

CARIBBEAN SCOPING STUDY FINAL REPORT:  
IP Value Capture Opportunities in Jamaica, Grenada and Belize

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## INTRODUCTION

In recent decades the intangible or non-physical value of products in developed country markets has overtaken the physical value as the main source of business income. Intangible value is the value of the non-physical characteristics of a product, such as its uniqueness, reputation, or method of production. Light Years IP works with producers in developing countries to capture some of the intangible value of their most distinctive products using business practices that have been utilized for years by corporations in developed nations.

Light Years IP (LYIP) assists large numbers of low-income producers move out of poverty by engaging farmers and producers throughout the world in their fundamental rights - restoring them to a position of balanced negotiating in the global market place. We have done this not through aid or production-based solutions, but through critically important tools available to business: Intellectual Property (IP), which is the process that most intangible value is managed and shared out and a practice we have called "IP Value Capture."

The work of LYIP is fundamentally based on recognition of the dignity of the worker as the products upon which we focus have often been developed over centuries or are central to a country's identity (reggae is not only a form of music in Jamaica, but has become embedded in the Jamaican culture, for example). These methods are fundamental to long-term economic growth as they are the same methods commonly used by producers in industrialized nations. Why should low-income producers not enjoy benefits deriving from the business tools of owning their hard-earned reputations in the form of brands; owning a foreign part of the supply chain and owning distribution companies and licensing rights?

Across the globe, lower income countries have been using export strategies that rely too heavily on increasing production and 'value addition,' such as building manufacturing plants and further processing products in the country of origin. These strategies put such countries in fierce competition with each other for a small part of production returns. That is, they are competing for income from the ever-shrinking physical value of products. IP Value Capture Strategies take a new approach to export. By focusing on the intangible value generated from a product's high quality, reputation, and/or distinction, countries can become new players in the global supply chain and capture the value associated with their products.

### How does Intellectual Property control intangible value?

The key difference between this strategy for improving farmer and producer income and moving people out of poverty and value-added/production approaches is that higher amounts of annual income value can be captured by owning and managing brands, licensing distributors and owning distribution in final markets. In many cases, distinctive products from developing countries generate retail prices 4-5 times higher than the retail prices of products based on standard commodities (e.g. fine coffee, chocolate made from high quality cocoa, etc). The difference in retail prices (\$15/lb or more for fine coffee) is mostly allocated to supply chain participants by the IP owner and managers/distributors. For low-income producers, their allocation is often nothing, unless they take some control of the IP elements.

Managing IP is key to increasing the income of many producers throughout the Caribbean. This strategy is complementary to competitiveness approaches, although different techniques are used than those involved in competing in commodity markets. Caribbean countries could develop IP Value Capture Strategies in conjunction with national development strategies when exporting to markets where value is dominated by IP. Generally, the valuable returns from IP are being captured in the importing country and not in the Caribbean country of origin. While there

are some products in the following reports that have not yet been developed for export, it is suggested that Caribbean countries export development strategies have an IP Value Capture Strategy just as developed country corporations that share intangible value with distributors and not surrender all that value to foreign wholesalers and retailers.

#### Light Years IP work in IP Value Capture

IP value capture strategies have shown proven success in the case of Ethiopian coffee farmers through the Ethiopian Fine Coffee Trademarking and Licensing Initiative. LYIP designed the initiative and provided substantial help to Ethiopia that included securing ownership of the three most valuable Ethiopian fine coffee brands - Sidamo, Yirgacheffe and Harar. Using the brand ownership to take some control of distribution and licensing 85 distributors generated new negotiating strength. The stronger negotiating position resulted in returns to Ethiopia of \$100 million in additional export income in the year to June, 2008.

LYIP then developed many such initiatives throughout Sub-Saharan Africa, aimed at implementing potential use of IP Value Capture strategies for specific other low-income producers. Studies have been completed on 13 products from fine Ugandan vanilla to Malian mudcloth. These specialty products are not currently returning much value to the farmers. In the case of Ugandan vanilla, for example, two vanilla pods that sell for \$12.00 at Whole Foods, a U.S. retail market specialized in natural and organic products, return only about 8 cents to farmers. LYIP has evaluated the efficacy of the Ugandans owning a wholesaler in a final market country, such as Italy, and employing the business techniques of IP germane to most successful businesses, to capture more value for Ugandan farmers.

From October 2008 thru May 2009, Light Years IP conducted research and field visits as consultants to the Organization of American States with funding from the Canadian International Development Agency (CIDA). This 'scoping study' included visits to three Caribbean countries (Belize, Jamaica, and Grenada) to analyze for potential IP value capture strategies. These countries were selected by a Group of Regional Stakeholders which included representatives from Caribbean Export, CAIC, the Office of Trade Negotiations of CARICOM, the OECS Secretariat, Light Years IP and the OAS, based on a November 2008 Interim Report or Desk Study (attached). The purpose of these visits was to gain further understanding of a range of preliminarily identified distinctive products that are sold, or have high potential to be sold, at high retail prices in the final market due to inherent intangible value and analyze genuine opportunities for returning income to the producers of these countries. Several new products were added as a result of field visits. The following Scoping Studies illustrate how producers can take control of the intangible aspect of their products in retail markets and earn higher and more secure income by utilizing IP Value Capture.

Each study can be taken forward to feasibility and implementation initiatives if stakeholders/owners of the intangible elements wish. "Feasibility and Strategic Implementation" steps include the creation of alternative business IP Value Capture strategies and evaluation of each one to allow stakeholders to determine which strategy to pursue, leading to investment fund-raising to implement the chosen strategy for higher and more secure income. There are often many tasks involved in implementation, requiring good planning and fast, business style implementation. Hence, it is generally best that investments be implemented by the stakeholders themselves, with assistance, rather than by Government as principals. An exception might be the Marine Bio Assets initiative.

#### Feasibility and Strategic Implementation Phase – typical elements

Estimate the scale of potential value capture

Study negotiating positions of exporters and importers

Examine possible strategies, costs, benefits and constraints

Identify the appropriate IP value capture strategy  
 Design capacity building  
 Project design including linkages or agreements that ensure that income increases reach producers.  
 Register trademarks, so that brand management is possible  
 Prepare final budgets for full implementation  
 Raise funding to complete implementation

The scoping study results in this document focus on the products identified through Light Years IP's screening methodology. The November 2008 Interim Report identified Grenadian nutmeg, Caribbean sugars, Caribbean pepper sauces and condiments, Jamaican cigars, Jamaican natural beauty products, Jamaican ginger and derivative products, Jamaican Logwood honey, merchandising from Reggae, marine bio assets and West Indian Sea Island cotton.

LYIP Methodology: How to identify and select products with high probability of returning income to farmers and producers through IP Value Capture?

The process is seek distinctive products that hold the following corollary properties:

- 1) **The product holds genuine distinctiveness:** There have been substantial changes in consumer behavior, as consumers reflect a greater willingness to pay higher prices for products with intangible value. For example, while there are a multitude of honey products, some honey is distinctive by its rareness, content quality, story of origin, reputation or perceived value in the marketplace. This is a critical criteria for selection, as income shares are determined by control of IP which is the key to capturing intangible value and improving farmer/producer leverage over IP. LYIP believes that low income producers and farmers suffer by being stuck in commodity pricing, which fluctuates heavily, whereas gourmet and distinctive consumer market prices are steadier and generally reveal long term upward swings. The potential for Ugandan vanilla to achieve higher income returns to the 900,000 vanilla farmers, who now receive pennies of the \$6.00 per pod retail price is partly a factor of managing the true quality distinctiveness in the final markets and willingness of consumers to pay higher prices for such distinctiveness. This distinctiveness measure is our first selection criteria, and is notable in each of the products identified in the scoping study from Grenadan nutmeg to Belizian xate; Jamaican logwood honey to Sea Isle cotton.
- 2) **Retail market price and export price gap:** In the successful strategies designed by LYIP across Africa, there is a notable, dramatic gap in export and retail prices. In Ethiopian coffee, for example, retail market prices were \$20US/lb. whereas export prices fell in the \$1.00US/lb. with about \$0.50US/lb going to the farmers. While not all retail/export and farmer prices hold such dramatic disparity, in smaller markets, there is important potential for increasing returns to low-income farmer/producers is where appreciable gaps leave room for such achievements. A large gap may justify considering distinctive products that have only a relatively small number of farmer/producers. While affecting income for 2,000 Jamaicans currently known to be engaged in bee farming may seem small at first glance, improving that income by appreciable margins is an advance with real social impact and can provide the key incentives to expansion of profitable export business. This means the impact of these strategies in Jamaican exporting may be largest in the long run.
- 3) **Potential for leverage in the supply chain:** As IP value capture strategies are aimed at improving leverage for the farmer/producer in LDCs, a vital aspect of the analysis is rigorous review of all aspects of the supply chain to determine where the most optimal IP

value capture opportunities lie. Some products, such as sugar and rum, two products for which Caribbean countries have long been known to hold superiority and brand recognition are unlikely to offer large gaps to be closed, due to the sophisticated business knowledge of established market leaders such as Bacardi and Domino brands. Too, some products have more complex supply and distribution chains with ownership rights more diffuse across country lines. While LYIP works with such products as Ethiopian leather and is engaged in work in musical instruments crafted from Blackwood of Tanzania and Mozambique, the IP value capture strategies are more complex, including outsourced elements of production.

- 4) **Clear social impact potential for low-income farmers and producers:** Since LYIP's mission and purpose as an NGO is to improve income for those who most need to advantage the business strategies of IP value capture, our litmus test in selecting products is to ask the fundamental question: Does this product have potential to generate real income return for low income farmers and producers?
- 5) **Local stakeholder interest and enthusiasm:** While we consider it our role to engage stakeholder interest through demonstrating viable income returns through IP value capture methodologies, research analysis and clearer specifications in follow-up feasibility studies, we operate as an NGO. Clearly, the farmers/producers own the projects and their full participation will take these business strategies forward if they so choose. In the study that follows, the products selected were considered first through our desk research analyzing markets; analysis of the import and retail markets; consumer behavior and industry reports. However, through days and weeks of in-country meetings with the trade representatives and in-country producers their enthusiasms brought to LYIP's attention products such as Xate where a strong, local champion and trade ministry both support local ownership of the process for moving implementation forward.

This report includes 8 products which hold high potential for IP value capture:

Four products in Jamaica including:

- Jamaican logwood honey;
- West Indies Sea Island Cotton;
- Natural beauty products and
- Reggae music and merchandising.

In Belize, in-country consultation with stakeholders suggested very good potential with these two clearly distinctive products, Xate leaves and marine bio-assets

In Grenada, the products are nutmeg and cocoa.

Brief reports on the four products not included in the study can be found in the Annex. Cigars, sugars, pepper sauces and condiments and ginger derivative products were not included in the interest of distributing products more equitably across the three countries and due to greater perceived IP-based strategies for the selected products. LYIP does, however, believe these four products/ sectors are distinctive and should be studied further.

This document also includes a summary of a special report on a group of products identified as Best Bets, with initial comments on the likelihood of IP Value Capture opportunities amongst these products/sectors. See Annex.

An additional development for the Caribbean could be to carry out wider work to identify further IP opportunities. This scoping study has resulted in a solid group of opportunities from three

countries within modest resources, but the LYIP team became aware, during fieldwork, of quite a large number of products across the region with potential. It would not be surprising if 100 export IP Value Capture opportunities were found across the Caribbean and put through a similar process of scoping study because the opportunities to achieve more than 1-5% share of retail values for distinctive products are numerous.

