

Green Public Procurement of Costa Rican Products to the European Union

Cámara de Industrias de Costa Rica

Alexandra Gunderson

Jennifer Maurer

Angelica Wzorek

Presented to:

Professors Isa Bar-On and Susan Vernon-Gerstenfeld

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Doña Elisabeth Duerr
Asesora en Comercio Exterior y Medio Ambiente
Experta Integrada CIM
Cámara de Industrias de Costa Rica
San José, Costa Rica

Dear Doña Duerr:

Enclosed is our report entitled Green Public Procurement of Costa Rican Products to the European Union. It was written at the Cámara de Industrias de Costa Rica during the period of October 20 through December 9, 2008. Preliminary work was completed in Worcester, Massachusetts, prior to arrival in Costa Rica during the period of August 26 through October 16, 2008. Copies of this report are simultaneously being submitted to Professors Susan Vernon-Gerstenfeld and Isa Bar-On for evaluation. Upon faculty review, the original copy of this report will be catalogued in the Gordon Library at Worcester Polytechnic Institute. We appreciate the time that you, Don Luis Obando, Don Enrique Acuña, and Doña Luisa Díaz have devoted to this project with us.

Sincerely,

Alexandra Gunderson
Jennifer Maurer
Angelica Wzorek

Report Submitted to:

Susan Vernon-Gerstenfeld and Isa Bar-On

Costa Rica Project Center

By

Alexandra Gunderson _____

Jennifer Maurer _____

Angelica Wzorek _____

In Cooperation With

Elisabeth Duerr, Asesora en Comercio Exterior y Medio Ambiente

Luis Edo. Obando R., Comercio Internacional

Enrique Acuña Cartín, Director Comercial Regional

Luisa M. Díaz Sánchez, Asesora en Competitividad y Medio Ambiente

of the

Cámara de Industrias de Costa Rica

**GREEN PUBLIC PROCUREMENT OF COSTA RICAN PRODCUTS
TO THE EUROPEAN UNION**

December 10, 2008

This project report is submitted in partial fulfillment of the degree requirements of Worcester Polytechnic Institute. The views and opinions expressed herein are those of the authors and do not necessarily reflect the positions or opinions of the Cámara de Industrias de Costa Rica or Worcester Polytechnic Institute.

This report is the product of an education program, and is intended to serve as partial documentation for the evaluation of academic achievement. The report should not be construed as a working document by the reader.

EXECUTIVE SUMMARY

Green public procurement is defined as the purchase of environmentally-friendly products using taxpayer money for public institutions such as jails, schools, and hospitals. The European Union has global initiatives aimed towards promoting sustainability; and Costa Rica is interested in expanding their trade agreements and international presence. For these reasons, the Cámara de Industrias de Costa Rica is interested in identifying business opportunities related to green public purchases of France, Germany, Italy, and Spain.

This project was performed as an exploratory study in which the three objectives were to:

1. Determine the feasibility of Costa Rican companies entering the green sector of the public market of the European Union.
2. Determine the preparedness of Costa Rican companies to meet the criteria of green public procurement within the European Union.
3. Analyze results from Objectives One and Two and use this information to identify the gap between Costa Rican practices and the criteria of European green public procurement. This resulted in the formation of recommendations to CICR regarding facilitating procurement of Costa Rican goods to the European Union.

These objectives were accomplished through internet research, correspondences with experts on the public market, and interviews with companies in the sectors of focus. The results from these objectives will be used by CICR as a pre-test for assessing feasibility of exporting to the public market in the future.

Research on the market of the European Union showed that the GDP in 2007 was \$14.43 trillion, where public procurement accounts for 16 percent of the EU's GDP or \$2.308 trillion. Of the \$2.308 trillion, 0.35 percent accounts for the value of the contracts awarded to firms

outside of the EU. This percentage represents \$8.08 billion, which is approximately 18 percent of Costa Rica's GDP. Therefore, it is economically advantageous for Costa Rica to seize opportunities available in the public sector of the EU.

To determine the product sectors of focus, we used the Tenders Electronic Daily page of the *Europa* website to access tenders posted by public authorities of France, Germany, Italy, and Spain. The tenders indicated a common need for furniture in the public markets of these countries. With guidance from CICR and Procomer, we determined that the project would also focus on the processed foods sector.

Upon deciding the product sectors of focus to be furniture and processed foods, we arranged company visits with two processed foods companies, A and B, and two furniture companies, C and D. Company A is a processed fruits company producing jams, marmalades, and fruit pastes. Company B produces spices and condiments. Companies C and D manufacture wooden furniture, couches, and cushioned chairs.

After visiting these companies, we determined that compliance with the criteria varied, although the interest in exporting to the EU was common to all. The results to the different sections of the questionnaires were divided into levels of the companies' compliance with the criteria:

1. High Compliance
 - a. Energy Usage
 - b. Water Usage
 - c. Solid Waste Management
 - d. Recyclable Packaging
 - e. Life-cycle

- f. Certified Timber Usage
2. Low Compliance
 - a. Organic Ingredients
 - b. Pollution Reduction
 - c. Harmful Chemical Content
 3. Insufficient Information to Determine Compliance
 - a. Reduction of Solid Waste During Harvest
 - b. Reduction of Solid Waste During Transportation
 - c. Aspects of Green and Organic Growing Processes

Overall, we determined that in order for the companies in Costa Rica to be prepared to export to the EU, several changes and implementations would be necessary. Most importantly, the companies must have access to the green public procurement criteria in order to make the changes necessary to export green products to the public sector. Once the companies understand the criteria and exportation process, CICR will be able to assess the companies using the pre-test questionnaire used during this exploratory study. Third-party certifiers must be available to assess companies and products by EU GPP criteria. In addition, it is necessary for Costa Rica to have a more accessible program to dispose of hazardous substances, such as chemicals used in varnishes and paints, separately from municipal trash. By presenting the series of case studies as an exploratory study to the Cámara de Industrias de Costa Rica, we anticipate the agency will be in a better position to assist and support their growing companies.

ABSTRACT

This report, prepared for the Cámara de Industrias de Costa Rica, contains the results of an exploratory study. We first determined that the green public market of the European Union could hold opportunities for outside countries, such as Costa Rica. We analyzed four case studies and pre-tested a method for CICR to use in order to assess the preparedness of Costa Rican companies. We developed a questionnaire incorporating European Union green public procurement criteria and green practices for each of the chosen product sectors. Using the results of the company interviews, we have identified the necessary changes required for exportation and a method for CICR to adapt to make further assessments of company preparedness.

AUTHORSHIP PAGE

Each group member, Alexandra Gunderson, Jennifer Maurer, and Angelica Wzorek, has contributed equally throughout the development of this report. All members have expended equivalent efforts researching, interviewing, writing, and revising each chapter of this report.

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We would like to express our appreciation to Professors Susan Vernon-Gerstenfeld, Isa Bar-On, and Thomas Robertson for their consistent support and guidance during this project. Their guidance is evident in the quality of work that they have always demanded and is represented here in this report. We would also like to thank the Cámara de Industrias de Costa Rica for sponsoring us for the past several weeks. In particular, we would like to thank Doña Elisabeth Duerr, Don Luis Obando, Don Enrique Acuña, and Doña Luisa Diaz for their dedication and help throughout the project. Most of all, we would like to extend our love and appreciation to our parents, who besides supporting us throughout our endeavor have given us the opportunity for this experience.

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CHAPTER ONE: INTRODUCTION

Costa Rica is a Latin American country with experience in trading with two major world powers—the United States and China. Although no formal trade agreement has yet been affirmed, negotiations between Costa Rica and the European Union are in progress as Costa Rica seeks to expand trade with another major world power (Eurocentro, 2008).

With a population of 490 million, the European Union (EU) represents a large share of world trade and holds one quarter of the world's wealth (European Union, 2008; *The European Union in the World: Delegations*, 2008). With a market worth over \$14 trillion, the European Union could provide trade opportunities for Costa Rica (European Union, 2008; Central Intelligence Agency, 2008).

The Costa Rican government is concerned with the growth of its economy and foreign trade; however, it is also concerned with the sustainability of the environment for future generations (Costa Rican President Arias, 2008; World Bank, 2008). As environmental issues become a global concern, both Costa Rica and the European Union are searching for innovative methods to improve the quality of the environment. Costa Rican President Oscar Arias Sánchez has recently called for several courses of action to improve environmental sustainability in Costa Rica (Costa Rican President Arias, 2008). The EU has also adopted standards for clean energy sources and sustainable technologies, organic foods, and recyclable plastics (*Sustainable Development*, 2008). The green initiatives of both parties indicate a common interest in the preservation of the environment and the growth of their economies. Green public procurement to the European Union could allow Costa Rica to accomplish two national desires: develop the nation's economy and produce environmentally-responsible goods.

Costa Rica's current industry demonstrates a wide range of products that could have the potential to compete in the European Union's public market; these products may include processed fruits and furniture (Export Companies of Costa Rica, 2008; Fruit, Vegetables and Related Products, 2008; Search Results: Furniture, 2008). By utilizing the green procurement criteria for the EU public market, Costa Rican companies could ensure that their products meet the standards and thus, export to a new sector of the European economy. This expansion of trade requires Costa Rican companies to take extra steps to become green certified and conform to the criteria of the public purchasing authorities of the European Union.

The goal of this project was to determine a method for analyzing the possibility of Costa Rican companies exporting processed foods and furniture to the public sector of the European Union. In order to understand the green public market opportunities, it was necessary for us to conduct extensive research regarding Costa Rican products, the tenders of the European Union's public market, and the green public procurement policies of the EU. We obtained this information through publicly-available government documents, resources from the Cámara de Industrias of Costa Rica (CICR) and Procomer, and interviews with experts on export markets.

The objectives of this project were to:

1. Determine the feasibility of Costa Rican companies entering the green sector of the public market of the European Union.
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3. Analyze results from Objectives One and Two and use this information to identify the gap between Costa Rican practices and the criteria of European green public

procurement. This resulted in recommendations to CICR regarding facilitating procurement of Costa Rican goods to the European Union.

CHAPTER TWO: BACKGROUND

In an effort to increase international trade, Costa Rica is seeking to expand its export to the European Union. With Costa Rica's commitment to create a more sustainable environment and the European Union's green initiatives, Costa Rica could accomplish their goal by focusing on green public procurement. The procurement of green Costa Rican goods to the public sector of the European market could increase Costa Rican exports while minimizing the impact on the environment. This chapter provides background information on sustainable development initiatives, Costa Rica's economy and international trade, the European Union's public market, and green public procurement.

SUSTAINABLE DEVELOPMENT

Sustainability is often used as a paradigm for development by both governmental and non-governmental organizations, but it cannot be easily defined (Lele, 1991). As human activity continues to have a negative impact on the environment and natural resources continue to be depleted, it is necessary to adopt a common understanding of what it means for a country to be sustainable. In 1987, the World Commission on Environment and Development held the Bruntland Commission due to an increasing concern for the deterioration of the human environment (Bruntland Commission, 1987). The Commission released a report, *Our Common Future*, which defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" and called for action within world governments (Bruntland Commission, 1987). Despite the fact that this definition was written to define a concept that is now two decades old, it is still viable today.

The Oxford English Dictionary provides a similar, yet more general definition, and identifies sustainable development as "forms of human economic activity and culture that do not

lead to environmental degradation” (Simpson, 2001). U.S. Census Bureau provides another definition, which claims that sustainable development is “achieving economic and social development in ways that do not exhaust a country's natural resources” (World Population Profile: 1996, 2007). Regardless of precise wording, these definitions have a common ground in the preservation of the human environment. The idea of preserving the environment has been the basis of many commissions and policies developed over the past two decades. For the purpose of this project, the definition from the Brundtland Commission will be used to describe sustainable development.

