenderer must provide proof of compliance with these international working standards (ILO Core Conventions) throughout the supply chain:

- 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)

ORGANICALLY PRODUCED TEXTILE FIBRES

The tenderer indicates the proportion of cotton or other natural fibres used in the final product by weight deriving from organic production.

RECYCLED FIBRES

The tenderer indicates the proportion of the product by weight made of recycled fibres, i.e. fibres originating only from cuttings from textile and clothing manufacturers or from post-consumer waste (textile or otherwise).

LABELS

	Better Cotton Initiative http://bettercotton.org
	Global Standard http://www.global-standard.org



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SECTION 5

Positive Multipliers of Sustainable Public Procurement

SECTION 5
POSITIVE MULTIPLIERS OF
SUSTAINABLE PUBLIC PROCUREMENT

Sustainable public procurement generates multiplier benefits: when governments spend money on goods, services and infrastructure, the initial spending is important, but so is the way the money is re-spent and circulated in the economy. Multiplier benefits occur when spending on public procurement ripples through local and regional economies, strengthening them and generating social and environmental benefits beyond the initial purchase transaction.

SPP can also help governments tackle persistent challenges, such as unemployment, insufficient skill bases, poor connectivity, and limited industrial diversity. The multiplier effects of SPP can regenerate societies and economies by creating local employment and business opportunities and multiplying the cash in the local economy.

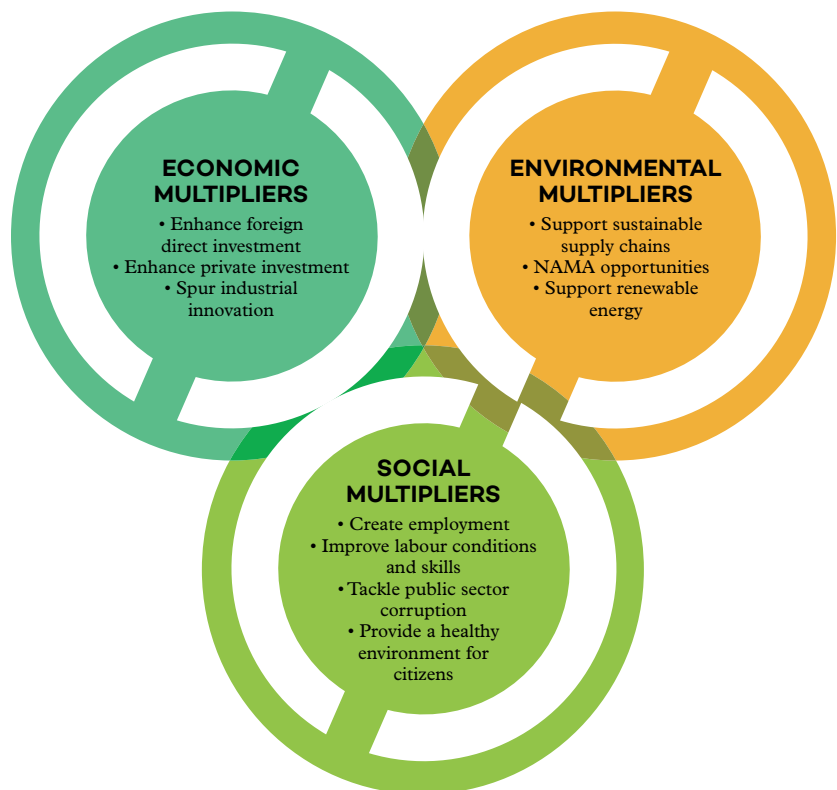
This section will present a few of the many positive multiplier benefits of SPP. There are many, depending on the economic, social and environmental situation of individual countries. While the SPP multipliers are here subdivided into economic, environmental and social categories, many of the multipliers can create benefits across all three categories simultaneously.

1. ECONOMIC MULTIPLIERS

SPP for attracting foreign investment

Foreign direct investment (FDI)—for example, when a company sets up a subsidiary in a host country—is important for economic development. It can contribute to the economic growth of the host country through training, upskilling of the local work force, diffusion of technology, capital inflows and other positive externalities. Many countries go to great lengths to attract FDI.

Government policy, including public procurement policy, affects a foreign company's level of interest in FDI. If a government targets sectors (e.g. automotive) with public spending (e.g. vehicle fleets), the safety of the domestic investment climate increases significantly. Public procurement becomes an investment incentive, ensuring investors of long-term domestic demand for their products and services.





Stable domestic markets are an important draw for foreign companies considering FDI. It enhances the competitiveness of both locations and enterprises. When a government commits to sustainability through a targeted SPP policy or project, it will attract new FDI seeking markets for sustainable goods, services and infrastructure.

SHARED RESPONSIBILITY FOR SPP POLICY IN GHANA

In 2010 the government of the Republic of Ghana made SPP part of its national strategy for sustainable development. The Public Procurement Authority of Ghana and the Ghana Investment Promotion Centre share responsibility for formulating and implementing SPP policy. They jointly identify priority sectors for investment, such as infrastructure, electronics, food and forestry. Targeted SPP can make the investment climate more attractive to both foreign and domestic enterprises and can reinforce SPP priorities.

SPP for mobilizing private investment for climate-friendly initiatives

SPP can help governments achieve regional, national and international targets for low-carbon development. SPP can mobilize private investment into climate-friendly initiatives. SPP can also secure international financial support through so-called Nationally Appropriate Mitigation Actions (NAMAs) that respond to climate change in ways that respect national ownership and reflect the unique circumstances of each country.

