Sustainable Procurement and International Financial Institutions

Discussion paper

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1. Introduction

Public procurement – the overall process of acquiring goods, civil works and services by organizations – is one of the instruments that can be used by international financial institutions (IFIs) to achieve sustainability. In recent years international institutions and governments have acknowledged the importance of procurement for sustainability (sustainable procurement, see Box 1). Some organizations have also started to formulate strategies for including sustainable aspects in their procurement process. However, despite the increased attention, very few governments and IFIs have actually been able to implement sustainable public procurement. This paper aims to contribute to a constructive dialogue on sustainable procurement within IFI-funded development programs by presenting best practices, by giving insight in challenges that environmentally and socially responsible public procurement brings, and by presenting potential coping mechanisms to deal with these challenges.

BOX 1: What is sustainable procurement?

'Sustainable procurement is 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 organization, but also to society and the economy whilst minimizing damage to the environment' (Department of Environment, Food and Rural Affairs, UK, 2006)

Paragraph 2 specifies the relevance of public procurement for sustainability. In paragraph 3 the principal-agent dilemma that can arise in the process of sustainable procurement is outlined. Paragraph 4 illustrates the different phases of including sustainability in public procurement and gives some examples of how far different institutions and governments are with inclusion. Paragraph 5 presents best practices of sustainable procurement. The paper concludes with a summary and several questions and dilemmas for further discussion. Table 1 gives an overview of the advantages and disadvantages of existing tools.

1 The discussion paper was presented at the Seminar on Sustainable Public Procurement and Multilateral Development Banks at the Royal Netherlands Embassy in Washington DC on March 22nd 2012.

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2. The relevance of public procurement for sustainability

One can distinguish several reasons why public procurement can be an effective instrument to achieve sustainability.

a. Procurement is significant in size and in effect

Public procurement often constitutes a large share of the economy. It is typically responsible for between 13 to 17 per cent of the GDP of OECD countries (IIISD, 2007). In the EU it amounts to 16 per cent of GDP and in Japan 20 per cent (IIISD, 2007). The share of public procurement is generally larger in developing countries than in developed countries (Eurodad, 2009). For countries such as Vietnam, India and China it can exceed 25 per cent (ADB, 2011). In the case of Least Developed Countries and post conflict countries this can be as high as 70 percent of GDP (UNDP, 2010).

According to an evaluation by the World Bank’s Independent Evaluation Group, the share of aid that is translated into public procurement in developing countries ranges from 25 to 43 percent, making it an important instrument for development (World Bank Group I, 2010).

Public procurement is also substantial in absolute numbers. An OECD report estimates the world’s total government procurement market at an average of US$ 5.55 trillion per year (2002, p. 34). This by far exceeds the accumulated total of US$ 119.60 billion official development assistance (ODA) by the OECD’s main donors in 2009 (2010, OECD II).

Besides the large market share, public procurement affects sustainability because it has a large direct impact on the environment and the society. Due to the large scale and the type of services it provides, such as waste disposal services, it has a large ‘footprint’ (Preuss, 2009). Through sustainable procurement a significant contribution can be made to reducing environmental or social damage or - formulated more positively - to a greener and more equitable society (Kjollerstrom, 2008).

b. Sustainable procurement has a cost saving potential

A second argument in favor of sustainable procurement is its potential to save costs. Although it may lead to higher direct purchasing costs, the overall lifetime cost of a sustainable product can be less than the overall lifetime costs of the up-front cheapest option. This is because the sustainable option can result in lower operating costs, maintenance and disposal costs. Thus, despite the higher initial purchasing costs, sustainable options can offer an important return on investment through reduced life-cycle cost. "It can result in an average decrease of overall costs for public organizations of around 1%" (PricewaterhouseCoopers, Significant & Ecofys, 2009, p.7). This percentage is based on life cycle cost estimation for seven European countries (United Kingdom, Sweden, Finland, Denmark, Germany, Austria and the Netherlands). A reduction of 1% can be significant in absolute terms, given the large value of public procurement. The cost reduction could be larger for nations with a higher procurement-GDP percentage, such as developing countries. The study found that especially in the construction and transport sector major cost reductions can be achieved through sustainable procurement.
c. Public procurement can create positive spill-overs

Public procurement can create spill-over effects, both among suppliers and consumers. A study showed that the government, as a legislator or client, was considered an important motivator for sustainable private procurement and project design by respectively 69% and 64% of private sector firms (Significant, 2009). By showing that a consistent demand exists for sustainable goods and services, government procurement can encourage the creation of sustainable enterprises. Through its significant purchasing power it can facilitate the realization of economies of scale, wider commercialization and the distribution of sustainable solutions (Preuss, 2009). Sustainable public procurement can function as a catalyst in the market.

Furthermore, through public procurement the government can provide ‘good sustainable consumption examples for their citizens’ (OECD, 2008, p. 41). This can increase consumer awareness of the environmental and social impacts of products and services (Kjollerstrom, 2008). By leading by example governments can promote responsible consumption patterns.

Whereas these are good ex ante arguments in favor of sustainable procurement, empirical studies on these effects are still limited. A recent Dutch study showed that sustainable public procurement has caused a shift in the market both on the demand and supply side. The private sector has shown an increased interest in sustainable procurement and has stated that it would like to see the government as a facilitator in stimulating sustainable private procurement. Competition, reputation and being a government client are mentioned as the most important reasons for this increased interest. There has also been an increase in the supply of sustainable products as the market has been stimulated to become more sustainable. This supply shift is most visible in the ICT and energy sector (Significant 2009).

In terms of environmental effects, the Significant study concludes that when all government procurement becomes sustainable, it could contribute to 5% of the national 2020 carbon reduction goal. More important, this contribution could increase to 20-25% by stimulating sustainable private procurement in the sectors where the government is influential. The potential energy savings that could be realized add up to approximately 20% of total energy demand by the government. The national renewable energy goal is to have 20% of total Dutch energy use in 2020 coming from renewable sources. Complete sustainable public procurement could contribute 1.8% to this goal.