The issue of sustainable development was first brought to the attention of the United Nations on the agenda of the Conference on the Human Environment of 1972 (Background: Earth Summit, 1997). The Conference focused on the preservation of the world, its resources, and the human environment, thus leading to the formation of the United Nations Environment Programme (United Nations Environmental Programme, 1972; Background: Earth Summit, 1997). Despite good intentions of all parties involved in the Programme, little was done to integrate the concerns addressed into governmental initiatives and legislation according to the authors of Background: Earth Summit (1997).

It was the Earth Summit of 1992 that catalyzed the implementation of sustainable development by governments around the world (Background: Earth Summit, 1997). The Summit called for the creation of practices that regulated manners in which human action affects the environment (Background: Earth Summit, 1997). The Summit was responsible for the creation of the United Nations’ Commission on Sustainable Development, which is responsible for the effective follow-up and monitoring of the Earth Summit and Agenda 21 agreements (UN Department of Economic and Social Affairs: Division for Sustainable Development, 2007).

These organizations and documents currently regulate production, trade, and labor laws by minimizing the impact of humans on the environment and its resources.

In anticipation of a new round of negotiations from the World Trade Organization (WTO), the European Commission created the First Sustainability Impact Assessment (SIA) in 1999 (Sustainability Impact Assessment, 2006). The purpose of the Assessment is to examine all aspects of environmental trade impact during negotiations.

Due to these initiatives, policy-makers and legislatures consider sustainable development and the sustainability of specific practices as a top priority during the decision-making process (Trade and Environment, 2007). The European Commission claims that opening new trade agreements can lead to improved environmental sustainability through a better use of resources, an expansion of job markets, and a growth of economic development (Sustainability Impact Assessment: FAQs, 2005). The European Commission goes on to say that despite the benefits, liberalization of trade can also create a negative impact on sustainability if the necessary framework is absent within the domestic economy (Sustainability Impact Assessment: FAQs, 2005). By balancing the advantages and disadvantages, an economy can maximize growth and trade while minimizing harmful effects on the environment.

COSTA RICA

Costa Rica is often identified as a developing country, but with a successful economy and tourism industry, it is quickly approaching other developed nations.

Costa Rican Economy and Trade

Costa Rica's economy is one of the strongest in Central America (Kloninger, 2008). According to Kloninger, Costa Rica has managed to move past its days as an agriculture-based "Banana Republic" and become a top exporter of computer chips, medical equipment, coffee,

bananas, and textiles (2008). The United States is one of the major export destinations of Costa Rica along with France, Germany, and Italy (Trade: Business - Numbers and Statistics).

In recent years, the economy of Costa Rica has expanded due to trade with both China and the United States. According to the U.S. Department of State, the United States accounts for almost half of Costa Rica's exports, imports, and tourism (2008). The United States also accounts for two-thirds of Costa Rica's foreign investment (United States Department of State, 2008). In 2007, Costa Rica established formal diplomatic ties with China, which made it Costa Rica's second largest trading partner after the United States (Wei, 2007). The gross domestic product of Costa Rica was \$45.77 billion in 2007 with its net exports estimated to be about \$8.20 billion in 2006 (Central Intelligence Agency, 2008; United States Department of State, 2008).

Costa Rican Sustainability

As with the growth and industrialism of Costa Rica, environmental concerns, such as the preservation of natural resources and biodiversity, have arisen. According to the United Nations statistics on Costa Rica, 23 percent of the surface area within the country is protected for biodiversity, while the percentage of surface area protected in France, Italy and Spain is 13, 12, and 8 percent, respectively (Environment Statistics Country Snapshot, 2008). Costa Rica has set aside nearly twice as much land percentage as France and Italy and three times as much as Spain, which indicates the importance that Costa Rica places on environmental stewardship (Environment Statistics Country Snapshot, 2008). The significance that Costa Rica places on sustainability is clear, considering 80 percent of their energy is from clean sources, such as hydroelectricity, geothermal energy, and wind power (Environment Statistics Country Snapshot). This number can be compared with 12 percent in Spain, 5 percent in Germany, 17 percent in Italy, and 11 percent in France (Environment Statistics Country Snapshot, 2008).

Costa Rica is an active member of the Central American-United States Joint Accord (Signing of Expanded Central American-United States Joint Accord, 2001). This agreement supports four main aspects of environmental actions: conservation of energy, environmental legislation, conservation of biodiversity, and sustainable development within the economy (Signing of Expanded Central American-United States Joint Accord, 2001). Signed in 1994 and renewed in 2001, this agreement allows the United States to assist Central American countries with environmental endeavors such as protecting marine-coastal areas, creating new national environmental laws, and promoting environmentally-conscious products and eco-labels (Signing of Expanded Central American-United States Joint Accord, 2001). Costa Rica's active participation in the Accord provides evidence of the country's commitment to the preservation and sustainability of the environment.

THE EUROPEAN UNION

Currently, Costa Rica is in the process of negotiations with the European Union to further expand trade (Eurocentro, 2008). The European Union represents the economies of twenty-seven European countries, altogether comprised of almost half a billion people (EU at a Glance: Key Facts and Figures About Europe and the Europeans, 2005).

European Union Procurement and Trade

Public procurement in the European Union is about 16 percent of the EU's GDP or €1500 billion (European Commission, 2008). The internal market of the European Union provides significant competition among member states and their providers of goods which therefore gives competitive prices to public authorities (European Commission, 2008). Public procurement in the European Union is often used as a way to encourage a "buy national" policy where specific sectors or regions are targeted for growth (Mardas, Papachristou, & V, 2008). These preferences

may be seen as a non-tariff barrier for foreign products in the domestic market of the European Union member states (Mardas, Papachristou, & V, 2008).

Free trade agreements and preferential trade is a large part of the European Union's foreign trade negotiations (Manchin, 2003). For those without free-trade agreements with the European Union, tariffs are often elevated and access to the market may be limited (Manchin, 2003). As the EU offers preferential-trade quotas for countries in free-trade or bilateral agreements, cost is lower for those countries' products within the EU's public market. For countries such as Costa Rica, this means that companies need to have a better product or lower price in order to be competitive within the European market. This can be identified through an example of the recent loss of the Nigerian cocoa processors when they failed to sign a free-trade agreement with the European Union after enjoying a period of duty-free trade with the EU (Boyle, 2008). The Nigerian cocoa market became dependent on European purchasers, which bought 90 percent of their raw and processed cocoa (Boyle, 2008). When the increased tariffs and duties were again implemented after the duty-free period, the cocoa processors were crippled in the fight to stay afloat in a competitive market (Boyle, 2008). Meanwhile, other cocoa-producing countries with free-trade agreements dominated the EU market and were able to easily undercut Nigerian cocoa products (Boyle, 2008).

European Union Sustainability

In 2001, the European Union implemented the first Sustainable Development Strategy, which has since been updated in 2006 (Selection of Legislation and Initiatives 2001-2004, 2007). The strategy encourages the members of the European Union to explore renewable energies, and find sustainable methods to manage natural resources and transportation. These initiatives are focused on establishing a healthier place to live and slowing the process of climate change by

focusing on environmentally-conscience practices (Selection of Legislation and Initiatives 2001-2004, 2007).

To facilitate its member nations and help them understand the new sustainable initiatives, the European Union has implemented several policies and awards. These have been established to orient citizens and nations to create a more sustainable Europe. For consumers of EU member countries, it is now possible to find an “eco-label” on products indicating that it has passed testing that identifies it as sustainable (European Union Eco-label Homepage, 2008). The European Union has also laid the framework for sustainable “energy-using products,” which establish the requirements for an environmentally-friendly and energy-efficient product (Eco-Design of Energy-Using Products Overview, 2007).

For European consumers, environmental concerns have emerged as a priority (Rosen & Sloane, 1995). While producers can assure consumers that the products on the shelf are green, without standards their claims are useless. The International Standards Organization provides ISO 14024, 14021, 14025 as regulations to evaluate products. These regulations credit claims made by manufacturers that their product meets a standard of a third party regulator (Allison & Carter, 2000). According to ISO 14020, the ultimate goal of all environmental labels is to increase the demand of products and services that are less stressful to the environment and thereby stimulate the potential market to influence environmental improvement (Allison & Carter, 2000).

For European public authorities on trade, the introduction of the Sustainability Impact Assessments by the European Commission has become an important part of assessing trade by determining its impact on the environment (Sustainability Impact Assessment, 2006). The SIA takes into account all environmental effects of production, transportation, use, and disposal of a

product (Sustainability Impact Assessment, 2006). It has created an integrated approach to accountability in trade policy and decision making (George & Kirkpatrick, 2004).

GREEN PUBLIC PROCUREMENT

Green public procurement of Costa Rican products to the European Union may be a method of improving the economy of Costa Rica and maintaining ideals of environmental stewardship of both countries. Public procurement has been defined by the European Commission as “the process used by governments, regional and local public authorities, or bodies governed by public law to obtain goods and services with taxpayer money” (Green Public Procurement, 2008). When these purchases take environmental factors into account, the procuring process is considered “green,” and termed “green public procurement” (Green Public Procurement, 2008). GPP can be viewed as a more specific aspect of sustainable public procurement. Sustainable public procurement places focus on the economy, society, and environment, while green public procurement focuses only on the environment and how it is affected by the production, use, and disposal of goods and services (Green Public Procurement, 2008).

The European Commission claims that a GPP policy benefits the future market and will create sustainable growth, new jobs, development of businesses, and global markets (Commission of the European Communities, 1996). GPP will also provide taxpayers with goods and services that minimize negative effects on the environment (Commission of the European Communities, 1996). The European Commission argues that by creating guidelines and plans of action that require public authorities and providers to consider environmental factors when accepting tenders, the European Union will receive the benefits of GPP while encouraging sustainable development (Commission of the European Communities, 1996).

There are three different types of procurement within the public sector—supplies, services, and work contracts. Supply contracts are comprised of the purchase or lease of consumable goods, which may include agricultural products, technological equipment, and wood products (Background, 2005). Service contracts deal with services such as maintenance of facilities, banking services, and public transportation (Background, 2005). Work contracts, or terms of labor or construction, may include construction of buildings and bridges, civil engineering work, and installation of plumbing and electric (Background, 2005). Each of these can be purchased and utilized as an avenue of green public procurement (Background, 2005). By establishing criteria, all public procurement has the ability to be green processes within Europe's market.

The European Commission has created a handbook for the purpose of guiding public authorities through the green public procurement process. The handbook addresses the benefits of following a green public procurement process, and gives examples of how these practices can be implemented (Commission of the European Communities, 2004).

At the Green Public Procurement Conference in Graz, Austria in April of 2006, EU country leaders discussed the implementation and benefits of GPP action plans (Green Public Procurement: The Graz Final Report, 2006). Prior to the conference, fifteen member states were expected to adopt national plans of action, but according to Herbert Aichinger, the Head of Unit of DG Environment for the European Commission, a study in 2006 found that only seven countries have incorporated environmental criteria in their bids (Green Public Procurement: The Graz Final Report, 2006). The conference also discussed the benefits of examining the life-cycle cost of a product, which takes into account the cost of a product from its manufacturing through use and disposal. Gerhard Lang, the Project Manager of Graz Energy Agency, claimed that when

looking at the life-cycle cost of a product, the benefits of green products are significantly higher than those of non-green products (Green Public Procurement: The Graz Final Report, 2006). Lang stated that when green criteria are missing from the procurement process, the costs will be higher than that of purchases made using the GPP process (Green Public Procurement: The Graz Final Report, 2006).

