

GRENADA NUTMEG SECTOR DEVELOPMENT STRATEGY

2010-2015



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European Union All ACP Commodities Programme Caribbean Region

GRENADA NUTMEG SECTOR STRATEGY



St. George's, Grenada
July 2010

The present strategy has been put together by the stakeholders of the nutmeg sector and the institutions of Grenada.

With support from:

All ACP Agricultural Commodities Programme



Financed by the European Commission



In collaboration with:

The International Trade Centre (ITC)



UNCTAD



World Bank



FAO



Vision for the Grenada NUTMEG and MACE Sector

“A world leading Industry by 2015 recognized for its top quality Nutmeg, Mace and value added products contributing to the sustainable livelihood of the People of Grenada.”

Note to the Readers and Purpose of this Document

As part of the E.U. funded All ACP Agriculture Commodities Programme, the Ministry of Agriculture, Grenada Cooperative Nutmeg Association (G.C.N.A.) and the other sector stakeholders, in collaboration with the International Trade Centre (I.T.C.) in Geneva, Switzerland, have undertaken the development of a Comprehensive Strategy for the Nutmeg Sector.

The A.C.P. programme held a Caribbean Region Kick-off Workshop in Montego Bay, Jamaica in April 2008, which was attended by public and private sector delegations from A.C.P. Caribbean countries including representatives from G.C.N.A., the Grenada Marketing and National Importing Board (M.N.I.B.), Private Sector and the Grenada Ministry of Agriculture.

The Grenadian delegation called for the Programme to support a participatory stakeholder approach to the design of a comprehensive Strategy for the development of the Nutmeg Industry using ITC's methodology and assistance in implementing product and market development activities.

As a result of the Sector Strategy, A.C.P. Programme implementing partners have contributed to the design of the Strategy and have also committed to provide support in its implementation. These partners include the Food & Agricultural Organisation of the United Nations (F.A.O.), the United Nations Conference of Trade & Development (U.N.C.T.A.D.), and the World Bank (W.B.).

The official Programme's counterpart in Grenada is the Ministry of Agriculture and the Comprehensive Sector Strategy for Nutmeg and Mace was developed along the lines of existing initiatives such as the National Export Strategy, the Commonwealth Secretariat Action Plan for the sector and G.C.N.A.'s Strategic Development Plan.

The Nutmeg Sector Strategy for Grenada was done using a market-led participatory stakeholder approach focusing on domestic, regional and international market opportunities.

The emphasis is on revitalizing the Nutmeg Sector through the Value-Chain Approach thus targeting farmers, private sector enterprises, processors, buyers, policymakers and support institutions.

The purpose of this Document is to guide and support the development of the Nutmeg Industry by providing a framework and a plan and by articulating Value Chain actors, private sector, existing resources, development activities and donor support.

This Document is intended to be the blue print for the development and improved competitiveness of the Nutmeg and Mace Sector in Grenada and it has been presented to Cabinet on July 2010.

Message from the Prime Minister

As Prime Minister of Grenada, Carriacou and Petite Martinique I am acutely aware of the importance of the Nutmeg sub-sector and the enormous contribution which it has made to the socio-economic development of our nation over the past decades. I am also painfully aware of the hurt and suffering that have been inflicted on the people by the passage of Hurricanes Ivan and Emily in 2004 and 2005 respectively; especially those of the rural community who depended on nutmeg cultivation and other agricultural activities for their economic livelihood.

My Government has made the revitalization and development of the Nutmeg Sector and indeed the development of agriculture as a whole, a top priority. A resuscitated and growing Nutmeg Industry is vital for sustainable socio-economic growth, not only for the rural farming community, but for the nation as a whole. It is in this regard that I pledge my Government's total and unwavering support to the development and implementation of this Strategy. This Nutmeg Revitalization Strategy is the culmination of extensive and exhaustive work directed and supervised by the Cabinet mandated Nutmeg Revitalization Committee with the collaboration of the International Trade Centre (I.T.C.). The process of strategy development was participatory, involving a wide cross-section of persons and organizations in Grenada. Resource persons from regional and international organizations have also brought their expertise and knowledge to bear on the strategy development process.

I am especially pleased that this Strategy has been developed using the Value Chain Approach, as my Government has placed much emphasis on value addition in nutmeg and agriculture as a whole. This Approach ensures that all players in the Nutmeg Industry are taken into account and that all areas are addressed.

This Strategy has been developed by Grenadians for Grenada. Thus it is my sincerest hope that it will be embraced by all and that its implementation is given the full support of all industry stakeholders. As Prime Minister I will use my good office to ensure that this Strategy receives full governmental support to ensure that the Nutmeg Industry is once again vibrant and robust.

Let me take this opportunity to offer my Government's sincerest appreciation to each and every person who played a part in the formulation of this comprehensive Strategy and once again pledge my Government's unwavering support to its implementation.

Message from the Ministry of Agriculture

With our Minister as the Champion for the Grenada Nutmeg Sector Strategy, the Ministry of Agriculture takes this opportunity to commend the efforts of the sector stakeholders and the Strategy Development Co-ordinating Committee composed of Guido Marcelle, Gregory Del Sol, Aaron Francois, Shanta Cox-Williams, Denis Noel, Shadel Nyack-Compton, Denis Felix, Adrian Thomas, Kisha Gellineau, Francis Robertson, Cosmos Joseph and Franklyn Salim.

The overall Strategy for the development of Grenada calls for ensuring sustainable economic and social progress. The Nutmeg Sector Strategy is therefore contributing to this goal and is based on our current ability to absorb changes. It is designed to seek improvements to our current situation, to export competitively to get best value and thus generating greater opportunities for our farmers.

The Ministry is pleased with progress and anxiously awaits the Implementation Plan that will be used by Government to move the Sector forward. We welcome this initiative by the European Union and the assistance of International Trade Centre (I.T.C.) in the development of this Plan and Strategy. We now look to our development partners and implementing agencies – in particular ACP Implementing Partners – to receive this Plan and to assess how and where it fits in their own plans and support for Grenada.

Message from G.C.N.A.

The Grenada Co-operative Nutmeg Association (G.C.N.A.) is pleased to welcome the presentation of the Nutmeg Sector Strategy for Grenada. Since April 2008, Government, through the Ministry of Agriculture, G.C.N.A. and the International Trade Centre (I.T.C.) engaged in an undertaking to produce a comprehensive sector Strategy for the revitalization of nutmeg and mace following the destruction to the Industry in 2004 and 2005.

The Strategy is now ready and all are pleased and expectant. The revitalization of Grenada's Nutmeg Industry is vital to the well-being of all of Grenada and given the additional problems wrought on the Industry by the root rot/nutmeg Wilt Disease, the presentation of the Strategy could not have been more timely.

We expect a revitalized, buoyant Nutmeg Industry to deliver among others:

- Improved benefits to our nutmeg farmers;
- Improved farming practices including methods of harvesting the fruit (food) and preparing it for marketing;
- Improved marketing arrangements and improved value added products for niche markets; and
- Improved value added applications and the application of Science and Technology and Information Technology to the overall operation and production of the G.C.N.A. and its Value Chain.

The G.C.N.A. is very pleased to be engaged with the I.T.C. and Government in the creation of the Nutmeg Sector Strategy for Grenada. We look forward to its wholehearted adoption, support, implementation and production – all in the name of our nutmeg farmers and Grenada.

Message from the Co-ordinating Committee

We have arrived at this point after months of active work, discussions, exchanges, interjections and deliberations.

We have established objectives. Working groups have elaborated on these objectives and an Implementation Plan, including some potential funding agents and other supporters has been formulated. Some aspects of the Implementation Plan have already commenced.

We are all in this together. The efforts and works of all will contribute to the whole. The way forward depends on us – stakeholders, farmers, G.C.N.A., the National Co-ordinating Committee, Government, supporting agencies, private sector, institutions and organizations among others.

We must see this Strategy as a rebirth – an instrument to be used to determine the way forward for the entire Nutmeg Sector.

This is the time to put Hurricane Ivan behind us. This is the time to look for solutions! This is the time to be creative and to generate new activities! Let us face the challenges! Let us chart a course, not by chance but a deliberate and sustainable course for the future of the Nutmeg Industry!

Let the People of Grenada be the beneficiaries! Let the Strategy guide us to work together with the Government, the G.C.N.A., the Implementing Partners and the sector stakeholders towards this end!

The National Co-ordinating Committee remains committed to play its full and meaningful role in the implementation of the Nutmeg Sector Strategy for Grenada.

Acknowledgements

The National Co-ordinating Committee wishes to specially acknowledge the support provided by:

The Honourable Tillman Thomas – Prime Minister of Grenada;
The Honourable Denis Lett – Minister for Agriculture, Lands, Forestry and Fisheries;
The Honourable V. Nazim Burke – Minister for Finance, Planning, Economy, Energy, and Cooperatives;
The Honourable Michael Church – Minister for the Environment, Foreign Trade and Export;
Ms. Gemma Bain-Thomas – Permanent Secretary, Ministry of Agriculture, Lands, Forestry and Fisheries (2008-2009);
Mr. Aaron Francois –Permanent Secretary, Ministry of Agriculture, Lands, Forestry and Fisheries (2010).

Additionally, special thanks to Ms. Joyce John –Manager for G.C.N.A. and members of the Board of Directors of the G.C.N.A. The National Coordinating Committee and The International Trade Centre (ITC) wish to thank all the individuals and institutions that participated in the development of this Strategy (Annex 1).

Finally special thanks go to the following individuals and institutions:

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Collaborating and Partner Institutions

The National Co-ordinating Committee would also like to recognise the following institutions for their input and the resources provided:



**Food and Agriculture Organisation
(F.A.O.)**

Dr. Federica Angelucci
Dr. Rosa Rolle



**United Nations Conference on Trade and
Development
(U.N.C.T.A.D.)**

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(U.N.D.P.)**

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on Agriculture (I.I.C.A.)**

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**Caribbean Agricultural Research and
Development Institute (C.A.R.D.I.)**

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Executive Summary

Grenada's Nutmeg Sector was dealt a devastating blow when Hurricanes Ivan and Emily struck the island in September 2004 and July 2005 respectively. The Nutmeg Industry was once the main source of livelihood for the rural population and brought significant economic benefit to the country. Over the last two decades, however, Grenada's economy shifted from being "agriculture" dominant and moved into one that is more "services" dominant, with tourism as the leading currency-earning Sector. There was little motivation to remain in nutmeg production after the hurricanes and a number of nutmeg farms were neglected.

The Nutmeg Sector Strategy has been developed to address the revitalization of this important Sector. The methodology for developing the Strategy has been participatory, using the Value Chain Approach with inputs from over 70 sector stakeholders drawn from the private and public sectors. This partnership is a part of the E.U. funded All ACP Agriculture Commodities Programme (AAACP) with the leadership from the Ministry of Agriculture, Lands, Forestry and Fisheries and the International Trade Centre (I.T.C.).

Grenada is the second largest world producer of nutmegs and mace after Indonesia, and is known for high quality nutmegs and as the only producer of the world's No.1 mace. Traditionally, nutmeg and mace have been exported mainly to Europe to be used primarily in meat preservation and sausage making. In addition to its values in the culinary field, there is now strong evidence to support its usage in the pharmaceutical and cosmetics industries. Though recognised for its superior product, Grenada lags behind in market research and development and its potential is limited because of the lack of an appropriate Market Information System (M.I.S.) to facilitate the gathering, processing and storage of domestic and international trade data so vital for informed decision-making.

This Strategy is designed to provide opportunities and potential for the Sector – its stakeholders and beneficiaries. It is anticipated that its implementation would generally enhance Grenada's economic development and would specifically contribute in a meaningful way to the rejuvenation of the rural economy.

Importance, Impact and Beneficiaries:

The nutmeg fruit, now recognised as a symbol of Grenada, plays an important part in the culture of the island. Before the hurricanes, the Industry was the major contributor to GDP and foreign exchange earnings and employment (nutmeg's revenue averaged EC\$35 million per year for the period 2000 to 2004 and as an indicative example, in 2002 nutmeg and mace contributed 22.5% of Grenada's total merchandise export).

The Strategy addresses the importance of managing tree rehabilitation and replanting efforts. A revitalized Nutmeg Sector further seeks to reinforce the organisation and capacity of farmers to guarantee consistent quality and volume of supply while adhering to Good Agricultural Practices (G.A.P.). This will no doubt enhance the productivity and competitiveness of the Sector and will facilitate the return of labour and employment to the agricultural communities. In addition, it is anticipated that there would be an increase of the overall Sector's contribution to G.D.P. over five (5) years and as such the economic benefits derived from the Sector's development would ultimately lead to improvements in living standards and quality of life for Grenadians.

Brief Description on Sector Situation:

During the last (5) five years, there has been steady growth in nutmeg prices on the world market and in first quarter of 2009 these reached a record high of 12,900 USD per tonne. This represents a favourable opportunity for Grenada although industry specialists agree it might not be sustainable due to potential increase in supply from other origins and due to the ability of industrial users to change formulas in order to reduce their cost.

Before the Hurricanes, the number of registered farmers was 6,579 and as many as 30,720 persons were affected directly or indirectly by the Nutmeg Sector. Later, with damage to 90% of the country's nutmeg trees, the number of active farmers declined to approximately 2,500 persons.

The Grenada Co-operative Nutmeg Association (G.C.N.A.) is the principal player in the Nutmeg Sector of Grenada. This body was formed in 1947 and is governed by the Nutmeg Industry Act, which gives it the mandate to be the sole marketing agent for Grenada's nutmegs. The G.C.N.A. manufactures and exports nutmeg and mace oil. The Act, however, restricts the growth of the Sector particularly in relation to the G.C.N.A.'s capacity to improve processes and to respond to farmer, industry and buyer requirements. The Strategy stresses that there is an urgent need to enhance the level of professionalism within the G.C.N.A. to allow it to operate in a competitive global market environment by ensuring the development of modern management practices.

The implementation of the Strategy is targeted to ensure the long-term sustainability of the Nutmeg Sector in Grenada. Research and development is an important feature of the Strategy, which should be applied to all aspects of the Industry including initiatives in product development aimed to increase the number of value-added nutmeg products.

The Target Markets:

The Netherlands has traditionally been the major destination market for Grenada's nutmegs where they are processed (e.g. cryogenic grinding) and then further transported to other countries in Europe. The G.C.N.A. sells through its agents in Belgium, Canada, and the U.S.A., limiting direct contact with end users.

On the domestic market, nutmeg and mace are used in agro-processing and manufacturing and in the tourism industry. There are retail markets for packaged ground nutmeg, spice mixes, processed products and food preparations. These are marketed to spice vendors, supermarkets, hotels and restaurants and industrial users.

Internationally, buyers prefer and select Grenada's nutmeg and mace because of the superior quality. They are in high demand and are able to fetch premium prices. The Strategy Implementation therefore seeks to create a platform for development and growth of the Sector to allow it to meet the demands of the market.

The following priorities are identified for marketing initiatives:

- Improve intelligence and analysis to guarantee better marketing strategies;
- Improve the dissemination of information;
- Develop a branding and promotion strategy to position Grenada's Nutmeg as the Original One and the world leader in quality.

The Strategy highlights the need for greater visibility of Grenada's nutmegs and makes recommendations for attendance at international conferences of the Spice Traders Association and for establishing links with grinders and other producers. Grenada needs to showcase its product, advertise on industry specific websites and make all efforts to differentiate Grenada's nutmeg on the export market.

The Strategy Response and Objectives:

This Strategy document addresses the critical factors related to the revitalization of the Grenada Nutmeg Sector and focuses on how the country needs to position itself to become a world leading Industry by 2015 recognised for its top quality nutmeg, mace and value added products. The Strategy is comprehensive and identifies target markets and associated Value Chain issues that impede efficiency and growth of the Sector. The Strategy for Grenada has identified six (6) major objectives as follows:

1. Reinforce access to Market Information to enable better decision-making for the Sector;
2. Reinforce capacity in G.C.N.A. to better compete and develop the Nutmeg Industry in Grenada;
3. Increase quality and quantity of nutmeg and mace collected and supplied to G.C.N.A.;
4. Improve access to finance for all stakeholders to facilitate sector operations and manage risk;
5. Improve cross Ministry co-ordination and public/private partnerships for better policy-making;
6. Ensure the long term sustainability of the Nutmeg Industry in Grenada.

As per the detailed costing of the implementation plan, the total amount needed for funding the Strategy over the first three (3) years of implementation is estimated at **\$6,588,000 US Dollars**.

If we compare this figure with the total amount of assets the Industry has (buildings, infrastructure and machinery) as well as with the projected cash flow of USD 11 million per year (see Annex 6) and with the projected operating margin of USD 4 million per year (see Annex 6), the return on investment is quite high.

Additionally, the Strategy's Sub-Objectives under each of the above named Objectives have been prioritized for implementation and can be viewed from page 61.

Ongoing Implementation of Key Activities:

Objectives have been divided into Sub-Objectives with key activities defined for each of the area. These have been prioritized and detailed.

Certain activities have already commenced. These include the following:

- Market research and G.C.N.A. strengthening (I.T.C.);
- Quantification of plants for propagation;
- Land clearing and preparation for replanting efforts;
- The F.A.O. funded Feasibility Study for Risk Management Mechanism of Agriculture;
and
- Preliminary Inspection and Assessment of Nutmeg Processing Plants.

The key activities under each Objective will be piloted with identified core groups and the successful experiences and results will be replicated as part of the continuing implementation process.

Expected Outcomes:

When the Nutmeg Sector Development Strategy is implemented, rehabilitation and replanting efforts would lead to an increase in the availability of nutmeg and mace. Accordingly, not only would farmers' earnings increase, but also there would be an increased contribution from this Sector to overall G.D.P.

As outlined in the detailed costing of activities in the Implementation Plan, it is anticipated that the total funding needed for the implementation of this Strategy is approximately US\$6,588 million over a 3-year period. Detailed costing per strategy objective and activity can be consulted in the **Resources Needed Section**.

However, the greatest impact will be reflected in Grenada's increased capability to achieve the Millennium Development Goals (MDGs) particularly in relation to economic benefits as it relates to development in rural communities.

The Strategy Management Framework:

The design and implementation of the Strategy is stakeholder run through a participatory approach. The Nutmeg Sector Development Committees were appointed by stakeholders and is composed of representation from the Value Chain from both the private and public sectors. The representatives included farmers, processors, officials of the G.C.N.A., Ministries of Agriculture and Finance and regional agencies.

The Minister of Agriculture has been declared the Champion for the Nutmeg Sector Development Strategy. The National Co-ordinating Committee has been responsible for the development of the Strategy and has articulated communication with stakeholders, government authorities, the G.C.N.A. and implementing partners.

Introduction

Grenada is a tri-island State with a small, open-economy, a population of approximately 100,000 inhabitants and a per capita income of US\$5,480. Its economy is based upon tourism, financial and educational services, remittances, and agriculture.

Approximately 62% of the total population reside in the rural areas and undertake some full time or part time farming activities. Many have nutmeg trees on their properties, and these have traditionally served as cash crops.

Over the past decade, economic growth has averaged 3.8 percent per annum. While the proportion of the population facing chronic poverty fell from 13 to 2.4 percent, the number of inhabitants falling under the poverty line actually increased from 32 to 38 percent.¹

Historically, Grenada was best known as a supplier of nutmeg and mace. Nutmeg (*Myristica fragrans*) was introduced to the British Colonies in 1843 and was first planted in Grenada at Belvedere Estate where the plants adapted well because of the favourable climatic conditions.

Today, Grenada is still recognised as the supplier of high quality nutmegs renowned for their exceptional good flavour with a guaranteed international market. The characteristics and qualities of Grenada nutmegs are not found in the nutmegs grown in any other geographical location.

Regarding the world industry, the world nutmeg prices have been steadily growing over the past 5 years and have hit a historic high during the first quarter of 2009 arriving to 12,900 USD per metric tonne. This represents a favourable opportunity for Grenada although industry specialists agree it might not be sustainable due to potential increase in supply from other origins and due to the ability of industrial users to change formulas in order to reduce their cost.

In terms of supply, as it is well known, Grenada was devastated by Hurricanes Ivan in September 2004 and Emily in July 2005 with widespread damage to infrastructure, housing, industry and agriculture (estimated to over 200% of GDP). Prior to Hurricane Ivan, the total world supply of nutmeg was estimated to be 9,000 tonnes and only a few supplying countries concentrated global export supply (Grenada 25%, Indonesia 70% and in minor quantities India and Papua New Guinea).

The Grenada Nutmeg Sector was hit particularly badly during the country's worst Hurricane recorded when 90% of the nutmeg trees toppled. During the period 2002 - 2008, the volume of nutmegs exported from Grenada decreased significantly from 2,300 to 1,100 tonnes in 2006 (when there were good volumes in stock). By 2008 it was further reduced to 250 and by 2009 to approximately 200 reflecting the impact of the Hurricanes of 2004 and 2005.

After the Hurricanes, many nutmeg trees were left to dry and die, as the crop remained uncollected in the fields. Even up to 2009, many estates were still not properly cleared and remained inaccessible.

The Grenada Investment Programme for Agricultural Development States: *"Since December 2005 the Government of Grenada, like other Governments in the region, has given priority to modernizing the agricultural sector, to promote competitiveness, food security and to develop stronger ties with other sectors of the economy."*

¹ World Bank, July 2009

The Government's major policy objectives for the agricultural sector relate to: food security, agro-processing/value-addition, replanting/rehabilitation of tree crops, and environmental management.

The Commonwealth Secretariat developed a Nutmeg Rehabilitation Strategy in 2005 and the Grenada Cooperative Nutmeg Association (G.C.N.A.) produced its Strategic Plan in 2008. This Strategy gives consideration to the recommendations from both documents and represents a broader and more participatory approach for the upgrading and revamping of the entire Industry, given the island's history of growing spices and the potential national economic and social impact.

Social and Economic Importance of Nutmeg:

The value of nutmeg to Grenada is not limited to agriculture but its impact is felt at all levels of society. Nutmeg is part of the Grenadian culture and has contributed to the income and lifestyle of the population for decades. Prior to 2004, the Industry was the major contributor to GDP and foreign exchange earnings and employment (Nutmeg revenue averaged \$EC35 million per year for the period 2000 to 2004 and as an indicative example, in 2002 nutmeg and mace contributed 22.5 percent of Grenada's total merchandise export).

Perhaps more important to farmers, nutmeg and mace also provided weekly and year round income and employment. With approximately 7,000 nutmeg growers (of whom 2,500 active after Ivan), the Nutmeg Sector provides income to about 30% of Grenada's population of 100,000 inhabitants.

The following table highlights the impact on the rural economy and that of the country. It summarizes the number of supplying farmers, total quantities supplied (green) and total revenue for farmers (including Nutmeg and Mace).

Yearly results of nutmeg production GCNA (Year begins 1 July and ends 30 June)								
	1999	2002	2003	2004	2005	2006	2007	2009
Number of Farmers								
(number)	6555	6626	6843	5574	1955	1996	2055	2560
Total production NUTMEG GREEN								
(actual WT LB)	13,012,802	9,593,606	13,229,464	12,893,890	3,566,938	1,002,172	1,202,660	1,579,070
Total revenue for Farmers EC DOLLARS	50,208,843	53,596,754	61,129,198	37,862,478	12,082,876	3,372,560	2,897,241	3,828,858
Source: Calculation using GCNA records				hurricane sept 2004				

As indicated in the table above, the number of actual supplying farmers/estates has decreased from 6,843 in 2003 to approximately 2,000 in 2006 and the total amount of resources injected into the farming economy was reduced from 61 million EC dollars in 2003 to 2.8 million EC dollars in 2007. In 2005, the year after the hurricane, G.C.N.A. operated on stocks that had been bought from farmers in 2004.

Beneficiaries and Stakeholders

The implementation of the Strategy would serve to benefit all the sector stakeholders. However, the primary beneficiaries of the Strategy will be:

- The Nutmeg Sector impacts on approximately 33,000 people. This includes about 7,000 registered farmers and their families, individuals employed in the estates and nutmeg stations, food processors and manufacturers, spice vendors, tour operators and others in the tourism sector.
- Producers and suppliers of farm inputs and equipment, training institutions, government's tax revenues and other stakeholders.

Implementation of the Strategy is also expected to contribute significantly to the sustainable development of the country as it would contribute to the generation of more employment opportunities in rural communities.

With the restoration of the Sector, it is expected that nutmeg will receive the position of pride in the country particularly as efforts are put in place to make nutmeg farming attractive to young people and to provide the incentives needed to allow it to compete with other activities.

Purpose of the Strategy and Time Frame:

The overall development goal of the Strategy is to improve the livelihood and economic situation of the Grenadian people by increasing the economic and social benefits that can be derived from the production and sale of nutmegs and its value added products. *Annex 1* has classified each one of the Strategy Objectives and the relevant activities regarding the contribution of the Strategy to the Millennium Development Goals.

The overall focus of the Nutmeg Sector Strategy is as follows:

- i. Improvement in Industry operations;
- ii. Positioning Grenada as the leading world producer (in terms of quality);
- iii. Raising overall competitiveness;
- iv. Diversification towards value added products for the domestic and international markets; and
- v. Building human capacity and skills.

This should serve not only to improve the profitability of the Sector, but the overall economic and social situation of the country and in particular, the rural economy.

Anticipated Impact of Strategy Implementation:

The Strategy targets as precisely as possible the *Productive, Social and Economic Sectors* and if implemented, it is anticipated that the impact would be as follows:

<i>Social:</i>	Increase livelihood of approximately 1/3 of population particularly in the rural areas;
<i>Economic:</i>	Increase farmers' earnings, stimulate and boost the rural economy, increase overall GDP; and Increase investment by private sector through value added products;
<i>Productive:</i>	Increase availability of nutmeg through rehabilitation and replanting of fields.

On a social level, as farmers' earnings improve, the individuals at all levels who are impacted by agriculture will become more secure and will be better able to plan for the future. Traditionally, the makeup of the Grenadian society allowed people within communities to look out for each other and it is worthy to note that when individuals feel they are able to make a contribution, it not only sustains them but also provides them with a sense of security.

With increasing opportunities to earn an income from agriculture, it is hoped that more and more young people will be encouraged to get into agriculture or to start agro-businesses. This would no doubt reduce the burden on Government to provide jobs and would also cut back on the migration of people. One can therefore expect a wider range and diversification of job opportunities for young people including work in cultivation, harvesting and processing. A more detailed analysis of the anticipated impact is included in the section that portrays each strategic objective.

Ongoing Implementation Activities:

Annex 2 shows a comprehensive list of existing initiatives that impact the Nutmeg and Mace Sector. Additionally, a summary of the most relevant implementation activities is included below.

Ministry of Agriculture, Lands, Forestry and Fisheries

Government resources are required to ensure the comprehensive and sustainable development of the Sector and successful coordination of activity implementation. Included are the Plant Propagation Programme and the Farm Labour Support Programme. Also of note are the E.U. funded Rural Credit Scheme, the Co-op Bank/M.N.I.B. Price Guarantee Scheme and the F.A.O. Land Bank Project.

The European Union SFA 2008 Spice Research Project is expected to contribute to achieving many of the activities detailed in *Objective 3*. The Ministry will also embark on an EC\$10,000,000 Farm and Feeder Road Rehabilitation Project which will be funded by the Kuwaiti Fund. The Ministry, collaborating with I.I.C.A. is currently implementing the "Youth in Agriculture" Programme, which has as its principal objective an increase in the number of young people participating in the agriculture Value Chain.

Ministry of the Environment, Foreign Trade and Export

The Ministry of the Environment, Foreign Trade and Export has placed significant importance on the growth and development of agricultural exports and value added products for driving economic growth. To ensure that agriculture exports grow and increase its contribution to GDP, the Ministry has committed to the formulation and implementation of an Agricultural Export Strategy which will be the road map for guiding agricultural export development in Grenada. The Ministry is currently in discussion with all of the major players in the agriculture sector and expects to begin the drafting of the strategy in the very near future.

Grenada Co-operative Nutmeg Association (G.C.N.A.)

The G.C.N.A. has embarked on a series of initiatives geared towards the resuscitation and growth of the Industry, namely "Operation Salvage" which was approved by the Board of Directors in February 2010. The objective of this programme is the resuscitation of abandoned fields and the salvaging of trees that had partially fallen but were still viable. This initiative needs to be strengthened and expanded, as the G.C.N.A. funding for this project is limited.

The G.C.N.A. has also started two projects to address the Nutmeg Wilt situation, improve the capacity of its laboratory, resolve the pest problem at the Processing Station in the town of

Gouyave and improve techniques for determining the sex of nutmeg trees. In the near future, the Association plans to invest more in the value added products in an effort to generate new revenue streams and allow for better compensation to the farmers.

I.F.A.D. and Caribbean Development Bank (C.D.B.)

The C.D.B. and I.F.A.D. Rural Enterprise Project has as its objective strengthening capacity and building confidence within the rural community. This Project will make funds available to smallholder communities for agriculture-based developments in support of the Nutmeg Strategy.

International Trade Centre (I.T.C.)

ITC has responded to the Strategy and Co-ordinating Committee's needs by starting implementation activities under Objective 2: Reinforce capacity in G.C.N.A. to better compete and develop the Nutmeg Industry in Grenada; and Objective 3: Increase quality and quantity of nutmeg collected and supplied to G.C.N.A. as follows:

Undertake a review of the intrinsic quality aspects attributed to Grenada's nutmeg and support them by suitable product testing.

