switchasia
NETWORK FACILITY

ENGAGING THE SUPPLY CHAIN TO PROMOTE SUSTAINABLE CONSUMPTION AND PRODUCTION

A THEMATIC STUDY OF SWITCH-ASIA PROJECTS, 2010

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SWITCH-Asia Network Facility is implemented by UNEP/Wuppertal Institute Collaborating Centre on Sustainable Consumption and Production and Wuppertal Institute for Climate, Environment and Energy.

A key challenge for the SWITCH-Asia Programme is to replicate successful approaches and methodologies, which can speed up the implementation of Sustainable Consumption and Production, and the road to sustainable development. By exploring and testing the best ways to interact with SMEs and consumers in large scale SWITCH-Asia can support policy-makers and business entrepreneurs with information of how to make the right choices for a sustainable Asia.

In the last decade, a vast array of good practices on sustainable production and consumption have been developed and demonstrated. The SWITCH-Asia Programme aims to take this one step further. The projects funded under the Programme should seek for "replication mechanisms" to scale-up existing good practices. Replication can be achieved through multi-stakeholder approaches, for example by building partnerships with business service providers and actors along the supply chains. Involving policy-makers and developing enabling policy environments for SCP are equally important.

The Network Facility launched a long-term analysis of the contribution of how the SWITCH-Asia programme is contributing to the understanding of how SCP can be mainstreamed in society and scaled-out effectively. This report is the first part in the analysis of SCP replication mechanisms via identifying interesting areas that can make a difference. This study will be continued along with the advancement of the projects.

EXECUTIVE SUMMARY

This thematic study examines the role that engaging the supply chain is playing and potentially can play in enhancing the ability of SWITCH-Asia projects to achieve their goals of promoting uptake of sustainable consumption and production in Small and Medium sized Enterprises (SMEs). The study also highlights opportunities for replication of Sustainable Consumption and Production (SCP) practices, suggests opportunities for enhanced supply chain engagement in current projects and recommends potential opportunities for enhanced supply chain engagement to future projects. The study focused primarily on activities undertaken or planned by the following four projects:

- Establishing a Sustainable Production System for Rattan Products in Cambodia, Laos, and Vietnam;
- Green Products Development and Labelling in Mongolia;
- Sustainable and Responsible Trade Promoted to Wood Processing SMEs through Forest and Trade Networks in China, India, and Vietnam; and
- Enhancing Environmental Performance in Key Sri Lankan Export Sectors.

SUSTAINABLE SUPPLY CHAIN MANAGEMENT

In its most formal sense, sustainable supply chain management (SSCM) involves development and enforcement by (typically) end product manufacturers of sustainability standards, such as Suppliers' Codes of Conduct, to upstream suppliers (and their suppliers further up the supply chain). Rigorous application of these standards may include regular monitoring or auditing of suppliers by the end product manufacturer. Less formally, SSCM may serve to influence suppliers in a more indirect way, if these suppliers improve their production processes in anticipation of gaining new business from a different or broader set of customers demanding sustainable products.

SSCM therefore provides a market-based approach to improving sustainability across a wide range of producers that can have positive benefits that go beyond government policy and regulation, particularly in countries with less rigorous sustainability standards or where standards may be less rigorously enforced.

CONDITIONS NECESSARY FOR SUCCESSFUL SUSTAINABLE SUPPLY CHAIN ENGAGEMENT

This study found that, while none of the four SWITCH-Asia projects reviewed were implementing activities that engaged the supply chain in the formal sense, all four were engaged in implementing innovative approaches to create or improve conditions necessary for successful engagement of SMEs in the supply chain to enhance their sustainability performance.

The conditions addressed by the SWITCH-Asia projects include:

- Sufficient demand or "market" pull;
- Limited market "leakage";
- Adequate supply chain organization;
- Ability to demonstrate sustainable performance; and
- Ability to respond to market demand.

Sufficient demand or "market" pull: Because it represents a market-based approach to sustainable production, SSCM requires sufficient demand for sustainable products to be effective. All four projects reviewed for this thematic study were using international demand (in the form of European and American standards) as an incentive to encourage SMEs in Asia to improve the sustainability of their production processes. One project, the Green Products project in Mongolia, also is working with the government to implement programmes intended to help increase domestic demand for more sustainably-produced goods.

Limited market "leakage": In addition to sufficient demand for sustainable products, effective supply chain management requires that there be limited opportunities or incentives for selling products to buyers who do not demand sustainably-produced goods. Where there are illegal markets, particularly for raw materials, or where there are substantial legal markets for non-sustainably-produced goods, suppliers may have little incentive to respond to a demand for sustainable products. Two SWITCH-Asia projects with a focus on the harvest of forest products (the Rattan project in Cambodia and Wood Products project in China) plan activities to reduce trade in illegally harvested material and to promote trade in certified legal raw materials. These two projects also are implementing activities to try to reduce legal markets for less sustainably produced goods by working with governments to improve domestic standards and increase public awareness of the need for sustainable raw materials harvesting or extraction.

Adequate supply chain organization: Effective SSCM also requires supply chains that are sufficiently organized to allow suppliers to respond to customer demands. The Rattan project in Cambodia is working to formally organize the previously informal rattan market through the development of a Rattan Association and through education and empowerment of rattan harvester's at the most upstream position in the supply chain. It is hoped that this organization will help ensure that only sustainably harvested rattan is used in manufacturing of furniture and that the Rattan Association will help rattan processors respond to international demand for sustainably produced rattan products. The Key Exports project in Sri Lanka is helping to organize the market for waste by creating a waste exchange as a means for providing sustainable waste management alternatives.

Ability to demonstrate sustainable performance: SSCM is made easier where systems are in place that allows suppliers to easily and reliably demonstrate to buyers that their products have been manufactured using SCP principles. The Green Products project is working with government to develop a rigorous Green Label that will help Mongolian consumers identify and purchase sustainably-produced goods, while the Rattan project in Cambodia is working to establish a chain-of-custody certification programmes that will allow rattan furniture manufacturers to certify that their raw rattan was legally obtained and sustainably harvested.

Ability to respond to market demand: Finally, SSCM can only take place if suppliers can respond to increased demand for sustainable products. This can be a particular challenge for SMEs and in Cambodia, the Rattan project is working to help Rattan furniture producers to not only implement sustainable manufacturing practices, but also to produce goods of sufficient quality and in sufficient quantity to satisfy European demand for sustainable rattan furniture. In Sri Lanka, the Key Exports project is working to ensure that adequate technical expertise and services are in place to help Sri Lankan manufacturers implement required production changes to meet their foreign customers' demand for sustainable products.

OPPORTUNITIES TO ENHANCE SUPPLY CHAIN ENGAGEMENT IN SWITCH-ASIA PROJECTS

While the projects reviewed for this thematic study are implementing a wide range of activities

to use supply chain engagement to promote the uptake of sustainable production, there are still a number of opportunities for these (and other projects) that could be explored to enhance the impact that supply chain engagement has on project outcomes. These include opportunities to expand project scope to include more actors in the supply chain, using supply chain engagement as a projects recruiting and replication tool, and using participants who are successful in entering international trade as a means to promote sustainable production even among producers focused on the domestic market. Opportunities also exist for future projects to fill gaps, such as improving understanding of SSCM among enterprises, increasing consumer awareness of the value of sustainable products, or engaging policy makers in a wider range of issues related to SSCM. Future projects might also build on earlier projects, for example, by adapting earlier projects to new sectors. Future projects also might more directly address issues related to ensuring that Asian SMEs are linked to markets for sustainable goods to ensure that they are not shut out from SSCM opportunities or seek out opportunities to build partnerships with large transnational firms facing shortages in supply of sustainable products.