### **Social Impact:**

The mission of LYIP is to move low-income farmers and producers out of poverty, by focusing on their export products that hold genuine distinctiveness in the retail markets, and thus IP value. Our projects range from sectors such as coffee with direct social impact upon 4 million Ethiopian coffee farmers to initiatives that engage 900,000 Ugandan vanilla farmers. Social impact is measured by outcome measures of permanent income generation for farmers and their dependents. Progressively work is being advanced on several other measures of social impact such as domestic economic multiplier effects.

As income is improved, the likelihood of re-engaging farmers and their families in nutmeg production, along with higher quality production is likely. Nutmeg was the most important export of Grenada in the not so distant past. It is important that Grenada regain its market before losing it to competitors, but it will not do by traditional means of production or remaining stuck in commodity price schemes of continual fluctuation. The social impact for future income stabilization cannot be underestimated.

Finally, it is valuable to consider the social impact of educating the next generation in the value and vitality of entrepreneurship. As farmers and producers are educated in the tools of business utilized by successful businesses and corporations around the globe. Through training, farmers and other stakeholders appreciate the value of their own intellectual property and how to move that appreciation forward into business strategies, tools and business mechanisms for the longer term. Such training may change producer's approach of accepting commodity prices to one of greater control, heightened dignity and ownership.



## JAMAICA COUNTRY REPORT

Intellectual Property (IP) Value Capture is a process of obtaining higher and more secure export income through business strategies that focus on the retail value of developing country exports and interventions in final market countries to obtain a greater share of that retail value. It is particularly useful for export products that are distinctive, premium or specialty, due to quality, reputation and/or unique flavor among many characteristics.

The initial study that Light Years IP conducted involved both desk research and a one week visit to Jamaica. It is recommended that Jamaica put a priority on export products that are distinctive. It is also recommended that Jamaica develop value capture strategies that are applicable to a wide range of distinctive Jamaican products, all of which can bring in higher and more secure export income from the global market. The initial study focused on four such products: Jamaican Logwood Honey, Jamaican Reggae, Natural Beauty Products, and West Indian Sea Isle Cotton.

Despite being an island full of natural resources and a determined people, the country has been struck with serious debt due to a sequence of adverse changes in exporting conditions which has led to large scale unemployment and underemployment, especially amongst the youth. The efforts to promote export led growth have been met with limited success, resulting in the country having an economic growth rate of about 1.3% in 2007. Jamaica's main source of GDP is currently from the tourism and service industries, which account for roughly 60 percent of the island's GDP. With the sugar and banana plantations were forced to close down due to market access changes and the devastating impact of hurricane Gustav in 2008, the agricultural industry in Jamaica is much weakened. The hurricane all but wiped out many of the important agricultural commodities, leaving many producers with no means to earn an income.

The reliance on these traditional export commodities is hazardous for Jamaica, as time and nature have both proven that these commodities will not bring Jamaica out of its current economic situation. Jamaica is in need of a non-traditional approach to trade; one that will identify the distinctive elements of Jamaica's existing and potential exports and that also enables Jamaica to reach beyond its borders to capture some of the value that its products earn in the foreign market.

Logwood honey, Jamaican reggae, Natural Beauty Products, and West Indian Sea Island Cotton are examples of products that are able to fetch high retail prices in the international market, due to intangible elements in each of them: whether it is the distinctive taste, rarity, or superior quality of the product. By focusing on the non-physical aspects of a product, producers and exporters can re-think the way that they interact with foreign importers and wholesalers. It is crucial for Jamaica at this point in time to start value capture strategies in several areas in order to build over time towards large scale impact across more sectors.

There are a number of both private and public organizations working to promote the products mentioned above, including but not limited to, Jamaica Trade and Invest, Jamaica Intellectual Property Office, Jamaica Exporters Association, Jamaica Business Development Corporation, Small Business Association of Jamaica, and The Competitiveness Company. Additionally, the Scientific Research Council and the Biochemical Department at the University of West Indies have led efforts in developing the capacity of farmers to provide agricultural products to local businesses to be used in locally made personal care products, such as lotions, soaps, and tonics, in addition to nutraceuticals.

In 2007, JAMPRO (now Jamaica Trade and Invest) launched a campaign entitled 'Brand Jamaica,' with an effort to transform Jamaica's image from that of purely a tourist destination, into one

that shows Jamaica as a sustainable and profitable place to do business. While in theory Brand Jamaica is meant to strengthen the investment atmosphere of Jamaica, the campaign has not had significant impact on investment in Jamaica's economy. For instance, the development of certification marks for a handful of products could have a greater economic impact if an IP based business strategy is developed along with these marks. A priority should be placed on the Jamaican government to develop a national strategy that would focus on promoting and capturing value from the distinctive products such as the ones mentioned in the following briefs.

It is useful for one entity to take the lead in developing a new IP based export approach in order to efficiently move each industry forward. The Competiveness Company focuses their work on building the capacity of small and medium sized enterprises (SMEs) in order to strengthen their position in the global economy. Because of the focus of their work and how it relates to a value capture strategy, the Government of Jamaica has decided that the Competiveness Company will be the leader in mobilizing a national strategy to focus on the unique products of Jamaica. Part of this strategy should involve identifying more distinctive export products, such as cigars, ginger, and Jamaican scotch bonnet peppers.

While business strategies will differ from product to product, an over-arching national strategy that focuses on value capture could involve awareness raising campaigns, training, and capacity building. Training workshops and capacity building in IP will lead to a new way of thinking, particularly among the youth, to better appreciate how the sophisticated tasks of managing IP assets can create stronger socio-economic standing and make production more interesting. Ghana's cocoa industry was unattractive to youth, due to the hard work in growing cocoa, but the collective ownership of a UK chocolate company has made it "cool" to be a farmer.

It is important to realize that stakeholder groups and the government activities to advance national brand recognition are an important step. However, brand recognition alone does not improve incomes. Most, if not all countries appreciate the national brand distinction of Jamaica, but it is not translating into income improvements. IP value capture is a very distinct and different strategy, as outlined above in our introduction. It differs because it is based in implanting strategies that capture retail value and return that income to the farmer/producers. LYIP would intend to build on sector work and

The following scoping studies provide evidence to show that there is a potential, as well as a need, for Jamaica to develop these industries by utilizing IP value capture strategies. The Caribbean study is meant to provide a preliminary assessment of the probable impact that a value capture strategy could have for Jamaica. In order to provide more depth and scope, it is recommended that more resources be put into conducting feasibility studies in each of the sectors.

#### *Sources*

Council on Hemispheric Affairs

Discussions and workshops with stakeholders in Jamaica

## JAMAICAN LOGWOOD HONEY

### IP Value Capture Opportunity

Under the Agricultural Development Strategy, the Jamaican government has given high priority to the development honey industry. Light Years IP recommends utilizing IP Value Capture strategies to develop the honey export values as one of a group of industries that can be built on distinctive products. The bright yellow flower of the logwood tree produces a unique honey that is thick, dark golden, and has a strong flavor that leaves a mint-like after taste. This distinctiveness should result in high retail prices in foreign retail markets that Jamaica can share in.

There is limited recognition of this particular superior honey in the foreign retail markets; as such, it is possible that Jamaica can develop an entirely new brand for logwood honey that can be distributed through a tightly managed distribution channel. Jamaica can export its honey as a single origin honey, targeting the gourmet food market where, over time, it will build its reputation of providing a unique and rare honey to the world.

It will be necessary to develop a certification system for Jamaican logwood honey, as there have been incidences of exporters mislabeling non-distinct honey as higher value honey in order to reap greater profit. This strategy can be built in conjunction with the government's capacity building efforts in the honey industry.

Efforts should be given to manage the brand efficiently in order to ensure that different Jamaican companies trying to sell logwood honey in the international market do not undermine one and other. For example, the brand could be managed so that one company targets a certain segment of a market, while another company focuses on a different segment. A feasibility study could develop estimates of the additional value that can be obtained in export income from this unified marketing strategy and consider what type of brand would be most suitable for the consumers of gourmet honey. Such a study would also consider the costs and returns of creating a single distribution company in a foreign market, which would capture wholesale profit margins.

An essential element to this strategy would be for Jamaica to target a market size that would be of the right scale in relation to the production of logwood honey in Jamaica. As Jamaica is not yet producing large quantities of honey, it will be necessary to target small, accessible markets, such as in Eastern Canada or Belgium, for example. When the distribution in the selected market is successful, an expansion strategy can be developed and implemented to reach into other markets.

### Demand Growth

In the European Union, honey consumption is growing at about 2% per year despite being a mature market. Much of this growth is contributed to the important health attributes associated with honey. A success story that serves as a comparable example can be drawn from New Zealand, where its specialty honey, such as manuka and rewarewa honey, are enjoying an increased in demand from all parts of the world. These unique honeys are being sold in high-end retail outlets, such as hotels and restaurants where the honey is used to replace sugar as sweetener. Due to its distinctiveness, logwood honey could enjoy similar popularity growth through the development of a strategy targeting such markets through a tightly controlled distribution system.

The gourmet and specialty food markets, which logwood honey falls into, is forecast to be worth an estimated \$120 billion dollars in 2009, with a 5% growth rate from 2004 to 2009. Additionally, the two wealthiest groups of consumers who are attracted to the gourmet and specialty market have grown by about 24% in Europe and the United States. As the purchasing

power of these consumers continues to grow so too will the demand for more specialty and distinctive products.

#### Background

The honey industry is one of eight agricultural sectors that the government of Jamaica is giving high priority to, as it is hoped to create jobs and increase export earnings from honey. While there are over 2,000 people tending apiaries, there is still considerable opportunity to train more people in beekeeping and to show Jamaicans that beekeeping is more than just a hobby – it can be a profitable business that enables development of entrepreneurial skills.

#### Distinctiveness

Like fine wines and coffees, certain types of exotic honey are fast finding a niche in the gourmet food bracket. While many people have opted to use honey as a sweetener over sugar due in part to its nutritional attributes, discerning consumers are now giving new attention to distinctive honey varieties - differentiating honey based on the year it was produced ("vintage honey") as well as floral origin, such as single varietal honeys (artisanal) or wild tropical honey. The distinctive taste of these honeys as well as their rarity contributes to the high retail prices.

Although it is not as internationally well known as black sage or manuka honey, logwood honey is recognized as a distinctive, exotic honey that has the potential to increase the export earnings of Jamaica. The returns from this export effort will be greater and more secure if IP Value Capture strategies are applied.

Single varietal honeys with distinctive flavors, aromas, and colors are in high demand and creating profitable niche markets. Honeys in the gourmet bracket are being sold for at least double that of non-distinctive honey, sometimes at quadrupled prices. Logwood honey, being a single origin honey, has significant potential to bring more export income into Jamaica if developed with the appropriate tools.

Most commodity honeys are a mixture of honey from clover plants, which grow in abundance in the United States, Canada, and Europe. Honey that is found in mainstream grocery stores, often in the shape of bears, already retails at a relatively high price compared to sugar and other sweeteners. A 25-ounce jar of clover honey sells for an average of \$5.50. In comparison, specialty honey retailers sell orange blossom and tupelo honey, considered single varietal, anywhere from \$6.00 to \$25.00 for 25-ounce bottles. The unique flavor, exoticness, and rarity of Jamaican logwood honey creates intangible value in the retail market, suggesting that once developed for export, the Jamaican logwood honey could fall into these premium price categories.