The study specifically mentions the limited innovation spur due to the technical specifications rather than performance based criteria in sustainability requirements. Functional requirements leave more room for innovation as they do not specify how the performance should be delivered. Application of the current criteria led to more sustainable products, but only limitedly stimulated innovation.

An illustrative example dates from 1993 when the US Federal Government decided to purchase only ‘Energy star’-compliant IT equipment. As a dominant client this decision played a significant role in the shift to compliance with ‘Energy star’ standards for the majority of IT equipment on the market. The environmental benefits of the move to ‘Energy star’ by the federal government
have been calculated at 200 billion kWh of electricity saved since 1995, which equates to 22 million tons of CO₂ (Buy Green Handbook, EU, 2011).

In sum, there are several arguments in favor of public procurement as an effective tool to reach sustainable outcomes. Due to the size and nature of government services, public procurement can have significant leverage on the achievement of environmental and social objectives. Sizable cost saving opportunities exist. Through its spill-overs on markets and consumers, public procurement can work as a catalyst. These arguments present a clear case for sustainable procurement, still there is a need for more empirical evidence of costs and its effects on society and the environment.

3. Principal-agent dilemmas in procurement
To look at sustainable procurement by IFIs from a more practical perspective the principle-agent theory can be used. In the this theory, a first party -the principal- delegates decision making or service delivery to another party, the agent (Eisenhardt, 1985). In conditions of incomplete information and uncertainty, adverse selection and moral hazard arise. Adverse selection is the condition under which the principal cannot exactly establish the agent’s ability to do the work for which he is being paid. Moral hazard is the condition under which the principal is not able to (without extra cost) force the agent to put maximal effort and commitment to the assigned job. The actual decisions made by the agent can diverge from the decisions that would maximize the principal’s benefits. This divergence occurs because agents aim to maximize their own interest, rather than that of the principal. Whenever the assigned job does not (fully) benefit the agent’s self-interest, the agent will be less committed (Eisenhardt, 1989).

As is shown in Figure 1, implementing sustainable procurement processes by IFIs can be seen as solving a sequence of two interrelated principal-agent dilemmas. The starting point of Figure 1 is that, in dialogue with both recipient and donor countries, sustainability is recognized as an important policy goal by the IFI and that it is desirable that procurement contributes to this. IFIs provide loans or other financial support to recipient countries. These means are subsequently channeled to suppliers that will execute the program or project. The IFI will want to make sure that – given the agreed policy focus on sustainability – the outcome of this process maximizes sustainability.
The first principal-agent dilemma that arises in this process involves the interaction between the IFI (principal) and the contracting entity (agent). Whereas in many cases the interests of the IFI and the contracting entity run parallel, there may be situations where that is not the case (Gutner, 2005). The principal—who has less information and expertise than the procuring entity about what takes place in the procurement process—will want to ensure that the tendering process is open and fair, that corruption is avoided, and in the case of sustainable procurement also that the decisions by the contracting agencies contribute to sustainability. Whereas it may be in the interest of the contracting entity to purchase the cheapest and quickest option due to budget constraints and short political time windows, the principal would want to guarantee that sustainability considerations are taken into account. The information problem could also exist inversely, when contracting entities are not fully aware of the intentions of IFIs.

On the level below, the contracting entity is the principal who through a tender process decides which supplier (agent) will get the contract. Assuming that the contracting entity wants to maximize the sustainability impact of its purchase decision (the first principal-agent dilemma is solved), it is itself dependent on the sustainable solutions that suppliers in the market provide. The principal often lacks the information or capacity to decide what good or service is the most sustainable.

Implementing effective and efficient sustainable procurement can be seen as finding well-functioning means to avoid the two principal-agent dilemmas presented. Below, a number of strategies are discussed to do so. In figure 1, a distinction is made between strategies that are exogenous or endogenous to the procurement process. For the purpose of this paper the endogenous
strategies are most relevant, but it is important to underline that IFIs have alternative options to contribute to sustainability outside the procurement process. IFIs can allocate their resources to areas with most (potential) impact on sustainability. IFIs can help foster mechanisms that discourage corruption, reducing possible behavior by contracting entities. IFIs can contribute to framework conditions (regulatory framework, incentive structures) in recipient countries that contribute to sustainability. Especially if opportunity costs of endogenous strategies turn out to be high, clearly exogenous strategies need to be taken into account. However, below we solely focus on endogenous strategies to the procurement process.

a. Procurement policy
The first level of implementation is when the acknowledgement of sustainability as an important policy goal by IFIs and its member countries, is translated into sustainable procurement policies. These policies can be translated into guidelines that lay out the IFI’s intentions and present concrete advice for inclusion of sustainable considerations in the tender process. This way, policies translated into guidelines can facilitate the agent to act in the interest of the principal. Good policies can also shape the conditions for procurement, and hence reduce the room for moral hazard if it clearly defines what is expected of contracting entities.

b. Targets
In some cases, policy guidelines or other documents will include concrete targets as to what sustainable procurement should look like. This gives a clear signal to contracting entities of what the ambitions are, but could leave open how these should be achieved. This can nevertheless be effective if combined with effective monitoring and evaluation, and mechanisms that make outcomes transparent (see also g.).

c. Procurement criteria
A third strategy can involve the formulation of criteria that the contracting entity needs to use in its decision making in the bidding process. This further facilitates the procurement officers to take social and environmental aspects into account and as such limits moral hazard. It can bring ex ante clarity to suppliers as to what is expected from them. Targets and criteria presuppose availability of information on the sustainability of a bid or product for contracting entities to base their decisions on, as well as the measurability of whether targets have been reached (see also f.).