During Participatory Workshops which took place in Grenada, stakeholders, invited specialist and buyers expressed the view that the natural attributes of Grenada's nutmeg allowed for:

- A low aflatoxin content;
- A low risk of pesticide residue content;
- Minimal problems in heavy metals; and
- Significant advantage regarding the biologically active principle safrole.

Additionally, it was felt there are some distinct food safety advantages in the system used by the G.C.N.A. for drying and floating nutmegs. There is therefore a need for a series of analyses to be carried out by independent laboratories in order to support these claims so that Grenada is able to use this data when promoting Grenada's nutmeg to a global market.

Collection Practices and G.C.N.A. Processing Operations Review:

Provide support and make recommendations to ensure that Good Agricultural Practices and the G.C.N.A. facilities are brought up to the standards expected by the importing countries.

Conduct a full H.A.C.C.P. review to ensure that all appropriate food safety risk is correctly managed in the Industry and help establish a suitable pest control programme in the manufacturing operations within Grenada.

Target Market Awareness and Induction:

Representatives of the Co-ordinating Committee and the G.C.N.A. should conduct a capacity building mission to the A.S.T.A. Trade Fair.

Food and Agriculture Organisation (F.A.O.) and United Nations Conference on Trade and Development (U.N.C.T.A.D.)

F.A.O. and U.N.C.T.A.D. are responsible mainly for addressing *Sub-Objective 1 of the Objective 4: Analyse actual situation to better design financial and risk management mechanisms.*

Additionally, the organisations are undertaking joint collaboration exercises to reinforce access to information by implementing a survey as specified under *Objective 1.*

The last census on agriculture was undertaken in 1995 and, in addition to the fact that it is now outdated, it does not include detailed information on households in terms of acreage, cropping

systems, off farm income etc. The F.A.O. is partly addressing this gap by supporting the Ministry of Agriculture in the design and administration of sample surveys on root and tree crops. These activities are funded within the framework of the Field Programme Management Information System (F.P.M.I.S.).

The survey on root crops is ongoing while the one on tree crops is planned to start during the third quarter of 2010. That survey on tree crops planned for the end of September 2010 could provide the opportunity for undertaking in-depth study on the Nutmeg Sector situation.

The National Co-ordinating Committee has highlighted as a priority, the urgent need for undertaking a survey aimed at obtaining a more comprehensive picture of the Nutmeg Sector. The survey should therefore be designed to provide information on the following aspects:

- Location of the nutmeg trees or plot, if different from the farmer address as mentioned in the G.C.N.A. statement;
- Number of trees or acres planted with nutmeg;
- Classification of trees as: fully productive (age, estimated yield, amount harvested, estimated frequency of harvest), partially productive (age, estimated yield, amount harvested, estimated frequency of harvest), not yet productive (age);
- Market outlet and frequency of supplies for nutmeg: G.C.N.A., other (how many times a year);
- Market outlet and frequency of supplies for mace: G.C.N.A., other (how many times a year);
- Diseases;
- Costs of production (pesticides and fertilizer, transport, labour, etc.);
- Membership to local farmer groups and services provided in terms of collection and transport of nutmeg;
- Other crops produced and income generated;
- Off farm income (from non-agricultural income generating activities);
- Needs for finance (pesticides and fertilizer, labour, transport, fence, etc.).

Other projects such as the F.A.O./Ministry of Agriculture Promotion Project are designed to enhance the Government's support to the export sector through improved access to trade information and by strengthening the capacity of the Bureau of Standards to provide conformity assessment and quality assurance.

World Bank

The World Bank has responded by undertaking implementation of activities under:

Objective 4: Improve access to finance for all stakeholders to facilitate sector operations and manage risk.

In particular the World Bank has planned to provide support in two areas:

Targeted Training to Farmers' Associations, G.C.N.A., financial institutions, and public sector on Price Hedging Instruments and Weather Risk Management Mitigation.

Review of the Agriculture Disaster Risk Reduction Policy and Plan and provide support to the Government in organizing a national or regional event to present the Policy and Plan for feedback of different stakeholders of the Sector.

The World Bank Public Sector Modernization Programme includes a component that provides support for strengthening the Small Business Development Centre (SBDC) of the Grenada Industrial Development Corporation (G.I.D.C.) and will provide technical assistance and training to the micro/small segment of the business community.

The following other Projects can have an Impact on the Sector:

- The C.I.D.A. funded project which looks at Partnerships for CARICOM Private Sector Development is designed to enable financial institutions to increase the number of loans they provide to underserved micro, small, and medium-sized enterprises (MSMEs). This may well contribute to the development of cottage industries related to value added products for the Sector.
- The O.E.C.S. Skills for Inclusive Growth addresses training to increase job related competencies among unemployed youth through the establishment of a competitive training mechanism that supports the financing and delivery of demand driven training.
- The U.N.D.P./U.N.H.T.S. Project is implemented by the NGOs and addresses the Restoration of Livelihoods.
- An I.I.C.A. funded initiative to undertake an investigation of the Nutmeg Wilt Disease and provide treatment recommendations.

The Current Industry Situation

Agricultural Sector

The island of Grenada is 12 miles (18 km) wide and 21 miles (34 km) long, and covers a land area of 120 sq. miles (440 sq. km). Grenada is of volcanic origin with a rugged topography. An estimated 38% of the land is suitable for agricultural production.

Most of what is planted is used for domestic consumption (including tourism) although some products are exported within the region. Imports of fresh and processed food represent a significant outflow of currency (main imports: cereals, poultry, dairy and processed foods). However, the core of the Grenadian diet remains with root and tuber crops, green bananas as well as fish, which are readily available and are hedged against inflation because their local prices are only marginally affected by international prices.

The current structure of Grenadian agriculture is difficult to analyse due to limitations of available data and the massive dislocations following Hurricanes Ivan in 2004 and Emily in 2005. The last agricultural census, undertaken in 1995, recorded some 13,000 farmers. Following the hurricanes, many farms were abandoned or not rehabilitated. This, together with the advanced age of most Grenadian farmers (thought to average more than 60 years old), has resulted in a situation where there are now only about 7,000 active farmers. The large majority of farmers have less than 5 acres of land and perhaps no more than 300 to 500 farmers have holdings larger than 10 acres. Formal sector employment in agriculture, mainly Government Estates, is likely to be 2000 to 3000. Some 256 entities are registered as agro-processors, the vast majority of which are micro or small-scale enterprises. There are comparatively few larger, fully commercial agro-processing enterprises².

Apart from the Ministry of Agriculture, the main institutional players in agriculture are the Grenada Co-operative Nutmeg Association (G.C.N.A.), the Grenada Cocoa Associations (G.C.A.), Marketing and National Importing Board (M.N.I.B.) and a number of non-traditional Farmers' Associations.

The recovery and growth of the Nutmeg Export Industry is constrained by many factors, including:

- The advanced age of many growers;
- The lack of interest or incentives of younger people to go into agriculture;
- The high costs of labour;
- Insufficient planting material;
- Certain tree disease issues like Wilt;
- Praedial larceny; and
- A high level of uncertainty about the future particularly with regard to extreme weather events that have impacted negatively on farmers' willingness to invest time and resources on nutmeg production.

The Nutmeg and Mace Sector

Annex 3 shows a brief description of the Nutmeg Industry and global trade.

Dynamics and main players

Nutmeg is dubbed "black gold" on the island and has been part of the lives of the population since its introduction in 1843. The Grenadian people and economy have survived three major hurricanes that have significantly affected the Nutmeg Industry (Janet 1955, Ivan 2004 and Emily 2005).

² World Bank, July 2009

As already stated, almost a third of the 100,000 citizens on the island depend on the crop for their livelihood. Government also owns the biggest farming estates (managed and farmed by employees and workers). Government also sells its nutmegs to the G.C.N.A.

Over the last decade, due to the crises of natural disasters and downturn in production, nutmeg has also become a metaphor in a raging debate over growth, modernization, and economic survival.

The G.C.N.A. (Grenada Co-operative Nutmeg Association)

All of Grenada's nutmegs are exported through the Grenada Co-operative Nutmeg Association (G.C.N.A.). It was formed in 1947 and is governed by the 1974 Nutmeg Industry Act. G.C.N.A. started with a single principle: "*the nutmeg belongs to the farmers and the farmers alone should reap its rewards.*" Therefore, the legislation mandates the G.C.N.A. to distribute all surpluses earned from the sale of products to members.

A Board of Directors comprised of six (6) farmers, selected representatives and three (3) government appointed representatives, controls the G.C.N.A. The G.C.N.A. also has a team of three (3) managers who deal with its day-to-day operations.

Historically, the G.C.N.A.'s way of operating was to pay farmers an "advance" based on world market prices when the raw nutmeg is delivered and then distribute a "surplus" to them just before Christmas, based on the actual profits of the G.C.N.A.'s total sales for the year.

The G.C.N.A., pursuing efforts to diversify its income base, decided to invest in the construction of a shopping mall to rent commercial space to tenants. Construction expenses and delays resulted in costs that doubled those anticipated and it was not until March 2010 that the mall was finally inaugurated. Currently, the G.C.N.A. is heavily burdened by debt, mainly to RBTT Bank and is struggling to survive. The cost of debt servicing has severely impacted on the operational profits with no end of year bonus paid to farmers since 2004.

The Association owns nineteen (19) Buying Stations and Processing Centres. However, as a result of a decrease in production, there are now just two (2) main operating Stations, the Processing Station in the town of Gouyave and the Receiving Station in the town of Grenville. Prior to 2004, the G.C.N.A. had invested in an Organic Processing Station but it is not used because of the low volumes of production.

Agents

Historically, in terms of sales, the G.C.N.A. sells 100% of its products through a single agent based in Brussels who in turn sells to international buyers. The same agent also handles the sale for Grenada's Cocoa.

Farmers

There is a great deal of (national) pride among farmers in relation to growing and harvesting nutmeg. The majority of the farmers are in their sixties (age) and have in average 5 to 7 acres of land. A typical farmer pays others to collect nutmegs every other day. However, there are many part-time farmers or occasional nutmeg collectors who collect nutmegs once per week or based on cash needs (this also includes praedial larceny).

There are now fewer "pure stand nutmeg farms" (those that only grow nutmeg and no other crop). In many cases farmers also plant bananas, cocoa and other fruits and vegetables and root crops. Unlike cocoa which generates income once or twice per year, nutmeg gives farmers a continuous income throughout the year. Some say that nutmeg is the perfect "lazy man's crop" based on the easy requirement of picking up nutmegs from the ground.

Internal Competition

The G.C.N.A. has had opposition from a local entrepreneur who struggled both from an operational and legal point to break G.C.N.A.'s monopoly to operate as the only buying agent. He invested heavily in a nutmeg oil producing facility in St. Andrew but has failed in his ability to source the required quantity of raw material. Currently the factory is on the market for sale by the creditors.

Processors

G.C.N.A. makes effort to invest in plants to process nutmeg (oils) locally so as to keep a greater part of the profits at home. Two (2) main processors exist in terms of value added facilities. De La Grenade Industries concentrates on nutmeg food products that are derived mainly from the pericarp. These include jellies, jams liqueur and ground spices. Noelville Ltd. concentrates on the production of medicinal pain relieving products that are manufactured from extracted nutmeg oil.

Nutmeg: Characteristics appreciated by all Buyers and Industrial Users

Grenada is recognised as the supplier of high quality nutmegs, renowned for their exceptional good flavour with a guaranteed market. It is the sole producers of quality No. 1 mace and it is well recognised by the industry that the characteristics qualities of Grenada's nutmegs are not found in the nutmegs grown in any other geographical location.

The intrinsic characteristics of Grenada's nutmeg are superior to nutmegs from other origins because of the following features:

- Low in aflatoxin, which easily meets the EU limits (<5 ppb and <10 ppb);
- Low in safrole, only 300 ppm, while the Indonesian Siau-Ambon nutmeg averages around 1,700 ppm and Papua (*Myristica argentia*) ranges at 8,000 ppm;
- Low in pesticide residues;
- Excellent traceability (important for e.g. U.K. supermarket chains);
- No risk of adulteration as Grenada has no wild nutmegs, nor is there processing for export in the form of grinding;

Thanks also to the peculiar production, harvesting and processing practises Grenada is:

- The sole world producer of quality No. 1 mace (hand picked and selected);
- More quality-driven in the picking to guarantee commodity freshness;
- Nutmeg farmers all belong to the Grenada Co-operative Nutmeg Association (G.C.N.A.). This allows for more efficient planning for harvesting and processing;
- Drying is done indoor on special wooden "beds". This is superior to outdoor drying done in other origins.

Production

Annex 4 shows some statistics regarding nutmeg production, farmers' revenue and procurement by the G.C.N.A.

Grenada's nutmeg fields were devastated by Hurricanes Ivan and Emily in September 2004 and July 2005 respectively, with approximately 90% of the nutmeg trees either destroyed (uprooted) or severely damaged.

As a consequence, for the 2006 "nutmeg crop year" (July 1st, 2005 – June 30th, 2006) nutmeg production was only 227, 249.89 kilogram, which was 92.43 per cent less than the production (2,999,878.46 kilogram) in 2003, the year immediately preceding Hurricane Ivan. Since 2006, nutmeg production has increased gradually to 272,712.02 kilogram in 2007; and 316,453.52 kilogram and 358,065.76 kilogram in 2008 and 2009, respectively. The number of registered

farmers pre-Hurricane Ivan was 6,579. The approximate number of active farmers post-Hurricane Ivan is 2,500.

Cocoa trees were also affected by the Hurricanes. However, because of their greater reliance, shorter recovery period and the quick response by the G.C.A. in their replanting scheme, coupled with the relatively short production cycle as compared to nutmeg, cocoa production is now almost back to its pre-Ivan levels.

Available data indicate that nutmeg production in the period July to December, 2009 was 40.6 per cent higher than in the same period in 2008. Mace production has followed a similar trend, declining from 209,034.47 kilogram in 2003 to 11,662.22 kilogram in 2006, a drop of 94.42 per cent. During the last three years (2007, 2008, 2009), mace production has risen to 19,317.92 kilogram, 24,719.28 kilogram, and 25,148.76 kilogram, respectively.

Despite the current low production levels, nutmeg and mace remain very significant foreign exchange earners for Grenada. During the 2008/2009 “crop year”, nutmeg and mace export sales together amounted to approximately US\$2.6 million.

Because Grenada’s nutmeg and mace are known for their high quality, they are in high demand, and are able to fetch premium prices. This was especially so following the Hurricanes when the supply was significantly reduced. For example, during the 2003/2004 “crop year” (just prior to Hurricane Ivan), the average market price for nutmeg was US\$4.55 per kilogram but, for the 2008/2009 crop year, the price was increased to US\$7.89 per kilogram. For mace, the price increase was less dramatic: Average mace price (per kilogram) moved from US\$4.95 during 2003/2004 crop year to US\$6.68 during the 2008/2009 crop year.

Grenada is continuing to take small and modest steps to return to pre-Hurricane Ivan production levels. In 2007, there were 15,000 seedlings; in 2009 there were around 40,000. Although many trees are bearing fruit less than five years after Hurricane Ivan, a typical tree begins bearing fruit at age seven (7). Additionally, the Government has spent \$US200,000 in clearing the fields so that access to fruit bearing trees becomes easier (or in some cases possible) for farmers.

Over the past two years, the Wilt Disease has affected many nutmeg trees and poses an imminent threat for the Sector.

Target Market Dynamics

The G.C.N.A. sells nutmegs and mace through its agents in Belgium, Canada and the U.S.A. and as such there is limited direct contact with customers. The table below shows the distribution of world supplies in 2006 and Grenadian supplies in 2006 and 2008.

Buying Country	All Suppliers 2006 (tonnes of nutmeg)	Grenada 2006 (tonnes of nutmeg)	Grenada 2008 (tonnes of nutmeg)
U.S.A./Canada	1,700	40%	15%
Europe	6,000	50%	80%
Other	3,500	7%	5%
Nutmeg for distillation	1,500	3%	0
Total	12,700	100%	100%

Nutmeg

The Netherlands has traditionally been the major destination market for Grenada's nutmeg (43% out of 50% in 2006). With the shortage in supply after the hurricane and because of the less strict aflatoxin level requirements in the U.S.A., North American buyers were quicker to switch to Indonesian nutmegs. Today, the Netherlands still continues to be the major destination for Grenada's nutmegs and once they arrive, they are processed (e.g. cryogenic grinding) and further transported into Europe.

Due to lack of supply from Grenada and due to industry practices, grinders and retailers mix Grenada's nutmeg with Indonesian or other origin nutmeg (adulteration). Unfortunately, the final consumer in the retail industry is unaware of the advantages of Grenada's nutmeg as very little is sold as origin specific.

Mace

The traditional markets for mace have primarily been North Western European Countries where it is used in meat preservation and sausage making. Apart from its well known culinary uses, mace is now more frequently used in both the pharmaceutical and cosmetics industries.

Sales to the U.S.A. will be re-exported for 50% in Europe. The list of major buyers in Europe and their estimated quantities bought per year are shown below:

- Catz – Dutch trader, resells 2,000 tonnes of nutmeg per year,
- Intertaste – Dutch grinder, processes 500 tonnes of nutmeg/year,
- Verstegen – Dutch grinder/retail seller, processes 50 tonnes of nutmeg/year,
- Huijbrechts – Dutch grinder/blender, processes 200 tonnes of nutmeg/year,
- Euroma – Dutch grinder/processor, processes 200 tonnes of nutmeg/year,
- Caldic – Belgian grinder, processes 100 tonnes of nutmeg/year,
- van Hees – German grinder/blender, processes 300 tonnes of nutmeg/year,
- Fuchs – German grinder/processor, processes 500 tonnes of nutmeg/year,
- Ducros – France, grinds 200 tonnes of nutmeg/year,
- Colin Palc – French grinder/blender, processes 100 tonnes of nutmeg/year.

On the domestic market, nutmeg, mace and the pericarp are used in agro-processing and the manufacture of medicinal products. There is also a retail market for packaged ground nutmeg, spice mixes, processed products and food preparations. These are marketed to spice vendors, supermarkets, hotels and restaurants and industrial users.

World Nutmeg Supply

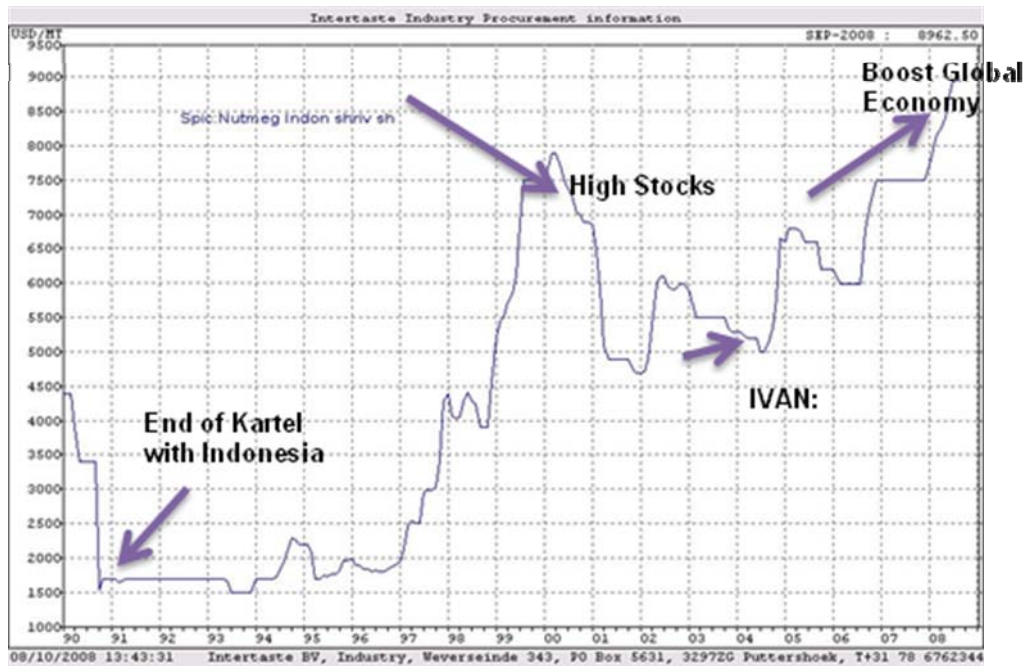
As already explained, Grenada used to account for approximately 25% and Indonesia 70% of the total world supply of nutmeg. The table below shows that since Hurricane Ivan in 2004, the global nutmeg supply decreased due to the sharp reduction in exports from Grenada. (The reason why the drop was not immediate is because in 2003 and 2004, large stocks of nutmeg were accumulated in Grenada, as a reaction to the low world prices). After 2004, the Grenada stocks were gradually released at growing prices, but in 2008 all stocks were finally depleted and Grenada nutmeg exports dropped down at a sad 300 tonnes. Effectively, by 2008 Grenada was only supplying less than 2% of the world's export volumes.

ORIGIN	EXPORTS IN TONNES								
	1995	2002	2003	2004	2005	2006	2007	2008	
Indonesia (Incl. Irian Jaya-Papua variety)	9,500	9,500	9,600	9,700	9,800	9,816	9,500	8.750	9,500
Grenada	2,500	2,297	2,030	1,943	1,434	1,066	500	300	350

Source: Black Numbers are from Eurostat/ITC, *red italic* numbers are estimates

International trends and Price

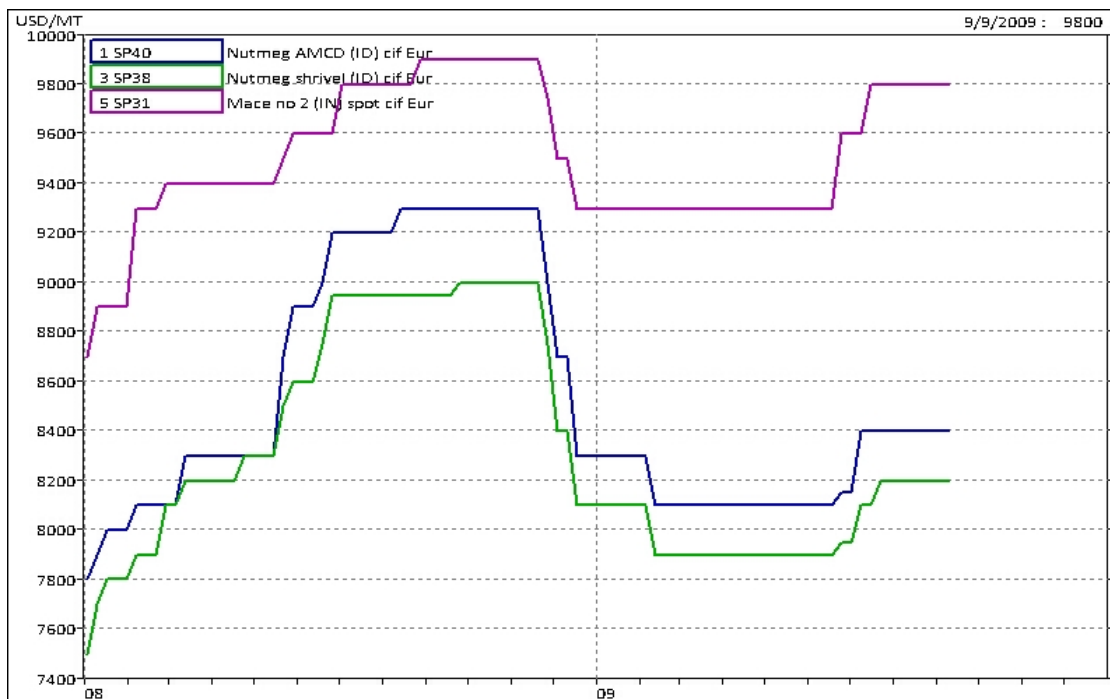
As seen in the graph below, the output fluctuations and stock building have had strong influence on the price development of nutmeg over the last 19 years.



Internationally, Grenada's nutmeg and mace are bought by buyers for their high quality. They are therefore in high demand, and are able to fetch premium prices, especially following the 2004/2005 Hurricanes when world supply was much reduced.

As a reference, before 2004, the average FOB market price for nutmeg was 4,500 USD per tonne in the 2008/2009-crop year the average FOB price was USD 7,809 per tonne and currently (May 2010) it is USD 12,900 per tonne.

The graph below was provided by McCormick and shows the 2008 - 2009 price (CIF) development of nutmeg and mace for the European Market.



Regarding the latest 2010 price developments, the table below shows a comparison for the months of March and April between *Pepper, Mace and Nutmeg*. The comparison with *Pepper* is important from the point of view of the buyer. In the portfolio of any buyer, *Nutmeg* and *Mace* are currently the most expensive spices per tonne.

CFR-EU Mainport, Incoterms 2000				USD/ Tonne	USD/ Tonne	USD/ Tonne	USD/ Tonne	USD/ Tonne	USD/ Tonne
Spice	Specification	Form	Heat Treated	2010 Mar 15	2010 Mar 19	2010 Mar 24	2010 Apr 1	2010 Apr 8	2010 Apr 19
Pepper Black	Vietnam 500 g/l	Whole	No	\$3,100	\$3,300	\$3,300	\$3,300	\$3,600	\$3,400
Pepper White	Vietnam double washed	Whole	No	\$4,200	\$4,600	\$4,600	\$4,750	\$4,750	\$4,750
Nutmeg	ABCD	Whole	No	\$12,200	\$12,200	\$12,750	\$12,750	\$12,750	\$12,900
Mace	SA, mesh 30	Ground	Yes	\$14,650	\$14,650	\$14,650	\$14,650	\$14,650	\$15,450

If we take into consideration the current level of pricing (which is at its historic high) and the fact that the levels have remained above USD 8,000 per tonne for most of 2009, one could say there is a significant income opportunity for Grenada. Even if the Industry cannot revert back to the pre-Ivan size, profitable alternatives remain both in mainstream and niche markets as long as high quality is maintained and the growers and exporters meet the other requirements of discerning buyers.

There are potential threats, including the sustainability of high prices that have to be factored in. From a buyer's perspective, the increasing rise in the cost of nutmeg and mace has impacted the overall profit margins for grinders and industrial users. In many cases, the increase in raw material cost cannot be passed onto the final consumer and has to be buffered by substitution in the formulas (less nutmeg or mace and more of other ingredients, but conserving original flavour) or by adulteration in the spice mixture (less nutmeg and more filler). If this upward price trend continues, the ultimate risk lies in the eventual substitution of *natural nutmeg and mace* with a synthetic nutmeg and mace product like has happened with vanilla.

On another hand, single sourcing (Indonesia) represents a risk for grinders and they are constantly seeking new sources of nutmeg. One of the major grinders invited to the Strategy Launch event in July 2009 said: *"given that the price gap between Indonesia and Grenada is starting to narrow, supplies are becoming more plentiful and reliable, and given the dangerous nature of being single sourced from Indonesia, we are beginning a project to re-qualify Grenadian nutmeg at the Spice Mille. The last time we used Grenada's nutmeg was as a blend over five years ago. We are currently working to reintroduce Grenadian nutmeg as a country source."*

Issues Affecting the Sector Value Chain

Annex 5 shows a table summarizing the issues identified by stakeholders during the Participatory Strategy Development Workshops.

Following is a brief summary of certain key issues:

G.C.N.A. and Regulatory Framework Issues

There is a perception that the Nutmeg Sector is suffering because of poorly coordinated efforts between the G.C.N.A. and the Ministry of Agriculture. There is an urgent need for Government to become involved in reviewing the legislation as it relates to the operations of G.C.N.A. and with the provision of development concessions to facilitate the modernization of the G.C.N.A. to allow it to become more competitive.

The G.C.N.A. is required to distribute surplus earnings to members. It is heavily indebted and as such it has been unable to accumulate the capital needed to invest in modernizing its operations. This includes the upgrading of equipment and infrastructure, improvements in its processing operations and advanced techniques in the research and development of new value added products. The Nutmeg Act, by which the G.C.N.A. is governed, now appears unduly restrictive to the growth of the Nutmeg Sector and is considered to be a hindrance to its growth as a commercial enterprise.

It is also well recognized that the management capabilities of the G.C.N.A. must be strengthened with effort placed on enhancing the level of professionalism while addressing issues related to governance and the roles and responsibilities of the Board of Directors. In addition, research and development is vital to the success of the Sector and the G.C.N.A. must ensure the strengthening of its laboratory and testing capacity to meet the key needs of the Industry.

It is important to note that from the standpoint of processing operations, the G.C.N.A. must begin to consider *Nutmeg and Mace* as food items. This means that they need to be treated with the care and attention that is given to food products and should be handled at all times in a food-safe manner.

Supply Side Issues

The inconsistency of delivery by nutmeg producers is a major concern for the sector. While the hurricanes impacted significantly on production levels, in many cases there are underlying issues that must be considered. These relate to the aging of the farmer population, the low buying price for green nutmeg and mace, the accessibility to fruit bearing trees and the disorganized and limited collection by more than 3,000 active suppliers.

The major concerns for farmers are losses due to harvesting delays as a result of poor access and unavailable and unskilled labour (despite the 30% unemployment rate). Workers typically make \$EC30 – \$EC40 per day
(1\$EC = 0.37USD)

There are continuing efforts to stimulate production and to provide incentives to farmers. These include training, distribution of planting material and financing. However, the ineffectiveness in organizing re-planting efforts and increased collection, points to the weak relationship between G.C.N.A., extension officers and farmers in areas of production and post harvesting.

