

## I. GENERAL PROJECT INFORMATION

PROJECT NUMBER	GY-M1025		
PROJECT TITLE	<i>Promoting a cluster approach for agricultural diversification in Guyana</i>		
PROJECT OBJECTIVE STATEMENT	The objective at the <b>impact level</b> is to sustainably increase the crop incomes of contract farmers and to provide year-round employment in the cluster for non-traditional agricultural crops. At the <b>results level</b> , the objective is to facilitate the integration of contract farms into the cluster for non-traditional crops through the development and delivery of key agri-business support services and access to investment capital.		
EXECUTING AGENCY (EA)	<i>Carana Corporation</i>		
DESIGN TEAM LEADER(S)	<i>Yolanda Strachan, Fernanda Lopez (co-team leaders)</i>		
SUPERVISION TEAM LEADER	<i>Vashtie Dookiesingh</i>		
OTHER TEAM MEMBERS	<i>Alejandro Escobar, Winsome Leslie, Hubert Forrester, Dora Moscoso, Sybille Nuenninghoff (INE/RND)</i>		
BENEFICIARY COUNTRY	<i>Guyana (GY)</i>	<b>BUDGET</b>	
UNIT WITH DISBURSEMENT RESPONSIBILITY (UDR)	<i>COF/CGY</i>	MIF GRANT SEP GRANT	<i>US\$ 500,000 \$ 250,000</i>
MIF ACCESS AREA	<i>Access to Markets and Capabilities (AMC)</i>	SEP LOAN	<i>\$800,000</i>
MIF AGENDA	<i>Linking small producers with high value agricultural market (NAM)</i>	MIF EQUITY	<i>\$000,000</i>
NUMBER AND TYPE OF BENEFICIARIES	<i>23 SME farms, 220 agricultural workers and trainees employed on farms 300 indirect beneficiaries</i>	TOTAL MIF/SEP CONTRIBUTION	<i>US\$ 1,550,000</i>
PREVIOUS OPERATIONS WITH EA		COUNTERPART (GRANT) LOCAL EA OTHERS	<i>US\$ 991,468</i>
COMPLEMENTARY IDB OPERATIONS		CO-FINANCING SEP GRANT OTHERS	<i>\$000,000</i>
OII'S 5 QUESTIONS/AFIDAVIT	Yes – Online Application	CO-INVESTMENT (EQUITY)	<i>\$000,000</i>
WORLD CHECK	Pending	TOTAL PROJECT BUDGET	<i>US\$ 2,541,468</i>

## II. PROBLEM DIAGNOSIS

### **Background**

The agricultural sector holds promise for the entire Latin America and Caribbean region. The Food and Agricultural Organization (FAO) estimates that by 2050 global food production will have to increase by 60% to feed the world's

population<sup>1</sup>. With 28% of the world's potentially suitable land for expansion and one third of its fresh water resources, the LAC region is uniquely poised to benefit from rising global demand for food. If the region pairs its comparative advantage with improved productivity and efficiency enhancements, agricultural production could truly become a regional engine of growth in the near future.

Nowhere is this picture more accurate than for Guyana: the country boasts abundant agricultural land and fresh water as well as a year-round growing season that allows for multiple harvests and sales to the European and U.S. markets during winter months. As the only net food exporter in the region, Guyana is often cited as a country that has the potential to become the 'breadbasket of the Caribbean'. Agriculture is one of the main engines of growth and accounted for more than 33% of employment, 40% of exports, and contributed to approximately 21% of GDP in 2012<sup>2</sup>. Production is largely concentrated in rice and sugar, followed by fisheries and forestry. To accelerate growth and agricultural diversification, the country has rolled out a 2013-2020 National Agricultural Strategy dubbed F5 Approach<sup>3</sup> whose objective is to achieve 5% growth by implementing strategies that help Guyana diversify its production and offer more support to non-traditional crops such as coconut, cassava, tomatoes, cabbage, pumpkin, hot pepper, banana, pineapple, grapefruit and passion fruit.