d. Capacity building
Another strategy for IFIs is to contribute to capacity and knowledge of sustainability at contracting entities. Sustainable procurement training will inform the procurement officers of the policy goals that the IFI and recipient country pursue and enable the officers to procure sustainably. The IFIs can actively distribute the available tools that assist in quantifying the sustainability factor of a bid. Hereby the procurer’s capacity to implement can be enhanced and adverse selection could be reduced.
e. Process design
IFIIs can also contribute to more sustainable procurement by considering alternative processes of bidding and decision making. Traditionally, such procedures primarily focus on ensuring that the process is fair and open. This can mean that contracting parties look at bids anonymously, without contact with the bidder during the process. E-procurement systems –procurement through the Internet and with the use of other information and networking systems- can facilitate in these anonymous and open procurement processes. Besides directly contributing to sustainable procurement by avoiding paper waste, e-procurement systems are built in such a way that it reduces the risk of adverse selection by the contracting entity, because they have to go through all relevant steps in a selection process, before being able to award a contract to a specific party. Also, e-procurement allows for the use of complex calculation based evaluation mechanisms that are often needed to quantify sustainability aspects of bids.

For complex issues such as sustainability, a more open and more interactive procuring process can also offer advantages. Given the information asymmetry between supplier and contracting party, a dialogue where both parties take some time and room to elaborate on how sustainability goals are best guaranteed through the offers of different suppliers can be valuable. In such a procuring process the bidders bear more project-risk and an interaction exists between the principal (procurer) and agent (bidder). This way the agent (bidder) becomes more of a stakeholder to the procurement process and the non-alignment of interests is mitigated. Contrary to the strategies mentioned before, this can help overcome the information problem whilst enlarging the risk of moral hazard.

f. Product/supplier criteria
IFIIs can contribute to solving the information asymmetry between contracting entity and supplier by promoting systems of labeling and certification of products or suppliers. A tender could, for example, specify certain product performance criteria, such as an energy-efficiency minimum. This practice lowers the guidance-effort or transaction costs needed from the procurer’s side (agent). Fixed sustainable requirements save time in assessing the sustainability factor of a bid. Especially for the government purchases of standard goods this can a gain of time. At the same time, clear criteria reduce the scope for corruption and nepotism, as they prevent the agent (procurer) to award contracts to personally favorable candidates under the pretext of vague sustainability aspects. The concern of corruption under the scapegoat of vague sustainability aspects is also expressed by Estache and Limi (2011)\(^3\). On the contrary one-dimensional, price-oriented competition may be more sensitive to pressures leading to collusion. An alternative approach allowing for a wider number of selection criteria variables would create a less collusion sensitive system and a more dynamic, iterative competitive process over a longer timeframe. This would also encourage the development of an innovative, efficient and profitable industry (Dorée, 2004).

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\(^3\) Estache and Limi studied the price-quality relation in public procurement of complicated electricity infrastructure projects financed by ODA-funds.
Finally, when the criteria are performance-based rather than product-based, they can also contribute to innovation by setting standards that suppliers can then try to reach. On the other hand, this system could have disadvantages. The cost of setting up certification systems could be high. It could favor incumbents, and therefore reduce open competition. And finally it assumes – in product labeling – that IFIs/governments are able to 'pick winners', that is, that they are able to identify what the most promising sustainable technology is.

g. Evaluation & Monitoring
Finally, IFIs can contribute to sustainable procurement by giving this a prominent place in monitoring and evaluation mechanisms. The effectiveness of such ex post mechanism is strengthened if the outcomes of evaluations provide incentives for both contracting agencies and suppliers in case the results are below expectations or standards.

4. Phases of implementation
A relevant question is where we currently stand in terms of the implementation of sustainable procurement and the use of the different strategies discussed above. Although the strategies mentioned in paragraph 3 are not necessarily phases as such, they do provide a useful framework. Most institutions and governments have gone through the first phase (the acknowledgement of sustainability as a policy goal and the identification of procurement as a possible tool for this). Many multilateral development banks, international institutions, task forces and companies have publicly acknowledged the importance of sustainable procurement. For instance, both the United Nations (UN) and the Asian Development Bank (ADB) have stated that the concept of sustainable procurement is closely connected to sustainable development and recognize public procurement as an important tool to reduce harmful impacts (UN, 2009)(ADB, 2008 & 2011).

The second phase is formulating a policy strategy on how to include sustainability in procurement. The European Union (EU) encouraged Member States to ‘adopt national action plans for GPP [Green Public Procurement] by the end of 2006’ (European Commission, 2008, p. 2). The European Parliament called on the European Commission ‘to explore the possibility of using green public contracts as a tool to promote sustainable development’ (European Parliament resolution, 2010, p.8). A country that recently joined the OECD, Chile, is integrating sustainability in public procurement (IISD 2, 2008). Chilean procurement laws and regulations now allow for life-cycle cost assessment and for awarding extra points to bidders promoting the environment and matters of social impact (IISD 2, 2008). South Africa explicitly embraces both environmental and social concerns in government procurement by focusing on energy efficient consumption and on promoting employment of ‘previously disadvantaged people’ (IISD, 2007). In China, a country which has received criticism by environmental activists, attention for sustainable procurement is growing. Some districts have been promoting Green Public Purchasing, for example, by publishing lists of environmentally preferable products for regional public procurement. In addition, during the Olympic Games in 2008 Green Purchase was an important topic (IISD, 2007, p. 24).
Some countries have put it into further practice and adopted several of the other strategies from Figure 1. For example, the United Kingdom created a business-led Sustainable Procurement Task Force that published a National Action Plan. Compulsory competitive tendering has been replaced by the notion of ‘value for money, taking account of wider economic, social and environmental benefits’ for government service delivery (Preuss, 2009, p. 214). The Netherlands has also committed itself to full sustainable procurement. In 2010 it almost realized this goal at federal level when 99.8% of procurement was sustainable. The Dutch municipalities intend to do so by 2015 (Significant, 2009). By setting these targets it has given a clear signal of its ambition.