Theft is an increasing problem in the farming communities with individuals going on farmers'

property to steal their nutmegs. Farmers are also confronted with the high costs of fertilizers.

Finally, the lack of nutmeg “grinders” (unsound) for oil distillation is a concern to some of the processors who are currently forced to import nutmeg essential oil for production.

Distribution and Market Issues

In general, there is a lack of information as it relates to all areas of the market. This includes selling prices, trading, production and cash flow. The following are areas of concern:

- Freight and transportation costs are high as there are limited routes from Grenada to markets; and
- Issues related to price transparency as Grenada Nutmeg and Cocoa Associations use the same agent.

The Future for the Nutmeg and Mace Sector

As described in the Target Market Dynamic Section above, it is clear that there are buyers willing to pay international market prices for Grenada's nutmeg and mace whether at the agent or grinder level. Given the current low supplies of Grenada's nutmeg, its high quality attributes and the uniqueness of the product, the marketing strategy should be to interact directly with users, find new buyers and obtain a price differential. This should be the case particularly for the handpicked selected Grade 1 mace of which Grenada is the sole supplier.

Some of the grinders that were involved in the Strategy Development Workshops have expressed the view that there is the possibility of paying a 10% price differential for *Origin Specific Grenada Nutmeg and Mace* provided that the supply is consistent, the volumes guaranteed and that the attributes are supported by accredited independent laboratory testing.

With regard to overall focus, and in line with vision of the Strategy, there is a critical need to increase overall value addition in the mid-term. This includes the processing of nutmeg into essential oils that would feed into the cosmetic and pharmaceutical industries. Given its high quality and the perceived attributes of Grenada's nutmeg by the world industry, there appears to be possibilities for grinding in the country of origin, provided it is undertaken in a food-safe manner.

In the long term, as production levels increase, the Industry must maximize the uses of nutmeg and mace by offering a portfolio of products as shown in the table below. Diversification into a portfolio of products provides the opportunity to remain competitive, profitable and even to become stronger vis-à-vis international market buyers and price volatility.

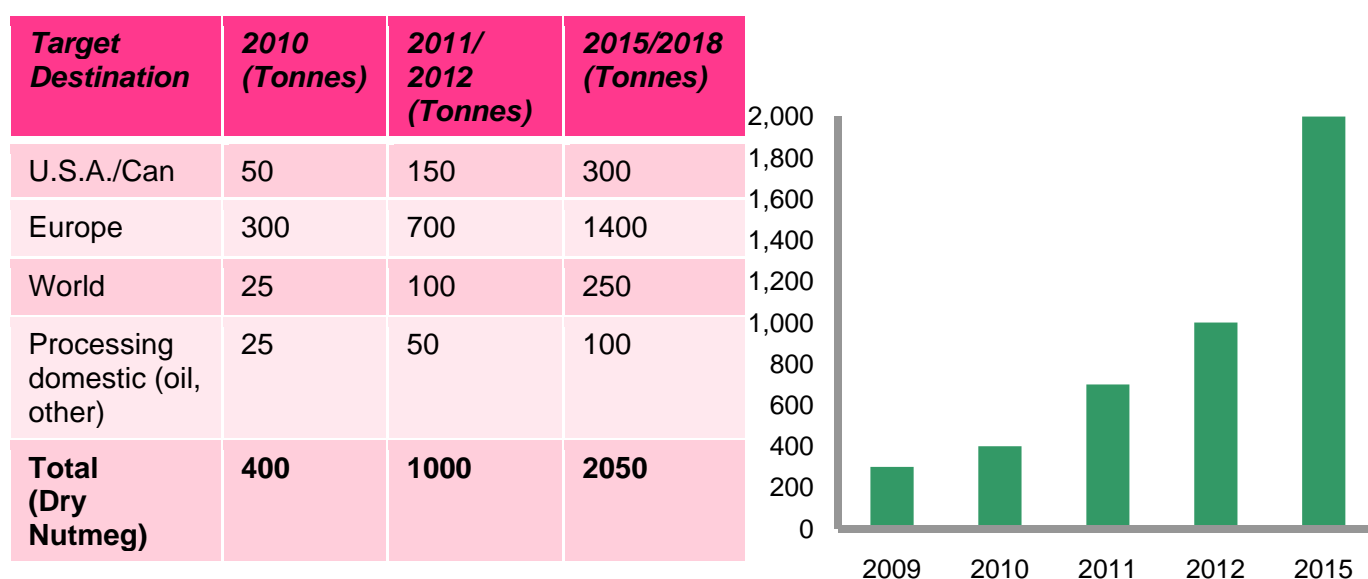
Focus	Phase 1 2009-2011	Phase 2 2012-2015
Nutmeg and Mace Whole	X	X
Origin Specific Ground Nutmeg and Mace for Niche Specialty Buyers		X
Nutmeg Essential Oil		X
Nutmeg Medicinal and Cosmetic Products	X	X
Nutmeg Food Products (Jams, Jellies, Liqueurs)	X	X

Production Targets

In order to respond to the above market targets and to capitalize on the uniqueness of Grenada's nutmegs, stakeholders agreed on the following targets both in terms of volume and destination:

- 2010** – Grow Grenada production to 400 tonnes by collecting more.
- 2011- 2012** – Grow to 1,000 tonnes: by clearing fields and improve accessibility.
- 2012 - 2018** – Grow back to 2,000 tonnes: by reorganizing cropping and replanting.

The Bar-Graph below shows the production targets (Dry Nutmeg) and the table shows the targeted distribution in terms of destination.



Scenario Analysis for 2011/2012 Target

In the Section following, the Co-coordinating Committee analyzed a possible operations scenario for the 2011/2012 Objective of collecting, handling and processing 1000 tonnes of dry nutmegs.

Although the *Strategy Objectives and Activities* will be described in detail in the next Section, it is necessary to mention their interrelation and the achievement of the set targets. Indeed, the Strategy Objectives shown below need to be implemented to support the target of procuring, processing and selling 1,000 tonnes.

- Objective 1 (Market information and securing the best buyers/distribution channels);
- Objective 2 (Reinforcing G.C.N.A. to operate more competitively and handle more volumes);
- Objective 3 (Increase quantity and quality of collected nutmeg);
- Objective 4 (Finance the operation across the Value Chain to reach target).

Annex 6 shows the detailed calculations for the proposed business scenario reflecting on:

- Cost of Goods Sold;
- Portfolio of Products and Sales Revenue;
- Income Statement (including farmers and G.C.N.A.).

Below some of the key aspects and conclusions are discussed.

Portfolio of Products and Potential Sales Revenue

Assuming that the working assumptions in the proposed model are accurate, the immediate conclusions are that by selling the Portfolio of Products (mace, nutmegs, nutmeg and mace oil, nutmeg pulp) the total sales cash flow per year can potentially amount to USD 11 million. This figure is based on a conservative target market price, which is lower than the current levels as seen in *Annex 6*.

As discussed above, selling a Portfolio of Products derived from nutmeg and mace is essential for increasing the cash inflow to the industry. The G.C.N.A. must also be able to identify market parties and negotiate the best selling price for the equivalent of 1,000 tonnes of dry and for 80 tonnes of mace.

Operational Costs and Estimated Cost of Goods Sold:

From the model, the other immediate conclusion is related to the Operational Costs of the Goods Sold (transport, purchasing the mace and nutmegs and processing). The cost of processing relates mainly to the G.C.N.A. operational cost and has been best estimated based on industry standards and on the visits to the Processing Facilities. These costs could become workable targets for G.C.N.A. Transport costs are estimated based on the approximate values in 2010.

For the targeted quantities of 1,000 tonnes of dry nutmeg and 80 tonnes of dry mace, this amounts to approximately USD 6.4 million. As seen in *Annex 6*, the cost of debt repayments or of any other cost not related to processing nutmeg has not been included.

The key question is of course related to the ability of G.C.N.A. to procure 2,000 tonnes of Green Nutmeg (Equivalent to 1,000 of tonnes dry):

By implementing *Objective 3*, Grenada will be able to produce 1,000 tonnes of dry nutmeg in 2012. To effectively produce a volume of 1,000 tonnes, farmers must collect 2,000 tonnes of green nutmeg. 2,000 tonnes of green nutmeg equals also 80 tonnes of dry mace.

Many of the young trees planted after Hurricane Ivan are bearing fruits. Approximately 40% of the land has been cleared to allow access to older trees. At the same time, farmer incentive to harvest has been boosted by the current worldwide economic downturn. A further incentive would be an increase in the G.C.N.A. buying price. In May 2010, G.C.N.A. increased the buying price from 2.00 EC to 2.50 EC per pound. With that, it is anticipated that quantities would immediately increase.

However, the Strategy suggests a further price increase given the high market pricing. During the Participatory Workshop focus was on the price paid for the No. 1 mace quality. Farmers are aware that No. 1 mace quality depends solely on the speed of collection and delivery to the Receiving Stations. Incentives should be provided for the collection of more No. 1 mace by increasing substantially the buying price and creating a price differential with No. 2 and No. 3 mace. Farmers would therefore have no other choice but to collect nutmegs as regularly as possible, provided they are driven by the increase in payment.

Can the procurement of 2,000 tonnes of nutmeg at higher buying price be financed?

From an operational point of view, increasing the farm gate buying price means contributing more income to the farmer communities. It also means advancing the purchasing money so that farmers continue to be paid upon delivery. *Objective 4* addresses the mechanisms to effectively do this. The G.C.N.A. has to be able to finance the sourcing of 2,000 tonnes (financing of the increase in buying price) together with the increase in processing cost.

Estimated Operational Gross Margin:

According to *Annex 6* the gross margin available from the operations for the targeted 1,000 tonnes of nutmeg and 80 tonnes of mace is approximately 4.3 million USD. This is the gross amount since taxes and many of the existing fixed costs related to bank debt repayments or G.C.N.A. unused infrastructure have not been factored in. From an operational point of view, and following the model proposed in *Annex 6*, the industry would have USD 4.3 million to re-invest in the business, distribute to farmers or repay debts.

Strategic Objectives and Activities in the Implementation Plan

As highlighted in the Executive Summary and in the detailed Strategy Implementation Plans (next section) the Strategy for Grenada has 6 major objectives as follows:

1. Reinforce access to Market Information to enable better decision-making for the Sector;
2. Reinforce capacity in G.C.N.A. to better compete and develop the Nutmeg Industry in Grenada;
3. Increase quality and quantity of nutmeg and mace collected and supplied to G.C.N.A.;
4. Improve access to finance for all stakeholders to facilitate sector operations and manage risk;
5. Improve cross Ministry co-ordination and public/private partnerships for better policy making;
6. Ensure the long term sustainability of the Nutmeg Industry in Grenada.

For each of the Objectives above, the activities in the Implementation Plan were grouped into Sub-Objectives, and costed. A summary table, with the order of priority for implementation follows.

The section below provides a brief summary for each objective as well as the anticipated outputs.

Objective 1: Reinforce access to Market Information to enable better decision-making for the Sector (Reinforce direct linkages with grinders and blenders)

Despite the significance and value of nutmeg to the Grenadian economy, there has been little or no analysis and market intelligence of the Sector including information related to trading, market prices or selling price. Additionally, there is not a very systematic approach to the collection of information as it relates to production, supply and to farmers' issues.

This Objective defines the steps that must be taken to ensure improvements in analysis and in the dissemination of information. In particular, G.C.N.A. must facilitate full access to information in relation to pricing and consumption trends.

Grenada needs to establish direct contact with nutmeg and mace processors as well as grinders and those who use the ground products in meat processing, convenience foods and baked goods.

Further, priority must be given to developing a communication platform to brand Grenada's nutmeg as aflatoxin-free, low in safrole, sustainably produced and with 100% traceability. Grenada needs to become visible and step up its commercial representation at conventions and trade shows and additionally must make every effort to embark on sales trips. In order to be an active player in the spice world, Grenada must become active in A.S.T.A. and establish contact with the European Spice Association (E.S.A.), while continuing to inform itself about EU-regulations that may impact on the use of nutmeg and mace in Europe. The Office of the Ambassador of Grenada to the E.U. based in Brussels, should therefore play a pivotal role with regard to issues that may affect the Nutmeg Industry.

Below is the list of Sub-Objectives included in the Implementation Plan and the expected anticipated outputs.

Sub-Objective in Implementation Plan		Anticipated Results from Development Activities	Timing
1.1	Define data needs to support sector operations and policy formulation	Accurate, up-to-date information related to pricing, crop forecast, trends in legislation results in enhanced decision-making and a more competitive Industry.	2009 – 2010
1.2	Improve intelligence and analysis to guarantee better marketing strategies	Development of Market Information System (M.I.S.) to gather, process and store domestic and international trade data for informed decision-making. This ensures more effective marketing strategies and tactics using relevant information based on the trends in usage to better position the commodity on the international market.	2009 – 2011
1.3	Improve dissemination of information	Better informed production and marketing decisions resulting in improved quality for export and optimum prices.	2009 – 2010
1.4	Develop a branding and promotion strategy to position Grenada's nutmeg as the Original One and the world leader in quality	Differentiation of Grenada's nutmeg on the export market resulting in premium prices for the commodity.	2009 – 2015

Below is a list of the detailed activities for each Sub-Objective as shown in the Implementation Plan.

Define data needs to support sector operations and policy formulation	<p>Define information needs, identify and review existing sources of information across the Value Chain for the following areas.</p> <p>Supply side:</p> <ul style="list-style-type: none"> - Directory of farmers to be classified according to age group and family members, land available and geographical locations and abandoned fields, total productive capacity including newly planted trees, fully productive trees and also disease affected trees. - Number of nutmeg trees per parish. Categorize it into fully productive and new trees including estimation of new production 1 year, 2 years, 3 years and 5 years. - Update 2000 Nutmeg Density Map. - Number of open roads and actual access to farming areas (G.C.N.A. has prepared a list).
	<p>Demand side:</p> <ul style="list-style-type: none"> - Various markets to which nutmegs are exported and potential new markets (non-traditional). - Identify buyers, traders and grinders. - Local demand for nutmeg including processed, ground products and derivatives. - Information on buyer requirements and demand trends from regional and international sources (liaise with international agencies e.g. A.S.T.A.). - Information on quality, grades and types of nutmeg. - Identification and profile of different types of customers (e.g. cosmetics, pharmaceuticals, food). - Identification of potential niche markets for particular components of nutmeg (safrole). - Identification of trends or fluctuations in demand and supply in local, regional and international market. - Identification of quantities demanded and supplied for the different uses and markets in order to identify achievable and promising targets. <p>Price:</p> <ul style="list-style-type: none"> - Competitors' prices according to different varieties; - Current and forecasted prices for nutmeg and mace on world and domestic markets; - Prices of new products that utilize nutmegs and nutmeg by-products.

<p>Improve Intelligence and analysis to guarantee better marketing strategies</p>	<p>Data Collection</p> <p>Supply side: Check and adapt past census/surveys for unused/unreported data and assess feasibility/requirements and revisit database lists. Develop a simple questionnaire that can be administered by farmers or students and use existing nutmeg competition and questionnaire as a basis.</p> <ul style="list-style-type: none"> - Collection of information with teams of students, Extension Officers and teams of farmers interviewing farmers per parish; - Increase in the number of field officers and liaison personnel to target relevant suppliers and buyers, to determine the market demand for nutmeg and its derivatives e.g. supermarkets, hotels. <p>Demand side: Collect up-to-date regular information regarding prices, markets, buyers' requirements.</p> <ul style="list-style-type: none"> - Establishment of an information collection mechanism for G.C.N.A. using the exiting infrastructure and tools at the Ministry of Trade (and use Embassy in Brussels and U.S.A.) to provide regular updates on potential buyers. Assign one staff member of G.C.N.A. or university intern to calling buyers. - Subscribe to various websites of A.S.T.A., European Spice Association and Meat Processors Associations. - Conduct market studies and engagement of trade representatives through the embassies. - Arrange for G.C.N.A. to visit destination markets regularly, invite buyers to GDA and communicate directly with buyers over Skype and telephone. <p>Data Analysis Develop an operational plan to strengthen data collection and analysis taking into account existing resources surveys and agencies.</p> <p>In line with the National Export Strategy set up a specific Market Intelligence Unit at the Ministry of Trade that will also have to cover market demand for nutmeg specific interest.</p> <p>Supply side information: Reinforce a Unit in the Ministry of Agriculture in cooperation with the Ministry of Planning to source relevant supply information and construct a database that is regularly updated.</p>
<p>Improve dissemination of information</p>	<p>Ensure market and supply side information transparency by making information available to all VC actors (farmers, processors, support institutions).</p> <p>Specific Dissemination for Farmers:</p> <ul style="list-style-type: none"> - Mobile buying unit to also deliver information; - Media (bulletins, newspaper, flyers, magazines, radio and television); - Extension Officers and G.C.N.A. Field Officers on visits; - Use mobile phone system and community representatives to communicate availability of transport and quantities required (price, mobile buying transport); - Farmer representatives; <p>In addition to the area meeting and the general meeting (2 times a year) incorporate 1 general production meeting and several area meetings (inter-professional and farmer community). These meetings should concentrate on dissemination of information regarding operations, planting, market requirements and training.</p> <p>G.C.N.A.:</p> <ul style="list-style-type: none"> - Monthly report from Ministry to G.C.N.A.; - Direct contact with agents and buyers; - Extension Officers; - Meetings. <p>Policy Makers: Organise monthly meetings between G.C.N.A., Co-ordinating Committee, business sector, farmer representatives to meet with Ministry of Agriculture – Planning Division, Ministry of Trade, Ministry of Legal Affairs, Ministry of Works and Ministry of Education.</p> <p>Buyers: Official websites of the Government and of G.C.N.A.; Existing Embassies.</p>

<p>Develop a branding and promotion strategy to position Grenada Nutmeg as the Original one and the world leader in quality</p>	<p>Identify and confirm the distinctive attributes and marketable characteristics of nutmeg in Grenada (Uniqueness of Origin, Method of Production, High Quality, Reputation of Grenada, Poverty Impact) and develop a comprehensive promotion and branding plan by building on:</p> <ul style="list-style-type: none"> - Quality of product in comparison to competition: Grenada's nutmeg is aflatoxin free and has the lowest safrole content, - Intellectual property opportunities to be exploit through W.I.P.O./W.T.O.: (Ministry of Tourism), - Promotion of geographic indication, branding and Spice Isle (Implement the promotion and communication plan domestically and internationally). <p>At a Domestic Level:</p> <ul style="list-style-type: none"> - Establish formal agreements with the tourism industry and promote nutmeg products for visitors' tour opportunities and merchandise; - Increase public awareness on the uses of nutmegs and its derivatives. <p>At an International Level:</p> <ul style="list-style-type: none"> • Attend American Spice Traders Association (ASTA) Meetings and visit grinders to establish links; • Identify potential users in industry specific areas lenders and grinders/and organise visits to showcase the product; • Advertise on industry specific websites. <p>Strengthen communication and dialogue with other producing countries and international buyers.</p> <p>Propose and organize the World Nutmeg Summit in Grenada by March 2011 to tell the story of "Grenada Come Back". Invite:- Producing Countries: such as Indonesia, Sri-Lanka, Papua New Guinea; Aspiring Producing Countries: Jamaica, Samoa, Fiji, Vanuatu, Trinidad, Guyana, Brazil, India, St. Vincent etc; Traders and Agents, International Companies; Grinders and Nutmeg Industrial Users (Sausage, etc); End Users and Supermarkets.</p> <p>Together with industry partners stimulate and promote the use of nutmeg to increase world consumption.</p>
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Objective 2: Reinforce capacity in G.C.N.A. to better Compete and Develop the Nutmeg Industry in Grenada

As explained above, Grenada has set very ambitious targets for collection, processing and commercialisation for the next five (5) years. This Objective is therefore crucial if Grenada is to meet it to become a competitive industry that can contribute significantly to the well-being of its population. Perhaps the first priority is to put in place an effective system to govern and professionally manage the G.C.N.A. without forgetting its major objective of farmer ownership.

In short, management of the business must be separated from Board governance and must be at the same level of competing and buying countries. The G.C.N.A. Act must be reformed so that G.C.N.A. can better respond to the farmers' requirements in terms of technical assistance, the market requirements and thus better capitalise on the potential increase in revenues and strategic options as defined in the Market Section.

Bearing the 2011/2015 targets in mind, clear standards must be established for the management and processing of material, including guidelines for food handling, hygiene and sanitation. There must be a scientific basis for determining the quality ("freshness") of nutmeg delivered to G.C.N.A.'s Receiving Stations; improvements aimed at reducing costs and time for the drying, processing and storage processes while ensuring that best quality is maintained.

Industry specialists audited the G.C.N.A. Receiving and Processing Stations in the town of Gouyave. Based on the results, the following areas will be addressed with the implementation of this Objective.

- (a) Refurbishment of drying tables – ventilated to speed up the drying process;
- (b) Attention to improving the overall efficiency and hygiene as well as routing in the factory;
- (c) Re-evaluation of de-shelling to reduce defectives; and
- (d) Avoid "Sinking" – the product should not be wet a 2nd time (Gravitational method is recommended).

In summary, the audit concluded that the G.C.N.A. manages to produce a high quality, low risk product despite the age of its facilities. The G.C.N.A. has in-depth knowledge in some areas and ensures that standard operating procedures are drafted in line with HACCP. However, there is a lack of the practical skills required to achieve simple solutions and implementation even at minimum costs. The operations and the quality of the work environment must therefore be improved in order to be acceptable to external independent auditors.

The commitment by all members of the Board is needed to successfully implement HACCP and ISO. A streamlined minimum cost plan must be drafted.

This Objective also deals with value addition and reinforces the need for diversifying the product portfolio, including nutmeg-oil extraction.

Below is the list of Sub-Objectives included in the Implementation Plan and the expected anticipated outputs.

Sub-Objective in the Implementation Plan		Anticipated Results from Development Activities	Timing
2.1	Support better Governance and professionalize G.C.N.A. to enable competitive management	Increased capability of G.C.N.A. to make better decision which encourage greater investment in the industry and increased returns to farmers.	2009 - 2012
2.2	Increase capacity in G.C.N.A. to respond to farmer, industry and buyer requirements and improve processes	More efficient delivery of services to farmers, improved management of industry resources and reduced number of complaints from buyers and processors.	2009 - 2012
2.3	Improve overall value addition and processing to secure sustainability of the industry	Increase in the number of value added nutmeg products marketed.	2009 - 2013
2.4	Establish TECHNICAL Council with producing countries and refineries	Increased access to improved nutmeg production and processing technologies as well as global market information to facilitate more favourable pricing mechanism.	2009 - 2013

Below are the detailed activities for each Sub-Objective as shown in the Implementation Plan.

Support better Governance and Professionalize GCNA to enable competitive management	Reform of G.C.N.A. Act and status using the Value Chain Approach: Working group composed by G.C.N.A. directors, farmers, processors and Government in order to revise G.C.N.A. Act and suggest possible amendments that will allow G.C.N.A to operate in a competitive manner.
	<ul style="list-style-type: none"> - Compare G.C.N.A.'s Government structure to other agricultural cooperatives (e.g. cocoa and other): assess needs in terms of specific managing expertise (e.g. Technical Manager for the processing, Commercial Manager for sales, Accountant for financing, etc) • Validate Operational Plan vis-à-vis procurement and processing; • Compare G.C.N.A.'s operations to other agricultural cooperatives with regards to fee structure, redistribution of income, investments in processing etc. Ensure sufficient pay to farmers or other incentives, so they will collect. Allocate financing to the factory; • Government nominees on the Board should be assistants and non-voting members.
	Validate G.C.N.A.'s strategic plan vis-à-vis buyers: negotiation activities with international buyers and allocation of funds for commercial (and promotion) activities. <ul style="list-style-type: none"> • Regularly meet with other professional food processors in Grenada: e.g. Grenada Breweries, Caribbean Agro-Industry (Flour Mill) and, Grenada Chocolate Factory (Chocolate Processors).
	In accordance with statutory requirements amend and update the Act governing the G.C.N.A. to allow: <ul style="list-style-type: none"> • Investment; • Import of raw material; • Ownership of share and capital by farmers; Governance and management of G.C.N.A.

Increase capacity in G.C.N.A. to respond to farmer, industry and buyer requirements and improve processes	<p><i>Farmer Needs:</i> Increase financing to the farmers</p> <ul style="list-style-type: none"> • G.C.N.A. should seek to facilitate a revolving soft credit fund to assist farmers with finance for the specific purpose of rehabilitating their fields. Assess the effectiveness of existing programmes such as the one whereby farmers may obtain an EC\$ 1,000 micro credit for rehabilitation. • G.C.N.A. must ensure continuity of those support programmes which enable nutmeg tree owners, who are no longer able to collect themselves, to have the nutmegs collected. G.C.N.A. to create a picking unit that would be co-financed by G.C.N.A., buyers, farmers and the bank itself.
	<p><i>New (value added) business opportunities:</i> Increase support for product and process development: Assess market potential for nutmeg and mace both in food and other markets (e.g. medical/pharmaceutical/cosmetics)</p> <p>Strengthen link to C.A.R.D.I. to enhance research capability and technology adoption, for example in solar drying for mace.</p>
	<p><i>Buyer requirements:</i> Identify potential new buyers (grinders), assess their requirements and supply the product accordingly</p> <ul style="list-style-type: none"> • Modify current arrangements with agents and facilitate flexibility in contacting traders and grinders directly; • Establish direct links with the final consumers, with the aim to understand trends in nutmeg and mace use (e.g. decreased need for mace in meat industry); • Renew membership on relevant Spice Boards e.g. A.S.T.A., E.S.A., Indian Spice Board.
	<p>Investigate the status and investment needs for collecting points and the processing factory in Gouyave</p> <ul style="list-style-type: none"> • Audit the factory regularly, with the aim to obtain certification vis-à-vis notified bodies and professionals. Define short and long-term improvement necessities; • Design a programme for short-term improvement of a safe food environment of the factory: document and classify raw material intake, improve sense of hygiene amongst personnel (e.g. by introducing uniform clothing, hairnets, sweeping sanitary area); • Draft an investment plan, short-term to achieve quick wins. E.g. drive drying time down from 5 to 3 weeks by introducing mechanical ventilation - (e.g. installing fans in the windows). Other short-term win is improving the mace winnower through a simple re-design. Drive down insect presence by placing insect fencing on all windows. Prioritize mechanical steps to prevent insects from coming in (only use chemical steps as a last resort to "control back again, what already went wrong"). Decrease mould risk by changing the wooden bottom of the beds for a metal grid; • Draft a long-term investment plan to reach ISO standards and other important certifications. Ensure that investments priorities on things workers can install themselves, before leaping towards capital intensive investments.
Improve overall Value addition and processing to secure sustainability of the industry	<p>Good traceability towards the farmers level will increase the value (= price) of Grenada's nutmeg in the international market:</p> <p>G.C.N.A. needs to put into place systems for traceability up to the farmers level through:</p> <ul style="list-style-type: none"> - numbering batches; - mapping and zoning the parish.
	<p>Installing Good Manufacturing Practices at Gouyave will ensure that a superior product after harvesting, will retain its (food safe and taste profile) quality during processing, transport and warehousing:</p> <ul style="list-style-type: none"> • Train Personnel in collecting points in the Processing Factory, with logistics partners. Simply copy what other food processors in the region are already doing; • Draft a Quality Handbook, to begin with a level that is achievable on the short term.
	<p>Improve Certification of Grenada's nutmeg and mace</p> <ul style="list-style-type: none"> • Set up grades and standards information; • Develop batch testing to provide advance information on exports.
	<p>Investigate opportunities for:</p> <ul style="list-style-type: none"> • Distillation of excess production volumes (e.g. of mace). Given the low volume of defectives (max 10% in Grenada, i.e. < 50 (tonnes) and the fact these contain only 4% of Volatile Oils, the maximum volume for oil extraction will be only 2,500 kg. Reconsider if such volume allows for cost effective processing in Grenada, or whether selling these defectives to countries like India is economically more feasible. • Explore the potential for developing other products with the nutmeg oil e.g. Nutmed, jellies, etc.

Establish TECHNICAL Council with producing countries and consuming countries	<p>Strengthen communication and dialogue with Indonesia and the other producing countries and international buyers (e.g. Propose to hold the World Nutmeg Summit in Grenada)</p> <ul style="list-style-type: none"> • Ensure Grenada is represented at international spice meetings including A.S.T.A. (American Spice Trade Association); • Formalise contacts with Indonesian counterparts and all the players involved in nutmeg production and commercialization.
	<p>With Producing Countries:</p> <ul style="list-style-type: none"> - exchange information on pest control, seed improvement, harvesting, processing; - ensure uniformity in testing and certification.
	<p>With Buying Countries:</p> <ul style="list-style-type: none"> - exchange information on alerts e.g. safrole contents, salmonella; - ensure uniformity in salmonella testing and certification.

Objective 3: Increase Quality and Quantity of Nutmeg and Mace Collected and Supplied to G.C.N.A.

If Grenada is to maintain its market position as the provider of quality nutmeg and mace and is able to meet the production targets set in the new Strategy, there must be a significant increase in assistance to farmers for disease management, collection and production efforts. Most importantly, the farmers need to be motivated and must recognise the effect of their improvements in terms of organization and quality vis-à-vis increased revenues. In order to meet this Objective, a number of measures must be put in place.