INTRODUCTION

The objective of this thematic study is to examine the role that engaging the supply chain is playing and potentially can play in enhancing the ability of SWITCH-Asia projects to achieve their goals of promoting uptake of sustainable consumption and production, highlight opportunities for replication of SCP practices, and suggest opportunities for enhanced supply chain engagement in current projects, and recommend potential opportunities for enhanced supply chain engagement to future projects. This thematic study focused primarily on activities undertaken or planned by four projects that received SWITCH-Asia funding in 2009:

- Establishing a Sustainable Production System for Rattan Products in Cambodia, Laos, and Vietnam (Rattan);
- Green Products Development and Labelling in Mongolia (Green Products);
- Sustainable and Responsible Trade Promoted to Wood Processing SMEs through Forest and Trade Networks in China, India, and Vietnam (Wood Products); and
- Enhancing Environmental Performance in Key Sri Lankan Export Sectors (Key Exports).

Following background research, site visits were made to each of the projects in March and early April of 2010 to conduct interviews with project implementers, partners, and beneficiaries. Where projects operated in more than one country, site visits were made only to one of the country locations – Cambodia for the Rattan project and China for the Wood Products project.

The four projects studied encompass a diverse set of activities across a wide range of Asian countries. Each project was engaging the supply chain in different ways, but some common threads were discernable, and it is possible to identify some innovative approaches to supply chain engagement that show promise in promoting the uptake of sustainable consumption and production. The remainder of this thematic study covers the following three areas:

- Introduction to sustainable supply chain theory;
- A discussion of conditions necessary for successful sustainable supply chain engagement and examples of how SWITCH-Asia is working to improve those conditions; and
- Opportunities for enhanced supply chain engagement among current projects as well as opportunities that might be pursued by future projects.

BACKGROUND/THEORY ON SUSTAINABLE SUPPLY CHAIN MANAGEMENT

Before discussing specific SWITCH-Asia projects that are using supply chain engagement to promote sustainable production and consumption, it is necessary to provide some background on the origins and current understanding of supply chain management generally, and sustainable supply chain management more specifically.

WHAT IS A "SUPPLY CHAIN"?

The network of manufacturers, wholesalers, distributors, and retailers, who turn raw materials into finished goods and services and deliver them to consumers.

www.dictionary.bnet.com

ORIGINS OF SUSTAINABLE SUPPLY CHAIN MANAGEMENT AS A CONCEPT

While perceived as a fairly modern concept, the origins of sustainable supply chain management (SSCM) actually go back into the 19th century, when the broader concept of "supply chain management" was first conceived. At that time, businesses began to recognize the importance of their relationships with suppliers, primarily in ensuring a reliable and economical stream of process inputs for their manufacturing operations, driven by an understanding of the damage

that disruption of supplies could cause and the impact that supply price had on profitability. The result was the rise of professional "purchasing departments" that took a more strategic look at supply procurement, with the ultimate goal of reducing the risk of disruptions and maximizing the competitive advantage associated with securing a stream of affordable process inputs.

In the late 20th century, rising societal awareness of the importance of environmental issues, as well as broader issues of corporate social responsibility (particularly as it relates to worker safety and health) have led not only to increased regulation of enterprises, but also to an expanded awareness of how these issues link up with earlier concerns about the supply chain. Forward thinking companies have come to understand that reduction of supply chain risk must also include the reduction of risks that might arise from being associated with poor performance in areas that can be broadly termed "sustainability issues." These risks include the risks to profitability of being associated, either legally or by reputation, with environmental degradation and other socially unacceptable activity such as child labour, as well as the competitive advantage that is conveyed to companies today that are considered "sustainable" in all facets of their operations.

"It is now widely understood that a company is no more sustainable than its supply chain"

It is now widely understood that a company is no more sustainable than its supply chain, and that in the same way that enterprises can use relationships with suppliers to ensure reliable streams of process inputs at competitive prices, enterprises also can influence the sustainability of their suppliers. The result has been the rise of "greening the supply chain," "socially responsible purchasing," or "sustainable supply chain management" (the term that will be used throughout the remainder of this paper) programmes to ensure that sustainable production is occurring along all parts of an enterprise's supply chain.

CURRENT PRACTICE AND UNDERSTANDING OF SUSTAINABLE SUPPLY CHAIN MANAGEMENT

In its most formal sense, sustainable supply chain management (SSCM) encompasses the process whereby end product manufacturers develop and enforce sustainability standards (e.g., Supplier Codes of Conduct) that their suppliers (and their suppliers' suppliers) must meet. Rigorous application of these standards may include regular monitoring or auditing of suppliers by the end product manufacturer. Enterprises that are highly engaged with their suppliers may actively work with them to ensure that they meet sustainability standards, or may take a more hands-off approach, seeking out or continuing business only with suppliers that already meet or agree to meet those standards. Less formally, SSCM may serve to influence suppliers in a more indirect way, if these suppliers improve their production processes in anticipation of gaining new business from a different or broader set of customers demanding sustainable products.

Recent and growing interest in the sustainability of products across their entire life cycle has also resulted in a more expansive view of SSCM, particularly among producers of goods for consumer retail sale. Consequently, SSCM has grown beyond its original focus on upstream suppliers to encompass broader issues that include the transportation and packaging of products as well as disposal, and now include initiatives on

the part of a number of producers to promote reuse and recycling through product take back programmes. Viewed in its broadest sense, SSCM can therefore be seen to be occurring at any time that sustainability is improved in any part of a product's life, from extraction of raw materials to disposal, in response to demand for sustainable performance. Similarly, SSCM may also be occurring if such improvements are being made, not just at the specific direction of a buyer implementing formal supplier codes of conduct, but also when improvements are made in response to perceived, but perhaps not formalized, customer demand for greater sustainability. The range of supply chain relationships are depicted in Figure below.

MARKET BASED APPROACH

Because SSCM influences business behaviour using customer demand, it provides a market-based approach to improving sustainability across a wide range of producers. In terms of promoting sustainable production in the developing world, SSCM can have positive benefits that go beyond government policy and regulation. This is because, to extent that suppliers may be located in countries with less rigorous sustainability standards or where standards may be less rigorously enforced, SSCM can help to improve the environmental and social performance of local suppliers in ways that simple compliance with local standards may not. The specific role of international standards and international consumer demand on promoting sustainable production will be addressed in greater detail in the section below.