#### Supply Chain

There are currently no exports of logwood honey from Jamaica, and though there are clusters of logwood trees growing with tropical fruit trees such as guava, grapefruit, and soursop, there is not ample production of this honey (at least 80% of the honey must be logwood to be labeled as such). The All-Island Bee Farmers Association (AIBFA) recently signed a Memorandum of Understanding with a US based company, Boston Diaspora Ventures, to produce, bottle, and export logwood honey under a new distribution company, Logwood Honey. While the AIBFA is the largest association of beekeepers in the island, there are close to one thousand more established beekeepers on the island as well as the potential to employ thousands more.

Logwood honey is mainly produced by small-scale bee farmers in the southwestern part of the island where the climate makes ideal growing conditions for the logwood tree. Presently Jamaican beekeepers will farm the bees in order to produce the honeycomb. The honeycomb can be sold as is, but is often taken to a local processing plant where the comb is removed so that only the liquid honey remains. It is then bottled, labeled, and sold locally. Based on comparative

honey products such as tupelo and orange blossom honey, a 25-ounce bottle of Jamaican logwood honey could sell on the international market at an average price of \$23.00. A 25-ounce jar will sell for US\$2.00-\$3.00 in Jamaica.

Projected Jamaican Logwood Honey Prices in Value Chain

Distinctive honey at retail:	\$23.00/25-ounces
Wholesale:	\$11.50/25-ounces
Exporters/producers:	\$3.00/25-ounces

*Sources*

World Pantry: <http://www.worldpantry.com/cgi-bin/ncommerce3/ProductDisplay?prmenbr=688248&prrfnbr=966183>

Savannah Bee Company: <http://www.savannahbee.com/>

Florida Tupelo Honey: <http://www.floridatupelohoney.com/items.cfm?ItemTopCategory=Honey&itemcategory=12%20oz.%20Squeeze%20Honey%20Bear>

The National Agency for Export Development: <http://www.nafed.go.id/>

Market New Zealand: <http://www.marketnewzealand.com>

## WEST INDIAN SEA ISLAND COTTON (WISIC)

### IP Value Capture Opportunity

A business strategy that has IP components as its cornerstone will enable Jamaica and other Caribbean countries producing WISIC to capture the value that is currently earned by retailers and wholesalers outside of the Caribbean and move some income back to the producing country. Although there has been much activity in this industry, little sustainable impact has been made. With the WISIC registration of a certification mark expiring in 2010, it is appropriate for Caribbean countries to put efforts into building a business strategy of greater scale and impact. If this is managed properly, Caribbean countries could earn substantial additional export income. Although a few countries are growing, or have the potential to grow WISIC, if one country leads the way and others work together in developing this industry, a successful regional strategy could be implemented.

As part of a proposed national campaign to build value capture strategies across 20-30 industries, Jamaica could be the leader in the development of a strong recognizable brand and distribution channel that will enable Jamaica and other Caribbean countries to capture some of the value that this superior cotton has in the international market. Presently yielding export income of around \$2.3m for both Jamaica and Barbados, most of the value is being lost to international wholesalers and retailers.

Many countries continue to focus their development strategies on value addition in cotton by building mills or processing plants in country. However, often times this approach is more costly than the benefits accrued. In order to capture the value associated with WISIC in the final market, it is necessary to control the distribution of products made from this distinctive cotton in the final retail market. It is recommended that the focus of WISIC efforts be put into building a strong brand and larger scale distribution channel for final cotton goods that the exporters would control together. This would mean examining the feasibility of expanding ECCI into a much larger scale operation or forming a collaboration of new similar companies to build a larger presence in selected foreign markets.

West Indian Sea Island cotton is grown only in the West Indies and has a reputation as the finest cotton in the world. Within the Caribbean and globally, WISIC is well known and the international value of the cotton has caused governments and the private sector to emphasize the development of this industry. Due to the distinctive elements of this cotton, there is significant opportunity to develop a value capture strategy. Jamaica can lead the rest of the Caribbean in developing this initiative, then assist Barbados and other countries to participate.

### Global Demand

Like all commodities, commodity cotton prices have experienced a depression recently, in some instances falling below 50 cents per pound. As the cotton industry faces these challenges as a whole, however, premium cotton such as WISIC is actually in a favorable market position. More mills want to spin premium cotton into fabrics, in response to consumers' increased spending on higher quality fabrics that will endure over the years.

Egyptian and Pima cotton have the reputation of being some of the cotton in the world; currently Pima exports are priced at around \$1.80 per pound, while Egyptian cotton exports yield \$2.00 per pound. West Indian Sea Island Cotton, however, is earning \$10 per pound, clearly showing the value of this special cotton. The amount currently being exported from producing countries is small: in 2006, Barbados exported US\$1,891,470 worth of WISC, while Jamaica exported \$465,000 worth of cotton. As WISC cotton only represents a tiny fraction of the world's total cotton supply and is of such high quality, this type of cotton can have a niche marketing strategy built around it that will protect it from fluctuating international commodity prices.

### Background

Known for its silky feel, luster and superior strength, West Indies Sea Island cotton (WISIC) is one of the most valuable and costly cotton varieties. This particular variety of *G. barbadense* is grown on only a handful of islands in the Caribbean, including Jamaica, Barbados, and St. Kitts and Nevis, where the combination of climate and trade winds allow this cashmere-like cotton to flourish exclusively in the West Indies.

The Exclusive Cottons of the Caribbean (ECCI), was formed in Barbados by cotton growers and the Ministry of Agriculture. ECCI works with small farmers and plantations growing WISIC and has set up a partnership with a Swiss company. Baled lint is shipped to their partner, Spoerry & Co. in Switzerland, where the lint is spun into yarn and woven or knitted into fabrics. Some fabric and yarn is returned to Barbados and sold to interior and clothing designers.

The importance of IP elements in a business strategy can be demonstrated from the confusion that had been created between 'West Indian Sea Island Cotton' and 'Sea Island Cotton.' Sea Island cotton is a generic term used to give consumers the impression that the material is made from high quality cotton. However, this is not a regulated term, thus it can be used by any company, even if the quality of the cotton is not superior. West Indian Sea Island cotton, to which this brief refers, is cultivated only in the West Indian islands of the Caribbean and is touted as the highest quality cotton in the world. It is grown from a particular strain that has not been successfully grown anywhere else.

Stakeholders involved in the cultivation and export of West Indian Sea Island cotton took notice of the confusion surrounding these two terms. In 2000, The West Indian Sea Island Cotton Association registered the name and certification of an authenticity mark, West Indian Sea Island Cotton, through the World Intellectual Property Organization (WIPO), and is thus filed in a number of important countries. The registration expires in 2010.



*Certification mark*

Source: [www.wipo.int](http://www.wipo.int)

A number of Caribbean islands have recognized the economic potential of WISIC and made concerted efforts to organize the industry. Both the Jamaican Agricultural Development Fund and the Jamaican Competitiveness Company have concerted their efforts to both build the WISIC industry in Jamaica, and negotiate deals with buyers.

### Distinctiveness

Because West Indian Sea Island cotton has the longest fiber in the world, up to two inches in length (55 mm), the quality of the material that is produced from this cotton, whether it is bed linens, shirts, or pajamas, is the highest in the world. Industry experts consider West Indian Sea Island cotton superior to American Pima cotton, and even to Giza Egyptian cotton, due to its inherent characteristics from the perfect combination of the West Indian climate.

The high quality and rarity of this product contribute to the intangible value of WISIC. The retail price of a men's shirt made out of WISIC sells for 10 times more than that sold in mainstream department stores. Socks made from WISIC sell at almost 9 times that of conventional socks. This intangible value of 900% should be benefitting the countries where this cotton is grown.

### Supply Chain

It takes about one pound of cotton lint to make one shirt. An average men's polo shirt, made of WISC, retails for \$250.00, while wholesalers of this shirt receive about \$125.00. For the same shirt, Jamaica receives \$10.00 per pound of cotton lint exported, where Egyptian cotton is exported at an average of \$1.00 per pound. Caribbean cotton pickers receive an average of \$1.50 to \$2.00 per pound for WISC. Looking at these prices, it is clear that the value of WISC is being captured at the retail and wholesale end, that is, by foreign companies benefitting from the intangible value of WISC.

### Value chain prices

Retail:	\$250/polo shirt, 1 pound equivalent
Wholesale:	\$125/polo shirt, 1 pound equivalent
Export:	\$10/per pound
Producer:	\$1.50/per pound



## JAMAICAN NATURAL BEAUTY PRODUCTS

### IP Value Capture Opportunity

Jamaica is located in one of the biological “hotspots” of the world, with 2,888 known flowering plant species, of which 27% are endemic to the island. According to the Caribbean Herbal Business Association, 81% of the 126 most popular herbs in the world grow in Jamaica.

Two Intellectual Property elements can be managed to build substantial export income in providing all-natural, plant based beauty products to the international market. Registering Jamaican patents for the results of scientific research in this field could be managed with regard to the exposure of these patents to theft unless patents are also registered in the final markets. Although patenting products in the U.S. and Europe is expensive and time-consuming, an IP Value Capture strategy would involve making licenses for exploitation only available to competent Jamaican producers and exporters for set time periods. These licenses might have termination provisions applicable if the licensees are not able to carry out exporting after a reasonable period of first opportunity, which would allow the scientific institutions to then obtain royalty income from foreign exploitation.

The larger, more critical IP opportunity is to build a uniform brand and marketing platform that would become the channel for long-term development of the export industry. IP Value Capture can be achieved by launching unique products on export natural beauty products market under a single, high quality brand that is based on the distinctiveness of the “natural treasures” of Jamaica. Previous surveys of Jamaican exporters in the beauty and cosmeceutical sectors (2004-5) showed that a number of small export businesses had developed independently, each with narrow focus in products and market access, so that owners saw little point in collaborating. The 2009 visit showed that the sector has become more interested in a unifying brand or exporting strategy and government is working hard on a Brand Jamaica strategy.

Cosmeceuticals have seen rising popularity within the last few years, with sales reaching over \$4 billion in 2007. The drug-like benefits that these products claim are most often plant-derived, with appeal to consumers who are looking for all-natural beauty products. With recent findings of the damage caused by some chemicals used in cosmetics being widely reported, consumers are opting more than ever for all-natural products.

Across the globe, prices for all-natural personal care products are much higher than commodity beauty products that one would find in retail chains. For a small container of an all-natural concealer (0.3 oz) from All-Natural Cosmetics retails for \$13.00, whereas a similar product that is not all-natural retails for about \$5.00 in generic chains. This example repeats across many forms of all-natural skin products such as, for example, an all natural face lotion such as Dr. Hauschka's moisture cream retails for \$79.00 (3.4 oz) at Whole Foods Markets, whereas the same quantity of a generic face cream retails for \$5.99 in generic chains. A lifestyle movement has taken place throughout the US and Europe which focuses on holistic living. While this started as a niche market that commands high retail prices for all-natural products, the market has expanded, becoming more mainstream in recent years. There is significant opportunity for Jamaica to break into this industry as it is still in its infancy.

An IP Value Capture strategy for Jamaica evolves around a single natural products brand that is built by the combination of existing exporters, new exporters and the licensing of scientific discoveries to producers and exporters, on condition that the resultant product meets high standards that continue to build the brand. This strategy is best implemented within a chosen market of appropriate size where it is possible for Jamaican exporters to create strong brand recognition and ensure consumers recognize the distinctiveness of Jamaica as a source of natural products. For example, the “Beauty and Barbershop” market in the U.S. is accessible to

personal marketing strategies, whereas providing products to U.S. distributors aiming at large scale supermarket access will involve the loss of IP Value to the distributors who often impose their own re-branding.