The following are recommended as some of the short-term measures to facilitate the achievement of the Objective:

- Clear and maintain access roads to nutmeg farms;
- Provide incentives such as increases in farm gate price (as discussed in the introduction part of the future for Nutmeg and Mace Sector);
- Assist in providing labour support to nutmeg farmers for the weeding of fields and the regular harvesting (collection) and delivery of nutmeg; and
- Re-establish systems such as mobile buying to alleviate transport costs to farmers and at the same time increase the frequency of collection.

Recommendations for long-term measures to support the Objective are as follows:

- Develop of a Land Use Strategy which identifies the lands best suited for nutmeg cultivation;
- Characterize Grenada's nutmeg based on specific genetic traits such as size and shape of nuts, thickness of mace, and chemical composition;
- Develop and utilize new and improved propagation techniques for nutmeg; and
- Encourage and assist farmers through the Ministry of Agriculture Extension Service, to plant, and care for nutmeg plants propagated in a vegetative manner.

This Objective stresses the need for Good Agricultural Practices (G.A.P.) in the Sector by enhancing the processes and techniques currently employed in the Industry and by improving the manufacturing environment. It supports the use of demonstration farms and the need for developing programmes that feature best practices. Very importantly, there should be an ongoing programme of training for nutmeg farmers and workers addressing needs related to nutmeg agronomy and Good Agricultural Practices.

Below is the list of Sub-Objectives included in the Implementation Plan and the expected anticipated outputs.

Sub-Objective in the Implementation Plan		Anticipated Results from Development Activities	Timing
3.1	Improve access to fruit bearing trees particularly in devastated areas	Significant increase in Grenada's annual nutmeg production.	2009 - 2013
3.2	Reinforce organization and capacity of farmers to guarantee consistent quality and volume of supply including G.A.P.	Improved quality of nutmeg and mace delivered to the Nutmeg Processing Stations.	2009 - 2013
3.3	Manage nutmeg tree rehabilitation/replanting efforts based on demand and establish a supply strategy for domestic and international	Limited quantities of nutmeg kept in storage for long periods.	2009 - 2020
3.4	Create Incentives to increase quantities, reduce post harvest loss and ensure consistency of supply	Increased efficiency in the production and harvesting and storage of nutmeg.	2009 - 2013

Below are the detailed activities for each Sub-Objective as shown in the implementation plan

Improve access to fruit bearing trees particularly in devastated areas	Baseline information
	Require of every G.C.N.A. farmer member to identify on his plot the number of not yet fruit bearing trees, the no. of fruit bearing but inaccessible trees and the no. of fruit bearing accessible trees.
	Make an estimate of the volume per (accessible fruit bearing) tree and from that estimate how much nutmeg and mace the farmer expects to supply to G.C.N.A. in 2009. Possibly with an outlook for 2010.
	From this information, derive an estimate of the potential volume of inaccessible trees. This gives insight in how much G.C.N.A. would like to invest to clear fields.
	The survey of accessible and inaccessible fruit bearing trees and the estimates on future yields should be undertaken by administering a simple questionnaire to farmers to be channelled through Farmers' Associations and Co-operatives.
	Reinforce Ministry of Agriculture plan for clearing of access to trees and devastated areas and identify: <ul style="list-style-type: none"> - Priority roads to be done in co-operation with farmers and existing farmer groups; - Timing of work and type of work (pruning, drainage, clearing); - Technical expertise, workforce and machinery needed (Ministry of Works and the Extension Division of Ministry of Agriculture).
	Estimate resources needed and seek funding for rehabilitation of priority roads through budget of the Ministry of Works. Once funding is identified, define the allocation of funds between the farmer himself and external resources.
	Explore partnerships with traditional donors involved with road building in Grenada such as China and Kuwaiti Fund (Funds already budgeted and presented to Kuwaiti Fund). Ensure good supervision to avoid damage to nutmeg trees by external workers.
	Development of pilot activities for land clearing.
	Develop a pilot approach with a range of activities including clearing based on a selected group of farms in a particular location in each parish.
	Land clearing team and farmer to identify what needs to be done during three days of work. After completion farmer needs to sign of and state satisfaction.

Reinforce organisation and capacity of farmers to guarantee consistent quality and volume of supply including GAP	<p>Organisation of Farmers</p> <p>Identify category of farmers and select the key representatives per area</p> <p>Establish farming groups, using La Digue, North East Farmers' Organisations, as a model and pilot a structure of community representations (i.e. 1 farmer representative to 10).</p> <p>G.C.N.A./MoA target key farmers and provide training related to GAP, to community management and representation, entrepreneurship and services to be provided through the organizations.</p> <p>Organise farmers by districts in keeping with the organisation of Extension Services Division to deliver the training.</p>
	<p>Collection activities</p> <p>Meet with Ministers of Agriculture, Education and Works to Establish a National Nutmeg Cultivation Picking and Clearing Day, based on harvest times (Low and Middle Belt: May, Higher Belt: June\July\August; Low and Middle Belt: November/January; High Belt: February) where population would volunteer to support the efforts.</p> <p>Explore using community groups and incentive schemes to stimulate collection</p>
	<p>Collection activities</p> <p>Explore reinforcing and replicate mobile buying system for all the parishes during high season period to increase quality and volumes</p>
	<p>In cooperation with MoA, the private sector and potential buyers, develop a more commercially driven methodology for training farmers and motivating G.C.N.A. Extension Officers</p> <ul style="list-style-type: none"> • Develop detailed cost analysis for production and harvesting to inform decision making for doing business in nutmeg and also cocoa (for a better understanding of farm income components). <p>Motivate MoA extension services to help farmers diversify crop varieties based on market potential for regional and international levels.</p> <ul style="list-style-type: none"> • Educate extension officers and farmers on the strategy of using different varieties for different markets.
	<p>Reinforce on site training at the farms and provide basic management skills including record keeping.</p> <ul style="list-style-type: none"> • Extension Officers to be trained in modern business practices to assist farmers with record keeping, quality standards, project proposal development, pricing and marketing products. • Organised spot checks to monitor adherence to standards.
	<p>Establish Good Agricultural Practices at farm level and a Model Farm for training purposes.</p> <p>Explore simple approaches to reduce the time fruit stays on the ground. E.g. tree shaking or rattling (bamboo stick) at collection day, to ensure that "loose "nuts fall down and avoid falling down in the days after. Thus one day plucking a week can be done with limited exposure of fruit on the ground.</p> <ul style="list-style-type: none"> - Develop production and post-harvest guides; - Organise on-site training events for farmers; - Establish nutmeg demonstration plots; - Closer monitoring of individual farmers' output relative to their nutmeg acreage (assist in the praedial larceny problem).

	<p>Role of G.C.N.A. in extension work</p> <p>Review the IOSTA GAP guide; modify it for Grenada's nutmeg cultivation. Then ensure information is disseminated to appropriate partners such as farmers and MoA Extension Officers.</p> <p>G.C.N.A. Extension Officers to carry out group training with farmers on the field.</p> <p>G.C.N.A. to devise a training schedule and establish how this will be delivered to the partners (workshops, brochures, radio etc).</p> <p>G.C.N.A. to provide budgetary allocation for such training. The training includes making farmers understand the relevance of customer specifications.</p> <p>MoA and G.C.N.A. to work out cropping pattern to dissimilate to farmers based on their areas of production. Organised spot checks to monitor adherence to standards of G.A.P.</p>
	<p>Train MoA Extension Officers in Nutmeg Technology:</p> <p>Collaboration of G.C.N.A. with MoA to re-train officers to provide production technology.</p> <ul style="list-style-type: none"> • Conduct training needs analysis for all aspects of the industry including production, post-harvesting, and marketing and identify equipment and material needed to conduct the training. • Establish a Model Farm for training purposes (e.g. appropriate intercropping). • Training must be re-emphasized and become an important component of G.C.N.A.'s activities. • G.C.N.A. to have extension officers for training in the sector. • G.C.N.A. to provide budgetary allocation for training and devise a training schedule. • G.C.N.A. working in collaboration with MoA to conduct "training of trainers programme". <p>G.C.N.A. would be responsible for training farmers and establishing a working partnership with MoA.</p> <p>Field officers to carry out group training with farmers on the field, giving guidance on sanitation measures and draining.</p>
	<p>Develop Plant Propagation Plans:</p> <p>G.C.N.A. to provide planting material: 32,000 plants/yr for 5 years at EC\$ 10 (Plant Propagation Plan has already been established and work has started: 35000 plants to be distributed to farmers by September 2010)</p>
Manage nutmeg tree rehabilitation / replanting efforts based on demand and establish a supply strategy for domestic and international	<p>Training activities for a correct methodology of plant propagation:</p> <p>Demonstration plots to train farmers in correct methodology – nursery; Devise a work plan and identify those farmers who have the capacity for plant propagation per parish and that can service other farmers.</p>
	<p>Introduce grafting technique to induce dwarfing (as lower trees are easier to harvest):</p> <ul style="list-style-type: none"> • Funding is available to facilitate the introduction of these techniques. The G.C.N.A. is awaiting the arrival of the specialist from the Indian Government. • MoA has already been exposed to the technique and will continue testing in an effort to perfect it. • Continuous practice of grafting technique to dwarf trees. Graft using types selected with low safrole content.

Create Incentives to increase quantities, reduce post harvest loss and ensure consistency of supply	<p>Increase Quantities and Quality</p> <p>Consider and quantify the benefits and volume-effects of Price Increase at the farm gate.</p> <p>Explore the possibility and impact of raising the price of Mace No. 1 quality in a substantial manner and reducing the price of Mace grades 2 and 3. This could potentially trigger an increased inflow of overall nutmegs (nuts, mace and pericarp) and would also have significant revenue impact due to the difference of market price for Mace 1 and lower quality Mace 2 & 3.</p>
	<p>Reduce post harvest loss</p> <p>Improvement of transport and warehousing/storage technology and methodologies.</p> <p>Assess existing technologies and research to develop more appropriate techniques.</p>
	<p>Ensure Overall Profitability of Supply</p> <p>Cost\benefit analysis which considers the following aspects: Inputs type of seed used, soil conditions, conservation practices, type of fertilizer, planting regime, way of farming, weed control, pruning activities, labour costs in comparison with other crops or household activities.</p>
	<p>Evaluate the effectiveness of monetary and non monetary incentives targeted to farmers and linked to the quantity and quality of Nutmeg and Mace harvested.</p> <p>Evaluate the effectiveness of tax incentives to young farmers and start-ups.</p>

Objective 4: Improve Access to Finance for all Stakeholders to Facilitate Sector Operations and Manage Risk

The Strategy explores opportunities for financing the sector needs. It analyses the process and business risks as well as the financing constraints faced by nutmeg farmers and by the G.C.N.A.

The activities in the Objective explore new and alternative ways of obtaining finance including a plan to engage regional and international banks as potential funding partners. The Strategy seeks to design multi-level finance system, which will allow stakeholders to take ownership of the investment. In order to meet the Strategy targets for production, processing and commercialisation, the G.C.N.A. would need to secure the necessary resources to fund the Sector operations including the increase recommended for the farm gate price.

The priorities identified by stakeholders to boost access to finance and mitigate risk exposure for the Nutmeg Sector in relation to the Sub-Objectives include: investment promotion, assessment of demand and supply, financing needs and the development of ad hoc risk management mechanisms.

Inherently to the Sector, financing needs are strictly linked with post-hurricane reconstruction and planting of new trees. This has taken place primarily through Government spending and is not driven by a particular strategy or targets established for each of the upcoming years. A damage assessment was conducted after the passage of Hurricanes Ivan and Emily but after almost six years, no review has been done to identify the work done or what still needs to be done. This is highlighted as one of the core activities in Objective 4.

The stakeholders have strongly recommended the conduct of an assessment of financing needs for the Sector with respect to the different segments of the Value Chain. In Grenada, as it relates to the Sector, financing is currently accessible only to stakeholders who have a proven record of good returns to investments and only if they are secured by savings. At this time, the Nutmeg Sector does not benefit from any form of targeted financial product for the following reasons:

- i. Nutmeg has always been considered a spontaneous and fruitful crop requiring very limited maintenance by producers;
- ii. Financial institutions are concerned with the weather risk exposure of the Nutmeg Sector as compared to other crops such as fruits and vegetables or cocoa, which are considered to be far more resilient.

For those reasons, producers and banks that would like to consider investments in nutmeg, are concerned about the costs of reconstruction and rehabilitation in the aftermath of a hurricane and have expressed their interest in investigating the feasibility of appropriate risk management strategies. These include several types of risks from weather to price variability, pests and diseases and theft.

Below is a list of Sub-Objectives included in the Implementation Plan and the expected anticipated outputs.

Sub-Objective in the Implementation Plan		Anticipated Results from Development Activities	Timing
4.1	Analyze actual situation to better design financial and risk management mechanisms	A more comprehensive understanding of the financial and security needs of stakeholders (farmers, institutions and processors) is achieved. Matching needs with current financial services informs the design of appropriate financial tools.	2009 - 2010
4.2	Design delivery mechanisms in co-operation with banks and stakeholders	Stakeholders adequately trained in project development and farm business management (Farmers, technicians, processors). Increased number of financial institutions interested in supporting the Sector through provision for financial resources for sector development.	2009 - 2011
4.3	Investment promotion	Increase confidence in the Sector resulting in greater investment.	2009 - 2015
4.4	Design Risk Management Tools	Tools in place to ensure that all stakeholders are better prepared to deal with disasters (hurricanes, diseases, price fluctuations).	2009 - 2015

Below are the detailed activities for each Sub-Objective as shown in the Implementation Plan

Analyze actual situation to better design financial and risk management mechanisms	<p>Conduct a Needs Assessment on access to finance for the Nutmeg Sector (Supply, Demand side):</p> <p>Supply side:</p> <ul style="list-style-type: none"> - Identify and consolidate a list of financing bodies or institutions targeting agriculture sector and SME finance at a national and regional level (loan conditions, funds available – short term vs. long term) - Composition of Portfolios - Banks Investment Strategy in the agro-sector (why they invest or do not invest in the sector) - Credit risk information - Survey of existing financial products - Interest rates + transaction costs - Collateral and other requirements (e.g. business plans) - Availability of Information on default and on clients in general - Review of the Ministry of Agriculture financing mechanism
	<ul style="list-style-type: none"> - Identify lead institutes (recommendations from the Committee) - Design survey based on representative sample of financial institutions (CEOs) - Contact responsible persons within banks

Demand side:

- Issues and bottlenecks in accessing finance by stakeholder type. Analysis of process and business risks that create or are the result of financing constraints (ability to repay loans)
- Administrative requirements
- Collateral
- Needs in terms of financing for technology acquisition

Stakeholders needs in relation to financing:

Farmers:

- Land preparation (short term)
- Replanting (short term)
- Equipment (medium term)
- Private road access (long term)

G.C.N.A.:

- Working Capital (short term)
- Trade Finance (short term)
- Equipment Finance (medium term)

Agro-processors:

- Working Capital (short term)
- Equipment Finance (medium term)

- Design a farmer survey based on a representative sample of stakeholders
- Conduct survey of farmers
- Collect information from: A.E.D.P., MoF, Regional and National Banks, Regulatory Institutions (G.A.R.F.I.N. and E.C.C.B.), National Export Strategy, Poverty Assessment Report (C.D.B.), G.I.D.C., E.U.-MoF

Develop a risk profile for Grenada in order to identify the magnitude of losses, frequency and major events responsible for production and/or revenue loss:

- price risk
- weather risk
- pest and disease
- praedial larceny

Get available information:

- W.B./C.C.R.I.F.
- Meteorological office (MoA - for types of weather events and frequency)
- Information on output prices (G.C.N.A. for domestic and international prices and MoF)
- Yield information per acre (G.C.N.A. for nutmeg and MoA for other crops such as cocoa)
- Pest and disease (MoA - Pest Management Unit)

Weather Risk:

Gathering all relevant data also regarding other crops (cocoa and other spices) and, if further information is needed, conduct an in depth survey on risk exposure by selecting a representative sample of stakeholders from the insurance companies, financial institutions, farmers and G.C.N.A. representatives.

Price Risk:

Information on price trends and variability on the domestic and international markets for nutmeg and by-products and inputs, together with requirements by buyers.

Design delivery mechanisms in cooperation with banks and stakeholders	Facilitation of access to finance
	<p>For farmers</p> <p>Credit guarantee scheme (G.C.N.A., Govt.) (Involve Credit Unions, Farmers' Associations, G.C.N.A.)</p> <ul style="list-style-type: none"> • Dedicated rehabilitation facility (self liquidating); • Leasing (equipment); • Factoring (trade finance); • Improve existing financing schemes (e.g. Agricultural Enterprise Development Programme Rural Credit Scheme); • Establish a revolving Credit Guarantee Scheme, to be partly subsidised by the Government and G.C.N.A., for nutmeg famers with well-tested systems for recovering money; • Explore financial mechanisms that establish linkages with cocoa production (The MoA continue to advance the process of amalgamating the Grenada Cocoa Association and the G.C.N.A.); • Explore new alternative ways of financing through feasibility studies: factoring and leasing, use of remittances, Diaspora fund to encourage nationals living abroad to invest in local value added development products; • Explore financial mechanisms to ease access to land (Land Bank Project is currently being undertaken and recommendations should be considered for implementation, capitalize on F.A.O. project); • Mutual funds; • Piloting of innovative financial mechanism and/or risk management as tools to secure loans (on the basis of current supply contracts by G.C.N.A., identify which farmers could be a part of a pilot to model alternative financing models and/or risk management products to be employed as alternative forms of collateral). <p>Cross cutting:</p> <ul style="list-style-type: none"> • Mobilization of remittances (Diaspora fund); • Export Credit Agency (for financing equipment purchase); • Design and test risk management mechanisms that would enhance access to finance, like contracts with international buyers for G.C.N.A. and contract farming for farmers, to be used as an intangible form of credit guarantee; • Design tools for export finance that are specifically tailored on agricultural exports like revolving credit facility or export facilities within the existing financial institutions; • Credit insurance.
	<ul style="list-style-type: none"> • Revolving credit scheme • Establish an ongoing investment and finance Committee to include representatives of commodity boards, the financial and insurance sector and the MoA
	<p>Approach regional and international agencies to conduct a feasibility study to analyze situation on ground, select the most appropriate alternative tools based on feasibility and using the value chain approach and conduct pilot programmes on tools selected</p> <p>Develop or complete a map of existing funding and potential implementing partners at a community, national, regional and international level.</p> <ul style="list-style-type: none"> • Banks, credit unions, corporate entities, C.D.B., I.I.C.A., C.A.R.D.I., F.A.O., U.N.D.P., I.F.A.D., E.U.

	<p>Undertake capacity building and training activities:</p> <ul style="list-style-type: none"> • Building capacity of Farmer Associations and Sector Associations / NGOs to put together funding proposals/business plans/investment strategies; • Provide direct training to farmers on business plan writing and record keeping/basic accounting as a way to facilitate access to credit; • Capacity building of farmer on price negotiation. <p>Information system on available banking services – display or introduce farmers to funding available.</p> <p>G.C.N.A. with the MoA to facilitate training courses to farmers, to be delivered by G.I.D.C. and other institutions to be identified.</p>
Investment promotion	<p>Investment promotion:</p> <p>Short Term Activities:</p> <ul style="list-style-type: none"> • Assess investment needs for the marketing of nutmeg and nutmeg products; • Ensure Government concessions to farmers and Associations on transport, inputs and equipment; • Implement Entrepreneurial Incentive Programme (e.g. for young farmers to be supported through Public/Private partnerships between financial institutions and Government); • Provide incentives to small farmers for better quality outputs and technology adoption and quality inputs (access to land); • Tie in Guarantee Scheme to encourage SMEs to purchase capital equipment for primary processing and value addition through time-bound lower rate loans, tax incentives, etc.; • Explore the feasibility of a technology support fund, accessible to farmers, SMEs or export companies that have an identified or potential market and have identified the right technology to scale up production and improve the quality to international standards and take advantage of this market.
	<p>Long Term Activities:</p> <ul style="list-style-type: none"> • Explore the feasibility of a venture capital fund and develop a policy to attract Foreign Direct Investment.
Design Risk Management tools	<p>Risk Management Activities</p> <p>Weather and Pest and Diseases:</p> <ul style="list-style-type: none"> - Strengthen extension services to provide guidance and advice on risk mitigation and prevention - Crop risk mapping at the national level for the agricultural sector - Feasibility study of micro - level weather insurance for the nutmeg and eventually other crops to be included in the scheme - G.C.N.A. in collaboration with the MoA to establish and provide grant funding for sustaining fields after a disaster. <p>HOW:</p> <ul style="list-style-type: none"> - Obtain information on the current active and inactive farms in order to identify potential demand for insurance; - Engage WINCROP on the possibility of collaboration on agricultural insurance; - Establish a commodity Risk Management Unit at Ministry of Agriculture to look at risk mitigation and insurance. <p>Price Risk Mitigation Tools:</p> <ul style="list-style-type: none"> • Design price risk tools for the nutmeg value chain stakeholders to be tested on a sample of stakeholders (e.g. forward contracts and mutual funds).

HOW

Conduct an analysis of price transmission throughout the nutmeg value chain in order to identify needs and stakeholders to be involved in price risk management tools such as production contracts and a comparative analysis on price transmission in other nutmeg producing countries.

Information on price trends will be used to design templates of price risk management tools such as forward contracts and/or mutual funds to be developed both at the farmer and at the G.C.N.A. level. In both cases, the possibility to use these risk management tools as additional forms of collateral will be evaluated. The feasibility of contracts at different levels will be tested together with an incentive scheme to stimulate collection of nutmeg by farmers in order to ensure contract obligations are met.

Objective 5: Improve Cross Ministry co-ordination and Public/Private Partnerships for better Policymaking

This Objective addresses the need for developing a robust private-public platform not only for managing the implementation of the Strategy but also for overseeing the development of the Industry as a whole. It highlights the importance of aligning policymaking not only with business needs but also with social development needs. The Objective makes recommendations for the revision of applicable legislation and in particular, the G.C.N.A. Ordinance of 1947, using the value chain approach and involving experts as well as stakeholders.

It is clear, that the Government will need to make some serious policy decisions if the targets and objectives laid down in the Strategy are to be met. Inter-ministerial cooperation in the operation of the Implementation Plan is essential for the success of the Strategy.

Below is the list of Sub-Objectives included in the Implementation Plan and the expected anticipated outputs.

Sub-Objective in the Implementation Plan		Anticipated Results from Development Activities	Timing
5.1	Align existing policies for value chain integration and implementation of the Strategy	More effective and enhanced coordination between support ministries, institutions, policy- makers and donors. This results in more effective implementation of the strategy and impact.	2010 -2011
5.2	Reform of legislation and institutional strengthening for increased effectiveness	A more coherent regulatory framework allows for an improved enabling environment that benefits the strategy implementation and sector stakeholders.	2010 -2011
5.3	Monitoring and implementing framework for implementation	The monitoring framework constitutes a public/private platform that manages the implementation using the value chain approach for achieving the development objectives.	2009 -2010

Below are the detailed activities for each Sub-Objective as shown in the Implementation Plan.

Monitoring and implementing framework for implementation	Establish monitoring and implementation framework to implement sector Strategy.
	Define measurable timetables and responsibility/accountability of implementing members and bodies
	Contact implementing partners to start designing detailed activities based on priorities for implementation and resources available.
	Based on the Implementation Plan, develop measurable timetables and responsibility allocation for implementing members and bodies.
Align existing policies for value chain integration and implementation of the Strategy	<p>Map existing policy initiatives and development activities that relate to or could potentially impact the sector strategy development:</p> <ul style="list-style-type: none"> • Preservation of agricultural land; • Development and sustainability of training initiatives; • Collection, analysis, and dissemination of market information; • Other developmental activities (agricultural sector and other sectors, such as tourism, transport and infrastructures, tax incentives, etc).

	<p>Investigate how other policy areas (social and economic development, trade, foreign policy, transport, etc) align with sector objectives and the Strategy:</p> <ul style="list-style-type: none"> • Develop a plan to link priorities within an integrated framework so as to maximize the use of resources and encourage better livelihood for the people in the country while minimizing a shift of people from the land. <p>Improve Public-Private dialogue by providing information on the sector's main priorities at national and regional levels to negotiators and policy makers through G.C.N.A.</p> <ul style="list-style-type: none"> • Exposure at an early age of the importance of nutmeg to Grenada; • National representatives should take advantage of each opportunity to highlight nutmeg as a national symbol; • Use the nutmeg as a national symbol, e.g. Embassies, stationery, etc. <p>Harmonize sector related policy making across national Ministries</p> <ul style="list-style-type: none"> • The Committee will create a comprehensive list of involved Ministries at national levels and to monitor implementation to ensure harmonization success: Agriculture, Education, Tourism/Foreign Affairs, Finance and Trade, Works and the Environment, Social Development and Labour, Housing, Land and Community Development, Health, Legal Affairs, Prime Minister's Ministry, Youth, Culture and Sports.
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Reform of legislation and institutional strengthening for increased effectiveness</p>	<p>Articulate clear policies and strategies for the Industry to ensure that all spice products coming from Grenada maintain a certain quality and meet specified standards:</p> <ul style="list-style-type: none"> • Strategy Development coordinating Committee to organise a working group with key stakeholders to develop the vision statement and to link it with policy making; • Establish a representative working group of stakeholders and authorities to define and agree on a common vision for the Nutmeg, Cocoa and Spice sector; • Establish a timeframe for implementation of the vision statement; • Design a slogan for use in "National PR Campaign" to make all VC Players aware of Sub-Sector Strategy. <p>Develop activities (e.g. media, tourism, etc) to promote the country as the "Isle of Spice";</p> <p>Reform of G.C.N.A.</p> <p>In accordance with statutory requirements, amend and update the Act governing the G.C.N.A. to allow:</p> <ul style="list-style-type: none"> • Investment; • Import of raw material; • Ownership of share and capital by farmers; <p>Working group composed by G.C.N.A. directors, farmers, processors and Government in order to revise G.C.N.A.'s Act and suggest possible amendments that will allow G.C.N.A. to operate in a competitive manner.</p> <p>Enhance and maintain regular relationship between the G.C.N.A. and the Department of Trade particularly with regard to the existing agreements for import and export activities within CARICOM.</p> <p>Enforcement of Praedial Larceny Act</p> <ul style="list-style-type: none"> • Review and strengthen the Praedial Larceny Unit; • Increase sensitization on actions to be undertaken at different levels; • Use technology to support the implementation of anti-praedial larceny activity (e.g. issuing of ID cards); • Review and assure enforcement of the penalties and sentences under the Act; • Traceability – registration of vendors and farmers; • Explore the possibility to create a special police monitoring body to operate in strategic areas in the parishes to contribute to the prevention of the praedial larceny activities.

Objective 6: Ensure the Long-Term Sustainability of the Nutmeg Industry in Grenada

The Strategy provides support for the long-term development of the Industry and it is evident that the Nutmeg Industry must be modernized and made more attractive to attract young entrepreneurs and farmers.

Though not often recognised as such, the Nutmeg Sector of Grenada is a multi-million dollar Industry and investment in the future of the Industry must be seen as a priority. The Strategy recommends that a percentage of the annual profits be allocated to activities such as:

- i. Training for sector staff and farmers;
- ii. Formulation and implementation of public awareness programmes;
- iii. Implementation of nutmeg-related summer programmes for primary and secondary schools;
- iv. Mechanization within the Nutmeg Industry;
- v. Research for value addition within the Nutmeg Industry; and
- vi. Implementation of a comprehensive nutmeg research and development programme.

This Objective seeks to address the need for carrying out both basic and applied research in areas relevant to the Value Chain. It further highlights the fact that the responsibility to develop the Industry is not only in the hands of Government or G.C.N.A. but also in the hands of the Grenadian people.

Below is a list of Sub-Objectives included in the Implementation Plan and the expected anticipated outputs.

