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1 FOREWORD

Sustainable public procurement is increasingly being used as a means for governments to transform markets and transition towards a greener economy. In a 2013 report released by UNEP on the Global State of SPP, 56 countries were identified as having a government/ministry with a policy on sustainable public procurement (SPP), and that number is predicted to grow in coming years. The benefits of having a clear policy on SPP are numerous – in addition to giving a clear indication of a government's willingness to lead by example in the promotion of sustainable consumption and production practices, this commitment communicates clear and predictable sustainability requirements to the market for the goods and services acquired by public agencies.

For this reason, SPP plays a very important role in promoting the dissemination of sustainable production practices through supply chains. It has the potential to promote the improvement of companies' performance along supply chains, including small- and medium-sized enterprises located in developing countries and emerging economies, by offering them a clear benchmark of sustainability to which their production processes and end products should align. Companies, including small- and medium-sized enterprises, are already taking advantage of these opportunities for innovation by positioning themselves as leaders in sustainability, gaining a competitive advantage in the market of SPP.

This pre-study is an important milestone in advancing the understanding of the implications, opportunities, and challenges associated with sustainable public procurement and supply chain sustainability. It builds on the excellent partnership between UNEP and SEMCo, and contributes to the development of the working group 4A on "Greening Supply Chains" of the 10YFP SPP Programme, previously of the Sustainable Public Procurement Initiative (SPPI). With this pre-study, the current work plan of working group 4A comes to a close, but it is our sincere wish that the 10YFP SPP Programme can build on the recommendations of this study and continue the effort of promoting sustainable development through the combined approach of SPP and sustainability along supply chains.

We take this opportunity to thank the Swedish Ministry of Environment for their financial support and SEMCo for their excellent work in putting together the pre-study, and we look forward to continued cooperation.

Sincerely,

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2 INTRODUCTION

Sustainable Public Procurement is a key area in the work to promote Sustainable Consumption and Production (SCP). In line with this UNEP and various partners announced at Rio+20 the launch of a Sustainable Public Procurement Initiative, SPPI, with the opportunity to form sub-groups targeting specific issues (The SPPI later became the Sustainable Public Procurement Programme of the 10YFP). There is an increased interest from public authorities to secure that procured goods and services are sustainable.

This pre-study is a result of a project within the sub-group "Greening supply chains, WG 4A". The attempt has been to explore to what extent SPP can be a tool to promote sustainability along the supply chains, and hence show the present potentials and limitations for SPP from this perspective. Many national, regional and local policies for public procurement express high ambitions on sustainability. This pre-study tries to explore if there is a market readiness to meet those high ambitions.

Globalization in the business sector has resulted in a dramatic growth of the cross border movement of commodities and goods. Consequently we now see an increase in the complexity of supply chains, with input of commodities, components and products from a variety of countries where different social and economic regulatory frameworks are at hand.

This lack of a common playfield regarding important aspects of sustainability creates a need for transparency in the supply chains.

Sustainable products should promote a sustainable and efficient management of resources through the whole life cycle, and in all stages of the supply chain of goods and services[1]. To assess the degree of sustainability in a product, operations in the entire production system and the stewardship on postproduction hence must be taken into account. The supply chain and the entire lifecycle of a product must be considered.

This is not an easy task, and so far the current state of play on national SPP/GPP efforts show there is a lack of clarity over determining what are the most sustainable products. So many different product claims, eco-labels and standards have been developed in response to the perceived market interest that it has become a crowded and complex market for purchasers to navigate[2].

To move forward there is a need to handle these complexity barriers, but also to find ways to incorporate a more holistic perspective in public procurement practices and supply chain management, encompassing the triple bottom of sustainability; with its environmental, social and economic aspects.

This work is an attempt to make a "Market Readiness Analysis" regarding potentials for SPP to work with supply chain aspects. It is a first step, with the aim to highlight state of the art and future possible approaches. The aspiration is also to raise awareness about these issues and possibly build up interest among different stakeholders to finance a major project in order to deal with the reported findings and recommendations.

The recent (2013) UNEP global review on SPP indicates there is a need for a set of internationally agreed and recognised principle and assessment systems for procurement sustainability. Hopefully this work can contribute to the collaborative work that needs to be done in this direction.

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[1] Paving the way for Sustainable Consumption and Production. The Marrakech Process Progress

[2] Sustainable Public Procurement: A Global review. Final report. UNEP 2013.

3 EXECUTIVE SUMMARY

Supply chain management is primarily a task for business, producing and delivering goods and services. How this is accomplished is dependent on market demands and expectations. Both the *why*: drivers, and *how*: relevant tools, must be assessed to examine the market readiness and current capability of sustainable supply chain management. There is also a need to define the concept – *what is* sustainable supply chain management.

As a starting point this pre-study turns to academia in search for a structured description of how sustainable supply chain management is approached and defined. The next step is to explore the business case - current approaches and practices. This to set the scene for attempts to affect sustainable supply chain management through sustainable public procurement (SPP). Procurers interact with the market and need to be informed on market condition to be able to express relevant expectations.

Current SPP practices are described, followed by a review of potentials and limitations in applicable tools.

To deepen insights on the composition of global supply chain, examples are given on supply chains of cotton textiles and construction material of wood, illustrating the gap between generic and "true" supply chains.

The pre-study is concluded with suggestions on important areas to further explore.

Scope and definitions

Early work on sustainability in supply chain management focused on environmental impacts and the possibilities to improve cost-effectiveness through streamlining the flows of materials and enhancing the efficiency in the use of energy and water. The supply chain scope was limited to a facility and its one-step-up tier of partners/suppliers.

To address long-term sustainability issues (e.g. risks for biodiversity loss, climate change, social insecurity or hazards to workers, public and communities) operations need to be optimized not only in processing and delivery within the supply chain, but also in the entire production system, with a stewardship on postproduction as well.

Seuring and Müller made an often-quoted definition of Sustainable Supply Chain Management in a literature review in 2008: *The management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development (economic, environmental and social) into account, which are derived from customer and stakeholder requirements.*

A UN practical guide to Supply Chain Sustainability gives this definition: *the management of environmental, social and economic impacts, and the encouragement of good governance practices throughout the lifecycles of goods and services. The objective is to create, protect, and grow long-term environmental, social ad economic values for all stakeholders involved in bringing goods and services to market.* [3]

The business case – large companies lead the way

Large companies with well-known brands, working on the global market, have taken on the challenge to be in the frontline of sustainable supply chain management. By doing so they are responding to external pressure and incentives set by governments,

[3] Supply Chain Sustainability. A practical guide for Continuous Improvement. UN Global Compact and BSR 2010.

investors, customers and stakeholder. The incentives are appreciated, but several barriers hamper the implementation.

The transparency in supply chains is limited, due to complexity and the global spread of involved partners. The lack of transparency presents in turn a barrier to companies attempting to establish sustainable supply chain management. The applied business approach is to identify risks and opportunities and engage with suppliers of key importance.

Expectations on sustainability performance are generally expressed by codes of conduct, but the objectives are not always expressed by quantitative requirements. The ability to monitor and evaluate performance is thus limited. The absence of relevant, comprehensive, international sustainability standards is contributing, but also sensitivity to costs and efforts needed for monitoring and capacity building in complex supply chains.

Global supply chains often involve small and medium sized enterprises (SMEs) on the local level. In contrast to large companies SMEs often have limited financial resources and management capacity. This is in particular the case among SMEs in developing countries and emerging economies. Requirements on data delivery, audits and remediation activities create burdens these companies are not always able to cope with. Business relations based on short-term contracts amplify the difficulties.

Deep engagement is proven successful

The business uptake of commitments to sustainable supply chain management varies, from general statements on sustainability expectations, to a deep engagement with supply chain partners and stakeholders. According to key findings in an annual implementation survey among companies participating in the UN Global Compact Initiative there is a clear gap between “say” and “do”.

Companies are making sustainability commitments, defining goals and setting policies at a high rate, but there is still much to do on the action steps: to implement, measure and communicate. Supply chains are seen as a roadblock to improved sustainability performance.

Large companies engaging with far-off suppliers and sub-suppliers show the way forward. Identified success factors are long-term commitments and deep involvement to help suppliers build knowledge and capacity. The use of scorecards is seen as a way to go beyond tracking supplier compliance, giving better incentives for continuous improvement.

Single company initiatives will not be sufficient. There is as well a need for multinational companies and industry associations to more actively engage in assisting SMEs in improving their resource efficiency and reducing their impacts, SMEs being the back bone of most economies and supply chains. Examples on joint programmes in supporting SMEs are the UNIDO-UNEP programme on Resource Efficient and Cleaner Production and International Finance Corporation’s Cleaner Production Financing Programme.

Joint efforts to support progress

The creation of data sharing platforms to help collect and manage supplier information about sustainability performance is underway, and seen as a mean to reduce costs and efforts for both purchasers and suppliers. Examples: The Supplier Ethical Data Exchange, SEDEX, offers an electronic system for collection and analysing information on ethical and responsible business practices.

EcoVadis is another sharing platform, using sustainability scorecards to measure and monitor sustainability performance in supply chains. Category profiles are used to understand the key sustainability criteria applicable to different spend categories. EcoVadis is also powering E-TASC, a sustainability solution created for Information and Communication Technology Companies.

Fair Factories Clearinghouse is a global clearinghouse of factory information, allowing members to identify common needs, prioritize them and attack them together. Fair Factories Clearinghouse also offers an Audit Management System.

Several initiatives – both industry and multi-stakeholder groups – work jointly to establish production standards and traceability systems for commodities like cotton, timber, soy, palm oil, beef, electronics and seafood. Significant negative impacts on nature, biodiversity and local communities have been identified in connection with the extraction and processing of these commodities.

Efficient tools and techniques to track goods delivered between different locations are evolving. But to make use of traceability to promote sustainability the reliability of sustainability claims must be verifiable through the supply chain. A range of approaches is applied to establish traceability, where Chain of Custody standards, confirming the transfer of certified goods step by step, is a measure to get around resistance to publicly convey and share supplier information.

Current practices on SPP

As in the business approach, to commit is the first step towards sustainable public procurement (SPP). At least 43 countries now have public institutions with a SPP policy or policy measures. The scope and level of implementation varies, from a fully integrated SPP into all government purchasing, with extensive monitoring and evaluation systems in place (very rare), to just having established a SPP policy and action plan.

A variety in focus areas occurs as well, from a single focus on environmental or social aspects, to a focus on all three aspects of sustainability, including also the economic dimension.

Known leaders on SPP have deepened their commitments and increased the number of environmental attributes being considered. The significance of sustainable supply chain management is recognized, but still in its infancy within public procurement. A recommended first step is that the public sector organizations begin to understand and address social issues in their supply chains. A great need for more resources and knowledge is identified, to monitor and audit sustainability aspects in supply chains in a professional manner.

Life Cycle Costing

Concerns on possibly higher prices when new aspects have to be considered are still seen as an important limitation to SPP. To visualize hidden costs in the post production stage of a product the use of life cycle costing calculations (LCC), is seen as an efficient tool. LCC assumes access to Life Cycle Data, but the uptake and implementation of Life Cycle Assessment, LCA, is not widespread and the existence of several calculation approaches create confusion in the market.

The objective of the existing ISO Standards on LCA and the UNEP/SETAC Life Cycle Initiative is to bring science based life cycle approaches into practice worldwide. The initiative works on a tool for Life Cycle Management, LCM, to help business minimize the environmental and social burdens associated with their product or product portfolio: by improving environmental performance and social benefits of existing products and for the design of new “green” products.

In the absence of product-specific data, common available generic databases can be used in LCA calculations. There are several publicly available LCA database; international as well as country-specific.

Measure and assess performance

Lack of monitoring mechanisms is seen as an important limitation to SPP and a suggested top priority activity for international cooperation on SPP is to create a simple measuring approach for sustainable procurement tracking.

Eco-labels and social labels are tools to verify compliance to important aspects on sustainability, holding suppliers responsible on the assurance of sustainability in supply chains.

Eco-labels in line with the ISO standard 14024, so-called Environmental labelling type I, shall be based on criteria of sufficient scientific reliability, taking into account a life cycle perspective. To acquire a license to label, third party verification is required. Currently there are breath of active eco-labels available worldwide in the market, representing a great degree of diversity in how they were developed, and what issues they address. Cooperation on mutual recognition of labels could be a tool to facilitate the use and promote improvement on identified gaps/deficiencies.

There are still many product categories for which no credible eco-label or standards exists. The use of Environmental Product Declarations, EPD, based on standardized LCA calculations, could also be a way to establish and monitor relevant, industry specific indicators on sustainability in supply chains. Focusing on fewer attributes, the use of EPDs reduces costs and monitoring efforts and is a tool easily integrated with the business use of scorecards. EPDs have, as a main objective, to meet specific requirements inherent in purchasing processes.

Pooling of resources

Development of joint product guidelines and criteria, and establishing information platforms to exchange common practice and share knowledge, are suggested to pool capacity among partners in supply chain and within SPP. This is to overcome significant limitations due to lack of time, knowledge and resources.

Several initiatives are underway, and some have proven to be successful. A challenge is to establish initiatives with long-term commitments, since knowledge and tools collected in project-oriented approaches tend to get lost over time.

Management approaches

In the procurement process management systems can be used in the selection of suppliers, as a qualification criterion, since these systems enable organizations to report on their abilities and strategies to work with sustainable issues. If an organization, having a certified environmental management system, has identified significant environmental impact in the supply chain, the system approach requires that the organization handle this through setting up targets, and implement applicable actions, thereby decreasing its environmental impact.

By requiring management system public procurers can drive the market towards better transparency in supply chains and encourage frontline companies to better engage with sub-suppliers to build knowledge and capacity in sustainable supply chain management.

4 WHAT IS SUSTAINABLE SUPPLY CHAIN MANAGEMENT?

The internationally recognized definition of sustainability is the use of resources to meet the needs of the present, without compromising the ability of future generations to meet their own needs.[4] A shift towards sustainable consumption and production patterns is necessary to achieve this, and the concept of sustainable production and sustainable products must then be made operational.

In this context achieving sustainability in the supply chains is a core issue. According to the Marrakech process sustainable products should promote a sustainable and efficient management of resources through the whole life cycle, and in all stages of the supply chain of goods and services[1].

Companies of different sizes are accountable for the delivery of goods and services, and thus also for the management of supply chains. How this is accomplished is dependent on market demands and expectations. Both the *why*: drivers, and *how*: relevant tools, must be assessed to examine the market readiness and current capability of sustainable supply chain management. There is also a need define the concept – *what is* sustainable supply chain management.

As a starting point this pre-study turns to academia in search for a structured description of how sustainable supply chain management is approached and defined. The next step is to explore the business case - current approaches and practices. This to set the scene for attempts to affect sustainable supply chain management through sustainable public procurement.

4.1 SCIENTIFIC ASPECTS

Supply chain management, SCM, became a research issue during the 1980s and is defined as the control of the supply chain operations, resources, information and funds in order to maximize the supply chain profitability or surplus. SCM focus on economic performance in the attempts to create customer values through the supply chain[5]. More straightforward SCM can be described as the process of getting the right product to the right place, at the right time at the right price. Growth in complexity and length of supply chains is a result of globalization, including sourcing and outsourcing to low-cost countries as a mean to capitalize differences in cost levels.

An interest in the connections between sustainability and supply chain management emerged as a research area in the 1990s, in the beginning as a very “fringe” topic. Nowadays research on Sustainable Supply Chain Management is moving to the

[4] Our Common Future, (Brundtlandrapporten),World Commission on Environment and Development, WCED, 1987.

[5] A literature review and a case study of sustainable supply chains with a focus on metrics. E. Hassini, C. Surti, C. Seracy, International Journal Production Economics 140 (2012)

mainstream, but according to several literature reviews there are still many questions that remain unanswered.

Linton et al tries to give a background for a better understanding of research on sustainable supply chains. They describe it as a multidisciplinary field that intersects with operations management. The perspective of sustainability added to the concept of supply chain management creates a need to optimize operations not only in processing and delivery within the supply chain, but operations in the entire production system and also a stewardship on postproduction. Optimizations must be done not only from a current cost standpoint but also from a total cost standpoint that include the effects of resource depletion, pollutants, waste and any shortcomings in the social dimension. They conclude that sustainability moves beyond current common practice and creates a need for new production and management systems. [6]

4.1.1 DEFINITIONS

Seuring and Müller made an often-quoted definition on Sustainable Supply Chain Management, SSCM, in a literature review in 2008:

> *"The management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e., economic, environmental and social, into account which are derived from customer and stakeholder requirements. In sustainable supply chains, environmental and social criteria need to be fulfilled by the members to remain within the supply chain, while it is expected that competitiveness would be maintained through meeting customers needs an related economic criteria."*[7]

This literature review includes peer-reviewed papers in English, addressing sustainability in supply chain management during the period between 1994-2007. In total 191 papers were included in the study.

Analysis regarding dimensions on sustainable development being addressed in the papers shows a heavy focus on the environmental dimension (140), whilst the social dimension was poorly represented (20). The economic dimension was assumed as being covered by all papers. Only 31 of 191 papers did address the triple bottom line (economic, environmental and social performance) of sustainability.

The Network for Business Sustainability published a comprehensive literature review on sustainable supply chain management in 2011. In stark contrast to observations made by Seuring and Müller a focus on social issues was identified as predominant in recent articles addressing sustainable supply chain management. A distinct shift from environmental to social concerns was observed from 2007 and onwards. The review included not only academic works, but also articles from outside the academic mainstream: news and business articles addressing the subject. The input from outside academia was estimated to some 40 % of articles [8].

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[6] Sustainable supply chains. An introduction. Linton, J.D, et al., Journal of Operations Management (2007).

[7] From a literature review to a conceptual framework for sustainable supply chain management. S. Seuring, M. Müller. Journal of Cleaner Production 16 (2008).

[8] Managing Sustainable Global Supply Chains. A Systematic Review of the Body of Knowledge. NBS 2011.

4.1.2 TRIGGERS FOR SUSTAINABLE SUPPLY CHAIN MANAGEMENT

External pressure and incentives set by governments, customers, investors and stakeholders are regarded as the starting points on sustainable supply chain management, according to Seuring and Müller. Large companies, often of big brands, lead the process, being vulnerable to external pressure due to needs to protect brand reputation.

A way of responding is to establish supplier management for risk and performance, which often includes supplier evaluation schemes with environmental and social criteria. This creates demands for definition of life cycle based standards for the environmental and social performance of products to be implemented throughout the supply chain. Internal as well as external capabilities have to be developed.

Seuring and Müller conclude that sustainable supply chain management has to take into account a wider range of issues and therefore look at a longer part of the supply chain. The implication of this is an increased need for cooperation among partnering companies in sustainable supply chain management. But according to findings in Suring and Müllers review, the integration is currently limited [7].

4.1.3 IMPORTANT MANAGEMENT ASPECTS

Carter and Rogers have also made a large-scale literature review on sustainable supply chain management. Like Seuring and Müller they identify risk management as an important facet of Sustainable Supply Chain Management (SSCM), together with transparency, strategy and culture. The importance of these four facets was confirmed by a control with chain managers from 28 big firms in the US and Germany [9].

The management of risk is identified as a way to address long term sustainable issues, like risks for biodiversity loss, climate change, food insecurity or hazards to workers and public. Carter and Rogers define supply chain risk management as the ability of a firm to understand and manage its economic, environmental and social risks in the supply chain.

The need for transparency connects to Seuring and Müller's perception on incentives for sustainable supply chain management, where Carter and Rogers claim that the rapid speed of communication worldwide make it very difficult and extremely risky to maintain the secrecy of corporate wrongdoings.

Carter and Rogers take the issue one step forward and include not only reporting to stakeholders, but also actively engaging stakeholders and use their feedback and input to both secure commodity values and improve supply chain processes. Transparency is also seen as a mean to promote greater collaboration within the supply chain, such as sharing of monitoring and information to decrease the burden on suppliers dealing with audit requirements.

To become sustainable enterprises Carter and Roger say the organizations need to change their company cultures and mind-sets; sustainability must be a part of an integrated strategy and deeply incorporated in the organizational culture. Thus economical, environmental and social goals must be integrated in the business process for improving the long-term economic performance of the individual company and its supply chain. Aspirations on sustainability often include core values and cultures with a sense of purpose that goes beyond short-term profit interests. Companies with such an approach are called visionary and seem according to Carter and Rogers as likely to be rated among 100 best companies of the Dow Jones Sustainability Indexes.

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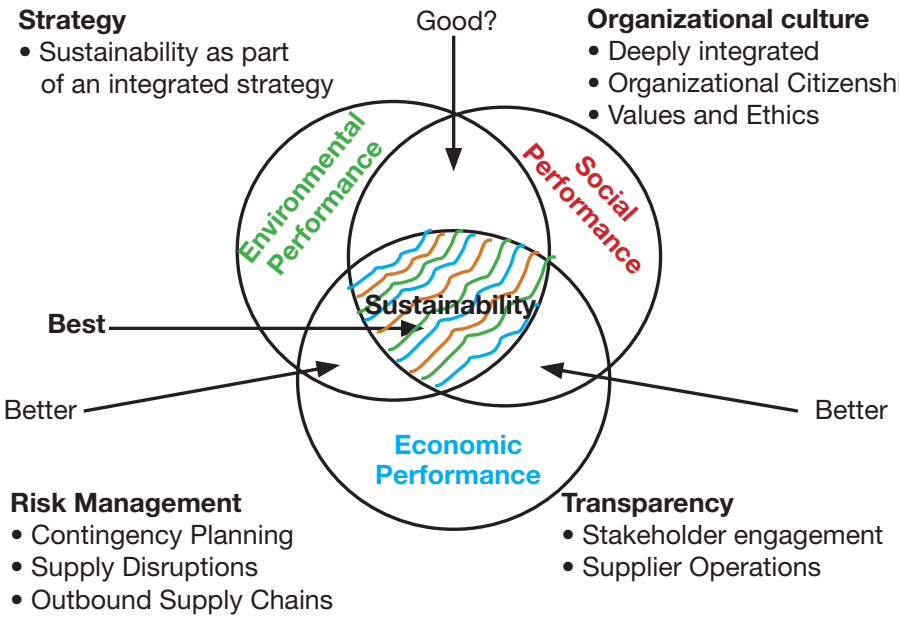
[9] A framework of sustainable supply chain management: Moving toward new theory. C. R. Carter, D. S. Rogers. International Journal of Physical Distribution & Logistics Management Vol. 38 No. 5, 2008 pp. 360-387.