The unifying brand may draw from the Brand Jamaica approach, but must be tailored to the actual chosen target market segment, where a deep presence and higher returns will depend on the appeal of the brand imagery to those particular consumers. Individual exporters can still use their own branding, but the stronger the use of the unifying brand, the better chance there is of high returns from IP Value Capture.

A feasibility study would examine alternative market segments that are of the right size and accessibility to the whole Jamaican natural products sector and evaluate the costs and potential benefits of brand building in each alternative segment.

#### Scientific Research

The Scientific Research Council (SRC) has begun development of a natural based product line from five local plants - sorrel, rosemary, lemongrass (fevergrass), ginger, and turmeric - through an investment from the Organization of American States (OAS). Although the contract ended in 2007, the base of this research may contribute to development of a product line under the unifying brand for export.

The SRC focused the majority of R&D on ginger and lemongrass, two plants that grow locally and have scientific properties that are attractive in cosmeceuticals and nutraceuticals. The SRC developed tissue cultures of these plants, and then provided the farmers the tissue cultures to grow the plants and subsequently sell them on the local market. While tissue cultures are shown to assist in crop yields, the impact that the SRC could have in the industry could be much greater if their involvement did not end when the farmers are given the plants. The channeling of these products into a unifying brand will build longterm value for Jamaica and returns to the investment in research.

In addition to the SRC, the Biotechnology department at the University of West Indies (UWI) has contributed substantially into building capacity of farmers by introducing them to tissue cultures of various plants and then training them in increasing crop yield and other elements related to agribusiness. The farmers have shown high engagement, even creating their own technological devices for plant hardening (a process the tissue cultures must undergo before being planted). The SRC and the University of West Indies are both involved with scientific development and engaging farmers and can all commit to participate in the export brand. More direct linkages between scientific research centers, farmers, and the business community will also help create more dialogue and foster an environment that can move Jamaica forward in developing a strong nutraceutical /cosmeceutical export industry.

Jamaican scientific research entities and the business community will continue to explore the Jamaican marketplace in order to identify processes and products for patent registration. Connecting this work with the single brand will contribute most to national benefit.

## REGGAE MERCHANDISING

### IP Value Capture Opportunity

Light Years IP proposes that Jamaica explore the potential for stakeholders to earn more from the merchandising of authentic Jamaican reggae crafts products. A preliminary idea is to create a new stakeholder group of handicraft artisans to create a product range that might be called "Authentic Jamaican Handcrafted Reggae Products." Under this concept, products will be developed by local artisans that have a reggae image associated it – whether it is beautiful wooden figures of men and women playing instruments, jewelry made from all natural sources such as shells or polished fruit seeds, or shirts with red, green, gold, and black, these products will all be certified as Authentic Jamaican Reggae products. It will be up to the stakeholder group to decide what products will be made and what criteria will apply as to what constitutes a craft as 'reggae inspired.'

Stemming from this concept, another possibility could be for new Jamaican reggae musicians to form a type of joint venture where they could enter into collectivized brand merchandising. Additional research could be conducted to fully understand the reggae merchandise industry and relationships amongst stakeholders in order to determine what strategies may be most effective and acceptable. There are questions to be considered, such as, is it wisest to develop products that relate to early reggae or to all reggae, including recent derivative music? These issues could also be considered along with analysis of important single markets for handcrafted products, like France.

### Demand

In the entertainment industry the licensing of merchandise deriving from a particular creative work, such as a movie, music, or TV show, is often worth more than the actual creative product. For example, a popular American TV show, Teenage Mutant Ninja Turtles, at one point had generated television and video revenue fee of \$200 million, while it was already the source of over \$3 billion in gross revenue from merchandising of Teenage Mutant Ninja Turtles products.

The International Intellectual Property Institute (IPI) estimated that reggae generated in 2004 an estimated \$1.0 billion in total retail sales, including copyrighted music and merchandising. Of that total, Jamaica was estimated to be receiving only \$1.4 million. This large gap indicates that there is potential for Jamaica and some other Caribbean countries to capture more of the total value. As there are many talented artisans in Jamaica, coupled with the deep cultural image that has been created about Jamaica, the opportunity to create a line of artisanal products that will bring significant returns to Jamaica is strong.

### Background

Jamaica introduced the world to the sounds of reggae music. Though influenced by American roots music and produced in some other Caribbean countries in small volume, reggae music is regarded as belonging primarily to Jamaica. Despite being a multi-billion dollar industry based on the image of Jamaican culture, Jamaica has not been able to benefit monetarily from reggae's popularity. From shirts to bags to ashtrays, there is an entire industry of reggae merchandise throughout the world, with many different images associated with it.

The Ministry of Tourism in Jamaica has been involved in implementing a system amongst craft producers that would result in greater regulation of production, as well training producers to be more business oriented. Stakeholders have voiced opinions that there is a need to train producers in the marketing aspects of their crafts products.

### Distinctiveness

The care-free attitudes, relaxed lifestyle, distinctive music, and the natural beauty of Jamaica have all resulted in the development of a strong international image that can bring more export income. This image can be recreated in craft products that convey the 'reggae' lifestyle. Using the unique image of Jamaica coupled with the imagination of craft producers will result in products that are unique and have good appeal to reggae audiences.

The unique products would be handcrafted by producers in Jamaica, not mass-produced in a factory for the tourist industry. The time, thought, and effort that go into handicraft production is something that cannot be recreated in a factory-produced product. The producers would own the brand of Authentic Jamaican Reggae products, another aspect that separates these products from other non-distinct products.

As there is intangible value associated with these products, that is, the image of Jamaica, Jamaica should implement a business strategy that utilizes Intellectual Property tools in order to capture the intangible value that is currently being lost to foreign retailers and wholesalers.

### Supply Chain

As there currently is no existing supply chain to support this initiative, a new one will need to be created. A feasibility study could further explore the particulars of each player in the new supply chain, such as which marketing channel will be most suited to promote authentic reggae merchandise.

### Estimated costs and investments

By establishing a unique marketing channel, such as promoting the crafts products in reggae music stores or Jamaican/Caribbean restaurants, as well as in countries where reggae is extremely popular such as France, it is expected that \$25 million worth of products can be sold with a \$3 million investment. The profitability per item must be more than the marketing cost, which marketing experts generally advise is about 10% of the gross revenue. Other costs include a certification system for authenticating the artisanal products.

## GRENADA COUNTRY REPORT: IP VALUE CAPTURE WITHIN THE CURRENT CONTEXT

The cocoa and nutmeg sectors have been slow to recover while tourism, the country's main source of foreign exchange, has rebounded. As a percentage of GDP, the service sector, including tourism, contributes 73%, industry 18% and agriculture 9%. In contrast, as a percentage of labor force by occupation, agriculture provides almost one third of employment. The discrepancy between agriculture's contributions to GDP versus employment is significant. Given the destruction and arduous recovery of the cocoa and nutmeg industries, historically important export earners, the opportunity presents itself to rethink and reinvent export strategies. IP Value Capture strategies could significantly increase Grenada's export revenue and stabilize income for producers.

The centralized associations that govern each the cocoa and nutmeg sectors come with both pros and cons. As the only organizations that purchase, export and market the products, they should benefit from collective bargaining power and unified promotion campaigns. Unfortunately, the GCNA, in particular, has not been able to move away from a position of accepting export prices rather than a position of equal negotiating ability. The GCA has done better but is still accepting prices based on commodity or bulk cocoa, a very different and non distinct product. Both associations lack capacity to market their product. They have little access to market data and low management capacity. They are charged with multiple tasks including propagation and processing, buying, and exporting yet operate with little funding.

With so much decision making authority resting with a single entity, the ability to chart a different path and create meaningful, tangible benefits for farmers also rests with these organizations. With their level of organization and centralization, the sectors could be poised to change dramatically their approach export. However, a framework must be in place in order to establish and implement a new approach. Pursuing IP Value Capture strategies will require a shift in the way Grenadian producers, exporters and other stakeholders view their position in the marketplace. It will require the sector to build capacity to manage and take on new responsibilities such as managing a brand or a distribution channel. It will require creating a system by which increased income filters back to producers.

Though almost a quarter of the labor force works, at least part time, in agriculture, the sector is in decline. Younger generations have moved away from the land and farming as a primary source of income – for good reason. Incomes are often low, poverty level, and unpredictable. A majority of farmers are older and unwilling to reinvest in permanent crops such as cocoa and nutmeg. Both are long term investments as they require significant time before bearing fruit. The benefit, however, is both products are well known in global markets and have very good export earning potential. A new approach to these products, domestically, at export and beyond Grenada's borders could reinvigorate the sectors and alter the perception of working the land. The following product briefs will describe in greater detail the export potential of Grenadian cocoa and nutmeg.

Beyond Grenada's most important export earners, there are numerous distinctive and unique products, many are agricultural. The Marketing and National Importing Board recognizes the need to build capacity and gain competency in identifying Grenada's distinctive products. In tandem with this, awareness building is necessary to bring attention to the value of Grenada's resources and assets and the potential to capitalize on this value. Much of the value resides in foreign markets, currently beyond Grenada's control. Awareness of the ideas and methods by which Grenada can gain control of their products outside of their borders, that is, capture value, is an innovative approach to maximizing and securing benefit from one's assets.

There is much focus on value addition, processing, and increasing manufacturing capacity. Grenada produces a number of distinctive products and many feel that it is imperative to curtail

exportation of these raw materials in favor of manufacturing and processing in order to export finished goods. At the same time, there is recognition of the many barriers to this approach such as the cost of importing packaging materials, cost of machinery, lack of technical expertise to operate and repair machinery, etc. A value capture strategy could holistically address many of these issues – the raw materials could be exported and processed outside of Grenada. The goods would be owned by Grenada ex-factory, packaged, distributed and marketed as products of Grenada. Shifting to capacity building in this latter approach first and increasing income by value capture may then open broader possibilities for processing secondarily.

The following scoping studies provide ample evidence that much potential exists in Grenada's cocoa and nutmeg for IP Value Capture strategies. The Caribbean study is preliminary in nature and thus recommendations include moving the Grenadian cocoa and nutmeg scoping studies into feasibility studies of greater depth and scope. It is also recommended that the Coordinating Committee headed by Dr. Marcelle consider IP Value Capture concepts as part of the National Strategy to Revitalize the Nutmeg industry. Focus on production alone will not substantially increase Grenada's export income, nor will it stabilize income for farmers. A forward thinking, long term strategy is required. Thirdly, building capacity to identify distinctive products will be an important way for Grenada to begin assessing and recognizing the significant value in its resources.

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## GRENADIAN NUTMEG

### Value Capture Opportunity

Grenadian nutmeg represents a serious value capture opportunity as identified by Light Years IP for several reasons:

- 1) Grenadian nutmeg is known as a superior product of the two major country producers and is marketed as superior by retailers, translating to a 25-30% higher retail price in retail markets over other origin nutmeg;
- 2) There is clearly a large gap in what Grenadians receive and the price for which retailers sell this unique spice. Farmers are currently receiving between \$1-2 per pound of whole nutmegs, whereas retail prices average \$40 per pound;
- 3) Grenada is highly experienced with nutmeg - at its peak exported 30% of the world's nutmeg, and at one time represented 80% of the countries' export product; involving 6,000 nutmeg farmers at its peak, though much diminished since hurricane Ivan;
- 4) The high reputation of Grenadian nutmeg in the retail market, coupled with the country's experienced and well-developed nutmeg farming and processing represents a sound value capture opportunity.