European Member States of Green Public Procurement

As of 2006, ten members of the European Union had adopted national plans of action with focus on green public procurement and other aspects of sustainable development (Green Public Procurement, 2008). Of the members of the European Union, seven member states have become known as the Green-7, meaning that they have implemented more elements of GPP than other European countries; these seven countries are Austria, Denmark, Finland, Germany, Netherlands, Sweden and the United Kingdom (Green Public Procurement, 2008). The national plans of action developed by each country were established in addition to the plans agreed upon by the European Commission. The plans of each country studied in this report are briefly explained in the following paragraphs.

France's plan of action was adopted in March of 2007 incorporates several goals targeting green public procurement (European Commission, 2008). These include transportation vehicles, requiring 20 percent of total annual renewal to be "clean" vehicles (European Commission, 2008). It also stipulates that 20 percent of all new construction comply with EU standards, and strives for 100 percent of all wood products to be sustainable by the year 2010 (European Commission, 2008).

Germany requires purchasers to consider issues relating to the production, recycling, and repair of goods before beginning the procurement process (European Commission, 2008). There

is also a federal agreement to only use sustainable wood sources and develop land according to ecological standards of the EU (European Commission, 2008). In 2007, Germany also adopted a new strategy to enhance national GPP with a focus on green energy (European Commission, 2008).

Italy also has a significant plan of action in place to regulate GPP. The plan at the federal level was signed in April of 2008 (European Commission, 2008). It requires that 30 percent of goods purchased comply with ecological standards or use recycled materials (European Commission, 2008). An additional 30 to 40 percent of goods must utilize less electricity during production and use (European Commission, 2008).

Spain has also adopted a national plan of action as of January 2008 (European Commission, 2008). It consists of an agreement of the Council to implement GPP in federal public bodies and practices (European Commission, 2008).

Challenges Facing Green Public Procurement

In addition to the benefits green public procurement can generate for businesses, governments, and the environment, there are several significant obstacles that remain (Green Public Procurement, 2008). The European Commission claims that there is a perception of high financial costs often associated with GPP (2008). Many effects cannot be given a monetary value, and therefore, make it difficult to compare costs and benefits (2008). Many administrators and decision-makers often lack environmental knowledge that is vital to the creation of environmental criteria, according to the European Commission (2008). These authorities may also lack management support, practical tools and information, and the training necessary to develop, implement, and regulate standards regarding GPP (Green Public Procurement, 2008).

The United Kingdom's Sustainable Procurement Task Force has also identified several practical barriers to GPP. These include insufficient supply of green products, implementation gaps, and dilution of policies (Sustainable Development: The UK Government's Approach, 2008). The Task Force emphasizes the need for communication between local authorities regarding the supply of green goods (2008). A high level of commitment does not necessarily assure implementation of GPP (Sustainable Development: The UK Government's Approach, 2008). Poor understanding often leads to gaps between policies and practices, as well as a dilution of standards from a better value to a cheaper price (Sustainable Development: The UK Government's Approach, 2008).

CHAPTER THREE: METHODOLOGY

The overall goal of this exploratory study was to determine a method of accessing the feasibility of Costa Rican companies exporting green products to the public market of the European Union by identifying criteria, market statistics, and the gap between Costa Rican practices and green public procurement criteria.

The objectives for this project were:

1. Determine the feasibility of Costa Rican companies entering the green sector of the public market of the European Union.
2. Determine the preparedness of Costa Rican companies to meet the criteria of green public procurement within the European Union.
3. Analyze results from Objectives One and Two and use this information to identify the gap between Costa Rican practices and the criteria of European green public procurement. This resulted in the formation of recommendations to CICR regarding facilitating procurement of Costa Rican goods to the European Union.

INTERNET RESEARCH

Due to the nature of this project, internet research was a useful tool in obtaining preliminary information.

Determining Feasibility

In order to determine the feasibility of Costa Rican companies succeeding in the public sector of the European Union market, we conducted research regarding market statistics from economic journals and past studies available publicly through the Europa website.

Identifying the Product Sectors

We identified the product sectors of focus in order to restrict the research space to provide a more detailed analysis. We determined the sectors using the Tenders Electronic Daily webpage of the Europa website. This site allowed us to view the public tenders for France, Germany, Italy, and Spain. In addition, CICR and Procomer assisted in the determination of the product sectors.

Identifying the Green Product Procurement Criteria of the European Union

We found the criteria regarding the green public procurement of products within the selected sectors through resources available on the Green Public Procurement page of the Europa website. This page provided a Toolkit, which contained tables identifying every requirement of goods imported to the public market of the Union. We identified supplementary requirements of organic products through additional research on the Europa website.

CORRESPONDENCES

In order to obtain statistical and regulation information with respect to public procurement in the four countries of focus, we sent emails and made phone calls to the embassies of each country in San José. In addition, we sent emails to economic researchers to obtain to the most recent statistical information.

CASE STUDIES

We conducted case studies on companies to determine what changes must be implemented in order for the manufacturing process to be certified as green according to the standards established by the European Union.

Personnel at the Cámara de Industrias de Costa Rica provided us with the names and contact information of Costa Rican companies producing products within our sectors of focus.

With the help of CICR personnel, we sent emails to these companies requesting a meeting and interview appointment. Of the companies emailed, four companies responded willing to arrange meetings. The case studies will be referred to in this report as Company A through Company D to protect their privacy.

DEVELOPMENT OF QUESTIONNAIRES

Preceding the interviews, we developed two questionnaires using the green public procurement criteria of the European Union, one questionnaire specifically for each sector of focus (see Appendices D and E). The questionnaires closely followed the Green Public Procurement Comprehensive Criteria for Food and Furniture, along with additional organic and green process considerations. The organic regulations were found in the *Official Journal of the European Union* document entitled “Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labeling of organic products and repealing Regulation (EEC) No 2092/91” (European Commission, 2007). The regulations within the document allowed for consideration of organic factors, such as the usage pesticides, genetically-modified organisms, and soil protection, to be included in the questionnaire. We received additional insight from personnel at Centro Nacional para la Producción más Limpia (CNP+L), which led to the incorporation of additional green processes, including energy, fuel, and water conservation. We chose to utilize resources and personnel at CNP+L for their experience using questionnaires to assess clean production in Costa Rica. We translated the questionnaires into Spanish, and emailed copies to the company contact in order to allow preparation for the interview assessment.

EVALUATION OF FEASIBILITY AND PREPAREDNESS

The two questions of feasibility and preparedness drive this analysis to determine the areas in which Costa Rican goods and practices do not meet criteria of the European Union green public procurement.

Feasibility

The evaluation of feasibility allowed estimation of the extent to which Costa Rican companies could penetrate the European Union public market. The lack of availability of a direct statistic stating the size of the market open to non-EU countries required us to calculate the statistic using the available information.

Company Preparedness

The evaluation of company preparedness allowed us to recognize the gaps between current Costa Rican practices and the standards of green public procurement in the European Union.

Following company interviews, we compiled the questionnaire responses. We qualitatively assessed the company responses within each category with regards to the green public procurement criteria. Opinions and comments of the companies regarding problems perceived in exportation to the European Union added detail from the producing perspective. We assessed all categories, which allowed clearer and more detailed view of current practices and the gaps between these practices and the criteria of the European Union. This assessment allowed us to classify each section of our questionnaire as follows:

1. High Compliance

- The majority of the companies interviewed met or exceeded the GPP criteria or green practices in this section.
2. Low Compliance
 - The majority of the companies interviewed did not meet the GPP criteria or green practices in this section.
 3. Unknown Compliance
 - The majority of companies interview were unable to answer the questions in this section.

The information we have gathered is detailed in following sections of this report.

CHAPTER FOUR: RESULTS AND DISCUSSION

In this section, we present the results of the exploratory study using the pre-test questionnaire. Here, we discuss to what extent non-EU countries have been able to penetrate this market and analyze four Costa Rican companies. In addition, we discuss the effectiveness of the questionnaire as a tool for future use by CICR in the assessment of company compliance to the GPP process.

FEASIBILITY OF ENTERING THE EU PUBLIC MARKET

Research yielded documents that showed that the public market of the European Union limits the contracts awarded to outside countries. The public market of the European Union is protected by initiatives, such as “buy-national” and “single market” policies, in addition to tariffs (European Commission, 2008). Together, these policies protect national products and products of the internal market of the European Union. *Better Food, Better Health, Better Environment: The Benefits of Sustainable Food Procurement in Hospitals* shows that foreign processed fruits may encounter difficulty infiltrating the public market of the European Union (Healthcare Without Harm, 2008). This document stressed the importance for hospitals in the EU to purchase “minimally processed, locally produced, organic, seasonal, and fairly traded foods” (Healthcare Without Harm, 2008).

An article written in 1998 titled *Public Procurement Directives in the European Union: A Study of Local Authority Purchasing* emphasized that only a very limited percentage of contracts, 0.35 percent, are awarded to firms in countries outside of the European Union (Martin, Hartley, & Cox, 1998).

Based on our calculations, a small percentage, such as 0.35 percent, of the European Union’s public market could hold large opportunities for Costa Rican companies. In 2007, the

European Union's GDP was valued at \$14.43 trillion (Central Intelligence Agency, 2008). The EU Single Market website states that public procurement accounts for approximately 16 percent of the Union's GDP, thus totaling to \$2.308 trillion (Public Procurement, 2008). Of this, 0.35 percent, or \$8.08 billion, represents contracts awarded to providers outside the European Union in countries such as Costa Rica. This is a small percentage of EU public procurement, but in relation to Costa Rica's GDP of \$45.77 billion, this represents 17.7 percent of the country's wealth (Central Intelligence Agency, 2008).

Thus, the European Union public market holds opportunities for Costa Rican products. The public market has the potential to provide new economic growth and jobs for Costa Rica.

SELECTION OF PRODUCT SECTOR AND COMPANIES FOR THE CASE STUDY

Internet research and review of available tenders provided a picture of what products are needed by the public sector of the European Union. Of the products listed in the tenders, furniture for public spaces such as government buildings, hospitals, and schools appeared to be needed in multiple regions and countries. Through additional research utilizing CICR contacts and *Análisis de Estadísticas de Exportación: Costa Rica*, we determined that the furniture industry of Costa Rica is developed and would likely be capable of exporting to France, Italy, Germany and Spain (Procomer, 2008).

In addition, another potential product sector that would be feasible for export is processed foods. *Análisis de Estadísticas de Exportación: Costa Rica* indicated that the alimentary sector is among the most developed within Costa Rica (Procomer, 2008). Past tenders indicated a trend in the processed food sector of the private regional markets of France, Germany, Italy, and Spain (Advanced Search, 2008). However, the need for processed foods was not evident in the public markets of these countries. For the purpose of this exploratory study, CICR directed our focus to

the processed foods sector to assess the preparedness of the Costa Rican companies if the public market were to become available.

EUROPEAN UNION GREEN PUBLIC PROCUREMENT CRITERIA FOR FOOD AND FURNITURE

This section summarizes the criteria for products involved in green public procurement in the European Union. These tables were adapted from those provided in the European Commission GPP Training Toolkit.

Table 1 summarizes the criteria for food. The criteria focus on ensuring that the food is grown organically, utilizes integrated production methods, and is packaged in recyclable materials. The raw foods cannot have been genetically modified and must contain certifications for proof of organic production.

