

Strengthening Sustainable Public Procurement (SPP) in the OECS

Procurement Guidelines for
Sustainable Construction Materials

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1. The Role of Public Procurement in Sustainable Development.

Public procurement is a key factor in the economy of every country and acts as a strategic policy lever that governments can harness to drive innovation and change through supply chains.

Procurement represents approximately 12% of GDP on average in OECD countries, almost 30% of total government expenditures, and up to 25-30% of GDP in developing countries¹. Thus, it exerts a significant impact on a country's economic development and plays a critical role in promoting the inclusive and sustainable economic growth endorsed by the Sustainable Development Goals (SDGs).

While, traditionally, the objectives of public procurement have been defined in terms such as value for money, transparency, fairness, and competition; increasingly, governments

1. What does public procurement have to do with sustainability?" OECD, 30 April 2019.



are using public procurement to pursue other, “horizontal” objectives. These may include environmental, social and economic considerations; for example, *inter alia*, by providing suppliers with incentives to offer more sustainable products and services, by promoting the participation of MSMEs in public contracts or by providing firms doing business with the government incentives to hire members of vulnerable or disadvantaged groups.

The internationally accepted definition of Sustainable Public Procurement (SPP) is the following:



“A process whereby organizations meet their needs for goods, services, works and utilities in a way that achieves value for money on a whole-life basis in terms of generating benefits not only to the organisation but also to society and the economy, whilst minimizing, and if possible, avoiding damage to the environment.”²

In this context, the United Nations Environment Programme has entered into a partnership with the Organisation of Eastern Caribbean States to implement a sustainable public procurement initiative in the Eastern Caribbean as part of the region’s larger Green Climate Fund (GCF) Enhancing Direct Access (EDA) pilot. The objective of this initiative is to promote awareness, build capacity and develop policies and tools for the successful implementation of sustainable public procurement practices in construction material purchasing in three OECS pilot countries—Antigua and Barbuda, Dominica, and Grenada—with a view to replicate and scale in the broader OECS region.

Some commendable initiatives have already been undertaken in the OECS to advance sustainability in construction materials. Principal among them is the adoption of the OECS Building Code³, which references relevant quality standards, including some from the American Society for Testing Materials (ASTM). In addition, the CARICOM Regional Organisation for Standards and Quality (CROSQ) has adopted several ASTM standards, including C33-18 Standard Specification for Concrete Aggregates and C144-18 Standard Specification for Aggregate for Masonry Mortar. At the national level, some Bureaux of Standards of OECS countries have similarly adopted relevant standards; Grenada’s Bureau of Standards has a national standard for concrete blocks.

2. 10YFP SPP Programme adapted from the UK Task Force report on Sustainable Public Procurement “Procuring the Future”

3. OECS Building Code, 7th Edition: September 2016.



Progress has also been made on SPP in the legislative and policy domains. Several countries, including Grenada and Dominica, list sustainability among the objectives of their national public procurement laws, while Grenada, uniquely among OECS countries, already has in place a national policy on Sustainable Public Procurement⁴. Through the work of this project, it is the objective of the OECS, in partnership with UNEP, to scale up existing SPP practices within the region and to introduce and roll out additional SPP best practices.

As one of the key outputs of this project, these SPP Guidelines will apply only if they are specifically incorporated by the OECS as an organization or by one or more Member States into their legal framework for public procurement, as either primary or secondary legislation. Until such time, they do not have legal standing. As currently presented, these SPP guidelines are intended to complement the legal framework of each Member State and, in doing so, they may be applied at the level of individual procurement transactions in a manner consistent with the Member State's own legal framework. The guidance they provide on incorporating sustainability considerations into the procurement of lumber and concrete blocks is flexible to the extent that it can be used under different Member States' legal frameworks without conflicting with them. The procurement legal frameworks of most OECS Member States contain no or only general commitments regarding SPP. Therefore, it is unlikely that the provisions of these SPP Guidelines would conflict with SPP-specific provisions in the laws of the Member States. Furthermore, these Guidelines have been crafted in such a manner as to be consistent with the legal frameworks of those OECS Member States which have well-developed legislation for public procurement, principally Grenada, in important areas, such as the range of procurement methods and evaluation criteria that may be used.

2. Legal and Policy Framework for SPP in the OECS

The legal framework for public procurement, including for SPP, in the OECS exists at three different levels: CARICOM; the OECS, including the Commission; and at the national level of each of the Member States. This section examines legal frameworks for SPP at the various regional levels and at the national level of each of the three pilot countries participating in the project: Antigua and Barbuda, Dominica, and Grenada.

4. Cabinet Conclusion on Implementation of a Sustainable Public Procurement Policy by the Government of Grenada (22 July, 2019).



CARICOM

Revised Treaty of Chaguaramas

The Caribbean Community (CARICOM) was founded by the Treaty of Chaguaramas (1973) and currently functions under the Revised Treaty of Chaguaramas (2001), which established the CARICOM Single Market and Economy (CSME). The Revised Treaty provides a robust legal framework for the promotion of sustainability. It is replete with obligations that bind the Member States to pursue sustainable development across a wide range of sectors, such as economy, trade, environment, industry, agriculture, fisheries, and forestry. The following articles are among those most amenable to realization through public procurement:

- **Article 15** on Trade and Economic Development, commits the Member States to “[...] promote and develop policies for the protection of and preservation of the environment and for sustainable development [...].”
- **Article 51** on Industrial Policy commits the Member States to pursue “market-led, internationally competitive and sustainable production of goods and services for the promotion of the Region’s economic and social development.”
- **Article 61** on Forest Management and Development commits the Community to, “[...] promoting commercialisation of natural forest products in a sustainable manner [...].”
- **Article 65** on Environmental Protection states that, “The policies of the Community shall be implemented in a manner that ensures the prudent and rational management of the resources of the Member States. In particular, the Community shall promote measures to ensure the preservation, protection and improvement of the quality of the environment; the protection of the life and health of humans, animals and plants [...].”
- **Article 239** commits CARICOM to “elaborate a Protocol relating [...] to government procurement.”



- The CSME Secretariat has developed a Protocol on Public Procurement in which the Member States commit “to enhancing the quality of governance in the Caribbean Community through the promotion of fairness, transparency and accountability in the supply of goods, services and works within the CSME.” The Protocol lists its objectives as being to:

“(a) create the necessary competitive and non-discriminatory conditions to facilitate achievement of best value for money; (b) provide opportunities for access to a single market with regional sales opportunities; (c) strengthen the competitiveness of the regional supplier base in particular in relation to micro, small and medium-sized enterprises; and (d) encourage the rational use of scarce resources.”⁵

It is apparent that several of these objectives are amenable to SPP approaches.

- Article 34 of the Protocol, which deals with “Public Procurement and the Environment,” provides that:

“Nothing in the Protocol shall be construed as precluding a Contracting Party [member state] from employing its best endeavours to incorporate green procurement considerations in its public procurement.”

- From a legal perspective, this provision may be interpreted as affording a member state which applies green procurement in its public procurement operations protection from a legal challenge from another member state. Green procurement as defined in Article 1 of the Protocol includes:

“improved recyclability; high recycled content; greater energy efficiency; utilising clean technology or clean fuels; reduced water consumption; reduced emissions of irritating or toxic substances during installation or use; and reduced production of toxic substances during use or disposal.”

5. CARICOM Protocol on Public Procurement, Article 2.



While the reference to green procurement in Article 34 of the Protocol essentially constitutes the removal of an impediment to member states' pursuing it, the definition of what constitutes green procurement is encouragingly broad and provides any member state that decides to pursue green public procurement a wide remit to do so across a range of sectors and procurement transactions.

It should be noted that, to date, only five CARICOM Member States have ratified the Procurement Protocol and these exclude the bloc's two largest economies, Trinidad & Tobago and Jamaica. Furthermore, the Protocol applies only above certain monetary thresholds⁶, which are set so high so as to exclude the majority of government-funded contracts, especially in smaller economies, from the application of the Protocol, thus limiting its impact at the level of the domestic public procurement market of each Member State. Furthermore, it should be kept in mind that, below the thresholds at which the Protocol applies, countries have greater freedom to pursue SPP as ambitiously as their own policies and national legislation permit.

In summary, at the CARICOM regional level, both the Treaty that governs the functioning of the single market and the Protocol on Public Procurement provide a promising basis for the pursuit of SPP within the Caribbean, including within the OECS, even though its effect has yet to be fully realized.

