

Procurement Guidelines for Sustainable Construction Materials



Key Stages in Procurement

1. Identification

Initial Considerations

- Borrower's sustainability policies, strategies and priorities
- Community needs and expectations
- Naturally arising environmental risks
- Environmental and social impact assessments
- Prioritization of sustainability needs

2. Analysis

Market research + Planning

- What are the expected sustainability benefits?
- What relevant sustainable products/services are available in the market?
- Is the market able to deliver new or customized sustainable solutions?
- What are the anticipated costs and what is the VfM proposition?
- How will the procurement strategy address sustainability?
- Develop Project Procurement Strategy for Development (PPSD)

3. Requirements

Procurement Process Design

- RFQ, RFB or RFP Selection Method?
- Use Prequalification, or not?
- Specifications: conformance or performance?
- Identify relevant sustainability standards and classifications
- Assess sustainability priorities throughout the life-cycle
- Develop sustainability criteria, including rated criteria and weightings, if applicable
- Check contract terms reflect sustainability priorities, as appropriate

4. Source

Sourcing process

- Advertise the opportunity to attract interest from suitable vendors
- Evaluate bids/proposals
- Assess quality of sustainable solutions
- Assess bidder's/proposer's sustainability credentials and track records
- Assess and compare whole-life costs
- Evaluate VfM including quality and cost of sustainable solutions
- Select the Most Advantageous Bid/Proposal
- Agree Key Performance Indicators
- Contract terms: Bonus/penalty incentives and value engineering clause

5. Implement

Contract Implementation

- Contract management plan
- System to monitor delivery of sustainability priorities
- System to report against delivery outcomes being achieved
- Assess delivery against KPIs sustainability measures
- Value engineering to improve sustainability outcomes

6. Check

Check

- Assess sustainability outcomes and benefits achieved
- Assess VfM over the whole-of-life
- Review usefulness of sustainability KPIs
- Review effectiveness of sustainability monitoring and reporting
- Identify lessons learned
- Share learning



- On-going contract management: 25
- Auditing and improving supplier performance: 25
- Awarding of contracts / contract negotiation: 19
- Contract performance clauses: 33
- Evaluations of bids / proposals: 32
- Development of requirements and technical specifications: 78
- Supplier pre-qualification: 26
- Supplier development: 34
- Needs definition: 69
- Other 3



Stage	Procurement Actions
Identify Sustainability Opportunities & Risks	• Define operational procurement need • Identify sustainability risks and opportunities associated with this procurement • Review how applicable legal and policy framework for sustainability applies to this procurement • Understand country and community needs and priorities e.g. > reduce greenhouse gas (GHG) emissions > improve efficiency of water usage > promote participation of MSMEs in public contracts > reduce youth unemployment > achieve gender pay parity > improve compliance with labour or health and safety laws • Prioritize sustainability needs to be served by this procurement transaction • Develop mitigation measures to reduce sustainability risks in this procurement process



Stage	Procurement Actions
Market Research & Procurement Strategy	• Analyze the supply market for the goods, works or services to be procured from both domestic and foreign suppliers, bidders, and producers/manufacturers • Define sustainability impacts at each stage of the supply chain, from extraction to delivery, and design a procurement strategy to mitigate them • Define expected sustainability benefits & how they will be incorporated into procurement requirements
Design Procurement Process	• Choose procurement method consistent with national procurement legislation > Open Competitive Bidding > Restricted Bidding > Single-Source Procurement • Define schedule of requirements, technical specifications, applicable quality standards, social labels • Set minimum qualification requirements for: > Bidders: past experience, workforce resources, and policies > Producers: ISO certifications, environmental record • Set bid evaluation criteria to obtain prioritized sustainability objectives: > Mandatory requirements = pass/fail criteria > Desirable requirements = rated criteria



Stage	Procurement Actions
Implement Procurement	• Attract enough qualified bidders offering the desired products. • Evaluate price and non-price components of bids to maximize sustainability benefits
Contract Administration	• Incorporate sustainability benefits into the contract as binding contractual commitments • Monitor supplier's performance against Key Performance Indicators • Verify products and processes
Assessment of Sustainability Impact	• Assess whether planned sustainability objectives were achieved • Evaluate whether the objectives, if achieved, had the desired effect