Table 2 similarly lists the criteria for furniture. The criteria concentrate on ensuring the certification of the wood used, the minimal usage of harmful chemicals, and the longevity of the finished product. The criteria do not allow specific substances to be used in the textile or foam components of the furniture. The packaging and plastic parts must be partially-recyclable.

Table 1: GPP Comprehensive Criteria for Food	
Subject Matter	
Purchase of food (or a certain food product group) with a percentage of products stemming from organic sources and of Integrated Production origin and with packaging reduced to a minimum.	
Specifications	
1. [X] % of [either a defined product group] must be organically produced according to Regulation (EEC) No 2092/91 until 31 December 2008, and Regulation (EC) No 834/2007 as of 1 January 2009. Verification: Proof must be supplied that food products are certified, by the competent body, as organically produced.	
Award Criteria	
Additional points will be awarded for:	
1. <i>Organic food</i>	Additional share of products coming from organic sources above the minimum requirement in the specification. Verification: As above.
2. <i>Integrated Production</i>	Additional share of products coming from Integrated Production sources above the minimum requirement in the specification. Verification: As above.
3. <i>Packaging</i>	Percentage of products that: <ul style="list-style-type: none"> - Are supplied in additional packaging with more than 45% recycled content. - Are not supplied in individual portions (single-unit packages). Verification: The supplier must provide a signed declaration indicating which of these criteria it is able to meet. The contracting authority will verify compliance during the contract period, and appropriate penalties will be applied for non-compliance.
<i>(adapted from the GPP Product Sheet from the European Commission GPP Training Toolkit)</i>	

Table 2: GPP Comprehensive Criteria for Furniture	
Subject Matter	
Purchase of furniture produced with environmentally friendly materials and processes.	
Specifications	
Wood and Wood-based Materials	
1.	<p>All wood and wood-based materials shall come from legally sourced timber.</p> <p>Verification:</p> <p>Certificates of chain of custody for the wood certified as FSC9, PEFC10 or any other equivalent means of proof will be accepted as proof of compliance. The legal origin of wood can also be demonstrated with a tracing system being in place. These voluntary systems may be 3rd party certified, often as part of ISO 9000 and/or ISO 14 000 or EMAS management system. If wood stems from a country that has signed a Voluntary Partnership Agreement (VPA) with the EU, the FLEGT license may serve as proof of legality. For the non-certified wood bidders shall indicate the types (species), quantities and origins of the wood used in production, together with a declaration of their legality. As such the wood shall be able to be traced throughout the whole production chain from the forest to the product. Contracting authorities may ask suppliers for further clarifications or proof.</p>
2.	<p>At least 30% of the solid wood or wood-based materials used shall come from forests that are verified as being managed so as to implement the principles and measures aimed at ensuring sustainable forest management, on the condition that these criteria characterize and are relevant for the products.</p> <p>Outside Europe, these principles and measures shall at least correspond to the UNCED Forest Principles (Rio de Janeiro, June 1992) and, where applicable, to the criteria or guidelines for sustainable forest management as adopted under the respective international and regional initiatives.</p> <p>Verification:</p> <p>Certificates of chain of custody for the wood fibres certified as FSC15, PEFC16 or any other equivalent means of proof will be accepted as proof of compliance. Any other appropriate means of proof, such as a technical dossier of the manufacturer will also be accepted.</p>
Preservatives	
3.	Wood classified with a durability class of 1 or 2 according to EN 350-2 or equivalent must not have been treated with preservatives.
4.	Wood not classified with a durability class of 1 or 2 according to EN 350-2 or equivalent, must not have been treated with substances classified according to Directive 1999/45/EC as carcinogenic, harmful to the reproductive system, mutagenic, or allergenic when inhaled.
5.	<p>The active substances in preservatives must not be based on arsenic, chrome or organic tin compounds.</p> <p>Verification:</p> <p>Bidders must present the durability classification of the timber products together with a list of the preservation substances used for each material present in the furniture and their Safety Data Sheet or equivalent documentation demonstrating compliance with the above criteria.</p>
Plastic Parts	
6.	<p>All plastic parts \geq 50g shall be marked for recycling according to ISO 114 69, or equivalent, and must not contain additions of other materials that may hinder their recycling.</p> <p>Verification:</p> <p>Bidders must provide a description of the plastic materials that are present and the quantities used, the way in which they are labeled and how they are attached to one another or to other materials.</p>

Surface Coating of Wood, Plastic, and/or Metal Parts	
7.	<p>The products used for surface coating shall:</p> <ul style="list-style-type: none"> • Not contain hazardous substances that are classified according to Directive 1999/45/EC as carcinogenic, harmful to the reproductive system, mutagenic, toxic, allergenic when inhaled, or harmful to the environment, cause heritable genetic damage, danger of serious damage to health by prolonged exposure, possible risks of irreversible effects. For phthalates: No use is allowed of phthalates that at the time of application fulfill the classification criteria of any of the following risk phrases (or combinations thereof): R60, R61, R62, in accordance with Directive 67/548/EEC and its amendments. • Not contain aziridine • Not contain Chromium (VI) compounds • Not contain more than 5% by weight of volatile organic compounds (VOCs). <p>Verification: Bidders must present a list with all surface treatment substances used for each material present in the furniture and their Security Data Sheet or equivalent documentation demonstrating compliance with the above criteria.</p>
Adhesives and Glues	
8.	<p>The VOC content of adhesives used in the assembly of furniture shall not exceed 10% by weight.</p> <p>Verification: Bidders must present a list with all adhesives used in the assembly of furniture and their Security Data Sheet or equivalent documentation where the amount of VOCs is displayed demonstrating compliance with the above criteria.</p>
Polyurethane Foams	
9.	<p>The blowing agents of polyurethane foams (PUR-foams) must not be CFC, HCFC, HFC, or methylene chloride.</p> <p>Verification: Bidders must present a declaration by the foam manufacturer of compliance with this criterion.</p>
Packaging Materials	
10.	<p>Packaging must consist of readily recycled material, and/or materials taken from renewable resources, or be a multi-use system.</p>
11.	<p>All packaging materials shall be easily separable by hand into recyclable parts consisting of one material (e.g. cardboard, paper, plastic, textile).</p> <p>Verification: A description of the product packaging shall be provided together with a corresponding declaration of compliance with these criteria.</p>
Durability, Reparability, Fitness for Use, and Ergonomics	
12.	<p>Furniture must meet national/international quality standards or equivalent regarding serviceability (including safety, abrasion resistance, tensile strength, light fastness, rub fastness, deformation by compression, ergonomics).</p> <p>Verification: Bidders must provide appropriate documentation to demonstrate compliance with these standards.</p>

Award Criteria (continued from Table 2)	
Additional points will be awarded for:	
1. Sustainable Forest Management	
	<p>The percentage of the final product made of wood, wood fibres or wood particles stemming from forests that are verified as being managed so as to implement the principles and measures aimed at ensuring sustainable forest management as defined above.</p> <p>Verification: As above.</p>
2. Recycled Materials Content	
	<p>Percentage by weight of recycled content of wood-based materials, plastics and/or metals in the final piece of furniture.</p> <p>Verification: Bidders must provide appropriate documentation where the recycled content percentage by weight is stated.</p>
3. Packaging	
	<p>The tenderer should indicate the percentage by weight of recycled content in the packaging materials (plastics and cardboard).</p> <p>Verification: Bidders must provide a list of the different packaging materials, their weight and a declaration by the packaging producer/s where it states the % of recycled content in their packaging material.</p>
4. For Textiles	
	<p>(A) Products shall</p> <ul style="list-style-type: none"> • Not contain hazardous substances that are classified according to Directive 1999/45/EC as carcinogenic, harmful to the reproductive system, mutagenic, toxic, allergenic when inhaled, or harmful to the environment, cause heritable genetic damage, danger of serious damage to health by prolonged exposure, possible risks of irreversible effects. • For biocides especially: Biocidal or biostatic products shall only be allowed if the active biocide component is approved by Directive 98/8/EC and the active biocide component is not classified by means of the EU R-phrases. • For phthalates: No use is allowed of phthalates that at the time of application fulfill the classification criteria of any of the following risk phrases (or combinations thereof): R60, R61, R62, in accordance with Directive 67/548/EEC and its amendments. <p>Verification: Any appropriate means of proof, such as Ecolabel, a technical dossier of the manufacturer, or a test report from a recognized body will also be accepted.</p> <p>(B) Bidders must indicate the proportion of cotton or other natural fibres used in the textiles by weight deriving from organic production. To be considered as such, the fibre must be produced according to Regulation (EEC) No 2092/91 until 31 December 2008, and Regulation (EC) No 834/2007 as of 1 January 2009.</p> <p>Verification: The supplier must provide evidence of the origin of the fibres used and the organic nature of their production, such as the EU organic logo or approved national logos for organic production.</p> <p>(C) Bidders must indicate the proportion of the textile by weight made from recycled fibres, i.e. fibres originating only from cuttings from textile and clothing manufacturers or from post-consumer waste (textile or otherwise).</p> <p>Verification: The supplier must provide evidence of the origin of the recycled fibres used.</p>

<p>5. For Padding Materials</p> <p>The padding material in the furniture meets the ecological criteria relating to the product itself and production processes of the Certipur standard (http://www.europur.com/index.php?page=certipur) or the European Ecolabel (http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:236:0010:0015:EN:PDF).</p> <p>Verification:</p> <p>All products carrying the European Ecolabel for textiles or the Certipur label will be deemed to comply. Any other appropriate means of proof, such as a technical dossier of the manufacturer or a test report from a recognised body will also be accepted.</p>
<p><i>(adapted from the GPP Product Sheet from the European Commission GPP Training Toolkit)</i></p>

ASSESSING PREPAREDNESS: FOUR CASE STUDIES

During the period of November 20 through December 3, 2008, we interviewed four Costa Rican companies. Each company provided answers to our questionnaire which was adapted from European Union green public procurement criteria. In this section we summarize the four case studies by the level of compliance presented in the questionnaire.

Description of Companies in Exploratory Study

- Company A is a processed fruits company, known for their jellies, marmalades, and fruit pastes. Composed of approximately fifty employees, it distributes throughout Costa Rica, Dominican Republic, and Puerto Rico.
- Company B is a spices and condiments company, which is comprised of thirteen employees and exports to mostly Central American countries.
- Company C produces wooden furniture, couches, and cushioned seats. The company employs approximately sixty people, has one production plant, and one direct store in San Jose.
- Company D is a home furniture company comprised of twenty employees.

In the following three sections, we summarize the responses to the questionnaire displayed in Tables 3 and 4 according to their compliance with GPP criteria.

Company Responses

We summarize the responses given to the questionnaires during each interview in the following two tables, Tables 3 and 4.