THE PREVALENCE OF RETAILER' ACTIVITIES IN EUROPE

What and how retailers choose
(upstream activities)

- Greening Supply Chain
- Local Sourcing Initiatives
- Eco-Design of Products
- Choice-Editing of Supplier Products

How retailers sell
(in-shop activities)

- Efficient Energy Consumption
- Waste Management
- Efficient Distribution System
- Environmental Training of Staff
- Greening Design of Buildings
- Eco-labelling of Retail Stores
- Green Products for Internal Use
- EMS

How retailers communicate
(downstream activities)

- Provision of green and fair Trade Products
- Communication through eco- and social labels
- Advertising and Marketing
- Pricing of green Products
- Consumers' Transport to Store
- Promotion of more sustainable Lifestyles and healthier Diets

Legend: • very common practices • common practices • rare practices (Source: ETC/SCP compilation)

CONDITIONS NECESSARY FOR SUCCESSFUL SUSTAINABLE SUPPLY CHAIN ENGAGEMENT

Effective engagement of supply chains in countries participating in SWITCH-Asia, especially in some countries and some industrial sectors, pose additional challenges. The ability of buyers to influence suppliers and of suppliers to respond to buyer demands depends on a number of conditions, some of which may not exist, or may not yet exist in a form conducive to SSCM, in the developing world. Furthermore, promotion of SSCM principles may have adverse impacts on local small and medium size enterprises (SMEs) in the developing world. While growing international demand for sustainably-produced goods can, as discussed above, help promote sustainable production in the developing world, there is a clear risk that SMEs in the developing world may be marginalized if they cannot respond to this new demand. In some cases, large transnational corporations (TNCs) may be able to work with their developing world SME suppliers and help finance changes needed to achieve compliance with their standards. However, many, if not most, SMEs in the developing world lack access to these customer networks and indeed, would find it very difficult to meet new quality and productivity requirements that do not yet apply in domestic markets.

"SWITCH -Asia projects reviewed are implementing innovative approaches to create conditions necessary for successful engagement of SMEs in the supply chain to enhance their sustainability performance."

Appropriately, therefore, current SWITCH-Asia projects are not focused on engaging supply chains in the formal sense discussed in the first section of this report. Instead, the SWITCH-Asia projects reviewed for the purpose of this thematic study are best viewed as implementing innovative approaches to create or improve conditions necessary for successful engagement of SMEs in the supply chain to enhance their sustainability performance. These conditions include:

- Sufficient demand or "market" pull;
- Limited market "leakage";
- Adequate supply chain organization;
- Ability to demonstrate sustainable performance; and
- Ability to respond to market demand.

This list of conditions should not be considered exhaustive. Rather, it reflects areas where current SWITCH-Asia projects are actively engaged. Furthermore, these conditions should be viewed as closely linked, as will be seen in the discussions below. The remainder of this section will discuss these five conditions, focusing on the ways that SWITCH-Asia projects are working to improve these conditions or, as appropriate, how conditions continue to act as barriers to fully successful supply chain engagement.

CONDITION 1: SUFFICIENT DEMAND OR "MARKET" PULL

SSCM cannot take place where there is insufficient demand for sustainable products. The definition of "sufficient" will vary, depending on the specific market, but may be understood gener-

ally as enough demand to elicit a response from a producer in the form of changed production practices. Ideally, this demand or "market" pull must extend through the entire supply chain, meaning that the producer or group of producers involved must exert sufficient demand on upstream suppliers to elicit a similar response from their immediate suppliers, who then in turn exert pressure on their suppliers up the supply chain. SSCM does not need to take place throughout the entire supply chain to have significant impacts. It is common, for reasons of practicality, for purchasers to focus SSCM efforts on those portions of their supply chains with the greatest impact on sustainability. For example, a clothing producer might focus its SSCM efforts on the parts of its supply chain involving the printing or dying of fabric, a process that uses significant amounts of potentially toxic chemicals. A producer of personal products, such as hand or body lotions might prioritize its suppliers of plastic packaging (bottles or tubes), the production of which also involves significant chemical use.

BARRIERS

SMEs participating in SWITCH-Asia projects are likely to play dual roles in the supply chain – as sellers to downstream customers demanding a sustainable product and as buyers of sustainable inputs from their own upstream suppliers. As a consequence, SWITCH-Asia projects have an opportunity to work both to help SMEs respond to demand for sustainable products, but also to help SMEs become consumers of sustainable products from their own suppliers.

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A significant barrier to increasing demand for sustainable products is cost. While many efforts are being made to make sustainably-produced products more cost competitive with their less sustainably-produced competitors, it is often the case that sustainable products cost more than less sustainable products. For example, it is estimated that wood products made from material certified to have been harvested legally from sustainably managed forests cost from three to five percent more than uncertified products. Demand for sustainable products therefore must often include a willingness by customers to pay a "sustainability premium" that reflects the value added conveyed by these products. Reluctance by consumers to pay more for sustainably-produced goods may be overcome through improved awareness of the additional value that sustainably-produced goods provide. (consumer awareness issues are discussed at greater length in the subsection on the role of policy-making below, as well as in a discussion of the role of "green" labelling later in this study.)

One particular challenge for SMEs wishing to implement SSCM policies of their own (or being required to implement SSCM as a condition of contracts with downstream purchasers) is their small size. While a large TNC, like Nike, or even a large domestic firm, may be able to make demands on its suppliers, smaller domestic SMEs find that they lack sufficient power within the market, on their own, to influence the production behaviour of their own suppliers.

ROLE OF INTERNATIONAL STANDARDS

All of the SWITCH-Asia projects reviewed for this study are, in some way, utilizing international demand for sustainable products as an incentive to encourage SMEs to implement sustainable production. In many cases, the international demand for sustainability has been formalized in international standards (in Europe, the U.S. and elsewhere) that product manufacturers must meet in order to export to those markets. While the potential opportunity to sell in export to, for example, European or American customers can be a strong incentive, this incentive is limited to the extent that European and American markets simply are not large enough to generate the demand needed to affect all producers. In addition, there also are disincentives working against SSCM through competing demand from other markets. This particular issue will be explored further in the discussion of market "leakage" below. Nevertheless, early experience in the four SWITCH-Asia projects visited suggests that the need or desire to meet international standards to increase foreign trade opportunities has already been at least somewhat successful in encouraging SME participation in SWITCH-Asia projects. In Cambodia, the project Establishing a Sustainable Production System for Rattan is using potential expansion of Cambodian rattan product sales into Europe as incentive to recruit rattan furniture producers to participate in the project. The prospect of international trade also is being used as an incentive to encourage rattan furniture makers to improve their production processes to meet international sustainability standards, which include both cleaner production standards at the manufacturing level and certification of raw rattan upstream. At present, Cambodian furniture producers have very little access to the European market, selling primarily within Cambodia, and to a smaller extent, elsewhere in Asia. The project plans trade fairs with European buyers beginning in the summer of 2010 to begin to introduce Cambodian furniture manufacturers to potential customers. Participation by the European furniture retailer, IKEA, is helping provide credibility with the Cambodian manufacturers. While the project is still in its first stages, early response suggests interest among processors.

The overall success of the project, as measured by continued interest of current participants, their willingness to implement sustainable production measures, and recruitment of additional participants, will depend on ability to break into international market.

In China, the project, Sustainable and Responsible Trade Promoted to Wood Processing SMEs, also is using the prospect of trade with Europe and the U.S. as a means for recruiting SME participants. Participants who join the WWF's Global Forest Trade Network (GFTN) receive training in certification practices that will enable them to meet European and U.S. requirements for certification that their products contain only wood that was harvested legally and from sustainably-managed forests. Like the Rattan project, this project has plans to link Chinese wood processors with potential international buyers.

The Green Products Development and Labelling project in Mongolia is working with two government ministries, the Ministry of Nature, Environment, and Tourism (MONET) and the Ministry of Food, Agriculture, and Livestock Industries (MOFALI) to develop product labels and certification schemes that ultimately will be in

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line with international standards as a means to prepare Mongolian enterprises to enter international trade. At present, most Mongolian enterprise engages in very little foreign trade. The project's "Green Products Challenge" is intended to help select Mongolian SMEs with proposals to develop products that might meet more rigorous standards.