### Background

The nutmeg tree, *Myristica fragrans*, is an evergreen indigenous to Indonesia. Nutmeg has been highly valued throughout history for its use in cuisine and medicinal remedies; it has been recommended for headaches, fevers, stomach ailments and as an aphrodisiac. The trade of nutmeg was dominated at different times by the Portuguese and Dutch. In the early 1800s, the English gained control and planted nutmeg trees in Grenada and Zanzibar. Now nutmeg is grown in a number of places including India, Malaysia, Sri Lanka, and New Guinea. The largest producer is Indonesia with about 70 percent of global production. Until a few years ago, Grenada was the second largest producer.

Nutmeg production has been an important source of income for Grenadian farmers and the country. Estimates indicate there are as many as 6,000 nutmeg farmers who together with their families equal a quarter to a third of the country's population. At times, nutmeg was the leading export. After the devastating effects of hurricane Ivan, there may be only 2,500 active nutmeg farmers.

A nutmeg tree will begin to produce fruit after five to seven years depending on the varietal. Nutmeg ripens six to nine months after flowering. When the fruit is ripe, the pod splits open revealing the mace and nut. In Grenada, farmers allow the nutmeg to fall from the tree before collecting; this ensures it is fully mature.

All layers of the nutmeg are used. The exterior fruit or pod is used in jams, jellies, syrups and liqueur. Mace, the red lacy membrane that enrobes the nutmeg shell, is carefully removed, flattened and dried for 10-14 days. Nutmegs are dried for 6-8 weeks during which time they shrink away from the shell. Once the nutmeg is properly dried, its shell is cracked off, and the nutmeg is graded according to size and quality. The cracked shells are used as mulch in gardens and on walking paths. It also has potential use as a defoliant once it is finely crushed. The nutmeg is sold whole, ground or in many byproduct uses.

The nutmeg tree is the only tree that provides the world with two different spices: nutmeg and mace. Nutmeg is the actual center of the fruit, the nut, while mace is the red covering of the nuts. Both are enjoyed in a variety of cuisines from Middle Eastern to Asian, as well as in baked goods. The essential oil of the nutmeg is used not only as a food flavoring, but also in cosmetic, pharmaceutical and industrial applications such as fragrances, skin care products, cough syrup,

and pain relief balms.

#### Distinctiveness: Superior Quality Product

Of the two major nutmeg producing countries, Grenadian nutmeg is known to be superior, having a much stronger flavor, greater balance as well as higher oil content. This may be due to the method of gathering in Grenada. Grenadian nutmeg also has much lower levels of safrole and myristicin, hallucinogenic compounds. Experts in Grenada suggest that the absence of wild nutmeg trees with which cultivated varieties may cross breed prevents adulteration. The extremely rich soil of Grenada is also believed to produce superior quality products.

Nutmeg and mace have accounted for as much as 80% of agricultural export in Grenada, and at its peak, the small island country supplied 30% of the world's nutmeg. In 2006, Grenada exported just under US\$3 million worth of nutmeg and mace; both are processed and sold as whole, dried spices. Since hurricane Ivan destroyed 80-90 percent of Grenada's nutmeg trees, production has been only a fraction of previous levels. In 2004, Grenada exported almost US\$10 million worth of dried nutmeg. Though this recent history was devastating, the plausible value-capture opportunity here could replenish and spark renewed incentive in nutmeg farming and production to return Grenada to its leading role.



*Nutmeg pod*

#### Supply Chain

Retailers are aware of the superior quality of Grenadian nutmeg and market the origin as an important point. Grenadian nutmeg retail prices are at a premium of about 25 to 30 percent over nutmeg from other origins. Unidentified origin nutmeg retail prices for the ground spice average \$20 per pound and \$36 per pound for organic. However, ground nutmeg packaged in one or two ounce bottles retail at the equivalent of \$40-70/lb. Whole Grenadian nutmegs retail at \$2.50 per ounce or \$40 per pound whereas nutmegs of other origin retail at \$2 per ounce. Importing Wholesalers will earn an estimated \$10 per pound from this nutmeg.

The export of Grenadian nutmeg is under the sole auspice of the Grenada Co-operative Nutmeg Association. As well, the GCNA buys and processes all nutmeg from farmers. Currently, they are exporting nutmeg at about US\$7200 per ton or about \$3.60 per pound of dried whole nutmegs. Export prices are negotiated on behalf of the GCNA by a few agents under contract with the GCNA. Farmers currently earn about \$1-\$2 per pound of green nutmegs, depending on the bonuses GCNA awards at the end of the year.

#### Grenadian Nutmeg Prices in Value Chain

Retail Whole nutmegs:	\$40/pound (\$2.50/ounce)
Wholesale Whole nutmegs	\$10/pound
GCNA Exporting Prices -dried, whole nutmegs:	\$3.60/pound (\$7,200/tonne)
Farmers Earnings for green nutmegs:	\$1-2/pound (depending on bonuses)



### Summary Recommendation

There is clearly a large gap in what Grenadians receive and the price for which retailers sell this unique spice. There are only two major producers of nutmeg, and Grenada as the producer of a superior quality nutmeg should be in a position to negotiate their export prices. Grenadian nutmeg's reputation for high quality is a source of intangible value – an element that should be capitalized upon by those who farm and market the nutmeg from Grenada. Light Years IP believes that an opportunity exists for Grenadians to capture a larger share of the final market value so that producer and export income can be increased and secured.

Strategies to capture more value may involve changing the position in foreign markets, such as exclusive wholesale distribution, owning a wholesale brand or owning a wholesaler.

### *Sources*

Consultation with GCNA, Grenada Produce Chemist Lab, Ministry of Agriculture, MNIB

[www.fao.org](http://www.fao.org)

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## GRENADIAN COCOA

### Value Capture Opportunity

Grenada's reputation across the globe for producing consistently fine flavored cocoa is precious intangible value that should not be diluted and should be earning the country more secure income. The small volume of Grenadian Trinitario cocoa creates a unique opportunity to establish a conscious strategy to ensure that every sack of cocoa beans is recognized and promoted for its exceptional quality and flavor and is sold in the up-market retail segment.

Grenada can sell its cocoa beans not only as single origin cocoa but also with the more coveted "single estate" designation. An IP value capture strategy would focus very specifically on distributing Grenada's cocoa beans to a specific set of end users, such as artisan chocolate makers who craft handmade chocolates. Buyers blending Grenadian cocoa with other cocoas should be passed over because the value capture opportunity for the specialty Grenada cocoa is in its uniqueness, its single origin and well-developed processes to insure quality.

### Demand Growth

Global demand for dark chocolate is rising significantly, particularly in the UK where sales have been up by 25 percent. In response, chocolate makers have been launching new dark chocolate products and supermarkets have been expanding their offerings of dark chocolate. Demand for super premium chocolate bars, single origin as well as single estate bars is also soaring. Chocolate, as a specialty, gourmet product is entering the realm of wine and coffee as consumers are becoming much more discerning about what they buy and appreciative of the product's effects on the palate. ([www.chocolate.org](http://www.chocolate.org)) The International Cocoa Organization states consumer demand for premium, single origin, dark and high cocoa content chocolate has surged. Studies showing the health benefits of dark chocolate are also fueling increased demand.

It is an opportune time to implement strategies to extract value from the final market to bring higher income back to cocoa farmers and the Cocoa Association in Grenada. This increased income may go a long way in revitalizing cocoa farming – it will bring needed income to replace trees, both cocoa plants and shade trees.

### Background

*Theobroma cacao*, "food of the gods," has been grown in Grenada for centuries. It has been and continues to be an important export earner. There are an estimated 6,000 small holder farmers growing cacao, often intercropped with nutmeg and banana.

The Grenada Cocoa Association carefully oversees and controls the propagation and processing of cocoa to maintain high levels of quality and consistency. In Grenada, cocoa beans are fermented for about 7 days in wooden boxes. They are turned every two days in order to spread the developing flavors and heat generated during the fermentation process. This progressive transformation is essential to developing the full cocoa flavor and producing a unique fine flavored bean. Next the beans are dried in the sun, the preferred method as other means can cause off-flavors. After drying they are ready to be packed in jute sacks for export.

### Distinctiveness

Grenada produces some of the world's finest cocoa beans; they are recognized around the world because truly fine chocolate can only be made from particular varieties of cocoa, such as Grenada's variety of Trinitario. For more than half a century Grenada has been working to preserve its particular cocoa plant so that from across the island, the cocoa is uniformly high quality. Grenada's cocoa is noted as fruity, slightly spicy and delicate in flavor.

Originally Trinitario was hybridized in Trinidad in the mid 1700s from the finest cocoa variety, Criollo, and Forastero, considered the bulk cocoa. Together Trinitario and Criollo account for between 5 and 10 percent of the world market of cocoa - they are called fine, flavored or special cocoa. They are used in specialty and dark chocolates where the taste of the cocoa is prominent, making the quality and flavors more critical.

Trinitario is difficult to define in terms of flavor due to differing proportions of Forastero and Criollo. Growing conditions and plant management also influence flavor profiles. Grenadian cocoa has a well established reputation; it has been described as “well fermented and uniformly fine.” It is sought after by niche market chocolate makers Amedei, L.A. Burdick Handmade Chocolates, Rococo Chocolates and others.



*Cocoa pod*



*Cocoa beans*

#### Supply Chain

Chocovic sells a 71% Grenadian cocoa dark chocolate bar at \$6.95 for 80g. L.A. Burdick sells a 75% Grenadian dark chocolate bar at \$6 for 100g.

Currently cocoa export prices are at their highest in recent years. At export, the Grenada Cocoa Association receives \$4-5,000 per tonne; The Grenada Cocoa Association, recognizing the distinctiveness of their cocoa, has earned price premiums over commodity cocoa. However, considering the final market prices Grenadian cocoa commands, cocoa farmers still earn a proportionately small income related to retail values. An American fine chocolate maker states that at 70% cocoa content, one kilo of cocoa is needed to produce one kilo of chocolate, so at retail, one kilo of cocoa beans earns Chocovic \$85, that is, 25 times more than the farmers who produce the cocoa that is essential for their product. Farmers earn about 70-80 percent of the export price that the Cocoa Association is able to negotiate, currently about \$3.40 per kilo.

Cocoa harvesting is labor intensive; the pods are harvested individually by hand and sliced open by hand to remove the seeds and the surrounding pulp. The wet beans are sold to the Cocoa Association who have standardized the fermentation process.

#### Grenadian Cocoa Prices in Value Chain

Retail 71% cocoa content chocolate bar:	\$85/kilo (\$6.95/80g)
Wholesale chocolate bar	\$45/kilo
GCNA Exporting Prices -dried, whole nutmegs:	\$4.50/kilo (\$4-5,000/tonne)
Farmers Earnings for green nutmegs:	\$3.40/kilo (70-80% of export)

### Summary Recommendation

Grenada is poised to take particular advantage of value capture opportunity with its unique and fine cocoa, carefully developed and well reputed globally, at a time when fine, dark chocolate consumption has soared and demand for specialty, dark chocolate is predicted to continue to rise as its health benefits are widely touted. Since Grenada holds 5-10% of the world market, LYIP value capture strategy is to focus on a niche market retail user such as artisan chocolate makers who cater to the growing retail demand. Such a niche-market focus will return more of the retail value to Grenada farmers and revitalize cocoa farming, a truly unique asset.