Table 3: Summary of Food Company Responses		
	Company A	Company B
General Information		
Date:	November 26, 2008	December 2, 2008
Products Produced:	Jellies, Marmalades, Fruit Pastes	Spices, Condiments, Powdered Drink Mixes
Product for Focus of this Evaluation:	Jellies, Marmalades, Fruit Pastes	Spices, Condiments, Powdered Drink Mixes
Currently exports to EU?	No	No
Section One: Organic Food		
Generally Organic	Do not use organic fruits. They use mostly pineapples, berries, and guava, which are easier to find certified in Costa Rica. Certified strawberries are harder to find. Many Costa Rican producers cannot afford to pay for certificates, and therefore, organic fruits are not available to processors. University students performed a study that concluded that most Costa Rican producers do not meet EU standards for organics.	Do not currently use organic spices. The spices are purchased from around the world. Oregano, pepper, and thyme are the only spices grown in Costa Rica, many of which are not certified. Organic spices could be purchased if necessary.
Pesticides, Fungicides, and Fertilizers	Used by the growers.	Unknown
Genetically Modified Organisms (GMOs)	Claims products do not contain GMOs.	Unknown
Negative Effects on Soil	Unknown	Unknown

Section Two: Energy Consumption		
Efforts Made to Reduce Electric Consumption	Gas equipment has reduced electricity consumption by 12% over the past year. This has been determined using the electric bills.	Energy usage is minimal; only four major machines are used. No efforts made to reduce consumption.
Efforts Made to Reduce Oil Consumption	Diesel usage has been completely eliminated. Transportation of products is handled by a distributor. This distributor is using a more oil-efficient system by using one larger truck, rather than one smaller one that required making three trips.	Oil usage is minimal; only one truck is used for transportation. A new truck is purchased every two or three years for best oil efficiency. No oil consumption during the production process.
Section Three: Water Consumption		
Efforts Made to Reduce Water Consumption	New water-saving methods are currently being developed. The plant currently uses their own water treatment plant to remove excess fruit and sugar from waste water. The company is considering purchasing a biodigester to assist with water filtration. They are ISO 2200 certified. Currently, 15-20 cubic meters of water are used daily, which can be reduced.	Water usage is minimal; only used for cleaning. No efforts have been made to reduce consumption.
Section Four: Solid Waste Output		
Efforts Made to Reduce Solid Waste Output During Harvesting	Unknown	Unknown
Efforts Made to Reduce Solid Waste Output During Production	Company claims only waste is excess fruit and sugar. Employees handle fruit carefully as to not cause excess waste. Most fruit is delivered already cut or skinned. Guavas must be skinned and pitted; skins and seeds are thrown away in trash system. Sugar bags are saved and sold. Company unaware of other solid waste.	Company claims solid waste is very minimal. A drainage system is used to filter water. Company unaware of other solid waste.
Efforts Made to Reduce Solid Waste Output During Transportation	Unknown	Unknown

Section Five: Pollution Reduction		
Efforts Made to Reduce Pollution Output During Production	Utilization of water treatment plant prevents water pollution. Information on emissions or chemical pollution was unknown.	Trash is separated and all boxes, bags, and containers that can be reused are given away to people and other companies in the community. The only chemical used in the plant is soap, which is disposed of by normal drainage. No other chemicals are used during production.
Section Six: Packaging		
Primary Packaging	Not recyclable, but looking to make recyclable within the next 3 to 4 years. Not made from recycled materials.	Packaging made of plastic (propylene) and paper, all of which can be recycled.
Outer Packaging	Unknown if boxes are recyclable. Most are not made from recycled materials, but one size (5 kilo) is. Company claims that boxes made from recycled materials do not have the same stacking ability.	All plastic packaging is recyclable.
Transport Packaging	Unknown	Pallets are reused.

Table 4: Summary of Furniture Company Responses		
	Company C	Company D
General Information		
Date:	November 20, 2008	December 3, 2008
Products Produced:	Wooden furniture for the home and hospitality industry	Wooden furniture for the home
Product for Focus of this Evaluation:	Wooden furniture	Wooden furniture
Currently exports to EU?	No	Currently exports to international clients, some of which are located in the EU.
Section One: Materials Information		
Timber	The timber does have certifications for sustainability or exportation. 50% is farmed from the company's plantation, 30% is purchased, and 20% is purchased plywood.	100% of timber is purchased from certified plantation.
Preservatives for Outdoor Furniture	Outdoor furniture is produced, but does not contain any preservatives.	Outdoor furniture is not produced.
Hazardous Substances and VOCs	Finishes containing VOCs are used on the surface of the wood and the adhesives contain 5-10% VOCs. No other hazardous substances are used on the furniture.	The varnish used is called Duralac and contains very little lead and has a VOC content of 82%. Some paints used contain polyurethane. (Sherwood Paint Industries, 2005)
Foams	Foam used contains polyurethane. Foams without polyurethane are not available to companies in Costa Rica. It is not worth-while to import because they do not use enough of it. Would need a local distributor or a organization of businesses who could import together.	Foam used does not contain polyurethane, but instead contains another unknown chemical.
Plastic Parts	The furniture does not contain plastic parts.	The furniture does not contain plastic parts.
Section Two: Energy Consumption		
Efforts Made to Reduce Electric Consumption	Maximum daily consumption limits the amount of electricity used each day by all machines. Ovens are fueled by scraps of recycled wood. This plan cut electricity consumption by 50%. This was measured using the electric bill.	Machines requiring large amounts of energy are not used during peak hours of the day. The plant current uses 200 KW per month, and this is a 15% reduction during the last year.

Efforts Made to Reduce Oil Consumption	Transportation of timber and finished products is well coordinated. Oil used in processing is very minimal. They do not know how much consumption has been reduced.	Oil usage is minimal. They utilize efficient transportation systems. Oil is not used during the production process.
Section Three: Water Consumption		
Efforts Made to Reduce Water Consumption	Amount of water used during processing is very minimal. No efforts have been made to reduce consumption.	Water usage is minimal; only used to clean and in the bathroom. Company uses a special instrument to detect leaks, which are fixed immediately.
Section Four: Solid Waste Output		
Efforts Made to Reduce Solid Waste Output During Production	Saw dust waste is sold. Other wood scraps are used for fuel in the ovens or given away to be used as fire wood. Scrap plastic and iron are recycled. Varnish containers are returned to the producer to be re-used. Other waste is managed by the municipality.	Saw dust is sold to local farmers. Wood scraps are sold as firewood. Bags are reused. Very little waste is managed by the municipality.
Efforts Made to Reduce Solid Waste Output During Transportation	None	Cardboard boxes and plastic used in transport is left with client to be recycled.
Section Five: Pollution Reduction		
Efforts Made to Reduce Pollution Output During Production	To prevent chemical pollution, filters and personal protection equipment are used. Extraction systems are used to reduce dust. Filtering systems are used to prevent excess fumes. Fumes from varnishes and paint are collected in water tubs, and then thrown away in the normal trash because there is no hazardous waste collection in Costa Rica. No mechanisms to reduce waste water.	Company is in the process of finding a better extraction system to ensure proper disposal hazardous chemicals.
Section Six: Packaging		
Primary Packaging	100% recyclable plastic	100% recyclable plastic and cardboard
Outer Packaging	100% recyclable	100% recyclable
Transport Packaging	100% recyclable	100% recyclable

Section Seven: Life-Cycle Considerations		
Recyclability	Product is 90% recyclable after use. Foam used in any product is not recyclable.	Product is almost completely recyclable after use. Company also re-upholsters older furniture for clients.
Reparability	Products are easily repaired and replaceable parts are easily available to the consumer. Hotel purchasers receive a 5-year warranty. Household purchasers receive a 1-year warranty.	Products are easily repaired. Company offers repair services. All purchases receive 1-year warranty.

Areas of High Compliance

Energy Usage.

Energy usage is an area of high compliance because all companies in our study have made efforts to effectively reduce their electricity use and oil consumption. For example, Company C utilizes a maximum daily consumption plan, which limits the amount of electricity used throughout the day. This resulted in a 50 percent decrease in their overall electricity use.

Water Usage.

All of the companies in our study either do not use water or use a minimal amount for their processes, making water usage an area of high compliance. For example, Company A uses a minimal amount of water in their process. Water is only used during the washing of the raw fruit and the cleaning of equipment.

Solid Waste Management.

Solid waste management is an area of high compliance because three out of four companies responsibly manage their waste. Company C complied with the criteria in this area and effectively managed their solid waste. All wood scraps produced during their processes are used to fuel the ovens for wood drying. Sawdust is sold to an outside company, while scraps of plastic and iron are recycled. Varnish containers are reused and all other wastes are managed by the municipality.

Recyclable Packaging.

Three out of four companies complied with the recyclable packaging criteria, making this an area of high compliance. The criteria of GPP require that food packaging be partially or completely recyclable.

Life-Cycle.

The life-cycle of a product is a consideration of GPP criteria for furniture. In this case, both of the furniture companies have complied with the GPP criteria. This criterion takes into account the durability and ergonomics of the product, as well as the availability of warranties and replacement parts (see Table 2). These considerations extend the life of the product, producing less waste.

Certified Timber Usage.

Certified timber usage is another criterion of GPP specific to the furniture sector. In this case, both companies comply with the GPP criteria. Companies C and D purchase 100 percent of their timber from either certified plantations or managed forests. The wood these companies use is also export-certified.

Areas of Low Compliance***Organic Ingredients.***

Organics is an area of low compliance since both processed food companies do not use organic ingredients. The use of all organic ingredients is a specific requirement of the GPP criteria for food. All foods must be organic, meaning they do not contain GMOs nor were produced using non-organic pesticides, fungicides, and fertilizers.

Pollution Reduction.

In order for a company to fully utilize green processes, it is necessary to ensure the proper disposal of pollutants. Both of the furniture companies interviewed do not prevent pollution from their plants in a manner safe for the environment. For example, Company C used extraction systems to reduce dust and a filtering system in the varnishing area to reduce fumes. These fumes from varnish and paint are collected in water tubs, and then disposed of in the municipal trash. This process does not comply with green standards.

Materials Made Using Harmful Chemicals.

Both furniture companies utilized materials made using harmful chemicals in their processes. The cushions are made with environmentally-harmful blowing agents such as CFCs, HCFCs, HFCs, or methylene chloride meaning that the current cushion material in use by the companies is unacceptable under GPP guidelines.

Areas of Insufficient Information

The following sections of the questionnaire contained questions to which the companies could not provide sufficient information to answer the questions. The companies either did not have specific information, or they did not comprehend how the topic pertained to their product or processes. Companies were unable to answer questions regarding the following sections:

- Solid Waste During Harvest (such as collection baskets, old machinery, and used containers)
- Solid Waste During Transportation (such as transportation pallets and excess packaging)
- Aspects of Green and Organic Growing Processes (such as the use of pesticides, fungicides, and genetically-modified organisms)

The company representatives could not answer the questions regarding these sections during our interviews. Some felt that the sections on harvest and transport did not pertain to them because those parts of the process are outsourced. Despite the companies' lack of involvement in these processes, they are still important considerations of GPP criteria. This indicates a lack of understanding of the GPP process. Knowing the details of these categories will help the companies seize GPP opportunities in the future.

Perceptions and Impressions of Companies on Exportation to the European Union

The following table summarizes the answers provided to the last part of the questionnaire. In this section of the questionnaire, the companies gave their impressions and insights as to potential problems they may encounter in exporting to the EU. This part of the assessment allowed us to understand the needs of the companies.

Table 5: Company Comments Regarding Exportation to EU				
	Company A	Company B	Company C	Company D
Current Exportation	Central America, Puerto Rico, Dominican Republic, and New Jersey. Looking to export to Sweden, Spain, and Italy because of interest there. Currently produce for the private sector.	Central America	Interested in exporting to Panama, because cheap transportation, few furniture companies, and many hotels.	Currently exports to private clients who take the products to Europe. Several clients in Switzerland are very interested.