The figure below summarizes their view on sustainable supply chain management:

Figure 1. Sustainable supply chain management according to Carter and Rogers



4.1.4 QUANTITATIVE MODELLING

In a more recent literature review, Seuring (2012) tries to summarize research on quantitative models for SSCM [10]. Environmental, social and economic criteria or performance objectives were assessed. This review includes 309 papers in total, whereof 36 papers apply quantitative models. Very few address social issues, and none use quantitative models for this aspect.

Identified techniques for modelling includes life cycle assessments (LCA) , and the use of equilibrium models or multi criteria decision-making. The overall objective is usually a cost minimization effort.

LCA-based approaches for evaluating environmental impact and their management in the supply chain often points to supplier selection and optimization issues, such as transport to end customers. Equilibrium models aim at balancing environmental and economic factors to find an equilibrium or optimal solution, assessing what the optimal level of investment into environmental technologies is in relation to the economic return. Multi criteria decision making also aim at finding a balance between different performance criteria, but deals with trade-offs among several conflicting objectives.

Seuring concludes that the integration of the three dimensions as well as the interrelations among sustainability dimensions and objectives demand further research.

4.1.5 METRICS IN RESEARCH

A literature review by Hassini et al[6] focuses on metrics in research on sustainable supply chain management. Absence of an appropriate framework for performance measurements in supply chains forms the starting point.

The review includes 87 peer-reviewed articles in English, published in category Decision Sciences and with presence of the key words sustainable/green and supply chain. The scarcity of research on sustainable supply chains metrics is confirmed.

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[10] A review of modeling approaches for sustainable supply chain management. S. Seuring. Decision Support Systems 54 (2013).

Hardly any paper deals with supply chain metrics regarding indicators for sustainability. When metrics are applied the performance measures were not used, or designed to be used, in a supply chain context; the measures do not span across partners in the supply chain. Neither does any study address comprehensively the three dimensions of sustainability.

All reviewed papers dealing with metrics encompass the environmental dimension, but few encompass the social dimensions. Metrics used cover for example water consumption, energy usage, air emissions, water emissions and waste recycling rate.

Several hurdles for the development of reliable metrics is pinpointed by Hassini et al, for example the need for agreements on which metrics to use and with which data between different supply chain players. This demands trust in the relationships, which is not always at hand. Information regarding contractors/sub-suppliers often is regarded as an aspect to be kept secret due to competition concerns.

4.1.6 ASPIRATIONS ON SUSTAINABILITY

The linkage of performance measures to goals rather than to firm values is taken as an evidence for the immaturity in the work on sustainability in supply chains. True sustainability remains an aspiration according to Pagell and Shevchenko. They claim that the major part of SSCM research has been focused on harm reduction rather than on factors that can create positive or regenerative impacts on social and environmental systems. They urge that future research needs to address the critical question how to create supply chains that are sustainable. They believe that creating sustainable chains will likely require changes in both the **what** and **how** of providing value and a rethinking of what value means. This will require changes in both practices and supply chain business models.

Regarding sustainability metrics they suggest an increased focus on metrics that can be imputed, for example by using publically available databases instead of using measurements from each link in the chain. The European Life Cycle Database, ELCD, is mentioned as an example on usable databases.[11]

4.1.7 SMALL AND MEDIUM ENTERPRISES IN THE SUPPLY CHAIN

Large companies are drivers in the development of sustainable supply chain management. New demands on sustainability performance, risk assessments and transparency affect suppliers. They are often small and medium sized enterprises (SMEs). Are they prepared to handle these tasks and other supply chain challenges? This is a question that multiple scientific papers during the past decade have asked. SMEs are globally seen as important drivers in business development.

An overall finding is that SMEs give less attention to planning and control methods than larger enterprises[12] . Lack of skill, lack of financial resources, lack of knowledge, lack of power, lack of infrastructure and lack of trust are identified as barriers of SCM in SMEs [13], [14]. These findings seem to be applicable to a varying extent for SME in both developed and developing countries.

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[11] Why research in sustainable supply chain management should have no future. M. Pagell, A. Shevchenko, Journal of Supply Chain Management, Vol 50 No. 1. (2014).

[12] Can the SME survive the supply chain challenges? T. I. Vaaland, M. Heide Supply Chain management: An international Journal, Vol 12. Ss1 pp 20-31, 2007.

[13] Barriers of SCM in SMEs. M. N. A Rahman et al., Applied Mechanics and Materials, Vol 44-47, p 3997-4001. 2010.

[14] Supply Chain Management (SCM) and Small and Medium-Sized Enterprises (SMEs):Is it a Myth? M. K. Tumaini et al, Applied Mechanics and Materials 58-60, 2613. 2011

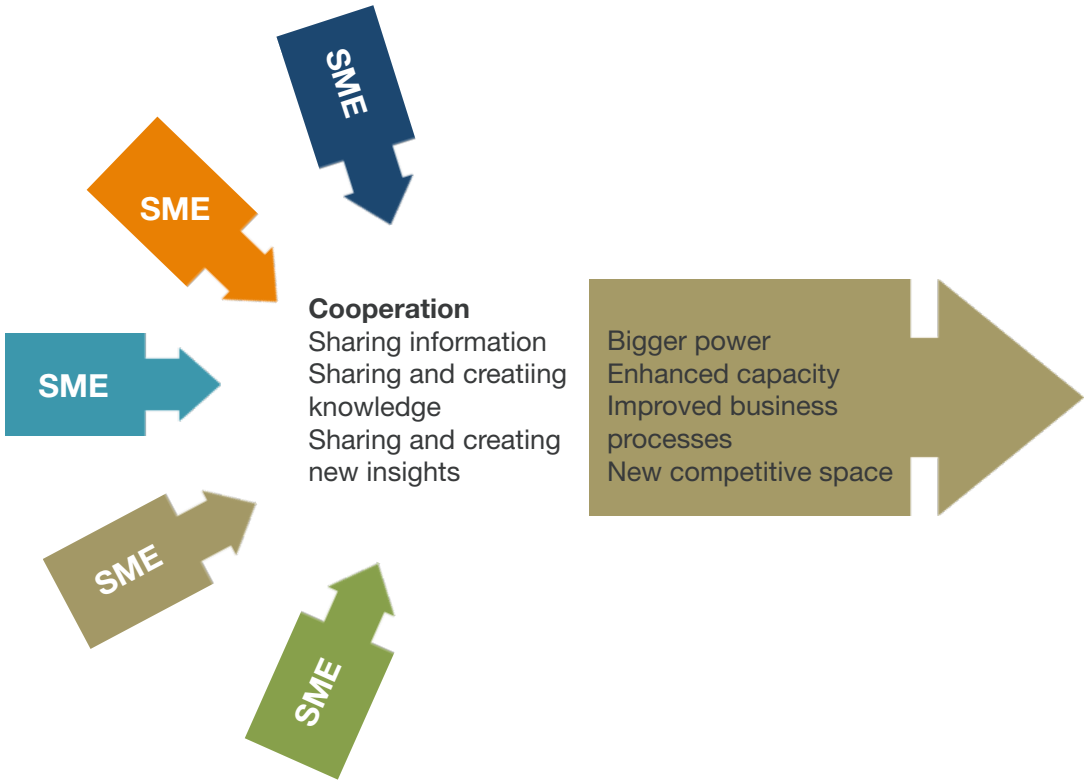
When it comes to sustainable supply chain management it is stated that little is known on how SMEs manage SSCM within the business-to-business context [15]. Still it is clear that SSCM is moving forward and wide-scale attempts to adopt sustainable sourcing practices may potentially become a dominant dynamic in the supply chain context.

SSCM can then be seen as an opportunity for companies to develop sustainability-oriented innovations (SOI); i.e. new products, processes and organizational structures. Higher flexibility and less structural inertia might be important advantages to innovation capacity within SME, in contrast to larger enterprises.

Lack of knowledge, financial resources and infrastructure among SMEs still must be overcome – enhanced cooperation is seen as a key factor. And interaction with primary and secondary supply chain stakeholders might give SMEs access to resources from a diverse range of stakeholders, for example universities and NGOs. If partners across a sustainable supply chain innovate jointly for SOIs, the innovation is not just limited to a single product, but can reach across the entire supply chain and give several SMEs competitive advantages.

To summarise: interaction with diverse primary and secondary supply chain stakeholders is suggested as one strategy for SMEs to access relevant resources for SOIs and/or competitive advantages regarding sustainability. Interaction presents an opportunity to go beyond traditional ways for developing products, services and processes, but is also associated with risks. Partners need to arrange contracts between them.

Figure 2. Enhanced cooperation can be a key factor for SMEs to create competitive advantages.



[15] Innovation in sustainable supply chains – Interaction for resources from an SME perspective. D. Harms, J Klewitz.

4.1.8 SUMMARY OF RESEARCH FINDINGS

A definition of sustainable supply chain management

Manage the flow of material, information and capital, with goals from all three dimensions of sustainable development to create customer value where

- customer value include the need to fulfill requirements from both customers and different stakeholders and where
- each member in the supply chain must contribute to the fulfilment of environmental and social requirements.

Answers to Why, Who and How

- External pressure and incentives set by governments, investors, customers and stakeholders are seen as the starting points on sustainable supply chain management. A shift in focus from environmental to social aspects occurred from 2007 and onwards.
- Large companies, often with big brands, are identified as drivers in the development of sustainable supply chain management.
- A solid operational framework on sustainable supply chain management is missing; continuous improvement is the applied approach ("true" sustainability is an aspiration).
- Risk management, transparency and sustainability strategies deeply incorporated in the organizational culture are identified as important prerequisites to establish sustainable supply chain management. This includes need for stakeholder engagement.
- Supply chain risk management is said to allow a firm to understand and manage its economic, environmental and social risks in the supply chain.
- A need for increased cooperation among partnering companies is identified as an important aspect of sustainable supply chain management, including involvement with more remote supply chain partners. Lack of confidence and fear of losing competitive advantage are perceived barriers.
- Appropriate frameworks for performance measurements in supply chains are still incomplete/missing. Applied metrics seldom span across all partners in the supply chains, and seldom address all three dimensions of sustainability.
- Use of LCA-data is suggested as a mean to provide metrics on sustainability all along the supply chain, with suggestions to explore the possibilities to impute data from existing databases.
- Enhanced cooperation is suggested as a mean for SME to create competitive advantages in the area of sustainability.

4.2 APPROACHES WITHIN BUSINESS

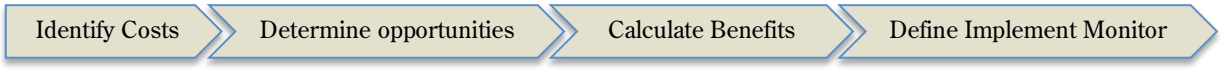
A multitude of initiatives, networks, advisors and consultants are working to develop models and joint platforms for sustainable supply chain management. The response to current market conditions is significant, but too extensive to be listed and described in detail in this pre-study, aimed primarily to provide an overview. This section will try to describe model approaches and some examples of current business practices on sustainable supply chain management. Knowledge on what businesses actually do provides an important framework for the understanding of what can be accomplished or affected with procurement requirements on sustainability in supply chain management.

A comprehensive compilation regarding initiatives, resources and corporate practice can be found on the website of Global Compact dedicated to supply chain management: http://supply-chain.unglobalcompact.org

4.2.1 GREENING THE SUPPLY CHAIN

As perceived by academic literature reviews initial efforts on a sustainable management of supply chains was primarily focusing on environmental aspects. An early model approach is the EPA The Lean and Green Supply Chain: A Practical Guide for materials Managers and Supply chain Managers to Reduce costs and improve Environmental performance (2000). The guide was created through a collaboration program with US industry, trade associations, research institution and government agencies [16].

The guidebook gives a four-step framework for identifying and using environmental information to improve financial performance: 1) Identify costs, 2) Determine opportunities, 3) Calculate benefits and 4) Decide, Implement and Monitor.



The focus is primarily on material management, but inclusion of health and safety management aspects is recommended as a way to identify environmental costs, and opportunities to reduce these costs. Recommended tools are Environmental, health and safety standards and performance reviews (e.g. ISO related standards like ISO 14001, OHAS 18001, and EMAS).

The guide concludes that material managers simultaneously can improve both the financial and environmental performance of their supply chain system by reducing risks and streamlining the flows of materials (e.g. by reducing spill, internal recycling and/or capture of by-products). The scope within the supply chain is limited to a facility and its first tier of partners/suppliers.

Important management aspects being highlighted are the need for integration of environmental considerations into each and every core business program and the need for tools to monitor and benchmark the outcomes.

4.2.2 THE GLOBAL COMPACT CONCEPT

The UN Global Compact Initiative was launched in year 2000, to establish a leadership platform for the development, implementation and disclosure of responsible and sustainable corporate policies and practices. Today the initiative has over 8 000 signatories in more than 140 countries, thus being the world's largest voluntary corporate responsibility initiative.

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[16] The Lean and Green Supply Chain: A Practical Guide for Materials Managers and Supply Chain Managers to Reduce Costs and Improve Environmental Performance. US EPA 743-R-00-001. Jan 2000.

The Global Compact Concept is based on ten universally accepted principles in the areas of human rights, labour, environment and anticorruption, with the objective to mainstream these ten principles in business activities around the world.

The ten principles in turn are based on The Universal Declaration of Human Rights, the International Labour Organization's Declaration on Fundamental Principles and Rights at Work, the Rio Declaration on Environment and Development and the United Nations Convention Against corruption. The approach creates a widely accepted and well-established framework for action towards sustainability.

The ten UN Global Compact Principles

Human Rights

Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and

Principle 2: make sure that they are not complicit in human rights abuses.

Labour

Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

Principle 4: the elimination of all forms of forced and compulsory labour;

Principle 5: the effective abolition of child labour; and

Principle 6: the elimination of discrimination in respect of employment and occupation.

Environment

Principle 7: Businesses should support a precautionary approach to environmental challenges;

Principle 8: undertake initiatives to promote greater environmental responsibility; and

Principle 9: encourage the development and diffusion of environmentally friendly technologies.

Anti-Corruption

Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

A four step model towards sustainable supply chain management

In close cooperation with Business for Social Responsibility, BSR, the Global Compact launched A Practical Guide to Supply Chain Sustainability in 2010[3]. The guide is designed to help companies initiate and advance their supply chain sustainability efforts. This is as well a step-by-step approach to assist companies in setting priorities for actions to establish a sustainable supply chain management through continuous improvement. A wide range in the level of commitment is accepted, as a response to the principle of continuous improvement. The scope of the supply chain management might as well be limited, preferably by using risk assessments to make demarcations.

The guide defines supply chain sustainability as the management of environmental, social and economic impacts, and the encouragement of good governance practices throughout the lifecycles of goods and services. The objective is to create, protect and grow long-term environmental, social and economic value for all stakeholders involved in bringing goods and services to market.

The guide brings a company through four steps needed to establish supply chain priorities and practices, featuring examples of good corporate practice as well. The steps in the model are:

Commit

The recognized starting point is to establish a company vision and objectives for supply chain sustainability. The vision should be based on the business case for action. The business case may vary between industry sector, supply chain footprints, stakeholder expectations, business strategy and organizational culture. A baseline can be identified through an evaluation of risks and opportunities.

It is recommended that the development of the company's vision and objectives is advocated from the top of the company, with involvement of executives and senior managers from all parts of the business related to the supply chain. The output of the process should be a statement of vision and commitment with clear connection to values that motivates the company's investments in sustainable supply chain management.

The guide emphasizes the need to integrate and closely coordinate supply chain sustainability strategies with business strategies that affect supply chains – this is in line with success factors identified within academic research. It is also stated that in addition to supply management professionals, product design, business development, logistics, marketing and sales can all impact supply chain sustainability.

When visions and objectives are in place, the next step is to establish sustainability expectations for the supply chain. Supplier codes of conduct are seen as critical and a way to create a shared foundation for sustainability from which supply management professionals, suppliers and other actors can make informed decisions.

For adopting or writing a supplier code of conduct the guide refers to the ten principles of Global Compact, and states that each area needs to be covered for a code of conduct to be considered comprehensive. The guide outlines sample policy areas that align with the principles and other potential sources to reference.

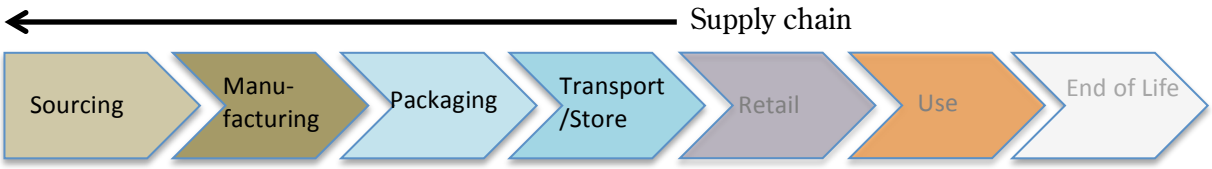
There are as well a number of international standards and industry created joint supplier codes of conduct to consult. They are intended to streamline the process of conducting audits of suppliers and to reduce the effort required of companies to design their own codes. However, these joint codes might not address all the issue areas of the Global Compact, or will not meet specific company concerns. Companies are recommended to consider whether to adopt a joint standard or write their own code. At a minimum compliance with national laws and proactive measures to avoid environmental and social harm should be expected and expressed.

Assess

What parts of the supply chain should be in compliance with expectations on sustainability and thus assessed against codes of conduct? The guide leaves this open since the size and spread of most companies' supply chains would impose an unrealistic burden if all parties should be included.

To identify the appropriate scope companies are advised to map their supply chain. The flow of materials and information should be traced for each product or service category back to the sourcing of raw materials and original suppliers. The approach is based on a generic and simplified representation of supply chains (see illustration below).

Generic supply chain stages from a retailer perspective



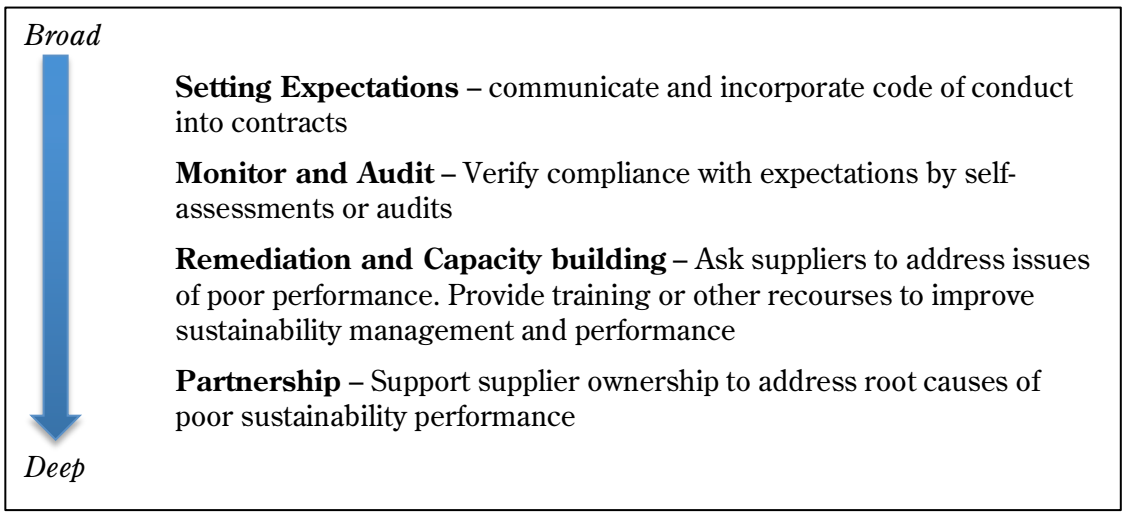
The objectives of the mapping are to identify which of the suppliers to engage with, and to what extent, by identifying potential risks and opportunities. This is done not only by mapping the flow of materials, but also by gathering information on the human rights, labour, environmental and corruption issues at every step. Risk events and likelihood and severity of risk events needs to be assessed.

The pictured generic supply chain is ideal. Supply chains are often more complex. Each tier, for example the sourcing of raw materials, can have several sub-suppliers, and these in turn sub-suppliers. Mapping tiers with many sub-suppliers to identify potential risks and opportunities can be very tricky due to lack of transparency and lack of company leverage. Recommended solutions are:

- Supply chain optimization by taking steps to shorten supply chains by grouping smaller suppliers into cooperatives and reducing middlemen
- Participation in industry collaborations, to pool leverage to increase the voice to sub-suppliers.
- Engagement in public policy by seeking legal and regulatory redress of sustainability issues

Define and implement

Suggested tools for different levels of engagement with suppliers are illustrated below:



Codes of conduct are seen as basic and efficient tools to communicate sustainability expectations to suppliers. The ability to comply with the expectations can be assessed in different ways. An invitation to suppliers to self assess their sustainability performance is suggested as a tool for an initial screening. This can give a starting point to cover a significant portion of the supplier base in a relatively short time frame and at relatively lower costs than audits.