Grenada is in a position to select its own exclusive chocolate makers and control the presentation of Grenadian source to the retail market, as part of a value capture strategy that can be developed in detail.

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[www.zchocolate.com](http://www.zchocolate.com)

## BELIZE COUNTRY REPORT

Belize is a small country of about 300,000 with 386 kilometers of coast. It is a small, essentially private-enterprise economy with tourism as the mainstay of the economy followed by exports of marine products, citrus, cane sugar, bananas, and garments. Other exported commodities include clothing, fish products, molasses and wood.

The climate is tropical and humid with hurricane season from June to November and coastal flooding a regular threat, especially in the south. Environmental issues include deforestation, water pollution from sewage, industrial effluents, agricultural runoff, solid and sewage waste disposal. These are serious issues for a small country with an urban population just over 50 percent and an urbanization rate of 3.1 percent (2005-2010, estimate, CIA factbook)

Past and current export strategies have yet to make significant, tangible differences in the income of the state and its people. Belize is rife with natural assets and good growing conditions for high-end premium quality products that have considerable intangible value in foreign retail markets that could and should be earning the country much more income. The IP value capture strategies that Light Years IP has implemented have proven successful in increasing overall export income and filtering this income down to farmers.

This section will highlight two Belizean products that are distinctive and have high intangible value in foreign markets. Xate is found in very few countries and the supply is rapidly dwindling. It is valued in floral arrangements, particularly during Easter. Marine bio assets are potentially extremely commercially valuable, so these resources must be protected by some kind of ownership and access regime.

### Light Years IP mission in Belize

The mission to Belize was a fact finding one intended to gather further data on the product sector identified in the preliminary desk study, marine bio-assets. LYIP also consulted with local stakeholders in order to begin a dialogue on Belize's distinctive products and IP value capture strategies.

Beltraide, a quasi governmental organization, provided a wealth of information and ideas. The organization is mandated to support investment, marketing and entrepreneurial development and to promote Belize made products. To this end, Beltraide has developed a National Export Strategy and carried out a Belize Market Study (BMS). The national strategy identified three main sectors to focus attention: tourism, agri business and environmental goods and services. The BMS identified numerous agricultural products with export potential. One such product that Beltraide felt particularly strongly about is xate, a wild plant used in floral arrangements for its dramatic effect and longevity. Most of Belize's xate is taken out of the country illegally and exported through Guatemala as a Guatemalan product. A brief on xate and an IP value capture strategy follows.

The Ministry of Agriculture and Fisheries also caught onto the idea of distinctive products and their potential to capture more value. Discussions with an officer in the Department of Fisheries yielded a number of unique, premium quality products. These discussions are a first step in first, identifying distinctive products, and second, raising awareness that while income is disproportionately allocated to foreign market stakeholders, IP value capture strategies and business tools are a means to level the negotiating dynamic thereby distributing income margins more equally along the entire supply chain.

The Ministry of Foreign Affairs was very keen to discuss IP value capture and how these ideas can benefit Belize, not only economically but also culturally and socially. With populations migrating from rural areas and a growing desire among younger generations to move away from the land, the issue of poverty and its implications become larger. IP value capture and a focus on distinctive products, products that are special, that only Belize produces or are of a particular quality when produced in Belize has a beneficial side effect of bringing into the spotlight, the tremendous assets and sources of pride found in Belize.

## XATE

### IP Value capture

An IP value capture strategy that aims to increase export income for Belize would include gaining ownership of the word Xate in the European market. A group of Belizean stakeholders would legally own the trademark for the word. This would enable Belize to sell genuine and legally harvested Xate and market their product as such. A distribution channel, probably a Netherlands company owned by the stakeholders, would then be established; this could be in the form of an actual distribution center or simply an agent subsidiary through whom the product is sold. This approach could also be a basis for sustainably exporting the product through better management of the resource.

A preliminary search of Community Trade Marks in the EU indicates that currently there is no CTM application or registration for the word Xate. Further research would be necessary to ascertain whether individual National Marks have been registered.

Once the trademark is registered and a distribution company is established, the stakeholders would be earning considerably higher incomes, by sharing in the wholesale revenue. This higher income could then be used as a means of preventing product from being lost to cross-border smuggling through Guatemala. The stakeholders could seek to channel more product to the distribution company, through more active harvesting of Belize crop. Then, Guatemalan harvesters and growers could be invited to participate in the strategy. It is important for a distribution structure to be in place before extending the strategy to include Guatemalan harvesters. As greater export incomes are returned to Belize, issues regarding collection, management, and conservation may be addressed.

### Background

Due to their small size and attractive leaves, three varieties of *Chamaedorea* are harvested from the wild, exported and used in floral arrangements and on Palm Sunday. They include *C. ernesti-augustii* (Fishtail), *C. oblongata* (Jade) and *C. elegans* (Parlour Palm). These ornamental leaves are indigenous to and found in Belize, Guatemala and Mexico. In the late 1990s, with serious declines in leaf production caused by over harvesting in Guatemala, xateros (xate harvesters) crossed the border into Belize to gather the leaves illegally from Belize's Chiquibul and Columbia River forest reserves. Guatemalan xateros depend so heavily upon these leaves for their livelihoods; they are devastating Belizean forests to meet Guatemalan suppliers' demand. This situation creates a multi layered dilemma involving issues of environmental sustainability, illegal harvesting in addition to the fact that Belize is not earning a fair share from their own resources.

### Distinctiveness

The three palm leaves are distinctive in shape and last 45 days after being cut. They are popular in wedding and funeral arrangements as well as on Palm Sunday. The parlor palm is a small palm with long graceful, bamboo like fronds. It is also popular as a house plant. The fishtail palm has a strikingly shaped leaf that grows to up to two feet long and one foot wide. The jade palm has smooth, large dark green leaves.



*Jade:*  
*Chamaedorea oblongata*



*Fishtail:*  
*Chamaedorea ernesti-augustii*

#### Over harvesting

To date, in Belize, xate is harvested from the wild only. If just a couple leaves are removed at a time, they can regenerate and the plant is not harmed in any way. Mostly, however, the harvesters are not careful to cut only good leaves; they cut indiscriminately, often cutting the whole plant. Xateros will camp and hunt in the forests for weeks while they gather the leaves; as they camp and hunt they gather plants for food and shelter and kill a variety of animals damaging the forest ecosystem in the process. If current levels and methods of harvesting continue, wild xate plants are in serious danger of depletion at which time all actors in both Guatemala and Belize will lose all economic benefits from this distinctive and commercially valuable plant.

These activities and their adverse environmental impacts have elicited public attention and sparked interest in the potential of xate as a non timber forest product for Belize. To this end, the government of Belize has created a Xate Technical Committee, including the Ministries of Agriculture, natural Resources and Foreign Affairs, to inform the development of a sustainable xate industry. Additionally, the Belize Botanical Garden and Ya'axche Conservation Trust conducted a cultivation trial and produced a xate growing manual.

#### Supply chain

It is estimated that US \$30-90,000 worth of xate is harvested every week in Belize and brought to Guatemala. A report by Beltraide suggests that up to 90 percent of leaves sorted and packaged in a plant in Guatemala City came from Belize.

Currently, Belizean xate is exported through Guatemala. Belizean xate leaf is channeled to Guatemalan buyers by two means. The buyer can buy from a legal exporter at \$0.06-0.10 per leaf. This exporter pre selects leaves for quality and size and transports the leaves to Guatemala. He buys leaves from legal harvesters at \$0.03 per leaf. Alternatively, the buyer can buy illegally harvested leaves at \$0.01 per leaf. He will transport the leaves to a facility in Guatemala where the leaves will be screened and sorted. Because of the indiscriminate cutting of illegal leaves, up to 60 percent will not meet quality standards to pass inspection.

At retail, the leaves sell for about \$1 per leaf. An estimated \$1-5 million worth of xate leaves are taken from Belize and exported through Guatemala to Holland and small amounts to the US. Quality of leaves is the greatest contributing factor to higher market prices. Handling of the



leaves after harvest, during sorting and transport can improve the quantity of leaves that are exported and, in turn, export income.

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Consultation with Beltraide

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Rainforest Alliance: [www.rainforest-alliance.org](http://www.rainforest-alliance.org)

Darwin Initiative: [www.defra.gov.uk/](http://www.defra.gov.uk/)

## MARINE BIO ASSETS

### The Distinctiveness of Belizean Coral Reefs

Belize's Grover reef atoll is considered the richest tropical marine environment in the Caribbean. Three of the Caribbean's four atolls (defined as having the unique property of the presence of an organic reef) are in Belizean waters. Coral reefs are important because about one quarter of the ocean's species lives in and around them; they are "underwater tropical rainforests." An atoll is particularly suitable for bioprospecting because it is surrounded by a lagoon, with generally more shallow waters, and affords easier access to coral reefs.

Genetic material has already been taken from Belize's forests by the National Cancer Institute (US). Also, a number of marine resources that led to the developed of medical products have been taken from the Caribbean: a tunicate for several cancers, compounds isolated from a sponge for HIV and an anti inflammatory compound from a soft coral for skin cream.

### IP Value Capture Opportunity

Many of the world's most valuable and successful medicines have been derived from nature. Ten of the world's 25 top-selling pharmaceuticals were derived from natural products and accounted for global sales of nearly \$20 billion. The major natural product sources examined by the pharmaceutical industry are microorganisms, plants and marine macro-organisms. The industry spends nearly \$US 2billion annually to launch a new drug, and, according to a study by Bain and Co. in 2003, nearly 50% of that amount is spent on prospecting and developing the new drug.

"Access and Benefit Sharing (ABS)" refers to work by developing countries to secure revenues from such prospecting for bio-assets in their natural environments and to ensure that the people of the host country are able to afford any pharmaceutical or other patented products that derive from those environments. Michael Gollin, a recognized expert in ABS law, suggests the current economic model for developing countries (and developed countries without domestic pharmaceutical businesses) would be to create a scientific institute in country. Such an institute would provide the country with jobs for research workers and lightly trained rural and marine bio-prospectors, while serving to reduce the barriers to entry for pharmaceutical and other prospecting companies.

LYIP suggests that this model can provide a part of the ultimate strategy and proposes the development of a more far-reaching business strategy to capture value from marine bio assets. In a Japanese business approach, 24 Japanese corporations, along with the Ministry of International Trade and Industry, established the Marine Technology Institute in Japan that employs 80 employees, researchers and laboratories but functions more like a traditional business. LYIP proposes the design of a program to establish legal and business ownership for Belize of the rights to bio assets that can be owned and a structure for rights management and revenue distribution that could be built at the same time as the institute. All components together would create an effective IP value capture model.

### Belize context

As a member to the Convention on Biological Diversity, Belize "has the responsibility of setting the conditions for giving access to its genetic resources to other parties, upon mutually agreed terms, while respecting the sovereign rights of the state over these resources." (Paola Ferreira-Miani) The Ministry of Natural Resources is responsible for negotiating research and extraction from Belize's seabed. To date no legislation is underway.