Exporting to EU	Exporting to the EU would mean higher volume and require a distributor.	Very interested in exporting to the EU. The company does not anticipate any problems, but are not aware of the criteria, and therefore, is not aware of potential problems. Looking for information on criteria and opportunities from CICR, also what type of process is involved.	Need more information on criteria and training to carry out improvements necessary to meet the requirements. Plans to meet the criteria by external collaboration, with agencies such as CICR, and continuous improvement. Feels that Europe would value cleaner production and higher. Might need to lower prices in order to compete.	Need more information regarding the quality standards of the EU, as well as the official criteria. Would like CICR to provide a lot more information, and help make connections with clients.
Certification	Would be interested in having a third-party certifier. An institution in Costa Rica is missing and someone will need to be accredited in order to handle certifications. Will the EU bring someone here? Or accredit a Costa Rican representative?	Would be interested having a third-party certifier. But there are no certifiers of EU criteria in Costa Rica.	Would be interested in receiving green certificates, but do not know which certificates are available to Costa Rican companies or which are in their reach. Would like to receive certificates to evaluate the product, find out if it would be competitive in the European market, and find ways to improve it.	Would be interested in having a third-party certifier.
Benefits	Unknown	Unknown	Access to the public market of the EU could provide growth, continuous improvement, staff training, and general excellence in all products and processes.	Not currently looking to export to the public sector of the EU, but rather the private sector. Understands that following the criteria of the public sector will help penetrate the private sector.

The companies interviewed are currently exporting to variety of countries, including those of Central America and the United States. Three of the four companies cater to the specific needs of the client.

All of the companies were very interested in exporting to the European Union. They lack the information regarding exportation to the European Union. Company C stated that they expected the European market to have an appreciation for their product for its high quality and green practices.

Each company expressed interest in having a third-party certifier evaluate their product to ensure that it meets GPP criteria. The companies also recognized that evaluation by a third-party certifier is expensive. Currently, there are no such institutions in Costa Rica.

Companies A and B did not comment on the benefits of exporting to the EU. Companies C and D recognized the benefits exportation would have for their company and employees. In addition, Company D expects that by having a presence in the public sector, more opportunities would become available to them in the private sector as well.

Assessment of Questionnaire as a Tool for Future Use

The value of the questionnaire as a tool for future use by CICR can be derived from the manner in which the companies responded.

For the questionnaires to be successful as a tool for assessing companies, the companies must understand how the questionnaire relates to GPP criteria. In some instances, companies would not answer particular questions or sections of the questionnaire; the companies justified this by saying that “the section does not pertain to my company.” In actuality, all sections represented in the questionnaire relate to the company and their processes, directly or indirectly.

This may indicate that the company representatives either did not know the answer or did not fully understand the question. Specifically, they might not see how the question pertained to the processes of the company and the criteria for GPP. The lack of knowledge on specific methods indicated that many companies are more concerned with creating a product that will sell versus a product that is environmentally-friendly. In these respects, the companies must first understand the criteria in order to understand the questionnaire and how it pertains to their processes.

CHAPTER FIVE: RECOMMENDATIONS

In order for CICR to use the questionnaire as a tool to assess the compliance of Costa Rican companies to the green public market criteria of the European Union, several changes must be implemented. Compliance with the GPP criteria will aid Costa Rican products in penetrating this sector of the EU economy. The results of the case studies indicate that Costa Rica will need to make changes in order to be prepared to meet GPP criteria. These are highlighted in this chapter in the form of recommendations.

INFORM THE COMPANIES OF GPP CRITERIA PRIOR TO INTERVIEW

The questionnaire served as a pre-test. In this, it was successful in identifying the areas in which companies complied with GPP criteria. However, in some areas, the questionnaire was ineffective because the company interviewed either did not understand the criteria, or was unable to answer due to the detail of the question. The questionnaire would be more effective if the companies first understood the GPP criteria and how it related to their product and processes.

MAKE EXPORTATION INFORMATION AVAILABLE TO COMPANIES

All the companies interviewed as case studies were at different levels of compliance with the GPP criteria. They all shared an equal interest in exporting to the European Union; however, there was confusion as how to export and where to find the criteria for exportation and green certification for the public sector. In accordance with their mission, CICR needs to provide their companies with information resources necessary to successfully export to the public market of the European Union. This information must include the following:

- Green public procurement criteria and regulations
- Information about the certification process and third-party certifiers
- Opportunities, markets, and clients available in the EU green public market

This information may be presented in the form of a pamphlet, manual, or website that would be available to the companies. CICR could also host a seminar to discuss any questions the companies may have and distribute further information. Once the companies understand the green public procurement process and criteria, they will be able to make the necessary changes in their products and production practices.

MAKE CERTIFIED ORGANIC FOOD ACCESSIBLE TO PROCESSED FOOD COMPANIES

In the Costa Rican processed food industry, there is a need for organic food producers. The lack of certifiers available in Costa Rica is one of the reasons obtaining certified foods is difficult for processing companies. Also, the cost of certifying a raw ingredient is high to farmers and many do not realize the benefits of obtaining certification. GPP food criteria requires that organic foods must not contain GMOs or be produced with non-organic chemicals. Information on certification processes and a directory of certified producers would be helpful to processed food companies.

MAKE MATERIALS FREE OF HAZARDOUS CHEMICALS AVAILABLE

There is a lack of the foam cushioning used in upholstered furniture that is made without harmful blowing agents or environmentally-hazardous chemicals available in Costa Rica. Thus, in order for furniture companies to fully comply with GPP criteria, it would be necessary to import this type of foam for the cushioning material. This is not cost-effective for the amount of foam needed by one furniture company. To resolve this, several furniture companies could create an organization for purchasing the material. This would allow the companies to import foam cushioning that complies with the criteria in a cost-effective manner. Another solution would be

for CICR to encourage the production and distribution of cushion foams compliant with GPP criteria within Costa Rica.

DEVELOP AN ACCESSIBLE HAZARDOUS WASTE DISPOSAL SYSTEM

The lack of accessibility to a hazardous waste disposal system is an issue that must be addressed. For many furniture producing companies, the varnishes and paints used in their processes are environmentally-harmful due to the volatile organic compound content. Currently, these chemicals are being disposed of in the municipal trash, and potentially contaminating the environment. It is necessary for Costa Rica to implement an accessible and environmentally-responsible hazardous waste disposal system for companies that use these types of materials. Furthermore, companies must be informed of the proper ways to utilize this system.

CHAPTER SIX: CONCLUSIONS

Costa Rican companies will need to address the gap between their current practices and the green public procurement criteria in order to succeed in exporting to the European Union public market. Our exploratory study has found that all of the companies interviewed showed interest in exporting, but are lacking the necessary information and tools to do so. Through our pre-test, we have identified some of the gaps and we anticipate that CICR will be able to adapt the pre-test to assess companies in other sectors. By doing so, CICR will be able to better assist and support their member companies. The inter-continental trade of green and environmentally-safe products from Costa Rica to the European Union will increase environmental-awareness in both countries. By exporting to the EU, Costa Rican companies will also increase their international presence and possibly aid in the economic growth of their country.

The overall findings of our exploratory study show that companies need access to the following materials:

- GPP criteria prior to interview
- Exportation information
- Certified organic food
- Materials free of hazardous chemicals
- A hazardous waste disposal system

This exploratory study and pre-test questionnaire should be adapted by CICR for the assessment of further product sectors.

APPENDIX A: CÁMARA DE INDUSTRIAS DE COSTA RICA

The Chamber of Commerce within Costa Rica, known as CICR, was instituted in 1943 and has since represented the industrial sector of the country (Info General, 2008). CICR states their mission is to “promote the interests and attend to the necessities of their associates, to promote its competitiveness and to contribute proactively to the sustainable development of the industrial sector” (Misión/ Visión/ Valores, 2008). In compliance with their mission, CICR claims to have managed to improve conditions not only for the industrial area, but also for Costa Ricans who depend on their leadership such as laborers and companies alike (Info General, 2008).

The Cámara consists of several permanent commissions, which serve to provide opportunities and help for their clients in expanding the market:

- Commission of Competitiveness Factors
- Commission of Human Capital Development
- Commission of Exterior Commerce
- Commission of Economy and Finance
- Commission of Small and Medium Sized Companies of Costa Rica

APPENDIX B: PROCOMER

Procomer is the foreign trade cooperation of Costa Rica, their mission is to promote and support exports and investments (Procomer, 2008). Although are a non-governmental public agency they are the official office for the promotion of Costa Rican Exports. They are responsible for programs related to investment and exports, providing support to the Costa Rican Foreign Trade Ministry, promoting Costa Rica's commercial interests abroad, keeping record of foreign trade statistics, and managing trust goods (2008). Their website provides data for the market researcher with information on the free zones in Costa Rica and data about companies currently in Costa Rica.

APPENDIX C: CENTRO NACIONAL PARA LA PRODUCCIÓN MÁS LIMPIA

The Centro Nacional de Producción más Limpia is a private, non-profit organization, which is a division of the Cámara de Industrias de Costa Rica, the CEGESTI, and the Instituto Tecnológico de Costa Rica (CNP+L Centro Nacional para la Producción Más Limpia, 2008). CNP+L works internationally with the United Nations Organization for Industrial Development, and United Nations Environmental Development Program (2008). CNP+L provides a number of services intended to help industries reduce their impact on the environment. They perform on-site evaluations, qualification of problems, in addition to providing information and technology to help the national sectors to meet their environmental goals (2008).

APPENDIX D: GPP COMPREHENSIVE CRITERIA QUESTIONNAIRE FOR FOOD

This questionnaire was translated into Spanish for the convenience of the companies interviewed.

Date:

Company Name:

Name of Person Providing Information:

Position:

Phone/Email:

Products Produced:

Product for Focus of this Evaluation:

Currently exports to EU?

If yes, which country and sector (public or private)?

If yes, which product is exported?

Which regulations are placed on the product?

PART I: Organic Process

- a) Do you consider your products as organic? Yes No Unknown
- b) Are there organic standards that are followed? Yes No Unknown
 - i) What standards?
 - ii) By whom is the standard evaluated?
- c) Are pesticides used? Yes No Unknown
 - i) Which pesticides?
 - ii) How much is used?
- d) Are fungicides used? Yes No Unknown
 - i) Which fungicides?
 - ii) How much is used?
- e) Are fertilizers used? Yes No Unknown
 - i) Which fertilizers?
 - ii) How much is used?
- f) Does the final product contain any Genetically Modified Organisms (GMOs)?
 Yes No Unknown

- g) Are steps taken to reduce negative effects on soil (consider soil erosion, nutrient depletion, and overall soil quality)? Yes No Unknown
- i) What steps are taken?
- ii) How are they evaluated?

PART II: Energy Consumption

- a) Have efforts been made to reduce electricity consumption?
 Yes No Unknown
- i) What mechanisms are utilized to reduce electricity consumption?
- ii) How much has consumption been reduced?
- iii) How is it measured?
- b) Have efforts been made to reduce oil consumption? Yes No Unknown
- i) What mechanisms are utilized to reduce oil consumption during the transportation process?
- ii) What mechanisms are utilized to reduce oil consumption during the production process?
- iii) How much has consumption been reduced?
- iv) How is it measured?

PART III: Water Consumption

- a) Have efforts been made to reduce water consumption?
 Yes No Unknown
- i) What mechanisms are utilized to reduce water consumption?
- ii) How much has consumption been reduced?
- iii) How is it measured?

PART IV: Solid Waste Output

- a) Have efforts been made to reduce solid waste during the harvesting process? (For example: old equipment, old machinery, etc.) Yes No Unknown
- i) What mechanisms are being utilized?
- ii) How much has solid waste been reduced?