CARICOM

Model Public Procurement Bill

The CARICOM CSME Secretariat has also elaborated a CARICOM Model Public Procurement Bill, with which it is intended to require from the Member States that ratify the Protocol to align their national public procurement legal regimes at some future date. The Model Bill has as its objectives national treatment and most favored nation status (concepts derived from the World Trade Organization), transparency, competition, fairness, and non-discrimination. However, the Model Bill is silent on the subject of sustainable public procurement.

OECS

Revised Treaty of Basseterre

The OECS was founded by the Treaty of Basseterre (1981) which was replaced by the Revised Treaty of Basseterre (2010), the latter of which created the Eastern Caribbean

6. >US\$3.0m for civil works; >US\$4.0m for civil works in less developed countries; US\$0.15m for goods and services.



Economic Union (ECEU), a single market among the signatory Member States. The ECEU is, in effect, a single market within the larger CARICOM Single Market and Economy.

Although the ECEU guarantees freedom of movement of goods and persons and tariff-free trade within the Union, the Revised Treaty of Basseterre does not define an objective of setting a common public procurement policy at the level of the ECEU. Rather, as noted above, a single market and economy, including for public procurement, has been established at the level of CARICOM, which encompasses all seven protocol member states of the OECS. Therefore, in respect of its common public procurement legal regime, the OECS falls under the CSME and does not have its own legal regime for public procurement at the OECS level. That said, it must be kept in mind that a single market for public procurement within CARICOM is still under construction: the legal framework for public procurement is not yet complete and, as noted above, only five of fifteen member states have signed the CARICOM Protocol on Public Procurement so far.

Protocol of Eastern Caribbean Economic Union (ECEU)

The ECEU Protocol contains several legal obligations on its signatory Member States that directly impact the pursuit of sustainability, principal among them are:

- **Article 2(b)** commits the Protocol Member States to facilitate, “economic and social progress and cohesion which are balanced and sustainable”;
- **Article 23.1** on Human and Social Development which provides that, “Each Protocol Member State shall promote sustainable social and cultural development that would ensure societies that are stable, safe and just and that are based on the promotion and protection of human rights, non-discrimination, respect for diversity, equality of opportunity, solidarity, security, and participation of all people.”
- **Article 24.1** on Environmental Sustainability, which requires that, “Each Protocol Member State shall implement the St. George’s Declaration of Principles for Environmental Sustainability in the OECS to minimize environmental vulnerability, improve environmental management and protect the region’s natural (including historical and cultural) resource base for optimal social and economic benefits for Member States.”



St. George's Declaration

The St. George's Declaration of Principles for Environmental Sustainability in the OECS (2001, updated 2006) sets out the broad framework for environmental management in the OECS. It sets an overall aim to “foster equitable and sustainable improvement in the quality of life in the OECS region,” which is to be pursued through the achievement of four goals:

1. Build the capacity of member states and regional institutions to guide and support processes of sustainable development.
2. Incorporate the objectives, perspectives, resources and talents of all of society in environmental management.
3. Achieve the long-term protection and sustained productivity of the region's natural resource base and the ecosystem services it provides.
4. Ensure that natural resources contribute optimally and equitably to economic, social and cultural development.

The Declaration expands on these goals through the definition of desired outcomes, targets and indicators for the achievement of each one of them. In many respects, the Declaration is a roadmap for the advancement of all aspects of sustainable development across the OECS and, as such, it provides an invaluable framework for envisioning how public procurement can contribute to that objective.



OECS Commission

The OECS Commission (OECSC) itself does not practice SPP in its own procurement operations. Sustainability is mentioned in the Commission's Procurement Manual⁷ under the definition of best value, as follows:



"Best Value: The optimum combination of whole-life costs including price, delivery time, quality (or fitness for purpose) to meet the OECSC's requirement. Depending on the nature of the Purchase, whole-life cost may include implementation costs, on-going operating costs and end-of-life disposal. Best Value may also involve due regard to other OECSC's policies, such as those dealing with environmental sustainability and socio-economic matters."

However, in practice, the Commission does not apply SPP criteria when conducting procurement under its own programs. At the time of writing, the OECSC is re-writing its Procurement Manual and has indicated its intention to include a policy on SPP in its new Procurement Manual.

Impact of OECS Model Policy of Application of SPP in the OECS

The OECS Model Policy on Sustainable Public Procurement of Construction Materials, which is one of the outputs of the Strengthening Public Procurement in the OECS Project, provides a comprehensive policy framework for the application of sustainability principles to the procurement of construction materials by OECS organizations.

It is still too early to tell how the Model Policy will be adopted and applied by the OECS and its individual Member States. It may be adopted in whole or in part by the OECS as a whole, by individual Member States or by OECS organizations, such as the Commission. To date, only Grenada among OECS Member States has adopted a legally-binding policy on SPP⁸, whose implementation is still in its early stages; yet, there is undoubtedly increasing momentum in the direction of greater use of SPP across the OECS, as evidenced by the commitment of the OECS Commission and of the pilot countries to this project. Whenever and however the different OECS bodies and Member States decide to take a more proactive approach to the application of SPP, the Model Policy will provide them with the essential policy framework to allow them to do so.

7. Procurement Manual of the OECS Commission (November 2013, revised June 2016).

8. Cabinet Conclusion on Implementation of a Sustainable Public Procurement Policy by the Government of Grenada (22 July, 2019).



3.

Sustainability considerations and criteria of lumber and concrete blocks

Sustainability considerations of lumber

Lumber⁹ has been used for thousands of years as a construction material. It is easy to work with, versatile, renewable, and recyclable, accounting for 25% of all wood harvested on a global scale.¹⁰ According to available literature, the lifecycle of lumber products, from log extraction to processing, distribution, usage and disposal is associated with a set of social and environmental impacts (see Figure 1).

Figure 1. Lumber life cycle and sustainability impacts

	Raw materials extraction	Transport	Processing	Distribution	Use	Disposal
sustainability impacts	Logging	Fuels	Fuels, chemicals	Fuels	Durability	Wood waste
	CO ₂ emissions resulting from deforestation, loss of biodiversity, impacts on indigenous livelihoods	Air pollution, CO ₂ emissions	Risk to human health and the environment	Air pollution, CO ₂ emissions and pollution	Wood waste due to poor quality	

Raw materials extraction - The vast majority of these sustainability impacts occur early on in the product lifecycle, during the process of raw materials extraction or logging, these include:

- **Climate change** – Trees cool the atmosphere, absorbing and storing carbon dioxide, a greenhouse gas, through a process called carbon sequestration.¹¹ When forests are cleared, carbon dioxide gases are reemitted into the atmo-

9. These Guidelines focus on lumber for construction purposes, namely for framing and roofing. Given that the distinction between lumber, timber, and wood can vary from country to country, for the purpose of these Guidelines, the term "lumber" is used to describe processed wood whereas timber and wood refers to unprocessed or "raw" wood.
10. Marzouk, M., Abdelhamid, M., & Elsheikh, M. (2013). Selecting sustainable building materials using system dynamics and ant colony optimization. *Journal of Environmental Engineering and Landscape*.
11. Le Quéré *et al.* 2009



sphere having a warming effect on the planet. It is estimated that the forestry sector contributes to up to 17% of all Greenhouse Gas emissions¹² and accounts for 10% of global warming.

- **Loss of biodiversity** – Forests are also home to over 80% of the world’s terrestrial biodiversity (animal and plant species).¹³ Logging destroys natural habitats, disrupting ecosystems and, in some cases, can lead to the extinction of animal and plant species.
- **Loss of livelihoods** – It is estimated that 1.6 billion people living in poverty depend on forests for their food and fuel.¹⁴
- **Loss of natural resources** – Flooding and soil erosion can result from deforestation.

Illegal logging can further exacerbate these impacts, as it is based on unsustainable harvesting practices and a direct cause of forest degradation, often contributing to deforestation.¹⁵

Processing - Lumber processing is the next most significant source of sustainability impacts due to the application of chemical treatment compounds or wood preservatives to control wood degradation problems due to fungal rot or decay, molds, or wood-destroying insects.¹⁶ These wood preservative products have high toxicity profiles and pose risks to human health and the environment both in the treatment process itself, as well as in the use of the treated products.

Distribution - Impacts related to distribution are difficult to investigate given the global nature of lumber production. However, given that lumber for construction purposes is almost entirely imported in the OECS, this sustainability impact should receive due consideration. Lumber transport, from the site of extraction to processing facilities and then to wholesalers, retailers and construction locations, involves the consumption of fossil fuels and CO₂ emissions. These emissions contribute to climate change and global warming.