Compliance audits are on-site evaluations of supplier performance against policies and expectations. Compliance audits gives more reliable results, carried through by

personnel from the focal company or by a third-party auditing firm. The recommendation is that the choice of auditor position should be based on an overall supply chain risk management and considerations on type and level of expertise needed to assess performance. The integrity and quality of audit results is said to strongly depend on individual qualifications. Assessment of management systems is also suggested to gather information on the strength of suppliers' sustainability management systems.

To build capacity among suppliers, and to create incentives for continuous improvement, remediation (corrective actions) is featured as an important tool. Remediation requirements should be communicated very clearly to suppliers, with timelines and consequences for not meeting them or continuing poor performance. Learning and capability building could also be included into auditing process. Other suggested tools are to create a learning network of suppliers, provide tools that suppliers can access and use independently or provide suppliers or workers training on major areas of non-compliance (deep engagement).

Collaborative efforts are proposed as a way for smaller companies to take action and contribute to further supply chain sustainability. Collaboration can as well be an important element of addressing the root causes of sustainability issues. Two types of industry collaboration are featured:

- Best Practice Sharing: sharing knowledge about approaches and tools that companies have found to be successful in their individual supply chain sustainability program.
- Joint Standards and Implementation: to create consistency among companies' expectations and supply chain programs. This approach can relieve the burden on suppliers for monitoring and remediation and also to conduct joint capability building for suppliers.

Collaboration can also be extended to multi-stakeholder partnerships, including not only collaboration within industry but also include e.g. national and local governments, workers organizations, NGOs and academics. Multi-stakeholder groups can assist with understanding the context for sustainability challenges, help with designing effective response and act as local implementing partner. In addition they can bring resources and legitimacy to supply chain sustainability efforts.

Measure and communicate

Comprehensive performance goals are a prerequisite for companies working with continuous improvement of sustainability in supply chains. Metrics need to be designed to allow for straightforward evaluation of the company's progress on its goals.

Practical guidance on how to do this include:

- Analyses of the breadth and quality of all existing metrics and data
- Standardization of the collection on metrics, to secure a unified way to capture data within different parts of the company

Data collection is described as a challenging task, given there often is a vast number of suppliers that need to be evaluated and a great number of different sources that data can originate from. Companies will need to collect data on both supplier and supply management professionals' performance. The risk of fraud in delivery of metrics is highlighted. This makes methods of ensuring the integrity of data critically important. In addition, transparency of supplier information across functional and organizational boundaries is often limited, and companies often struggle with a lack of effective communication and understanding between companies and their suppliers on the information they need to exchange,

No single solution to these difficulties is laid out. Suggested approaches are:

- The use of technology platforms that will enable comprehensive data collection and management, preferably in collaboration with suppliers (to make them more inclined to engage with the programme and impute data in a trustworthy way.)
- The uses of data sharing platforms that can help collect and manage supplier information about sustainability performance. Examples given are Sedex, EcoVadis, E-TASC and Fair Factories Clearinghouse.

Public reporting is underscored as a good tool to stimulate and enhance sustainability and transparency in the supply chain. All signatories to the Global Compact Initiative are required to publicly communicate with stakeholders on an annual basis on their progress in implementing the ten principles. Global Reporting Initiative (GRI), is the recommended reporting language for Global Compact companies and is also the world's most widely used sustainability-reporting framework.

4.2.3 SUSTAINABILITY REPORTING

Sustainability reporting provides information on business, complementary to products. The GRI sets out principles and indicators that organizations can use to measure and report their economic, environmental and social performance. A multi-stakeholder working group progressively strive to enhance the GRI Sustainability Reporting Guidelines. GRI launched G4, an updated version of the guidelines, in 2013. One of the key changes in G4 is the increased attention to reporting on supply chain performance. According to GRI the G4's coverage of impacts in the supply chains is comprehensive and designed to address some of the most pressing issues in contemporary business life. G4 is intended to be in full implementation by the year 2015.

In 2012 approximately 2 500 private companies were using GRI for sustainability reporting. Large companies are predominant ((approx. 90 %). Financial services is the most prevalent branch among reporting companies (12 %), followed by Energy (10 %), Food and beverage products (7 %), Household and personal products, (5 %), Mining (5 %) and Chemicals (4 %)[17]

In April 2014 the European Parliament adopted a Directive on non-financial information disclosure for large companies (with more than 500 employees). Listed companies, credit institutions, insurance undertakers and other companies defined by Member states will be required to report on environmental, social and employee-related issues, human rights, anti-corruption and bribery matters. These companies will be encouraged to rely on recognized frameworks such as GRI's Sustainability Reporting Guidelines, the UN Global Compact Principles and the UN Guiding principles on Business and Human Rights, OECD Guidelines, ISO 26000 and the ILO Tripartite Declaration of principles concerning multinational enterprises and social policy. [18]

Figure 3. The most prevalent branches reporting on sustainability in 2012

[17] GRI reports list 1999-2014, downloaded from https://www.globalreporting.org the date of 050314

[18] http://europa.eu/rapid/press-release_STATEMENT-14-124_en.htm, downloaded 05 06 2014.

4.2.4 THE NBS BEST PRACTICE MODEL

The Network for Business Sustainability has made a model approach for sustainable supply chain management close to the Global Compact approach. NBS is a Canadian non-profit network for business sustainability, engaging international academic experts and business leaders. The aim of the NSB literature review mentioned on page 3 was to provide a comprehensive multidimensional framework of international sustainable supply chain management practice, based on experience and empirical evidence.

A baseline model was identified that embodies four principal processes and arenas of management practices, summarized with the words Expect, Select, Inspect and Reject. As in the Global Compact approach the need to elaborate and express expectations, assess capacity of compliance, monitor and build capacity among suppliers and clearly communicate consequences of poor performance are underpinned. Codes of conduct are regarded as key tools to communicate expectations in both models.

Good relations with partners, including peer companies, suppliers, communities and NGO's are specifically put forward as important factors to construct an organisation-external culture to support the development of sustainable supply chains. In this respect the use of codes of conduct implies a top-down and un-negotiated approach, which is seen as a problem and a potential cause of resistance to the expectations: The codes might lack legitimacy in the eyes of the suppliers and can embody demands that do not fit with local needs and perspectives.

This appreciation leads to suggestions on a best practice model for sustainable supply chain management, emphasizing the needs for deep involvement with stakeholders in all processes of management practices. The recommendation is that not only suppliers, but also NGOs, communities and industry peers shall be invited to take part in the processes. This approach is included in the BSR model on the level of deep engagement.

4.2.5 SME PERSPECTIVES

Large companies close to end consumers lead the way on sustainable supply chain management. Their work involves upstream supply chain partners, often SMEs in different locations. Worldwide SMEs are responsible for up to 70 % of GPD, making them the backbone of most economies and supply chains.

The actual work to enhance sustainability in goods and services thus must be executed in small and medium-sized enterprises. There are needs for strong incentives but as well of supportive structures. The support needs are dependent upon the institutional and human capacity of each country.

The lack of technology, expertise and financing among SMEs, especially in developing countries, were identified as the main obstacles to greening global value chains in the Second Green Growth knowledge Platform Conference in 2013[19]. The Green Growth Knowledge Network, established in 2012 by the global Green Growth Institute, the Organization for Economic Co-operation and Development, the UNEP and the World Bank, arranged the conference.

Emerging economies are integrated in the global economy with varying degrees of knowledge exchange but least-developed countries are not connected to international technology flows. In addition an informal economy often plays an important role in developing countries, with firms working for cash but not being registered, taxed or

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http://www.greengrowthknowledge.org/SiteCollectionDocuments/Paris%20Conference/Outcome_GGKP_conference_%284-5_April_2013%29.pdf

monitored under a regulatory framework. Reaching out to these firms with sustainability expectation is indeed challenging.

Single company initiatives will not be sufficient. There is a need for multinational companies and industry associations to more actively engage in developing and implementing integrated technical and financial support programmes aimed at assisting SMEs in improving their resource efficiency and reducing their impacts.

Examples on joint programmes in supporting SMEs are the UNIDO-UNEP programme on Resource Efficient and Cleaner Production and International Finance Corporation's Cleaner Production Financing Programme.

SMEs are seen as an important source of green innovation. The UNEP Eco-Innovation project supports work to promote Eco-innovation within SMEs. Eco-innovation is described as the development and application of a business model, shaped by a business strategy that incorporates sustainability throughout all business operations based on life cycle thinking and in cooperation with partners across the value chain[20]. So far the project has published practical guides and advice documents on Design for Sustainability. The project is right now calling for proposals for Pilot application of Eco-innovation in SMEs in Asia Pacific, Latin America and the Caribbean.

4.2.6 EXAMPLES OF CURRENT BUSINESS PRACTICES

Tesco, H&M, Levi Straus & Company, Ford Motor Company, Hewlett & Packard, Ikea, Nestlé, Patagonia and Timberland are examples of companies often mentioned in connection with work on sustainable supply chain management. These and many other large companies have designed and implement systems for sustainable supply chain management. In general these systems are based on policies and codes of conduct. The ambition and scope varies, industry specific as well as company specific policies and codes are applied.

Codes of conduct

A review on the use of compliance- and performance based tools in supply chain management was carried out by Lee & Kashmanian in 2013[21]. They explore to what extent and how supplier codes of conduct are actually used and followed up with compliance- and performance measures in supply chains. The study is based on real company cases: codes from large multinational enterprises were examined, with specific focus on current practices of building environmental sustainability into supply chains.

The environmental section of supplier codes of conduct varies widely according to the review, ranging from just a single sentence expressing expectations on general environmental concerns, to expectations on legal compliance, or more specific demands on reduction of emissions, the water- and energy-use or the use of hazardous substances. In the latter case quantitative requirements or goals are seldom specified. One explanation put forward is the lack of relevant international standards that can be applied globally to environmental issues. The level of detail and specificity agreed in the ILO conventions are used as a reference, said to enable companies to express clear expectations regarding social performance. No corresponding basis to express enforceable environmental expectations is at hand.

The variety in expectations also connects to ambitions (the business objectives) and to the variety of important environmental impacts within different industry sectors.

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[20] http://www.unep.org/ecoinnovationproject/

[21] Supply Chain Sustainability Compliance- and Performance Based Tools. T. Lee, R.M. Kashmanian. Environmental Quality Management. Summer 2013

Companies tend to address issues that are most relevant to their businesses and industries

A variation in the supply chain scope is also observed. Some codes explicitly address expectations on compliance by suppliers and sub-suppliers, although it is said to be unclear whether the term "supplier" refers to first tier suppliers or to other, indirect suppliers in the supply chain. The code of Timberland is taken as an example, stating "Facilities are expected to make sustainable improvements in environmental performance and require the same of their suppliers and sub-contractors". Still, indirect partners who are found deep within supply chain layers are said to be rarely, if ever, mentioned in a company's supplier codes of conduct. Implementing expectations across supply chains and subsidiaries is reported as a top barrier to integration of sustainability[22]. It is often limited to suppliers (and eventually sub-suppliers) in tier one.

Audits and scorecards

Reported means to follow up on supply chain performance are supplier audits and supplier sustainability scorecards. Xerox monitors key suppliers in its first tier for compliance. Procter & Gambler use country as a primary factor in determining which supplier to audit, assessing risks of labour and human rights violation. Baxter focus on a "select 100" list of suppliers that are critical to its business in terms of dollars and supply continuity.

The use of scorecards is seen as a way to go beyond tracking supplier compliance, giving incentives for continuous improvement. From a procurer perspective it is also a tool to retain competitiveness in supply chain management, using scorecards when selecting suppliers.

Several multinational enterprises have elaborated scorecards of their own, for example Wal-Mart and IKEA. According to a supplier scorecard study, conducted by the organisation Renewable Choice Energy among 24 large multinational organizations, scorecards are created in partnerships to the same extent as independently at company level. Environmental areas often being addressed by scorecards are carbon/energy, waste and water. Social performance is generally addressed as well [23].

Responsible sourcing

Many multinational companies identify the sourcing of raw materials, like palm oil, beef, soy, forest products, seafood, minerals and cotton as high-risk activities since the sourcing of these commodities has shown to severely affect local communities and important ecosystem services, like the climate regulatory function of forests, biodiversity and hydrological cycles.

Statements on responsible sourcing in codes of conduct address this perception in large companies like Tesco, IKEA, HP, H&M, The way to secure the promises varies, but is often related to joint initiatives setting production standards or advices on best practice for above mentioned "risk" commodities: e.g. Global Roundtable for Sustainable Beef, Round Table on Responsible Soy Association, Roundtable on Sustainable Palm Oil and Tropical Forest Alliance.

Initiatives like Better Cotton Initiative (BCI), Forest Stewardship Council (FSC), Program for the Endorsement of Forest Certification (PEFC) and Marine Stewardship Council (MSC) takes the issue one step further, not only setting production standards but also offering traceability systems to guarantee promises on sourcing through the

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[22] A new era of sustainability. UNGlobal Compact-Accenture CEO Study 2010.

[23] White Paper. The Growing Trend of Sustainability Scorecard. Why It Makes Sense to Get on Board. Renewable Choice Energy. www.renewablechoice.com

supply chain. Traceability is not equivalent to transparency in the supply chain, but a technique to verify compliance with a specific expectation, in this case the origin of and methods applied when producing the raw material (see chapter on traceability).

Some large companies like H&M, Tetra Pak and IKEA refers to Better Cotton Initiative, FSC and PEFC in sourcing standards or policies. Others, like Tesco, refers to the commodity initiatives and a due diligence approach to secure promises on sourcing[24].

Other impact measurement initiatives

There is a growing interest in impact measurements. Some examples are listed below:

Ecological footprint: This accounting system tracks, on the demand side, how much land and water area a human population uses to provide all it takes from nature. The accounting system also tracks the supply of nature; it documents how much biologically productive area is available to provide these services. Business footprints as well as personal footprints or carbon footprints can be calculated. The Global Footprint Network, a non-profit organization, has been working with this accounting tool since 2003. They have as well taken on a work on developing international Footprint Standards, to advance the integrity and comparability of Footprint applications worldwide. The Global Footprint Network is a community affiliate to the ISEAL Alliance[25].

EP&L, Environment Profit & Loss account: A system to evaluates the environmental impacts on society of a product in a Cradle-to-Cradle perspective, including such as greenhouse gas emissions, local air emissions, water use, waste and land use. PUMA together with Kering, supported by Trucost, developed the system. The EP&L is built on existing input-output models, with new valuation methodologies added such as TEEB, The Economics of Ecosystems and Biodiversity.

TEEB, The Economics of Ecosystems and Biodiversity: a global initiative focused on drawing attention to the economic benefits of biodiversity including the growing cost of biodiversity loss and ecosystem degradation. TEEB presents an approach that can help decision-makers recognize, demonstrate and capture the values of ecosystem services and biodiversity The TEEB initiative is hosted by UNEP.[26]

Several industry specific sustainability standards connected to metrics can be found with the Sustainability Accounting Standards Board, SASB, an independent, non-profit organization. SASB provide companies with standardized accounting metrics to account for performance on industry-level sustainability topics. The standards are designed for the disclosure of material sustainability issues. SASB is accredited to establish sustainability accounting standards by the American National Standards Institute (ANSI).

Several framework and tools for assessing social and socio-economic impacts can as well be found, for example the Powerty Footprint methodology developed by Oxfam[27] and Social life cycle assessment (SLCA) used for product level analysis, developed and managed by The Natural Step[28].

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[24] Standards and codes from mentioned companies

[25] http://www.footprintnetwork.org/en/, downloaded 8th of June 2014

[26] http://www.teebweb.org/, downloaded 8th of June 2014.

[27] http://www.oxfam.org/en/policy/poverty-footprint, downloaded 8th of June 2014

[28] http://www.thenaturalstep.org/, downloaded 8th of June 2014

4.2.7 ASSESSMENT OF BUSINESS PERFORMANCE

Global Compact conducts an annual implementation survey among companies participating in the Global Compact. It is an online, anonymous survey, available in English, Chinese, French and Spanish. The survey is administrated and analysed by The Wharton School of the University of Pennsylvania.

The response rate in 2012 was 25 %, with 1 712 respondents from 113 countries. Respondents are seen as generally representative of the Global Compact participant base. The survey has been conducted since 2007, to understand and benchmark how corporate participants are taking steps to advance their commitment to the Global Compact. [29]

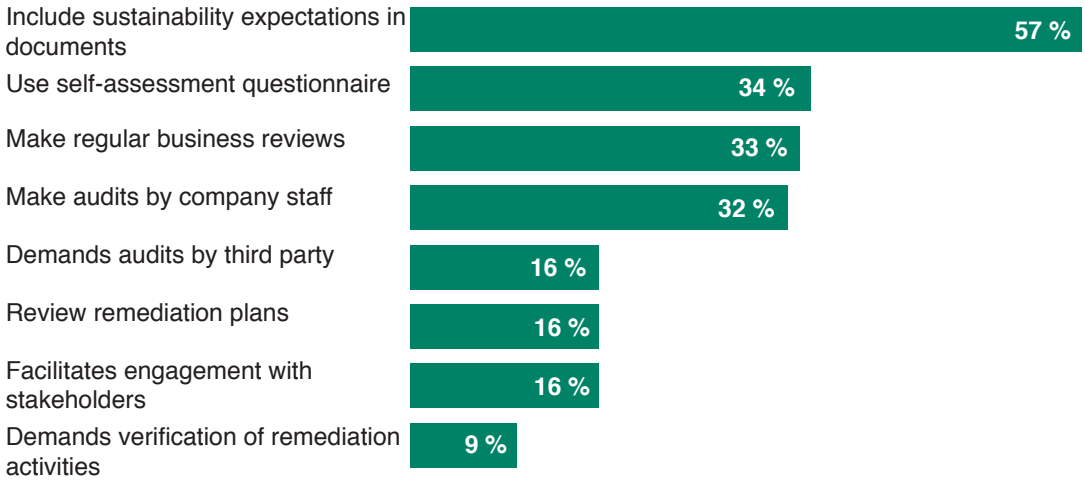
Key findings

A clear gap between "say" and "do" is identified: Companies are making commitments, defining goals and setting policies at high rates. But the saying is: there is still much to do on the action steps: to implement, measure and communicate.

Large companies still lead the way: they are twice as likely to have a human rights complaint system or monitor and evaluate their environmental performance.

Supply chains are seen as a roadblock to improved performance: A majority of respondents have established sustainability expectations for their suppliers, but they are not tracking compliance or helping suppliers to reach goals. 83 % "consider" adherence to the Global Compact principles by suppliers, only 18 % assist them with setting and reviewing goals. And just 9 % take steps to verify remediation.

Figure 4. Snapshots in numbers regarding supply chain management among responding companies:



[29] Global Compact Sustainability Report 2013. United Nations Global Compact Office, 2013.

4.2.8 SUMMARY OF FINDINGS

- Large companies of big brands acting in the global market are pushing the work on sustainability in supply chains. The incentives are strongly appreciated, but several barriers hamper the implementation.
- Global supply chain was created as a mean to capitalize differences in cost levels. Lower wages and less comprehensive regulations on environment and labour health and safety gives lower costs but must be approached when sustainability in supply chains becomes an issue. In the balance sheet not only monetary values but long term profitability must be taken into account. This demands a shift in mind set and accounting systems, which is not easily accomplished.
- Expectation on sustainability performance in supply chain is generally expressed through codes of conduct. Expressed expectations on environmental performance tend to lack quantitative requirements, which can be explained by the absence of relevant international standards on environmental performance. Lack of metric makes it difficult to monitor and report on environmental improvement in supply chains.
- Social requirement are often based on widely recognized agreements like the ILO conventions and the convention on Human rights. These requirements are easier to convey, but still need to be assessed for compliance, causing costs and efforts among suppliers as well as procurers.
- Suggested approaches to solve data problems are
    - Cooperation/mutual agreements with suppliers
    - Technology platforms that enables comprehensive data collection and management
    - The use of data sharing platforms that can help collect and manage supplier information about sustainability performance (like Sedex, ExoVadis, Fair Factories Clearinghouse)
- Deeper engagement with supplier sustainability performance is often limited to the first tier. Information on who are involved is not easily accessible due to the complexity and global spread of players in supply chains. Additionally, information on contractual agreements is often considered sensitive with regard to competitiveness. This is seen as a fundamental barrier to promote sustainability in supply chains. Stronger incentives to promote transparency are needed.
- Traceability systems are applied as a mean to secure expectations on responsible sourcing. They generally do not reveal accessible information on all players in the supply chain, but could be a potential tool to enhance transparency.
- Upstream suppliers and sub-suppliers are generally SME's, having less technical and financial capacity for change, but often a higher degree of flexibility.
- The use of scorecards can offer a more flexible framework for improvement than just tracking compliance.

5 SUSTAINABLE PUBLIC PROCUREMENT

In academic reviews and business models customer demands and purchasing power are seen as important drivers to promote sustainability in supply chain management. Public spending normally represents 15–30 percentage of national GDP, giving public procurement leverage to drive markets towards innovation and sustainability.

For most countries, national and international legal frameworks influence public procurement. Examples on international agreements are the Government Procurement Agreement (GPA) from the World Trade Organisation, WTO, and the United Nations Commission on the International Trade law's (UNICTRAL) model law.

Public procurement shall satisfy requirements for goods, works, systems and services in a timely, non-discriminating and cost-effective manner, which demonstrates the achievement of "value for money". It also has to meet the basic principles of good governance; transparency, accountability and integrity. By referencing "value for money" and good governance these agreements can be perceived as a basic call for sustainability in public procurement. International Labour Organization (ILO) Conventions and multi-lateral environmental agreements such as the UN Framework Convention on Climate Change also drive policy commitments and in some cases regulations towards sustainable public procurement.