- b) Have efforts been made to reduce solid waste during the production process? (For example: old equipment, leftover scraps of metal, leftover food scraps, etc.)
 Yes No Unknown
- i) What mechanisms are being utilized?
 ii) How much has solid waste been reduced?
- c) Have efforts been made to reduce solid waste during the transportation process? (For example: used pallets, old equipment, etc.) Yes No Unknown
- i) What mechanisms are being utilized?
 ii) How much has solid waste been reduced?

PART V: Pollution Reduction

- a) Have efforts been made to reduce pollution generated by the production process?
 Yes No Unknown
- i) What mechanisms are you utilizing to reduce or eliminate pollution from the plant?
 ii) What mechanisms are you utilizing to reduce or eliminate waste water pollution from the plant?
 iii) What mechanisms are you utilizing to prevent chemical pollution from substances such as paints and solvents?

PART VI: Packaging Considerations

- a) Is the primary packaging material able to be recycled or biodegraded after use?
 Yes No Unknown
- i) What percentage is able to be recycled or biodegraded? _____%
- b) Is the primary packaging made from recycled materials? (For example: is the packaging box made from previously used boxes?) Yes No Unknown
- i) What percentage of the packaging is made from recycled materials?
 _____%
- c) Is the outer-packaging (for example: the wrapping or boxes the product is placed in) able to be recycled or biodegraded after its use? Yes No Unknown
- i) What percentage is able to be recycled or biodegraded? _____%
- d) Is the outer-packaging made from recycled materials? Yes No Unknown

- i) What percentage of the packaging is made with recycled materials?
_____ %
- e) Is the transport packaging (for example: the larger box the product is shipped in or the wooden pallets used to transport the product) able to be recycled, biodegraded, or reused after its initial use? [] Yes [] No [] Unknown
- i) What percentage of it able to be recycled, biodegraded, or reused?
_____ %
- f) Is the transport packaging made from recycled materials?
[] Yes [] No [] Unknown
- i) What percentage of the packaging is made from recycled materials?
_____ %

PART VII: Company Impressions and Thoughts

- a) What problems do you perceive in exporting to the European Union?
- i) How do you plan to over-come these problems?
- ii) What help would you like to see from CICR on the issue?
- b) How do you feel about hiring a third party authority to evaluate the certification of your product?
- i) Why do you feel this way?
- c) What benefits do you see for your company in the public sector?

APPENDIX E: GPP COMPREHENSIVE CRITERIA QUESTIONNAIRE FOR FURNITURE

This questionnaire was translated into Spanish for the convenience of the companies interviewed.

Date:

Company Name:

Name of Person Providing Information:

Position:

Phone/Email:

Products Produced:

Product for Focus of this Evaluation:

Currently exports to EU?

If yes, which country and sector (public or private)?

If yes, which product is exported?

Which regulations are placed on the product?

PART I: Product Questions

- a) Is the timber used for the furniture legally sourced timber?
 Yes No Unknown
- i) Does the timber have export certification? Yes No Unknown
- b) What percentage of the timber used is from managed forests?
 _____%
- c) Do you produce outdoor furniture? Yes No Unknown
- i) What preservatives are used on the furniture?
- d) Are the active substances in preservatives based on arsenic, chromium, or organic tin compounds? Yes No Unknown
- e) Does your product contain any hazardous substances (for example: lead, aziridine, chromium, etc.)? Yes No Unknown
- f) Does your product contain more than 5% by weight of volatile organic compounds (VOCs) in the surface coating of the wood? Yes No Unknown

- g) Does the VOC content of adhesives used in the assembly of furniture exceed 10% of the total weight of adhesives used? Yes No Unknown
- h) Does the product contain polyurethane foam? Yes No Unknown
- i) Does the foam contain chlorofluorocarbons (CFCs), fluorocarbons (FCs), hydrochlorofluorocarbons (HCFCs) hydrofluorocarbons (HFCs), or methylene chloride? Yes No Unknown
- j) Are there plastic parts in the furniture? Yes No Unknown
- i) Are these parts larger than 50 grams? Yes No Unknown
- ii) Are these parts recyclable? Yes No Unknown

PART II: Energy Consumption

- c) Have efforts been made to reduce electricity consumption? Yes No Unknown
- i) What mechanisms are utilized to reduce electricity consumption?
- ii) How much has consumption been reduced?
- iii) How is it measured?
- d) Have efforts been made to reduce oil consumption? Yes No Unknown
- i) What mechanisms are utilized to reduce oil consumption during the transportation process?
- ii) What mechanisms are utilized to reduce oil consumption during the production process?
- iii) How much has consumption been reduced?
- iv) How is it measured?

PART III: Water Consumption

- b) Have efforts been made to reduce water consumption? Yes No Unknown
- i) What mechanisms are utilized to reduce water consumption?
- ii) How much has consumption been reduced?
- iii) How is it measured?

PART IV: Solid Waste Output

- d) Have efforts been made to reduce solid waste during the production process? (For example: old equipment, leftover scraps of metal and wood, etc.)
 Yes No Unknown
- i) What mechanisms are being utilized?
- ii) How much has solid waste been reduced?
- e) Have efforts been made to reduce solid waste during the transportation process? (For example: used pallets, old equipment, etc.) Yes No Unknown
- i) What mechanisms are being utilized?
- ii) How much has solid waste been reduced?

PART V: Pollution Reduction

- b) Have efforts been made to reduce pollution generated by the production process?
 Yes No Unknown
- i) What mechanisms are you utilizing to reduce or eliminate pollution from the plant?
- ii) What mechanisms are you utilizing to reduce or eliminate waste water pollution from the plant?
- iii) What mechanisms are you utilizing to prevent chemical pollution from substances such as paints and solvents?

PART VI: Packaging Considerations

- g) Is the primary packaging material able to be recycled or biodegraded after use?
 Yes No Unknown
- i) What percentage is able to be recycled or biodegraded? _____%
- h) Is the primary packaging made from recycled materials? (For example: is the packaging box made from previously used boxes?) Yes No Unknown
- i) What percentage of the packaging is made from recycled materials?
 _____%
- i) Is the outer-packaging (for example: the wrapping or boxes the product is placed in) able to be recycled or biodegraded after its use? Yes No Unknown
- i) What percentage is able to be recycled or biodegraded? _____%
- j) Is the outer-packaging made from recycled materials?
 Yes No Unknown

- i) What percentage of the packaging is made with recycled materials?
_____ %
- k) Is the transport packaging (for example: the larger box the product is shipped in or the wooden pallets used to transport the product) able to be recycled, biodegraded, or reused after its initial use? Yes No Unknown
- i) What percentage of it able to be recycled, biodegraded, or reused?
_____ %
- l) Is the transport packaging made from recycled materials?
 Yes No Unknown
- i) What percentage of the packaging is made from recycled materials?
_____ %

PART VII: Life Cycle Considerations

- a) Is the product itself recyclable and/or biodegradable? Yes No Unknown
- i) What percentage of the product by weight is recyclable and/or biodegradable?
_____ %
- b) Is the product easily repaired or are parts easily replaced and accessible to the client? An easily repairable product prolongs the life of the product and reduces excess waste.
 Yes No Unknown
- c) Are customer services or warranties available to the consumer?
 Yes No Unknown

PART VIII: Company Impressions and Thoughts

- d) What problems do you perceive in exporting to the European Union?
- i) How do you plan to over-come these problems?
- ii) What help would you like to see from CICR on the issue?
- e) How do you feel about hiring a third party authority to evaluate the certification of your product?
- i) Why do you feel this way?
- f) What benefits do you see for your company in the public sector?

REFERENCES

- 30 Things You Can Do To Improve the Environment. (2008). Retrieved October 31, 2008, from Commonwealth of Pennsylvania: Department of Environmental Protection:
<http://www.dep.state.pa.us/earthdaycentral/96/business/FS1977.htm>
- Advanced Search. (2008). Retrieved November 2, 2008, from dgMarket: Tenders and Consulting Opportunities Worldwide: <http://www.dgmarket.com/eproc/Search.do>
- Agenda 21: Chapter 2. (2004, December 15). Retrieved September 22, 2008, from UN Division of Economic and Social Affairs: Division for Sustainable Development:
<http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21chapter2.htm>
- Allison, C., & Carter, A. (2000). *Study on different types of Environmental Labelling (ISO type II and III Labels): Proposal for an Environmental Labelling Strategy*. DG Environment, European Commission.
- Background. (2005). Retrieved October 2, 2008, from CARPE: http://www.carpe-net.org/site/rubrique.php?id_rubrique=5
- Background: Earth Summit. (1997, May 23). Retrieved September 20, 2008, from United Nations: <http://www.un.org/geninfo/bp/envirp2.html>
- Biodiversity in Costa Rica. (2008). Retrieved October 31, 2008, from National Biodiversity Institute: http://www.inbio.ac.cr/en/biod/bio_biodiver.htm
- Boyle, J. (2008, March). Nigerian Cocoa Processors to Lose Millions. *Trade Negotiation Insights*, 7 (2), p. 4.
- Britanica Online Encyclopedia. (2008). *Costa Rica*. Retrieved 11 3, 2008, from Britanica Online Encylclopedia: <http://www.britannica.com/EBchecked/topic/139528/Costa-Rica>

Bruntland Commission. (1987). *Report of World Commission on Environment and Development: Our Common Future*. United Nations General Assembly.

Case Studies. (2005). Retrieved October 2, 2008, from CARPE: http://www.carpe-net.org/site/article.php?id_article=41

Central Intelligence Agency. (2008, November). *Costa Rica*. Retrieved November 12, 2008, from The World Factbook: <https://www.cia.gov/library/publications/the-world-factbook/print/cs.html>

Central Intelligence Agency. (2008, November). *European Union*. Retrieved November 12, 2008, from The World Factbook: <https://www.cia.gov/library/publications/the-world-factbook/geos/ee.html>

Climate Change in Tropics / Ocean. (2008). Retrieved October 31, 2008, from World View of Global Warming: <http://www.worldviewofglobalwarming.org/pages/tropics-oceans.html>

CNP+L Centro Nacional para la Producción Más Limpia. (2008). Retrieved November 30, 2008, from Cámara de Industrias de Costa Rica: http://www.cicr.com/index.php?option=com_content&task=view&id=27&Itemid=38

Commission of the European Communities. (2004, August 18). *Buying Green! A Handbook on Environmental Public Procurement*. Brussels.

Commission of the European Communities. (1996, November 27). *Green Paper: Public Procurement in the European Union: Exploring the Way Forward*. Brussels.

Costa Rican Exports. (2008, October 29). *Inside Costa Rica* .

Costa Rican President Arias. (2008, September 3). *Inside Costa Rica* .