Use - The environmental and social impacts of lumber use are negligible; however, quality considerations can come into play, particularly in the context of the Caribbean, which is prone to seasonal hurricanes. Poor quality lumber can more readily decay, leading to

12. Miles and Kapos 2008; Baccini et al. 2012

13. <https://www.worldwildlife.org/habitats/forest-habitat>

14. <https://www.worldwildlife.org/habitats/forest-habitat>

15. https://forestlegality.org/sites/default/files/Legality%20Guide_FY18_FINAL.pdf

16. Treated wood is most commonly used outdoors.



structures possibly needing to be reenforced, replaced or rebuilt. This can lead to unnecessary wastage, as well as the need for new lumber products, taking us full circle back to raw materials extraction.

Disposal - Lumber disposal is also negligible in terms of its sustainability impacts, given that lumber is a biodegradable product by nature.

Sustainability criteria of lumber for public tendering

There are several sustainable procurement approaches to addressing the various lifecycle impacts of lumber, depending on the social and/or environmental impacts considered (see Table 1). These approaches take into account both the OECS Regional Building Code recommendations, as well as international sustainable construction standards.

Table 1. Lumber sustainability considerations and proposed approach

Lifecycle phase	Sustainability consideration	Proposed procurement approach	Verification
Raw materials extraction	Deforestation - climate change, biodiversity loss, environmental degradation, disruption in livelihoods	Procure lumber from legal sources	Certificate of origin
		Procure certified lumber	Forest management and sustainable chain of custody certifications, such as FSC, PEFC or SFI
Processing	Risk to human health and the environment of hazardous chemicals in wood preservation process	Procure timber products with volatile organic compound limits; e.g., wood products that do not contain urea-formaldehyde resin.	Producer's declaration of chemicals and preservatives used in lumber processing.
		Procure lumber treated with newer and less toxic wood preservatives that have been approved by the United States Environmental Protection Agency (EPA), such as alkaline copper quaternary or "ACQ."	
Transport	Climate change	Minimize CO ₂ emissions from transport of materials by considering alternatives from nearby sources	Certificate of origin
Use	Vulnerability to climatic events	Procure high-quality lumber	Lumber grade marks

Deforestation – At minimum, public contracting authorities may wish to ensure that the lumber which is procured either directly or indirectly through civil works contractors is from legal sources. The legality of lumber is assessed against: (1) whether the origin of the lumber was legally designated for harvesting and (2) whether the harvesting



operations were in compliance with relevant laws and regulations; legality requirements can therefore vary from country to country and do not implicitly guarantee that the lumber was sustainably harvested. While there is no standard against which the legality of lumber production can be verified, a good starting point could be a certificate of origin. Certificates of origin are typically only issued by legally established enterprises.

Public contracting authorities may also go a step further, ensuring that lumber is sourced from responsibly managed forests by applying ecolabelling requirements. Forest certification, a type of eco-label, is a voluntary procedure by which an independent third party (the “certifier”) assesses the quality of forest management and production against a set of requirements (“standards” such as compliance with laws, workers’ rights and employment standards, indigenous standards, etc.) predetermined by a public or private certification organization. With forest certification, and associated labelling, consumers are informed about the sustainability of the forests from which wood was produced.

There are two types of forest certifications: *certification of forest management*, which assesses if forests are being managed according to a specified set of standards; and certification of the *chain of custody* (CoC certification), which verifies that certified material is identified and separated from non-certified or non-controlled material through the production process, from forest to final consumer. Both management certification and chain-of-custody certification are required to label a final product.

Most of the certifications address a wide range of economic, social, environmental, and technical aspects of forest management. The three largest international certification programs are the following: Forest Stewardship Council (FSC), Programme for the Endorsement of Forest Certification (PEFC), and Sustainable Forestry Initiative (SFI).

Risk to human health and the environment from hazardous chemicals – Public contracting authorities concerned with the environmental and health impacts of wood preservatives may wish to procure lumber products that have been treated with lower toxicity chemicals. The United States Environmental Protection Agency (EPA) recommends newer wood preservatives for residential uses that have lower toxicity profiles when compared to older ones, such as alkaline copper quaternary or “ACQ.” Suppliers can be required to submit a producer’s declaration of chemicals and preservatives used in lumber processing.



CO₂ emissions from transport contributing to climate change – The negative impacts of transportation can be minimized by procuring legally-harvested lumber from nearby sources. A certificate of origin can be employed as a means of verification.

Vulnerability to climatic events – Public contracting authorities can purchase lumber used for load purposes that meets a minimum quality standard to ensure durability. This is typically evidenced by a Grade Mark of a Lumber Grading or Inspection Bureau or Agency that is approved by the contracting authority.

Sustainability considerations and criteria for concrete

Concrete, the largest manufactured product on Earth by mass, is a composite material composed of a mix of cement, sand, gravel, and water.¹⁷ Concern about the sustainability of concrete is largely focused on the Greenhouse Gas emissions associated with the production of cement, its key ingredient, accounting for 4–8% of all carbon dioxide generated by mankind. However, sustainability considerations also extend to the mining of its aggregates (sand and gravel), as well as concrete processing itself, when all three ingredients are mixed together with water (see Figure 2).

Figure 2. Concrete life cycle and sustainability impacts

	Raw materials extraction and processing	Transport	Processing	Use	Disposal
sustainability impacts	Cement – CO ₂ emissions from cement production, air pollutants, noise and vibration, public health and safety	Fuels			
	Sand – coastal erosion from sand removal/extraction	Air pollution, CO ₂ emissions emanating mainly from imports of cement	Water usage, labor conditions	Durability and thermal efficiency	Concrete waste
	Gravel – environmental degradation, threats to cultural heritage, compromised health and safety of workers				

17. There are two main types of concrete use options: pre-cast (concrete blocks, for example) and cast in-place concrete or “poured” concrete.



Raw materials extraction and processing (cement and aggregates)

- **Cement**

Cement is a binder, a substance used for construction that sets, hardens, and adheres to other materials to bind them together. The industry standard is a type called “Portland Cement,” which is used in 98% of concrete globally.

Cement production: Portland Cement production is a major contributor to the climate crisis, accounting for 8% of all global carbon emissions. The production of Portland Clinker, which acts as the binder, is a crucial step in making Portland Cement and the main contributor of CO₂ emissions. In this process, ground limestone is heated at high temperatures in a kiln to produce lime, releasing CO₂ through a chemical reaction. Around half of the emissions from cement production arise from this chemical reaction, while the other 40% come from the combustion of fossil fuels powering the kilns. The remaining 10% of emissions are attributed to the fuels needed to mine and transport the raw materials (limestone).

- **Aggregates (Sand and gravel)**

Sand and gravel are concrete aggregates, providing the requisite surface area for the concrete, or binding material, to adhere to. These aggregates also act as a filler, adding more volume to the mortar (mix of concrete, sand/gravel and water), thereby making it more economical.

Raw material extraction – The main sustainability impacts of sand and gravel are associated with the raw material extraction process. Unlike cement, which is imported, sand is locally mined in many OECS countries and can have direct impact on the environment, particularly when unregulated. The principal impact of beach sand mining, in the case of beach sand, is coastal erosion, when extraction rates exceed natural sand replenishment rates. Coastal erosion can lead to a number of issues, including:

- **Threats to freshwater and marine fisheries and biodiversity** – Due to turbidity in water.
- **Increased vulnerability to climatic events** – Due to a decline of protection or barriers against extreme events, such as hurricanes and floods.
- **Changes in hydrological function** – Changes in water flow, flood regulation and marine currents due to the removal and dredging of sand.



In addition, sand mining can disrupt beach and aquatic ecosystems, threatening the variety of flora and fauna that inhabit these areas. Sand mining can also destroy the aesthetic beauty of beaches and riverbanks, which can impact tourism, an important economic sector in the Caribbean.

Gravel, like sand, is locally produced and presents a number of direct sustainability impacts, both social and environmental, during the process of extraction or quarrying, particularly when unregulated. These can be summarized as follows:

- **Threats to health and safety of workers** – Laborers may risk their health and safety when quarrying for gravel if they are not provided with the appropriate equipment and if safety measures are not taken. (Awaaz Foundation, 2017).
- **Loss in cultural heritage and archeology** – Some areas in the Eastern Caribbean are rich in cultural heritage and could be adversely impacted by quarrying activities.
- **Impacts on local communities and eco-tourism** – Communities residing in close proximity to a quarry may be affected by poor mining practices and their livelihoods could be compromised.