For the purpose of this paper it is particularly relevant to assess where IFIs such as the World Bank and the Inter-American Development Bank (IDB) stand in sustainable procurement. In their approach to public procurement, the IFIs have shown increased attention for the strategic function of procurement as delivering public services and good value for taxpayers. Instead of mainly treating procurement as a compliance mechanism to assure that the IFI finances are spend through the correct procedures, more and more emphasis is given to getting value for money for recipient countries and encouraging high ethical values on both the private and public entities involved. This provides more space to discuss sustainability and governance aspects of procurement.

Attention for governance aspects has clearly grown over the past decade within the World Bank and IDB. Recently the World Bank has also shown interest in developing strategies to incorporate environmental requirements in public procurement and “began a series of studies on sustainable procurement practices” (Annual Procurement Report, fiscal year 2011, p.20). Within the IDB the Energy Division is currently measuring the effectiveness and sustainability of energy projects in Latin America and the Caribbean. The recently established Task Force that is leading this effort will also include Sustainable Public Procurement best practices.

For the IFIs, this shift towards more attention for sustainable procurement, good governance and value for money, takes place parallel to another change in its procurement policies: the increase of the use of country systems. In line with the broader ambition of stronger country ownership of development policies by the recipient countries (OECD, 2006), the use of recipient country procurement systems is recognized as the preferred approach. During the most recent High-level Forum on Aid effectiveness in November 2011 in Busan the use of country systems was again advocated. Although pilot programs with country systems by the World Bank did not deliver the expected results, the World Bank continues to implement this policy through its new Programs for Result Lending Tool. Also the IDB has incorporated the use of country systems in its strategy and recently allowed Chile as the first country whose public procurement system can be used in IDB financed projects (IDB, 2009). Whereas some of the IFI’s client countries have improved their procurement capacity significantly over the years, other countries, mainly the fragile and conflict affected states, still lack capacity. The shift to using the recipient country’s own procurement systems reinforces the importance of capacity building. Analyzing the extent to which most international organizations and countries nowadays procure sustainably, one can conclude that while sustainable
procurement is high on the agenda, concrete implementation strategies are often still lacking. Insufficient knowledge is an important obstacle. Procurement officers within the United Nations stated this as one of the main barriers to sustainable procurement (UNEP, 2004, p.10). They also indicated the lack of sustainable products criteria, data bases and incentives as concrete impediments to implementation (UNEP, 2004). Likewise, an OECD report on the sustainability practices in OECD countries states that ‘procurement decisions which take life-cycle costs into account are still rare, partly due to methodological difficulties’ (OECD, 2008, p. 41). In the next paragraph we present several concrete tools that are used to procure sustainably.

5. Best Practices in sustainable public procurement

Despite slow progress in implementation of sustainable procurement, a number of tools is currently available and in use, mostly for green purchasing. These can be seen as best practices – although some are still very new – in how to overcome the dilemma’s presented in paragraph 3. Some of the tools refer to several of the strategies under a.-g. Table 1 summarizes the different tools, relates them to the dilemmas and strategies in section 3 and presents the major advantages and disadvantages of each tool.

a. Guidelines assisting in sustainable procurement design

Facilitate the agent (procuring entity) to act in the sustainable interest of the principal. Can also shape favorable conditions for sustainable procurement.

The Buying Green! handbook for environmental public procurement developed by the European Commission is meant to help European administrations successfully launch a green purchasing policy and provides clear and concrete advice for the inclusion of environmental considerations in the tender process. In a practical way, it presents the possibilities offered by European Community law and looks at simple and effective solutions that can be used in public procurement procedures (2004).

A similar guideline is the Procura+ Manual, which gives guidance to European governments and institutions on how green aspects can be given a place in the procurement process (Procura+, 2007). It provides a model for starting and managing sustainable procurement. The suggested criteria are legally compliant and can be inserted directly into tendering documents (Procura+, 2007).

Both manuals present basic principles and point out which sections in tender documents allow for the introduction of green criteria. The Procura+ manual also gives suggestions on the development of environmental specifications, such as performance specifications. Both highlight the possibility of the inclusion of environmental specifications in the following tender sections:

1. the subject matter of the contract (what will be procured)
2. the technical specifications for the product/work/service
3. the selection or eligibility criteria for a candidate
4. the contract award criteria

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4 The Procura+ framework is an initiative of the International Council for Local Environmental Initiatives (ICLEI)
5. the contract performance clauses.

Including the environmental concerns in the early phase and in the subject matter of contract, is the most direct way of inclusion. It will clarify the procurer’s green intention to all parties from the start. Specific requirements, such as performance specifications, need to be addressed in the technical specification phase. They cannot be discriminatory, as that would be against the EC Treaty principles (Procura+, 2007; Buy Green!, 2004). For example, it is not allowed to demand a certain type of computer, but demanding ‘energy-efficient computers’ is possible. Another possibility is to use the eligibility criteria to exclude bidders whom have been previously convicted for environmental crimes or to use technical capacity conditions to include proof of the ‘environmental’ experience of the bidder.

In the contract award stage, the guidelines suggest that it is important for environmental award criteria to be objectively quantifiable and clearly defined in the tender documents in order to guarantee transparency. Introducing environmental criteria in the award phase can be beneficial if the procurer cannot anticipate the availability or cost of the more environmentally friendly product or service, but wants to integrate a preference for green options. The ‘weight’ given to the environmental criteria in the evaluation shows the willingness to pay for this aspect.

Lastly, even in the last phase of defining contract performance clauses, there is some scope for environment-friendly conditions on how the contract is carried out. Matters like transport, packing and installment can be specified.