Sub-Objective in the Implementation Plan		Anticipated Results from Development Activities	Timing
6.1	Research and development applied to the Nutmeg Industry (Pre-Production, Production, Product development)	Increases in the number of products and recipes developed using nutmeg and mace resulting in enhanced value addition.	2010 - 2012
6.2	Change of mindset with regard to the Nutmeg Industry and farming (Entrepreneurship and youth)	Increased involvement and investment into agriculture and development of small business resulting in rejuvenation of the sector.	2009 - 2020
6.3	Promotion of equal opportunities for all Grenadian people	Increased opportunities for Grenadian people contributing to the achievement of MDG's.	2009 - 2020

Below are the detailed activities for each Sub-Objective as shown in the Implementation Plan

Research and development applied to the Nutmeg industry (Pre-Production, Production, Product development)	<p>Define policies that establish a link between science and technology on one side; and education, production and manufacture of Grenada products of culinary, pharmaceutical, and cosmetic values</p> <ul style="list-style-type: none"> • Create a Joint Committee composed by private stakeholders and experts/scientists to ensure regular consultation and exchanges between R&D activities and their concrete application to the Nutmeg Sector and the Spice Sector in general.
	<p>Conduct a complete inventory of the Nutmeg Industry including plant population and distribution, and all human resources involved in the Value Chain.</p> <ul style="list-style-type: none"> • Establish appropriate soil conservation measures where necessary; • Develop production and post-harvest guides; • Organize on-site training events for farmers; • Institutionalize farm competitions; • Establish nutmeg demonstration plots; • Promote nutmeg as a viable business venture by the use of all business techniques; • Institutionalize annual summer camps for youth in respect of the Nutmeg Industry (especially propagation and harvesting); • Closer monitoring of individual farmers' output relative to their nutmeg acreage (assist in the praedial larceny problem); • Enforce stricter guidelines for the issuance of nutmeg cards to farmers.
	<p>Carry out both basic and applied research in areas relevant to the Value Chain:</p> <ul style="list-style-type: none"> • Involve farmers in all research initiatives undertaken; • Organize students to assist in research activities during school vacation; • Make nutmeg research information available at a site that is open to the public (e.g. National Documentation Centre/Website); • Establish and co-ordinate the necessary research laboratory facilities; <ul style="list-style-type: none"> - Improve the capabilities of extension and technical personnel to support research and development initiatives; - Develop partnership agreements with University of West Indies for training of technical staff and for joint R&D; - Organise visits and exchanges with other R&D Units in different countries including Nutmeg Producing Countries.
	<p>Provide support for increased R&D. Primary responsibility lies with Government, but with inputs from G.C.N.A. and from the private sector for technical assistance</p> <ul style="list-style-type: none"> • Establish a focal point in the Ministry which determines the priority areas of research for the nutmeg industry (evaluate potential utilization of the R & D desk at the Ministry of Agriculture); • Establish a small advisory committee made up of national and regional institutions and which will be able to co-opt resource persons as needed and will advise the focal point personnel in the selection of priority areas; • Improve the capabilities of extension and technical personnel to support research and development initiatives; • Revise the ordinance of the G.C.N.A. to reflect among others things the allocation of a quantum of funds for research and development in the Nutmeg Industry; • Seek funding through regional and international sources; • Allocate budgeted annual government funds for research.
	<p>Product Development:</p> <p>Explore the beneficial uses of nutmeg, mace, shells, pericarp and leaves with a view to developing commercial value added products based on potential uses and attributes.</p>
	<p>Technology Development:</p> <p>Develop de-macing technology for use by individual farmers to enhance the quality of mace</p> <p>Explore solar dryers for mace.</p>

	<p>Laboratories and Testing: Address the problem of providing inputs, support and coaching to laboratories to increase international accreditation levels.</p> <ul style="list-style-type: none"> • Generate interest for science subjects in secondary schools; • Equip labs in secondary schools; • Gear education curriculum towards science. <p>Commercialize activities so as to develop a more market-driven approach: Explore the beneficial uses of nutmeg with a view to developing commercial products based on uses.</p> <ul style="list-style-type: none"> • Develop a national capability through training and research; • Approach F.A.O. and other institutions for support in training and development.
Change of mindset with regard to the nutmeg industry and farming (Entrepreneurship and youth)	<p>Establish a development unit with special focus on activities related to changing the mindset</p> <ul style="list-style-type: none"> • Design and implement an education programme targeting the stakeholders • Promote commercial value added activities and especially keeping in mind emerging global trends • Establish clearly in the mind of the population that nutmeg is a food and address relevant food safety concerns.
	<p>Promote the importance of farming and agriculture in schools:</p> <ul style="list-style-type: none"> • Clear direction and support at the policy level; • Get young people involved in agriculture; • Summer internships; • Scholarship programmes – use regional agricultural tertiary institutions. <p>Reintroduce/re-emphasize agriculture as part of school curriculum for early training:</p> <ul style="list-style-type: none"> • Strong message from the policy level; • Work closely with the Ministry of Education; • Motivate teachers; • Maximise the use of the Mirabeau Farm School. <p>Get children back to farming through the planning of:</p> <ul style="list-style-type: none"> • Weekend events; • Harvesting trips; • G.C.N.A./MoA target key farmers for lands for replanting. Persons selected should be supported (technical and material) to deliver the service; • GOG to hold a series of consultations across the country seeking input from the general population to get young people involved in agriculture.
	<p>Build entrepreneurial drive and awareness:</p> <ul style="list-style-type: none"> • Establish G.C.N.A. Fund to support entrepreneurial initiatives; • G.C.N.A. to develop its own award/recognition programme. <p>Get farmers organized to survey and watch plantations:</p> <ul style="list-style-type: none"> • G.C.N.A. extension working in conjunction with the Ministry to broaden farm watch programme
	<p>Farming as an Agri-business:</p> <p>Tackle younger farmers by introducing incentives to stimulate investment in the nutmeg sector</p> <p>Turn farmers into "agri-business men" by e.g. encouraging appropriate intercropping and supply product management assistance.</p> <p>Develop detailed costing for production and harvesting to informed decision making for doing business in nutmeg.</p> <p>Educate farmers on the Strategy of using different varieties for different markets.</p> <p>Farmers to be trained in modern business practices such as record keeping, quality standards, project proposal development, pricing and marketing products.</p>

	<p>In cooperation with MoA, the private sector and potential buyers, develop a more commercially driven methodology for training farmers and motivating G.C.N.A. Extension Officers</p> <ul style="list-style-type: none"> • Develop detailed cost analysis for production and harvesting to inform decision making for doing business in nutmeg. <p>Motivate MoA extension services to help farmers diversify crop varieties based on market potential for regional and international levels.</p> <ul style="list-style-type: none"> • Educate Extension Officers and farmers on the strategy of using different varieties for different markets. <p>Reinforce on-site training at the farms and provide basic management skills including record-keeping.</p> <ul style="list-style-type: none"> • Extension Officers to be trained in modern business practices to assist farmers with record-keeping, quality standards, project proposal development, pricing and marketing products. • Organised spot checks to monitor adherence to standards.
Promotion of equal opportunities for all Grenadian people	<p>Conduct an assessment on women involvement in the Nutmeg Sector to eventually designing policies aimed at enhancing women participation and entrepreneurship:</p> <ul style="list-style-type: none"> - number of women entrepreneurs; - share of women in farming.

Sub-Objectives in order of Relative Priority for Implementation

Relative Priority	Timing	Start	End	Sub-Objective in Imp. Plan	Sub-Objective Description
1	Short Term	year 1	year 1	5.3	Monitoring and implementing framework for implementation
2	Short Term	year 1	year 1	1.1	Define data needs to support Sector operations and policy formulation (supply side and demand side)
3	Short Term	year 1	year 1	1.2	Improve intelligence and analysis to guarantee better marketing strategies
4	Short Term	year 1	year 1	2.1	Support better Governance and professionalize G.C.N.A. to enable competitive management
5	Short Term	year 1	year 1	2.2	Increase capacity in G.C.N.A. to respond to farmer, industry and buyer requirements and improve processes
6	Short Term	year 1	year 2	3.2	Reinforce organization and capacity of farmers to guarantee consistent volume and quality of supply including G.A.P.
7	Short Term	year 1	year 2	3.1	Improve access to fruit bearing trees particularly in devastated areas
8	Short Term	year 1	year 1	1.3	Improve dissemination of information
9	Short Term	year 1	year 1	4.1	Analyze actual situation to better design financial and risk management mechanisms
10	Mid Term	year 1	year 3	3.4	Create Incentives to increase quantities, reduce post harvest loss and ensure consistency of supply
11	Mid Term	year 1	year 5	3.3	Manage nutmeg tree rehabilitation/replanting efforts based on demand and establish a supply strategy for domestic and international
12	Mid Term	year 1	year 2	5.1	Align existing policies for Value Chain Integration and implementation of the Strategy
13	Mid Term	year 2	year 2	5.2	Reform of legislation and institutional strengthening for increased effectiveness
14	Mid Term	year 2	year 4	1.4	Develop a branding and promotion strategy to position Grenada's Nutmeg as the Original One and the world leader in quality
15	Mid Term	year 1	year 2	4.2	Design finance delivery mechanisms in co-operation with banks and stakeholders
16	Mid Term	year 1	year 5	4.4	Design Risk Management Tools
17	Mid Term	year 2	year 5	4.3	Investment promotion
18	Mid Term	year 2	year 5	2.3	Improve overall value addition and processing to secure sustainability of the Industry
19	Long Term	year 2	year 5	6.1	Research and development applied to the Nutmeg Industry (Pre-Production, Production, Product development)
20	Long Term	year 3	year 3	2.4	Establish TECHNICAL Council with producing countries and consuming countries
21	Long Term	year 1	year 5	6.2	Change of mindset with regard to the Nutmeg Industry and farming (Entrepreneurship and youth)
22	Long Term	year 1	year 5	6.3	Promotion of equal opportunities in the long term for all Grenadian citizens

Implementation Plans

Objective	Sub Objective	Activity	Leading local Institution / body	Potential Implementing partners	Progress indicators	Resources needed (US\$)
Reinforce access to market information to enable better decision making for the sector	Define data needs to support sector operations and policy formulation	<p>Define information needs, identify and review existing sources of information across the value chain for the following areas:</p> <p>Supply side:</p> <ul style="list-style-type: none"> - Directory of farmers to be classified according to age group and family members, land available and geographical locations and abandoned fields, total productive capacity including newly planted trees, fully productive trees and also disease affected trees - Number of Nutmeg trees per parish. Categorize it into fully productive and new trees including estimation of new production 1 year, 2 years, 3 years and 5 years. - Update 2000 Nutmeg density map - Number of open roads and actual access to farming areas (GCNA has prepared a list) <p>Demand side:</p> <ul style="list-style-type: none"> - Various markets to which nutmegs are exported and potential new markets (non-traditional) - Identify buyers, traders and grinders - Identify processed, ground products and derivatives - Information on buyer requirements and demand trends from regional and international sources (liaise with international agencies eg. ASTA.) - Information on quality, grades and types of nutmeg - Identification and profile of different types of customers (e.g. Cosmetics, pharmaceuticals, food) - Identification of potential niche markets for particular components of nutmeg (safronole) - Identification of trends or fluctuations in demand and supply in local, regional and international market. - Identification of quantities demanded and supplied for the different uses and markets in order to identify achievable and promising targets <p>Price:</p> <ul style="list-style-type: none"> - Competitors' prices according to different varieties; - Current and forecasted prices for nutmeg and trace on world and domestic markets - Prices of new products which utilize nutmegs and nutmeg by-products <p>Define data sources and methods of Collection</p> <p>Supply side:</p> <ul style="list-style-type: none"> - Track and adapt past censuses/surveys for unused/unreported data and assess feasibility requirements and revisit database lists - Develop a survey instrument for data collection and questionnaire as a basis for data collection - Collection of information with teams of students, Extension Officers and teams of farmers interviewing farmers per parish - Increase in the number of field officers and liaison personnel to target relevant suppliers and buyers, to determine the market demand for nutmeg and its derivatives Eg. Supermarkets, hotels <p>Demand side:</p> <ul style="list-style-type: none"> - Collect up-to-date regular information regarding prices, markets, buyers' requirements. - Establishment of an information collection mechanism for GCNA using the existing infrastructure and tools at the Ministry of Trade (and use Embassy in Brussels and USA) to provide regular updates on potential buyers. Assign one staff member of GCNA or university intern to calling buyers. - Subscribe to various websites of ASTA, European Spice Association and meat processors ass. - Conduct market studies and engagement of trade representatives through the embassies - Arrange for GCNA to visit destination markets regularly, invite buyers to GDA and communicate directly with buyers over skype and telephone. 	GCNA Ministry of Agriculture Ministry of Works Ministry of Trade Farmers	ITC MOF University of West Indies, University of St Georges, University of Guyana UNCTAD MOA Special Assistance (SAF) FAO Research facilities CDB (research in production), ICA CARDI ECLAC EU ASTA ESA	20% of farmers directory by 2010 20% of nutmeg trees identified 2010 Update density map ready 2010 50% of roads mapped 2010	70,000 (first 4 activities) 25,000 for the next 11 activities
	Improve intelligence and analysis to guarantee better marketing strategies	<p>Data Analysis</p> <p>Develop an operational plan to strengthen data collection and analysis taking into account existing resources surveys and agencies in line with the National Export Strategy set up a specific market intelligence unit at the Ministry of Trade that will also have to cover market demand for nutmeg specific interest.</p> <p>Supply side information: Reinforce a unit in the Ministry of Agriculture in cooperation with the Ministry of Planning to source relevant supply information and construct a database that is regularly updated</p> <p>Ensure market and supply side information transparency by making information available to all VC actors (farmers, processors, support institutions).</p> <p>Specific dissemination for Farmers:</p> <ul style="list-style-type: none"> - Mobile buying unit to also deliver information - Media (bulletins, newspaper, flyers, magazines, radio and television). - Extension Officers and GCNA Field Officers on visits - Use mobile phone system and community representatives to communicate availability of transport and quantities required (price, mobile buying transport) - Farmer representatives <p>In addition to the area meeting and the general meeting (2 times a year) incorporate 1 general production meeting and several area meeting (interprofessional and farmer community).</p> <p>GCNA</p> <ul style="list-style-type: none"> - Monthly report from Ministry to GCNA - Coordination with agents and buyers - Extension Officers - Meetings <p>Policy Makers:</p> <ul style="list-style-type: none"> - Organise monthly meetings between GCNA, Coordinating Committee, business sector, farmer representatives to meet with Ministry of Agriculture Planning Division, Ministry of Trade, Ministry of Legal Affairs, Ministry of Works and Ministry of Education <p>Buyers:</p> <ul style="list-style-type: none"> - Official websites of the government and of GCNA - Existing Embassies 	GCNA Ministry of Trade, MOA, GCNA	ITC MOF University of West Indies, University of St Georges, University of Guyana UNCTAD MOA Special Assistance (SAF) Framework for Funding for research facilities CDB (research in production)	Chaire farmers ready 2009 GCNA official appointed Dec-2009 Market niche study June 2010 Invite 5 Buyers to Grenada May 2010 Intelligence Unit at Data collection strengthened by end of 2010	20,000 for the next 3; 35,000 for the next 8 activities
	Improve dissemination of information	<p>Ensure market and supply side information transparency by making information available to all VC actors (farmers, processors, support institutions).</p> <p>Specific dissemination for Farmers:</p> <ul style="list-style-type: none"> - Mobile buying unit to also deliver information - Media (bulletins, newspaper, flyers, magazines, radio and television). - Extension Officers and GCNA Field Officers on visits - Use mobile phone system and community representatives to communicate availability of transport and quantities required (price, mobile buying transport) - Farmer representatives <p>In addition to the area meeting and the general meeting (2 times a year) incorporate 1 general production meeting and several area meeting (interprofessional and farmer community).</p> <p>GCNA</p> <ul style="list-style-type: none"> - Monthly report from Ministry to GCNA - Coordination with agents and buyers - Extension Officers - Meetings <p>Policy Makers:</p> <ul style="list-style-type: none"> - Organise monthly meetings between GCNA, Coordinating Committee, business sector, farmer representatives to meet with Ministry of Agriculture Planning Division, Ministry of Trade, Ministry of Legal Affairs, Ministry of Works and Ministry of Education <p>Buyers:</p> <ul style="list-style-type: none"> - Official websites of the government and of GCNA - Existing Embassies 	MOA, GCNA	ITC	Regular contacts with buyers as of November 2009 Monthly report from Ministry to GCNA as of January 2010 Regular Meetings GCNA with partners as of January 2010 Website operational March 2010	15,000 for activities under dissemination of information
	Improve dissemination of information	<p>Identify and confirm the distinctive attributes and marketable characteristics of Nutmeg in Grenada (Uniqueness of origin, Method of production, High quality, Reputation of Grenada, Poverty Impact) and develop a comprehensive promotion and branding plan by building on:</p> <ul style="list-style-type: none"> - Quality of product in comparison to competition: Grenada is allatoin free and has the lowest safronole content - Intellectual Property opportunities to be exploit through WIPO/WTO; (Ministry of Tourism) - Promotion of geographic indication, branding and Spice/leImplement the promotion and communication plan domestically and internationaly <p>At a domestic level:</p> <ul style="list-style-type: none"> - Establish formal agreements with the tourism industry and promote nutmeg products for visitors tour opportunities and merchandise - Increase public awareness on the uses of nutmegs and its derivatives <p>At an international level:</p> <ul style="list-style-type: none"> • Attend American Spice Traders Association (ASTA) and visit grinders to establish links • Identify potential users in industry specific areas leaders and grinders and organise visits to showcase the product <p>Strengthen communication and dialogue with other producing countries and international buyers</p> <p>Propose and organise the World Nutmeg summit in Grenada by march 2011 to tell the story of Grenada Come Back. Invite: Producing countries such as Indonesia, Sri-Lanka, Papua New Guinea, Aspiring Producing Countries: Jamaica, Samoa, Fiji, Vanuatu, Trinidad, Guyana, Brazil, India, St Vincent etc</p> <p>Traders & Agents, International Companies Readers and Nutmeg Industrial Users (Sausage etc) End User and Retailers</p> <p>Together with industry partners stimulate and promote the use of nutmeg to increase world consumption</p>	GCNA MOA Tourism Foreign Affairs	WIPO GCNA UNCTAD ITC	Copy Platform ready Dec-2009	75,000 for the activities associated with branding & promotion
	Develop a branding and promotion strategy to position Grenada Nutmeg as the Original one and the world leader in quality	<p>Strengthen communication and dialogue with other producing countries and international buyers</p> <p>Propose and organise the World Nutmeg summit in Grenada by march 2011 to tell the story of Grenada Come Back. Invite: Producing countries such as Indonesia, Sri-Lanka, Papua New Guinea, Aspiring Producing Countries: Jamaica, Samoa, Fiji, Vanuatu, Trinidad, Guyana, Brazil, India, St Vincent etc</p> <p>Traders & Agents, International Companies Readers and Nutmeg Industrial Users (Sausage etc) End User and Retailers</p> <p>Together with industry partners stimulate and promote the use of nutmeg to increase world consumption</p>	MOF MOA	GCNA	First world summit on Nutmeg organised in Grenada by March 2011	200,000
	Develop a branding and promotion strategy to position Grenada Nutmeg as the Original one and the world leader in quality	<p>Strengthen communication and dialogue with other producing countries and international buyers</p> <p>Propose and organise the World Nutmeg summit in Grenada by march 2011 to tell the story of Grenada Come Back. Invite: Producing countries such as Indonesia, Sri-Lanka, Papua New Guinea, Aspiring Producing Countries: Jamaica, Samoa, Fiji, Vanuatu, Trinidad, Guyana, Brazil, India, St Vincent etc</p> <p>Traders & Agents, International Companies Readers and Nutmeg Industrial Users (Sausage etc) End User and Retailers</p> <p>Together with industry partners stimulate and promote the use of nutmeg to increase world consumption</p>	GCNA	Coordinating Committee	Meetings with Nutmeg Producer Countries and campaign to promote Nutmeg consumption designs	30,000

Objective	Sub Objective	Activity	Leading local institution / body	Potential implementing partners	Progress indicators	Resources needed (US\$)
Reinforce capacity in GCNA to better compete and develop the nutmeg industry in Grenada	Support better Governance to enable competitive management	Reform of GCNA act and status using the value chain approach: Working group composed by GCNA directors, farmers, processors and government in order to revise GCNA Act and suggest possible amendments that will allow GCNA to operate in a competitive manner.	GCNA	Committee MOF MOA	Investigate cocoa board structure by Dec 2009 GCNA to Draft operational plan procurement GCNA to draft processing plan by Dec 2009	20,000 for GCNA reform activities
		<ul style="list-style-type: none"> Compare GCNA government structure to other agricultural cooperatives (eg Cocoa and other): assess needs in terms of specific managing expertise (eg technical manager for sales, accountant for financing etc) Validate Operational Plan vis-a-vis procurement and processing Compare GCNA's operations to other agricultural cooperatives with regards to restructuring, redistribution of income, investments in processing etc. Ensure sufficient pay to farmers or other incentives, so they will collect. Allocate financing to the factory. Government nominees on the Board should be assistants and non-voting members. 				
		Validate GCNA's strategic plan vis-a-vis buyers: negotiation activities with international buyers and allocation of funds for commercial (and promotion) activities.	GCNA Committee	ITC	1st meeting with peer group in Grenada July 2010 Plan validated and agreed by December 2010 GCNA act amended by end of 2010	10,000
	Support better Governance to enable competitive management	Regularly meet with other professional food processors in Grenada: Carb-beer, four mill, chocolate processors	GCNA	Government of Grenada		10,000
		In accordance with statutory requirements amend and update the Act governing the GCNA to allow: <ul style="list-style-type: none"> Investment Import of raw material Ownership of share & capital by farmers Governance and management of GCNA				
		Farmer Needs: increase financing to the farmers <ul style="list-style-type: none"> GCNA should seek to facilitate a revolving soft credit fund to assist farmers with finance for the specific purpose of rehabilitating their fields. Assess the effectiveness of existing programs such as the one whereby farmers may obtain a EC\$ 1,000 micro credit for rehabilitation. GCNA must ensure continuity of those support programs which enable nutmeg tree owners, who are no longer able to collect themselves, to have the nutmegs collected. GCNA to create a picking unit that would be cofinanced by GCNA, buyers, farmers 	GCNA Committee	FAO Commercial Banks	Establish procurement funding by Sept 2010 Involve 500 farmers by mid 2011 Establish 1 "jacking"	1,000,000
	Increase capacity in GCNA to respond to farmer, industry and buyer processes	New (value added) business opportunities: Increase support for product and process development: <ul style="list-style-type: none"> Assess market potential for nutmeg & mace both in food and other markets (eg medical/pharmaceutical/cosmetics) Strengthen link to CARD to enhance research capability and technology adoption, for example in solar drying for mace. 	MOA, GCNA, CARD	ICA FAO ITC	Identify nutmeg oil application 2010 Identify Mace HPS potential 2010	10,000
		Buyer requirements: identify potential new buyers (grinders), assess their requirements and supply the product accordingly <ul style="list-style-type: none"> Modify current arrangements with agents and facilitate flexibility in contacting traders and grinders directly Establish direct links with the final consumers, with the aim to understand trends in nutmeg and mace use (eg decreased need for mace in meat industry) Renew membership on relevant spice boards eg. ASTA, ESA, Indian Spice Board 	MOA, GCNA, Nutmeg Committee	FAO, ITC	Visit FIE Frankfurt November 2010 Visit ESA meeting June 2011 Visit Asta meeting May 2011	40,000
		Investigate the status and investment needs for collecting points and the processing factory in Gouyave <ul style="list-style-type: none"> Audit the factory regularly, with the aim to obtain certification vis-a-vis notified bodies and professionals. Define short and longterm improvement necessities Design a program for short term improvement of a food safe environment of the factory: document and classify raw material intake, improve sense of hygiene amongst personnel (eg by introducing uniform clothing, hairnets, sweeping sanitary area). Design an investment plan, short term to achieve quick wins. Eg drive drying time down from 5 to 3 weeks by introducing mechanical ventilation - (eg installing fans in the windows). Other short term win is improve the mace winnover through a simple re-design. Drive down insect presence by placing insect forcing on all windows. Prioritise mechanical steps to prevent insects from coming in (only use chemical steps as a last resolve to "control back again, what already went wrong"). Decrease mould risk by changing the wooden bottom of the beds for a metal grid. Draft a long term investment plan to reach ISO standards and other important certifications. Ensure that investments prioritise on things workers can install themselves, before leaping towards capital intensive investments. 	MOA, GCNA, Bureau of Standards, Nutmeg Committee, CARD	ICA FAO	Quick wins in Gouyave: drying - Mar 2010 Gouyave improve routing, hygiene - June 2010 Gouyave insecting in Gouyave - Dec 2010 Improve mace drying by bins - March 2010 ISO standards end 2011	85,000
	Improve overall Value addition and processing of the industry	Good Traceability towards the farmers level will increase the value (= price) of Grenada nutmeg in the international market: <ul style="list-style-type: none"> GCNA needs to put into place systems for traceability up to the farmers level, through: <ul style="list-style-type: none"> numbering batches mapping and zoning the parish Intalling Good Manufacturing Practices at Gouyave will ensure that a superior product after harvesting, will retain its (food safe and taste profile) quality during processing, transport and warehousing: <ul style="list-style-type: none"> Train Personnel in collecting points, in the processing factory, with logistics partners. Simply copy what other foodprocessors in the region are already doing Draft a Quality Handbook, to begin with a level that is achievable on the short term. Improve Certification of Grenada nutmeg & mace <ul style="list-style-type: none"> Set up grades and standards information Develop batch testing to provide advance information on exports 	GCNA MOA	FAO WB	20% done end of 2010 50% done end of 2011 70% done end of 2012 90% done end of 2013	15,000
		Investigate opportunities for: <ul style="list-style-type: none"> distillation of excess production volumes (eg of mace). Given the low volume of defectives (max 10% in Grenada, i.e. < 50 Mts) and the fact these contain only 4% of Volatile Oils, the maximum volume for oil extraction will be only 2,500 Kgs. Reconsider if such volume allows for cost effective processing in Grenada, or whether selling these defectives to countries like India is economically more feasible. Explore the potential for developing other products with the nutmeg oil e.g. Nutmeg, jellys etc. 	MOA, GCNA, Bureau of Standards	ITC	GMP basic level mid 2010 GMP medium level end 2010 GMO good level end 2011 Define PS mid 2010 for mace & nutmeg Batch testing by end of 2010	50,000
		Strengthen communication and dialogue with Indonesia and the other producing countries and international buyers (eg Propose to hold the World nutmeg summit in Grenada)	MOA, GCNA, Bureau of Standards	ITC	Detail 100 Mts of defectives nutmeg 2011	20,000
Establish TECHNICAL council with producing countries and consuming countries	Establish TECHNICAL council with producing countries and consuming countries	<ul style="list-style-type: none"> Ensure Grenada is represented at international spice meetings including ASTA (American Spice Trade Association) Formalise contacts with Indonesian counterparts and all the players involved in nutmeg production and commercialization 	MOA, GCNA	ITC	Grenadian delegation representing the value chain travelling to ASTA in 2010	50,000
		With producing countries: <ul style="list-style-type: none"> exchange information on pest control, seed improvement, harvesting, processing ensure uniformity in testing and certification 	GCNA Coordinating Committee	Ministry of Agriculture Ministry of Trade	Meet Nutmeg users at Food and Ingredient Fair or ASTA annually	10,000
		With Buying Countries: <ul style="list-style-type: none"> exchange information on alerts eg safrole contents, salmonella ensure uniformity in salmonella testing and certification 	GCNA Coordinating Committee	Ministry of Agriculture Ministry of Trade	Meet Nutmeg users at Food and Ingredient Fair or ASTA annually	30,000