There is no single recipe for leveraging funds, but some climate-friendly initiatives might include:

- Procurement of sustainable infrastructure (e.g., green roads)
- Transformational projects (e.g., smart cities)
- Preferential purchasing programs (e.g., procurement that targets energy efficient commodities or renewable energy)

The procurement of clean energy, sustainable infrastructure or transformational projects involves higher risks and longer repayment periods than more traditional initiatives. SPP's focus on value-for-money over the life of the asset improves the risk-reward profile of climate-relevant projects, especially when combined with complementary climate change policies and financial regulations.

If the higher risks of the equity/debt investment for such climate-friendly projects are covered (i.e. by the public sector or international development organizations), private investors can use an array of lower-risk instruments. Risk-mitigation instruments will provide a suite of financial products to leverage private capital in ways that will appeal to each type of private investor. In this way, SPP can be a powerful tool to redirect private sector investment toward climate-relevant projects.

THE GLOBAL ENVIRONMENT FACILITY

The Global Environment Facility (GEF) is the world's oldest and largest dedicated international environment fund. Since 1991, the GEF has provided \$13.5 billion in grants and leveraged \$65 billion in co-financing for 3,900 projects in more than 165 developing countries. The GEF finances activities related to climate change, biodiversity, land degradation, and waste in the context of development projects and programs. It works through partner agencies (mostly UN agencies and multilateral development banks) that propose projects to the GEF and sometimes oversee project delivery.

GEF-supported projects have been successful in attracting private sector co-financing for climate-relevant projects: almost half of the projects reviewed in a study by the World Resources Institute (WRI) included a private sector capital contribution, ranging from 0.5 per cent to 97.3 per cent, and averaging 36.6 of the total.

SPP pilots and demonstration projects can provide governments with opportunities to tap international private investment to co-finance initiatives.

Sources: <http://www.thegef.org/gef/whatisgef> and http://pdf.wri.org/public_financing_instruments_leverage_private_capital_climate_relevant_investment_focus_multilateral_agencies.pdf

SPP for spurring innovation

Public procurement represents a key source of demand for firms in sectors such as construction, defence, health care, water, energy and transport. The large-scale and long-term demand of the public sector make it a powerful driver of innovation.

Technologies such as the Global Positioning System (GPS) developed from publically-funded research and development and pre-commercial procurement.

The initial price—and the associated risk—of innovating may be high, so the role of the public sector as innovation leader and risk taker is often very important. SPP, with its emphasis on lifecycle value-for-money, provides a strong rationale for investing in innovation: It often results in more environmentally, socially and economically sustainable products and services.

Through strategies such as pre-commercial procurement, first commercial procurement, product services systems and the use of performance-based specifications, policy-makers can assure additional demand that will augment the social, environmental and economic multipliers of SPP:

- Pre-commercial procurement refers to contracts by which governments fund the development of solutions for anticipated environmental and social needs.
- First commercial procurement refers to contracts through which governments procure design prototypes and fund their testing.
- Product Service Systems refers to the blending of products and services, usually with an intensified service component.
- Performance-based specifications detail required results or functions (e.g., strength of concrete, luminosity of light, efficiency of fuel use) rather than defining specifications and processes required to achieve the result (e.g. mixture proportions, number of bulbs, type of fuel).

PUBLIC PROCUREMENT OF INNOVATION IN THE EUROPEAN UNION

The European Union's Procurement Directives were revised in 2014, creating opportunities for procurement to spur innovation by allowing states to:

- Conduct preliminary market consultations and pre-commercial procurement (PCP);
- Include environmental and social factors in the procurement process;
- Use lifecycle costing at the award stage; and
- Use functional or performance-based specifications.

These provisions provide more scope for innovation than traditional procurement rules, while maintaining the requirements of competition, transparency, and equal treatment.

For more information on the public procurement of innovation, visit the IISD publications centre: <http://www.iisd.org/publications/search/all/all/26>

2. ENVIRONMENTAL MULTIPLIERS

SPP for promoting sustainable supply chains

The power of public procurement spending is not limited to the initial purchase of goods, services or infrastructure by a public authority. The impact of this spending can be followed as it ripples through the supply chain. Suppliers will need employees—and more suppliers—to deliver goods and services. Every supplier's employees will spend money on another round of goods and services. This chain of spending

multiplies income within economies and can sustain businesses, economies and communities.

The positive impacts of SPP are felt both upstream (production, parts, manufacturing, assembly and packaging) and downstream (use stage and end-of-life value). The procurement contract is a powerful tool for specifying the points on the supply chain where specific sustainability actions are required. For example:

- A catering service contract requiring a certain portion of organic food will have upstream impacts, by sending a market signal that will encourage farmers and industry to produce pesticide-free food.
- A procurement contract requiring the composting of a minimum percentage of food waste will have downstream impacts—by converting part of the establishment's waste stream into fertilizer.

Upstream and downstream impacts are complementary. They can be included in the same SPP tender.

The spillover effects of more sustainable supply chains benefit all citizens. Upstream employees in manufacturing and production may experience safer, toxin-free working conditions. Downstream citizens could see an improvement in local recycling facilities and the emergence of new waste management businesses in their communities.



UPSTREAM AND DOWNSTREAM IMPACTS OF SPP IN BRAZIL

In 2010, the Foundation for Education Development (FDE) in Sao Paolo, Brazil decided to buy notebooks made out of recycled paper, for middle and high schools. A total of 3,792,015 notebooks were procured to be included in the publically provided school “kits” for the 2011 school year. These notebooks had 180 sheets each, and were made of 60 per cent recycled fibres.