A fundamental premise of Enhancing Environmental Performance in Key Sri Lankan Export Sectors is that Sri Lankan enterprise needs to improve its sustainability performance to protect and expand its markets for key existing exports. The project is using this message to recruit participants to its training programmes on sustainable production.

ROLE OF POLICY IN ENHANCING/CREATING DEMAND

Where market demand for sustainable products is not high, government policy can play a significant role in enhancing consumer demand. Government policy can also create demand for sustainable products as a means to "jump start" the market in those cases where private consumer demand is currently too weak to support sustainable production in a meaningful way. The Green Products project has two activities that illustrate how government can be engaged in creating greater demand for sustainable products.

"Where market demand for sustainable products is not high, government policy can play a significant role in enhancing consumer demand"

The first activity is the Green Labelling programme, introduced earlier. In addition to reflecting a desire by the Mongolian government to encourage domestic enterprise to prepare itself to engage in more international trade, the Green Labelling programme is also envisioned as a means to educate Mongolian citizens about the value and desirability of locally produced goods. Much of production in Mongolia continues to use traditional methods that are "low tech" and therefore fairly sustainable already. The Mongolian government hopes that by developing a domestic green label and raising local awareness of the value of "clean" and "natural" Mongolian products, it can enhance Mongolian demand for goods produced locally in preference to less sustainably produced goods from abroad (especially China and Russia). Work on the Green Label is scheduled to begin later in 2010 with technical support from SWITCH-Asia.

The second activity is the development of a government "green purchasing" programme. This programme also is intended to increase demand for locally-made and sustainable Mongolian products. Like the Green Label programme, initiation of work on this activity is expected later in 2010 with SWITCH-Asia technical support.

CONDITION 2: LIMITED MARKET "LEAKAGE"

Closely related to condition that there be sufficient demand for sustainably produced goods, is the second condition being addressed by some SWITCH-Asia projects – there must be limited opportunities or incentives to sell to buyers who do not demand sustainable products. To the extent that markets continue to exist for less sustainable products or there are not additional incentives (such as better prices or more stable markets) to produce sustainably, suppliers may not respond to demands from customers to improve the sustainability of their operations. They may simply "take a walk" and sell to someone else.

ROLE OF ILLEGAL TRADE

The role of illegal trade in market "leakage" and its consequent dampening effect on effective SSCM epitomizes this problem, particularly in production involving processing of timber and non-timber forest products. Where there is a ready market for illegally harvested timber and non-timber forest products, incentives to harvest only legal forest products and furthermore, to participate in certification and chain-of-custody programmes that help enforce sustainable harvest, are minimized. In Cambodia, for example, illegally harvested rattan continues to be sold into Vietnam, often at a better price than legally harvested rattan sold within Cambodia. In China, illegal harvesting of wood in excess of established quotas continues, and illegally harvested wood from Russia and Myanmar is imported and sold at low cost, undercutting attempts to increase use of sustainable wood in Chinese production of flooring and wood furniture.

In Cambodia, the problem of illegal rattan is compounded by the lack of a chain-of-custody programme that would allow rattan furniture makers to distinguish legal from illegal material (additional discussion of the role of certifications and verification is provided below). The SWITCH-Asia Rattan project is working to reduce the impact of illegal trade at several levels: 1) through the establishment of a recognized chain-of-custody programme to be implemented by the recently formed Rattan Association; 2) working with village-based rattan harvesters to raise awareness of the problems of illegal rattan harvesting; 3) empowering village harvesters by improving their level of control in the supply chain and helping them to get better prices for their legally harvested and sustainably managed rattan (this will be discussed in the section on organization, below); and 4) working with the Cambodian government to improve enforcement of regulations around harvesting.

The Wood Products project also is working to reduce trade in illegally harvested wood in China. The project is trying to raise public awareness within China to increase demand for products made from legally harvested wood through public awareness campaigns. It also is working with Chinese government (Ministry of Environment) to establish more rigorous domestic standards regarding harvest and trade in illegal wood and improved enforcement of existing standards.

ROLE OF ALTERNATIVE LEGAL MARKETS

While illegal markets pose a challenge in some sectors, the fact remains, most markets for less sustainable products are completely legal and common. While overall demand for sustainable products is growing, world-wide consumer demand for sustainable products remains low, especially where there is a significant price difference between sustainable and non-sustainable products (this holds true in both the developed and developing world). In Asia, domestic markets are still the primary markets for most SMEs, so the impact of international standards does little to affect these enterprises. Even SMEs that might be influenced by buyers or the potential for buyers like, for example, IKEA, might find it easier and just as profitable to continue to produce less sustainable goods for another market. Consumer preferences also play a role. In Japan, for example, bleached rattan is favoured for furniture, even though production of bleached rattan generally uses methods that are not considered sustainable. Convincing Cambodian rattan processors currently selling furniture to Japan to change their practices could be a difficult task.

In China, the domestic market is considered by the implementers of the Wood Products project to be the biggest barrier to successfully engaging the supply chain to ensure use of sustainably harvested wood. Most wood processors have little or no incentive to ensure that their wood supply comes from a legal source, as Chinese requirements for the use of legally harvested wood in manufacturing are not particularly rigorous or well enforced and public concern about sustainable forest products is low. The project is working with the Ministry of Environment to establish more rigorous domestic standards and enforcement, and hopes that its public awareness campaign about the problems of illegal wood harvesting will help. The project is getting help from processors who already meet international standards. These processors are beginning to pressure the government themselves to make domestic standards more rigorous as a means of "levelling the playing field" for all producers to make domestic competition more fair.

In Cambodia, the Rattan project faces similar difficulties. The main market for Cambodian processors is currently domestic, and domestic standards are limited. Cambodia's limited international trade in rattan furniture is primarily with other Asian countries like Japan, where there also may not be sufficient standards in place to encourage sustainable production.

ROLE OF POLICY IN TIGHTENING THE MARKET

In the case of illegal extraction or harvesting of raw materials, government policy clearly has a large role to play in helping close off markets for unsustainable products. Enhanced regulation and enforcement are needed – emphasis by SWITCH-Asia projects on including policy-building activities to protect raw materials resources highlights this need. In both the Rattan project in Cambodia, and the Wood Products project in China, specific activities to try to improve regulatory structures around harvest of timber and non-timber forest products are planned and intended to help enhance the impact of other project activities.

"Policy interventions can play an important role, both in raising public awareness of sustainability issues and raising domestic standards"

Limiting the impact of legal markets for non-sustainable or less sustainable products is more complicated. Policy interventions can play an important role, both in raising public awareness of sustainability issues and raising domestic standards. In these cases, the kinds of policy interventions discussed for Condition 1, Demand or "Market Pull" are equally applicable, and would serve to facilitate or enhance domestic demand for sustainable products and reduce non-sustainable options.