Examples of guidelines also exist for the more social aspects of sustainability. One example comes from South Africa, where social policy goals are weighed along with price in the award phase. South African legislation states that a preference points system must be used and provides a list of several social policy goals (McCrudden, 2004). The inclusion of these policy goals in the contract will yield preference points. These policy goals include: “contracting with persons, or categories of persons, historically disadvantaged by unfair discrimination on the basis of race, gender or disability, and implementing the programs of the Reconstruction and Development Program” [socio-economic policy framework implemented by the South-African government]. All social policy goals for which points may be awarded, must be clearly specified in the invitation to submit a tender. Additionally, all such goals must be measurable, quantifiable and monitored for compliance. Unless objective criteria justify differently, the bidder that scores most points must be awarded the contract (McCrudden, 2004, p 262.). Depending on the contract value, either a maximum of 10 or 20 points can be awarded to social goals. The other 90 or 80 point will be awarded on the basis of price.

b. Product criteria and data bases

Facilitates the procurer through better information; saves time and lowers the guidance-effort needed from the procurer’s side. Clear criteria can reduce the scope for shirking, nepotism and corruption by the procurer.

The Procura+ framework provides practical suggestions for purchasing criteria for six high-priority product groups (construction, IT equipment, cleaning products, food, buses and electricity). The suggested criteria are legally compliant to European law and can be inserted directly into tendering
documents (Procura+, 2007). This way it intends to make these purchasing criteria as accessible and implementable as possible.

A public entity that already works with product criteria is the Dutch government. It has created its own database of sustainable product criteria for different product categories of goods that can be purchased by the government. These have been developed by the Procurement Expertise Centre and have been precisely specified (Ministry of Infrastructure and Environment, 2011). The requirements are defined for a wide range of products, ranging from electronics to office supplies, from public transport to street furniture. After compliance with the clearly specified criteria, all bidders can equally compete on the basis of price. The technical specifications can be defined in terms of environmental technical standards or performance requirements. Performance requirements provide more room for creative market solutions than specific environmental technical standards, as they are flexible on how to achieve the sustainable performance level. Another option is to require certain production and process methods.

Examples of other countries that use national sustainable procurement criteria are Germany, the United Kingdom (UK) and Spain. Germany uses the Blue Angel GPP criteria, a criteria list of all product groups and services that may be awarded the Blue Angel eco-label. The UK uses Government Buying Standards that are designed to make it easier for UK government buyers to buy sustainably. The Basque civil service uses the IHOPE GPP criteria, which provides models and examples for the implementation of green purchasing (Procura+, 2007).

A less desirable characteristic of this ex ante instrument is the limited entry possibility for suppliers that do not comply with the criteria. This limitation of competition is one of the main arguments against sustainable requirements and is a concern mentioned in academic literature. In a study on the price-quality relation in public procurement, Estache and Limi find that the adoption of rigid qualification standards deters the entry of new bidders (2011)\(^5\). It limits the pool of bidders, which raises the price (Estache & Limi, 2011). The reduced competition premium is a loss to society.

However, protagonists of sustainable procurement argue that the reduced business opportunities would mainly be a short term problem. Part of the appeal of using public procurement as an instrument to sustainability is the fact that the public procurement government can create spill-over effects. As the government is a major player, it can spur sustainability in the market. As time goes by, bidders in the market might be incentivized to comply with a certain level of sustainability, if they perceive a consistent demand for sustainable goods and services. Sustainability advocates argue that sustainable public procurement could create a market for sustainable solutions and suppliers.

c. DuboCalc

Possibility of sustainable discount opportunity creates incentive to bidders. Clear assessment procedure facilitates procurer, enhances implementability and reduces possibility for procurer to use sustainability as scape-goat for corruption and nepotism.

\(^5\) Estache and Limi studied complicated electricity infrastructure projects financed by ODA-funds.
The Dutch Ministry of Infrastructure and Environment has developed a specific software program that facilitates the assessment of the sustainability factor of ground, roads, and water projects (Ministry Infrastructure and Environment, 2010). This tool is called DuboCalc. It uses an environmental Life-Cycle-Analysis formula to quantify the sustainability of project design, ex post submitting the bid. Where Life-Cycle-Analysis normally refers to an approach where all economic costs related to the product/service throughout its lifetime are considered, DuboCalc computes the overall environmental footprint during the complete life cycle of the work. So, where economic Life-Cycle-Analysis would look at the purchase price, energy bills, maintenance and demolishing costs, the environmental Life-Cycle-Analysis would look at the environmental costs in terms of toxicity, use of chemicals, energy and water, and degradability. The DuboCalc program contains an extended database of information on different materials and building procedures. The software translates the project design into an environment cost indicator, which will be weighted along with price and quality in the process of economically most favorable bid.

DuboCalc facilitates the check on minimum environment requirements. The environment cost indicator shows whether efforts have been made in terms of sustainability in a bid (Ministry Infrastructure and Environment, 2010). Additionally, DuboCalc allows for using sustainability as an award criterion, since it gives the bidder the opportunity to differentiate through a low environment cost indicator. Ultimately, this environment cost indicator will affect the outcome of the economically most favorable bid (Ministry Infrastructure and Environment, 2010). This environmental discount opportunity can create an incentive at the supplier’s side. At the same time, this tool can make it easier for the procuring entity to take into account sustainability aspects as it provides a clear procedure. This improves the ‘implementability’ and enhances the capacity of sustainable procurement. Furthermore, a clear procedure reduces the scope for corruption and nepotism, as it makes it harder to award contracts to personally favorable candidates under the pretext of vague sustainability aspects.

d. Life-cycle cost accounting tools
Facilitate the procurer with computation of sustainability savings, thereby enhancing implementability. Allow for more flexibility at the supplier side than product criteria.

As also mentioned by the Procura+ guidelines and the Buy Green! Handbook, life-cycle cost accounting can be an important step towards sustainable procurement. Life-cycle cost accounting – sometimes also referred to as Total Cost of Ownership – can partially tackle the commonly heard argument that sustainability has a large price premium.