Distribution – The distribution impacts of sand and gravel are negligible, given that the aggregates are locally mined/quarried in the OECS. When sand is scarce locally, it is sourced from neighboring countries in the region due to the high cost of transport (large volume and weight).

Processing – Besides the inherent sustainability issues associated with cement's principal ingredients (concrete and aggregates), the processing of these materials into concrete presents additional sustainability considerations that can have a direct effect on the environment and society, as cement is locally produced in most OECS countries. One of the most prominent considerations is the stress that concrete production can have on the local water supply, as well as the impact of untreated water disposal. Another consideration is whether or not workers are treated fairly, according to existing labor regulations.

Distribution – The distribution impacts of concrete are negligible, given that much of the concrete consumed in the OECS is produced locally. However, due consideration can be given to concrete imported into the OECS region as well as to cement, which is almost



entirely imported. Transport to processing facilities and then to wholesalers, retailers, and construction sites, involves the combustion of fossil fuels and CO₂ emissions. These emissions contribute to climate change and global warming.

Use – The environmental and social impacts of concrete use is negligible; however, like lumber, quality considerations can come into play. Poor quality cement can more readily decay, leading to structures that may need to be reinforced, replaced, or rebuilt. This can lead to unnecessary wastage, as well as the need for new concrete products, taking us full circle back to raw materials extraction.

Disposal – Like lumber, concrete disposal is also negligible in terms of its sustainability impacts, given that it is a biodegradable product by nature; however, it takes longer to decompose.

Sustainability criteria of concrete and concrete blocks for public tendering

There are several approaches to addressing the various sustainability impacts of concrete and concrete block production, depending on the social and/or environmental impacts considered (see Table 2). These approaches take into account both the OECS Regional Building Code recommendations, as well as national and regional sustainable construction standards.

Table 2. Concrete blocks sustainability considerations and proposed approach

Lifecycle phase	Sustainability consideration	Proposed procurement approach	Verification
Raw materials extraction and processing (cement)	Climate change - CO ₂ emissions from cement production	Procure concrete using cement that has been produced in a manner that mitigates or minimizes Greenhouse Gas emissions.	Self-declaration or third party verification of Greenhouse Gas emissions reduction
Raw materials extraction (aggregates)	Environmental degradation and social impacts (threats to cultural heritage, human health and safety) due to extraction	Procure concrete using aggregates from legal sources. Procure aggregates that have been mined or quarried in an environmentally and/or socially sustainable manner.	Certificate of legal establishment Self-declaration of sustainable mining or quarrying practices; Environmental Management Plan; Environmental and Social Management Plan



Lifecycle phase	Sustainability consideration	Proposed procurement approach	Verification
Processing	Water usage and disposal	Procure concrete from legal sources.	Certificate of legal establishment
		Procure concrete that uses and disposes of water in a sustainable manner.	Self-declaration of sustainable processing practices; Environmental Management Plan
	Unfair, unhealthy and/or unsafe labor practices	Procure concrete from suppliers that respect labor regulations and/or promote gender equality and non-discrimination.	Certificate that indicates the supplier has not been fined in the last 6 months for labor or health and safety non-compliance; Labor policy; equality and non-discrimination policy
Transport	Climate change - CO ₂ emissions from transport	Minimize the negative impacts of transportation of materials by considering materials from nearby sources.	Certificate of origin
Usage	Vulnerability to climatic events	Procure quality concrete that lasts.	Quality standards for concrete (ASTM C90, C94, C55, C129 or similar; quality standards for cement (CROSQ quality standard for cement or similar); quality standard for aggregates (ASTM C33)

Vulnerability to climatic events – At the most basic level, public contracting authorities may wish to procure concrete that adheres to national or regional quality standards such as ASTM C90, C94, C55, C129 or similar. Durability and resilience to hurricanes and earthquakes are important considerations in the Caribbean context.

Public contracting authorities may also consider concrete that consists of cement that meets the CROSQ standards or similar and/or aggregates that meet the ASTM C33 standard or similar.



Climate change – Public contracting authorities may wish to minimize CO₂ emissions from cement production by requiring a self-declaration or third party verification of Greenhouse Gas emissions reduction.

The negative impacts of CO₂ emissions from transport can be minimized by procuring concrete and cement from nearby sources. A certificate of origin can be employed as a means of verification.

Environmental degradation – Public contracting authorities may also wish to encourage legal production/quarrying of sand and gravel, by requiring that suppliers submit certificates of legal establishment. Contracting authorities may also request self-declarations and/or Environmental Management Plans addressing some of the key sustainability issues related to concrete production and quarrying of aggregates.

Social impacts – Public contracting authorities may wish to encourage fair and safe working conditions, meeting national and international labor standards, or could go a step further and encourage gender equality and non-discrimination. Suppliers would be asked to provide evidence of their labor policies.



4. Sustainability Considerations in Public Procurement

This section looks at the procurement cycle through the lens of sustainability and examines opportunities to promote sustainability objectives at each stage.

Figure 3: Stages of Procurement: Key Sustainability Considerations at Each Stage of the Procurement Process¹⁸



18. World Bank Procurement Guidance on Sustainable Procurement (November, 2016).



I. Initial Considerations / Identification of Sustainability Risks and Procurement Requirements

The primary stage of the procurement cycle is where a government identifies the goods, works or services that it needs to procure to fulfill a given operational need, such as the delivery of public education or improved transportation through the construction of a new road. At this early stage, the government should simultaneously pay attention to determining the key sustainability risks, impacts and objectives that may be pursued through that specific procurement transaction. Viewed through a sustainability lens, the most broadly impactful procurement transactions are those that simultaneously advance all three pillars of sustainability: economic, environmental, and social. However, a procurement process that addresses only one of these pillars may still make an invaluable contribution to sustainability.

At the country level, the identification of sustainability risks, impacts, and opportunities should take place in the context of the country's own national sustainable development strategy and priorities. In the OECS, this approach is facilitated by the fact that such strategies already exist at the level of the OECS as a whole¹⁹, as well as at the level of individual Member States. For example, each of the three of the pilot countries participating in this project has its own development strategy, some of which have a specific sustainability focus: Antigua and Barbuda²⁰, Dominica²¹ and Grenada²².

Governments should also be mindful of naturally arising or man-made environmental risks (See Section 2, above). In the OECS, all countries are at risk from seasonal Atlantic hurricanes, which drive the need to improve resilience, as well as from threats arising from climate change and rising sea levels. In addition, these countries have environmental risks that are particularly acute due to their specific situation. This may drive the government to pay closer attention to those risks. Antigua and Barbuda, for example, describes itself as a "water-scarce country"²³, where the water that can be accessed from natural sources, "is far from sufficient to meet the demand for residential, agriculture and domestic uses"²⁴. As a result, water resource management is one of the central objectives of the country's national development strategy and is likely to be a paramount

19. OECS Development Strategy: Shaping our Shared Prosperity 2019-2028 (in draft).

20. Government of Antigua and Barbuda Medium-Term Development Strategy 2016-2020.

21. National Resilience Development Strategy: Dominica 2030.

22. Grenada National Sustainable Development Plan 2020-2035: Better, Ever Stronger, Together.

23. Government of Antigua and Barbuda Medium-Term Development Strategy 2016-2020 (p. 61).

24. *Ibid.*



consideration when the Government is procuring concrete blocks, given that their production is a water-intensive process.

Economic and social assessments may also suggest the sustainability risks that may need to be prioritized, such as alleviating poverty by creating jobs through increased participation of MSMEs in public procurement, or promoting gender equality by ensuring greater representation of women in the work forces of contractors that implement public contracts. Dominica, for example, has developed a strategic plan for MSME development²⁵, the implementation of which is envisaged to be advanced through public procurement.

Where the country already has an SPP policy in place—currently, only Grenada among OECS countries does, although its implementation is as yet nascent—it will also have a key influence in shaping the government’s identification of sustainability opportunities at the needs identification stage. Similarly, the OECS Model Policy on Sustainable Public Procurement (SPP) of Construction Materials, which has been drafted under this project, is expected to have a substantial impact on the sustainability priorities of Member States once it is incorporated into their applicable legal frameworks.

At this stage of the procurement cycle, it is imperative that the Government should identify the key product-specified sustainability risks that pertain to lumber and concrete blocks, as listed in Table 1 and 2, in order to ensure that these are raised with all of the stakeholders involved and due consideration is given to the mitigation of these risks at all stages of the procurement cycle.