5.1 DEFINITIONS ON SPP

The UK report, Procuring the Future[30], is an often-quoted reference work, defining the case and relevant approaches to sustainable public procurement. Procuring the Future is the result of a business led Task Force to devise a National Action Plan on Sustainable Procurement for the UK. The Task Force also devised a versatile definition of sustainable procurement that encompasses all three dimensions of sustainability and the importance of looking at sustainability in supply chains:

> *Sustainable Procurement is a process whereby organisations 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 minimising damage to the environment. In an additional footnote the definition makes a clear reference to supply chain management:*
>
> *Sustainable Procurement should consider the environmental, social and economic consequences of: Design; non-renewable material use; manufacture and production methods; logistics; service delivery; use; operation; maintenance; reuse; recycling options; disposal; and suppliers' capabilities to address these consequences throughout the supply chain.*

In the foreword of Procuring the Future chairman Sir William Simms claims that more than 50 % of the impact of public sector procurement arises from its supply chain. But according to the report the public sector is lagging behind leaders in the private sector in its approach to working with the supply chain. A recommended first step is that the public sector organisations begin to understand and address social issues in their supply chains.

There has been an uptake of the UK Task Force definition on SPP in subsequent policy work; for example in Sustainable Public Procurement Implementation Guidelines, a

[30] Procuring the Future Sustainable Procurement National Action Plan: Recommendations from the Sustainable Procurement Task Force. The Department for Environment, Food and Rural Affairs, UK. 2006

result of the Marrakech Task Force Approach to SPP, and in Buying for a Better World, a guide on sustainable procurement for the UN system[31].

5.2 A SUGGESTED FRAMEWORK TO SPP

The Sustainable Public Procurement Implementation Guidelines presents a step-by-step approach to introducing sustainable public procurement, starting with the launch of a project to establish a SPP Policy and action plans, the basis for a structured implementation of SPP throughout the whole procurement cycle.

Figure 5. The UNEP Step-by-step model

It is noted that there are significant differences between countries in their response to the aspects of sustainability (economic, social and environmental). In many industrialized countries and regions, for example Europe and Japan, SPP tend to focus more on environmental aspects and the fostering of renewable energies than on social concerns. In countries such as South Africa, the social agenda is given a higher priority, reflecting that social concerns are seen as more relevant to the underlying concept of sustainability.

In order to create a final list of priority goods and services that the policy and action plan will implement, answers to the following questions are recommended as a guide:

- How important is the sustainability issue and/or sector to the national government?
- What scope is there to improve?
- Will the market be able to respond to this issue?

Supplier engagement

Training is described as an important step for implementation of the SPP approach. Not only staff needs training, but suppliers as well. It is recommended that public entities establish a process of dialogue and communication with suppliers. Suppliers and contractors must get a clear understanding of the role expected of them as part of the implementation of sustainable public procurement.

An initial dialogue with the market is recognized as an essential component of sustainable procurement activities. Leaders of the sustainable procurement policy are

[31] Buying for a Better World. A Guide on Sustainable Procurement for the UN System. United Nations Environment Programme (UNEP), United Nations Office for Project Services (UNOPS), International Labour Organisation (ILO), and the ILO's International Training Centre (ITC ILO). 2011

urged to create market incentives for innovation and development of sustainable goods and services. This could include training and awareness rising.

Supply chain management

The SPP implementation guidelines addresses supply chain management by stating: "Evaluating in detail a supplier's approach to meeting the SPP aspects of a contract and undertaking their own business in a sustainable manner, as well as how they apply sustainability principles with their suppliers down the supply chain, will ensure the long–term success of the SPP approach".

The recommendation is to identify important aspects of sustainability in supply chains when working on prioritisations and market readiness analysis: assessing risks and opportunities to SPP with regard to environmental hazards, socio-economic risks, reputational risks and the scope for improvement within different categories of goods and services.

The UN Guide on Sustainable Procurement for the UN System suggests that risk assessments of supply chains could:

- be made in conjunction with external consultants
- be made through supplier engagement
- with assistance from industry peers within the sector

Suggestions on tools

Sustainability criteria can be applied at any stage of the procurement process. To manage sustainability risks in the supply chain, supplier selection and contract management are said to play an important role.

However, it is stated that suppliers may not always be in a strong position in relation to their suppliers. Many suppliers are distributers or other intermediaries, and in that role they are unlikely to be able to exert much influence on major global players. This must be taken into account when considering the use of selection criteria including supply chain management aspects.

A questionnaire can be used to explore the suppliers' own approach to sustainable procurement and their application of sustainability principles throughout the supply chain. To treat all bids equally, answers must then be evaluated in a bid evaluation model. It also must be possible to verify performance during the contract. Contract management is essential to ensure that suppliers and contractors keep to the commitments they made in their bids. An organisation striving to deliver SPP must ensure that its suppliers deliver on the sustainability commitments made and that results are measurable.

The UN Guide on Sustainable Procurement for the UN system[31] digs a bit deeper into the aspects of supply chain management within SPP, suggesting tools and approaches. The suggested approach is similar to the business case:

Supply chain management aspects should:

- Be based on the principle of continuous improvement and on a life cycle approach.
- Have a risk-based approach
- Target areas of highest impact or priority

Suggested frameworks to ensure that organisations can fulfil their objectives for social and environmental performance are social and environmental management systems: EMS, EMAS and SA8000:2001. SA8000 is described as a widely recoginized global

standard for managing human rights in the workplace. The standard is suitable for any-sized organization in virtually all industry sectors, and it is a certification standard.

There is as well an ISO standard on social responsibility, the ISO 26000, published in 2010. In contrast to SA8000 this is not a certification standard. Companies will not be able to be certified according to its terms, but ISO 26000 provides guidance to all types of organizations on the principles and practices of social responsibility.

Other suggestions:

- Joint efforts can be made to make approved lists of suppliers for different areas.
- In high risk/high value projects back-to-back contracts can be used to assure that main contractor pass on its contractual obligations and requirements to its subcontractors in the supply chain (although not popular with suppliers).
- Innovative procurements processes are seen as the most efficient/applicable processes to involve with and promote sustainability in supply chain management. In this context supplier engagement is seen as a core mission.

5.3 CURRENT SPP PRACTICES

A lot of work has been done on designing and implementing sustainable public procurement policies and action plans, by global, regional, national and local initiatives. Insights on current state of play on national SPP efforts are given in the UNEP report Sustainable Public Procurement: A Global Review. The review is based on analysis of recent literature and interviews with leading experts on SPP.

Notably not all actors included in the review use the term Sustainable Public Procurement. Related concepts used are Green Public Procurement (GPP), Environmentally Preferable Procurement (EPP), Socially Responsible Procurement (SRP) and Responsible Purchasing (RP): Definitions and the scope of sustainability vary in procurement policies of different countries and regions. This is in line with the SPP Implementation Guidelines, recommending each country to develop its own list of issues, with respect to national strategy objectives.

In the text to follow the term SPP will consistently be used.

A growing interest in SPP

According to the UNEP review the interest in SPP by governments and stakeholders is growing and has proven to be resilient. At least 43 countries now have public institutions that have adopted a SPP policy or policy measures.

The level of implementation varies widely: A fully integrated SPP into all governmental purchasing, with extensive monitoring and evaluation systems in place, is perceived as present by 4 % of national governments, while 39 % is stating that SPP is integrated into purchasing in some product categories, but not for others. The known leaders in SPP have deepened their commitment to implementation and increased the number of environmental and social attributes being considered, but few measure the degree of implementation, or do follow up on outcomes. [2]

For countries just starting work with SPP, a need to help social and environmental issues gain political support is identified. Developing countries are lagging behind on SPP, often confronting more urgent needs and priorities for the immediate well-being of citizens, and not even having enough capacity on public procurement in general. A summary of current practices thus becomes biased by practices within industrialized countries. Even leaders on SPP feel they still have a long way to go implementing SPP. Both cost and complexity barriers are identified.

Weighting on "value for money"

Price persists being the dominant awarding rule (43 %) in public procurement, but with weighting on "value for money" in 34 % of national governments. Value for money allows for SPP criteria and often considers life cycle/whole life costing of goods and services. Life cycle costing techniques contribute to expose the hidden costs of ownership, from purchase through usage and maintenance costs to disposal; purchased products will consume energy, water and other resources, and eventually costs on disposal[32].

In the UNEP review 2 % of national governments report on using life cycle costing all the time, while 36 % report LCC is used sometimes for some product categories, but not all. A higher price on more sustainable products is considered as the most important barrier to SPP in the UNEP survey.

Product guidelines and criteria

Development of joint buying standards/procurement guidelines or criteria is a commonly used tool to address sustainability objectives in SPP. Countries with a longer history of SPP often have a larger number of product categories with SPP guidelines. Japan, the US, Canada and the European so-called "Green-7" countries (Austria, Denmark, Finland, Germany, the Netherlands, Sweden and the UK), as well as Belgium, Italy and Spain are seen as frontrunners.

Categories most often mentioned as having national criteria developed are: construction, copying paper, cleaning products and transportation. Frontrunners on SPP also often have guidelines in place on electricity, office IT equipment, furniture, food- and catering services, lightening and textiles.

In the creation of product category guidelines, eco-labels and sustainability standards are often used to identify relevant product criteria. Some countries provide their purchaser guidance on sustainability performance in how to use an array of different eco-labels and voluntary sustainability standards, while other countries align their national programmes on SPP with the criteria and work of national eco-labelling bodies.

The focus on labels and standards as reference tools in creating procurement criteria make them commonly used for verification as well. In general this leaves to the supplier/labelling entity to check on compliance to sustainability requirements in the supply chain.

The breath of sustainability labels and standards on the market complicates the implementation. Several sustainability labels and standards might address the same issue or area of concern, raising the question: which standard or label can be relied on?

The extensive work done by the UK Central Point of Expertise on Timber (CPET) highlights the problem: To assist procurers CPET are continuously assessing certification schemes on responsible forest sourcing, to verify compliance with the UK Government procurement policy. The policy requires all timber and wood derived products must be from only independently verifiable legal and sustainable sources.

Additionally, CPET are developing guidance on other methods to verify compliance. This is as well a time-consuming work, being implemented due to EU-regulations on the use of labels and certification schemes in public procurement. So far it has not been possible to require conformance with particular eco-labels or standards, but only use them as one, but not the only, way of demonstrating conformance to procurement criteria. According to some interpreters these limitations might bee lessened when implementing the revised European Public Procurement Directives, approved by the

[32] A Guide to Environmental Labels for Procurement Practitioners of the United Nations System. UNOPS 2009.

European parliament in the beginning of 2014. The implementation timeline is set to March 2016.

Supply chain management

Supply chain management is seen as an up-coming but still not integrated part of the procurement process, according to the UNEP review. Developing world supply chain issues is considered as a priority aspect regarding social issues by 11 % of respondents. Supply chain management is not reported as a priority area at all when it comes to environmental issues.

Skills needed for supply chain management within SPP are said to be similar to those usually identified with commercial procurement; the call is to learn from business; by adopting best private sector practices and applying them to the public sector [30]. This must be done with respect to the regulatory framework on public procurement: The principles of openness, transparency and no-discrimination might conflict with supplier engagement, put forward as an important success factor to enhance sustainability in supply chain management within business.

Right now public procurers are joining forces to build knowledge and capacity to address social issues in supply chains. A representative example of a platform for knowledge sharing is the Landmark project. The European Commission funded the Landmark project, bringing together public bodies and NGOs to develop best practices in socially responsible public procurement. The project was implemented over a period of three years and submitting a final report in March 2014.

Although stating: "*the implementation of socially responsible public procurement is still in its infancy*" the Landmark project hopes to encourage continued efforts to master recognized obstacles. Outcomes of the project are publications giving legal guidance, presenting success stories and examples on good practice – thus trying to address identified gaps in knowledge and legal uncertainties.[33]

Given examples on approaches and means to forward or verify compliance with social criteria in the supply chains are:

- Bidder declarations
- Follow-up questionnaire
- Transparency and disclosure of the supplier and sub-contractors
- External audits
- Catalogue of measures
- Labels, multi-stakeholder initiatives and Codes of Conduct
- Sector-specific schemes

Follow up on compliance beyond the first tier is reported as a major problem. Verifying compliance of social criteria in remote parts of the supply chain remains a challenge – in public procurement as well as among procurers in business. Pooling resources, sharing information and taking united approaches are suggested solutions to expand the scope beyond the first tier.

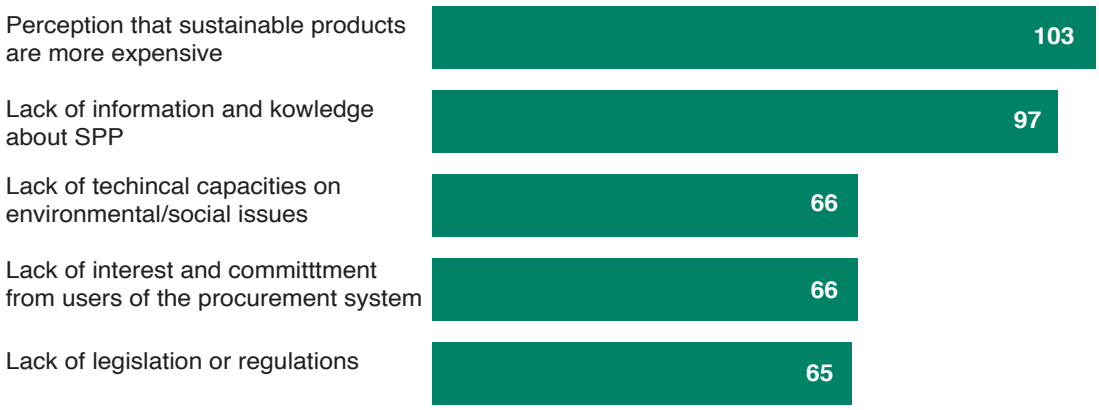
[33] Verifying Social Responsibility in Supply Chains: A Practical and Legal Guide for Public Procurers. The Landmark Project, June 2012. Good Practice in Socially Responsible Public Procurement: Approaches to Verification from Across Europe. The Landmark Project, July 2012. Success Stories in Socially Responsible Public Procurement. Using public spending to drive improvements for workers in global supply chains. The Landmark Project, March 2014.

5.3.1 REPORTED NEEDS AND LIMITATIONS

In an OECD survey on Public Procurement in 2010, concerns over possibly higher prices are identified as a limitation to SPP by almost 80 % of responding government procurement officials. 45 % report lack of monitoring mechanisms (e.g. reporting or audit) as an important limitation while 42 % consider lack of/little incentive to take green criteria into account as limiting[34].

The top five rank of barriers among respondents in the UNEP Global Review are quite similar, with Higher prices as number one barrier, followed by Lack of information and knowledge on SPP, Lack of technical capacities on environmental/social issues, Lack of interest and commitment from users of the procurement system and Lack of legislation and regulation as number five.

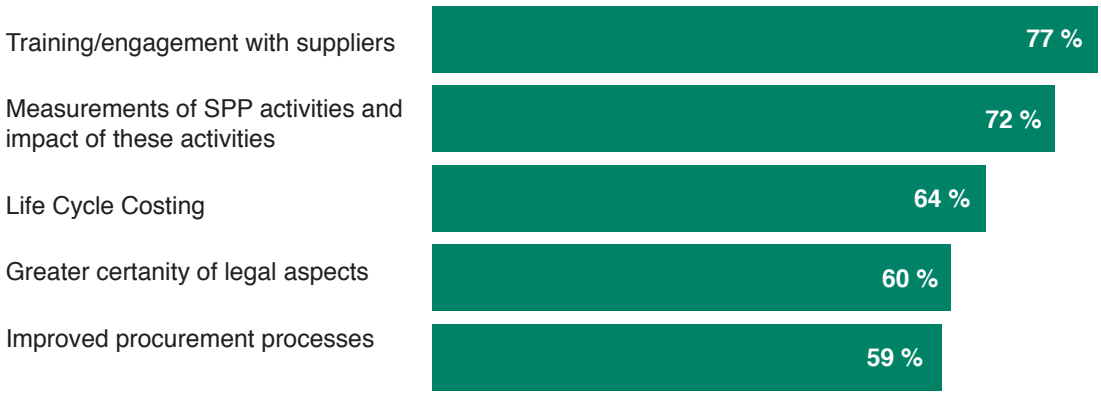
Figure 6. Top five ranking of barriers to SPP in the UNEP Global Review



Collection and evaluation of sustainability information on products and services, as well as verifying claims from suppliers is put forward as an important barrier from a procurer perspective. This connects to needs to differentiate between the breath of sustainability standards and eco-labels that exists in the market.

Respondents in the UNEP Global Review also were asked to specify what activities are most needed to grow SPP. The top five rank of most important activities reported is: Training/engagement with suppliers (77 %), Measurements of SPP activities and impact of these activities (72%), Life Cycle Costing (64 %), Greater certainty of legal aspects (60 %) and Improved procurement processes (59%).

Figure 7. Top five ranking of most important activities:



[34] OECD 2010 Survey on Public Procurement

Top five reported priorities for international collaboration are: Develop product guidelines and criteria (81 %), Engage stakeholders and raise awareness (80 %), Establish information platforms to exchange practice, serve as a help desk, etc (74 %), Provide training (72 %) and Create a simple measuring approach for sustainable procurement tracking (61%).

5.4 SUMMARY ON FINDINGS

- Sustainable public procurement is increasingly seen as an activity that should not only focus on short time values, but also on long-term benefits. Supporting wider social, economic and environmental objectives can offer real long-term benefits, but tools to visualize these benefits are needed. Concerns on possibly higher prices are still seen as an important barrier to SPP.
- A wide variation in the level of commitment and capacity for SPP is at hand globally. A spread in focus areas occurs; from a single focus on environmental or social aspects, to a focus on all three aspects of sustainability. Known leaders have deepened their commitment and increased the number of environmental and social attributes being considered.
- Use of joint buying standards/procurement guidelines or criteria is the commonly used tool to address and verify sustainability objectives in SPP, The breath of sustainability labels and standards on the market, with several labels and standards addressing the same issue or area of concern, creates confusion and needs to evaluate which can be relied upon for different product categories.
- Other identified barriers to sustainable supply chain management are lack of time, knowledge and resources, within procurement organizations as well as among suppliers. Training, engagement with suppliers and pooling of resources are seen as important activities to grow SPP.
- Supply chain management is seen as an upcoming, but still not integrated, part of the procurement process, where social issues are considered as the priority aspect of supply chain management.
- Suppliers being distributors or intermediaries might lack power to influence on major global players in the supply chain.
- To verify compliance with sustainability requirements in supply chains there are need for performance indicators at supply chain level. An organisation striving to deliver SPP must ensure that its suppliers deliver on the sustainability commitments made and that results are measurable. There is also a need for mechanisms promoting continuous improvement.
- Innovative public procurement is put forward as an important tool to create market incentives for innovation and development of sustainability in supply chains.
- Suggested high priority activities for international collaboration is to establish information platforms to exchange practice, provide training and create simple measuring approaches for sustainable procurement tracking.

6 TOOLS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A large variety of issues must be addressed to create sustainable supply chains: e.g. the distribution of responsibilities between actors, a rethink on values and the input of parameters in financial accounting, and the sharing of best practice within different industry sectors.

So far supply chain management is in its infancy within SPP, but there is a growing interest to reach out with sustainability expectations in the supply chain. This section deals with tools having potentials to enable purchasers to set and assess such requirements, commenting on both potentials and limitations in relation to identified areas of need.

Every purchase has some impact on the environment, on the economy and on people. The most sustainable purchase is often the one not being accomplished. By re-thinking their needs purchasing organizations can also achieve successful SPP – and save costs.

The ongoing work to develop regulatory frameworks on sustainable development (i.e. international agreements and national legislation) remains a core issue. Global supply chains were created as a mean to capitalize differences in cost levels, not infrequently caused by less comprehensive regulations on environment and labour health and safety. The lack of pricing on costs created by deterioration of ecosystem services or local communities remains a difficulty that needs to be addressed by regulatory activities as well.

Procurement requirements on sustainability can be seen as an activity complementary to, but not replacing, regulatory activities, using market mechanisms to raise the bar. It also must be acknowledged that SPP in most countries is not mandatory.

Identified needs

Procurer-related needs identified in this pre-study in the context of supply chain sustainability are summarized in bullet points below:

Needs

- Tools to make visible the long term benefits created by SPP
- Sustainability requirements addressing supply chain performance. This headline includes the need of tools to
    a) specify procurement criteria and
    b) ways to measure and verify performance on sustainability in supply chains.
- Tools to encourage commitments to continuous improvement in supply chains
- Tools to promote innovation on product design and production methods
- Tools to pool resources

Some tools address multiple needs, but are for practical reasons only listed below under one heading.

6.1 VISUALIZE LONG TERM BENEFITS

The control of public expenditure is a primary goal of public procurement, and price is often the dominant awarding rule. This conflicts with the ambitions of SPP, putting a focus on long-term benefits. To build the case of SPP there is a need for tools to develop the concept of long-term profitability and visualize hidden costs created by unsustainable practices.

Applied tools to visualize hidden costs in the post-production stage of a supply chain within public procurement are Life Cycle Costing calculations and the use of single-issue labels. Ecological footprint and carbon footprint can be used to make visible how life-style choices impact on the resource capacity of nations and worldwide. Other means to visualize upstream costs are dealt with under the heading sustainability requirements addressing supply chain performance.

6.1.1 LIFE CYCLE COSTING

Addressed issue: To make visible long-term economic benefits created by SPP.