Higher initial costs are the main barrier to implementing sustainable procurement, according to an OECD report on government initiatives promoting sustainable consumption (OECD, 2008). However, the sustainable option is not necessarily the more expensive option. Whether there exists a price premium on sustainable solutions mostly depends on the way costs are identified. As soon as ‘hidden’ life-cycle costs are accounted for, the economic advantages of procuring sustainable products become more comprehensive. By evaluating costs in a more holistic way, the sustainable option can
be more economic. Although the initial purchase price might often include a premium for new technologies and sustainable design, the overall lifetime cost of a sustainable product can be less than the overall lifetime costs of the up-front cheapest option. Thus, despite the higher initial purchasing costs, sustainable options can offer an important return on investment through reduced life-cycle cost.

Accounting for these life-cycle costs requires a different approach than usual. The *Life Cycle Cost Analysis* (LCCA) tool and the *Whole Life Costing + CO₂* (WLC+CO₂) tool help to account for these costs. The LCCA is developed within the framework of Procura+. The WLC+CO₂ is designed by the Forum for the Future, a global non-profit organization working with business and government to create a sustainable future. Both Excel based tools allow for comparison of the life-cycle costs of products by analyzing the expenses that are usually not taken into account with initial cost comparisons. Examples of such costs are operating costs such as energy and water usage, maintenance costs and disposal costs. The LCCA tool also creates a base-line scenario to which the normal cost analysis can be compared.

Additionally, both tools can compare individual products in terms of carbon emissions (Procura+, 2007; Website Forum for the Future). A value can be applied to those emissions, which in turn can influence the award of the contract. In that sense it is not only a cost accounting instrument that computes the ‘sustainability savings’ and traditional financial costs. It also considers the amount and cost of the carbon emitted by the product over the contract period, to the organization directly or society as a whole.

Tools like LCCA and WLC+CO₂ assess the sustainability factor of a tender after submission (ex post). They allow for more flexibility at the supplier side than product criteria, since the supplier is flexible on how to reduce the life-cycle costs. Using these tools to assess the sustainability of a bid, demands more time from the procurement department. This extra work might not be welcomed by the agent, the procurement officer. However, the tools make it easier to compute and ‘concretize’ the sustainability savings, increasing the attractiveness of implementing sustainability for the procurement officers. Given that the procurement department is motivated to include sustainability, implementability is enhanced by using these tools. In that sense they are capacity building tools.

e. Carbon ‘footprint’ tools

*Assist the procurer in assessing overall sustainability. Sustainable discount opportunity incentivizes bidders to consider their overall sustainability, rather than product related sustainability only.*

Taking it one step further, one can also take into account the bidder’s footprint rather than only the sustainability of what is to be procured. The Dutch government uses the so-called ‘CO₂-performance ladder’ in order to stimulate sustainability beyond what is subject to procurement (Website Ministry Infrastructure and Environment, seen on 25-10-12). Rather than assessing the sustainability of the products or construction tendered, these tools assess the sustainability of the business practices of bidders in the service sector. The energy savings, efficient use of materials and usage of renewable energy within a company’s own business practices are rated on a scale from one to five. According to its sustainability performance score the company will be awarded with a fictive monetary discount on
the tender compared to the other tendering companies (Website Foundation of Climate-friendly Procurement and Business, seen on 25-01-'12).

Another example of a way to quantify a business’ footprint is with the Carbon Calculator developed by UK’s Department of Environment, Food and Rural Affairs (Website National Energy Foundation). This tool does not offer a ‘translation’ into a monetary discount on the tender, but simply allows for footprint comparison.

These types of business practice footprint tools aim to stimulate bidders to consider their overall sustainability, rather than just their product related sustainability. The CO\textsubscript{2} performance ladder gives bidders the opportunity to score with a smaller carbon footprint. A smaller footprint will positively influence their chances in the tender. From the procurer’s side, resistance to using such a footprint tool in procurement may exist as it takes time and extends the procurement procedure.

d. Open procurement dialogues: Best Value Procurement + Competitive Dialogue

Alternative procurement approaches allow for market knowledge extraction and may lead to more valuable and sustainable procurement outcomes. Non-alignment of interest is mitigated through more risk-sharing.

Two types of ‘new’ procurement approaches are worth mentioning in the discussion on the inclusion of sustainability in procurement and the development impact through procurement: Best Value Procurement and Competitive Dialogue. Although they are not specifically designed to include sustainability concerns, they are designed to capture non-price aspects and optimize ultimate value creation through public procurement. In this sense these procurement approaches share the same objective as including sustainability.

Best Value Procurement (BVP) is a procurement approach that aims to achieve the highest possible value for the lowest possible price (Dutch Ministry of Infrastructure and Environment, 2010). BVP does not simply award contracts on the basis of price and it goes beyond weighed selection awarding, which is based on a combination of price and qualifications. Although the exact implementation can differ significantly, best value procurement generally permits flexibility not offered by traditional competitive bidding (Heise, 2002). It allows for evaluation of contractor bids based on factors other than price, such as design, quality and relevant experience, and therefore also offers scope to non-price sustainability considerations.

The solicitation procedure is typically executed in two phases (Heise, 2002). During the first phase price or cost data are explicitly excluded. Evaluation factors that can be considered are past performance, risk assessment, design aspects, quality, technical requirements, life-cycle costs, etc. The explicit exclusion of the price aspect from the first phase allows the procurer to focus on the non-price features of a complex project. Competitors will not underbid to get the contract, causing compliance problems at a later stage. Also, the bidders do not have to prepare a detailed cost analysis unless they are selected to enter the second phase. This lowers the bid costs (Heise, 2002). In the second phase a short list is created from the participants in the first phase. In this phase the price factor can be considered. To determine the best value a trade-off is made between a bid’s technical or
quality aspect and its price (Heise, 2002). It can happen that a higher priced bid is chosen if it is superior in another award aspect.