II. Market Analysis & Procurement Strategy

Analyzing and understanding the nature and capability of the supply market for particular goods, works, or services is a key step to a government’s improving its ability to serve its sustainability priorities through public procurement. Only by fully understanding the current and potential capability of its suppliers—domestic, regional and international—can a government improve its suppliers’ capacity to meet its sustainability needs through measures such as supplier development programs.

The Market Readiness Analysis of Sustainable Construction Materials, which has been produced under this project, equips OECS governments with much of the information

25. MSME Policy and Strategic Plan (October 2020), prepared by the Ministry of Tourism, International Transportation & Maritime Initiatives, Small Business Support Unit.



they need to understand the current state of the supply markets for lumber and concrete blocks. Armed with this analysis, governments are well placed to develop procurement strategies which will successfully deliver the sustainability objectives they aspire to achieve through the award of public contracts.

For lumber, product-specific considerations at this stage of the procurement cycle include identification by the government, through market research, of legal sources of lumber from among current and prospective main export sources; development of a procurement strategy that ensures that only certified lumber will be procured and that potential sources produce lumber that is free from harmful chemicals; and, in order to minimize CO₂ emissions resulting from transportation of lumber over distance, research and identification of compliant sources closest to the point of import.

For concrete blocks, the government should identify sources of cement that use production processes designed to minimize GHG emissions, minimize use of water and ensure legal and sustainable access to and disposal of water; source aggregates from sources that employ sustainable quarrying practices; and, similarly to lumber, identify sources that minimize transportation effects.

III. Procurement Process Design & Sourcing Process

It is imperative that the sustainability priorities identified by the purchaser at the needs definition and market research and strategy stages of the procurement cycle are fully reflected in the design of the procurement process, including in the selection of the procurement method (see below) and definition of requirements, scope of work, technical specifications, and evaluation criteria to be included in the bidding documents and in the form of contract to be used for the procurement.

The way in which the purchaser defines its requirements and the content of its technical specifications should be informed by the knowledge of the capability of its existing and potential supplier base, acquired during the development of its procurement strategy, in order to ensure a successful market response to its invitation to bid.

In the case of **lumber**, it is recommended that, in drafting specifications, governments should specify grade-marked lumber, in accordance with the OECS Building Code 7th Edition, section 1403.2(a).

In addition, it is recommended that the purchaser specify legal sources, certified wood that is approved by a recognized third-party certifying organization as being obtained from a responsibly managed forest. By specifying forest certification, and associated



labelling, the purchaser is informed of the sustainability of the forests from which wood was produced. Both certification of forest management and certification of the chain of custody (CoC certification) should be considered. Purchasers may refer to certifications provided by one of the three largest international certification programs, which are the following: Forest Stewardship Council (FSC), Programme for the Endorsement of Forest Certification (PEFC), and Sustainable Forestry Initiative (SFI). Where feasible, domestic sources of lumber that meet the above requirements may be preferred or, where none are available, sources closest to the point of import should be specified or, in competitive bidding, preferred.

Attention should also be paid to the specification of the chemicals used in the treatment of lumber, in order to avoid procuring wood that has been treated with hazardous chemicals. The United States Environmental Protection Agency (EPA) recommends newer wood preservatives for residential uses that have lower toxicity profiles when compared to older ones. The following chemical wood preservatives are registered for treatment of lumber to be used in the residential lumber and timber market: alkaline copper quaternary (ACQ), which is sold in pilot countries; borates; copper azole; copper naphthenate; copper-HDO (Bis-(Ncyclohexyldiazeniumdioxy-copper)); polymeric betaine. Purchasers should also refer in their technical specifications to the OECS Building Code which provides guidance on the chemical treatment of wood products: *"Select timber products with volatile organic compound limits, e.g., wood products that do not contain urea-formaldehyde resin."*²⁶

In the case of **concrete blocks**, specifically **cement**, it is recommended that purchasers incorporate into their specifications reference to relevant national, regional, or international standards, which are instrumental in the evaluation and testing of cement. ASTM standards for cement²⁷ are used as a reference by the OECS Building Code. Widely used standards for cement are:

- ASTM C150 / C150M - 20 Standard Specification for Portland Cement;
- CROSQ regional standard for cement: CR5 54:2014 Cement – Specifications;
- Antigua and Barbuda Bureau of Standards standard for cement – CR5 54:2014 Cement – Specifications, which adopts the CROSQ standard.

26. OECS Building Code, 7th Edition (September 2016), Section 1403.3(c)

27. <https://www.astm.org/Standards/cement-and-concrete-standards.html>



Purchasers should also seek to procure from producers that manage and reduce their Greenhouse Gas emissions (GHG) a requirement that may be stated as a qualification requirement in the post qualification section of the bidding documents.

Transport impacts of aggregates are significant, as these products need to be transported to concrete-production facilities, which means loading these resources onto vehicles that emit greenhouse gases. Specifying readily available local or recycled materials can help to cut down emissions and expenses.

IV. Application of SPP under Different Procurement Methods

While the national public procurement laws of OECS countries provide for a range of different procurement methods, most of them provide for at least the following three:

- Open Competitive Bidding
- Selective or Restricted Bidding
- Single-Source or Negotiated Procurement

These are also the only procurement methods provided for under the CARICOM Model Bill on Public Procurement, with which all OECS countries will eventually be expected to align their national public procurement legal regimes once they have ratified the CARICOM Protocol on Public Procurement.

As explained in the following paragraphs, the procurement approach that governments adopt to achieve their desired sustainability objectives from a given procurement transaction will vary according to the procurement method used.

Open Competitive Bidding

In most national public procurement legal regimes, Open Competitive Bidding is established by law as the main or even default procurement method which governments are required to use when procuring public contracts for goods, works, or services. This is because Open Competitive Bidding is widely regarded as the procurement method that best achieves the key procurement objectives of competition, transparency, equal opportunity, non-discrimination, and value for money. In Grenada, for example, the law provides that, "Except as provided by this Act all public procurement by all procuring entities



shall be conducted by open competitive tendering,"²⁸ so that all the other procurement methods provided under the Act may be used only when one or more of their conditions for use are met.

While it is undoubtedly the case that a government's SPP objectives can be fully met when awarding a contract by Open Competitive Bidding, it must also be taken into account that there are a number of unforeseeable variables involved in the use of this procurement method that increase the risk for these objectives to not be realized. Principal among these is the difficulty of foreseeing the bidders who will submit a bid in response to an open tender: both the qualifications of the participating bidders and the quality of the construction materials they offer in their bids are often unpredictable. This factor increases the importance of the purchasers defining the required quality, standards, and technical specifications of the goods and the required minimum qualifications of bidders tightly in the bidding documents, so that they will be able to reject nonresponsive bids and/or unqualified bidders fairly and transparently, in accordance with the law and the terms and conditions of the bidding documents.

A purchaser is invariably within its rights to reject a bid that offers goods that do not meet its mandatory technical specifications or standards. However, the bidding documents must make it clear that such specifications and standards are mandatory and that a bid offering goods that do not meet them will be evaluated as being nonresponsive and rejected.

Evaluating a bidder's qualifications is usually more complex and less clear-cut than evaluating the technical responsiveness of goods offered in a bid, making it more difficult to reject a bid based on qualifications. Also, once a bid is evaluated as the winning bid, whether by a lowest-evaluated methodology or by an evaluation of combined price and non-price criteria, it becomes more problematic to reject a bid based on the bidder's qualifications.

Selective or Restricted Bidding

Selective or Restricted Bidding is a procurement method whereby the purchaser is not required to publish an invitation to bid but, rather, directly invites a limited number of bidders to participate in a tender. The major advantage of Selective Tendering is that, because the Purchaser is permitted to choose which bidders it invites to bid, it has the opportunity to ensure that only fully qualified bidders participate, so it may invite only

28 Public Procurement and Disposal of Public Property Act (No. 39 of 2014), Clause 30(1).



bidders with a proven track record of supplying sustainable products, delivering sustainability commitments, and with a clean track record with regard to violation of environmental or social standards. In that respect, this procurement method reduces the risk in Open Competitive Bidding of unqualified bidders participating and winning the contract. However, reduction of this risk is clearly predicated on the purchaser knowing the supply market and the capacity of the bidders which comprise it.