Life Cycle Cost calculations, (LCC) considers the total cost of a product during use and disposal. It covers the initial investment when buying the product, the operating and maintenance costs, as well as any environmental taxes and costs of discarding the product. It also covers potential revenues, for example subsidies and the remnant value, i.e. all economic impacts that can influence the total anticipated cost.

Potentials: The concept of LCC is best applied in the need analysis during the procurement process, where it can be used to improve purchase planning and estimate the difference in cost of buying or leasing a product. It can also be used in estimations on how much an environmentally compatible "green" alternative would cost in comparison with a conventional product – maybe even resulting in a cost saving rather than an increase. Finally it can be used to establish awarding criteria.

Limitations: The current practice of LCC usually deals with downstream processes in the supply chain. LCC calculations are best suited to products where operating and maintenance costs are comparatively high during the product life cycle, e.g. for products with high energy consumption in use, as for vehicles, lighting and office equipment.

6.1.2 SINGLE-ISSUE LABELS

Addressed issue: To make visible long-term benefits created by SPP.

Some single-issue labels, like energy labels or water labels, address specific environmental aspects of a product during its use. The EU energy label rates energy efficiency of households appliances and promotes energy-efficient products that have the same quality standards of equivalent models, and in addition reduce energy-related carbon emissions and lead to cost savings. The Australian Water Efficiency Labelling and Standards focus on water efficiency, to assist in the choice of the most water efficient products,

Potentials: These labels give procurers a "short-cut" to compare and choose the most efficient products on addressed issues, to achieve environmental as well as cost advantages.

Limitations: Mentioned single-issue labels only deal with usage, and do not address up-stream sustainability aspects in the supply chain. They are best suited for products with high energy or water consumption.

6.1.3 ECOLOGICAL FOOTPRINT

Addressed issue: to make visible how life-style choices impact on the environment.

The scope of the Global Footprint Network is to measure the ecological resource use and resource capacity of nations over time. This to provide aggregate indicators of human pressure on ecosystems available, incentivising action towards sustainability. This accounting system can be applied on a global as well as on a national level and on cities, businesses and individuals. It indicates the extent to which we are exceeding the available bio capacity of the earth, measured in global hectares as an indication of the proportion of the earth's surface required to support a particular activity.

Potentials: Make visible limitations and threats created by the current use of resources in simple figures.

Limitations: The ecological footprint is one indication of unsustainability. Ecological footprints don't account for economic, political or cultural factors such as well-being and do not explain what are the sustainable solutions, taking account for pollution, water use, toxicity, health, viability etcetera. There are as well several approaches on methodologies, creating some confusion.

6.2 ADDRESS SUSTAINABILITY PERFORMANCE

An organisation striving to deliver SPP must ensure that its suppliers deliver on the sustainability commitments made and that results are measurable. The work on procurement criteria must be linked to means of verification.

6.2.1 JOINT PROCUREMENT CRITERIA

Addressed issue: to specify requirements on sustainability in goods and services.

Procurement guidelines or criteria ("buying standards") are commonly used to address environmental and social objectives in SPP, and to an increasing extent also economic constraint. In general front-runners on SPP have developed their own criteria on a large number of product categories. The current state of play is that there are a large number of procurement criteria worldwide, some addressing the same product group.

Several initiatives and networks also provide jointly developed guidelines and criteria, publicly available to any purchaser worldwide. Examples on such initiatives are the European initiative Procura+, and the Responsible Purchasing Network. The International Green Procurement Network (IGPN) provides web links to green purchasing networks holding procurement criteria in different countries or regions. Several other initiatives and networks doing work on procurement criteria can be found on the SCP Clearinghouse.

Potentials: Availability to commonly recognized procurement criteria support purchasing activities on SPP, reducing costs and efforts needed to define requirements to be fulfilled through the contract. The access to harmonized procurement criteria can contribute to a stronger market response to sustainability expectations, and make it easier for supply chain participants to implement systems to verify compliance in a unified and cost-efficient way.

Limitations: The wide variation in level of commitment and capacity on SSP might pose a risk on low-level agreements in joint work on procurement guidelines. Creating sets of criteria, addressing different areas and with basic, advanced and cutting edge levels of requirements can address this risk.

6.2.2 LIFE CYCLE ASSESSMENTS

Addressed issue: to measure and verify requirements on environmental performance in supply chains, but also to assess risks and specify requirements on environmental performance in goods and services.

Life Cycle Assessment, LCA, is a methodological approach that aims to quantify and assess environmental impacts of a product throughout its life cycle, from "cradle-to-grave" including all stages from raw material extraction, through processing semi-manufactured goods, manufacture, distribution, use, repair and maintenance, and final disposal and/or material and energy recycling.

Two ISO standards (14040 and 14044) have been established to consolidate LCA calculation and methods, thereby providing structures to define a so-called functional unit, identify and describe inherent units and processes, assess the magnitude of potential environmental impacts and finally interpret the findings in relation the objectives set for the study. LCA provides an assessment of potential environmental impacts on the basis of a chosen functional unit, to make comparisons possible in case of LCA studies being conducted in a similar way.

Potentials: Information on potential environmental impacts in different stages of a product's life cycle is of great help to identify important areas for product improvement and to compare the environmental performance between separate products in a specific product category. LCA also can be used as a tool to assess potential areas for environmental improvements along the supply chain, indicating the greatest needs for activities to control and measure environmental performance.

LCA results can furthermore constitute a platform for reliable background information for the purpose of developing environmental product declarations (EPD) and eco-labels.

Limitations: The uptake and implementation of LCA is still not widespread, despite the existence of an international recognized standard on a suitable methodology. Making an LCA is seen as resource demanding and costly.

Despite ISO standards there are currently several other calculation approaches available, which has created confusion in the market.

ISO based LCA standards do not address aspects on social performance in the supply chain, or biodiversity impacts at the extraction of raw materials.

Still there is a growing interest in LCA, seen as a good help in providing quantitative information among suppliers in the supply chain. Efforts to create databases containing generic LCA data are underway. Generic data can be used to perform overall risk assessments, specify requirements on branch-specific environmental performance and in LCC calculations. However, one should not forget that there is always a need to independently verify LCA inventory data to compliance with environmental requirements for a specific product in a procurement process.

The UNEP/SETAC Life Cycle Initiative, founded in 2002, is currently working with projects to further develop and expand the concept of LCA. Examples on upcoming efforts is to develop and test a tool for social life cycle assessments (S-LCA), promote a consistent approach to unit processes and aggregated datasets and provide a methodology for mining knowledge from existing LCA studies.[35]

[35] Greening the Economy Through Life Cycle Thinking. Ten Years of the UNEP/SETAC Life Cycle Initiative. UNEP 2012.

6.2.3 ENVIRONMENTAL PRODUCT DECLARATIONS

Addressed issue: to measure and verify requirements on environmental performance in supply chains but also to specify requirements on environmental performance in goods and services.

Environmental Product Declarations (EPDs) can be seen as an information tool based on LCA calculations. The overall goal is to provide relevant and verified information as a basis for fair comparisons of goods and services by its environmental performance. The scope can be limited, focusing on the most significant environmental aspect for a product or a service in a life cycle perspective, thus reducing costs and efforts assessing impacts.

As an example of such a system, the international EPD system offers possibilities for single-issue declarations, focusing on only one environmental aspect of the product's life cycle. The most frequent single-issue EPDs is climate declarations, which declares only climate impact of a specific product, equivalent to the so-called carbon footprint of the product.

ISO 14025 sets the framework ISO 14025 sets the framework for EPDs as well as product category rules (PCR) and rules for independent verification - on top of the ISO standards on LCA procedures and methods (ISO 14040 and 14044).

Potentials: EPD's can be used as a pool of verified information for formulating environmental criteria, and as a tool for verification. The most prominent objective of an EPD is to assist purchasers and users in making informed comparisons between goods and services. EPD's can also be used to provide information to authorities, as a basis for eco-labels.

EPD's as well can give an organization a good insight on how their products or services affect the environment. This can be useful in internal product-development work, and represents a solid basis for the management of forthcoming aspects related to all kinds of sustainable issues.

Limitations: EPDs are still a fairly unknown concept as an environmental information tool on the market. The market uptake is still limited and as well as for LCA too many different calculation approaches creates confusion in the market. This is especially evident with regard to the public understanding of EPD´s and Eco-labels, which indeed are quite different and have separate market audiences.

Product Environmental Footprint

Within the EU there is an ongoing work to develop a harmonised methodology for the calculation of the environmental footprint of products (PEF), including carbon. This work is based on the same framework as used for the EPD:s; the ISO 14025 on top of the ISO standards on LCA procedures and methods (ISO 14040 and 14044), but in addition also the Ecological Footprint Standards and the Greenhouse Gas Protocol.

A methodological guide was published in April 2013, after finalizing pilots on PEF. Recently the selection of products (foodstuff) for a second wave of Environmental Footprint pilots was concluded.[36]

6.2.4 ECO-LABELS

Addressed issue: to measure and verify requirements on environmental performance in supply chains, but also to specify requirements on sustainability (environmental performance) in goods and services.

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[36] http://ec.europa.eu/environment/eussd/smgp/product_footprint.htm, dowloaded 16th of June 2014.

Eco-labels in line with the ISO standard 14024, Environmental labelling type I, shall be based on scientific evidence, taking into account a life cycle perspective. The scope is to identify goods and services that have less environmental impact throughout their life cycle, compared to other products in the same product category, from the extraction of raw material through to production, use and final disposal.

Adverse environmental aspects shall be addressed, with a focus on the stages where the product has the highest environmental impact. This differs from product to product. In some cases specific processes are addressed by the eco-label criteria, e.g. the use of specific chemicals in the manufacturing of textiles (dying, bleaching and finishing) or on the efficiency of their consumption (e.g. electronics). To carry the label a third party verification is required.

A current trend is incorporation of requirements on working conditions into environmental labels, often with reference to the ILO's core conventions and codes of conduct equivalent to the social standard SA 8000 (e.g. the Nordic Swan).

Potentials: ISO-based Type I eco-labels can be used to specify requirements on sustainability in goods and services, and also as a cost-efficient tool to verify compliance with these requirements. In the procurement process the supplier is held responsible on the assurance of sustainability in the supply chain, by the delivery of eco-labelled products.

Several product categories are covered by eco-labels, e.g. chemicals, textiles, electricity, paper, furniture, food, electronics, building material, and cleaning products and services. Eco-labels are found globally, including developing countries and economies in transition[32].

The use of eco-labels is a way to standardize requirements on sustainability, facilitating unified systems for measuring and monitoring, and thus reducing costs and burdens on follow-up and verification between supply chain partners. With criteria focusing on important sustainability aspects the eco-labels can promote and be used as benchmarks on "best practice" within different industry sectors.

Inclusion of social requirements in eco-label criteria enhances the sustainability scope and the possibilities to promote sustainable supply chain management.

Limitations: Currently there are several active eco-labels in the market, representing a great degree of diversity in how they were developed, and what issues they address. The Ecolabel Index reports on 451 eco-labels in 197 countries, and 25 industry sectors in 2014[37].

This can counteract the opportunities to create unified systems to measure and monitor sustainability in supply chains and the potentials to reduce costs and burdens associated with certification. The diversity on how they are developed can also jeopardize the credibility of eco-labelling schemes.

Bearing in mind the business experiences on supply chain management – with difficulties in collecting unified data on supplier performance and supply chain management – the licensing of an eco-label on a product can anyway be a tricky task and as well jeopardize the credibility of eco-labels.

Legal barriers to the use of eco-labels in public procurement are perceived in some countries/regions. Participation in eco-labelling schemes is voluntary and the conclusion drawn is that participation should not be imposed upon suppliers. When requiring eco-labels as a proof, procurers need to add the words "or equivalent" to facilitate to the supplier to use other means of verification.

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[37] http://www.ecolabelindex.com/ downloaded 16th of June 2014.

Despite the amount of eco-labels there are still many product categories for which no credible eco-labels or standards exists. Tenders often include a range of product groups, which may make it more difficult to make use of eco-labels.

6.2.5 SOCIAL STANDARDS AND LABELS

Addressed issues: to assess and verify requirements on social performance in supply chains, but also to specify requirements on social performance in goods and services.

The SA8000, a workplace standard, is an early attempt to deal with the lack of consistency in terms of social expectations on supply chain participants. Examples of areas addressed are forced and child labour, health and safety, freedom of association and collective bargaining, working hours and management systems. The standard embraces the Core Conventions of ILO, the Universal Declaration of Human Rights and the United Nations Convention on the Rights of the Child.

ISO 26000 is an ISO-standard on social responsibility, but companies will not be able to be certified to it. The intention of ISO 26000 is to provide guidance to all types of organizations in all kind of locations on the principles and practices of social responsibility. Large parts of the standard texts are devoted to definitions, examples and suggestions on how to identify and address specific issues in seven core subject areas: organizational governance, human rights, labor practices, environment, fair operating practices, consumer issues and community involvement and development.

Labels addressing the social or socio-economic capacity of a producer/supplier are emerging in a number of market sectors. Social labels usually cover issues such as human rights, workers rights, payment of a fair price and ban of child labour. Well-known social labels are the Fairtrade and the Rugmark.

The main objective of Fairtrade is to promote better trading conditions to marginalized producers and workers in developing countries. Fairtrade standards have requirements on social rights and security for hired workers. Forced labour and child labour are prohibited. The Rugmark certification guarantees that carpets and rugs are produced without employment of child labour, ensuring this through independent certification.

Several other examples on product specific social labels and standards can be found on the webpage of the Sustainability Compass, http://www.sustainability-compass.com/ or the Standards Map, http://www.standardsmap.org/. Both sites offer search functions on social and sustainability labels and standards (read more in the section on Pooling of recourses).

A special group of labels focus on how raw material is sourced or produced, with standards including criteria on sustainability performance from all three dimensions of sustainability, addressing economic, social and the environmental aspects. The FSC is a good example of such a label. Social criteria in forest standards of the FSC require alignment with the UN declaration of human rights, the ILO Core Conventions and the Indigenous and Tribal Peoples Convention (the ILO Convention number169).

Several multi-stakeholder initiatives, like the Better Cotton Initiative, also include requirements on working conditions and human rights in requirements on the sourcing and processing of raw materials (read more in the section on Traceability).

Potentials: Social labels and labels with inclusion of social requirements can help procurers to make more ethical choices and facilitate verification of compliance.

Limitations: In contrast to eco-labels, there is no common standard for social labels. Existing labels do not address social concerns in a consistent and comparable way. Each one will focus more or less on different socio-economic issues. The procurer needs to review the standard used to see what issues are addressed and how checks are carried out.

Social labels generally target how a product is produced, manufactured or distributed and thus must be managed by several supply chain partners. Lack of transparency in supply chains increases the risks for the occurrence of non-compliance.

Tools assisting procurers to compare and evaluate different labels and schemes can help solve this problem (see Pooling of resources).

6.2.6 TRACEABILITY

Addressed issue: Complexity and lack of transparency in supply chains

Lack of transparency in supply chains is identified as a major barrier to sustainable supply chain management, although there has been a rapid development of technology platforms to track and trace goods between different locations. The advantages of keeping records on commodities and products have been recognized in several industry sectors, due to logistics or as an efficient tool to comply with regulatory requirements or enable withdrawals in case of product failure. Regulatory requirements on food and drug security have been a driver within the foodstuff and pharmaceutical industry, while the focus has more been on product quality within the automotive and electronics industry.

On the market there are several solutions consisting of software and hardware systems to automatically or manually record the transfer of goods within or between facilities, inventories and retailers, e.g. RFID and barcodes. Still, transparency demands more than just techniques to track and trace goods between different locations: a willingness to store and share information between all tiers and sub-tiers must be in place, and has so far proven to be hard to establish.

Creating traceability in the supply chain is an attempt to bypass this problem. As already stated, several initiatives attempt to establish more sustainable ways in producing and sourcing commodities where current practices have shown to create severe negative impacts on people, communities and/or the environment. A core issue is to establish systems to assure the origin through the supply chain – to give purchasers and consumers a preferable choice and a tool to influence the market.

Potentials:

Traceability is in the context of assuring origin is a useful tool. According to a recently published and comprehensive traceability guide from the UN Global Compact Initiative[38] several approaches are applied: Companies with a good understanding of their supply chain have instituted their own traceability programs for certain commodities.

Stakeholders and companies in industries with complex supply chains have joined forces in global multi-stakeholder initiatives to establish production standards and traceability systems. The Forest Stewardship Council, FSC, the Marine Stewardship Council, MSC and the UTC Certified are taken as examples on initiatives having developed both comprehensive sustainable production standards and chain of custody certification for products all through the supply chain: from the raw material to the final use phase. Other initiatives offer more general guidance on traceability, or apply a scattered set of traceability schemes in different locations.

According to the UN Global Compact Traceability Guide, traceability so far has been a good tool for driving progress to improve the sustainability of raw materials. The rapid growth in market demands for fish and forest products from responsible sources – and the corresponding global growth of certified forest area and fishery – is held up as a

[38] UN Global Compact Traceability Guide: A Practical Approach to Advance Sustainability in Global Supply Chains. UN Global Compact Office 2014.

proof. Still the amount of traceable products in any category on the market is currently limited.

Limitations: Traceability requires significant investments in processes and technology to track goods along the supply chain. Coordination between different supply chain actors requires time and willingness on all sides.

The reluctance of suppliers to share information and a frequent occurrence of opaque sections of the supply chain remains roadblocks, but can be overridden with a step-by-step approach to traceability.

6.3 ENCOURAGE CONTINUOUS IMPROVEMENT

International standards for quality assurance, environment, work environment and human rights can help organizations to plan, do, check and act on important sustainability issues with regard to SPP. The International Standards Organisation, ISO, provides well-recognized management standards on Quality, Environment and Energy. ISO 26000 provides guidance on how businesses and organizations can operate in a socially responsible way. The ISO 26000 is not a certification standard but can be linked to other management standards since they focus on customer satisfaction and benefits for interested parties.

6.3.1 ENVIRONMENTAL MANAGEMENT SYSTEMS

Addressed issues: To encourage commitments to continuous improvement in supply chains but also to promote cooperation and transparency in supply chains.

An Environmental Management System (EMS) according to ISO 14001 sets out the criteria for an environmental management system and can be certified to. It does not state requirements for environmental performance, but maps out a framework that a company or organization can follow to identify and manage significant environmental impacts. The standard provides assurance that environmental impact is being measured and improved. ISO 14001 also has requirements on supplier control mechanisms.

Potentials: The use of management standards enables organisations to work with continuous improvement in a structured way, to align with legal requirements and respond to external expectations. Having management systems in place organizations can communicate on ambitions and verify progress.

If an organization certified for ISO 14001 has identified significant environmental impact in the supply chain, the standard requires that the organization handle this through setting up targets and actions to decrease the impact. In this case the organization need to control its suppliers and hence deal with environmental impacts from the supply chain in order to decrease the environmental impact that is connected to the organizations procured goods/services/work contracts.

In the procurement process management systems can be used various ways in the procurement process, e.g in the selection of suppliers as a qualification requirement since these systems enable organizations to report on abilities and strategies to work with sustainability issues, where supply chain management is an important part Validity and scope of the organization´s certificate should be assessed as a part of the verification process.

According to a recent ISO Survey of Certification (October 2013) certification to ISO management systems is on the rise[39]. China is taking the lead in the number of certificates issued to 9001 and 14001, followed by Japan and Italy.

Limitations: Lack of knowledge, capacity and financial resources are identified barriers among SMEs to implement certified management systems. This in particular applies to SMEs in developing countries. Large companies, with a substantial purchasing leverage, can contribute to reduce this barrier by establishing long-term relations and capacity building with their SME suppliers.

After implementation of a management system, with many easily identified cost-effective measures, moving forward is often associated with the need for more costly measures, which can halt the process of continuous improvement in absence of external incentives/drivers. Qualification requirement on management systems can serve as a driver.

Environmental impacts connected to any organization's supply chains are seldom addressed in an EMS due to perceived lack of capacity to control and influence the supply chain. Here, measures to increase transparency and cooperation between partners in the supply chain can contribute to make better use of supply chain management in SPP.

Life cycle management systems

The Life Cycle Initiative has developed a Life Cycle Management system, incorporating basic life cycle principles and key elements of ISO 9000, 14000 and 26000. The intention of this work has been to enhance the scope of sustainability in management systems, calling for continuous improvement on environmental and social issues associated with products in the entire life cycle.[40]

6.3.2 GLOBAL SOCIAL COMPLIANCE PROGRAMME

Addressed issues: To encourage commitments to continuous improvement in supply chains, but also to promote cooperation.

The Global Social Compliance Programme is a business-driven programme for the continuous improvement of working and environmental conditions in global supply chains. It was created by and for global buying companies (manufacturers and retailers) wanting to work collaboratively on improving the sustainability of their often shared supply base. The scope of the programme encompasses social and labour practices and site-specific environmental practices (not product related).

Potential: The programme demonstrates a way to strengthen collaboration and joint efforts on managing supply chains in a sustainable, and cost-efficient way. A set of reference tools and processes to provide a common interpretation of fair labour/social and environmental requirements and their implementation in the supply chain has been developed within programme. The reference tool is based on best practices, and common approaches, and is designed to reflect an be aligned with relevant international standards.

Limitations: This is not a monitoring initiative. The GSCP does not monitor, nor audit in any way the compliance by a user's supply chain with the GSCP reference tools or

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[39] The ISO Survey of Management System Standard Certifications – 2012, Executive summary, dowloaded from http://www.iso.org/iso/iso_survey_executive-summary.pdf 2014-04-11

[40] Life Cycle Management. How business uses it to decrease footprint, create opportunities and make value chains more sustainable. UNEP/SETAC 2009.

any standards. The implementation and monitoring of compliance resides with the user.[41]

6.4 PROMOTE INNOVATION

Addressed issues: To promote innovation on product design and production methods.