CONDITION 3: ADEQUATE SUPPLY CHAIN ORGANIZATION

Effective SSCM requires that suppliers be able to respond to market demand (either from consumers or directly from downstream producers) for more sustainable products. Buyers also must be able to convey information about their requirements for sustainable products to potential suppliers, and suppliers interested in providing sustainable products must know how to get to those buyers. A minimum level of market organization is, therefore, a pre-requisite for functioning SSCM. Organization facilitates the flow of information up and down the supply chain, improves awareness of business opportunities, and generates the business relationships necessary for buyers to influence suppliers and for suppliers to reach buyers with products. Adequate market organization is strongly linked to

suppliers' ability to respond to market demand, discussed below. For some industrial sectors, this intermediary organization takes care of itself. For example, in cases where a large, often transnational, producer is the catalyst for SSCM, it is generally the producer that organises the supply chain. Information about the producer's demand for sustainable supplies is conveyed through formal agreements, such as Supplier Codes of Conduct, and business relationships are formalized and enforced in supplier contracts. As discussed above, large companies implementing SSCM may directly enforce their standards through independent audits of their suppliers' performance, although less rigorous enforcement or a reliance on certifications provided by suppliers also are common.

With its emphasis on engaging SMEs, SWITCH-Asia projects mainly involve smaller producers, who are not often yet in international trade and frequently are involved in manufacturing and sales that are much less formalized. Relationships with suppliers may not even involve formal contracts, and communication among participants in the supply chain may be inadequate to convey changing market demands. These smaller producers may also lack the market power to influence their own suppliers' behaviour.

SSCM AT HEWLETT PACKARD

By contract, HP requires its suppliers to comply with the following standards:

1. Comply with all applicable laws and regulations and require their suppliers to do the same (including labor agencies).
2. Read and understand HP's Supply Chain Social and Environmental Responsibility Policy.
3. Comply with standards in HP's Electronic Industry Code of Conduct (a supplier code of conduct, which includes environmental, labor, and ethical standards) and HP's General Specification for Environment.

Standards are enforced through supplier self monitoring and reporting to HP, as well as through periodic audits by HP of its suppliers' performance.

From: Supplier Social and Environmental Responsibility Requirements
www.hp.com/hpinfo/globalcitizenship/society/supplychain/guidance.htm

FORMALIZING A MARKET

The Rattan project in Cambodia provides an interesting example of how a SWITCH-Asia project is helping to formalize a previously unorganized market, and how that organization is facilitating uptake of sustainable production techniques across the supply chain.

As illustrated in the accompanying diagram, raw rattan, which grows wild in tropical forestland, is harvested by villagers, who in turn sell the raw rattan to transportation "middle men," who sell the raw rattan to processors who make it into furniture (although processing and manufacture may occur in two separate steps). Typically in Cambodia, this supply chain is dominated by the "middle men," who control the market because they perform the key transport function (which, if done legally, requires compliance with government regulations, including certifications and the payment of fees), and control the relationship between raw materials producers (villagers) and furniture end producers. Generally, the harvesters and producers are too small to exert much influence on the transporters. Also, relationships along this supply chain are

informal nature, although ongoing relationships between harvesters and transporters and transporters and processors are common. A consequence of this lack of organization and dominance by one party is reduced prices for raw rattan, higher raw material prices for processors, and little formalization to ensure that raw rattan is harvested in a manner that ensures legality and ongoing supply. The Rattan project is working to formalize this supply chain for first time with multiple initiatives that include the establishment of the Rattan Association of Cambodia (a trade association of processors) and by direct intervention with village harvesters. The Rattan Association will help collectivize rattan processors and furniture producers to increase their influence in the supply chain and will establish a chain-of-custody (CoC) scheme for raw rattan (chain of custody certifications will be discussed in greater detail under Condition 4, below). While the Rattan Association was only recently formed, it is hoped that it will be able to enforce use of the CoC scheme and have sufficient bargaining power with transporters to ensure use of the scheme and better prices for raw rattan for Association members. In the meantime, work with village harvesters is intended to raise their awareness of the need to sustainably harvest rattan, to gain their support for the CoC scheme, and link them more formally to the overall rattan supply chain in a way that will help them obtain better prices for their legally harvested and managed rattan. This step is a key to the project's success – better prices for legally harvested rattan is a primary incentive to villagers to ensure sustainable management of their rattan resources.

RATTAN SUPPLY CHAIN

Rattan Village Harvesters

Transportation "Middle Men"

Processors/Furniture Manufacturers

Retailers

The Rattan Association also will help processors with access to markets, by providing a focal point for rattan furniture buyers and a means for SME rattan processors/producers to communicate with expanded markets outside of Cambodia. The Rattan project will facilitate this process by working with the new Rattan Association to organize trade fairs and begin to establish links with European buyers. Gaining the cooperation of the transporters will be the final step in fully formalizing the rattan supply chain. It is hoped that organization of processors through the

IMPROVED LIVELIHOODS IN THE RATTAN MARKET IN CAMBODIA

The Rattan project is seeing some early successes from its initial efforts to organize the rattan supply chain. Participation in the new Rattan Association, with its promise of helping expand markets for rattan furniture, has prompted at least one furniture producer to begin making changes to her production processes. One of those changes – the institution of a more assembly-line like approach in her factory – has improved productivity to such an extent that the factory now operates 6 days a week to achieve the same level of production that previously required 7 days. Workers now have a day off without a commensurate loss of wages.

A nearby harvesting village is developing a "rattan nursery" to cultivate young rattan for replanting in their forests. More formal links to the supply chain (they now have contracts with the above mentioned producer) have provided incentives for better management of their rattan, including greater vigilance to prevent illegal harvesting and with a better income from their raw rattan.

Rattan Association and implementation of the new CoC scheme will provide leverage to encourage transporters to cooperate. In Cambodia, government involvement also will be critical, as government regulation of rattan transportation is an important pressure point for transporters. The project plans to work with Cambodian government representatives to ensure adequate enforcement of existing requirements and establish incentives that will help bring the transporters into the formalized supply chain. It is also hoped that transporters will see the benefits of more reliable sources of raw rattan and more reliable markets for the sale of rattan to processors.

MAKING A MARKET – NEW TWIST ON SSCM

The Key Exports project in Sri Lanka is working on an innovative approach to SSCM – creating a market for suppliers of materials that currently have no market – i.e., waste. At present, Sri Lanka has inadequate waste disposal options for both solid and hazardous waste, leading to illegal dumping and making it difficult for Sri Lankan firms to meet sustainability standards. While establishing improved disposal options ultimately will be necessary for the sustainable management of Sri Lanka's industrial waste, the project is attempting to reduce the need for disposal through the establishment of a formal waste exchange. The waste exchange will help channel some waste to companies already generating energy through incineration, but also will formalize links between waste generators and the enterprises that could use that waste as process inputs. In essence, waste generators will become suppliers of raw materials to certain manufacturers, creating a new sustainable supply chain link. In addition to establishing a website to highlight waste exchange opportunities, the project is collecting data to spur investment in additional waste-to-energy opportunities.