Use of Selective Tendering is usually conditioned by a number of considerations, including if there are only a few known suppliers, contractors, or service providers of the goods, works, or services locally or internationally or if the time and cost required to examine and evaluate a large number of tenders is be disproportionate to the value of the goods, works or services to be procured.²⁹

Although the Market Readiness Assessment provides comprehensive information about current and potential suppliers of lumber and concrete blocks to the OECS, governments should not take this information as justification for the use of Restricted Tendering or for otherwise limiting participation in public bidding to known suppliers. On the contrary, in every instance of use of Restrictive Tendering, one or more of its conditions of use should be met, as stipulated in the applicable national public procurement legislation. Furthermore, it is generally a good practice in public procurement that governments should maximize competition, including the research and identification of new, qualified suppliers.

Single-Source or Negotiated Procurement

Single-Source Procurement, where the government directly invites one company, without competition, to perform the contract is a procurement method whose use is based on a number of conditions, which typically include the continuation of a contract that was previously awarded competitively, emergencies, where the goods are proprietary, or where only one bidder is uniquely qualified to perform the contract. The latter two conditions justify sole-source procurement; that is, where there is only one bidder that can supply the goods or perform the works the government needs. This situation involves an important difference from Single-Source Procurement, where there are several qualified bidders available but the government chooses to invite only one among them to perform the contract. For a government to be able to use this method legally, at least one of its conditions of use must be fully met.

29. Grenada: Public Procurement and Disposal of Public Property Act (No. 39 of 2014), clause 34. (b)-(c).



Single-source procurement is difficult to justify in the procurement of civil works other than in the case of an emergency, such as a natural disaster. This is because construction works are rarely proprietor and, in most countries, there are usually a number of qualified contractors, either domestic or international, who can perform a given contract. Certainly, in the case of lumber and concrete blocks, these are not proprietary materials; rather, they are available from multiple suppliers, as evidenced by the Market Readiness Analysis.

While Single-Source Procurement obviates the need to compare and evaluate competitive bids from a number of suppliers, the government's approach to conducting the procurement process should be no less rigorous in respect of many of the key stages in the procurement process, if it is to realize the desired sustainability benefits. These stages include defining the procurement requirements, technical specifications and quality standards, and criteria for evaluating the single bidder's submission and for evaluating its qualifications.

V. Bid Evaluation, including Bid Evaluation Criteria

In the procurement legal frameworks of several OECS countries, the provisions on the criteria to be used in the evaluation of bids are not yet highly elaborated. Of the three pilot countries, none of their applicable legal systems provides clear guidance on how sustainability considerations are to be reflected in the criteria for the evaluation of bids. In practice, most countries surveyed evaluate on the basis of lowest price.

Evaluation of bids may be based on price-only or on a combination of price and non-price factors.

Evaluation based on price-only, which is currently widely used throughout the OECS, has limited application in the context of SPP. This is because the greater the variety of sustainability objectives a purchaser includes in a given procurement process and the greater the complexity of those objectives, the more difficult it is to quantify them in monetary terms.

Where the purchaser is able to specify its requirements precisely—for example, 100% grade-marked lumber with forest certification, price-only evaluation may still be a suitable method of bid evaluation, as award to the lowest-price bids among a number of responsive bids that all offer 100% grade-marked lumber with forest certification would constitute value for money.

However, once the purchaser decides to pursue more diverse sustainability objectives through the procurement process, other evaluation systems become indispensable.



Criteria may be either mandatory (also called required or pass/fail) or preferred (optional).

Mandatory Criteria

Mandatory criteria are intended to establish the minimum acceptable specification of performance of the materials that must be met. For example, where the purchaser specifies a particular standard that offered cement is required to meet, such as ASTM C150 / C150M – 20. Standard or CROSQ standard CR5:2014 Cement Specification, that standard is expressed in the bidding documents as a mandatory criterion, which must be met by the cement offered by the bidders in their bids. Given that the criterion is mandatory, a bid which offers cement (either the entire quantity offered or a part of the quantity offered) that does not meet the specified standard shall be evaluated as technically nonresponsive and rejected.

Preferred Criteria

A purchaser may also define some of its sustainability requirements as preferred or optional criteria. In this case, the criteria are not mandatory for bidders. However, even with preferred criteria, it is usually advisable for a purchaser to set a minimum level of certain sustainable criteria to be met by all bidders. For example, a purchaser may specify a minimum of 10% or working hours in a given works contract to be performed by members of vulnerable or disadvantaged groups. In such a case, all bidders must offer this percentage and any bid that fails to offer it shall be rejected as nonresponsive, while bidders offering a higher percentage would receive proportionately higher scores in the purchaser's evaluation of that non-price criterion. Where multiple sustainability objectives are included in a given procurement process, the evaluation methodology will, out of necessity, be comprised of price plus a range of non-price criteria, each one of which may be an assigned minimum, mandatory level and associated preferred level, this making the evaluation methodology more complex.

In the specific case of lumber and concrete blocks, the use of life cycle costing in bid evaluation does not readily lend itself to the evaluation of bids for these materials because the post-purchase cost of owning and maintaining these products during their useful life is negligible. Also, the cost of disposal at the end of the materials life cannot readily be factored into the evaluation of bids because of a number of factors, including the fact that the useful life of the materials may be 30-50 years and that, at the end of the material's life, the cost of disposal may not fall to the original purchaser, given that the materials are typically incorporated into buildings, such as houses, ownership of which may pass through several hands before the materials are disposed of.



VI. Contract Implementation, Supervision and Impact Assessment

As mentioned above under the design of the procurement process, it is essential that the form of contract applied by the government, including all its standard terms and conditions, should lock in all of the sustainability benefits identified by the purchaser through each of the earlier stages of the procurement cycle. These will include the applicable quality standards, technical specifications, production methods and, where applicable, self-certifications by suppliers and producers, maintenance and disposal protocols, and packaging and transportation methods that minimize environmental effects. To ensure the use of appropriate standard terms and conditions of contract, governments should re-visit their current standard bidding documents for goods and works, which typically include standard forms of contract, to ensure that the necessary sustainability considerations are included in those forms of contract.

It is imperative that the purchaser should recognize that, even if they have incorporated all of their pre-defined sustainability objectives into the contract signed with the winning bidder following the procurement process, the realization of those sustainability objectives is still dependent on the contractor's or supplier's performance and, indeed, the stated objectives may not be realized unless the purchaser manages the contractor's performance of the contract throughout its duration.

In that context, the purchaser ought to proactively manage the contract to ensure that the sustainability priorities are delivered, as agreed. It is essential that the award of contract is not seen as the end of the sustainable procurement process, but the beginning of a process that actually delivers the sustainability needs.

The best way to manage contract implementation and the relationship with the supplier is to develop a comprehensive contract management plan. The contract management plan may be finalized and jointly agreed to include performance targets and measures. Linking sustainability targets with the contract management plan assists in maintaining focus and momentum for delivering the sustainability outcomes. As part of contract management, the purchaser should share its sustainable procurement risks, identified at the needs definition stage, with the contractor, so that the latter may be aware of those risks and focus on managing or mitigating these risks through contract performance.

Continuous monitoring of the contractor's performance is essential for the duration of the contract to ensure that the contractor continues to deliver in accordance with the specifications, contract terms, and Key Performance Indicators defined in the contract.



In the context of the procurement of construction materials in the OECS, the role of Building Inspectors is particularly important. As recognized by the OECS Building Code, “The development of an adequately staffed building inspectorate is necessary to ensure that the minimum standards stated in the code and guidelines are maintained. The inspectorate will be expected to ensure compliance with the minimum standards set out in the code [...]”.³⁰

VII. Circular Economy, Re-Use, Recycling and Disposal

Some repair and re-use of publicly owned assets are already ongoing in the OECS. Notably, the Government of Grenada operates a successful program for repairing and re-using office furniture, which is typically made from wood, metal or fabric. Repair and reupholstering of damaged office furniture is undertaken by a local repair facility, contracted by the Government under a public-awarded contract.

Re-use opportunities are significantly more limited in the case of lumber and concrete blocks, given that they are procured to be built into physical structures which are intended to operate for several decades.

Disposal of lumber carries negligible environmental risk, given that lumber is a biodegradable product.

Concrete disposal also has negligible sustainability risks but it takes longer than lumber to decompose.

Regarding the disposal of water used in concrete block production, it is imperative that discharges of wastewater to surface water should not result in contaminant concentrations in excess of local ambient water quality criteria. Discharges into public or private wastewater treatment systems should meet the pre-treatment and monitoring requirements of that sewer treatment system.³¹ These commitments in respect of water disposal should be written into the producer’s contract and appropriate performance monitoring measures put in place to ensure they are respected.