Upstream, this initiative saved more than eight million liters of fresh water.

Downstream, it avoided the production of 1,766 tonnes of solid waste and the release of 241 kg of dangerous organo-halogen compounds. It also supported waste-pickers—marginalized workers who collect waste for re-use.

Source: <http://www.unep.fr/scpl/procurement/docs/res/projectinfo/studyonimpactsofspp.pdf>

SPP as a Nationally Appropriate Mitigation Action (NAMA) opportunity

NAMAs are national government initiatives—monitored under the United Nations Framework Convention on Climate Change (UNFCCC)—that reduce greenhouse gas emissions in developing countries.¹⁴

NAMAs can provide countries seeking to reduce greenhouse gas emissions with an internationally recognized platform to structure and finance those efforts. Developing countries, their partners, and other actors in and around the UNFCCC

are working to operationalize the concept of NAMAs in order to leverage climate finance through bilateral and multilateral support, and through carbon markets.

National-level policy reform in support of SPP could qualify as a legitimate, if slightly unconventional, policy-based NAMA. An effort by a national government to reduce transport sector carbon emissions by developing a policy or law on the procurement of energy efficient or electric fleets should qualify as a NAMA and be eligible for international material and financial support. Similarly, SPP programs or projects could potentially qualify as NAMAs.

SPP can be understood as a NAMA opportunity, through its potential to reduce emissions (e.g. through the procurement of renewable energy or recycled paper) or by removing carbon from the atmosphere.

SPP for increasing the market share of renewable energy

Public authorities purchase significant amounts of energy through construction and through the operation of, for example, hospitals, schools, offices, street lighting and vehicles. Such a large market share has the potential to shift demand toward renewably generated electricity. SPP policies and practices make it possible to increase the share of renewable energy in the national grid by procuring from independent power producers (IPPs) or other providers of renewable energy. These efforts can be particularly effective if coordinated at a regional or international level.

PUBLIC PROCUREMENT OF RENEWABLE ENERGY IN SOUTH AFRICA

The South African Government’s Renewable Energy Independent Power Producer Procurement Programme (RE IPPPP) is a government-led initiative to increase the share of renewable energy in the national grid by procuring energy from independent power producers. It was developed by the Department of Energy in 2011 to replace a feed-in tariff program. A key objective of the program is economic development: using a competitive bidding process, renewable energy projects submitted are assessed on two factors, the tariff they offer (weighted at 70 per cent) and their contribution to defined economic development criteria (weighted at 30 per cent). Economic development criteria include: job creation, local content, ownership, management control, preferential procurement, enterprise development and socioeconomic development.

3. SOCIAL MULTIPLIERS

SPP for employment, improved labour conditions, upskilling, and worker satisfaction

Public procurement generates employment. Buying goods, services and infrastructure on such a large scale boosts the economy, circulates money and creates jobs. Public procurement can generate employment for those with limited education or experience. Service delivery sectors (e.g. catering, cleaning, and maintenance) and construction sectors (e.g. roads, buildings, and rail) are often attractive to young people, particularly those leaving school with few formal qualifications.

¹⁴ <http://unfccc.int/focus/mitigation/items/7172.php>

Procurement contracts can promote safe and healthy working conditions by requiring suppliers to follow ILO standards. Similarly, procurement contracts can be tied to commitments to offer apprenticeships and other training and development opportunities for employees. Preference can be given, for example, to companies that provide paid training and education opportunities to their staff.

There is growing evidence of a connection between a company's perceived environmental performance and employee satisfaction.¹⁵ Whether within a public office or a private enterprise, employees seek a sense of pride and fulfillment in their work—not only an income. So the move towards more sustainable public procurement can make all employees—of both suppliers and producers—more motivated and satisfied at work. Direct or indirect engagement with a social movement (e.g., “think globally, act locally”) may provide employees with an additional sense of purpose and motivation at work.

ELECTRONICS WATCH – SOCIALLY RESPONSIBLE PUBLIC PROCUREMENT OF INFORMATION COMMUNICATION TECHNOLOGY (ICT) IN EUROPE

The supply chain of the electronics industry is rife with human rights abuses. Challenges related to worker health and safety and the right to join a union persist and efforts to improve conditions have been unsuccessful.

Workers in South Korea's semiconductor industry who contract diseases such as cancer and leukemia do not have the means to prove a connection to their working environment. Unable to get their conditions recognized as work related, they have no access to compensation.

Public procurers have enormous purchasing power. With this power comes the responsibility to demand decent work conditions up and down the supply chain.

The newly established Electronics Watch monitors working conditions in the global electronics industry to facilitate socially responsible public procurement in Europe. For socially responsible procurement, this provides the missing link in public policy.

Source: http://electronicswatch.org/winds-of-change_788981.pdf

SPP for tackling public sector corruption

Because of the magnitude of the financial exchange, public procurement is highly vulnerable to fraud and corruption. Transparency International estimates that the global average cost of corruption in procurement is between 10 to 25 percent of a contract's value—and as high as 50 percent in the some cases. So it is not surprising that in many countries public procurement has become a focus of efforts to tackle public sector corruption.

The implementation of SPP laws, policies and practices provides a great opportunity to address accountability and transparency within the procurement function. Ensuring value for taxpayers' money is the core of SPP. This includes promoting effective competition among suppliers and ensuring integrity in administrative processes. SPP emphasizes transparency at all stages of procurement: needs identification, prequalification, evaluating, awarding and monitoring. All provide opportunities to call attention to the function and to ensure accountability and transparency in its execution. For example, prequalifying suppliers based on their past environmental performance adds an objective standard to the evaluation process.