Objective	Sub Objective	Activity	Leading local institution / body	Potential implementing partners	Progress indicators	Resources needed (US\$)
Increase quality and quantity of nutmeg collected and supplied to GCNA		Baseline information Require of every GCNA farmer member to identify on his plot the number of not yet fruitbearing trees, the no of fruitbearing but inaccessible trees and the no of fruitbearing accessible trees Make an estimate of the volume per (accessible fruitbearing) tree and from that estimate how much nutmeg and mace the farmer expects to supply to GCNA in 2009. Possibly with an outlook for 2010. From this information, derive an estimate of the potential volume of unaccessible trees. This gives insight in how much GCNA would like to invest to clear fields. The survey of accessible and unaccessible fruitbearing trees and the estimates on future yields should be undertaken by administering a simple questionnaire to farmers to be channelled through farmer associations and cooperatives Reinforce Ministry of Agriculture plan for clearing of access to trees and devastated areas and identify: - Priority roads to be done in cooperation with farmers and existing farmer groups - Timing of works and type of work (pruning, drains, clearing) - Technical expertise, workforce and machinery needed (Min of Works and Extension Division of Ministry of Agriculture). Estimate resources needed and seek funding for rehabilitation of priority roads through budget of the Ministry of Works. Once funding is identified, define the allocation of funds between the farmer himself and external resources Explore partnerships with traditional donors involved with road building in Grenada such as China and Kuwait fund (funds already budgeted and presented to Kuwait Fund). Ensure good supervision to avoid damage to nutmeg trees by external workers	GCNA Coordinating Committee	FAO MOA ICA	20% plots identified mid 2010 20% plots accessible and accessible volumes for 2010 no later than May 2010 Mid 2010 an estimate of Q1-2010 steady roads etc	Costed in Q1, 2010 100,000
	Improve access to fruit bearing trees particularly in devastated areas	- Priority roads to be done in cooperation with farmers and existing farmer groups - Timing of works and type of work (pruning, drains, clearing) - Technical expertise, workforce and machinery needed (Min of Works and Extension Division of Ministry of Agriculture). Estimate resources needed and seek funding for rehabilitation of priority roads through budget of the Ministry of Works. Once funding is identified, define the allocation of funds between the farmer himself and external resources Explore partnerships with traditional donors involved with road building in Grenada such as China and Kuwait fund (funds already budgeted and presented to Kuwait Fund). Ensure good supervision to avoid damage to nutmeg trees by external workers	GCNA MOA ICA	FAO ICA	Q1-2010 steady roads etc 20% plots identified mid 2010 20% plots accessible and accessible volumes for 2010 no later than May 2010 Mid 2010 an estimate of Q1-2010 steady roads etc	200,000
	Improve access to fruit bearing trees particularly in devastated areas	Development of pilot activities for land clearing Develop a pilot approach with a range of techniques including clearing based on a selected group of farms in a particular location in each parish. Land clearing team and farmer to identify what needs to be done during three days of work. After completion farmer needs to sign of and state satisfaction.	GCNA MOA	FAO ICA	Q1-2011 we will do 10 pilot areas, well distributed over Grenada	200,000
	Improve access to fruit bearing trees particularly in devastated areas	Organisation of Farmers Identify category of farmers and select the key representatives per area Establish farming groups, using La Digue, North east farmers organisations, as a model and pilot a structure of community representations (ie 1 farmer representative to 10) GCNA/MoA target key farmers and provide training related to GAP, to community management and representation, entrepreneurship and services to be provided through the organizations Organise farmers by districts in keeping with the organisation of extension services division to deliver the training Collection activities Meet with Ministers of Agriculture, Education and Works to Establish a National Nutmeg cultivation picking and clearing day, based on harvest times (low and middle belt: May, Higher belt: June/July/August; Low and Middle November/January; High belt: February) where population would volunteer to support the efforts Explore using community groups and incentive schemes to stimulate collection Collection activities Explore reinforcing and replicate mobile buying system for all the parishes during high season period to increase quality and volumes	GCNA MOA	ICA FAO ART UNDP	Q1-2010 select these model farmers Continuous training	75,000
	Improve access to fruit bearing trees particularly in devastated areas	In cooperation with MOA, the private sector and potential buyers, develop a more commercially driven methodology for training farmers and motivating GCNA extension officers Develop detailed cost analysis for production and harvesting to inform decision making for doing business in nutmeg and also cocoa (for a better understanding of farm income components) MOA/GCNA extension officers and farmers to be trained in the use of different methodologies for regional and international levels • Educate extension officers and farmers on the various uses of different methodologies for different markets Reinforce on site training at the farms & provide basic management skills including record keeping • Extension Officers to be trained in modern business practices to assist farmers with record keeping, quality standards, project proposal development, pricing and marketing products. • Organised spot checks to monitor adherence to standards.	Nutmeg Committee GCNA	Ministry of Agriculture	Picking days plan in Q1-2010	20,000
	Improve access to fruit bearing trees particularly in devastated areas	Establish Good agricultural practices at farm level and a Model Farm for training purposes Explore simple approaches to reduce the time fruit stays on the ground. E.g. teeshaking or rattling (bamboo stick) at collection day, to ensure that "boise" nuts fall down and avoid falling down in the days after. Thus one day picking a week can be done with limited exposure of fruit on the ground. - Develop production and post-harvest guides; - Organise on-site training events for farmers - Establish nutmeg demonstration plots	ART Young Leaders Programme Coordinating Committee Ministry of Agriculture	FAO, Commonwealth Secretariat GCNA UNDP FAO	Q1-2010 elaborate this model farm plan with	30,000
	Improve access to fruit bearing trees particularly in devastated areas	Review the ICSTA GAP guide, modify it for Grenada nutmeg cultivation. Then ensure information is disseminated to appropriate partners such as farmers and MoA extension officers. GCNA extension officers to carry out group training with farmers on the field GCNA to devise a training schedule and establish how this will be delivered to the partners (workshops, brochures, radio etc) GCNA to provide budgetary allocation for such training The training includes making farmers understand the relevance of customer specifications. MoA and GCNA to work out cropping pattern to disseminate to farmers based on their areas of production. Organised spot checks to monitor adherence to standards of GAP Train MoA extension officers in nutmeg technology. Collaboration of GCNA with MoA to train officers to provide production technology. • Conduct training needs analysis for all aspects of the industry including production, post-harvesting, marketing and identify equipment and material needed to conduct the training. • Establish a Model Farm for training purposes (eg appropriate intercropping) • Training must be re-emphasized and become an important component of GCNA's activities • GCNA to have extension officers for training in the sector • GCNA to provide budgetary allocation for training and devise a training schedule • GCNA working in collaboration with MoA to conduct "training of trainers programme" GCNA would be responsible for training farmers and establishing a working partnership with MoA. Field officers to carry out group training with farmers on the field, giving guidance on sanitation measures and draining. Reduce Praedial Larceny • Clearer monitoring of individual farmers' output relative to their nutmeg acreage (assist in the praedial larceny problem) • Enforce stricter guidelines for the issuance of nutmeg cards to farmers Select correct method of plant propagation, looking both at internal solutions and external (eg India)	MOA, GCNA, CARDI MOA	FAO, Commonwealth Secretariat GCNA UNDP	Q1-2010 elaborate this model farm plan with	50,000
	Reinforce organisation and capacity of farmers to guarantee consistent quality and volume of supply including GAP	Review the ICSTA GAP guide, modify it for Grenada nutmeg cultivation. Then ensure information is disseminated to appropriate partners such as farmers and MoA extension officers. GCNA extension officers to carry out group training with farmers on the field GCNA to devise a training schedule and establish how this will be delivered to the partners (workshops, brochures, radio etc) GCNA to provide budgetary allocation for such training The training includes making farmers understand the relevance of customer specifications. MoA and GCNA to work out cropping pattern to disseminate to farmers based on their areas of production. Organised spot checks to monitor adherence to standards of GAP Train MoA extension officers in nutmeg technology. Collaboration of GCNA with MoA to train officers to provide production technology. • Conduct training needs analysis for all aspects of the industry including production, post-harvesting, marketing and identify equipment and material needed to conduct the training. • Establish a Model Farm for training purposes (eg appropriate intercropping) • Training must be re-emphasized and become an important component of GCNA's activities • GCNA to have extension officers for training in the sector • GCNA to provide budgetary allocation for training and devise a training schedule • GCNA working in collaboration with MoA to conduct "training of trainers programme" GCNA would be responsible for training farmers and establishing a working partnership with MoA. Field officers to carry out group training with farmers on the field, giving guidance on sanitation measures and draining. Reduce Praedial Larceny • Clearer monitoring of individual farmers' output relative to their nutmeg acreage (assist in the praedial larceny problem) • Enforce stricter guidelines for the issuance of nutmeg cards to farmers Select correct method of plant propagation, looking both at internal solutions and external (eg India)	MOA, GCNA, CARDI MOA	FAO, Commonwealth Secretariat GCNA UNDP	Q1-2010 elaborate this model farm plan with	50,000
	Manage nutmeg tree based on demand and establish a supply	Develop plant propagation plans: GCNA to provide planting material: 32,000 plants/vt for 5 years at EC\$10 (Plant Propagation Plan has already been established and work has started: 35000 plants to be distributed to farmers by September 2010) Training activities for a correct methodology of plant propagation using value chain approach: Demonstration plots to train farmers in correct methodology - nursery Devise a work plan and identify those farmers who have the capacity for plant propagation per parish and that can service other farmers Introduce grafting technique to induce dwarfing (as lower trees are easier to harvest): • Funding is available to facilitate the introduction of these techniques. The GCNA is awaiting the arrival of the specialist from the Indian government • MoA has already been exposed to the technique and will continue to liaise the technique in an effort to perfect it • Continuous practice of grafting technique to dwarf trees. Graft using types selected with low salinity content.	GCNA MOA	ICA	Reduction of 50% in reported cases of praedial Larceny by 2012	40,000
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Objective	Sub Objective	Activity	Leading local institution / body	Potential implementing partners	Program indicators	Resources needed (US\$)
Improve access to finance for all stakeholders to facilitate sector operations and manage risk	Analyse actual situation to better design financial and risk management mechanisms	<p>Conduct a Needs assessment on access to finance for the rumeng sector (Supply, Demand side):</p> <ul style="list-style-type: none"> - Identify and consolidate a list of financing bodies or institutions targeting agriculture sector and SME finance at a national and regional level (loan conditions, funds available – short vs long term) - Composition of Portfolios - Credit risk information - Survey of existing financial products - Interest rates + transaction costs - Collateral requirements (eg business plans) - Availability of information on default and on clients in general - Review of the Ministry of Agriculture financial mechanism - Identify lead institutes (recommendations from the committee) - Design survey based on representative sample of financial institutions (CEOs) - Conduct a survey with business owners with banks <p>Demand side:</p> <ul style="list-style-type: none"> - Issues and bottlenecks in accessing finance by stakeholder type. Analysis of process and business risks that create or are the result of financing constraints (ability to repay loans). - - Administrative requirements - Collateral - Lack of information - Lack of knowledge of financing for technology acquisition - Stakeholders needs in terms of financial products: - Farmers: <ul style="list-style-type: none"> • Land preparation (short term) • Planting (short term) • Fertilizer (short term) • Private road access(long term) - GCNA : <ul style="list-style-type: none"> Working Capital(short term) Equipment finance(short term) Equipment finance(long term) Agro-processors: Working capital (short term) Equipment finance (medium term) Equipment finance(long term) - Design a farmer survey based on a representative sample of stakeholders - Conduct survey of farmers - Collect information on: <ul style="list-style-type: none"> • EDP: MOF, National banks, national banks, Rural finance institutions, GAREN, and ECCEB, National export unions, GAREN, GIDC, GIDC, ELMOF • Financial risk profile for Grenada in order to identify the magnitude of losses, frequency and major events responsible for production and/or revenue loss. - price risk - weather risk - pest and disease - Get available information: <ul style="list-style-type: none"> - WBCCRF - Meteorological office (MOA - for types of weather events and frequency) - Information on output prices (GCNA for domestic and international prices and MOF) - Information on input prices (GCNA for domestic and international prices and MOF) - Pest and disease (MOA for other crops such as cocoa) - Weather risk 	MOF, MOF, farmer associations, GCNA, insurance companies	CDB, UNCTAD, VIB	Risk and Finance needs assessment finalized by July 2010	10,000
			MOA	Coordinating Committee GCNA, UNCTAD, VIB	Risk and Finance needs assessment finalized by July 2010	costed above
			MOA	Coordinating Committee GCNA, UNCTAD, VIB	Risk and Finance needs assessment finalized by July 2010	35,000
			MOA	Coordinating Committee ICA, UNCTAD, VIB	Survey conducted by end of 2010	40,000
			MOA, MOF, farmer associations, GCNA, insurance companies	UNCTAD, VIB, FAO, IFAD, CDB, EDP	During 2010 a parametric insurance study will be finalized	40,000
Design delivery mechanisms in cooperation with banks and stakeholders		<p>Facilitation of access to finance</p> <ul style="list-style-type: none"> - For farmers - Credit guarantee scheme (GCNA, gov) (involve credit unions, farmer associations, GCNA) - Dedicated rehabilitation facility (self liquidating) - Leasing (equipment) - Factoring (trade finance) - Establish a revolving credit guarantee scheme, to be partly subsidised by the Government and GCNA, for rumeng farmers with well-tested systems for recovering money. - Establish financial mechanisms that establish linkages with cocoa production (The MOA continue to advance the process of amalgamating the Grenada Cocoa Association and the GCNA) - Explore new alternative ways of financing through feasibility studies: factoring and leasing, use of remittances, diaspora fund to encourage nationals living abroad to invest in local value added development products - Establish financial mechanisms to ease access to land (Land Bank Project is currently being undertaken and recommendations should be considered for implementation, capitalize on FAO project) - Pledging of innovative financial mechanisms and/or risk management as tools to secure loans (on the basis of current supply contracts by GCNA, identify which farmers could be a part of a pilot to model alternative financing models and/or risk management products to be employed as alternative forms of collateral). - Cross colling - Mobilization of remittances (Diaspora fund) - Export credit Agency (for financing equipment purchase) - Establish a revolving credit scheme based on rumeng (trade to be managed by an ongoing investment and finance committee (composed of representatives of commodity boards, the financial and insurance sector and the MOA) 	MOA, MOF, farmer associations, GCNA, insurance companies	UNCTAD, VIB, FAO, IFAD, CDB, EDP	During 2010 a parametric insurance study will be finalized	costed above
			GCNA, Government of Grenada	Commercial Banks	Revolving credit scheme finalized by end of 2010	costed above
			Coordinating Committee	FAO, VIB, UNCTAD	Feasibility study on credit guarantee scheme finalized in 2011	75,000
			GCNA, GIDC, MOA	UNCTAD, FAO, VIB	Investment promotion and associations	20,000
			MOA, MOF, MINISTRY OF WORKS, GCNA	UNCTAD, FAO, VIB, UNCTAD, IFAD	Investment promotion and associations	50,000
Design Risk Management tools	Investment promotion	<p>Investment promotion:</p> <ul style="list-style-type: none"> - Assess investment needs for the marketing of rumeng and rumeng products - Ensure Government concessions to farmers and associations on transport, inputs and equipment - Implement Entrepreneurial Incentive Programme (eg for young farmers to be supported through Public-Private partnerships between financial institutions and Government) - Establish a revolving credit guarantee scheme, to be partly subsidised by the Government and GCNA, for rumeng farmers with well-tested systems for recovering money. - Establish financial mechanisms that establish linkages with cocoa production (The MOA continue to advance the process of amalgamating the Grenada Cocoa Association and the GCNA) - Explore new alternative ways of financing through feasibility studies: factoring and leasing, use of remittances, diaspora fund to encourage nationals living abroad to invest in local value added development products - Establish financial mechanisms to ease access to land (Land Bank Project is currently being undertaken and recommendations should be considered for implementation, capitalize on FAO project) - Pledging of innovative financial mechanisms and/or risk management as tools to secure loans (on the basis of current supply contracts by GCNA, identify which farmers could be a part of a pilot to model alternative financing models and/or risk management products to be employed as alternative forms of collateral). - Cross colling - Mobilization of remittances (Diaspora fund) - Export credit Agency (for financing equipment purchase) - Establish a revolving credit scheme based on rumeng (trade to be managed by an ongoing investment and finance committee (composed of representatives of commodity boards, the financial and insurance sector and the MOA) 	MOA, MOF, MINISTRY OF WORKS, GCNA	UNCTAD, FAO, VIB, UNCTAD, IFAD	Investment promotion and associations	50,000
			MOA, MOF, MINISTRY OF WORKS, GCNA	UNCTAD, FAO, VIB, UNCTAD, IFAD	Investment promotion and associations	50,000
			MOA, MOF, MINISTRY OF WORKS, GCNA	UNCTAD, FAO, VIB, UNCTAD, IFAD	Investment promotion and associations	50,000
Design Risk Management tools	Risk management activities	<p>Risk management activities:</p> <ul style="list-style-type: none"> - Strengthen extension services to provide guidance and advice on risk mitigation and prevention - Crop risk mapping at the national level for the agricultural sector - Feasibility study of micro - level weather insurance for the rumeng and eventually other crops to be included in the scheme - Establish a revolving credit guarantee scheme, to be partly subsidised by the Government and GCNA, for rumeng farmers with well-tested systems for recovering money. - Establish financial mechanisms that establish linkages with cocoa production (The MOA continue to advance the process of amalgamating the Grenada Cocoa Association and the GCNA) - Explore new alternative ways of financing through feasibility studies: factoring and leasing, use of remittances, diaspora fund to encourage nationals living abroad to invest in local value added development products - Establish financial mechanisms to ease access to land (Land Bank Project is currently being undertaken and recommendations should be considered for implementation, capitalize on FAO project) - Pledging of innovative financial mechanisms and/or risk management as tools to secure loans (on the basis of current supply contracts by GCNA, identify which farmers could be a part of a pilot to model alternative financing models and/or risk management products to be employed as alternative forms of collateral). - Cross colling - Mobilization of remittances (Diaspora fund) - Export credit Agency (for financing equipment purchase) - Establish a revolving credit scheme based on rumeng (trade to be managed by an ongoing investment and finance committee (composed of representatives of commodity boards, the financial and insurance sector and the MOA) 	MOA, MOF, MINISTRY OF WORKS, GCNA	UNCTAD, FAO, VIB, UNCTAD, IFAD	Investment promotion and associations	50,000
			MOA, MOF, MINISTRY OF WORKS, GCNA	UNCTAD, FAO, VIB, UNCTAD, IFAD	Investment promotion and associations	50,000
			MOA, MOF, MINISTRY OF WORKS, GCNA	UNCTAD, FAO, VIB, UNCTAD, IFAD	Investment promotion and associations	50,000
Design Risk Management tools	Long term activities:	<p>Long term activities:</p> <ul style="list-style-type: none"> - Explore the feasibility of a venture capital fund and develop a policy to attract Foreign Direct Investment 	MOA, MOF, MINISTRY OF WORKS, GCNA	UNCTAD, FAO, VIB, UNCTAD, IFAD	Investment promotion and associations	50,000
			MOA, MOF, MINISTRY OF WORKS, GCNA	UNCTAD, FAO, VIB, UNCTAD, IFAD	Investment promotion and associations	50,000
			MOA, MOF, MINISTRY OF WORKS, GCNA	UNCTAD, FAO, VIB, UNCTAD, IFAD	Investment promotion and associations	50,000
Design Risk Management tools	Conduct an analysis of price transmission throughout the rumeng value chain in order to identify needs and stakeholders to be involved in price risk management tools such as production contracts and a comparative analysis on price transmission in other	<p>Conduct an analysis of price transmission throughout the rumeng value chain in order to identify needs and stakeholders to be involved in price risk management tools such as production contracts and a comparative analysis on price transmission in other</p>	MOA, MOF, MINISTRY OF WORKS, GCNA	UNCTAD, FAO, VIB, UNCTAD, IFAD	Investment promotion and associations	50,000
			MOA, MOF, MINISTRY OF WORKS, GCNA	UNCTAD, FAO, VIB, UNCTAD, IFAD	Investment promotion and associations	50,000
			MOA, MOF, MINISTRY OF WORKS, GCNA	UNCTAD, FAO, VIB, UNCTAD, IFAD	Investment promotion and associations	50,000
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Objective	Sub Objective	Activity	Leading local institution / body	Potential implementing partners	Progress indicators	Resources needed (US\$)
Improve cross ministry co-ordination and public/private partnerships for better policy making	Align existing policies for value chain integration and implementation of the strategy	Map existing policy initiatives and development activities that relate to or could potentially impact the sector strategy development. <ul style="list-style-type: none"> • Preservation of agricultural land; • Development and sustainability of training initiatives; • Collection, analysis, and dissemination of market information; • Other developmental activities (agricultural sector and other sectors, such as tourism, transport and infrastructures, tax incentives etc) 	Ministry of Finance Ministry of Agriculture Coordinating Committee	GOVA and Grenada Cocoa Association UNDP INMB GRENODA, GREP and other NGOs	Policy mapping completed and understanding by Q1-2010 Proposal for harmonisation of policies tabled to Cabinet by end of 2010	None
	Reform of legislation and increased effectiveness	Investigate how other policy areas (social and economic development, trade, foreign policy, transport etc) align with sector objectives and the strategy: <ul style="list-style-type: none"> • Develop a plan to link priorities within an integrated framework so to maximize the use of resources and encourage better livelihood for the people in the country while minimizing a shift of people from the land. • Improve Public-Private dialogue by providing information on the sector main priorities at national and regional levels to regulators and policy makers through GCNA • Exposure at an early age of the importance of nutmeg to Grenada. • National representatives should take advantage of each opportunity to highlight nutmeg as a national symbol. • Use the nutmeg as a national symbol (e.g. embassies, stationery etc). Harmonize sector related policy making across national ministries <ul style="list-style-type: none"> • The Committee will create a comprehensive list of involved ministries at national levels and to monitor implementation to ensure harmonisation success: Agriculture, Education, Tourism/Foreign Affairs, Finance and Trade, Works and the Environment, Social Development and Labour, Housing, Land and Community Development, Health, Legal Affairs, Prime Minister's Ministry, Youth, Culture and Sports. Articulate clear policies and strategies for the industry to ensure that all spice products coming from Grenada maintain a certain quality and meet specified standards:	Nutmeg Committee MOA, MOE, GCNA	WB, UNDP, FAO	2 Policy formulation rounds organised in 2010 between government, GCNA and private sector Drafting of harmonized common policy for Nutmeg Industry	30,000
	Reform of legislation and increased effectiveness	Reform of GCNA In accordance with statutory requirements amend and update the Act governing the GCNA to allow: <ul style="list-style-type: none"> • Investment • Import of raw material • Ownership of share & capital by farmers Working group composed by GCNA directors, farmers, processors and government in order to revise GCNA Act and suggest possible amendments that will allow GCNA to operate in a competitive manner	Government of Grenada GOVA	Government of Grenada	Standard and Quality policies articulated by end of 2011	15,000
	Reform of legislation and increased effectiveness	Enforcement of Prædial Larceny Act <ul style="list-style-type: none"> • Review and strengthen the Prædial Larceny unit • Increase sensitization on actions to be undertaken at different levels • Use technology to support the implementation of anti prædial larceny activity (eg issuing of ID cards) • Review and assure enforcement of the penalties and sentences under the Act • Traceability – registration of vendors and farmers Establish monitoring and implementation framework to implement sector strategy <ul style="list-style-type: none"> • Definition of measurable timeables and responsibility/ accountability of implementing members and bodies 	Ministry of Agriculture	Coordinating Committee Ministry of Legal Affairs, Ministry of Agriculture, Ministry of Labour ITC	Consultation with stakeholders regarding the Act reviewed and reformed by mid 2010 90% reduction of reported prædial Larceny cases by 2010	25,000
	Monitoring and implementation framework	Contact implementing partners to start designing detailed activities based on priorities for implementation and resources available Based on the implementation plan develop measurable timeables and responsibility allocation for implementing members and bodies	Coordinating Committee MOA	cabinet	Submission by the Ministry of Agriculture to Cabinet by end 2010	100,000
			Coordinating Committee	Planning Divisions MOA, IMOF	One page description sent by implementing partners on proposed activities and modalities based on Implementation Plan Project Proposals drafted and agreed with Committee	10,000

Objective	Sub Objective	Activity	Leading local institution / body	Potential implementing partners	Progress indicators	Resources needed (US\$)
Ensure the long term sustainability of the Nutmeg industry in Grenada	Sub Objective	Define policies that establish a link between science and technology on one side, and education, production and manufacture of Grenada products of culinary, pharmaceutical, and cosmesceutical value, on the other	MOA, MOE, SGU, UNDP, Nutmeg Committee	ICA, FAO	Policies drafted in support of R&D activities by end of 2010, meeting 4 times per year in 2011	5,000
		Create a joint committee composed by private stakeholders and experts/scientists to ensure regular consultation and exchanges between R&D activities and their concrete application to the nutmeg sector in general				
		Conduct a complete inventory of the nutmeg industry including plant population and distribution, and all human resources involved in the value chain.	MOA, GCNA, Nutmeg Committee	ICA, FAO, UNDP	Inventory of nutmeg plant population complete by end of 2011	50,000
		<ul style="list-style-type: none"> Establish appropriate soil conservation measures where necessary; Develop production and post-harvest guides; Organise on-site training events for farmers Establish farm competitions Establish demonstration plots Promote nutmeg as a viable business venture by the use of all business techniques Institutionalise annual summer camps for youths in respect of the nutmeg industry (especially propagation and harvesting) Classify monitoring of individual farmers' output relative to their nutmeg acreage (assist in the praedial larceny problem) Enforce stricter guidelines for the issuance of nutmeg cards to farmers Enforce official guidelines for the issuance of nutmeg cards to farmers 			Training and demonstration of applied R&D to farming during 2011	
		<ul style="list-style-type: none"> Carry out both basic and applied research in areas relevant to the value chain; Involve farmers in all research initiatives undertaken Organise students to assist in research activities during school vacation Make nutmeg research information available at a site that is open to the public (eg. National Documentation Centre/web site) Establish and co-ordinate the necessary research laboratory facilities Improve the capabilities of extension and technical personnel to support research and development initiatives Develop partnership agreements with University of West Indies for training of technical staff and for joint R&D 	MOA, MOE, GOA	FAO, Commonwealth Secretariat	Applied research results in improved industry practices and reduction of costs	200,000
		<ul style="list-style-type: none"> Organise visits and exchanges with other R&D units in different countries including nutmeg producing countries Establish a local point in the Ministry which determines the priority areas of research for the nutmeg industry (evaluate potential utilization of the R&D desk at the Ministry of Agriculture); Establish a small advisory committee made up of national and regional institutions and which will be able to co-opt resource persons as needed and will advise the focal point personnel in the selection of priority areas; Improve the capabilities of extension and technical personnel to support research and development initiatives; Revise the ordinance of the GCNA to reflect among others things the allocation of a quantum of funds for research and development in the nutmeg industry; Seek funding through regional and international sources; Allocate budgeted annual government funds for research; 	MOA, UWI, CARD	FAO	Focal point for R&D established in Ministry of Agriculture by end 2010	150,000
	Research and development applied to the Nutmeg Industry (Pre-Production, Production, Product development)	Product Development:	MSB, Individual Committee	Office of the Prime Minister	GCNA - enhance making	750,000
		Explore the beneficial uses of nutmeg, mace, shells, pericarp and leaves with a view to developing commercial value added products based on potential uses and attributes	Ministry of Agriculture GCNA	Minister	Research for products and benefits for Nutmeg	
		Technology Development:	Ministry of Education R&D Technical Committee	Produce Chemist Lab TAMCC	3 new product developed in 2010	150,000
		Develop de-masking technology for use by individual farmers to enhance the quality of mace	Ministry of Agriculture GCNA	Ministry of Agriculture	New technologies developed that improve quality of mace in the value chain approach	
		Explore solar dryers for mace	Technology Council	Bureau of Standards		
	Research and development applied to the nutmeg industry and farming	Laboratories and Testing	MOA, GCNA, GBC, Nutmeg Committee	ITC, FAO	Improved laboratory testing procedures and quality of service provided by end of 2011	200,000
		<ul style="list-style-type: none"> Address the problem of providing inputs, support and coaching to laboratories to increase international accreditation levels. Establish a laboratory in the value chain in secondary schools; Equip labs in secondary schools; Gear education curriculum towards science Commercialise activities so as to develop a more market-driven approach 				
		Explore the beneficial uses of nutmeg with a view to developing commercial products based on uses				
		Develop a national capability through training and research				
		Develop a national capability through training and research				
	(Entrepreneurship and youth)	Establish a development unit with special focus on activities related to changing the mindset				
		Design and implement an education programme targeting the stakeholders				
		Promote commercial value added activities and especially keeping in mind emerging global trends				
		Establish clarity in the mind of the population that nutmeg is a food and address relevant food safety concerns.				
		Promote the importance of farming and agriculture in schools.				
	Change of mindset with regard to the nutmeg industry and farming	Get children back to farming through the planning of				
		Harvesting events,				
		Weekend trips,				
		GCNA/MOA target key farmers for lands for replanting. Persons selected should be supported (technical and material) to deliver the service				
		GCNA/MOA target key farmers for lands for replanting. Persons selected should be supported (technical and material) to deliver the service				
	Change of mindset with regard to the nutmeg industry and farming	Build a national capability and support entrepreneurial initiatives				
		Establish GCNA F and to support entrepreneurial initiatives				
		GCNA to develop its own award/recognition programme				
		Get farmers organized to survey and watch plantations				
		GCNA extension working in conjunction with the Ministry to broaden farm watch programme				
Promotion of equal opportunities for all Grenadians	Change of mindset with regard to the nutmeg industry and farming	Farming as a Agri-business	GCNA, MOA, GBC	ITC	Farmers increase their household income as a result of improved business	50,000
		Tackle younger farmers by introducing incentives to stimulate investment in the nutmeg sector				
		Turn farmers into "agri business men" by e.g. encouraging appropriate intercropping and supply product management assistance.				
		Develop detailed costing for production and harvesting to inform decision making for doing business in nutmeg				
		Educate farmers on the strategy of using different varieties for different markets				
	Change of mindset with regard to the nutmeg industry and farming	Farmer to be trained in modern business practices such as record keeping, quality standards, project proposal development, pricing and marketing products				
		Cooperation with MOA, the private sector and potential buyers, develop a more commercially driven methodology for training farmers and motivating GCNA extension officers	MOA, GCNA, GBC, Nutmeg Committee	FAO, UNDP, OIECS, CARICOM	On-site training for farmers leads to better field management and improvement of nutmeg and mace production (in grade 2 and 3 to grade 1)	150,000
		Motivate MOA extension officers to help farmers identify marketing opportunities based on market potential for regional and international levels				
		Reinforce on site training at the farms & provide basic management skills including record keeping				
		and marketing products.				
	Promotion of equal opportunities for all Grenadians	Organised spot checks to monitor adherence to standards.				
		Conduct an assessment on women involvement in the nutmeg sector to eventually design policies aimed at enhancing women participation and entrepreneurship:				
		- number of women entrepreneurs;				
		- share of women in farming				
	Promotion of equal opportunities for all Grenadians					

Resources Needed

In order to fully implement all the activities under the current Strategy and Implementation Plan, a revolving 3-year budget has been prepared by the Co-ordinating Committee. The budget and the detail of costing per activity can be consulted in the full version of the Implementation Plan.

The total amount needed for funding the Strategy over the first 3 years of implementation is estimated at **6,588,000 US** Dollars. The table following provides the detail per objective and year.