It is important for Belize to begin developing a policy framework within which access and benefit sharing agreements may be made. In the meantime, or concurrently, an institute may be established that will significantly benefit Belize in a number of aspects. Environmental and

technology transfer experts believe Costa Rica's Instituto Nacional de Biodiversidad (InBio) is a model worthy of replication. It has as its main areas of foci inventorying, conservation, education, managing biodiversity information and bio prospecting. A similarly structured institute in Belize could build technical knowledge and capacity – collecting, identifying and cataloguing biological material. The institute would also provide training and employment. For external parties, the institute could facilitate agreements and access, reducing transactions costs and barriers to entry.

From an IP value capture standpoint, an institute would, perhaps, constitute a first step. While a major pharmaceutical breakthrough occurs once in thousands of samples, the likelihood is some valuable samples will be found in Belize's waters at some point in time. Considering Belize's rich heritage of traditional medicinal knowledge, and the rate at which such knowledge is pirated globally, it is recommended that Belize move forward to a feasibility study that will examine access and benefits sharing from an IP based business perspective. Such a perspective would include the design of an economic benefit structure to Belizeans that is directly relevant to the goals of the country's long-term development, avoiding the "Dutch Disease" of short-term consumption of royalty payments. A business oriented program will build upon the information, inventorying and educational activities of the institute. While reducing transaction costs for foreign corporations, the institute must also serve the interests of local communities.

#### Global context

It is estimated that the worldwide pharmaceutical market generates approximately US\$300 billion annually, with worldwide royalty payments to rights owners now estimated at between US\$7-10 billion annually. Michael Gollin reports that all U.S. pharmaceutical companies were reported to have stopped bio prospecting at present, but a number of European and Japanese companies were continuing.

Royalty payment structures are, in simplified terms, applied as follows:

- 1-6% of net sales for unscreened samples
- 5-10% of net sales for samples that are backed by preclinical trials
- 10-15% of net sales for those samples that have material efficacy - i.e. have likelihood of being developed into a marketable drug.

The 1991 contract between Costa Rica and Merck was the first major bilateral agreement on bio prospecting. The agreement was made between INBio and Merck, a US based pharmaceutical corporation. Under the agreement, Merck was allowed to evaluate the commercial potential of a number of plants. In return, INBio received US\$1.1 million over two years and an undisclosed percentage of royalties on any commercial products. INBio also received technical and scientific training. Though, absent in the agreement was any mention of the rights and roles of indigenous peoples.

A significant amount of bio prospecting is ongoing throughout the tropics. A survey of 20 major bio-prospecting companies shows they collected 17% of their samples from marine environments. (Singh). The National Cancer Institute has collected tens of thousands of samples from plants, microorganisms and marine genetic diversity from 30 tropical countries. Three agencies of the US Government, together under the name International Cooperative Biodiversity Group (ICBG), have bio-prospecting contracts that will give US based pharmaceutical companies biological extracts from numerous countries. Intermediaries such as research institutes, botanical gardens and public institutions carry out these bioprospecting contracts and many others. For the country from which the biological materials are taken, this makes knowing with whom they are negotiating and the ultimate end user difficult to identify. In example after example, research institutes negotiate agreements with countries only to negotiate substantially more profitable agreements with pharmaceutical companies.

Pharmaceutical companies play an important role in discovering drugs and developing them into forms that can be used by the public. However, this does not exclude such companies from sharing benefits with the rightful owners of genetic materials for personal gain. A balance must be struck whereby all participants benefit.

#### Piracy, access and benefit sharing

The ICBG has undertaken an agreement with the University of Papua New Guinea who would take the lead role in a US\$4 million project with the objective of searching for marine organisms and plant species that contain components for tuberculosis, malaria, cancer and HIV treatments. If the drug discovery program is successful, the National Institute of Health and the University of Utah stand to make US\$26 billion. (Sharma)

In the Caribbean, University of California researchers found and patented an anti inflammatory agent called pseudopterosin. The compound was developed at the University of California and has been licensed to OsteoArthritis Sciences, Inc and Nereus Pharmaceuticals for royalties in the millions. In addition, the compound is also licensed to the cosmetic giant Estee Lauder who uses it in a skin cream.

In Mexico, a project led by the University of Georgia, a Mexican university research center and Molecular Nature, Ltd., a UK company and funded by the ICBG for US\$ 2.5 million over five years intended to use "indigenous knowledge to guide its research...discover, isolate and evaluate pharmacologically important compounds from the plant species and microorganisms employed in traditional Mayan medicine." Eleven Mayan organizations criticized the project for its theft "of traditional indigenous knowledge and resources, with the sole purpose of producing pharmaceuticals that will not benefit the communities that have managed and nurtured these resources for thousands of years...The project explicitly proposes to patent and privatize resources and knowledge that have always been collectively owned..." (RAFI) Ultimately, ECOSUR, the Mexican research center, cancelled the project due to significant local opposition.

#### Common key concerns

As of 2004, only eight countries have Access Benefit Sharing laws and policies: Colombia, Costa Rica, Ecuador, Mexico, Philippines, Peru, Samoa, Thailand and the USA.

A few of the main concerns of countries drafting legislation on ABS are as follows:

1. Ownership of the genetic resources
2. The relationship between traditional IPR systems and traditional knowledge.
3. Indigenous people's rights
4. Impact of IPR on conservation and biodiversity

There are myriad issues and complexities associated with access and benefit sharing. Fundamentally, Belize, as a country, and the communities who share their knowledge and resources are entitled to a share of the economic benefits derived from the use of their assets irrespective of legal, environmental and other policy debates.

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## COMMENTS ON "BEST BETS"

This section discusses sectoral opportunities laid out in NIHERST's Sector Foresight Project. The full study can be found at <http://www.niherst.gov.tt/s-and-t/projects/foresighting/index.htm>

The series of the NEXT sector foresight reports (including Biotechnology, the Creative sector, Niche Manufacturing, the Food and Beverage sector, and the Tourism sector) outline current market trends, as well as future predictions in each sector. While these reports solely focused on opportunities for Trinidad and Tobago, Light Years IP read the documents with opportunities for all Caribbean countries in mind.

### Biotechnology

Light Years IP agrees that the field of biotechnology is an important sector that could earn Caribbean countries more export income.

As noted in the Biotechnology Sector Report, the biotechnology field concerning Health and Wellness is a huge sector that has many different sub-sectors within it, including health and wellness enhancement, regenerative medicines, reproductive technologies, genomic medicine, and nutrition. For this reason, Light Years IP has chosen this field to focus on in the Caribbean Scoping Study.

In order to have a more narrow focus, Light Years IP is suggesting to first focus on the development of marine biotechnology as this is a field that the Caribbean could grow to have a competitive edge if developed thoroughly. The Caribbean's development of this field could also serve as a model in developing countries that have an abundance of natural resources that could be used for the development of, among other products, pharmaceuticals, to show how the developing country can earn a fair share, rather than the majority of profits going to foreign pharmaceutical companies.

Light Years IP agrees that other fields within the biotechnology field, such as agricultural biotechnology, industrial and environmental biotechnology, and security and defense biotechnology pose opportunity for the Caribbean countries to earn more export income. However, as noted in the report, the field of biotechnology requires huge investments and resources in order to be successful. For this reason, it is suggested that one sector first be developed (marine biotechnology) with more to follow.

It is likely that there will be many sector convergences within the biotechnology field, thus while developing the biotechnology field, it will also indirectly be building other biotechnology areas. With the primary focus on one segment, Caribbean stakeholders can better understand the biotechnology field in general, enabling more efficient and effective development of subsequent sectors.

### Food and Beverage Sector

This sector looks into the importance of the food and beverage sector, outlining its complexities, trends, and various future forecasts. The report emphasizes the importance of unique food

products as well as the growing popularity of ethnic and fusion foods, two trends that have been taken into consideration in the choice of products Light Years IP has chosen to focus on for the Caribbean Scoping Study.

The report highlights two important approaches that are being undertaken in order to reach long-term profitability in the food and beverage market: (1) to offer a 'value-added' product through traditional retail channels that differentiates it from commodity food and beverage products that are under constant competitive price pressure and (2) to offer a unique high value product solution through emerging rapid growth channels. Light Years IP agrees that these two assertions are important to take into consideration for long term profitability, which is why Light Years IP has chosen certain products that fall into this sector and meet these requirements.

Caribbean Condiments and Sauces is one product line that is unique to the Caribbean, has an ethnic appeal, and is in high demand. The secret ingredients to these sauces that make them distinct from other products cannot be replicated. This product line fits well into what the NEXT report sees as important areas to focus on. Jamaican logwood honey, Jamaican ginger derivative products, and Grenadian nutmeg are all unique products to the Caribbean that also fall into the 'rapid growth channels' that the report discussed.

Light Years IP is in agreement that there is opportunity in other Caribbean products that would bring more export income to Caribbean countries. It must be stressed, however, that instead of focusing on 'value-added' products, it is advised to look at products that are already being produced, or have traditionally been produced, in Caribbean countries. Many of these products, such as Caribbean fruits and vegetables, are unique to the Caribbean and have high amounts of antioxidants, falling into the category of 'super foods.' No 'value-addition' has to take place in many products in the Caribbean – because of their distinctiveness, these products can simply be sold as they are in the international market, but through application of Intellectual Property business strategies, can generate more export income in Caribbean countries.

#### Creative Sector

As noted in the report, the creative sector is huge and reaches across art, culture, design, craft, and media practices – including everything from architecture, and visual arts to crafts, performing arts, fashion, music and film. Light Years IP believes that this sector has enormous opportunities for growth in the Caribbean, which is why Light Years IP has chosen to include merchandising of Reggae music into the Scoping Study. Reggae is highly associated with the Caribbean, in particular Jamaica, and Reggae merchandising (such as hats, bags, and ornaments) is estimated to be a multi-million dollar industry. As noted in the report, it will be essential to develop strategic partnerships in the related field, which will be identified during the scoping analysis.

Light Years IP agrees that the culture of the Caribbean, both ethnic and creative, is an area that has potential to earn more export income for the Caribbean. The Light Years team hopes that our Scoping Analysis of not just reggae music, but of all products in the Caribbean, will show stakeholders how, if properly developed, IP strategies can help protect and promote Caribbean creative products in the international arena.

The NEXT report also highlights the growth of technology within the creative sector, which is indeed an important area to gain economic returns. The NEXT report asserts that the 'Big Players' are focusing more on technology, but in order for the Caribbean to see growth in this section, it is important to put appropriate resources into the scientific research institutions to develop scientific capacity in the Caribbean. The Light Years team hopes to strengthen the Caribbean's use and application of IP strategies around their current assets (such as music), which will then

enable Caribbean countries to have more success when building their digital and technological creative products.

As the NEXT report outlines, creative leadership, global connectedness and branding, commercializing creativity, as well as design and technology led innovation are important aspects that must be strengthened in order to sustainably build the creative sector within the Caribbean. As these key areas are incorporated into policy, it is also important to continue to encourage entrepreneurship in the creative field. The Caribbean is rich in creativity, and with key tools and resources, the Caribbean will be able to see more monetary returns for their rich cultural assets and culture of creativity.

As noted, the sectors that fall into the creative field, such as fashion, film and visual arts, music and culture, and design all have potential to be strengthened within Caribbean countries. Puma launched a successful line of clothing based off of the image of Jamaican Rastafarian culture, showing that there is indeed international appeal of the Caribbean lifestyle. Through employing IP strategies, Caribbean countries will be able to share their unique culture with the world, while at the same time earning more export income.