¹⁵ <http://www.inderscience.com/info/inarticle.php?artid=38082>



Electronic procurement software is another evaluation tool. E-procurement can add value to SPP implementation, through software applications that apply environmental and social screening criteria to tender design and award processes. E-procurement can also be an excellent tool for fighting corruption in the procurement function, as evaluation and award processes become more objective. These improvements must be accompanied, however, by enhanced capacity to monitor compliance.

INTEGRITY PACTS FOR CURBING CORRUPTION IN PUBLIC PROCUREMENT

Transparency International developed the Integrity Pact to create a level playing field in the contracting process.

An Integrity Pact is an agreement between and among the agency undertaking a procurement and the tendering companies. The pact encourages companies to abstain from bribery by assuring them that their competitors have also agreed to, and that government procurement agencies have committed to preventing corruption by their officials and to following transparent procedures.

Integrity Pacts have been implemented in many countries, including India, Korea, Pakistan, Argentina, Mexico, Colombia, Austria and Germany. The construction of Pakistan's Greater Karachi Water Supply was subject to an Integrity Pact monitored by Transparency International—and the project came in 15.83 per cent under budget!

Source: http://www.transparency.org/whatwedo/publication/curbing_corruption_in_public_procurement_a_practical_guide

SPP for a healthy environment

Humans rely on the natural environment. A safe, clean, healthy and sustainable environment enables us to survive—it provides us with food and drink and air. That is why environmental stewardship—taking actions that reduce harm to the environment—is good not only for nature but also for humanity.

For example, if humans reduce the amount of toxic and hazardous waste dumped into the natural environment, we reduce our exposure to those chemicals. If humans protect a wetland from commercial development, we ensure that it will continue to clean our water. The list is long, and it demonstrates that social welfare and environmental health are tightly linked. We must never forget that we depend on nature.

When governments support sustainable development, they recognize the deep connection between our society and our environment. They recognize that we have an obligation to future generations: we must not meet our own needs by destroying the ability of the earth to support theirs.

Governments can use SPP to help meet that obligation.



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SECTION 6

Public Procurement and Infrastructure



Infrastructure can be acquired through traditional procurement processes or through public-private partnerships (PPPs).

In traditional procurement, a government:

- Finances the acquisition or construction of the asset,
- Structures the deal, and
- Commissions and operates the asset.

In PPP procurement, public and private sector partners collaborate in one or more of those areas to deliver an infrastructure project.

1. WAYS TO STRUCTURE A PPP

The term public-private partnership describes a variety of arrangements characterized by a varying balance of public and private investment and control:

PUBLIC	PUBLIC-PRIVATE PARTNERSHIPS					PRIVATE
Traditional procurement and service contracts	Management contracts	Leasing contracts	Concession contracts	Build-Operate-Transfer arrangements	Joint venture	Private ownership, financing and operation

Different legal arrangements are appropriate, depending how tasks, risks and responsibilities are shared among the partners.

Service contracts

Service contracts are short-term agreements in which the public partner carries most of the risk. The private partner, selected through a competitive process, will perform in accordance with the standards of service set by the public partner. The fee is defined in the contract and the public partner is responsible for any capital investments.

Management contracts

A management contract is an extended service contract under which the private partner must deliver a service but is also responsible for operations and management. While the private partner provides the working capital, the public partner must finance capital investments to create the infrastructure. Such contracts typically run for three to five years.

Leasing (or affermage) contracts

Leasing contracts typically run for 10 to 20 years. The private partner is responsible for the entire service and must meet agreed-upon quality standards. The public partner is only responsible for capital investments for new requirements, and sometimes for major replacements. The funding, management and execution of operations, maintenance and repair are the responsibility of the private partner.

The private partner does not receive a fixed fee from the public partner and carries the operational losses or unpaid customer debt. It collects its revenue from the users of the service and transfers part of this fee to the public partner.

Under an ordinary lease, the fee is fixed. Under an affermage contract—a specialized type of lease—the provider pays the public partner a fixed rate per unit produced or sold. Affermage contracts are used only for investments in existing infrastructure, not for new infrastructure investments.

All leases contain incentives for the private partner to improve the efficiency and performance of its operations. These arrangements are most effective if the public partner has the capacity to monitor and supervise the arrangement. Since the provider’s revenues are dependent on consumer payments, price changes are a sensitive issue.

Concession contracts

All responsibility for the operations, management, maintenance and repair—and for capital investment—lies with the private partner. The assets remain publicly owned during the term of a concession contract, which is usually between 20 and 30 years. The term must be sufficiently long to assure the provider of an appropriate return on investment. The public authority remains responsible for the development of performance standards, tariff regulation and monitoring.



Concession contracts are particularly good tools for promoting efficiency and performance, and for attracting private capital. The ability of the public partner to monitor performance and regulate tariffs may, however, be limited. Long-term infrastructure contracts may be politically sensitive and raise concern over the power given to the private partner. Contracts must be flexible in order to allow for changing circumstances, and the public authority must maintain control over the private partner.

Build-operate-transfer (BOT) and similar arrangements

In BOT and similar arrangements the private partner owns the assets for the period needed to earn a return on investment from user fees. Generally, a public partner will commit to a certain level of purchasing in order to guarantee coverage of the private provider’s operating costs. BOTs are used primarily for the construction of new assets, with the private party financing the construction.