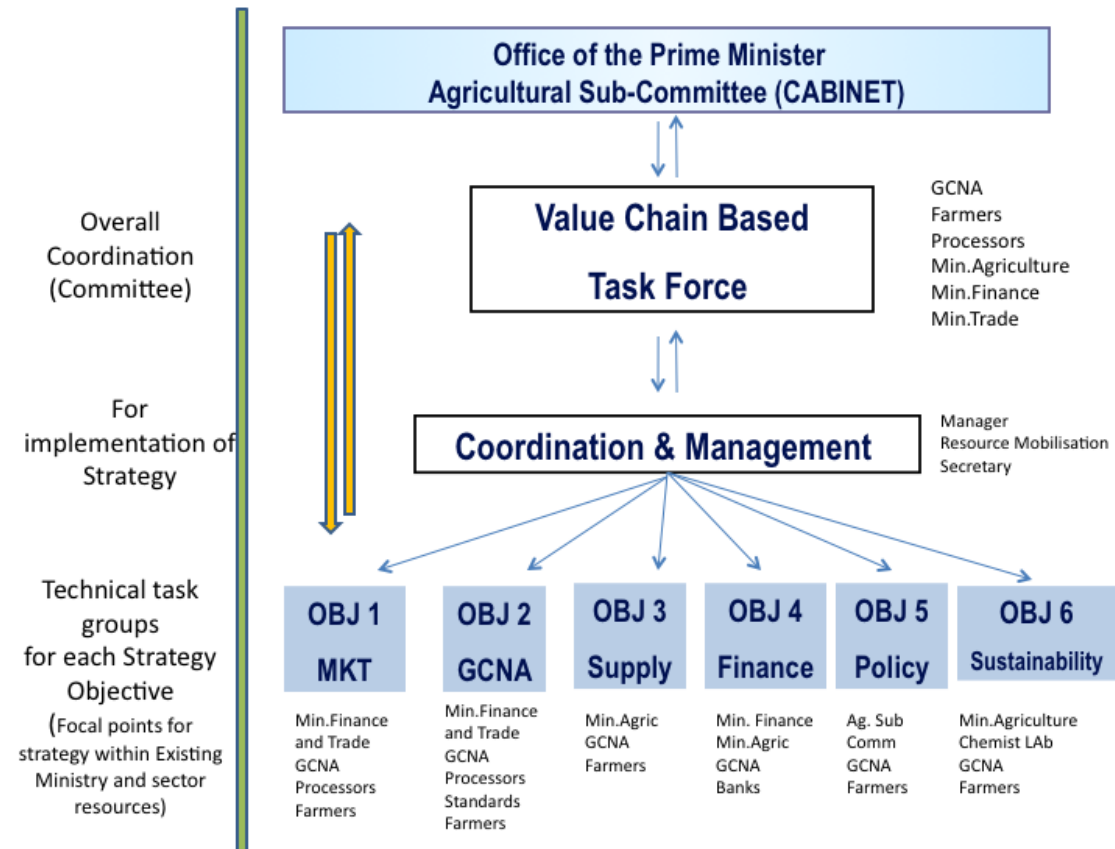
Objectives	Total	Year One	Year Two	Year Three
Objective One:	\$605,000	\$145,000	\$215,000	\$245,000
Objective Two:	\$1,590,000	\$345,000	\$750,000	\$495,000
Objective Three:	\$918,000	\$245,000	\$378,000	\$295,000
Objective Four:	\$1,750,000	\$345,000	\$495,000	\$910,000
Objective Five:	\$345,000	\$ 80,000	\$105,000	\$160,000
Objective Six:	\$1,380,000	\$245,000	\$490,000	\$645,000
Total:	\$6,588,000	\$1,405,000	\$2,433,000	\$2,750,000

Implementation Framework

In the Strategy Development Workshops the Sector stakeholders (including support institutions, Government, farmers and processors) have decided that for successful implementation and impact, the Strategy Implementation Framework needed to follow the same Value Chain participatory-based principles used in the design phase.

Cross Ministry co-ordination, private/public dialogue, donor co-ordination and most important representation of the Value Chain in decision making remain the major challenges for successful and sustainable implementation governance and impact.

The diagram below shows the recommended Implementation Framework Structure:



The underlying principle is: a Steering Task Force (similar to the Value Chain Based Committee that managed the design phase) providing guidance and monitoring for implementation. The Task Force would in turn report to Cabinet's Agricultural Sub-Committee through the Ministry of Agriculture. For successful implementation management on the day-to-day basis, the Task Force would also have an Operational and Executive Management Arm composed of three (3) people: (Manager, Resource Mobilization and Administrative Staff provided by the Ministry of Agriculture). Finally, the Management would interact with a series of Strategy Objective resource teams composed again based on need.

The following members and institutions compose the Value Chain Based Task Force:

Ministry of Agriculture, Forestry and Fisheries	Dr. Guido Marcelle, Mr. Gregory Del Sol
G.C.N.A.	Mr. Denis Felix, Mr. Adrian Thomas
Private Sector Representative (Farmer)	Ms. Shadel Nyack-Compton, Mr. Franklyn Salim
Private Sector (Processor)	Mr. Denis Noel
Ministry of Finance	Ms. Shanta Williams-Cox
Inter-American Institute for Cooperation on Agriculture	Mr. Cosmos Joseph

Based on needs and implementation activities, new members and institutions can be included provided the Task Force nominates them.

Key Sector Performance Indicators

Below are a set of performance indicators that offer a framework for evaluation. They will be converted to more precise measurable indicators as implementation roles out in the future.

The effective monitoring of the Strategy requires the use of a set of macro and micro economic progress indicators to trace the most important developments in the Sector and its environment. These performance indicators are in addition to progress indicators associated with each Strategy implementation activity. Sector performance indicators should include:

- Trends in worldwide nutmeg usage and demand;
- Selling price for high quality nutmeg;
- Value and volume of nutmeg and nutmeg products exports, accessory imports and exports by country of destination and origin;
- Number, potential and actual production capacity and employment in G.C.N.A. and enterprises in the Sector;
- Structure, quality and number of new investments in the Nutmeg and Spice Sectors;
- Demand for support services from farmers and G.C.N.A.;
- Demand for training courses and for business counselling and mentoring activities;
- Quality characteristics across the sector's production (compliance with E.U. Standards, etc.);
- Disbursement of credit to enterprises by registered development financing institutions;
- Productivity of nutmeg farmers per acre and estimated profitability per acre;
- Increase in land under nutmeg production;
- Increased domestic distillation of oil and grinding of spices;
- Compliance with national and international standards;
- Export readiness.

Progress Monitoring and Reporting Schedule

The Value Chain Based Task Force is responsible for co-ordinating and monitoring the implementation of the Strategy. Following is the schedule of the Work Plan for the Committee:

Phase 1 2010 - 2012

1. Monthly meetings of the Task force – determine the scheduling of activities in keeping with the Implementation Plan, monitor and review progress of activities.
2. Quarterly Progress Evaluation Reports – submit to the Minister of Agriculture.
3. Annual Executive Review – submit to the Cabinet through the Minister of Agriculture and to the ACP Programme Co-ordination Unit and to the ITC. Compare against the Implementation Plan, noting progress to date, slippage in delivery and areas of non-performance.
4. End of First Stage Report – submit to the Cabinet through the Minister of Agriculture and to the ACP Programme Co-ordination Unit and to the ITC. This is a detailed analytical report of progress in keeping with strategy document and Implementation Plan. This will also include the achievements, the efficient and effective utilization of the financial resources and any investment undertaken during the Phase. In addition, it should include an assessment of changes in the market and business environment and any possible impact and outcome on the Strategy.

Phase 2 2013 - 2016

1. Continued monitoring and updating of the Implementation Plan.
2. At the end of Phase 2, the Task Force will present its final report. This will evaluate the implementation exercise noting progress made, the strengths and weaknesses and unachieved activities. The report will provide recommendations for future developments in the Sector.

Annexes

Annex 1: Millennium Development Goals (MDGs) and anticipated Impact per Activity

Strategy Objectives	Eradicate Extreme Poverty and Hunger	Promote Gender Equality and Empower Women	Combat HIV/AIDS, Malaria and other Diseases	Ensure Environmental Sustainability	Global Partnership for Development
Objective 1					1.3 Improve dissemination of information. 1.4 Develop a branding and promotion strategy to position Grenada's Nutmeg as the Original One and the world leader in quality.
Objective 2	2.1 Support better governance and professionalize G.C.N.A. to enable competitive management. 3.1 Improve access to fruit bearing trees particularly in devastated areas (Rehabilitation). 3.2 Reinforce organization and capacity of farmers to guarantee consistent volume and quality of supply (Provide training to ensure delivery). 3.4 Create Incentives to increase quantities, reduce post harvest loss and ensure consistency of supply.	2.2 Increase capacity in G.C.N.A. to respond to farmer, industry and buyer requirements and improve processes.		2.3 Improve overall value addition and processing to secure sustainability of the Industry. 3.3 Manage nutmeg tree rehabilitation/replanting efforts based on demand and establish a supply strategy for domestic and international.	2.4 Establish TECHNICAL Council with producing countries and refineries.
Objective 3					

Objective 4	4.2 Design delivery mechanisms in cooperation with banks and stakeholders.			4.1 Analyze actual situation to better design financial and risk management mechanisms. 4.5 Design Risk Management Tools.	4.4 Investment Promotion
Objective 5	5.3 Reform of legislation and institutional strengthening for increased effectiveness.				5.1 Align existing policies for value chain integration and implementation of the strategy. 5.2 Monitoring and implementing framework for implementation. 6.4 Together with Industry partners stimulate and promote the use of nutmeg to increase world consumption.
Objective 6	6.2 Change of mindset with regard to the Nutmeg Industry and farming (Entrepreneurship and youth).	6.3 Promotion of equal opportunities for women and men.		6.1 Research and development applied to the Nutmeg Industry (Pre-Production, Production, Product development).	

Annex 2: Existing Development Activities Affecting Nutmeg and Mace in Grenada

Current or Pipeline Development (Bilateral or Multilateral) projects related to: **Reinforce Training and organization at farmer and extension services level to minimize loss (pest and disease) and improve the rehabilitation of nutmeg tree**

Financing Organization	Name and Length of the Project	VC Applicability	Project Budget	Main Activities	Contact Information
C.D.B. I.F.A.D. Country: Grenada	Rural Enterprise Project 2002-2009 Project number:	Farmer SME	7 662 000 USD	The Project's objectives are to: (i) diversify, improve and sustain beneficiary income-earning activities; (ii) strengthen capacities and build confidence within the rural community; (iii) strengthen rural service providers so that they can meet community needs; (iv) promote efficient and environmentally sustainable production and processing activities; and (v) foster sector and market linkages. Outputs/Outcomes: 12,000 No. of Households; 3,000 Project will assist a minimum of 3,000 Households, or 12,000 persons within 41 poorer rural communities. Benefits are calculated for about 2,920 Households operating smallholdings and 80 Households with microenterprises. In addition to these direct beneficiaries.	Ministry of Finance (MoF)

Current or Pipeline Development (Bilateral or Multilateral) Projects related to: **Improve access to finance and insurance to all stakeholders and strengthen risk management (Farmers & G.C.N.A.)**

Financing Organization	Name and Length of the Project	VC Applicability	Project Budget	Main Activities	Contact Information
C.D.B. U.S.A.I.D. Grenada	Basic Needs Trust Fund Programme	SME		The BNTF Programme funds small-scale infrastructure construction, maintenance and rehabilitation of social infrastructure, skills training and up-grading, related public awareness and information, project management and implementation and independent consultancy services.	Caribbean Development Bank

Financing Organization	Name and Length of the Project	VC Applicability	Project Budget	Main Activities	Contact Information
C.I.D.A.	Partnership for CARICOM Private	SMEs	1 300 000 CND	This Project addresses challenges facing the private sector in the member countries of the Caribbean Community (CARICOM),	Executed by I.F.C. and World Bank

Country: Grenada	Sector Development Project number: A034045-001 2008-2013			<p>mainly by means of technical assistance. The technical assistance focuses on three Areas: (1) Catalyzing private sector participation and investment in transport, power, water, and communications infrastructure. This includes output-based aid initiatives that subsidize the cost of extending infrastructure to disadvantaged areas, dependent upon positive results and projected sustainability of the new infrastructure; (2) Enabling financial institutions to increase the number of loans they provide to underserved micro, small, and medium-sized enterprises (MSMEs), which typically do not have sufficient collateral to qualify for such loans; and (3) Promoting regulatory simplification as an aid to private sector development.</p> <p>The Project is implemented by the International Finance Corporation (I.F.C.), the private sector arm of the World Bank Group.</p>	
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Current or Pipeline Development (Bilateral or Multilateral) Projects related to: **Improve cross Ministry co-ordination and increase G.C.N.A./public/private partnership in relation to policy-making and governance and implementation of the Strategy**

Financing Organization	Name and Length of the Project	VC Applicability	Project Budget	Main Activities	Contact Information
World Bank Country: Grenada	GD TAC 2008-2011 Project number: P101322	Government	250,000 USD	<p>The Grenada Technical Assistance Project Development objectives are to: (i) improve the efficiency of tax administration of Customs; (ii) improve the efficiency of tax administration and decrease transaction costs of paying taxes and consequently increase tax compliance; (iii) modernize investment promotion; and (iv) enhance the Government's support to the export sector through improve access to trade information and strengthening the capacity of the Bureau of Standards to provide conformity assessment and quality assurance. The Project components are to improve the efficiency and effectiveness of Customs through modernizing the administration. To achieve the overall objective, the technical assistance will focus on: (a) improve Customs systems and procedures; (b) upgrade Information Technology; and (c) capacity building of management and staff in Customs through technical and customer service training. The Project will have nominal direct impact, in that, it will improve the delivery of services in key areas of the Public Sector and support activities to implement the Government's export strategy and generally improve the investment climate in Grenada. The medium-to-long-term direct impact of the Project is likely to be substantial, including: better quality service and reduced clearance time at Customs; reduced time and lower transaction cost for paying taxes and hence improved compliance; greater access to trade data and quality assurance support for exporters; and increased investments as a result of a more streamlined and faster system for investment approval in Grenada.</p>	MINISTRY OF FINANCE

Financing Organization	Name and Length of the Project	VC Applicability	Project Budget	Main Activities	Contact Information
World Bank Country: Grenada	Public Sector Modernization Technical Assistance Credit 2005-2010 Project number: P082392	Ministry SBDC G.I.D.C.	3 500 000 USD	The Public Sector Modernization Technical Assistance Project for Grenada will assist the Government of Grenada to begin the process of modernizing its Public Sector. The Project has the following Components. Component 1) will finance: (i) the strategic review of the proposed organizations and functions for conversion to Executive Agencies status; (ii) the preparation of detailed, modernization and financing plans for each conversion; (iii) the preparation of a Policy Framework for Executive Agencies; and (iv) the preparation of enabling legislation-including the preparation of a draft Executive Agencies Bill to be presented to Cabinet and Parliament under Grenada's legal framework. Component 2) will support the strengthening of the Small Business Development Centre (SBDC) of the Grenada Industrial Development Corporation (G.I.D.C.) that will provide technical assistance and training to the micro/small segment of the business community. Component 3) will support Grenada in taking the lead to jointly procure selected goods and services with other O.E.C.S. countries. Component 4) will strengthen the Public Sector Reform Unit by providing financial and technical resources and training on key policy areas, including change management.	DEPARTMENT OF HUMAN RESOURCES, PUBLIC SECTOR REFORM UNIT (P.C.U.)

Current or Pipeline Development (Bilateral or Multilateral) Projects related to: **Enhance the long-term sustainability of the Nutmeg Industry in Grenada (R&D).**

Financing Organization	Name and Length of the Project	VC Applicability	Project Budget	Main Activities	Contact Information
World Bank Grenada	O.E.C.S. Skills for Inclusive Growth 2009-2013 Project number: P095681	Multi	4 500 000 USD	The objective of the Organization of Eastern Caribbean States (O.E.C.S.) Skills for Inclusive Growth Project is to support Grenada to increase the employability of youth through public/private sector partnerships for technical and life skills training that is demand driven. This objective will be pursued through three means: (a) training to increase job related competencies among unemployed youth through the establishment of a competitive training mechanism that supports the financing and delivery of demand driven training; (b) establishing a framework to improve the quality and value of training in Grenada and enhance OE.C.S. collaboration in training through the adoption of an occupational standards framework that is validated locally and recognized regionally; and (c) strengthening institutional capacity to plan, implement, and monitor training. There are three components to the Project. The first component of the Project is skills training for unemployed youth, will finance the training of unemployed youth through a competitive, demand-driven training scheme. The objectives of the training scheme are to provide quality, competency-based skills and life skills training to vulnerable youth, and to ensure that the training corresponds to labour market needs. The second component of the Project is establishing an occupational standards framework to improve the quality and value of training, will finance activities related to the adoption of an occupational standards framework that is regionally recognized and adapted to the local context. This will include the introduction of occupational standards, their vetting by local industries, and the establishment of quality assurance processes. The third and the final component of the Project is institutional strengthening and project management.	TDB

Resume of Development Projects related to the Nutmeg Sector Strategy in Grenada

Objectives	Main Support Project	Secondary Support Project
1. Reinforce Market Information capacity in G.C.N.A.		<p>GD TAC 2008-2011 <u>Total Project Budget:</u> 250 000 USD</p> <p>See Objective (4): Enhance the Government's support to the export sector through improved access to trade information and the strengthening the capacity of the Bureau of Standards to provide conformity assessment and quality assurance</p>
2. Reinforce/build capacity in G.C.N.A. and in overall value addition and processing		<p>C.D.B. & IFAD: Rural Enterprise Project 2002-2009 <u>Total Project Budget:</u> 7 662 000 USD</p> <p>See Objective 3: Strengthen rural service provider</p> <p>Implementing partner: MoF</p>
3. Training and organization at farmer and extension services level	<p>C.D.B & I.F.A.D.: Rural Enterprise Project 2002-2009 <u>Total Project Budget:</u> 7 662 000 USD</p> <p>See Objective 2: Strengthen capacities and build confidence within the rural community</p> <p>Implementing partner: MoF</p>	
4. Access to finance and insurance	<p>C.I.D.A.: Partnership for CARICOM Private Sector Development 2008-2013 <u>Total Project Budget:</u> 1 300 000 CND</p> <p>See Objective 2: Enabling financial institutions to increase the number of loans they provide to underserved micro, small, and medium-sized enterprises (MSMEs).</p> <p>Implementing partner: W.B. or I.F.C.</p>	<p>C.D.B. & USAID: Basic Needs Trust Fund Programme Ongoing</p> <p>See Objective: Funds small-scale infrastructure construction</p> <p>Implementing partner: C.D.B.</p>

<p>5. Cross Ministry co-ordination and increase G.C.N.A./public/private partnership</p>	<p>WB: Public Sector Modernization 2005-2010 <u>Total Project Budget:</u> 3 500 000 USD</p> <p>See Component 2. Support the strengthening of the Small Business Development Centre (SBDC) of the Grenada Industrial Development Corporation (G.I.D.C.) that will provide technical assistance and training to the micro/small segment of the business community.</p> <p>Implementing partner: Depart of Human Resources, Public Sector Reform Unit</p>	<p>WB: O.E.C.S. Skills for Inclusive Growth 2009-2013 <u>Total Project Budget:</u> 4 500 000 USD</p> <p>Objective C: Strengthening institutional capacity to plan, implement, and monitor training.</p> <p>Implementing partner: TDB</p>
<p>6. Sustainability of the Nutmeg Industry</p>		<p>O.E.C.S. Skills for Inclusive Growth 2009-2013 <u>Total Project Budget:</u> 4 500 000 USD</p> <p>Objective A: Training to increase job-related competencies among unemployed youth through the establishment of a competitive training mechanism that supports the financing and delivery of demand driven training.</p> <p>Implementing partner: TDB</p>

A.I.D.A. Referenced Development Projects related to Draft Strategy Objectives

Activity Name	Country	Sector Group	Donor	Status	Amount	Currency
BAN-2005/ 017622	Grenada	Rural developm	European Co	Ongoing	621,426	USD
BAN/2004/016-991-GD SFA 2004	Grenada	Agriculture	European Co	Ongoing	621,195	USD
Fonds Commun des Donateurs de la CE	Grenada	Social Services	Luxembourg	Ongoing	68,446	USD
GD TAC	Grenada	Sector Goup nc	The World B	Ongoing	250,000	USD
GRANT ASSISTANCE FOR GRASSROOTS 15P	Grenada	NGO Support	Japan	Ongoing	1,095,367	USD
GRANT ASSISTANCE FOR GRASSROOTS 5P	Grenada	NGO Support	Japan	Ongoing	406,233	USD
GRENLEC III PROJECT	Grenada	Energy	N/A	Ongoing	6,214,267	USD
IS/Training Program Phase II, Grenada	Grenada	Transport	Canada	Ongoing	111,700	USD
Improving the Competitiveness of the Economy of Grenada	Grenada	Rural developm	European De	Ongoing	684,462	USD
OECS (Grenada) Skills for Inclusive Growth	Grenada	Multiple	N/A	Planned		USD
EMPLOYM	Grenada	General Progra	European Co	Ongoing	13,689,253	USD
PUBLIC SECTOR MODERNIZATION TECHNICAL ASSISTANCE CREDIT	Grenada	Civil Society an	The World B	Ongoing	3,500,000	USD
Public Sector Modernization Technical Assistance Credit	Grenada	Sector Goup nc	The World B	Ongoing	3,500,000	USD
Rural Enterprise Project	Grenada	Multiple	UNKNOWN	Ongoing	7,662,000	USD
SOUTHERN GRENADA WATER SUPPLY IMPROVEMENT PROJECT	Grenada	Water Supply s	European Co	Ongoing	8,409,689	USD
SPECIAL FRAMEWORK OF ASSISTANCE. GRENADA SFA 2006	Grenada	Agriculture	European De	Ongoing	627,588	USD
Small Actions Latin America	Grenada	Multisector	Switzerland	Ongoing	67,826	USD

DevEx referenced development projects related to draft strategy objectives

Programme	Agency	Status
FOOD SECURITY INITIATIVES IN THE O.E.C.S.	I.A.D.B.	CURRENT
SOUTHERN GRENADA WATER SECTOR SUPPLY PROJECT: INSTITUTIONAL DEVELOPMENT IN GRENADA	EUROPEAid CO-OPERATION OFFICE	CURRENT
TECHNICAL ASSISTANCE UNDER THE SOUTHERN GRENADA WATER SUPPLY PROJECT IN GRENADA	EUROPEAid CO-OPERATION OFFICE	FORECAST
FOOD SECURITY INITIATIVES IN THE O.E.C.S.	I.A.D.B.	FORECAST
GRENVILLE MARKET SQUARE DEVELOPMENT PROJECT IN GRENADA	CARIBBEAN DEVELOPMENT BANK	CURRENT
CATASTROPHE RISK INSURANCE FACILITY PROJECT IN THE CARIBBEAN	CANADIAN INTERNATIONAL DEVELOPMENT AGENCY WORLD BANK	CURRENT
ECONOMIC MANAGEMENT PROJECT (PHASE III) IN LATIN AMERICA AND THE CARIBBEAN	CANADIAN INTERNATIONAL DEVELOPMENT AGENCY	CURRENT
O.E.C.S. SKILLS FOR INCLUSIVE GROWTH PROJECT IN GRENADA	WORLD BANK	IN PLANNING
O.E.C.S. E-GOVERNMENT FOR REGIONAL INTEGRATION PROGRAMME IN THE EASTERN CARIBBEAN	WORLD BANK	CURRENT
TECHNICAL ASSISTANCE CREDIT PROJECT IN GRENADA	WORLD BANK	CURRENT
O.E.C.S.-CATASTROPHE INSURANCE PROJECT IN THE CARIBBEAN	WORLD BANK	CURRENT
AGRICULTURE AND ECONOMIC DIVERSIFICATION PROJECT IN GRENADA	EUROPEAid CO-OPERATION OFFICE	CURRENT
PUBLIC SECTOR MODERNIZATION PROJECT IN GRENADA	WORLD BANK	CURRENT

Annex 3: Brief Snapshot of the Nutmeg Industry

Nutmeg and Mace: Two Spices in one Fruit

Nutmeg (“pala” in Indonesian) is a “peach-like” fruit which grows on trees.

The nutmeg tree flowers after 6-7 years and can bear fruit for more than 50 years. A typical plantation has 50-200 female trees and one male tree. Nuts are usually harvested in 3 crops. 1 tree produces up to 100 kg of nutmeg and 10 kg of mace per year.

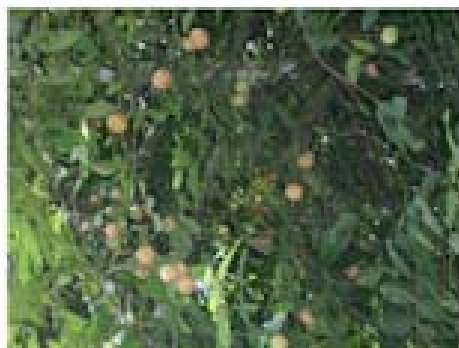
The peach-like fruit contains a nut, enveloped by a hard shell, which is covered by sharply red coloured mace. When the fruit is ripe, it bursts open (“explodes”), revealing the red colourful mace. The scientific name is “*myristica fragrans*”.

There exists no Indonesian word for mace, simply because the Indonesians never valued mace as a spice. Only when English and Dutch explorers started to buy directly from Banda, an application of mace was found in meat processing.

Nutmeg is sometimes referred to as “the lazy man’s crop”, indicating how easy it is to grow nutmeg. Hardly any care needs to be taken of the trees - no fertilizers or no fumigants. One simply reaps the fruit once it falls. 1,000 kg of “green” nutmeg gives 500 kg of dried nutmeg and 40-50 kg of mace.

When picked unripe, the nutmeg is still immature and wrinkled (shriveled).

When picked off the ground, there is a serious risk of mould infection. Quick harvesting and good drying ensures a higher quality nutmeg.



The nutmeg tree originates from the Banda Islands in Indonesia. It has proven to be difficult to spread the tree. Today, nutmeg grows on (9) nine Sulawesi Islands (Siau-Ambon variety), Irian Jaya (Papua variety) and Grenada-Caribbean (Grenada variety). Wild nutmeg from India and Sri Lanka is mainly consumed internally.

Grenada's nutmeg production suffered from Hurricane Ivan, when it struck the island in 2004. Then annual production decreased from 2,500 tonnes to only 250 tonnes in 2008.

World production is now around 10,000 tonnes: 90% coming from Indonesia and 8% from Irian Jaya (Papua).

Grenada's nutmeg is preferred for its low levels of aflatoxin (limit is 5-10 ppb), but also today for its low safrole level of 350 ppm.

Siau-Ambon nutmeg suffers more from aflatoxin, although control has been strongly improved (e.g. with black light). Its safrole level averages around 1,700 ppm.

Papua's nutmeg is more fatty and comes from the *Myristica argentia* family. Its safrole level is high, averaging around 8,000 ppm.

The typical nutmeg farm is a family affair, where next to nutmeg trees also cocoa, peppers, cloves, etc. are grown.

In Indonesia, nutmeg farming continues as a private sector activity. In Grenada however, while in most cases, cultivation is undertaken by individual farmers, the Grenada Co-operative Nutmeg Association (G.C.N.A.) controls processing activities.

Nutmeg Handling in Indonesia



Processing at Farm Level

The whole fruit is either picked from the tree, with long sticks or reaped once fallen. In hanging fruit, moulds can develop; fruits which fall down may deteriorate further if not reaped quickly.

Once harvested, the whole fruit is opened, and the kernel-with-mace (45% moisture content) is removed and transported to the farmhouse.

At the farmhouse, the mace is removed by hand/knife. This is a "family business". Mace is put to dry in the open (not in the sun), until moisture is down to 14%.

The pericarp is used for making jellies, soap, etc.

In Indonesia, unshelled nutmegs are usually dried down at the farm. Often this is done in small ovens, then de-shelled and washed and dried further.

Processing at Collecting Points

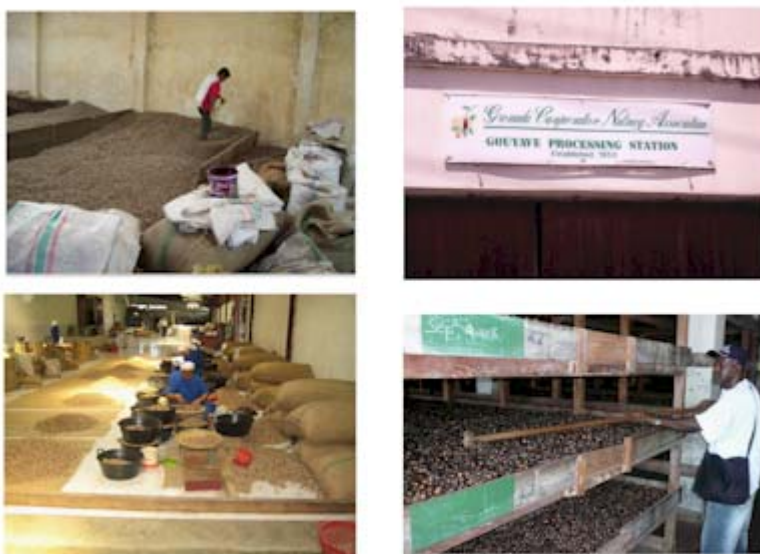
In Grenada, processing is done centrally at the G.C.N.A. Processing Plant in Gouyave. Grenada has always been a more quality-driven in its picking and drying (in-house) than Indonesia. Also the selection (testing in water, sinkers are of good quality) is more careful than in Indonesia.

Careless processing produces more defected nuts, which can only be used for extraction.

In Indonesia, farmers bring the kernels (hard shell with nutmeg inside) and dried mace to regional collectors. There, the hard shell is removed, by first cracking (either in a machine, or by letting it fall on the ground) and then by hand. The nutmeg is then dried down to 14% moisture content, packed in 50-75 kg bags (with collector ID) or in containers and shipped for further cleaning and selection to Surabaya or Jakarta.