Innovative solutions are of crucial importance to achieve sustainable economic growth. Public spending normally represents 15-30 % of national GDP, thus giving public procurement leverage to drive markets towards innovation and sustainability.

There are several tools that could be used in efforts to stimulate the market towards innovation and sustainability. Some examples:

- Competitive dialogues, a way to develop the tender specification in dialogue with suppliers, to increase the ability to include innovative proposals on design, technology or business strategies.
- Design competition, which means inviting bids on a design concept and where design requirements and the tender evaluation may include sustainability aspects.
- Procurement of function, where specifications in the tender describes what should be achieved, leaving to the supplier to deliver solutions on how it will be achieved.

Potentials: Implementing innovative procurement within SPP is a way to signal and specify needs, incentivizing innovative sustainable solutions throughout the supply chain, an important step to enhance sustainability in new products, processes or organizational structures. Innovative procurement can help bring new products to the market, also making them available to other procurers and consumers. The greatest potential will be found in procurement of large volumes and/or goods and services of high values.

Higher flexibility and less structural inertia is said to give advantages to innovation capacity within SMEs, although there is as well a need for intermediaries to strengthen the innovative capacity in terms of access to resources and facilitating cooperation.

Limitations: The work on public procurement of innovation (PPI) is a more advanced way to carry out a procurement process, being applied to a very limited extent in daily procurement practices. Experiences from innovative procurements so far show that it is usually large, mature companies that have won the tenders/competitions, often with products that have more or less been finished in their research departments.

Volumes are needed to incentivize innovation, but the delivery of requested product volumes might create a barrier to small innovative companies, not having a sufficient production capacity, or capacity to finalize development of a new product or process.

This can be solved by assistance from intermediaries, joint initiatives and innovative platforms of which there are already several in place, and others under development.

The UNEP concept on Eco-innovations is an example, trying to develop and apply new business models, shaped by a new business strategy that incorporates sustainability throughout all business operations based on life cycle thinking and in cooperation with partners across the value chain. It entails a coordinated set of modifications or novel

[41] GSCP – Reference tool on Supply Chain Social Performance Management Systems. www.gscpnet.com.

solutions to products/services, processes, market approaches and organizational structure, which can enhance a company's performance and competitiveness[42].

6.5 POOLING OF RESOURCES

Lack of knowledge, time and resources are perceived as important roadblocks to achieve sustainable supply chain management, within business as well as among public procurers. A rich flora of initiatives that aim to pool resources is currently evolving; driven by multi-stakeholder initiatives, procurer initiatives as well as industry groups. The geographical scope varies.

Some initiatives, like CPET, a Central Point of Expertise on Timber in the UK, or TPAC, the Timber Procurement Assessment Committee in the Netherlands, work to assist public procurers to procure timber and wood derived products from independently verifiable legal and sustainable sources. Sweden has established guidance on Corporate Social Reporting, to assist companies and public procurers to work with social aspects in supply chains. In the US an inter-agency working group has created a methodology to assess eco-labels and environmental standards for use in federal procurement.

Procura+ (within ICLEI, the association of cities and local governments dedicated to sustainable development) and the Landmark project are examples of projects bringing together public bodies and NGOs on a regional level to develop best practice in sustainable public procurement.

Examples on other joint initiatives featuring sustainability labels and standards, enabling comparison are the Ecolabel Index, the ITC Standards Map, The Sustainability Standards Comparison Tool and the Sustainability compass. Other examples on joint efforts are GEN, the Global Eco-labelling Network, http://www.globalecolabelling.net, a non-profit association of Type-1 eco-labelling, with twenty-six members operating eco-labelling programs around the world. There are several other international initiatives on SPP, listed in the UNEP review on SPP practices.

The creation of data sharing platforms that can help collect and manage supplier information about sustainability, to reduce costs and efforts for both purchasers and suppliers are also underway, e.g. the Supplier Ethical Data Exchange, SEDEX, EocoVadis and Fair Factories Clearinghouse.

These are just a few examples of players operating in the area of sustainable supply chain management. Several other efforts are on the go, but many seem to have stalled. Remaining signs from comprehensive projects are websites containing a wealth of information that is no longer updated.

A challenge is to establish initiatives with long-term commitments, since knowledge and tools collected in project-oriented approaches tend to get lost over time.

[42] http://www.unep.org/ecoinnovationproject/, downloaded 8th of June 2014.

7 PRODUCT RELATED EXAMPLES

So far this report has dealt with more or less generic supply chains. In this section we will take a closer look at "true" and product related supply chains, to highlight challenges to SPP when trying to address supply chain performance.

The attempt has been to explore the maturity of supply chain management, and the ability to address various sustainability issues. Each supply chain has its own characteristics. The choice of product groups to assess was discussed during a web seminar, with a recommended choice of product groups that are prominent in public procurement, but preferably have different levels of complexity in supply chain composition.

7.1 COTTON TEXTILES AND CLOTHING

Public organisations procure a significant quantity of textile products, and more than half of all textiles globally consist of cotton; this said to explain the choice to examine supply chains of cotton textiles and clothing. Processing cotton to textile includes many stages and the cotton industry has a complex supply chain, involving many players in different stages and locations.

7.1.1 MARKET STRUCTURE

Farmers typically deliver their cotton to a ginnery, where the cotton lint is rinsed out, washed and pressed into cotton bales. The cotton bales from different ginneries are sold to traders, acting on the local, regional or global market; there could be several middlemen involved. On the global market cotton bales are anonymously traded, and prices set on the raw material stock market. The ratio of cross border trading of cotton bales was by 2005-06 close to 40 per cent.[43]

The bales end up at spinning mills, representing a mixture of cotton that ranges in origin and quality. Weaving and knitting mills take a similar approach, using yarn from several spinning mills. Sub-contractors often carry out activities on dyeing, printing and finishing the fabrics. Textile and apparel manufacturers source from different mills to get hold of fabrics suitable for different end products and deliver to retailers.

More than 100 millions of families are directly involved in the production of cotton fibres, with China, India, the U.S., Pakistan and Brazil being the top five leaders on cotton production. [44] Countries in Western Africa: Benin, Burkina, Cameroon, Mali and Senegal, also contribute significantly to the world cotton production. [45]

Lead countries in the production of cotton textiles are China, Turkey, Pakistan, India, Taiwan and Thailand. This explains the global trade on cotton lint, where great producers as the U.S. and Brazil are exporting the bulk of their cotton production, while countries with an extensive textile industry like China, Turkey and Thailand are major importers.

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[43] Global Cotton and Textile Product Chains. IISD, October 2008.

[44] Cotton: World Markets and Trade. United States Department of Agriculture, Foreign Agricultural Service, April 2014. (USDA, Fas)

[45] Riskanalys av råvaror till textilier, elektronik och biodrivmedel. Swedwatch. Miljöstyrningsrådets rapport 2010:7.

Regional supply chains dominate in yarn. In manufacturing textiles and apparel there are often several actors involved, with intermediate inputs (such as cut fabric) from extensive networks in low-cost countries nearby to the lead textile production countries[43]. The larger brand names sometimes have their manufacturing consolidated, but the industry is still mostly made up of small manufacturers that specialize in patterns, cutting, embroidery, trims and findings such as buttons, zippers and belts, which are brokered to the sewing shops. There are multiple global layers of distribution through brokers who supply products to the next level of manufacture before a garment reaches the retail store. This contributes to the complexity of the cotton textile supply chain. Mayor importers of cotton textiles are the U.S. and countries in the European Union.

Three main nodes can be identified in the cotton textile supply chain: the cotton fibre production, the cotton textile production and the consumption node – use and disposal. Substantial environmental impacts emanate from all three nodes, while impacts on the social and economic dimensions of sustainability primarily occur in the production of cotton fibre and production of textiles/apparel.

7.1.2 SUSTAINABILITY IMPACTS IN THE SUPPLY CHAIN

7.1.2.1. Production of cotton fibre

After food grains and soya beans cotton is one of the most important and widely produced agricultural and industrial crop in the world, planted on approximately 2,5 per cent of the world's arable land.

Environmental impacts

Growing cotton has a potentially significant environmental impact, as cotton is a water-demanding crop, being sensitive to pest infestation and weed competition. Current practices in cotton cultivation also include significant inputs of chemical fertilizers, defoliants and film. These inputs can increase yields greatly, but also negative environmental impacts such as land degradation, water shortage and a spread of pollutants.[43]

Cotton production represents approximately 24 per cent of global insecticide use and 11 per cent of herbicide use. Among most commonly used insecticides several are classified as highly hazardous.[46] Since the technology and policy standard vary in different countries, the impacts of cotton production in different countries are also diverse.

The chemical plants that produce fertilizers, plastic film and pesticide not only consume a great deal of resources and energy. Their emissions also can generate acid rain, water eutrophication and contribute to the greenhouse effect.

There is a great diversity in forms and scale of cultivation: from large-scale cotton farms to family-based smallholdings. The diversity occurs both between and within different regions, but family farms are more frequent in South Asia and West Africa. [43]

Social risks

Key risks on health and safety in cotton production are workers being exposed to harmful toxins, primarily because they are not provided with, or do not wear, adequate

[46] WWF: http://wwf.panda.org/about_our_earth/about_freshwater/freshwater_problems/thirsty_crops/cotton/ 2014 04 23

personnel protective equipment while spraying pesticides. In West Africa and South Asia children contribute labour to cotton growing, primarily in cotton picking.

Among smallholders in South Asia and West Africa financial problems are not uncommon, due to high input prices, variation in yields and lack of unattached and transparent funding opportunities, creating an unfavourable dependency relationship with suppliers as well as buyers. An occurrence of poor working conditions and lack of freedom to organise is observed in several cotton producing areas, not only in South Asia and West Africa, but also in Brazil.[47]

7.1.2.2.Production of cotton textiles

Environmental impacts

There are several water demanding stages in the processing of cotton fibres, and large quantities of chemicals are used as well: In ginning and bleaching of the cotton fibre, but also in printing, dyeing and finishing of knitted or weaved textiles. Some of used chemicals are harmful to human health and the environment, but it is hard to get hold of information on the chemical mixture being used since trade secrets are common with regard to the chemical ingredients of a chemical product. Of the approximately 1.900 substances identified within the textile industry, 165 substances have been identified to be hazardous to health and/or environment. Workers at textile production facilities can be exposed to these chemicals, which are as well emitted to the environment. [48]

Traditional textile printing and dyeing generates a large quantity of wastewater, often difficult to process with normal biological methods due to a complicated composition with poisonous substances and sharp fluctuations of pH.

Social risks

The rapid expansion of global sourcing within the textile industry has contributed to maintaining low retail prices, where the cost of labour has been a major factor in moving most textile manufacture and garment assembly overseas. This cost cutting creates social and economic risks in terms of working conditions, such as health and safety, working hours and wages levels. The risks are increased in supply chains consisting of networks of specialized subcontractors, feeding in intermediate inputs to sewing shops working on short-term contracts.

7.1.2.3.Use and disposal of cotton textiles

Environmental impacts

The heavy use of chemicals in the textile industry affects the quality of finished textiles. In particular chemicals used for dyeing/printing and finishing can be found in apparel and textiles. Residuals of process chemicals also occur. Some of these chemicals are harmful to human health and the environment. They can cause allergic reactions, be carcinogenic, toxic and bio accumulating. So far there is a lack of harmonised threshold values and regulations on chemicals in finished textiles.[48]

Direct human exposure mostly takes place via the skin, but chemicals from textiles might also cause emissions to the indoor environment, leading to indirect exposure

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[47] BCI scoping research on labour and social issues in global cotton cultivation. Final report to BCI Steering Committee. October 2006. Ergon.

[48] Hazardous Chemicals in Textiles – Report of a Government Assignment. Report from the Swedish Chemicals Agency, No 3/13.

through inhalation or by chemical containing dust particles. Absorption via the skin is usually negligible compared to the absorption which can occur when contaminated hands or food are placed in the mouth.

Since many fabrics are washed regularly, chemical residues in textiles may also lead to emission to the environment through the washing water, but also when the textile is disposed. So far textile recycling in not very developed, although there is a current growth in recycling. In the U.S. the recovery rate for textiles was estimated to 15,7 per cent in 2012, and the textile waste percentage of municipal solid waste by weight to 5 per cent[49].

World wide large amounts of textiles are disposed in landfills, releasing methane and carbon dioxide to the atmosphere and with potential risks for chemical leakage when decomposing. By recycling the need for virgin fibre production can be reduced.

7.1.3 SUSTAINABILITY INITIATIVES AND STANDARDS

There are several initiatives addressing sustainability issues in the supply chain of cotton, some addressing the sourcing part and others the manufacturing part, some focusing on environmental aspects and others on social issues. There are also initiatives and standards covering several sustainability aspects through all stages of the supply chain.

Procurement guidelines

The Sustainability Compass online tool, www.sustainability-compass.com includes 17 relevant sustainability standards for textiles/apparel, giving information on the scope and area of concern. [50]. The International Trade Centre Standards Map also provides an online standard search tool on www.standardsmap.org.

The Sustainability Compass, defined and implemented by BSD Consulting, is a joint effort between Swiss and German actors, also involving the International Trade Centre. The Sustainability Compass recently completed an assessment on initiatives, labels and standards applicable to textiles. This resulted in textile product factsheets, helping public procurers include social criteria into their procurement procedures. These factsheets are so far only available in German and French: http://oeffentlichebeschaffung.kompass-nachhaltigkeit.ch/beispiele/textilien.html

The Better Cotton Initiative

The Better Cotton Initiative is a multi stakeholder initiative, supported by business partners as well as NGO's. It was established in 2005, with the mission to promote measurable and continuing improvements for the environment, farming communities and the economies of cotton-producing areas.

The BCI work is based on six production principles comprising guidelines on:

- crop protection practices (reduce the use of pesticides)
- water efficiency and care
- protection of soil health,
- protection on natural habitats,
- quality of the fibre and
- decent work conditions.

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[49] http://www.epa.gov/epawaste/conserve/materials/textiles.htm, April 26, 2014.

[50] http://sustainability-compass.com/ April 28 1014.

BCI supports and trains farmers in growing better cotton, provides regular farm assessment and measurements of results, connects supply and demand in the Better Cotton supply chain and measure progress/changing to ensure that Better Cotton delivers the intended impact. Better Cotton provides chain of custody in the supply chain.

In the course of 2009 a group of private and public players including IDH – The Sustainable Trade Initiative - developed a strategy to speed up the implementation of the Better Cotton System. The strategy is based on the commitment of frontrunner brands and retailers to invest both in farmer support programs and in the procurement of mainstream volumes of Better Cotton, with the aim to implement Better Cotton farming practices on 1.5 million ha of arable land by 2014.

Other sustainability standards and labels

Fair Wear Foundation (FWF), Ethical Trading Initiative (ETI), Fair Labour Association (FLA) and the Business Social Compliance Initiative (BSCI) work with codes and standards that address working conditions in textile manufacturing facilities – particularly clothing manufacturers.

FWF's guiding principles are based on the ILO Conventions and the UN's Declaration on Human Rights. FWF verifies whether companies comply with the Code of Labour Practices, through factory audits, complaints procedures, management system audits at the affiliates and through extensive stakeholder consultation in production countries.

Companies working with ETI adopt a code of labour practice that they expect their suppliers to work towards. Such codes address issues like wages, hours of work, health and safety and the right to collectively organize. Member companies are obliged to submit an ethical trade strategy or a detailed annual report on improvements to workers' conditions in their supplier's sites.

Examples on eco labels with criteria on apparel and clothing are the EU-ecolabel, the Blue Angel, OEKO-TEX 100, Fair for Life, Naturland and the Nordic Swan. Examples on other product labels with inclusion of sustainability criteria within textile production are Naturtextil and Fairtrade.

The Global Organic Textile Standard promotes organic cotton production, being an international standard on organic cotton production, developed by an international working group involving stakeholders and experts on organic farming and environmentally and socially responsible textile processing. The GOTS comprises requirements throughout the supply chain for both ecology and labour conditions in textile and apparel manufacturing, using organically produced raw materials (at least 70 per cent of the fibre content must be organic).

All chemical inputs such as dyestuffs and auxiliaries used must meet certain environmental and toxicological criteria. The choice of accessories is limited in accordance with ecological aspects as well. A functional wastewater treatment plant is mandatory for any wet-processing unit involved and all processors must comply with minimum social criteria. Independent, specially accredited bodies perform on site inspection and certification of processors, manufacturers and traders within the supply chain.

7.2 CONSTRUCTION MATERIAL OF WOOD

Construction projects take a big part of public spending, and are a prominent area within public procurement. Since construction material of wood is and important element in construction projects, the choice was perceived as relevant, although tenders seldom address procurement of construction material as a single issue. The initial expectation was as well that this is a project group with a less complex supply chain than textiles.

7.2.1 MARKET STRUCTURE

Proximity of forest resources used to be a major consideration for the establishment of wood processing industries, with a predominance of local or regional supply chains for construction material of wood; e.g. sawn wood, wood based panels and flooring. In 2004 global output of industrial round wood was about 1,6 billion cubic metres, of which only 7 per cent was exported. The bulk of the production was consumed locally, or processed into secondary products. [51]

In Scandinavian countries, the Russian Federation and Canada the domestic output is generally sufficient to meet national demand and here we typically find national and quite simple supply chains for construction material of wood:

Strong demands in emerging economies are changing the market. China has become the top one importer of industrial round wood, with Russia, Malaysia, New Zealand, Gabon and the U.S. as main supplying countries. Domestic demands within China are large, and in 2011 China overtook the U.S. to become the largest importer of sawn wood as well – at the same time also taking the word lead in production of sawn wood.

Over the last decade wood processing industries have emerged in China and in the countries of Eastern Europe, making them the new players in the global market for production and export of secondary processed wood products. China is now taking the lead in the export of wood-based panel, with Malaysia and Thailand also being newcomers in the top five rank of exporters.[52]

7.2.2 SUSTAINABILITY IMPACTS IN THE SUPPLY CHAIN

Growing demands on timber, not only for construction needs, puts a pressure on global forests. This in turn reinforces the needs for sustainable forestry, in some areas counteracted by other interests and needs: for more arable land to produce food or industrial crops or for wood fuels. Currently an extensive forest degradation and deforestation is taking place, a trend amplified by illegal logging and illegal trade of timber.

Huge timber flows goes to China, considered to be a hub in the vast global traffic in illegally logged timber. An import-source analysis made by the UK Chatham House in

[51] Changing trends in forest products trade. Vital Forest Graphics. UNEP, FAO, UNFF 2009.

[52] 2011 Global Forest Product Facts and Figures. FAO.

2010 indicates that China imported the round wood equivalent of 20 million cubic metres of illegally sourced timber and wood products in 2008. [53]

The illegal harvesting and trade in forest products is pervasive and often involves unsustainable forest practices, which causes serious damage to forests, to forest dependent people and to the economies of producer countries. Risks on illegal forest activities are in particular reported from Russia, Brazil, Indonesia, Malaysia and countries in Western and central Africa, although the situation is improving.

There has been an observed decline in illegal logging in Indonesia, Western Africa and Brazil. In remote areas illegal logging continuous to be a serious threat to people and ecosystems and the globalized trade on wood derived products creates risks that construction material of wood emanates from illegal sources or from forests where sustainable forest practices are not applied. Deficiencies in forest practices are reported from developed countries as well, creating threats to biodiversity and other forest values.

Forests represent some of the most diverse ecosystems on the Earth. They provide employment and livelihoods for a large number of communities. In developing countries forests often act as an economic safety net in times of need. Forests also play an important role in the water cycle, and have important protective functions.

The role of forests in the global carbon cycle is as well of great importance, where afforestation can contribute to mitigate climate change, while deforestation and forest degradation on the other hand speeds up the process. A sustainable forest management is thus of crucial importance to people, environment and society.

7.2.3 SUSTAINABILITY INITIATIVES IN THE WOOD SUPPLY CHAIN

According to the Chatham House study the U.S., Japan, UK, France and the Netherlands are estimated as the largest importers of illegally sourced wood products. The U.S. developed and implemented an amendment of the Lacey Act in 2008, prohibiting the import and sale of illegally sourced wood. The EU Timber Regulation put the same limitations in action in March 2013.

Procurement guidelines

In addition the UK and several other European countries have procurement policies requiring that all timber and wood-derived products must be from independently verifiable sustainable sources. CPET, the UK Central point of expertise for timber procurement, provides tools to assess origin, as do TPAC, the Timber Procurement Assessment Committee of the Netherlands.

The Sustainable Timber Action was formed to assist European public authorities in assuring that the wood/timber products they buy are produced and traded in a sustainable and fair way. A Sustainable Timber Action Toolkit, including a guide for public authorities on how to procure sustainable timber products has been compiled. The project ended in November 2013, but is continued in the European Sustainable Tropical Timber Coalition[54].

Forest certification schemes

There are several certification schemes trying to approach shortcomings on sustainability in the wood supply chain, in particular focusing on the sourcing of wood

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[53] Illegal Logging and Related Trade: Indicators of the Global Response. S. Lawson and L. MacFaul. Chatham House July 2010.

[54] http://www.sustainable-timber-action.org/home/ April 28 2014

fibre – i.e. current practices on forestry. Forest certification schemes provide a way of defining sustainable forest management as well as third party, independent verification that a timber source meets the definition of sustainability. If coupled to mechanisms for tracing products from the certified source forest to end use, forest certification schemes provide evidence of a legal and sustainable sourcing.