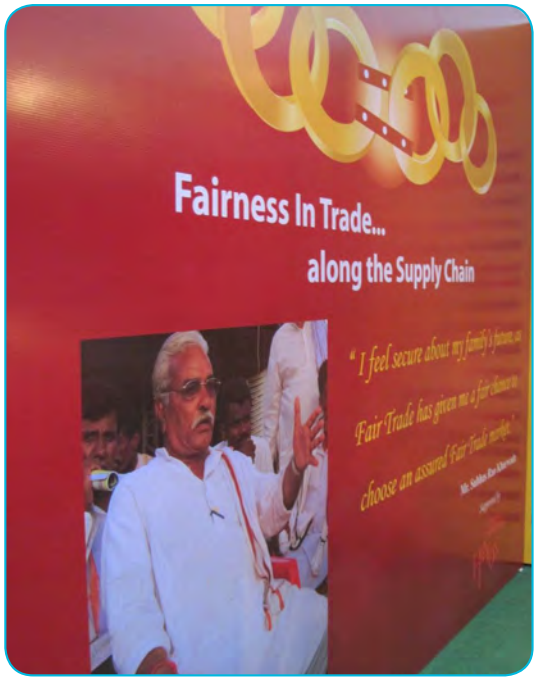
ROLE OF SERVICE PROVIDERS

The Rattan project's formation of the Rattan Association of Cambodia, along with its projected role in establishing both upstream and downstream linkages between suppliers and ultimate purchasers of rattan furniture illustrates the significant role that "service providers" can play in organizing and maintaining effective supply chains. In this case, the Rattan Association is helping to give processors the collective buying power (for raw materials) and selling power (final goods in the international market) that will enable them to influence their supply chains and by extension, better respond to demands from customers for sustainable products.

CONDITION 4: ABILITY TO DEMONSTRATE SUSTAINABLE PERFORMANCE

Once there is sufficient demand for sustainable products and the market is organized to respond, how can purchasers be sure that suppliers are providing them with the sustainable products that they want? In "traditional" greening the supply chain efforts, big downstream buyers – TNCs like Nike, IKEA, and WalMart – establish their own standards and monitor supplier compliance. Large corporations may have the resources to audit suppliers to ensure compliance with sustainability standards, but many other enterprises, and especially developing country

SMEs, lack the resources to monitor supplier compliance. Similarly, SMEs trying to market their products to customers without the resources to monitor their performance may have trouble demonstrating that their products meet sustainability standards.



ROLE OF LABELS AND CERTIFICATIONS

A key condition for effective SSCM is, therefore, that all participants along the supply chain be able to demonstrate or confirm – depending on their place in the chain – that products meet certain sustainability standards. The question is how these demonstrations and confirmations can be made in an effective and efficient manner. Product labelling and certifications can offer a short-cut to purchasers who want to be sure they are getting sustainably-produced products without having to undertake their own evaluations. So called "green labels" are becoming increasingly popular around the world, and can be extremely effective in conveying to purchasers (both retail consumers and products manufacturers) that a specific product meets certain sustainability standards. To be effective, however, labels and certifications need to provide meaningful and credible information. As a consequence, labels and certifications need to meet certain conditions:

"Product labelling and certifications can offer a short-cut to purchasers who want to be sure they are getting sustainably-produced products without having to undertake their own evaluations"

- The label or certification should be well recognized by appropriate audiences. "Green" labels directed at retail consumers should be recognized by the general public. Other labels or certifications need to be recognized by purchasers of the applicable products.
- The criteria and process for determining whether a product merits a label or certification should be known to purchasers, or at least, should be accessible to purchasers. That is, the criteria and process must be transparent.
- The certifying body must be credible and should not have an interest in the product being certified. The certifier must have the experience and credentials to evaluate the sustainability of products and must be independent from the producer getting certified.

In many instances, labels and certifications do not meet these criteria. For example, in Mongolia, a wide variety of "green" labels can be found on a range of products. Many of these labels are not linked to any criteria and have been created by product manufacturers seeking to capitalize on perceived interest in sustainable products.

Other labels in Mongolia come from more credible sources, but lack formal criteria and processes for application. The Mongolian government, for example, has certified two enterprises as "green" – an electric bus company and an energy generation company – but does not have a formal process in place with transparent criteria for making these determinations. The Mongolian National Chamber of Commerce and Industry (MNCCI) also certify products as "green," but the criteria applied do not satisfy international standards.

The Green Products project will be working with its project partner, the Mongolian Agency for Standards and Measurement, to develop an independent "Green Label" for Mongolian products. The initiative, which has support from the country's Prime Minister, will follow international

guidelines for the establishment of certification bodies and will be modelled on European standards. A number of critical challenges remain to be overcome before the green label can be fully implemented. The first is identifying a suitable independent third-party to implement the label. Mongolia lacks organizations with sufficient technical expertise to adequately make the needed assessments. A second is readying Mongolian enterprise to comply with the labelling standards, which will be more rigorous than current requirements. Mongolian enterprises

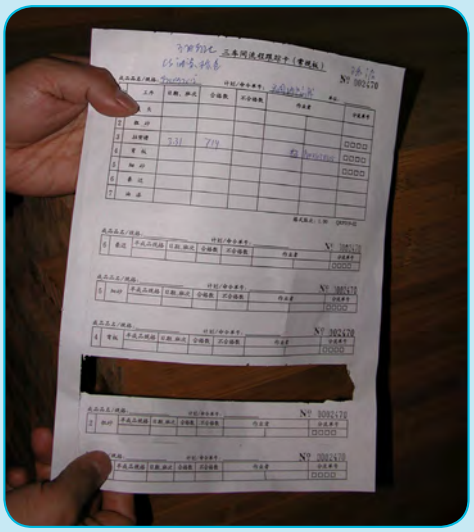
have expressed concerns about whether European standards are appropriate for Mongolia, and there appears to be general agreement that simply copying European standards would be inappropriate. One option under consideration is to create less rigorous standards to start, and then raise standards over time until they are consistent with European standards.

In Cambodia, the Rattan project is working with its project partner, Artisans Association of Cambodia (AAC) to train rattan processors on the standards that must be met to obtain a Fair Trade certification and will provide processors with assistance in changing operations to meet those standards, as well as provide guidance on how to obtain certification. Having a Fair Trade certification provides verification of sustainability in areas that go beyond the certification of the source of rattan, including worker safety and health, environmental performance, gender issues, and incomes. It is hoped that Fair Trade certification will help open some foreign markets to Cambodian producers.

WHERE DOES THAT WOOD COME FROM?

A key barrier to SSCM in sectors where illegal extraction of raw materials occurs is determining whether raw materials come from legal sources. All wood, for example, looks the same, whether from a sustainably managed forest or harvested illegally from protected land. End users are usually far from the forest, and cannot be certain where their supply of wood actually came from.

Chain of custody (CoC) certifications, that travel with raw materials as they move through the supply chain and demonstrate that they were legally extracted, are a critical first step in ensuring the sustainable production of goods using protected raw materials.



Absence of adequate certifications can effectively thwart efforts to implement SSCM. In Cambodia, lack of a credible CoC programme means that rattan processors cannot determine with any degree of confidence that their rattan supply comes from legal sources. Consequently, they also cannot certify to potential downstream buyers – most specifically potential customers in Europe – that their products meet international standards. Establishing a reliable CoC programme for rattan in Cambodia will, therefore, be an important factor in the project's success.

LABELS AND CONSUMER DEMAND

In addition to facilitating implementation of SSCM by making it easier to determine whether products come from sustainable suppliers, "green" label programmes can play a role in helping raise public awareness of sustainability issues and the value of sustainably-produced goods, increase the visibility of sustainable products, and help SMEs to market themselves as "green" producers. To have this impact, labels must be widely recognized by the general public and meet the other criteria of transparency and independence discussed above. If consumers are not familiar with or do not trust the credibility of labels, they will ignore them. The Green Label facet of the Mongolian Green Products project has an explicit goal to raise the awareness of average Mongolians about the value of sustainable products as a means for increasing demand for sustainably-produced local products and for all sustainably-produced products more generally.