30. OECS Building Code, 7th Edition (September 2016), Preface.

31. <http://www.basel.int/Portals/4/Basel%20Convention/docs/pub/techguid/cement/tg-cement-e.pdf>



VIII. Means of Verification

From a contractual point of view and in order to protect the purchaser's interest in securing the anticipated sustainability benefits, it is imperative that the purchaser should specify an appropriate, effective means of verification of the sustainability properties for all products that they procure and that these should be incorporated upfront, starting from the stage of the design of the procurement process.

For lumber and concrete blocks, the following are the recommended means of verification which should be incorporated into the procurement contract:

- 
- **Lumber:** Lumber grade marks, certified wood, Forest certification (PEFC), certification of forest management (PEFC ST 1003); certificate of origin, attesting to the source of lumber and distance transported; and certification of forest management and sustainable chain of custody (PEFC ST 2002); producer's self-declaration regarding the use of non-hazardous chemicals and preservatives in the processing of the lumber supplied.
 - **Cement:** CROSQ quality standard for cement (CR5 54:2014 Cement – Specifications or similar); producer's self-declaration or third-party verification of reduction of GHG emissions; certificate of legal establishment of the vendor and producer.
 - **Aggregate:** Relevant ASTM standards, as referenced in the OECS Building Code are listed below. No regional (CROSQ) or national quality standards of pilot countries for aggregates are available. ASTM C33 / C33M – 18 Standard Specification for Concrete Aggregates. ASTM C144 – 18 Standard Specification for Aggregate for Masonry Mortar; self-certification of the application of sustainable quarrying practices
 - **Sand and Gravel:** There are no sustainability standards available for sand and gravel aggregates. Purchasers may impose a qualification requirement on producers whereby it procures only gravel and aggregates that have been extracted from quarries that are managed in accordance with sustainable quarrying best practices. In terms of the





risks to the health and safety of quarry workers, quarries from which gravel and aggregates are extracted may be required to follow internationally recognized good practices, such as those reflected in the “Health and Safety in Quarrying” documentation, published by the UK Health and Safety Executive.³²

Verification of producers that manage and reduce their Greenhouses Gas emissions (GHG) may comprise a self-declaration of GHG reduction or third-party verification of GHG emissions reduction by a pre-determined percentage. Such requirements may be stated as a qualification requirement that is incumbent on the producer and incorporated into the qualification criteria of the bidding documents.

5. Incorporating SPP Provisions into Bidding Documents³³

I. References to Standards and Brand Names

Standards and technical specifications used in bidding documents should promote the broadest possible competition, while ensuring performance or other requirements for the procurement. National or regional (CROSQ) may be used in domestic tendering within the purchaser’s country. However, to the extent possible, in international competitive procurement, the purchaser should specify internationally accepted standards, including quality standards, with which the materials shall comply. In all cases, the bidding document should state that material meeting other standards that are at least substantially equivalent to the specified standards shall also be accepted.

Specifications shall be based on relevant technical characteristics or performance requirements of the materials. References to brand names, catalogue numbers, or similar classifications should be avoided, as they may have the effect of unfairly limiting competition. In the particular case of lumber or concrete blocks, branding of such materials is uncommon and would be difficult to justify, given the nature of the products. Where it is justified to specify a brand name or catalogue number of a particular manufacturer

32. Available at: <https://www.agg-net.com/resources/articles/health-safety/health-and-safety-in-quarrying-3>

33. These Guidelines use the World Bank’s Standard Procurement Document for Small Works as a model.



to clarify an otherwise incomplete specification, the words 'or equivalent' shall be added after such a reference to permit the acceptance of offers for goods that have similar characteristics and performance at least substantially equivalent to those specified.

II. Bill of Quantities

The purchaser should include in the Bill of Quantities contained in the bidding documents sufficient information on the quantities of works to be performed to enable bids to be prepared efficiently and accurately. When a contract has been entered into, a priced Bill of Quantities is included in the contract for use in the periodic valuation of works executed. The works should be itemized in the Bill of Quantities in sufficient detail to distinguish between the different classes of works, or between works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost. Consistent with these requirements, the layout and contents of the Bill of Quantities should be as simple and brief as possible.

III. Bid Evaluation Criteria

Notwithstanding the provisions on the bid evaluation in current procurement laws, there are certain universally recognized good practices that should apply in all cases:

- The evaluation criteria should be proportionate and appropriate to the type, nature, market conditions, complexity, risk, value, and objective of what is being procured.
- To the extent practicable, evaluation criteria should be quantifiable, such as convertible to monetary terms.
- The bidding documents should include the complete evaluation criteria and the specific manner in which they shall be applied.
- The evaluation criteria should be applied consistently to all bids submitted.
- Only the evaluation criteria, and all the evaluation criteria, indicated in the bidding documents should be applied during evaluation.
- Once the bidding documents have been issued, any change to the evaluation criteria should be made in writing through a formal amendment to the bidding documents, issued to all bidders.



IV. Qualifications of Bidders, Manufacturers and Producers

As most bidders on civil works tenders conducted by OECS countries are domestic, regional or, in some cases, international civil works contractors and, therefore, not the original producers of the construction materials they offer in their bids, the qualification requirements stipulated in the bidding document should be designed so as to apply to both the bidder and the producer, manufacturers or extractors whose materials the bidder is offering in his bid. Qualification criteria should be expressed as minimum requirements and normally assessed on a pass/fail basis against such criteria as: eligibility, experience, technical capability, and financial resources. These take into account objective and measurable factors such as: experience, satisfactory past performance, successful completion of similar contracts over a given period, capability of construction and/or manufacturing facilities, financial situation, and eligibility.

V. Bid Evaluation

a. *Substantial Responsiveness*

Few bids are perfect in every detail; most have imperfections, errors, omissions or other forms of deviation from the requirements of the bidding documents which the purchaser is required to evaluate as part of the process of evaluating the bid.

Deviations, either minor or major, may occur at any stage of the bid evaluation process. Each one requires the purchaser to determine whether it is minor or major and evaluate it accordingly.

At any stage of the evaluation process, a determination that an identified deviation is major requires the bid to be rejected at that stage and not be considered further in the evaluation. One of the most common errors in bid evaluation is that a bid that has been evaluated as containing a major deviation at a given stage of evaluation is allowed to proceed to subsequent stages of evaluation. This is an erroneous approach which can result in the wrong bid being recommended for award of contract, given that a non-responsive bid may be allowed to continue through to the stage at which the recommendation for award is made, even though it should have been rejected earlier in the process.

Some deviations are self-evidently major, thus making a decision to reject the bid quite straightforward. They include:





- refusal to accept the law of the purchaser's country as the law applicable to the contract;
- requesting that a price adjustment clause be included in the contract, where the bidding documents require bids to be submitted on the basis of fixed prices;
- failure to respond to essential specifications of the purchaser's Schedule of Requirements and technical specifications and instead offering goods of a different design that do not provide substantial equivalence in critical performance parameters to the purchaser's requirements;
- subcontracting in a substantially different manner or amount than is permitted by the bidding documents;
- refusal to bear important contractual responsibilities or liabilities as allocated to the supplier or contractor by the bidding documents, such as warranty obligations, functional guarantees or insurance coverage; refusal to comply with critical provisions in response of such items as taxes and duties or dispute resolution procedures;
- participating in another bidder's bid, where such is prohibited by the bidding documents;
- offering to supply goods that do not conform to the standards stipulated in the bidding documents.

b. Treatment of Minor and Major Deviations

Some deviations are minor, others major. The key difference between them, in terms of how they are treated in evaluation, is that a minor deviation may be evaluated and need not result in the rejection of the bid, which may still be evaluated as substantially responsive to the requirements of the bidding documents and accepted for detailed evaluation.