There are variants on these arrangements. While a BOT transfers the asset to the public party after operations, a Build-Transfer-Operate (BTO) arrangement transfers ownership to the public partner before operations commence. In a Design-Build-Operate (DBO) the private party never owns the assets. Other possible variants are the Design-Build-Finance-Operate-Transfer (DBFOT),

Build-Own-Operate-Transfer (BOOT), Operate & Maintain (O + M) or Build-Own-Operate (BOO) contracts BOTs and similar arrangements can more easily attract private financing for construction, especially when the risk is reduced by a government promise to buy a significant amount of the output. The drawback is that there is less emphasis on performance and a government might overestimate the demand for the output that it has promised to buy.

Joint ventures

A joint venture is a structure in which ownership and operation are shared by private and public sector partners. The joint venture is a separate company. Good governance of a joint venture is vital to delivering a profitable and sustainable infrastructure solution. The private party operates the venture, but control—shares and board members—is divided between the public and private partner. There may be additional contracts that further define performance requirements. Both the private and public partners take risks and must be fully committed to the project.

The drawback is that the public partner has a stake in both the company’s profits and the regulatory framework under which it operates. This conflict of interest can pose a serious problem for joint ventures.

TABLE 4:

Overview of PPP arrangements and their characteristics

TYPE OF PPP	DURATION	PRIVATE PARTNER RESPONSIBILITY	PUBLIC PARTNER RESPONSIBILITY	STRENGTHS	WEAKNESSES
Service contracts	< 5 years	<ul style="list-style-type: none"> • Delivery of clearly defined service for a pre-determined fee 	<ul style="list-style-type: none"> • Performance standards • Financing of operations and investment • Monitoring 	<ul style="list-style-type: none"> • Ideal for specific service delivery • Provides private sector expertise • Easy to monitor 	<ul style="list-style-type: none"> • Not suitable to attract private capital investment
Management contracts	3–5 years	<ul style="list-style-type: none"> • Delivery of service • Daily operations and management 	<ul style="list-style-type: none"> • Performance standards • Financing for investment • Monitoring 	<ul style="list-style-type: none"> • Private sector management and operational expertise 	<ul style="list-style-type: none"> • Distinction between financing for service and management, and financing for renewal and expansion of assets may be unclear

Leasing and affermage contracts	10–20 years	<ul style="list-style-type: none"> • Full responsibility for service delivery, including financial risk for operations and maintenance • Costs and revenues managed by private provider • Fee paid to public body based on per unit of sales or output or fixed lease fee 	<ul style="list-style-type: none"> • Performance standards • Monitoring assets • Public ownership 	<ul style="list-style-type: none"> • Incentives for provider to achieve higher efficiency and sales 	<ul style="list-style-type: none"> • Tariff policy may be sensitive • Potentially reduced level of maintenance of assets toward the end of contract
Concession agreements	25–30 years, sufficiently long for return on the capital investment	<ul style="list-style-type: none"> • Operations • Management • Maintenance and repair • Capital investment 	<ul style="list-style-type: none"> • Asset ownership • Performance standards • Monitoring • Tariff regulation • Potential support for capital investment cost (subsidies) 	<ul style="list-style-type: none"> • Incentives for efficiency and performance of operations • Attractive for private capital 	<ul style="list-style-type: none"> • Needs a strong regulatory capacity for tariff regulation and monitoring of performance • Long term contracts create more complicated bidding processes • Private partner will only make investments if there is return within the remaining contract period • Concern about monopoly
Build-Operate-Transfer (BOT) and similar contracts	Minimum time necessary to build new infrastructure or repair major components	<ul style="list-style-type: none"> • Depending on the type of arrangement • Asset first privately owned, then transferred to a public body 	<ul style="list-style-type: none"> • Minimum level of output purchased • Performance standards • Monitoring 	<ul style="list-style-type: none"> • Attracts private finance • Reduces commercial risk through minimum purchase commitment of public partner 	<ul style="list-style-type: none"> • Complicated tender and contracts • Risk of too much government demand for output • Less emphasis on performance

TABLE 5:
Commonly used PPP arrangements by type of infrastructure

SECTOR	INFRASTRUCTURE TYPE	SUGGESTED PPP ARRANGEMENT
Transportation	Road	BOT, OMT
	Urban transport	BOT, O + M
Energy	Plant	DBFOT, BOT + BOO
Water	Water treatment plant	BOT, DBFOT, concession contract
	Water distribution network	BOT, BOOT, concession contract
	Water meters and billing responsibility	M+O
Health	Hospitals, Mobile Clinic, Tele- Health	BOO, BOT or management contract
Education	Schools (incl. energy, water, ICT)	BOO, BOT
	Science parks, universities	DBFOOT



2. CRITERIA FOR GREEN BUILDINGS

Green buildings are designed, constructed and maintained to be resource-efficient at every stage of their life cycles. Important characteristics include construction from environmentally preferable materials, reduced energy and water use, improved indoor air quality and less waste and toxic materials. Depending on the type of building (homes, commercial buildings, schools, hospitals) more specific sustainability criteria may be considered. Governments may use this checklist, based on the rating systems developed by LEED (<http://ch.usgbc.org/LEED>) and the Institute for Sustainable Infrastructure (<http://www.sustainableinfrastructure.org/>), as specifications or award criteria when preparing tender documents for design and construction of new buildings.