"If consumers are not familiar with or do not trust the credibility of labels, they will ignore them."

BARRIERS TO USE OF LABELS AND CERTIFICATIONS

While labels and certifications can make it easier for SMEs to both demonstrate to potential buyers that their products are sustainable and determine that the materials they are purchasing from suppliers are sustainable, significant barriers exist to the use of labels and certifications in the developing world.

The first barrier is cost. This barrier encompasses both the direct cost, in terms of fees that must be paid to obtain a label or certification, and indirect costs, in terms of the staff time that must be spent complying with requirements for the label or certification. In China, the Wood Products project is working to get wood processors signed on to an existing WWF programme, the Global Forest and Trade Network (GFTN), that assists wood processors in complying with CoC requirements for certified forest products.

The cost and time burdens of the programme have proven to be a barrier to participation by some SMEs. Even some who have signed on to the program have dropped out due to the cost and time involved. In Mongolia, businesses have expressed concerns about the potential costs associated with obtaining the planned Green Label. In Cambodia, Rattan project partner AAC acknowledges that Fair Trade certification is a difficult and time consuming process and that rattan processors are likely to require technical assistance to help them achieve it.

A second barrier is the lack of adequate support services necessary to implement credible labelling and certification programmes. In developing countries, the availability of adequate laboratory services to conduct the testing that many certification programmes require is a significant barrier to SMEs trying to obtain a label or certification. Lack of adequate lab services is especially problematic for enterprises seeking to demonstrate compliance with international standards. Even where services are available, the cost of these services can be a barrier. In Sri Lanka, the Key Exports project is targeting technical assistance to try to increase the capabilities of local organizations to provided lab services. It is, as yet, too early in the project to know how successful these efforts will be at expanding the use of certifications in Sri Lanka. Mongolia faces similar challenges as it develops its Green Label programme.

CONDITION 5: ABILITY TO RESPOND TO MARKET DEMAND

Even if all other conditions required for effective supply chain engagement exist – i.e., there is ample and evident demand for sustainable goods,

there is no significant competition for suppliers from non-sustainable markets, the supply chain is organized, and mechanisms exist to help SMEs and other enterprises to demonstrate their sustainability – it still may be difficult to influence enterprises through the supply chain in a meaningful way. This is because effective SSCM depends on the ability of enterprises to respond to demand and supply goods that the market is asking for. This is especially true if the goal is to sell products in international trade or to use international standards as incentives for sustainability. Two major hurdles exist for enterprises, and especially SMEs in the developing world, to respond to demand for sustainably produced goods:

- Inadequate capabilities to implement sustainable production techniques in a cost effective way; and
- Inadequate capabilities to produce goods of the quality and in the quantities desired by the market, even if sustainable production criteria can be met.

LACK OF TECHNICAL EXPERTISE

If suppliers recognize rising demand in their industrial sectors for sustainable production or have been given sustainability standards with which they must comply to continue supply relationships with existing customers, they may not have the technical capabilities necessary to make all the changes necessary to respond to new demand. Even where enterprises have long-standing relationships with downstream customers, it may not be possible for those customers to supply much, if any, assistance to their suppliers. And, as previously discussed, most SMEs in the developing world do not, in any case, have the existing relationships with large corporation buyers that might help them get outside technical help.

Lack of technical expertise has long been recognized as a key barrier to the uptake of sustainable production techniques, both in the context of SSCM and more broadly in discussions of implementing any sustainable production project. Many programmes have worked to increase the technical knowledge of enterprises, especially SMEs, and the SWITCH-Asia programme is no exception. All of the projects reviewed for this thematic study therefore provide some level of technical support to participants to help them meet standards for sustainable production.

The Sri Lankan Key Exports project has as a key focus training and technical assistance. Focusing initially on completing an extensive study of the value chains associated with five sectors identified as key export sectors for Sri Lanka's economy, the project will tailor assistance to help enterprises respond to international demand for more sustainable products and work in cooperation with industry and government to raise government standards to bring them in line with international norms. At the same time, the project is seeking to increase local technical capacity to provide the types of technical assistance that will be required by Sri Lankan enterprise as demand for sustainable products increases.

In Mongolia, the Green Products Challenge invites Mongolian enterprises to submit proposals for the development of improved "green products." Enterprises with the best ideas will be selected to receive technical assistance to develop those products and marketing assistance to promote them to potential buyers. The Green Products Challenge also plans to assist participating enterprises that wish to obtain Mongolia's Green Label and other applicable certifications for their products.

The Rattan project is already working, in partnership with IKEA to some extent, to introduce more sustainable production methods to rattan processors. Some early participants have already made changes based on guidance from the project (see the sidebar in the discussion of supply

chain organization for highlights of the early results of some of those changes). Over time, the newly formed Rattan Association is expected to become a focal point for providing ongoing training to rattan processors.

In China, the Wood Products project offers a wide range of technical assistance related to compliance with CoC and forest certification requirements to enterprises signing on to the GFTN.

Where necessary changes to production processes require significant capital investment, the cost of these changes could be an ongoing barrier to enterprises' ability to respond to demand for sustainable goods, especially SMEs. The Green Products project in Mongolia has anticipated this need and hopes to be able to assist enterprises participating in the Green Products Challenge with access to financing in order to complete development of their proposed sustainable products.

INADEQUATE PRODUCT QUALITY AND/OR QUANTITY

Even if they have the technical capabilities to meet requirements for sustainable production, many enterprises, especially SMEs, may find that they lack the expertise to produce goods of a quality or design that is desired by the market or in quantities to satisfy large buyers. This is a particular issue for enterprises interested in moving into the export market and responding to international demand for sustainable goods. To the extent that increasing international demand for sustainably produced goods is expected to be a significant driver to engage developing world SMEs in sustainable production, this hurdle needs to be addressed directly. Rattan processors in Cambodia face precisely this problem. As very few rattan products are currently sold outside the country, and the relatively small export trade is primarily within Asia, Cambodian processors have little experience with or knowledge of European markets. At the same time, the potential to begin trade with European companies is a major incentive being offered by the Rattan project to recruit processors to engage in sustainable practices. If the rattan processors are unable to sell to European buyers, there may be less incentive for them to participate in the project or implement changes needed to improve their production processes.

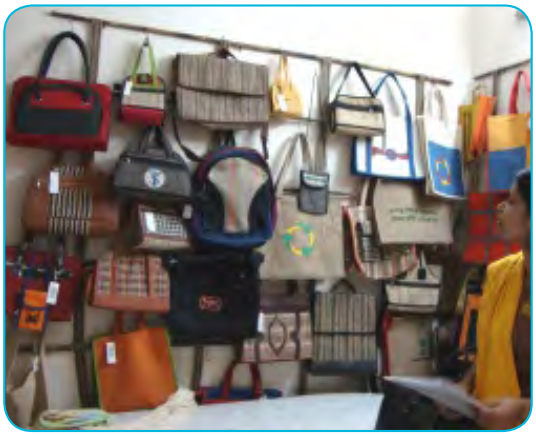
"Even if they have the technical capabilities to meet requirements for sustainable production, many enterprises, especially SMEs, may find that they lack the expertise to produce goods of a quality or design that is desired by the market or in quantities to satisfy large buyers"

To address the quality issue, the Rattan project plans to provide technical assistance in design to participant processors. The design assistance will be provided by students from Lund University in Sweden, and will help the processors redesign their products to align them with European tastes. Design changes will also have a sustainability side benefit, namely, the design assistance also will include guidance on how to design furniture that maximizes the use of rattan and minimizes waste, including the use of toxics.