Stage

Procurement Actions

Identify Sustainability Opportunities & Risks

Sustainability Risks Related to Lumber

- Climate:
 - > Trees cool Earth's atmosphere by storing greenhouse gases (GHGs)
 - > 15% of GHG emissions are due to deforestation
 - > Half of earth's natural forests have already disappeared, and earth is losing 27 football fields of forest every minute, exacerbated by illegal logging
 - > Lumber used in construction accounts for 25% of wood harvesting globally
 - > Transportation of lumber consumes fossil fuels, contributes to global warming
 - > OECS imports >85% lumber, mainly from USA (EC\$31.8m by 3 pilot countries in 2017)
 - > Hard wood from Guyana, Brazil, Honduras, Chile. Soft wood from USA
- Biodiversity:
 - > Forests are home to 80% of biodiversity on Earth
 - > **Indigenous People:** 350 million indigenous people live in forests
 - > **Food Security:** 1.6 billion people living in poverty rely on forests for livelihoods
 - > **Environment:** Trees improve soil quality, retain water, regulate rivers, prevent flooding. Deforestation results in environmental degradation
 - > **Human Health:** Chemical treatment of lumber with toxic chemicals endangers human health
 - > **Construction Risks:** Poor-quality lumber poses risks of structural failure, warping, insect infestation



Market Research & Procurement Strategy

Stage

Procurement Actions

- OECS Regional Market: No major lumber producers in 3 pilot countries
 - > ***Antigua and Barbuda:*** No domestic production of lumber; no sustainable lumber alternatives available locally
 - > ***Dominica:*** Small-scale domestic production of lumber, used in furniture manufacturing; no domestic sources of certified sustainable lumber
 - > ***Grenada:*** Some small-scale production of lumber; limited domestic sources of certified sustainable lumber
- Bidders on public contracts are mainly domestic or other OECS regional construction contractors, all of whom are importing lumber to satisfy demand of public works contracts
- Procurement strategy should be built on understanding bidders' existing supply chains, where they are sourcing lumber from and from which producers



Stage	Procurement Actions
Design Procurement Process	• Procurement method, consistent with national procurement legislation > Open Competitive Bidding: harder to control which bidders participate and which products they offer. Therefore, qualification requirements and specs need to be tightly defined > Restricted Bidding: Balance between creating competition and ensuring only qualified bidders participate > Single-Source Procurement: Maximizes Purchaser's control but still needs to ensure sustainability commitments are defined in the contract • Quality standard: Lumber identified by Grade Mark, certified lumber • Require Chain of Custody Certification • Procure from legal sources • Specify lumber that has been treated with greener wood preservatives, according to OECS Building Code • GHGs: Minimize negative impacts of transportation by procuring lumber from domestic market or from nearby sources, where available



Stage	Procurement Actions
Implement Procurement	• Price-only evaluation may work where all sustainability requirements can be clearly defined in the specs and quality standards • Certain sustainability criteria require evaluation based on rating of non-price criteria. In such cases, a bidder offering higher level of benefit may be rewarded in technical evaluation • Requirement for sustainable lumber could be phased in gradually: a bidder offering a higher percentage of grade-marked lumber in his bid, above the minimum requirement, could be rewarded with additional points in evaluation
Contract Administration	• Verification: > Grade Mark visible in lumber. Certified wood with forest management, sustainable chain of custody certification such as FSC, PEFC, SFI > Legal source certificate or FSC-controlled wood standard > Certificate of origin for imported lumber



Stage	Procurement Actions
Identify Sustainability Opportunities & Risks	• Sustainability Risks Related to Concrete Blocks > Cement is the largest manufactured product on Earth by mass > In Caribbean, construction, mining and transportation sectors account for 35% of GDP average > Production of concrete blocks uses aggregate/gravel, sand, cement, and water > Cement is heavily used in construction in the OECS: > 90% of houses in Grenada are constructed using cast-in-place concrete • Climate > Cement production releases 5-6% of all carbon dioxide generated by human activity and accounts for 4% of global warming • Use of Water Resources > Concrete block production is water-intensive and creates risks associated with access to, use of, and disposal of water. In 2012, concrete production accounted for 9% of industrial water use globally > Quarrying of aggregates can harm water quality and damage aquifers