Various forest certification schemes operate around the world; some are international and others limited to one country or region. Two systems working on the global level are the Forest Stewardship Council, FSC, and the Programme for the Endorsement of Forest Certification, PEFC. While FSC is a multi stakeholder initiative, cooperating with multi stakeholder initiatives on national or regional levels, the PEFC is more of an umbrella organisation, open to national forest certification organizations. China Forest Certification Scheme, Malaysian Timber Certification Council and the Sustainable Forestry Initiative in the U.S. are examples of national certification organizations within the PEFC umbrella.

PEFC requires all national standards to be in compliance with the PEFC International's Sustainability Benchmark, while all forestry standards of FSC shall be in compliance with the FSC Principles and Criteria. Chain of Custody schemes are promoted by both FSC and PEFC. Both of these schemes require compliance with the principles of legality, environmental, social and economic sustainability addressed above, including observing the ILO core conventions throughout the supply chain, and protecting the rights of indigenous populations. Most sustainable timber procurement policies accept either label as one way of demonstrating compliance with their sustainability requirements.

The certified forest area of the world as well as chain of custody certification among manufacturers and retailers is growing within both FSC and PEFC. UNECE/FAO estimates that in 2012-2013 already some 28,3% of the global roundwood production is from certified forests[55]. Both systems also promote the use of recycled materials in certified products.

European Sustainable Tropical Timber Coalition

The European Sustainable Tropical Timber Coalition aims to increase demand for timber from sustainably managed forests to a mainstream level. It is an international platform, and the approach consists of to elements: producer support and market creation.

On one hand the program supports concession holders in their process towards achieving SFM certification in different locations; like the Amazon, Indonesia and the Congo Basin.

It also acts to mainstream demand for sustainable tropical timber in Europe by promoting demand for sustainable tropical timber among companies and authorities. By linking with local legality developments and building on the momentum created by legality regulation in Europe (and the U.S), the program aims to make sustainability the new norm for tropical timber. The IDH Sustainable Trade Initiative is involved in these activities as well.

Step-by-Step approaches

There are several standard initiatives offering tools to verify legal compliance on forest sourcing, e.g. SGS Timber Legality & Traceability Verification, SmartWood Verification of Legal Compliance and SmartWood Verification of Legal Origin (VLO). These standards are adapted to work with the FLEGT-initiative within the European Union.

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[55] Forest Products, Annual Market Review 2012-2013, UNECE, FAO

The SmartWood VLO is intended as a first step on the way towards a forest certification addressing sustainability.

The EU eco-label and the Nordic Swan have criteria on the sourcing of raw material in flooring, paper products, construction, wood-panels, windows and doors. Traceability on the sourcing of raw material is required, to ensure that at least a major part of wood/fiber components come from sustainably managed forests and the rest from controlled sources. Means of verification are usually certification by FSC or PEFC “or equivalent”.

8 OUTCOMES AND CONCLUSIONS

The objective of this pre-study has been to explore to what extent sustainable public procurement (SPP) can be a tool to promote sustainability in supply chains, to obtain more sustainable goods and services.

Definitions, drivers, tools and current business practices on sustainable supply chain management have been examined, to assess the market readiness and the potentials and limitations for public procurers to influence sustainability aspects in supply chains. The overall intention has been to create a platform for in-depth discussions regarding sustainable supply chain management and means to bring the issue forward.

This part of the pre-study was intended to give input to the in-depth discussion during the web conference on 19th of June (se Minutes in Annex III).

8.1 SPP APPROACHES

Public procurement is increasingly seen as an activity that should not only focus on short time values, but also on long-term benefits by supporting wider social, economic and environmental objectives. This wording expresses the intentions of sustainable public procurement. The importance of supply chain impacts on sustainability has become widely recognized. But the public sector is lagging behind leaders in the private sector in its approach to working with supply chains.

Using life cycle costing is an upcoming practice to include sustainability aspects in the post-production stages of the supply chain, from purchase through usage and maintenance to disposal/recycling. Life cycle costing techniques can expose hidden costs and impacts – purchased products consume energy, water and other resources, and products with recycling potentials will probably reduce impacts in connection with disposal.

There is also an increasing interest in verifying compliance with sustainability aspects throughout the supply chain. The most prevalent approach has focused on social issues. So far attempts to assess supply chain performance often have been limited to the first tier, due to lack of transparency in supply chains and lack of time, knowledge and resources in the procuring organisation.

Use of eco-labels and buying standards to outline technical requirements on product quality is the usual way to address environmental aspects of product sustainability. This leaves to the supplier to manage the supply chain in an appropriate way. To expand the impact on supply chain sustainability a reported top priority area within the context of SPP is to establish systems enabling suppliers to report on all aspects of sustainability performance throughout the supply chain, in a factual-based, verifiable and cost-efficient way.

This raises need for transparency in supply chains as well as performance indicators at supply chain level.

8.2 MARKET READINESS

Large companies of big brands acting in the global market are pushing the work on sustainability in supply chains. The incentives are strongly appreciated, but several barriers hamper the implementation. Small and medium sized enterprises (SMEs), being the backbone in many supply chains, are currently lagging behind in the work on sustainability.

A wide range of underlying factors creates identified gaps:

The definition of sustainable supply chain management is rather theoretical, and a solid operational framework is missing. Continuous improvement on aspects of sustainability in supply chains is the prevailing approach.

This creates difficulties in assessing the scope of sustainability in supply chain management. Difficulties also arise due to the fact that important aspects of sustainability differ between industry sectors, as do the composition of supply chains.

Global supply chains tend to be complex; an illustrative example put forward in this pre-study is the very complex supply chain of cotton textiles, involving many players in different stages and locations.

8.2.1 IDENTIFIED GAPS

- Global supply chains were created as a mean to capitalize differences in cost levels. Lower wages and less comprehensive regulations on environment and labour health and safety gives lower costs but must be approached when sustainability in supply chains becomes an issue. In the business sector not only monetary values, but also long term profitability, must be taken into account in the balance sheet. This shift in mind-set must also be embraced by society.
- Sustainability requirements are often linked to requirements on reporting and assessing performance, creating costs to suppliers as well as procurers, thus affecting the balance sheet and short-term profitability.
- Deeper engagement with supplier sustainability performance is often limited to the first tier. Information on who are involved is not easily accessible due to the complexity and global spread of players in supply chains. Additionally, information on contractual agreements is often considered sensitive with regard to competitiveness. This is seen as a fundamental barrier to promote sustainability in supply chains, within business as well as the public sector. Lack of transparency is limiting the ability to reach out with sustainability expectations to far-off, up-stream suppliers.
- Business expectations on sustainability performance in supply chains are generally expressed through codes of conduct. Expectations on environmental performance tend to lack quantitative requirements, which can be explained by the absence of comprehensive international standards on environmental performance (there is a rich flora of environmental standards and voluntary schemes, but they are addressing different issues and different stages in the supply chain). Lack of metric makes it difficult to monitor and report on environmental improvement, affecting procurement efforts to impact on supply chain sustainability (public as well as private sector).
- Social requirement are often based on widely recognized agreements like the ILO Conventions and the Convention on Human rights. These requirements are easier to convey, but still need to be assessed for compliance. To do this there is a need for transparency in the supply chain, with disclosure of entities involved.
- Small and medium sized enterprises are the backbone in many supply chains. The actual work to enhance sustainability in goods and services thus must be executed in SMEs. Short contracts, lack of awareness, capacity, power and trust are identified barriers to engage SMEs in building sustainability along the supply chains. These deficiencies are applicable to a varying extent for SME in both developed and developing economies. Both business and public sector appreciate training/engagement with suppliers as an important activity to enhance sustainability in supply chains.

8.2.2 SUGGESTIONS ON WAYS FORWARD

Develop the concept of long-term profitability

Tools to make visible hidden costs and long-term values are seen as crucial to promote sustainability in supply chains and delivered goods and services. Some attempts to develop the concept of long-term profitability are mentioned in this pre-study, for example the GRI platform for sustainability reporting, Environment Profit & Loss Account and the work on the Economics of Ecosystems and Biodiversity (TEEB).

Is this an area for public procurers to further engage with? In what ways/how? Are regional approaches to be preferred?

Promote transparency in supply chains

Lack of transparency is seen as a fundamental barrier to promote sustainability in supply chains, limiting the ability to reach out with sustainability expectations to up-stream suppliers. Stronger incentives and tools to promote transparency are needed.

Examples on approaches to this barrier given in the pre-study are: contractual agreements to pass on responsibilities in the supply chain, sustainability reporting, the use of data sharing platforms and traceability systems.

Traceability systems are applied as a mean to secure expectations on responsible sourcing. They generally do not reveal accessible information on all players in the supply chain, but could be a potential tool to enhance transparency through third party verification. This applies in particular for systems that include both social and environmental requirements.

Is this an area for public procurers to further engage with? In what ways/how? Are regional approaches to be preferred?

Develop metric on sustainability performance

A rich flora of environmental/sustainability standards and voluntary labelling schemes exist on the market. They often address different issues and different stages in the supply chain, creating difficulties to both suppliers and procurers; what standards and which performance measures are most relevant to address and assess in the supply chain? Regional initiative, global initiatives, multi-stakeholder initiatives as well as industry initiatives are continuously working on sustainability standards and labels, some with the objective to mainstream expectations, others with the aim to establish standards in new areas/on new issues. To reduce costs and enhance involvement, harmonization and streamlining of metric are suggested.

Is this an area for public procurers to further engage with? In what ways/how?

- Is extended work on unified procurement criteria a preferred and feasible way forward? What is a proper geographical scope and who should be involved in the work?
- What more can be done to harmonize the work on standards and eco-labelling programs, to secure credibility and facilitate a unified approach on measurement within different product groups and industry sectors? Is a continuous work to compare and assess standards and eco-labels a feasible way?

Build capacity for sustainable practices within SMEs

Small and medium sized enterprises are the backbone in many supply chains, but are lagging behind in the work on sustainability in supply chains; This due to lack of power, knowledge and capacity. Large companies engaging with far-off suppliers and sub-suppliers show the way forward. Identified success factors are long-term commitments and deep involvement to help suppliers build knowledge and capacity.

To speed up the process industry associations and other stakeholders need to more actively engage in developing and implementing support programmes to assist SMEs, improving their resource efficiency and reducing their impacts. Supporting capacity and cooperation between SMEs can also be a way to strengthen their capacity to innovate on sustainable solutions.

Is this an area for public procurers to further engage with? In what ways/how? Are regional approaches to be preferred?

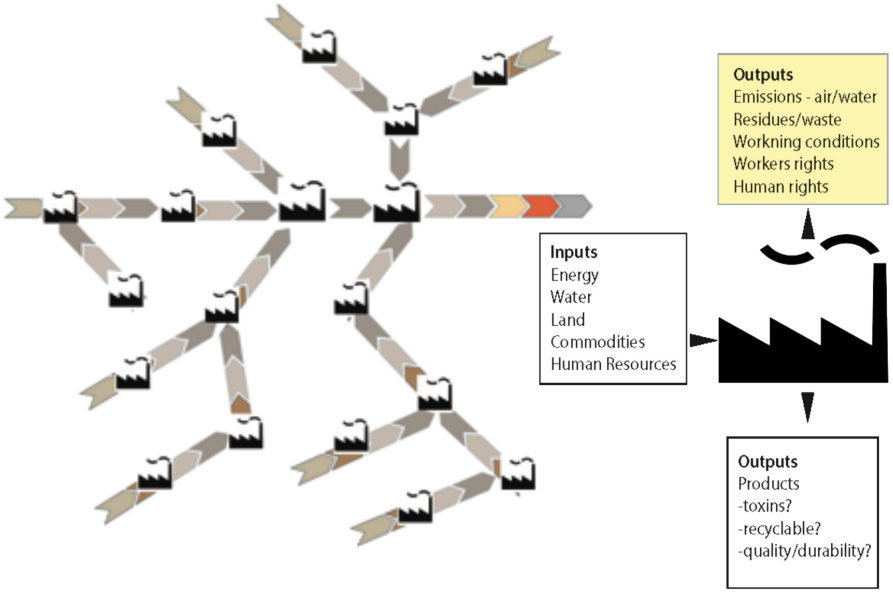
Pool resources and reduce costs

Both business and public procurers identify costs and lack of time, knowledge and resources as barriers to promote sustainable supply chain management. Several examples on pooling of resources are put forward in the pre-study, for example the use of data sharing platforms that can help collect and manage supplier information about sustainability performance, platforms listing standards facilitating comparisons on requirements as well as joint platforms for sharing of knowledge and best practice. An observed challenge is to establish initiatives with long-term commitments, since knowledge and tools collected in project-oriented approaches tend to get lost over time.

Is this an area for public procurers to further engage with? In what ways/how? Are regional approaches to be preferred?

- Should this be and area for closer interaction between the public sector (public procurers), business and industry?
- Could national efforts (CPET, TPAC) be shared and financed on a regional level?

Figure 8. Sustainable supply chain management remains a challenge



8.2.3 SUGGESTIONS ON AREAS TO FURTHER EXPLORE

Many valuable comments were given in the consultation on the pre-study and during the web conference on 19th of June. Some suggestions have been taken care of by textual additions and changes. Others remain unprocessed due to limitations in the project scope, budget and timeline.

Bullet points below reflects suggestions on additional work regarding sustainability in supply chains:

- Joint work on procurement criteria, where the work within the EU might serve as a model for best practice on developing joint procurement criteria, with the possibility to choose between different levels, creating better opportunities to align these criteria with different national procurement policies.
- A platform to showcase “best practice” on sustainability within business and the public sector. There are already several platforms at hand, but a need to give assistance on how to navigate and find the most active and prominent sites or examples.
- There is a significant need for coherent, appropriate and comprehensible metrics on sustainability in supply chains, where ISO based EPD’s can be a useful tool. There are others as well, and a need to harmonize both requests and data collection methods to secure credibility and prevent high costs and audit fatigue.
- Lack of transparency in supply chains can be approached in several ways, good examples given are the FSC chain of custody system and the EPA request on companies to list chemicals used in manufacturing of a product.
- The use of third party verification has many advantages, but distribution of costs and risks for corruption and misuse need to be further explored.
- The pre-study primarily focus on aspects of checking compliance of sustainability along supply chains. There are several other important aspects to explore, for example the need to raise awareness and for capacity building, particularly among SMEs.
- More attention should be given to challenges for SME on sustainable supply chain management and how supply chains actually work with SMEs. There is a need to set a model for how SMEs will be engaged.
- There is a need for more focus/examples on platforms and initiatives in emerging/developing economies, as well as the role of intermediaries to SME.
- More attention should be given to potentials and limitations for innovative sustainable procurement.
- There is need for work on a coherent package to drive sustainability in supply chains, coupling SPP with interventions that are calling for sustainable practices, like capacity building, financial incentives and access to technology.
- The interface between voluntary approaches and political processes to enhance sustainability in supply chain management needs to be further discussed. What issues are appropriate to address with market mechanisms and what areas should rather be addressed through regulation on international and national levels?
- How can SPP couple with competitiveness in the perspective of emerging economies and to what extent can multinational companies be expected to be consistent in their sustainability protocol in the face of competition?

ACRONYMS

BCI	Better Cotton Initiative
BSR	Business for Social Responsibility
CPET	the UK Central Point of Expertise for Timber Procurement
EMAS	The EU Eco-Management and Audit Scheme
EMS	Environmental Management System based on ISO 14001
EPEAT	Electronic Product Environmental Assessment Tool
EPD	Environment Product Declaration
EP&L	Environment Profit & Loss account
EU	European Union
FSC	Forest Stewardship Council
GDP	Gross Domestic Product
GRI	Global Reporting Initiative
GSCP	Global Social Compliance Programme
ILO	International Labour Organization
IISD	International Institute for Sustainable Development
ISO	International Organization for Standardization
IT	Information Technology
LCA	Life Cycle Assessment
LCC	Life Cycle Costing
LCM	Life Cycle Management
NBS	Network for Business Sustainability
NGO	Non Governmental Organisations
OECD	Organisation for Economic Co-operation and Development
PCR	Product Category Rules used within EPD
PEF	Product Environmental Footprint
PEFC	Programme for the Endorsement of Forest Certification
SASB	Sustainability Accounting Standards Board
SCM	Supply Chain Management
SCP	Sustainable Consumption and Production
SEMCo	The Swedish Environmental Management Council
SEDEX	Supplier Ethical Data Exchange
SETAC	Society of Environmental Toxicology and Chemistry
SLCA	Social Life Cycle Assessment
SME	Small and Medium-sized Enterprises
SP	Sustainable Procurement
SPP	Sustainable Public Procurement
SPPI	Sustainable Public Procurement Initiative
SSCM	Sustainable Supply Chain Management
TEEB	The Economics of Ecosystems and Biodiversity
TPAC	Timber Procurement Assessment Committee of the NL
UK	United Kingdom
UN	United Nations
UNEP	United Nations Environment Programme
UNICTRAL	United Nations Commission on the International Trade law's
UNIDO	United Nations Industrial Development Organization
UNOPS	United Nations Office for Project Services
US	United States
US EPA	United States Environmental Protection Agency
WTO	World Trade Organization

ANNEX I

MINUTES - WEB CONFERENCE 21ST OF MARCH 2014

Participants:

Priscilla Halloran, US EPA, Anoucheh Khanbabai, UNEP, John Hontelez, FSC, Richard Kashmanian, US EPA, Harry Lewis, US EPA, Nadia Balgobin, Globeethics.net, Flavia Fries, BSD Consultling, Jose Ramon Domenech Cots, Carolina Restrepo, Juan Camilo Ortiz, CNPML, Marcela Perez, CNPML, Farid Yaker, UNEP, Cuchulain Kelly, UNEP, Theo Jaekel, Swedwatch, Sven-Olof Ryding, SEMCo, Peter Nohrstedt, SEMCo, My Laurell, SEMCo.

Agenda

1. Welcome
2. Update on the progress of work
    a. The "scene" – a presentation
    b. Discussions/comments on presentation
3. Decision on product groups to assess
    a. Suggestions
    b. Discussion
    c. Decision
4. Conclusions
5. Termination

Minutes

1. Welcome – opening of the meeting

Peter Nohrstedt, SEMCo opens the meeting. Participants in the meeting present themselves.

2. Update on the progress of work

After Peter Nohrstedt introduced SEMCo and the project My Laurell gave a presentation about the findings so far. Please find the PPT and recording of the web conference on the SCP Clearinghouse project webpage.

3. Decision on product groups to assess

John Hontelez, asked about if you have a chain of suppliers that involve transportation in many tiers, how is that incorporated? My Laurell answered that it is included in the model.

Peter Nohrstedt asked if the "Legal barrier" working group was active and pointed out that there should be many interesting touch points between the two projects. John Hontelez answered that he is a member of this group and that they have had some problems to raise funds to get this working group active.

John Hontelez responded about Peters finding about that there is a bottleneck that suppliers have a lack of information regarding their products. However John meant that it is easier to ask if the supplier meet a certain standard or label. Peter agreed about that but there are many procurement areas that doesn't have a standard or label to refer to in public procurement.

Flavia Fries pointed out that BSD has done an assessment of different textile standards that can be handy in this project.

Flavia Fries and **John Hontelez** brought up that lumber was not a product group that is commonly procured by the public sector, they rather procure furniture and constructions where lumber is part of the product/work contract. My explained that "lumber" meant construction wood and that construction work contracts are far too complicated to handle in this project.

The group concluded that it is a good way forward to choose one simple and one complex product group. Cotton textiles and construction wood seems to be suitable for this study.

4. Conclusions

My Laurell concluded that the presentation on the scene was a bit too much information at the same time and therefore the feedback has been scarce. However it is important that we all have a similar comprehension on the scene so any input or ideas are welcome.

ANNEX II

MINUTES - WEB CONFERENCE 21ST OF MAY 2014

Participants:

Ran Qi, MEPCEC, Elisa Tonda, UNEP, Anoucheh Khanbabai, UNEP, Nadia Balgobin, Globeethics.net, Flavia Fries, BSD Consultling, Cuchulain Kelly, UNEP, Theo Jaekel, Swedwatch, Sven-Olof Ryding, SEMCo, Peter Nohrstedt, SEMCo, My Laurell, SEMCo.

Agenda

1. Welcome
2. Participant presentation
3. Presentation of comments given in the pre-study consultation.
4. Discussion on comments and conclusions
5. Sum up and closure

Minutes

1. Welcome – opening of the meeting

Peter Nohrstedt, SEMCo opens the meeting.

2. Participant presentation

Participants in the meeting present themselves.

3. Presentation of comments given in consultation

My Laurell, SEMCo, presents given comments, see presentation on SCP Clearinghouse http://www.scpclearinghouse.org/working-group/ftp/30-sppi-4a-greening-supply-chains.html

4. Discussion

A couple of questions to discuss were put forward in a discussion paper posted ahead of the conference. During the discussion participants also were invited to feed in with other perspectives and issues to discuss.

Issue I. The pre-study impact

The discussion started with an overall question regarding the pre-study impact on participants' perception of approaches to sustainability in global supply chains and the opportunities for public procurers to influence supply chain management towards sustainability.

Elisa Tonda made a post to share one element of her perception of the role of public procurement in promoting sustainability in global supply chains, also giving a couple of points to show where her comments are coming from: Elisa Tonda is the Head of the Business and Industry Unit in the UNEP Division of Technology, Industry and Economics Sustainable Consumption and Production Branch and has been doing a lot of work related to small and medium sized enterprises. She has also working very

specifically on the sustainable public procurement agenda in the regional office of UNEP in Latin America and the Caribbean.