Best value procurement is a more dynamic and interactive procurement procedure than competitive price procurement. Whereas competitive price procurement is usually characterized by strict statutory and regulatory frameworks intended to reduce the bidder’s freedom and standardize the procedure, BVP leaves a lot of scope for the ideas and input from the bidders. It invites the bidders to present their expertise and input on the design and problem solution of complex works. This means there is more scope for innovative sustainable solutions. The government has mostly a facilitating role in BVP and the bidder assigned with the contract takes the lead. With this different division of roles the risk responsibility is divided differently as well: with BVP the executing bidder bares a larger share of risk than in traditional procurement (Dutch Ministry of Infrastructure and Environment, 2010).

Another interactive procurement strategy is developed by the European Commission and is called the Competitive Dialogue. This type of procurement starts with a prequalification process (Freshfields Bruckhaus Deringer, 2005). A dialogue follows where potential suppliers present their views and inputs. At the end of this discourse, suppliers are invited to submit a tender based on the solutions resulting from the discourse. This way the contract is shaped in dialogue with the bidders.

The competitive dialogue is specifically designed for public private partnerships. Often public private partnership contracts are too complex for the competitive price procurement procedure. In such a case, the procuring entity is not able to determine the technical specifications and a reasonable price in advance. Therefore, European contracting authorities are permitted to use Competitive Dialogue if: a) the nature of what is procured or the risks related to what is procured do not allow prior price estimation, b) the specifications cannot be drawn up with sufficient precision to allow prior price estimation, c) the procuring party is unable to identify the best technical solution or define the appropriate service delivery (Freshfields Bruckhaus Deringer, 2005).

The competitive dialogue deviates from the assumption that bidding experts are better informed of what the market has to offer. If that is indeed the case, Competitive Dialogue can be beneficial in capturing this information in the tender, creating a higher value than with traditional competitive price bidding. On the other hand, the fact that the bidders have a larger role in the Competitive Dialogue may give rise to some concerns. If the knowledge from the bidders is really to be captured, full confidentiality must be guaranteed. In practice, guaranteeing this confidentiality may be problematic and prone to corruption. Even when guaranteed, market participants may not be willing to invest in the dialogue and share their know-how if no adequate compensation is offered to the unsuccessful bidders (Freshfields Bruckhaus Deringer, 2005).

This increased flexibility in both BVP and the Competitive Dialogue contrasts with the traditional emphasis on regulatory frameworks and objective statutes. In situations highly prone to corruption, this flexibility can become problematic. On the other hand, the alternative process designs do offer scope for more valuable and sustainable procurement outcomes. The 'risk' represented by this
increased flexibility must be balanced against the value extraction facilitated by these interactive procurement procedures.

The tools presented above share some common characteristics. All of them are essentially ways to reduce adverse selection and increase the available information for the procuring entity. The information on how to procure sustainably and how to assess sustainability intends to facilitate the procurer in how to award contracts taking sustainability factors into consideration. Some of presented tools also reduce moral hazard and create incentives for both the procuring entity and bidders to act in favor of sustainability. Once contracts will actually be awarded based upon sustainable criteria, bidders will clearly be motived to include environmental and/or social aspects into their bid.

6. Summary and Discussion

This discussion paper intends to contribute to the debate on the role of sustainable procurement within IFI-funded programs. It aims to identify the issues and challenges that play a role in implementing sustainable procurement and to discuss how best-practices in sustainable procurement could deal with these challenges.

There are several arguments in favor of public procurement as an effective tool to reach sustainable outcomes. Due to the size, ranging from 13 to 70 per cent of GDP, and nature of government services, public procurement can have significant leverage on the achievement of environmental and social objectives. Also, sizable cost saving opportunities exist. Through its spillovers on markets and consumers, public procurement can work as a catalyst. At the same time, there is still a need for more empirical evidence of costs and its effects on society and the environment.

Sustainable procurement in IFI-funded programs can be analyzed in a principal-agent framework. This framework analyses the double dilemma between the IFI that delegates procurement to a country’s procurement entity, and the procurement entity that delegates the delivery of goods, works or services to the suppliers. The principal-agent framework provides insight in the possibly non-aligned interest of the different actors in the process and in the effects of incomplete information between these actors. It also offers scope to consider governance aspects of procurement, which have received growing attention over the past decade within IFIs. Implementing effective and efficient sustainable procurement can be seen as finding well-functioning means to avoid the two principal-agent dilemmas.

The paper discusses a number of strategies for the inclusion of sustainability in the procurement process. Some of the strategies focus on policy formulation and target setting, while others involve more concrete steps for the inclusion of sustainability, like procurement criteria, capacity building, process design and product criteria. Very few IFIs and countries have reached the stage of concrete implementation beyond formulating strategies and sustainable procurement guidelines.

The sustainable procurement tools presented in this paper vary from software tools that quantify sustainability aspects to buying green manuals and from product criteria to open procurement
dialogues. These tools mainly focus on green, rather than social procurement. They can provide ways to better align the interests of the involved actors, increase transparency and quantify sustainability aspects of bids.

When considering the use of sustainable procurement tools for IFI-funded programs one questions if developing countries are currently capable and willing to procure sustainably and what responsibilities the IFIs have in bringing sustainable procurement to the attention of their client countries. Questions for further debate and study are how IFIs can advance the sustainable procurement agenda within its client’s countries and if they should do this through policy dialogue and capacity building or if more imperative guidelines will be more successful.

The fact that all of the best-practices mentioned in paragraph 5 come from developed countries with sophisticated procurement systems, also raises the question to what extent sustainable procurement is inevitably related to advanced procurement capacity. Is sustainable procurement desirable for all countries, what are potential first steps, how can the presented best-practices be used for procurement of IFI-funded programs and should local capacity be an ex ante condition?