Stage	Procurement Actions
Identify Sustainability Opportunities & Risks	Sustainability Risks Related to Concrete Blocks • Environment: > Cement production releases persistent organic pollutants (dioxins, heavy metals, particles) > Extraction of sand and gravel exceeds natural replenishment rates, causes coastal erosion • Human Health: > Noise, air vibration and dust result from cement production and transportation > Quarrying of aggregates produces noise, loss of habitat, damages natural and cultural assets > Risks surrounding labour conditions, health and safety of workers, particularly in quarrying and concrete production plants • Economy: > Sand extraction impacts beach tourism, which is so important to Caribbean economies > Opportunity to promote participation of domestic producers and MSMEs, as most production is local



Stage	Procurement Actions
Market Research & Procurement Strategy	• Quarrying of aggregates is ongoing in all 3 pilot countries • Production of concrete blocks is ongoing in all 3 pilot countries in a mix of small-scale industrial and cottage industry facilities • There is no cement production in any of the 3 pilot countries; all cement is imported, mainly from Trinidad and Colombia • Transportation of imported cement causes GHGs • Value of cement imports by the 3 pilot countries in 2017 was EC\$29.5m • 3 of 4 components are produced locally (except for sand in Grenada) and production occurs domestically in all countries, thus giving Governments greater leverage to use its purchasing power to influence domestic production practices towards more sustainable practices



Design Procurement Process

Stage

Procurement Actions

- Purchasers may specify products that meet applicable quality standards for inputs:
 - > ASTM quality standard for cement is referenced in OECS Building Code
 - > CROSQ has defined a Caribbean regional standard for cement
 - > National Bureaux of Standards have adopted (A&B) or are adopting (Dominica) CROSQ standard or have their own cement standard (Grenada)
 - > ASTM standards for aggregates, referenced in OECS Building Code
 - > Extraction of aggregates from quarries that employ sustainable quarrying practices
- Products that meet applicable national (Bureau of Standards), regional (CROSQ) or international (ASTM) quality standards should be defined as mandatory, pass/fail criteria in bidding documents
- Requirements for improved sustainability of extraction (e.g., quarrying of aggregates) can be defined as mandatory qualification criteria for the producer, rather than the bidder, giving domestic bidders adequate time to diversify their supply chains, or domestic producers (quarry operations, concrete production plants) time to transition to more sustainable production practices
- Avail of opportunities to promote social gains through production processes:
 - > Reduction of youth unemployment, provision of apprenticeships
 - > Involvement of women in contract performance
 - > Improved enforcement of labour, health & safety laws



Stage	Procurement Actions
Implement Procurement	• Approach to bid evaluation is similar to that for lumber • Applicable quality standards should be stated as mandatory requirements • A bid offering one or more products that fail to meet the specified quality standard should be evaluated as nonresponsive and rejected • Price-only evaluation is less likely to work well, given that there are 4 components to concrete blocks, each with different extraction and production characteristics, that the Purchaser should seek to influence through the procurement process • Evaluation will generally be based on application of rated criteria
Contract Administration	• Verification: Compliance of supplied product with specified national, regional or international standards e.g., CROSQ quality standard for cement • Self-declaration of GHG reduction or third-party verification



Stage	Procurement Actions
Assessment of Sustainability Impact	- Contracting authorities need to compare the impacts expected from the procurement of conventional items for a specific contract with the impacts expected from the sustainable procurement - This can be done on a unit basis multiplied by the volume of procured goods - Reduction of GHG emissions are the easiest to assess. Biodiversity, pollution, health or social impacts are more difficult to assess
2 UNEP Publications	- The Impacts of Sustainable Public Procurement https://wedocs.unep.org/bitstream/handle/20.500.11822/32156/ISPP.pdf?sequence=1&isAllowed=y - Measuring and Communicating the Benefits of Sustainable Public Procurement https://www.greengrowthknowledge.org/sites/default/files/downloads/resource/Measuring_and_Communicating_the_Benefits_of_Sustainable_Public%20Procurement%20%28SPP%29.pdf



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