Deforestation. (2003). Retrieved October 31, 2008, from Viva Costa Rica:

<http://www.vivacostarica.com/costa-rica-information/costa-rica-deforestation.html>

- Eco-Design of Energy-Using Products Overview. (2007). Retrieved September 10, 2008, from Europa: http://ec.europa.eu/enterprise/eco_design/index_en.htm
- Eco-label Statistics. (2008). Retrieved September 23, 2008, from Europa: http://ec.europa.eu/environment/ecolabel/marketing/statistics_en.htm
- Economic Recession Definition and Causes. (2008). Retrieved October 31, 2008, from Recession.org: <http://recession.org/definition>
- Environment Statistics Country Snapshot. (n.d.). Retrieved September 28, 2008, from United Nations Statistics Division: unstats.un.org/unsd/environment/envpdf/Country%20Snapshots
- Environmental Issue News. (2008). Retrieved October 31, 2008, from ScienceDaily: http://www.sciencedaily.com/news/earth_climate/environmental_issues/
- EU at a Glance: Key Facts and Figures About Europe and the Europeans. (2005). Retrieved September 15, 2008, from Europa: http://europa.eu/abc/keyfigures/index_en.htm
- Eurocentro. (2008). Retrieved October 21, 2008, from Cámara de industrias de Costa Rica: http://www.cicr.com//index.php?option=com_content&task=view&id=89&Itemid=105
- European Commission. (2007). Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91. *Official Journal of the European Union* .
- European Commission. (2008). National GPP Strategies.
- European Commission. (2008). *Public Procurement*. Retrieved November 5, 2008, from European Commission: EU Single Market: http://ec.europa.eu/internal_market/publicprocurement/index_en.htm

European Commission. (2008). *The EU Single Market*. Retrieved November 16, 2008, from

Europa: http://ec.europa.eu/internal_market/index_en.htm

European Union. (2008, October). Retrieved November 4, 2008, from World Factbook:

<https://www.cia.gov/library/publications/the-world-factbook/print/ee.html>

European Union Eco-label Homepage. (2008). Retrieved September 15, 2008, from Europa:

http://ec.europa.eu/environment/ecolabel/index_en.htm

Export Companies of Costa Rica. (2008). Retrieved November 4, 2008, from Export Directory:

<http://www.bruncas.com/crexport/food.html#PROCESSEDFRUITS>

FAIRS Country Report. (2008, July 31). Retrieved October 26, 2008, from United States

Department of Agriculture: Foreign Agriculture Service:

<http://www.fas.usda.gov/gainfiles/200808/146295368.pdf>

FAS Offices in the E.U. (2008). Retrieved October 26, 2008, from Foreign Agricultural Service:

U.S. Mission to the European Union: <http://useu.usmission.gov/agri/FAS-in-EU-25.html>

Fruit, Vegetables and Related Products. (2008, November). Retrieved November 4, 2008, from

dgMarket:

<http://www.dgmarket.com/eproc/SearchResult.do?sub=15300000&locationISO=&selPageNumber=&status=&updatedId=&keywords=&fundingAgencyId=¬iceType=&deepPage=0&catNum=20>

George, C., & Kirkpatrick, C. (2004). Trade and Development: Assessing the Impact of the

Trade Liberalization on Sustainable Development. *The Journal of World Trade* , 141-169.

Green Public Procurement. (2008, July 18). Retrieved October 2, 2008, from European

Commission: Environment: http://ec.europa.eu/environment/gpp/index_en.htm

Green Public Procurement: The Graz Final Report. (2006). *Turning Policy into Practice*. Graz, Austria.

Healthcare Without Harm. (2008). *Better Food, Better Health, Better Environment: The Benefits of Sustainable Food Procurement in Hospitals*. Rumunská, Czech Republic.

Info General. (2008). Retrieved September 13, 2008, from Cámara de Industrias de Costa Rica:
http://www.cicr.com//index.php?option=com_content&task=view&id=89&Itemid=105

International Customs Tariffs Bureau. (2006, April). *The International Customs Journal*. Retrieved November 5, 2008, from Export.gov: Helping U.S. Companies Export:
http://www.export.gov/static/EU_tariff_schedule.pdf

Johannesburg Plan of Implementation: Chapter X. Means of Implementation. (2004, December 15). Retrieved September 22, 2008, from UN Department of Economic and Social Affairs: Division for Sustainable Development:
http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIChapter10.htm

Kloninger, J. D. (2008, February 28). *Costa Rica's Economy*. Retrieved September 28, 2008, from Costa Rica Pages: <http://www.costaricapages.com/blog/business/economy-in-a-nutshell/661>

Lele, S. M. (1991). Sustainable Development: A Critical Review [Electronic version]. *World Development*, pp. 607-621.

Manchin, P. B. (2003). *Making EU Trade Agreements Work: The Role of Rules of Origin*. Malden, MA: Blackwell Publishing Ltd.

Mardas, D., Papachristou, G., & V, N. C. (2008, June). *Public procurement and foreign direct investment across France, Germany, Italy and the UK*. Retrieved November 5, 2008,

from bNet: Business Network:

http://findarticles.com/p/articles/mi_hb6413/is_2_36/ai_n29448719

Martin, S., Hartley, K., & Cox, A. (1998). *Public Procurement Directives in the European Union: A Study of Local Authority Purchasing*. Blackwell Publishers Limited.

Misión/ Visión/ Valores. (2008). Retrieved September 8, 2008, from Cámara de Industrias de Costa Rica:

http://www.cicr.com//index.php?option=com_content&task=view&id=13&Itemid=30

O'Brien, F. (2008, November 3). *EU Says Europe Economy Probably Already in Recession*.

Retrieved November 3, 2008, from Bloomberg.com:

<http://www.bloomberg.com/apps/news?pid=20601068&sid=aogbd7eLTaZw&refer=home>

Pearson Education. (2005). *Glossary: Economic Recession*. Retrieved October 31, 2008, from Pearson Education:

<http://wps.pearsoned.co.uk/wps/media/objects/1881/1926829/glossary/glossary.html>

Procomer. (2008). *Análisis de Estadísticas de Exportación: Costa Rica*. San Jose: Grupo Nación.

Procomer. (2008). *Mission*. Retrieved November 6, 2008, from Procomer:

http://www.procomer.com/Ingles/Procomer-01/procomer_mision-01-02.html

Procomer. (2008). *Organizational Background*. Retrieved November 6, 2008, from Procomer:

http://www.procomer.com/Ingles/Procomer-01/procomer_historia-01-01.html

Public Procurement. (2008, September). Retrieved November 10, 2008, from European

Commission: The EU Single Market:

http://ec.europa.eu/internal_market/publicprocurement/index_en.htm

Rosen, B. N., & Sloane, G. B. (1995). *Environmental Product Standards, Trade and European Consumer Goods Marketing Processes, Threats, and Opportunities*. The Columbia Journal of World Business.

Search Results: Furniture. (2008, November 29). Retrieved November 30, 2008, from TED-Tenders Electronic Daily-Supplement to the Official Journal of the European Union: http://ted.europa.eu/Exec?DataFlow=ShowPage.dfl&TableName=TED_EN&Template=TED/N_result_list_expert.htm&Page=1

Selection of Legislation and Initiatives 2001-2004. (2007). Retrieved September 13, 2008, from Europa: http://ec.europa.eu/sustainable/sds2001/init-priorities2001_en.htm

Sherwood Paint Industries. (2005, January). *Material Safety Data Sheet: Duralac*. Retrieved December 3, 2008, from <http://www.sherwood-paints.com.au/Products/MSDS/201%20Duralac%20MSDS.pdf>

Signing of Expanded Central American-United States Joint Accord. (2001, June 7). Retrieved November 5, 2008, from U.S. Department of State: <http://www.state.gov/r/pa/prs/ps/2001/3325.htm>

Simpson, J. (Ed.). (2001). *Oxford English Dictionary*. Oxford, England: Oxford University Press.

Sustainability Impact Assessment. (2006, October). Retrieved September 15, 2008, from European Commission: Trade Issues: http://ec.europa.eu/trade/issues/global/sia/index_en.htm

Sustainability Impact Assessment: FAQs. (2005, February). Retrieved September 15, 2008, from European Commission: Trade Issues: <http://ec.europa.eu/trade/issues/global/sia/faqs.htm>

Sustainable Development. (2008). Retrieved September 15, 2008, from Europa:

http://ec.europa.eu/sustainable/welcome/index_en.htm

Sustainable Development: The UK Government's Approach. (2008, October 1). Retrieved

October 2, 2008, from Department for Environment, Food, and Rural Affairs:

<http://www.defra.gov.uk/sustainable/government/>

TARIC Table of Contents. (2008). Retrieved November 5, 2008, from Europa: Taxation and

Customs Union: [http://ec.europa.eu/taxation_customs/dds/cgi-](http://ec.europa.eu/taxation_customs/dds/cgi-bin/tarsect?ProdLine=00&Type=&Action=1&Lang=EN&SimDate=20081106&YesNo=1&Indent=-1&Flag=1&Test=tarsect&Periodic=0&Download=0&Taric=&taric=Browse&Country=-1&Day=06&Month=11&Year=2008)

[bin/tarsect?ProdLine=00&Type=&Action=1&Lang=EN&SimDate=20081106&YesNo=1&Indent=-](http://ec.europa.eu/taxation_customs/dds/cgi-bin/tarsect?ProdLine=00&Type=&Action=1&Lang=EN&SimDate=20081106&YesNo=1&Indent=-1&Flag=1&Test=tarsect&Periodic=0&Download=0&Taric=&taric=Browse&Country=-1&Day=06&Month=11&Year=2008)

[1&Flag=1&Test=tarsect&Periodic=0&Download=0&Taric=&taric=Browse&Country=-1&Day=06&Month=11&Year=2008](http://ec.europa.eu/taxation_customs/dds/cgi-bin/tarsect?ProdLine=00&Type=&Action=1&Lang=EN&SimDate=20081106&YesNo=1&Indent=-1&Flag=1&Test=tarsect&Periodic=0&Download=0&Taric=&taric=Browse&Country=-1&Day=06&Month=11&Year=2008)

The European Commission's Delegation to Belarus. (2004). Retrieved November 4, 2008, from

Europa: <http://www.delblr.ec.europa.eu/page824.html>

The European Union in the World: Delegations. (2008). Retrieved November 4, 2008, from

Europa: <http://www.delmus.ec.europa.eu/en/euglobal/1.htm>

Trade and Environment. (2007, January). Retrieved September 15, 2008, from European

Commission: Trade Issues:

http://ec.europa.eu/trade/issues/global/environment/index_en.htm

Trade: Business - Numbers and Statistics. (n.d.). Retrieved September 28, 2008, from Costa

Rica: <http://www.costarica.com/Business/Numbers-&-Statistics/Trade/>

UN Conference on Environment and Development: Earth Summit. (1997, May 23). Retrieved

September 20, 2008, from United Nations: <http://www.un.org/geninfo/bp/enviro.html>

UN Department of Economic and Social Affairs: Division for Sustainable Development. (2007, February 22). Retrieved September 21, 2008, from United Nations:

<http://www.un.org/esa/sustdev/contact.htm>

UN Follow-Up: Earth Summit. (1997, May 23). Retrieved September 20, 2008, from United Nations: <http://www.un.org/geninfo/bp/envirp3.html>

United Nations Environmental Programme. (1972). *Declaration of the United Nations Conference on the Human Environment*. Retrieved September 20, 2008, from United Nations:

<http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=97&ArticleID=1503>

United States Department of State. (2008). *Background Note: Costa Rica*. Retrieved September 13, 2008, from <http://www.state.gov/r/pa/ei/bgn/2019.htm>

Wei, J. (2007). China, Costa Rica to Begin FTA Process [Electronic version]. *China Daily* .

What is CAFTA? (2008). Retrieved September 25, 2008, from CAFTA Intelligence Center: http://www.caftaintelligencecenter.com/subpages/What_is_CAFTA.asp

World Bank. (2008, 10 15). *Costa Rica Country Brief*. Retrieved November 3, 2008, from World Bank: <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/LACEXT/COSTARICAEXTN/0,,contentMDK:20232979~pagePK:141137~piPK:141127~theSitePK:295413,00.html>

World Population Profile: 1996. (2007, May 18). Retrieved September 27, 2008, from U.S. Census Bureau: <http://www.census.gov/ipc/www/wp96.html>