#### Tourism

It is well known how important tourism is to Caribbean countries. As the NEXT report highlights, recent tourism trends are posing new opportunities for Caribbean countries to emerge as vacation destinations that offer unique experiences to travelers. Adventure tourism, agro-tourism, cultural tourism, eco-tourism, and health and wellness tourism are just a few examples of tourism sub-sectors that have tremendous opportunities in Caribbean countries. Additionally, there is more awareness of sustainability in general, and travelers are opting for destinations that highlight this aspect of respective countries.

One of the product areas that Light Years IP is including in the Scoping Study is Jamaican Natural Beauty Products. This is an example of how a country can utilize its inherent resources and apply this to the tourism sector. Jamaica is beginning to offer more 'eco-lodges' and 'eco-spas' that are high end, but use products in the lodges that are all local and provide the tourist with a very authentic, natural, and unique experience all while maintaining a high 'luxury' image. This is just one example of how a country can re-brand its image to the outside world to cater to trends within an industry.

Light Years IP is in agreement with the NEXT report that tourism areas such as cultural and creative tourism, as well as extreme/experimental tourism are opportunities that Caribbean cultures can capitalize on while at the same time building their global image and bringing in more export income. As these sectors develop, Caribbean countries can simultaneously be using IP business strategies to promote cultural products or products unique to the Caribbean that will enhance the experience of a traveler. As noted in the NEXT report, unique travel experiences are becoming as important to consumers as owning unique products. The Caribbean is in a position to develop both these areas.

#### Niche Manufacturing

The NEXT report offers two definitions for manufacturing: (1) "The transformation of raw goods into finished goods for sale, or intermediate processes involving the production or finishing of semi-manufacturers," and (2) "Our vision of manufacturing in 2020 is of a consumer-driven, high value-added environment with an emphasis on the manufacture of individual products to meet individual requirements." Light Years IP would like to note, for the purpose of our work, the classic view of 'value-added' is not always necessary for countries to compete at a higher level. For example, if value-added is referring to additional processing that a product must go through,

it often may be more profitable to undergo this 'value-addition' offshore, while at the same time still owning the product ex-factory.

Manufacturing must involve innovation, scientific and technological research and development, in addition to large investments into appropriate institutions. The importance of Intellectual Property Rights is very high in this field, as it is necessary to protect innovations and subsequently earn the monetary awards associated with the products. However, Light Years IP did not specifically address manufacturing in the Scoping Study Report, as this field will be developed as more entrepreneurship is encouraged and more investment goes into the appropriate research institutions.

Instead, in certain products that are included in the Scoping Study Report, such as Jamaican ginger derivative products, manufacturing will likely be part of a strategy when developing a successful IP approach. In this way, new approaches in manufacturing will be viewed in conjunction with creating an IP business export strategy. The manufacturing sector in the Caribbean can grow if more innovation is encouraged and novel products are created. It is hoped that the approach that Light Years takes in the Scoping Study will show how IP rights and tools relate to, and can strengthen, every segment within an economy.



## INTERIM REPORT: PRODUCTS EXCLUDED FROM FINAL REPORT

### Caribbean Sugars

Sugar production in the Caribbean has a long, and sometimes tumultuous, history. The islands of the Caribbean only produce forms of 'raw' sugar, a rich, distinctive brownish-gold sugar, with large crystal-like grains. It is produced from pressing sugar cane that is then steamed for the juice to form thick cane syrup. Once evaporated, the crystals are then formed. As it is not refined much, it retains a very rich and creamy flavor, ideal for baking and flavoring coffee and tea.

Demerara sugar has come to be known as the generic name for this type of specialty sugar. Demerara is a region in Guyana that was the first to begin producing and exporting sugar from Guyana in large quantities. Although this product originated in Guyana, the name 'Demerara sugar' has been popularized for years, disassociating it from the country. Opportunity does exist for a campaign to be launched for Guyana to reclaim its connection with this product.

Another type of sugar from this region is Moscovado sugar, a dark molasses based sugar from Barbados that is sought for baking as well as a sweetener in drinks. Raw sugars, such as Demerara and Moscovado generally have a retail price of around \$5.00-\$8.00 per pound, while conventional granulated white sugar retails at around \$0.66 per pound. Types of raw sugar clearly are sold at premium prices, indicating a tremendous amount of intangible value that may be being lost to the Caribbean.

As none of the sugar exported from the Caribbean is refined, it is suspected that there are other types of Caribbean specialty sugar that are more distinct and fall into the gourmet bracket at retail. Raw sugars from the Caribbean are not refined, and thus do not have the added chemicals that conventional sugar has.

### Jamaican Cigars

The Caribbean islands and Central America are considered to be the ideal regions for growing cigar tobacco. Cuba is, of course, the most famous cigar producing country, but other countries in the region also grow fine tobacco that can be used to produce premium, hand rolled cigars.

Jamaica has an interesting history in the tobacco industry. The climate and soil are perfect for growing tobacco, especially the volcanic ash enriched soil in certain areas. Additionally, Jamaicans have an interesting history of hand rolling cigars, a skill that they learned from the best – the Cubans, who brought the tobacco industry to Jamaica during the Second World War. During the '60s and '70s Jamaica was the leading place for cigar making in the Caribbean, outside of Cuba.

Many of the top premium cigars brands use Jamaican tobacco in their filler blends, indicating that an assortment of Jamaican tobacco falls into the category of 'premium.' A variety of tobacco indigenous to Jamaica includes silver tongue, a long leafed tobacco (tobacco that runs the entire length of the cigar), which is required to produce hand rolled cigars in the premium bracket. Short leaf tobacco is generally used for the production of machine rolled cigars.

Apart from the quality of the tobacco, Jamaicans have developed a unique way of preserving their cigars in humid weather. Developed by Royal Jamaica cigars, the cigars are dipped in a mixture of boiled Bethune (a Jamaican root) in addition to rum and other herbs. This not only protects the cigar from the excessive humidity of Jamaica, but also adds a distinct flavor to the cigar that is enjoyed by many cigar connoisseurs. Jamaican Royal cigars have been touted as "the one truly unique product in the entire realm of handmade premium cigars."

Cigars are sold in boxes with an average of 15-25 cigars per box, with prices ranging from about \$75.00 a box to over \$200.00, with individual cigars ranging from \$3.00 to \$25.00 at retail. Tobacco has the capability to earn Jamaica additional export income by moving all cigar production into the premium bracket. Jamaica is the fourth largest producer of cigars for the USA market after Honduras, the Dominican Republic, and Nicaragua. In 2007, 23 million hand rolled premium cigars were shipped to the USA from Jamaica.

Continued research is needed to verify the current production occurring in Jamaica, as well as the situation of tobacco farmers and cigar companies. The secret ingredient of Bethune that adds distinction to the cigars, the favorable climate, and the history of cigar making in Jamaica, all improve Jamaica's opportunities to capture more value of premium hand-rolled cigars in the final retail market. With a package of IP based business strategies as well as capacity building, Jamaica could become one of the leaders in premium cigar production.

#### Caribbean pepper sauces and condiments

Two original Native American tribes, the Arawaks and Caribs, occupied the islands before European powers took over. It is believed the Caribs began the method of spicing foods with chili peppers. There are many varieties of the hottest pepper species, *Capsicum chinense*. *C. chinense* seeds were brought to many Caribbean islands where specifically adapted pod types have evolved and have local names – Scotch bonnets from Jamaica, congo peppers from Trinidad, booney peppers from Barbados, piment bouc from Haiti. The pods of the *C. chinense* species vary in shape and size from 0.25 to 5 inches. These pods are characterized by a distinctive fruity aroma that is present regardless of variety, heat level or pod size. (Peppers of the World, DeWitt and Bosland) These peppers tend not to dry very well and are thus best preserved as pepper sauces, blended with spices, herbs and sometimes fruit. They have become a mainstay of Caribbean cuisine and each country has favorite recipes and flavors.

Jerk is a style of cooking native to Jamaica where meats are rubbed with a very hot spice mixture called Jamaican jerk spice. The main ingredients in jerk spice are Jamaican pimento (allspice) and scotch bonnet peppers; cloves, cinnamon, scallions, nutmeg, thyme and garlic are also added. The meat is generally marinated for more than 24 hours, allowing it to absorb the full intensity of flavors. The method of Jamaican jerk where meat is put on a grid of green sticks about one and a half feet above a smoldering fire of green pimento wood in a shallow pit makes it tender and flavorful. The meat is covered with pimento leaves to impart more flavor while also trapping the smoke. Barbecuing over pimento wood and covering with pimento leaves and berries gives jerk its distinctive and authentic flavor. In addition to the cooking method, jerk is famous for its fiery hot seasoning due to the scotch bonnet pepper. Recipes for jerk seasoning vary by individual, family or restaurant; each has a special recipe or secret ingredient. The seasoning, the method, and the history are all important aspects of jerk, all sources of intangible value.

There is a huge range and variety of sauces, seasonings, spice mixtures and flavors associated with Caribbean cuisine and culture. Pickapeppa, one of the more recognized brands, has been producing sauces in Jamaica since 1921. They age their sauces in oak barrels for a year to create fullness and body in the sauce. Their sauces, sold online, retail at US\$3-5 for 3-5 ounce bottles and the uniquely jerk seasoning retails at US\$5 for a 10 ounce bottle. There are many local sauce and condiment producers who clearly are not benefiting from the distinctive flavors of their condiments and unique stories behind them.

#### Jamaican Ginger derivative products

Ginger, *Zingiber officinale*, is a highly versatile and one of the most widely used herbs worldwide. Of the many producing countries, Jamaican ginger has long been considered the finest quality because of its strong yet delicate aroma and flavor, oil content and appearance. Until recently, Jamaica was one of the largest commercial producers of ginger. Between the 1930's and

1960's, Jamaica, at its peak produced 2 million kilos. More recently, in 2006, Jamaica produced 259 tonnes.

Ginger has a multitude of uses in the processing industry, pharmaceutical industry, and confectionary and perfumery industries. Its sweet, pungent taste lends itself to refreshingly flavorful drinks; "ginger beer is probably the most perfect small beer... with sparkling effervescence. The Jamaica ginger gave it both exquisite flavor and pungency." (www.jamaicadrinks.com) Ginger tea is available commercially and is easily made by infusing fresh ginger in water. It is known to aid digestion and has a soothing aroma. Oil of ginger is used as a food flavoring and also as an ingredient in perfumes and in aromatherapy. Candied ginger is eaten as a confection. Preserved ginger is prepared by peeling young rhizomes and boiling them in syrup. Ginger root is also readily available in a variety of forms for culinary uses ranging from whole raw or fresh roots, dried roots, powdered, and pickled. It has been used medicinally for centuries for common ailments such as nausea, inflammation, cough, and rheumatism.

Ginger, in its primary forms, is one of the world's most used spices. However, great potential lies in ginger derived products such as ginger oil, scented products, make up and lotions. Jamaican ginger's oil content and delicately warm and balancing aroma make it an exceptional ingredient in soaps, lotions, shampoo and muscle rubs. A number of high end products specifically note Jamaican ginger in their ingredients list. For example, one ounce of Arcona Jamaican ginger make up sells for \$45 and Lush ginger lotion sells for \$22 for 7.9 ounces. Lush also sells 1.3 ounces of ginger perfume for \$59.95. (Chanel N°5 Eau de Toilette Spray sells for \$50 for 1.2 ounces). Ginger Essential oil by Aura Cacia with a warm, sweet woody note sells at \$14.15 for 0.5 ounce whereas other common herb essential oils such as rosemary, mint and lemongrass retail at \$6-8 for 0.5 ounce.