“One element this group kept referring to, which might be important to voice in the pre-study, is that public procurers have an enormous opportunity to educate the supply chain towards sustainability, starting with the supply chain parts that are in their country. With the requirement that sustainability will be incorporated in a gradual way, this has a great potential to enhance the sustainability of supply chains. Any possibility to embed this idea of education to, or preparing or guiding supply chains towards sustainability, would really be a message that would resonate to a lot of developing countries whose economies is probably carried to 85 % by small and medium sized companies in need for education and preparation.

Peter Nohrsted: My experience from procuring entities is that they have a deficiency in capacity. Do you mean they should educate?

Elisa Tonda: Not as an individual intervention, but there are infrastructures – like procurement agencies in Latin America – that have teams that are interacting with companies, explaining to them the requirements. By building on these synergies there are potentials to transmit messages on what is considered to be sustainable for products and supply chains, which for companies is extremely important since they will not have the opportunities themselves to investigate what it means being a sustainable actor in a global supply chain.

My Laurell: I would appreciate if you could assist me with case studies or other written input to illustrate this way of working.

Elisa Tonda promised to give further feed back on the issue.

Peter Norhstedt described current approaches on SPP in Sweden, SEMCo being the national focal point in charge of the work to develop procurement criteria. This is accomplished in dialogues between different stakeholders representing industry, SMEs as well as NGOs. The ambition is to find consensus on what are important sustainability aspects for a product category.

Flavia Fries commented on the pre-study structure and impact, describing it as an extensive work, so far in two parts not yet enough linked to each other. She suggested on changes and additions to table 4.3.2, with a structure based on SPP integration activity, Challenges and Good practice/tools.

My Laurell asked Flavia to give further feed back by email to clarify the approach. This was **agreed.**

My Laurell also urged participants to give more comments on the pre-study impact; does it give any guidance on potentials for public procurers to influence supply chain management towards sustainability or has the approach been too broad?

Theo Jaekel: I think it is a very substantial summary, but it is a difficult area. I can see a good use of the two examples on textile and construction material, whereof I am most familiar with the situation in the global textile industry.

Elisa has an important point when calling for procurers to educate suppliers; this is an issue we have discussed a lot in our organization. It is not enough to have criteria, but also a need to explain why – the objectives. But as Peter already has stated there is a certain deficiency of knowledge within procurement entities, and that is where our organization fits in: We are working with training as ell as with criteria to promote sustainability. Partnership is very important.

Peter Nohrstedt: There are programs around Europe providing support and education to suppliers, primarily to enable more companies to bid on contracts. In Europe we have a complicated legislative framework on public procurement, which is a perceived barrier to SMEs in particular.

Issue II. Market readiness on sustainability

The intention with the question set under this headline was to further explore viewpoints/the perception on possibilities/limitations for SPP to promote sustainability in supply chain, with respect to described market readiness. A question regarding regulation activities versus procurement activities was an attempt to connect with feed in from the consultation on the pre-study: where some commentators asked for clarifications. Participants were invited to comment on other areas as well.

Nadia Balgobin: These questions are not easy to answer. There is a wide range of products involved in public procurement. I want to comment on this from the perspective of my work with developing countries, where there is a great need to consider on resources, both financial and others.

Our experience is that SMEs are ready for any type of training. The government of Ghana have the intention of introducing SPP, and also have a component specifically linked to how SMEs can respond to tender documents that are often very technical. But there is also a great need to support SMEs to be more sustainable. Supply chain management is key in the whole process, but there are a lot of other aspects; we need to work with organizational issues as well. Here we focus on sustainability, which can mean different things in different areas. We must not miss what we want to achieve in the end.

Regarding regulations there are a number of international agreements and regulations, but they are difficult for developing countries to implement. There is a need for capacity building in projects, with cooperation between initiatives, associations and SPP. That is exactly what we are doing in Ghana, with two different partners. We are trying to see how we can bring them together.

Peter Nohrstedt: Do you see a capacity problem regarding human resources in procurement: a need to educate procurers on sustainability? From a Swedish perspective we do not have enough personal resources or knowledge to follow up on compliance to sustainability criteria in the supply chain. Do you identify the same problem?

Nadia Balgobin: Looking at products is not the only way. You have to look at the organisation of the SMEs not of the procurer. SMEs cannot educate them self. In developing countries SMEs need to understand how business are run and learn how to run a business from a sustainability perspective.

Peter Nohrstedt: Regarding knowledge among SMEs I think we have the same problem in Sweden: the lack of resources to understand and deal with technical specifications in tenders. But in Sweden the signing of contracts in general are made by larger companies, SMEs having the role of sub-suppliers. Public procurers seldom make business directly with SMEs. Is the situation different in Ghana?

Nadia Baglobin: Yes they do, and this is an important driver in developing countries to get SMEs on board on SPP. The intention is to trigger their participation and boost the local market where SMEs have 90 %.

Elisa Tonda: I will also like to stress the importance in general of market relationships. We have a market which is today not ready for the “ideal level” of sustainability. But by a gradual approach SPP have potential to build market readiness. This can be achieved through stringent requirements on sustainability within a predictable timeframe, starting from the actual level and escalating it to higher levels of performance.

SPP as a policy intervention of its own cannot solve all problems on sustainability in supply chains. SPP must be coupled with other interventions that are calling for sustainable practices, like capacity building interventions, financial incentive interventions and access to technology. There is need for a coherent package to drive sustainability in supply chains.

We have an ongoing work on business cases in developing countries, to be finalized and disseminated soon, and we are also doing work analysing the policy context and how they are conductive.

My Laurell: This is a very interesting discussion, making it very obvious that objectives and approaches within SPP differs widely between industrialised and developing economies. While industrialized countries look for tools to promote sustainability in remote supply chains, focusing on identified environmental and social risks, developing countries strive to establish and support business practices on country level, as an important tool to promote development and improved living conditions among citizens – important aspects of sustainability as well.

We welcome this input, but budget and time lines of the project must also be considered, putting limitations to the capacity of including new areas and substantial input of new information.

Elisa Tonda: I might be able to share some of our work ahead of dissemination, although there will not be a referral option until these work are published.

Flavia Fries: I agree with Elisa on the need for a gradual approach.

Looking at certain goods, there is a market readiness. This counts for food and textiles where there are several standards available, which can be used in procurement processes.

There are big opportunities in the field of infrastructure and construction, since these areas takes a big volume of public procurement. Requesting detailed documentation on construction, creates opportunities to conduct comparisons.

Peter Nohstedt: These are important product categories, but the wealth of labels and standards creates a problem since they are not harmonized, which leaves to the procurer to make comparisons where apples might be compared to pears.

Flavia Fries: Yes this is a problem, as is the legal uncertainty regarding the use of labels and standards in public procurement within the EU. The objective of our work on a standard comparison tool is to ease the work to make comparisons.

Theo Jaekel: I want to agree on the issue raised regarding policy coherence. Policy coherence is important to pool and enhance the buying power, and can be achieved if different authorities and countries jointly agree on sustainability requirements, for example on the EU level. This approach also connects to the points raised on SMEs – coherent requirements make it easer for them to know what requirements to comply with.

A good example is new project Electronics Watch, focusing on procurement criteria on electronics, with the objective to achieve a set of criteria and follow up requirements to combine buying power of institutions within the EU.

My Laurell: Do you suggest that joint work on procurement policies should be performed on a regional level, rather than on a global scale? This with respect to differences in market readiness and sustainability priorities within different geographic regions.

Theo Jaekel: Yes, it is important to align approaches to current capacity, and also to have a step-wise approach: recommending suppliers to start with mapping their supply chains and apply due diligence, rather than asking them to attest they are in full control of their supply chains.

Flavia Fries: I would add a comment from one of my colleagues, missing information on the Global Social Compliance Programme and on the EU Product Environmental Footprint in the pre-study report.

Nadia Baglobin: I want to comment on a regional approach, which I think is a good idea. Different regions put priority to different aspects, of high priority in Ghana and on the African continent are for example energy and construction issues.

My Laurell: I would like to ask Flavia to tell us more about the work with the Sustainability Compass.

Flavia Fries: The Sustainability Compass is a work supported by Swiss and German organisations, developing tools to support an easy understanding of SPP issues. The main part is a standard database, operated in collaboration with ITC.

There is an ongoing work to expand the database, and a more extensive version will be available next year, enabling deeper standard comparisons; not only by scope but also with regard to credibility.

This approach has been applied in a pilot project, with a fact sheet on textiles, presenting different standards and labels, showing what part of the supply chain they address and an evaluation of credibility. The intention is make the same approach to different product groups, resulting in comprehensive fact sheets for different product groups.

My Laurell opens the floor for other comments and considerations.

Nadia Baglobin comments on two categories of SMEs being present in developing economies: the category of SMEs being suppliers to large international companies, and the category of SMEs just doing business on the local or national market. Has the pre-study taken into account the different needs in these two categories?

My Laurell: No, this is a perspective we have not been working with. The focus has been on large companies and procurement practices within industrialized countries.

Elisa Tonda: Ask for guidance on the per-study perspective on innovative sustainable procurement, whit the recommendation that the project should connect with the WG 3 work to integrate product service systems in SPP.

The recommendation is also that a list on issues to further explore, identified in the discussion and in comments on the pre-study should be assessed to identify critical issues to bring the work on sustainable public procurement forward: It is very important to recognize what has not been addressed and what is critical.

Nadia Baglobin: I see a need for a broader perspective; with a discussion taking into accounts both sustainable consumption and sustainable production, where consumption connects to SPP and production to SMI. This can be a way to easier identify when and how SPP can be a driver.

Peter Nohrstedt: We have a text on innovative procurement, written by Sven-Olof Ryding at SEMCo, and will see how we can fit that text into the pre-study. Due to project limitations we now must delimit further uptake. All has to be finalized before end of June, the date when SEMCo will close down and all SPP activities will be transferred to another authority.

Hopefully we can identify important work areas to bring the work on SPP forward during the next web conference.

My Laurell: Thank's for your engagement in this conference, and all relevant and interesting comments given. There is a need for further considerations, and to list where more work is needed – and also to identify critical issues.

ANNEX III

MINUTES - WEB CONFERENCE 19TH OF JUNE 2014

Participants:

Jerry Ackotia, Public Procurement Authority, Ghana, Sylvia Aguilar, NGO, Costa Rica, Serena Arduino, NGO, ACRA-CCS, Italy, Fabio Borba, Brazil, Colin Campbell, Assist Social Capital, Scotland, Sarah Dayringer, UN NGO, Major Group of Children & Youth, Holly Elwood, EPA, US, Gakuji Fukatsu, Green Purchasing Network, Japan, Emna Gana, SPP-process in Tunisia, Priscilla Halloran, EPA, US, Atsuko Hasegawa, GPN, Japan, John Hontelez, FSC International, Cuchulain Kelly, UNEP, My Laurell,SEMCo, Sweden, Harry Lewis, EPA, US, Dafne Mazo, Barcelona Activity Centre SCP, Spain, Barbara Morton, Sustainable Procurement Limited, England, Peter Nohrstedt, SEMCo, Sweden, Christina Raab, CSCP Germany, Angela Rengel, BSD Consulting, Switzerland, Sven-Olof Ryding, SEMCo, Sweden, Marietta Scheurmann, Globeethics, Switzerland, Ana Terrazos Aguilar,Clean Production Centres, Peru, Elisa Tonda, UNEP, Farid Yaker, UNEP, Zulfira Zikrina, SPC-center, Kazachstan

Agenda

1. Welcome
2. Participant presentation
3. The project in summary
4. Outcomes and conclusions
5. Discussion – ways forward
5. Sum up and closure

Minutes

1. Welcome – opening of the meeting

Peter Nohrstedt, SEMCo, opens the meeting and presents the scope and objectives of the project, the pre-study and the web conference.

2. Participant presentation

Participants in the meeting present themselves. Due to technical problems not all could get through with a presentation.

3. The project in summary

My Laurell, SEMCo, presents the pre-study with outcomes and conclusions, see presentation on SCP Clearinghouse http://www.scpclearinghouse.org/working-group/ftp/30-sppi-4a-greening-supply-chains.html

During the presentation **Elisa Tonda**, UNEP, commented on capacity and readiness to sustainable practices among SMEs in global supply chains, pointing at the potentials for public procurers to be educators, if using an approach with more and more stringent requirements for a step wise rise of the bar.

Angela Rengel, BSD Consulting, contributed with an example on pooling of resources, by presenting the work on the Sustainability Compass, http://www.sustainability-compass.com/, a tool customized to both public procurers and SMEs.

4. Discussion – ways forward

Suggestions on areas to further discuss in search for ways forward was presented. Peter Nohrstedt opened the floor for posts from participants.

John Hontelez, FSC International, commented on the importance of third party verification schemes, suggesting this should be mentioned in chapter 7, Outcomes & Conclusions, as an important mean to overcome lack of transparency in supply chains. The FSC Chain of Custody system secures alignment with social requirements throughout the supply chain, giving guarantees that all companies are being audited against set social standards by accredited certification bodies. This is an approach that could be applicable within several other product areas and thus should be mentioned as a way forward.

John Hontelez also stressed the importance of global responsibility among public authorities in countries that rely heavily on imports: including import of products where there are serious social issues in the supply chain (child labor, unsafe working conditions etcetera)

My Laurell, promised to add this aspect in chapter 7; the area is covered in earlier parts of the pre-study.

Colin Campbell, Assist Social Capital, emphasized the need for clear requirements on evidence in tender documents, and the procurer responsibilities in following up on contracts.

Peter Nohrstedt, SEMCo, agreed, referring to the need for consistency in the procurement process to maintain credibility and fair business conditions; necessary prerequisites to long-term sustainability commitments.

Holly Elwood, EPA, shared some experience from the EPA Environmental Purchasing Program, now focusing on supply chain impacts when developing criteria on electronics; for example servers and computers.

To address impacts from energy consumption in the supply chain, EPA now works with a criteria requiring manufacturers of components that go into servers to be certified to ISO 5001 on Energy Management, and striving for a reduce of their energy use by 5 % every three years. Requirements regarding reduction of green house gases are as well included in criteria on LCD screens, to be addressed in the manufacturing process.

Right now EPA tries to identify important hot spots in manufacturing processes and supply chains, which is a new approach.

Peter Nohstedt asked if EPA uses a Life Cycle approach when trying to identify hot spots and develop criteria.

Holly Elwood explained that the objective is to take a life cycle approach, but so far there has not been so much work done on the sourcing phase, but a stronger focus on the usage phase, with requirements on energy efficiency (the Energy Star), recyclability and reassembleability on delivered products.

My Laurell asked if EPA has turned to other procuring entities in search for experiences from the development of criteria addressing sustainability in electronics? Does EPA believe that international cooperation can be beneficial?

Holly Elwood: Yes, a lot of work needs to be done, and we need to work together to accomplish more in a resource efficient way. We have an open process, and anybody

can take part. Some work is already happening on an international level, involving stakeholders from the UK as well as China and some enterprises.

It would be very helpful if we could figure out a way to enhance the cooperation.

Farid Yaker, UNEP, commented on third party verification, and notes that the pre-study does not mention risks of corruption. Farid considers corruption as an important constraint that should be addressed, and questions how FSC is targeting this problem.

My Laurell answers since John Hontelez has left the web conference: and agrees that corruption is an important issue we have not targeted so far.

Regarding the FSC system there is an ongoing effort to prevent misuse of the label. FSC is trying to establish an online claims platform, OCP, with the intention to streamline the process of validation and to be able to remedy any issues with the veracity or authenticity of an FSC claim in a timely manner. The platform digitally connects certified FSC suppliers and customers so that both trading parties can swiftly confirm claims for FSC-certified products as accurate. As products move down the supply chain, their FSC certification can be assured. Right now a demo version of the platform is being tested. Learn more on http://ocp-info.fsc.org/

Farid Yaker: corruption is a critical issue we have to look deeper into. I also want to address costs connected to third party verification – who will actually pay for it?

My Laurell: There is no single answer to this question; in general the prise to end consumers reflects the costs in the production process, including audition costs and other administrative burdens. Occasionally the labelling of a product does not result in willingness to pay a higher price, but represents a precondition for market access. Verified labels are as well used to build a credible brand, thus creating other, long-term company values than just a short-term benefit of a higher price.

Farid Yaker suggests that these aspects should also be included in work on ways forward.

Peter Nohrstedt agrees, emphasising that procurers need to consider on the level of reliability in evidence put forward by suppliers: where third party verification gives a higher level of reliability in comparison to for example self declarations. Requirements on proper evidence have a great significance for potentials of SPP to affect the market.

Angela Rangel wants to explore what will be the next steps of the work: The pre-study gives a great overview on what is happening, but there is a need to further develop practical tools and compile and share knowledge on best practices.

My Laurell states that this is the objective of today's web conference: to get your input on critical work that needs to be done to bring this issue forward.

I take this as a suggestion to do further work to develop and share examples on best practices within business and SPP, a work that has already started but could be further elaborated. A breath of information can be found on e.g. the web site of SCP Clearinghouse, as well as on the web site of Global Compact, Procura+ and several other sites. But there is a navigation problem; which initiatives are the most prominent and who are still active?

Angela Rengel: We need to have a learning process; with joint work on procurement criteria and follow up on market impact; and with case studies looking at solutions to reduce costs and overcome audit fatigue among suppliers.

My Laurell: Thank you for this input Angela.

Holly Elwood conveyed information regarding a tool develop by EPA; the Electronic Product Environmental Assessment Tool (EPEAT), delivering information on environmental benefits from purchases of products registered in the EPEAT product registry. More information on the tool can be found at http://www.epa.gov/epeat/

To promote transparency in supply chains EPA have procurement criteria for specific products, requesting companies to list all chemicals used in the manufacturing, and to make these lists publicly available.

Holly also referred to the Sustainability Compass as an interesting starting point for international cooperation on procurement criteria; if the platform can achieve the capacity to collect all sustainability standards in one place. Having such a platform countries/procuring entities can select and agree on responsibilities to develop sustainability procurement criteria within different areas.

What is the progress on the work on joint procurement criteria within the EU so far?

Marietta Scheurmann, Globeethics, reported on a project within Globeethics, with the objective to give SMEs training in ethics and sustainability: with a practical approach to raise awareness, identify sustainability values and implement them in company strategies. This put forward due to reported interest among public procurers in training SMEs,

Peter Nohrtedt concluded that it is high time to start training of suppliers, in order to match increased knowledge among public procurers with increased knowledge among suppliers.

Elisa Tonda commented on the need to build the business case, but also on the need for consistency and coherence in sustainability expectations; pointing at the importance of an overall perspective and coherence in messages from not only public procurers but public authorities in general.

The business case must not only be built from a procurement perspective, but also from a participant perspective – "what's in it for me". UNEP are presently looking at the business sense, and will soon publish case studies exercising all the basis of the business case on sustainability.

My Laurell: We look forward to the dissemination of the business cases, and will also stress the need for coherent packages to drive sustainability in supply chains, coupling SPP with interventions that are calling for sustainable practices, like capacity building, financial incentives and access to technology

Sven-Olof Ryding, SEMCo, emphasized the need for quantitative information, possible to collect and pass on between entities within the supply chain. EPDs based on ISO standards is a promising tool and right now a global register on EPD is on the go; it is important that information on how to develop and make better use of EPD is included in conclusions on how to pave the way forward.

Peter Nohrstedt invites **My Laurell** to wrap up the web conference, according to My a challenging task:

This is a vast area to explore and different valuable perspectives have been voiced during the conference. Right now we don't have outlines on a specific project showing the way forward, but several suggestions on important or critical issues to further work on.

E.g.

- Joint work on procurement criteria, with suggestions from EPA on a possible approach. The work within the EU has resulted in joint procurement criteria on several product groups, with the possibility to choose between different levels, creating better opportunities to align these criteria with different national procurement policies. This could serve as a model for best practice on developing joint criteria.
- A platform to showcase "best practice" on sustainability within business and the public sector. There are already several platforms at hand, but a need to give

assistance on how to navigate and find the most active and prominent sites or examples.

- The need to raise awareness, build capacity and the "business case", in particular for SME participants in supply chains, to step wise improve sustainability in supply chains.
- There is a significant need for coherent, appropriate and comprehensible metrics on sustainability in supply chains, where EPDs have been put forward as a useful tool. There are others as well, and a need to harmonize both requests and data collection methods to secure credibility and prevent high costs and audit fatigue.
- Lack of transparency in supply chains can be approached in several ways, good examples given today are the FSC chain of custody system and the EPA request on companies to list chemicals used in manufacturing of a product.
- The use of third party verification has many advantages, but distribution of costs and risks for corruption and misuse need to be further explored.

This was just a few of all suggestions put forward today, we will try to integrate as much as possible in the final pre-study report.

Farid Yaker expressed his gratitude to SEMCo, for the work on the pre-study, and to all participants for valuable input and engagement:

The work has raised more questions than given answers, which often is the case with a pre-study. But I think we are on a solid ground to pursue this work. It is very promising that this project has managed to gather a wide variety of stakeholders, and I hope we will have the support from all of you to continue this work. Thanks' to all of you.

Peter Nohrsted terminated the conference with information on how and when the project will be finalized – on the 30th of June when SEMCo will be integrated in the Swedish Competition Authority.

ANNEX IV

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Sustainable public procurement often draws upon a worldwide market – globalization in the business sector has resulted in dramatic growth in the cross-border movement of commodities and goods. As a result, we now see an increase in the complexity of supply chains, with products imported from a variety of countries where different social and economic regulatory frameworks prevail.

In order to become more sustainable, public procurement thus has to deal with an increasing number of environmental, social or ethical issues at all stages of the supply chain.

This pre-study assesses state of the art regarding sustainable supply chain management and how it relates to public procurement by zeroing in on two product groups – timber and textiles.