CRITERIA CATEGORY	SUGGESTED MANDATORY REQUIREMENTS	OPTIONAL REQUIREMENTS
Sustainable siting: the relationship between buildings, ecosystems and ecosystem services. It rewards projects that are able to remediate or minimize the impact on the surrounding environment.	<ul style="list-style-type: none">• Design and implement measures to control soil erosion, waterway sedimentation and airborne dust generated by the construction of the building.	<ul style="list-style-type: none">• Undertake a site assessment to influence the design of the building. Study the topography, hydrology, climate, vegetation, infrastructure, soils and distance to sources of air pollution.• Protect or restore 40 per cent of the site's greenfield area to preserve biodiversity.• Provide 30 per cent or more of the total site area for outdoor space, of which at least 25 per cent must be covered with vegetation other than turf grass.• Manage on site the runoff rainwater from the developed site for the 85th (or 95th, or 98th) percentile of regional or local rainfall events through the use of low-impact development and green infrastructure, with the aim of restoring natural hydrology processes.• Manage on site the annual increase in runoff volume resulting from development of the site.• Implement non-roof measures (to, for example, provide more shade around the building), or install a high-reflectivity or vegetated roof to reduce heat islands, minimizing the effect on microclimates and human and wildlife habitats.• Reduce light pollution from excessive or poorly directed lighting and internally illuminated exterior signage.• Install separate meters for irrigation of the landscaped area, indoor plumbing fixtures and fittings, domestic hot water, boilers with annual aggregated water use of more than 378,500 liters, reclaimed water and other process water.

<p>Water efficiency: conserving water by using it more efficiently.</p>	<ul style="list-style-type: none"> • Reduce outdoor water use by demonstrating that the project does not need a permanent irrigation system beyond a two-year establishment period or by implementing an efficient irrigation system that decreases outdoor water use by 30 per cent (compared to the baseline for the site's peak watering month). • Reduce indoor water use by 20 per cent from the baselines for toilets, urinals, lavatory faucets, kitchen faucets and showerheads. Appliances with the WaterSense (or equivalent) label meet this requirement. • Install permanent water meters that measure potable water use for the building and grounds to support water management and to identify opportunities for additional water savings. • Equip cooling towers and evaporative condensers with makeup water meters, conductivity controllers, overflow alarms and drift eliminators that reduce drift to a maximum of 0.002 per cent of recirculated water volume for counterflow towers and 0.005 per cent of recirculated water volume for cross-flow towers. 	<ul style="list-style-type: none"> • Install separate meters for irrigation of the landscaped area, indoor plumbing fixtures and fittings, domestic hot water, boilers with annual aggregated water use of more than 378,500 liters, reclaimed water and other process water.
<p>Energy efficiency: Implement energy efficiency measures and reduce energy use.</p>	<ul style="list-style-type: none"> • Execute a whole-building energy simulation and demonstrate an improvement of 5 per cent in the building performance rating compared with the baseline calculated in accordance with energy standards for buildings (ISO or national equivalent). • Track building-level energy use for energy management and to identify opportunities for additional savings through the installation of energy meters or submeters. • Prohibit the use of chlorofluorocarbon (CFC) – based refrigerants in heating, ventilation, air-conditioning and refrigeration systems. 	<ul style="list-style-type: none"> • Establish an energy performance target and achieve 50 per cent better energy performance than comparable buildings. • Install advanced energy metering systems. • Design building and equipment for participation in demand-response programs through load shedding or shifting to make energy generation and distribution more efficient. • Use renewable energy systems to offset building energy costs. • Engage in a project energy contract, for a minimum of five years, that calls for 50 to 100 per cent of energy from green power, carbon offsets, or renewable energy certificates (RECs).
<p>Material and resources use, and waste management: Use a life-cycle analysis of the resources required to build and operate the project and reduce the impact of extraction, processing, transportation, maintenance and disposal.</p>	<ul style="list-style-type: none"> • Provide dedicated recyclable storage and collection locations. (Recyclables include mixed paper, cardboard, glass, plastic and metals.) • Safely store and dispose of batteries, lamps containing mercury, and electronic waste. • Develop a construction and demolition waste management plan to reduce landfilling or incineration in favour of reusing, recycling and recovering materials. 	<ul style="list-style-type: none"> • Undertake a life-cycle assessment of the project (in accordance with ISO 14044) and ensure a minimum 10 per cent reduction compared with a baseline building in at least three of the following categories, with no increase greater than 5 per cent in any category: <ul style="list-style-type: none"> – CO₂ emission (global warming); – CFC-11 emissions (stratospheric ozone layer depletion); – SO₂ emissions (acidification of land and water sources); – nitrogen or phosphate pollution (eutrophication); – NO_x, O₃ or ethane (tropospheric ozone formation); – depletion of nonrenewable energy resources.