Moreover, with the use of the recipient country’s own procurement systems, the importance of explicit procurement capacity building becomes more important. The shift towards increasing ’country ownership’ and acknowledgement of different levels in procurement capacities also affects the role of IFIs in the development and procurement process. This brings us to the question if the increased use of country systems affects the achievability of sustainable procurement in IFI-funded programs and what the role of the IFIs is in strengthening local sustainable procurement capacity and stimulating knowledge sharing among sustainable procurement professionals.

Finally, public procurement is just one of the many possible policy instruments that can be used to achieve the sustainability-objective, which makes one wonder to what extent organizations should give preference to other means than public procurement to achieve sustainable outcomes.
<table>
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<tr>
<th>Tools</th>
<th>Description</th>
<th>Type</th>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
<tr>
<td>Guidelines: Procura+ and Buy Green!</td>
<td>Both Guidelines provide clear and simple advice for European public authorities on how to include environmental concerns into procurement.</td>
<td>- Gives direction from principal (f.i.IFI) to contracting entity.  - Contributes to capacity building.</td>
<td>- Criteria are legally compliant.  - Criteria are concrete and can be inserted directly into tendering documents.  - Contributes to enabling conditions for sustainable procurement.</td>
<td>- Time consuming.  - Leaves much discretionary room for contracting entities.</td>
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<tr>
<td>Product criteria and data bases</td>
<td>Purchasing criteria for 6 product groups (Procura+)  Dutch database of sustainable ready-to-use product criteria for a wide range of products within the direct government purchases of goods.</td>
<td>- Facilitates procurer with information on sustainable nature of products.  - Enforces compliance with sustainability requirements for bidder (agent).</td>
<td>- Easy to use.  - Gives clear guidance to procurer as to what to procure.  - Can spur innovation by clear standard setting.</td>
<td>- Reduces entry for bidders non-compliant of criteria.  - Reduced pool of bidders can increase price.  - Can come at the cost of innovation, for example, if the criteria are product based rather than performance based.</td>
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<tr>
<td>DuboCalc</td>
<td>Software to assess and quantify the environmental (as opposed to economic) footprint of the design of large construction works. Translates this footprint into an environmental cost indicator, which is included as a negative award criterion in bidding process.</td>
<td>- Provides a tool for the principal (procuring agency) to assess sustainability efforts from the agent (bidder).</td>
<td>- Provides tool for construction works, a sector in which sustainability can be hard to quantify.  - Is translatable to award factor.  - The award factor can incentivize suppliers to consider environmental aspects in their design.  - Restricts options for nepotism and corruption under the scapegoat of vague sustainability requirements, for the procurer as an agent.</td>
<td>- Time consuming.  - Leaves much discretionary room for contracting entities.</td>
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<td>Tools</td>
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| **Life-cycle Accounting tools:**  | - LCCA Excel tool  
- WLC+CO2 tool                                                                                                                                  | Both Excel based tools assist in calculating the costs of assets throughout their lifetime. Hereby it quantifies the sustainability of a purchase. It also allows for comparison of the CO2 impacts of different products. | - ‘Concretizes’ the sustainability savings, increases implementability and facilitates the procurer.  
- Check on sustainability will incentivize suppliers (agent). | - Time consuming  
- Leaves much discretionary room for contracting entities.                                                                                   |
|                                  |                                                                                                                                                    |                                                                      | - Improves information for contracting entity as to sustainability outcomes.                                                                  |                                                                                                                     |
| **CO2 footprint tools:**          | - CO2 Performance Ladder  
The CO2 Performance Ladder rates a company on a scale from one to five on the basis of energy savings, efficient use of materials and use of renewable energy. Performance score is translated into a fictive monetary discount on the tender price. | - Incentivizes the agent (bidder) to take into account overall sustainability as it can earn a discount in the tender. | - Time consuming                                                                                                     |
<p>|                                  |                                                                                                                                                    |                                                                      | - Improves information for contracting entity as to sustainability outcomes                                                                  |                                                                                                                     |</p>
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<tr>
<td>Alternative procurement approach:</td>
<td>A more flexible procurement approach that aims to realize the highest value for the lowest price. Price is only considered in second bid round, which allows for explicit focus on other aspects in first round. The supplier takes lead in final project execution and procurer has mostly a facilitating role.</td>
<td>- Due to less price-focus the bidders and the procurer’s interests are no longer non-aligned on price. Also, as the agent (bidder) bears more risk, interest become more aligned. - Information asymmetry problem reduced</td>
<td>- It allows for evaluation of contractor bids based on factors other than price. - It allows for market knowledge extraction, creating a higher (and more sustainable) value than with tradition competitive price bidding. - The bidders do not have to prepare a detailed cost analysis unless they are selected to enter the second phase. - Underbidding by competitors at the cost of the project’s impact less likely, since price is no longer only award factor.</td>
<td>- The flexibility in the procurement process may tilt towards non-transparency and contract awarding on the basis of subjective characteristics. This could create scope for corruption.</td>
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<td>Best Value Procurement</td>
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<tr>
<td>Open procurement dialogues:</td>
<td>An interactive form of procurement whereby the bidders help to shape the tender by presenting their views and inputs. At the end of the dialogue, suppliers are invited to submit a tender based on the solutions resulting from the discourse. This way the tender is shaped in dialogue with the bidders.</td>
<td>- Information asymmetry problem reduced</td>
<td>- It allows for market knowledge extraction, creating a higher (and more sustainable) value than with tradition competitive price bidding.</td>
<td>- The flexibility in the procurement process may tilt towards non-transparency and contract awarding on the basis of subjective characteristics. This could create scope for corruption. - Full confidentiality must be guaranteed, which may be hard in practice. If it cannot be guaranteed, bidders may not share their input and there will be no extra value created in comparison to traditional price bidding. - Even when guaranteed, market participants may not be willing to invest in the dialogue and share their know-how if no adequate compensation is offered to the unsuccessful bidders.</td>
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<td>Competitive Dialogue</td>
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