Selecting nutmegs is labour intensive (done by hand), usually carried out by women.

Nutmeg Handling in Grenada



World Exports of Nutmeg: Trends 1995 - 2007

The consumption of nutmeg and mace has been stagnating over the years. These spices are mainly used in North-Western countries especially in meat preservation and sausage making.

Nutmeg is usually purchased “whole” and is grounded in the markets of destination. Cryogenic grinding (- 160 C) is preferred to retain essential oils. It delivers a white powder, while ambient milling (pinmill) usually results in a brownish powder. Mace is purchased dried and broken.

A particular problem of nutmeg is the Food Safety Regulation that aflatoxin levels must be very low, < 20 ppb for U.S.A. and < 10 ppb for Europe.

U.S.A. was traditionally sourcing 75% from Indonesia and 25% from Grenada.

In Western Europe, Grenada’s nutmeg was preferred because of its very good regulation of aflatoxin levels.

Defected nuts (Broken Wormy Punky) are sold to India, where it is extracted. The extracted material (spent) is again re-exported and is used as “filler” in ground nutmeg. This should be declared as “defatted nutmeg”; an additional 10% of the spent product is used to ease the grinding process in the cases where the nutmeg fat content is high. This helps to produce “free flowing” blends.

There were strong stock build-ups 10 years ago, resulting in price erosion as of the year 2000.

Origin	Exports in Tonnes							
	1995	2002	2003	2004	2005	2006	2007	2008
Indonesia (Incl. Irian Jaya)	9,500	9,500	9,600	9,700	9,800	9,816	9,500	8,750
Grenada	2,500	2,297	2,030	1,943	1,434	1,066	500	250
Total	12,000	11,797	11,630	11,643	11,234	10,882	10,000	9,000

Source: Black numbers are from Eurostat/ITC, *red italic* numbers are best guesses.

Grenada's exports were seriously affected by Hurricane Ivan in 2004

During the period 2002-2008, Grenada's exports in volume have decimated, falling sharply from approximately 2,000 tonnes to 1,100 tonnes in 2006 (when still good volumes were on stock) to 250 tonnes in 2008.

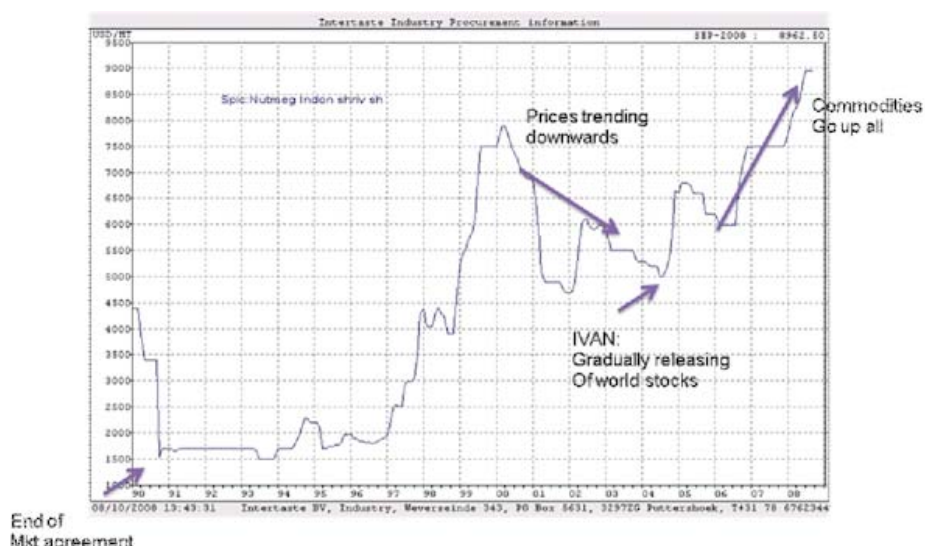
Hurricane Ivan reduced 90% of Grenada's nutmeg supply capacity in 2004:

- Trees toppled (40%);
- Damaged trees (25%);
- Inaccessible trees (30%); and
- Dying of trees (5%).

It has been proving difficult to revive nutmeg production in Grenada. The first reason is that fields have not been cleared properly since 2004. Secondly, unknowingly, too many male trees were replanted.

In 2004, high stocks built up both in Indonesia and in Grenada. After the hurricane, these stocks were released step by step on the world market. By 2008, the stocks have disappeared and with demand (10,000 tonnes) now just matching supply, prices have risen strongly.

In 1992 a trade marketing agreement between Indonesia and Grenada ended, which started a long period of low prices, resulting in undersupply.



Routes that (Indonesian) nutmeg travels from Origin to Destination – 2006 Statistics

Indonesia and Irian Jaya together: produce almost 10,000 tonnes;

Singapore and Vietnam: buy from Indonesia/Irian Jaya and just re-export whole;

India: buys 2,500 tonnes of defectives either directly from Indonesia or via the Singapore/Vietnam route. These are extracted in India (Cochin), where 2,000 tonnes of spent material is re-exported to grinders in Europe and N-America;

Netherlands: 2,500 tonnes are sold to Dutch grinders (Intertaste, Euroma, Huijbrechts), 1,800 tonnes of which is re-exported in ground form;

Brazil: 1,500 tonnes are sold whole to Brazil, ground there and re-exported in ground form to German grinders;

Western Europe: another 1,000 tonnes is sold whole to other European grinders; and

U.S.A.: 1,400 tonnes is sold to grinders in North America (incl. Canada).

Country of 1st Destination	Origin 2006 (Tonnes)		Re-exports		
			Tonnes	Processing in Re-exporting Countries	Destination of Re-exports
Europe	Indonesia	Grenada			
Netherlands	1,398	307	1,815	Grinding	GE-529, UK-254, ES-202, IT-182, B-146
Germany	100	195	376	Industrial blends & retail	AU-123, CH-45, F-32, ES-29, B-24
Belgium	100	116	603	Industrial blends	NL-303, F-167, GE-64, EC-36
France	100	2	141	Industrial blends & retail	GE-32, USA-27, ES-24
Spain	50	0	153	Grinding	IT-82, POL-12, UK-11
Italy	50	0	330	Retail packaging	UK-83, F-73, G-64, GR-23, PO-13
Other Europe		96	119		
North America					
U.S.A.	600	177	0		
Canada	450	147	104		USA-88, Sam-16
South America					
Brazil	100	0	1,489	Transito-grinding by Fuchs	Germany (1,423), USA (66)
Other SA	30	26	13		
ROW					
Singapore	731	0	1,279	Trading whole numegs	USA-224, Viet-166, SAF-117, B-94
India	1,416	0	2,027	Extraction, spent is re-exported	UAE-848, Bra-154, USA-110
Vietnam	2,964		2,964	Trading whole & broken	Most to India (?) and Brazil (?)
Sri Lanka	1,000	0	985	Trading whole nutmegs	India-543, Pak-232, SIN-42, BE-25, GE-25
Malaysia	720	0	205	Trading whole numegs	BE-42, NL-37, Viet-29, Ind-22
Africa	7	0	56	Retail packaging	
Total	9,816	1,066	12,659		

Annex 4: Key Statistics of Nutmeg and Mace Production (\$E.C. Dollars / Pounds / Kilos)

Yearly results of nutmeg production (GCNA) ¹													
1 Year (financial year from July to June)													
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	
Number of Farmers													
(number)	6075	6555	6670	6717	6626	6843	5574	1955	1996	2055	2401	2560	
Total production NUTMEG GREEN													
(actual WT LB)	9,708,586	13,012,802	11,439,498	10,716,154	9,593,606	13,229,464	12,893,890	3,566,938	1,002,172	1,202,660	1,395,560	1,579,070	
Production NUTMEG GREEN/farmer													
(actual WT LB)	1,598	1,985	1,715	1,595	1,448	1,933	2,313	1,825	502	585	581	617	
Total Nutmeg production DRY and shelled													
(Equivalent WT. LB)	4,854,293	6,506,401	5,719,749	5,358,077	4,796,803	6,614,732	6,446,945	1,783,469	501,086	601,330	697,780	789,535	
Production Nutmeg in Kilo dry	2,201,870	2,951,254	2,594,435	2,430,383	2,175,793	3,000,392	2,924,285	808,968	227,289	272,759	316,508	358,127	
Production Equivalent MACE													
TOTAL MACE Production DRY 1&2&3	370,406	659,881	444,802	455,947	321,044	490,341	302,913	82,510	27,366	45,315	57,985	58,993	weight
1	104455	186086	125434	128577	90534	138276	85421	23268	7717	12779	16352	16636	30%
2	208909	372173	250868	257154	181069	276553	170843	46535	15434	25558	32704	33272	60%
3	34818	62029	41811	42859	30178	46092	28474	7756	2572	4260	5451	5545	10%
Average price NUTS green inc bonus													
(EC\$ per LB)	2.30	3.54	4.37	4.50	5.43	4.48	2.82	3.25	3.25	2.25	2.25	2.30	
Average Price MACE per lb inc bonus													
1	10.54	8.46	8.35	7.50	6.30	5.06	7.00	8.16	6.30	6.30	6.85	5.30	
2	6.30	6.38	6.68	6.00	4.75	3.79	4.82	5.91	4.00	4.00	4.57	3.00	
3	3.12	3.14	3.34	3.00	2.42	2.46	2.82	3.28	2.00	2.00	2.29	1.63	
								no bonus	no bonus	no bonus	no bonus	no bonus	
Total revenue for Farmers	24,855,460	50,208,843	52,853,433	50,858,522	53,596,754	61,129,198	37,862,478	12,082,876	3,372,560	2,897,241	3,413,957	3,828,858	
								hurricane sept 2004					

Annex 5: Summary of Value Chain related Problems and Issues

Outputs of Participatory Stakeholder Workshop 1, October 2009

Issues by Value Chain Stage	Categories
<ul style="list-style-type: none"> Overall <ul style="list-style-type: none"> - Lack of information on market prices, selling price by trader, and poor trading information - No mapping of country or catchment areas - No dialogue between competitors - Lack of information on cash flow and supporting data - No direct relationship/representation with grinders to consider the issue of representation on the other side of the chain re. Market - No cross fertilization between industries and benchmarking - Poor policy coordination and emphasis on sector - Unclear roles and responsibilities of the G.C.N.A and the MoA with reference to the development of the Industry - Policy emphasis not focused on nutmeg - Need for strategies to reduce overall production costs - Field Officers not incentivated enough (10 field officers in total) - Need for development concession (G.I.D.C.) - Need for Government concession (transport, inputs, equipment) - High cost of freight. Need for more direct trade routes from Grenada to market - Costly to clear for banana - No possibility to sell/collect/link banana to local and regional markets - Lack of training capacity - Good relations with E.U. Agent - Lack of financing and trust - Lack of management experience and of entrepreneurial skills G.C.N.A. Operations and Processing <ul style="list-style-type: none"> - Poor functioning of G.C.N.A.'s lab - G.C.N.A. to set up lab to deal with issue of time and cost in testing nutmegs - Little or no R&D work in the Industry with reference to dwarf trees and production development - No traceability to farm - No record-keeping at farm level - No record of farmers' reject rate - Irregular availability of supply from farmers. Provide incentives to farmers to stimulate production (ex. Training, Finances). - Availability of oil for processing - Low investment in facilities can lead to quality problems - G.C.N.A. cannot invest farmers' money by law. Limitation to G.C.N.A.'s ability to invest in operations and import. Act needs revising 	<ul style="list-style-type: none"> Market Info. Market Info. Market Info. and Organization Market Info. Organisation Inter-sector linkages Policy Policy/ Organization Policy Policy Policy Policy Policy Transportation & Trade facilitation Market linkages Extension services External relations Finance Mindset Standards compliance/ Investment R&D Quality tracking Quality tracking Quality tracking Supply issues Inputs Extension services/ Investment Policy/ Investment

<ul style="list-style-type: none"> - Need to strengthen G.C.N.A.'s management through the introduction of: <ul style="list-style-type: none"> · Professional Board · Governance · Training for farmers and access to credit - Lack of information on production, labour, prices, prices coming from agent - Dehumidifier not used to save electricity. If volume increases need to use it - Low propensity to receive Extension Services - Lack of knowledge of chemical composition of nutmeg - No segregation of inventory - Need for DeMacing Technology - Need for Epicotal Grafting Specialist - Compared to competitors, process takes 90 days. Shell does it in 60 days - Floating process makes nutmeg wet. This implies a 2-day loss and added cost of operations - Need to improve efficiency of conversion rate from nutmeg to nutmeg oil - Farmers do not have a "share" of G.C.N.A. (property issue). They are only given a bonus (collateral) - No direct link with grinders 	<p>Organization and Management</p> <p>Market Info.</p> <p>Extension services</p> <p>Extension services and Awareness</p> <p>Extension services</p> <p>Extension services</p> <p>Extension services</p> <p>Extension services</p> <p>Time to market</p> <p>Time to market/ Technology</p> <p>Time to market/ Technology</p> <p>Farmer's clout</p> <p>Common drive</p>
<ul style="list-style-type: none"> • Farmers <ul style="list-style-type: none"> - Lack of farmers' ownership. Lots of land wasted and not reused - Lack of bargaining power - Replanting efforts not organized. Farmers are responsible for planting. No sufficient follow-up by Extension Officers - Co-ordination between MoA and G.C.N.A. for extension and incentives - Praedial Larceny - Poor roads to farms. Difficult to get labour to collect - Low diversification (Eggs in one baskets) - No diversification of crops for cash to farmers - Nutmeg gestation period of 7 years (Use of multi-crops) - Lack of links to other spices (e.g. merger with cocoa) - No interplant of crops - Cost of inputs – high price of imported fertilizer - Loss of quality due to harvest decay: <ul style="list-style-type: none"> · Tree stock low; · Poor accessibility (100 tonnes per year lost to inaccessibility); · Collection 1 every 5 weeks; · Clearing not done. - Labour unavailability affects production - Lack of skilled labour and of training capacity (e.g. pruning, drainage, multicropping) - Intercropping: <ul style="list-style-type: none"> · High input and intensive labour for banana as cash crop; · Banana not profitable. Disease attack banana - difficult to sell. - No training to farmers to treat and prevent Wilt Disease 	<p>Farmers' clout</p> <p>Farmers' clout</p> <p>Organization</p> <p>Organization</p> <p>Infrastructure</p> <p>Infrastructure</p> <p>Diversification</p> <p>Diversification</p> <p>Diversification</p> <p>Diversification</p> <p>Diversification</p> <p>Inputs</p> <p>Inputs</p> <p>Inputs</p> <p>Inputs and Training</p> <p>Inputs</p> <p>Disease management</p> <p>Disease management</p>

- Poor pest management (Apply research that has already been done)	Disease management
- Little or no access to finance, insurance, risk assessment	Finance
- Training for re-planting and for disease treatment to be carried out on the field and with G.C.N.A. officers	Extension services
- Need for training in crop husbandry (pruning, spacing, fertility management)	Extension services
- Inability to serve farmers in terms of training and credit.	Finance
- No collateral for farmers and no available finance	Finance
- No insurance or risk management for natural disasters	Finance
- Lack of crop insurance	Finance
- Bigger estates do not invest to harvest. Uneconomical to harvest	Investment
- Soil erosion and land slides	Threats
- Need to spur youth motivation and commercial drive	Mindset
- Farmers' frustration	Mindset
- Low farmers' involvement. Low attendance of G.C.N.A. meetings and area meetings	Common drive

ANNEX 6: Business Model for the Collection, Processing and Commercialization

Target Quantities: 1,000 tonnes of Nutmeg and 80 tonnes of Mace. To effectively produce a volume of 1,000 tonnes farmers must collect 2,000 tonnes (4,400,000 lbs) of green nutmeg and the G.C.N.A. has to be able to finance this supply and to process it.

This Annex is divided into three sections: Cost of Goods Sold, Potential Income Generation and Income Statement.

1. Procuring 2,000 tonnes of green nutmeg requires a quarterly revolving fund of USD 2 million³

Estimated Costs of Goods Sold (COGs) - for Target Quantities (includes Raws, Transport, Packs, Conversion)		
1 Kg (=2,2 Lbs) USD (=2,67EC\$)	EC\$	USD
Target volumes (lbs/kg)	<i>Lbs</i>	<i>Kg</i>
GREEN nutmeg	4,400,000	2,000,000
Equiv Dry nutmeg	2,200,000	1,000,000
GREEN Mace (lbs/kg)	187,234	85,106
Hand Picked Selected	11,702	5,319
Grade 1	46,809	21,277
Grade 2	70,213	31,915
Grade 3	58,511	26,596
Equiv DRY MACE (lbs /Kg)	176,000	80,000
Hand Picked Selected	11,000	5,000
Grade 1	44,000	20,000
Grade 2	66,000	30,000
Grade 3	55,000	25,000
Farm prices per Lbs or Kg (GREEN)	<i>EC\$/Lbs</i>	<i>USD/Kg</i>
Nutmeg Farmgate price Green	\$3.00	USD 2.47
Hand Picked Selected	\$8.00	USD 6.59
Grade 1	\$7.00	USD 5.77
Grade 2	\$3.00	USD 2.47
Grade 3	\$1.63	USD 1.34

³ Working Assumptions

- 2.000 Lbs of green nutmeg give 1.000 Lbs of dry nutmeg + 80 lbs of dry mace.
- Transport from farm to processing unit costs average EC\$ 0.20/lbs of green nutmeg.
- Processing from green to dry, including overhead, costs EC\$ 0.50/lbs green nutmeg.
- Processing green mace to dry cleaned mace, costs EC\$ 0.20/lbs green mace.
- With the right price incentive farmers could collect 4,400,000 lbs of green nutmeg in 2011 and thereby enabling G.C.N.A. to sell 1,000 tonnes of dry nutmeg on the market.
- The farm-gate price of green nutmeg is raised to EC\$ 3.00/lbs and of dry mace EC\$ 8.00/lbs for top quality.
- The processing time is 8 weeks; the shipping time to Europe is 4 weeks. So every 3 months G.C.N.A. receives cash from the buyers. (Quarterly revolving fund of 2 Million USD to attain total funds needed of 6 Million USD);
- 1 kg = 2.2 lbs and 1 USD = 2.67 EC\$.

(Continued from table above)

COSTING (per Lbs or KG)		
Transport farm to factory	\$0.20	USD 0.16
Processing green to dry (Nutmeg)	\$0.50	USD 0.41
Processing green to dry (Mace)	\$0.20	USD 0.16
COG DRY NUTMEG per lbs / Kg	\$7.40	USD 6.10
COG DRY Mace per lbs / Kg	\$4.56	USD 3.76
Total Quantity dry nutmeg	2,200,000	1,000,000
Total Quantity dry Mace	176,000	80,000
TOTAL COG 1000 Mts dry nutmeg	16,280,000	6,097,378
TOTAL COG 80 Mts dry Mace	802,181	300,442
Total Costs (Nutmeg + Mace)	17,082,181	6,397,821

2. Potential Income generated by production of 1000 tonnes

The table below shows what cash flow could be generated from Grenada nutmeg/mace when harvesting 2,000 tonnes of green nutmeg in 2011: over EC\$ 29 mio (**USD 11 mio**).

Portfolio	Target 2010 Volume (Kgs)	Price (USD/Kg) (2010/ 2011 Conservative estimates)	Income (000 USD)
Nutmeg	1,000,000		
GUN	800,000	USD 11.00	USD 8,800,000
GBC - Grenada Broken Clean	100,000	USD 9.50	USD 950,000
"grinders" to be processed in:	100,000		
nutmeg oil	6,000	USD 50.00	USD 300,000
Extracted nutmeg	90,000	USD 1.00	USD 90,000
Mace	80,000		
Hand Picked Selected	5,000	USD 15.00	USD 75,000
Grade 1	20,000	USD 13.00	USD 260,000
Grade 2	30,000	USD 11.00	USD 330,000
Grade 3	25,000	USD 8.00	USD 200,000
Total Cash Flow (Income)			USD 11,005,000
Cash Flow in EC\$			\$29,383,350

3. Operational Gross Margin

The table below shows the income statement that derives from the sales and cost of goods sold shown above.

The operational margin is gross, in the sense that taxes have not been deducted and many of the existing fixed costs related to Bank Debt repayments or G.C.N.A. unused infrastructure have not been included. However, it is important to highlight that if the farm-gate price is increased for Nutmeg to 3 \$EC per lb and the Mace quality 1 to 8 \$EC per lb, the farmers would receive more income, collect more (200 tonnes of green) and the Industry would have 4.3 million USD to re-invest in the business, distribute to farmers or repay debts.

GROSS INCOME STATEMENT	
<i>Kg (=2,2 Lbs)</i> <i>USD (=2,67EC\$)</i>	DRY 1.000 Mts Nutmeg 80 Mts Mace
Total Target Volumes	<i>EC\$/Lbs</i>
Green nutmeg (Lbs)	4,400,000
Dry nutmeg (Lbs)	2,200,000
Green Mace (Lbs)	187,234
Dry Mace (Lbs)	176,000
(A) FARMER INCOME	EC\$
Farmers Income Nutmeg	\$13,200,000
Farmers Income Mace	\$727,287
Total:	\$13,927,287
(B) Operation COSTS	EC\$
Transport & Processing	\$3,117,447
Interest Rev Fund to procure green and fund GCNA operations (2 Million USD every 3 months) (5%)	\$735,332
(C.) Operation SALES (Portfillio)	
Cash Flow in EC\$	29,383,350.00
Cash Flow in USD	USD 11,005,000
GROSS Operations Income GCNA	(C-(A+B))
EC	\$11,603,284
USD Equiv	\$4,345,799

Of course the above is a model and the analysis can be repeated with different values, particularly at the farmgate pricing and with the estimated market prices.

Annex 7: List of Stakeholder participating in Strategy Workshops

LAST NAME	FIRST NAME	POSITION	REPRESENTING DEPARTMENT/ORGANIZATION
Alexis	Jacqueline	Managing Director	Grenada Cultural Foundation
Andall	Reginald	Coordinator, C.A.R.D.I.	C.A.R.D.I. Grenada Office
Andrews	Lennox	Coordinator EDF Programme/EC Office	Ministry of Finance
Baghwan	Sally-Ann	MoF	Economic Affairs Department
Bain-Thomas	Gemma	Permanent Secretary	Ministry of Agriculture, Forestry and Fisheries
Baldeo	Shira	Ag. Chief Agronomist	Ministry of Agriculture
Baptiste	Carlyle	Farmer	G.C.N.A.
Beggs	Jeremiah	Farmer	Nutmeg
Bishop	Elliot	Treasurer	Grenada Trade Union Council
Bowen	Christine	Permanent Secretary	Ministry of Legal Affairs
Brathwaite	Samuel	Manager	Grenada Cocoa Association
Branch	Robert	Registrar	Supreme Court Registry
Bridgeman	Clifford	Farmer	G.C.N.A.
Brizan	George	Former Prime Minister & Minister for Agriculture	
Buckmire	Kenneth	Director	Parris Pharmacy
Britton	Samuel	President	St. Mark's Development Org.
Campbell	Byron	Farmer	G.C.N.A.
Charles	Eric	Supervisor, Customs	Ministry of Finance
Charles	Rawle	Southern District Supervisor, Extension Division	Ministry of Agriculture, Forestry and Fisheries
Charles	Ricardo	President	Grenada Bankers Association
Church	Michael	Minister for the Environment, Foreign Trade and Export Development	Ministry of the Environment, Foreign Trade and Export Development
Clouden	Keith	Farmers' Representative in the Senate	
Courtney	Roland	Field Inspector	G.C.N.A.
Cruickshank	Arnold	Retired Agronomist and Farmer	
Daniel	Charles	Farmer	Nutmeg
Del Sol	Gregory	Planning Office	Ministry of Agriculture, Forestry and Fisheries
Felix	Denis	Director, G.C.N.A.	G.C.N.A.
Fletcher	Kenneth	Agri. Sales Supervisor	Renwick & Thompson
Forrester	Bernard	Farmer	Nutmeg
Francis	Allyson	Policy Advisor, Trade Department	Ministry of Finance
Frank	Kevin		Grenada Industrial Development Corporation
Gabriel	Milton	Chairman	Grenada Minor Spices Corporation
Gellineau	Keisha	Trade Officer	Ministry of Finance
Gellineau-Simon	Yvonne	President	Grenada Chamber of Industry & Commerce
Graham	Lennox	Farmer	Nutmeg
Graham	Paul	Pest. Management Officer	Ministry of Agriculture, Forestry and Fisheries
Hardy	Brian	General Manager	Spice Isle Beach Resorts
Hyacinth	Carl	Manager	Foodland Supermarket
James	Fitzroy	Manager	Marketing & National Importing Board (M.N.I.B.)
Jerome	Mary, Teresa	Farmer	G.C.N.A.
Jessamy	Faith	Farmer	Nutmeg

Jessamy	Jessy-Ann	Director	Veronica's Visions
Jessamy	Michael	Heritage Officer	Ministry of Tourism & Civil Aviation
John	Joyce	Manager	G.C.N.A.
Joseph	Ashley	Farmer	Nutmeg
Joseph	Cosmos	Coordinator, IICA Grenada Office	I.I.C.A Office, Grenada
Joseph	Hillary	Budget Officer	Ministry of Finance
Joseph	Samuel	Farmer	Nutmeg
Kristos-Miller	Delate	Intern, Trade Department	Ministry of Finance
La Grenade	Cecile	Manager	De La Grenade Industries
Lalitte	Gabriel	Farmer	Nutmeg
Laurent	Roberte	Manager	Moi Spa/Belzeb
Lewis	Daniel	Agronomist	Ministry of Agriculture, Forestry and Fisheries
Lewis	Simone	Head of Certification	Grenada Bureau of Standards
Livingston	Irene	Farmer	Nutmeg
Lord	Edward	Manager	Grenada Ports Authority
Lowe	Ferron	Policy Advisor	Ministry of Agriculture, Forestry and Fisheries
Marcelle	Guido	Chief Analytical Chemist, Produce Chemist Laboratory	Ministry of Agriculture, Forestry and Fisheries
Marryshow	Theresa	President	GRENROP
Moses	Aaron	Advisor	Prime Minister's Office
Murray	Emmerson	Farmer	G.C.N.A.
Noel	Denis	Owner/Manager	G.C.I.C./Noelville Ltd.
Nyack-Compton	Shadel	General Manager	Belmont Estate
Patrick	Kelly	Eastern District Supervisor, Extension Division	Ministry of Agriculture, Forestry and Fisheries
Phillip	George	Agricultural Assistant, Extension Division	Ministry of Agriculture, Forestry and Fisheries
Powlette	Albinus	Northern District Supervisor, Extension Division	Ministry of Agriculture
Robertson	Clifford	Independent Agricultural Consultant	
Robertson	Francis	Ag. Senior Technical Officer	Ministry of Tourism & Civil Aviation
Romain	Jerome	Director – G.C.N.A. (former)	G.C.N.A.
Rush	Ingrid	Manager Food Security Programme	Ministry of Agriculture, Forestry and Fisheries
Rush	Rennie	Manager	Rush Landing Cargo
Salim	Franklyn	Farmer	
Seales	Mandoo	Independent Tour Operator	Grenada Hotel & Tourism Association
Shears	Randolph	Chief Extension Officer, Extension Division	Ministry of Agriculture, Forestry and Fisheries
Simmons	Jennifer	Supervisor, Farm and Garden Centre	Geo. F. Huggins
Sis	Raymond	Dean	St. George's University
Steele	Dunbar	Dean	T.A. Marryshow Community College
Thomas	Peter	Association Director	National Science & Technology Council
Thomas	Wapley	Farmer	Nutmeg
Vesprey	Augustine	Director - G.C.N.A. (former)	G.C.N.A.
Viechweg	Jervis		Ministry of Education
Wardally	Paula	Manager	Arawak Islands Ltd.
Wells	John	Director	GRENCODA
Whiteman	Ken Martin	Regional Representative	JHB International Trade & Finance
Williams	Ann	President	Caribbean Agri. Business Assoc.

Williams	David	Farmer	Nutmeg
Williams	Garnett	Operations Manager	G.C.N.A.
Williams-Cox	Shanta	MoF	Department of Trade
Winsborrow	Cecil	Consultant	Ministry of Agriculture, Forestry and Fisheries
Wislon	Michael	President	St. John's Social & Cultural Org.

Annex 8

GLOSSARY OF TERMS

A.S.T.A.	American Spice Trade Association
CARICOM	Caribbean Community
C.D.B.	Caribbean Development Bank
Co-op Bank	The Grenada Co-operative Bank
\$EC	Eastern Caribbean Dollars
E.S.A.	European Spice Association
E.U.	European Union
F.A.O.	Food and Agricultural Organization
F.P.M.I.S.	Field Programme Management Information System
G.A.P.	Good Agricultural Practices
G.C.N.A.	Grenada Co-operative Nutmeg Association
G.D.P.	Gross Domestic Product
G.I.D.C.	Grenada Industrial Development Corporation
I.F.A.D.	International Fund for Agricultural Development
I.F.C.	International Finance Corporation
I.T.C.	International Trade Centre
M.D.G	Millennium Development Goals
M.I.S.	Market Information Systems
M.N.I.B.	Marketing National and Importing Board
MoA	Ministry of Agriculture
O.E.C.S.	Organization of Eastern Caribbean States
N.G.O.	Non-Governmental Organization
S.T.A.	Spice Traders Associations
U.N.C.T.A.D.	United Nations Conference of Trade and Development
W.B.	World Bank

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