		<ul style="list-style-type: none">• Require at least 20 installed projects for which producers can provide life-cycle information or describe environmental impact of the product, in conformity with ISO 14025, 14040, 14044 or 21930.• Require at least 20 installed projects for which producers can document the corporate responsibility commitment of suppliers of raw materials in conformity with ISO 26000, either self-reported or verified by the Global Reporting Initiative.• Recycle and salvage nonhazardous construction and demolition materials:<ul style="list-style-type: none">– by diverting 50 per cent of total construction and demolition waste (including at least three material streams),– by diverting 75 per cent of the total construction and demolition waste (including at least four material streams), or– by reducing total construction waste to less than 12.2 kg/m² of floor area.
<p>Indoor environmental quality: indoor air quality, heating, lighting, and acoustic comfort.</p>	<ul style="list-style-type: none">• Meet minimum requirements for ventilation and determine the minimum outdoor air intake in accordance with international standards or local equivalent. Install a monitoring mechanism.• Prohibit smoking inside the building and outside the building within of 7.5 metres of entries and air intakes.	<ul style="list-style-type: none">• Improve indoor air quality by installing and maintaining permanent entryway systems that capture dirt and particulates entering the building, preventing interior cross-contamination, and using particle filters or air-cleaning devices to improve ventilation.• Limit materials that emit VOCs into the indoor air.• Develop and implement an indoor air quality management plan for construction and prohibit the use of tobacco products on site during construction.• Design a Heating-Ventilation-Air Conditioning (HVAC) system that meets the ISO 7730 standard (or local equivalent) to increase thermal comfort and install thermal comfort controls to control air and radiant temperature, humidity and air speed.• Provide lighting controls to adjust illumination levels between on, mid-level (30-70 per cent) and off.• Design and implement a lighting quality improvement strategy.• Install manual or automatic glare-control systems so that regularly occupied spaces can use daylight rather than electrical lighting.• Offer building occupants a connection to the natural outdoor environment by providing direct views to the outdoors for 75 per cent of the occupied floor area. At least 75 per cent of the area must have multiple lines of sight to such views at least 90 degrees apart, or views that include at least two of the following (i) flora, fauna and sky, (ii) movement, (iii) objects at least 7.5 meters from the exterior of the glazing, or unobstructed views near the exterior of the building.• Comply with international standards (or local equivalents) for HVAC noise levels.• Meet the composite sound transmission class rating of the local building code to achieve better sound isolation.

3. CRITERIA FOR GREEN ROADS

While road construction is seen as unsustainable and low-technology, the sector is pro-active and advanced in the research, development and implementation of environmentally-friendly technologies and sustainable solutions.

The road sector faces pressures such as resource shortages, increased prices for energy, water and natural resources, increased costs related to greenhouse gas emissions, and changing uses and expectations of roads. Transport agencies around the world are reconsidering their approaches to road design and construction. The road sector has been pushed to seek out cost-efficient solutions to bring real improvements in environmental and social performance.

In this section, criteria for sustainable or green roads are presented under sections on: materials, energy and emissions, ecology and biodiversity, water, social equity, community and safety. Each subsection includes sample metrics for the writing, evaluation and award of tenders for public roads. The final section presents some futuristic ideas for sustainable roads.

The criteria developed below are appropriate for the maintenance of existing roads as well as the construction of new roads. The criteria will not, of course, apply to all road projects. Bicycle lanes, for example, will not be appropriate on highway projects, and the use of saline water for cement mixing will not be feasible in landlocked countries.

GREEN ROAD CRITERIA	SUGGESTED REQUIREMENTS	SAMPLE METRICS
<p>Materials: Road construction involves a number of materials, primarily asphalt, cements and aggregates.</p>	<p>Asphalt:</p> <ul style="list-style-type: none"> • Use alternative materials such as recycled asphalt or rubber crumb. • Mix plastic waste with the bitumen. • Use innovative bitumen mixes and designs. • Use recycled bitumen. • Use alternative mix technologies such as warm, half-warm or cold mix asphalt. • Use innovative methods and techniques to replace bitumen. <p>Cement:</p> <ul style="list-style-type: none"> • Use improved kiln technology to manufacture clinker, with preference for dry processes over wet processes to lower energy consumption. • Improve energy efficiency for firing of the kiln: approximately 1 tonne of CO₂ is emitted by the manufacture of 1 tonne of Portland cement, half from the decarbonation of limestone during the firing, and half from energy used to heat the kiln and operate other equipment. • Use alternatives such as sulfo-aluminate, magnesium-phosphate, and alumino-silicate cements. <p>Aggregates:</p> <ul style="list-style-type: none"> • Use alternative aggregates that require less mining and crushing energy. • Source aggregates near site to reduce energy used in transportation. • Use waste tires, glass, bauxite residue and building materials. • Use plant-based bitumen alternatives. • Use local paving materials, such as naturally-occurring weathered rocks, ridge gravels, stream gravels, sands and clays that are close to site and can be obtained and placed by readily available construction equipment. • Use saline or non-potable water for stabilization and dust control. • Use in situ stabilization techniques such as foamed bitumen to reduce the need for aggregate. 	<ul style="list-style-type: none"> • Distance imported aggregate travels per km of constructed road. • Tonnes of materials imported to project. • Percentage of alternative materials for road base (considering the longevity and security of supply). • Percentage of materials recycled (both on and off project). • Use of adaptive re-use or rehabilitation options (considering cost and legacy). • Lifespan of pavement (total years and maintenance programs). • Impact of maintenance activities on lifespan of materials. • Volume of bitumen used (considering exposure to oil price increases). • Percentage of bitumen alternatives. • The use of results of innovative trials in materials (in-situ stabilization). • The opportunity for innovative materials trials as part of project.