Increasing the quantity of goods furnished to provide a reliable supply to European buyers such as IKEA presents an additional challenge. While one factory can make design changes that will meet European tastes, most SME rattan processors will be unable to increase production to meet a large buyer's needs. To address this issue, the Rattan project will rely on the new Rattan Association to organize smaller processors into groups that can collectively manufacture products to sell internationally to large purchasers. Growing demand for rattan furniture in Europe is a significant incentive for Cambodian processors, but comes with a danger. Increasing production also means increasing the quantity of rattan harvested by villagers. Without adequate measures, increased demand for raw rattan might result in an increase in illegal harvest. The Rattan project hopes that its simultaneous work with rattan villages increase rattan supplies in a sustainable manner and reinforce the need to manage rattan resources can help mitigate this risk.

OPPORTUNITIES TO ENHANCE SUPPLY CHAIN ENGAGEMENT IN SWITCH-ASIA PROJECTS

The projects reviewed for this thematic study reveal a wide range of activities currently being implemented by the first phase of SWITCH-Asia projects that seek to use supply chain engagement to promote the uptake of sustainable production. At the same time, the review reveals opportunities that these (and other projects) might want to consider implementing to enhance the impact that supply chain engagement has on project outcomes. Also, the review of current projects suggests areas of opportunity that future project proposals could consider when developing new project designs. Specifically, the following opportunities have been identified:



Expand the scope of projects to include more actors in the supply chain. Some of the first phase SWITCH-Asia projects engage only a portion of the supply chain associated with a particular sector. For example, the Wood Products project focuses primarily on raw materials supply. The Key Exports project is implementing a range of activities that target various supply chain elements, but those activities are generally not integrated with one another. Building on wood processor interest in ensuring that their raw materials come from certified forests, it might be possible, for example, to introduce sustainable production concepts at the production level through additional technical assistance provided through the GFTN. Explicit integration of activities to link various elements of the supply chain might enhance participant knowledge and help expand project activities to a wider group of enterprises.

Use supply chain engagement as a project recruiting and replication tool. Because current projects are still in their initial phases, it might be possible to use supply chain linkages to generate additional participation by SMEs. Projects could encourage participants to identify and recruit suppliers. Such recruitment might have the advantage of securing a more engaged group of participants if suppliers see an advantage in working with their customers in the project. Bringing in suppliers also could be used as a project replication tool if participants are trained in sustainable production concepts and techniques, and are then encouraged to pass this information on to suppliers. For example, the Green Products project might be able to expand its reach by encouraging the participation of "supply teams" in its Green Products Challenge, rather than single enterprises. Any project engaged in providing technical training to participants might be encouraged to include training on supply chain management.

Build on projects with international trade focus. As discussed above, while using the potential to engage in international trade can be an effective incentive to implement sustainable production techniques, a significant number of enterprises either will not be able to engage in export or will not have the interest to do so. Highlighting the achievements of participants who are preparing for international trade through publication and dissemination of success stories or through other means might help generate interest in sus-

tainable production among enterprises serving the domestic market and expand awareness of how sustainable production can be a benefit to all enterprises. Raised awareness might promote replication in enterprises focused solely on the domestic market.

Include project elements to raise domestic consumer awareness, where appropriate. Specifically due to the limitations of reliance on international demand for sustainable products to promote more widespread uptake of SCM principles, projects could be encouraged to include elements designed explicitly to increase domestic consumer awareness of the value of sustainable products. These elements might include public campaigns (possibly in partnership with relevant government agencies, where feasible and appropriate) or trade fairs aimed at introducing local consumers to SCM principles and products produced locally using those principles.

Engage policy makers more broadly, where appropriate. It is clear that policy has a strong role to play in promoting SSCM and more broadly, in promoting sustainable production. Projects already engaged with policy makers on issues related to labelling programmes, for example, might be able to use that opportunity to engage policy makers on other issues, such as the establishment of proper laboratories or legal frameworks to set standards to level the playing field for enterprises voluntarily improving sustainability performance. Other projects engaging policy makers on issues related to sustainable raw material supply might also be able to leverage that work to include policy on sustainable production at the manufacturing level.

Use current SWITCH-Asia projects as examples that could be applied in other areas. Some current projects are engaged in innovative activities that might prove successful in other, related sectors. New projects, for example, might look at how the Rattan project has organized the rattan supply chain to plan projects that implement similar activities for other non-forest timber products or raw materials sectors.

Address concerns about SMEs being shut out of trade, due to inability to comply with increasing demand for sustainably produced goods. Increasing interest in sustainability among large TNCs brings with it the danger that developing country SMEs will be shut out of supply chains and therefore trade, due to their inability to meet standards imposed by these large companies or even to access networks in order to participate in sustainable supply chains. A future SWITCH-Asia project might look at activities designed to help bring SMEs into these supply chains or identify sectors where sustainable production and supply chain management are playing significant roles in that sector's development and build project activities around ways to improve the suppliers that large enterprises can access.

Plan projects around sectors experiencing shortages of supply. The Rattan project built on earlier IKEA interest in improving the sustainability of rattan harvest and processing. IKEA's interest was in ensuring its own continued access to sustainably produced rattan furniture in the face of growing European demand. There may be other sectors facing similar situations and with large TNCs that would be effective partners in working with suppliers and potential suppliers to implement sustainable production.

Improve understanding of SSCM among potential project proposers. It is clear, despite some of the innovative approaches to SSCM being implemented by SWITCH-Asia projects that SSCM is not well understood in some places. The SWITCH-Asia programme itself might consider providing more information on SSCM and its potential to encourage uptake of sustainable production. Such information might help enhance current supply chain engagement and encourage future projects to more explicitly incorporate supply chain engagement into their projects.

CONCLUSIONS

While none of the projects reviewed for this thematic study are directly engaged in sustainable supply chain management, each of them is engaged in activities that are related to the improving the conditions necessary for effective sustainable supply chain management to take place. While it is too early in the lives of each these projects to know what specific project outcomes will be, improvements to the conditions necessary for successful SSCM could have significant positive impacts in terms of the uptake of sustainable consumption and production (SCP) and for replication of project results.

SCP UPTAKE AND REPLICATION

SSCM harnesses market forces to amplify consumer demand for more sustainably produced goods from end producers up the supply chain. Within existing projects, there is early evidence that SSCM principles are helping to encourage uptake of SCP among direct project participants. To the extent that current projects are able to make lasting improvements to conditions for necessary for effective SSCM, it could be expected that further opportunities for SCP uptake and replication of project outcomes will be enhanced as well.

OPPORTUNITIES TO ENHANCE SUPPLY CHAIN ENGAGEMENT

At the same time, since each SWITCH-Asia project is engaging only portions of the supply chains with which they are involved, opportunities exist for additional engagement in current projects and for enhanced engagement in future projects that could further advance the impact of SWITCH-Asia projects on uptake of SCP. These opportunities include building on current engagement activities to further the reach of existing projects and expand recruitment of project participants, as well as opportunities to use lessons learned from current projects to implement similar activities in other areas, address remaining barriers limiting conditions for successful supply chain management, and implement projects with expanded supply chain engagement.

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