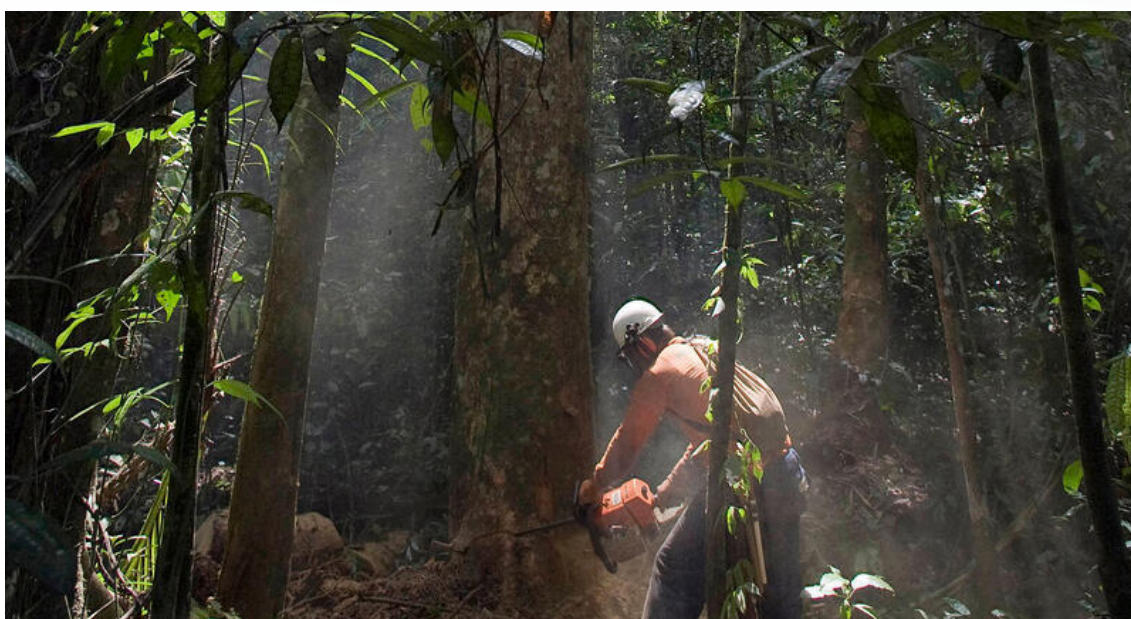
By contrast, a major deviation means that the bid is substantially nonresponsive to the requirements of the bidding documents and must be rejected. A major deviation cannot be evaluated.



VI. Form of Contract

General Conditions of Contract: The General Conditions of Contract contained in the World Bank's Standard Procurement Document for Request for Bids for Small Works (less than US\$10.0 million) may be used without change for the procurement of civil works by OECS countries. Indeed, many OECS countries that are World Bank borrowing member countries already use this document successfully on their national procurement procedures.

Particular Conditions of Contract: The Particular Conditions of Contract (PCC) should be used to modify the General Conditions of Contract to the purchaser's specific needs. In the case of concrete blocks, they should contain the purchaser's specific requirements in terms of the production processes to be used, requirements in respect of use and disposal of water and health and safety conditions to be provided by the producer for workers engaged in the production process for the specified contract. For extraction of gravel and aggregates, the PCCs would include the purchaser's requirements in respect of sustainable quarry management practices and requirements in terms for working conditions of quarry workers. Through the PCC with the main contractor, these specific sustainability requirements of the purchaser are passed on, by means of a subcontract, to the producer or extractor of the materials.



Annex 1. Lumber - Recommended specifications

RS1 Sourcing legal Lumber

Lumber used in construction and civil works must be legally harvested.

Verification

- A declaration that only Lumber from legal sources will be used in construction and civil works.
- Certified Lumber with FSC, PEFC and SFI.

Note: Declaration might be implemented as a first step (short term) to provide a message to the market which allows them to be prepared for further requirements, like certifications.

Note: Certification schemes, like FSC, PEFC and SFI, provide sufficient level of assurance to comply with this criteria. Although its application to 100% lumber used is desirable, it could be difficult since local markets could not be prepared to supply all lumber certified. It is recommended to start its application with low percentages and move to higher percentages when the market might be ready to supply certified lumber.

This recommendation may be used as a technical specification and as Contract performance clause if supply is constant in the project.

RS2 High quality Lumber

Lumber used for load supporting purposes should be identified by Grade Mark (according to the OECS Building Code).

Verification

- Grade Mark visible in lumber.

Note: Grade marks provide information about lumber quality and characteristics. This criteria may be used as a technical specification in tenders.



RS3 Lumber chemical treatment

Procure lumber that has been treated with newer and greener wood chemical preservatives (according to Environmental Protection Agency). "Select timber products with volatile organic compound limits. (according to OECS Building Code).

Verification

- Producer's declaration of chemicals and preservatives used on lumber.

Note: Environmental Protection Agency defines the following Chemicals as recommended, newer and greener to treat lumber.

- Alkaline copper quaternary (ACQ)
- Borates
- Copper azole
- Copper naphthenate
- Copper-HDO (Bis-(Ncyclohexyldiazoniumdioxycopper))
- Polymeric betaine

This criteria may be used as a technical specification in tenders.

RS4 Reduce transport environmental impacts

Lumber transported from farther producers might represent a higher environmental impact.

Minimize the negative impacts of transportation of materials by choosing alternatives from nearby sources (according to OECS Building Code).

Verification

- Origin certificate which specifies country when lumber is harvest.

Note: It is recommended to start its application just asking for the certificate, in a first step it cannot represent a compulsory technical specification or an awardable criteria. In a second step it can be applied as an award criteria proving tenders' points when concrete blocks are produced nearby.



RS5 Reduce Environmental impacts

Procure sustainable lumber which reduce impacts in rainforest and local communities.

Verification

- Certificates of forest management and sustainable chain of custody certifications, like FSC, PEFC or SFI.

Note: Certification schemes, like FSC, PEFC and SFI, provide sufficient level of assurance to comply with this criteria. Although its application to 100% lumber used is desirable, it could be difficult since local markets could not be prepared to supply all lumber certified. It is recommended to start its application with low percentages and move to higher percentages when the market might be ready to supply certified lumber.

This recommendation may be used as an Award Criteria.



Annex 2. Concrete blocks - Recommended specifications

RS1 Incentivize better quality construction materials

Improving construction materials allows longer life constructions and higher resilience against natural disasters.

Verification

- For Cement might be requested the following standards: CROSQ quality standard (CR5 54:2014 Cement – Specifications or similar).
- For Aggregates might be requested the following standards: ASTM C33 standard for aggregates or similar
- For Concrete blocks might be requested the following standards: ASTM C90, C94, C55, C129 or similar.
- Self declaration which specifies that concrete blocks followed the OECS Building Code 7th edition concrete blocks recommendations.

Note: Application of quality standards is subject to the recognition of them by countries local bureaus of standards. Although is desirable to apply quality standards to all construction materials, recognition is a needed previous step.

In a first step, OECS Building Code concrete blocks quality self declaration can be implemented as a not compulsory technical specification and not awardable.

This recommendation can be applied as a Technical Specification in tenders when standards have been developed and implemented in countries.

RS5 Reduce environmental and social impacts in local quarries.

Quarries operations may create negative impacts in the environment (i.e., water, soil, rivers), cultural and archeological heritages, workers health and safety (i.e. noise, dust, vibration, working conditions) and nearby local communities.



The identification of negative impacts of every specific quarry represents a first step to create a plan that allows Quarry to reduce and compensate their negative impacts.

Verification

- Self-declaration of reduction negative impact reduction compromise.
- Environmental and social Impact Plan with management objectives.

Note: Creation and implementation of an Impact plan in quarries may represent an important challenge for Small and Medium Enterprises. Implementation of this criteria is recommended to do in steps. In a first step a self-declaration may be requested to concrete blocks producers. In a second step an impact plan may be requested. It is important to consider that people managing quarries may need to be trained and supported, by the government or NGOs, to create technical specifications which must be contained in the management plan.

This recommendation can be used as a Award Criteria in tender since it can encourage companies to integrate this kind of assessments.

RS6 Incentivize suppliers that work in favor of gender equality and no discrimination.

Verification

- Policy on gender equality and no discrimination.

Note: Policy must content a compromise to respect gender equality and to avoid any practice of discrimination. Policy must be signed by owners or high administration.

This recommendation can be used as a Award Criteria in tender since it can encourage companies to have gender equality and avoid discrimination.



RS7 Incentivize suppliers that respect labor regulations and promote healthy and safe work spaces.

Companies which are complying with Labour and Health and safety laws, represents a lower risk of having accidents or bad labor practices.

Verification

- National or governmental certificate which specifies that Company has not been fined in the last 6 months for labour or health and safety legal non-compliances.
- Labour and Health and Safety Policy.

Note: Policy must content a compromise to respect labour local laws and to provide a safe and healthy work space. Policy must be signed by owners or high administration.

Note: If countries have not develop labour or health and safety certificates, application of this criteras can be done through a policy in a first step. Also, Validation can be done by external stakeholders, like labour unions or NGOs.

This criteria can be applied in a first step as a specification not compulsory. In a second step it can be implemented as a legal specification which will represent that Local Governments will work only with companies which are complying labour and health and safety local laws.

This recommendation also can be used as Contract Performance clause if materials is constant in a proyect.