¹⁶ http://www.sbenrc.com.au/wp-content/uploads/2013/11/sbenrc_1.3futureofroads-industryreport.pdf and www.greenroads.org



<p>Energy and emissions: The design, construction and operation of a road to reduce greenhouse gas emissions.</p>	<p>Design and planning</p> <ul style="list-style-type: none"> Align roads to minimize distances traveled. Design for multiple users of road space. Use demand management systems. Use lifecycle analysis and lifecycle costing. Use a carbon calculator to evaluate proposals. <p>Construction</p> <ul style="list-style-type: none"> Use on-site or local aggregate, water and other materials to reduce fossil fuel use . Use renewable energy during road construction. Use renewable energy in road maintenance. <p>Operations</p> <ul style="list-style-type: none"> Control traffic flow and use demand management systems to reduce greenhouse gases emissions from idling. Use less energy in signals and lighting. Use energy efficient (LED) route lighting. 	<ul style="list-style-type: none"> The percentage of renewable energy used in construction of road. The total amount of direct and indirect energy used in construction. Tonnes of CO₂ direct and indirectly emitted during road construction. Tonnes of air pollutants emitted during road construction (PM10, VOC, NO_x). The percentage of renewable energy used to maintain and operate roads. The revenue from energy generation, carbon sequestration per lane-km of road. Level of design for low carbon use (gradients, intersections, albedo). Post-construction road surface characteristics (roughness, temperature). Embodied energy in materials. Impact on urban heat island effect. Efforts to reduce heat island effect (such as increased tree canopy coverage, surface finishing and materials choice).
<p>Ecology and biodiversity: Reduce impacts on the natural environment, including flora and fauna.</p>	<ul style="list-style-type: none"> Implement an ISO 14001 certified Environmental Management System (EMS). Use reforestation or re-vegetation of land included in road projects. Reduce stormwater runoff, sediment and pollutants. Plant native vegetation on road banks. Minimize impacts on sensitive ecosystems, fragile environments and endangered animals through strategic placement of roads. Use wildlife corridors. Implement a system to reduce wildlife deaths from vehicles (including signage, road speed levels, fencing, sonic systems, and nature underpasses or overpasses.) Implement a system to reduce potential impacts from noise and dust. 	<ul style="list-style-type: none"> Hectares of land revegetation/ reforestation as part of project. Hectares of land revegetated/reforested to offset construction footprint (such as replanting and ecosystem development). Land revegetation/reforestation as a portion of total construction cost. Erosion and sediment control measures as a portion of total construction cost. Percentage of unpaved area revegetated/ reforested. The creation, linking or enhancement of wildlife corridors. Cost of measures to reduce impacts on biodiversity as a portion of total construction cost. Species count before and after construction. Level of noise generated by finished road surface.
<p>Water resources: Limit the use and pollution of freshwater resources in the construction and maintenance of a road.</p>	<ul style="list-style-type: none"> Design and implement water efficiency measures (such as a trickle system, flood mixing, water additives, orange oil use, and bomag mixing) during pavement material mixing and compaction. Identify a suitable non-potable water supply in the vicinity of the road project (e.g. saline water or wastewater for mixing and dust control). Install water use tracking systems (“water footprint”). Use native vegetation that will not require roadside irrigation. 	<ul style="list-style-type: none"> Hectares of affected watercourse and wetlands. Hectares of watercourse and wetlands protected or enhanced to offset construction footprint. Cost of watercourse restoration as a proportion of total construction cost. Volume of runoff treated on-site with swales and other innovative practices. Retention of original flow patterns, overland flow, and watercourses. Percentages of potable, bore, and sea water used.

Social equity, community and safety: Sustainable roads have a focus on community health and equitable access. This category provides quantifiable ways to make roads more accessible, transit/pedestrian/bike-friendly, integrated with the community and safer.

- Prioritize road construction as important for the economic and social well-being of the community.
- Use project to raise environmental and sustainability awareness in local and broader community.
- Allow public participation in the road project before, during and after construction.
- Use local knowledge (from professionals, elders, community leaders, etc.) in the project.
- Employ local people (particularly youth) in the road project.
- Execute safety audits and make the results publicly available.
- Incorporate pedestrian and bicycle needs (access, lanes, crossings and overheads) into project.
- Create scenic roads to be enjoyed by travelers and commuters.

- Population served per lane/km of road constructed.
- Number of ideas submitted and adopted through community engagement.
- Level of participation of community members in project team.
- Number of entry level positions (e.g. apprenticeships) in project team.
- Level of satisfaction shown by community (determined by pre- and post-construction surveys).
- Level of safety of constructed roads (e.g. number of 'black spots' per km of road).

4. OPTIONAL CRITERIA FOR ADVANCED GREEN ROADS

ICT provides many options for taking a green road to the next level of sustainability, mostly by harnessing advances in materials engineering. Some examples are roads that:

- Use integrated intelligent transport systems, communicating weather conditions, traffic flows, road repairs and other information between the road and the driver;
- Incorporate infrastructure for electric vehicle usage and multi-modal transportation;
- Harvest energy and heat to power road signs and lighting;
- Use roadside devices to capture carbon;
- Use self-repairing pavement and instant crack repair technologies to reduce maintenance activity;
- Have built-in flood resistance; or
- Disperse snow and ice automatically.



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Published by the International Institute for Sustainable Development

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IISD is registered as a charitable organization in Canada and has 501(c)(3) status in the United States. IISD receives core operating support from the Government of Canada, provided through the International Development Research Centre (IDRC), and from the Province of Manitoba. The Institute receives project funding from numerous governments inside and outside Canada, United Nations agencies, foundations, the private sector, and individuals.



International Institute for
Sustainable Development

Head Office

111 Lombard Avenue, Suite 325
Winnipeg, Manitoba
Canada R3B 0T4

Tel: +1 (204) 958-7700

Fax: +1 (204) 958-7710

Website: www.iisd.org

Twitter: @IISD_news

Geneva Office

International Environment House 2
9 chemin de Balxert
1219 Châtelaine
Geneva, Switzerland

Tel: +41 22 917-8683

Fax: +41 22 917-8054