### ***The problem***

Despite its vast potential, Guyana has not been able to capitalize on its comparative and competitive advantages to build a non-traditional export sector. This shortfall is not due to a lack of demand, but rather to structural challenges facing the sector. The agricultural sector is comprised of many small family farms which use traditional practices to supply fruits and fresh vegetables for communities and local markets. The production base is highly fragmented as there are few well-functioning cooperatives and farmer organizations to aggregate producers, increase leverage with buyers, and promote scale. Farming is mainly a seasonal activity and crops are sold on the spot market in the absence of any contractual arrangements. In this context, small family farms play a key role in domestic food security but are unable to make the leap to regional or international food production networks which require a more coordinated and commercial approach. Nowadays, as high value markets become more sophisticated, consolidated and regulated, it is increasingly difficult for small Guyanese farms to access and participate in these value chains.

**The central problem the project will address is that small-scale farms in non-traditional crops are unable to capture new commercial opportunities in farming for high value markets. This is due to the following main causes:**

- a) **Lack of secure buyers.** Most farmers produce for the spot market. Limited linkages to buyers through contracts or supplier agreement often leave farmers locked in the middle: producing too little for international markets but overproducing for their communities. In fact, it is estimated that small farmers leave upwards of 30% of a given crop in the field due to lack of markets and low local prices during the harvest season. In Carana's experience, the problem is partially related to following an approach whereby buyers are sought for the crops produced instead of taking a backward approach that focuses on identifying potential buyers in markets with low saturation points who could be open to confirming purchasing orders as long as quality / quantity requirements are met.

<sup>1</sup>Inter-American Development Bank, "The Next Global Breadbasket: How Latin America can feed the world" <https://publications.iadb.org/handle/11319/6436>

<sup>2</sup>Inter-American Development Bank, "Private Sector Assessment of Guyana", 2014. <https://competecaribbean.org/wp-content/uploads/2015/02/2014-Guyana-Private-Sector-Assessment-Report.pdf>

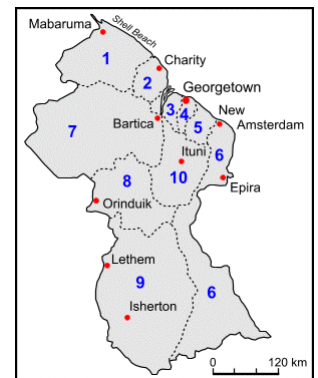
<sup>3</sup> The F5 Approach refers to Food, Fiber Fuel, Fashion and Furniture. <http://agriculture.gov.gy/new-fao-country-representative-to-guyana-present-credentials-to-agri-minister/>

- b) **Efforts to reach scale.** Farms operate individually in the local market rather than collaborating or organizing to achieve economies of scale (through sharing the cost of input purchasing, logistics, harvesting-related activities, etc.) to compete more effectively. The small scale of production implies low volumes, higher production costs and less efficient use of inputs and equipment.
- c) **High barriers to entry.** The use of basic production practices and limited understanding of quality and traceability requirements increase production costs and become very high entry barriers for farmers interested in tapping into international value chains. For example, high traceability standards and strict quality requirements for foreign markets often prove insurmountable obstacles small scale farms to overcome. In the experience of Carana, these entry barriers can explain why diversification into high value crops like papayas or diaspora-focused crops like pumpkin were not successful in Guyana.
- d) **Limited access to finance.** The strict financing requirements of local banks –very short repayment terms, lengthy and demanding application processes and high collateral requirements – paired with financial products and services that do not adapt to the characteristics of the agricultural cycle constitute main barriers for farming enterprises looking for credit. Currently, existing financing products have a 6% interest rate with 6 months grace period when the optimal tenor for an agricultural loan would be of 18 months. The interest rate could be as high as 18%.

To establish an export driven cluster requires a more commercial focus and a coordinated effort to modernize small farms and transform them into agricultural enterprises capable of producing for the market, achieving scale, complying with standards, and generating sustainable returns.

### **Target Beneficiary Groups**

Traditional agriculture carried out by smallholder farmers is a major source of income for three-quarters of the country's residents who live in rural households<sup>4</sup>. The majority of Guyana's agricultural production occurs along the coastal belt in rural communities. An estimated 10% of the project beneficiaries will be of indigenous origin residing in the hilly sand and clay regions. Under the model proposed, CADP will develop a contract farming<sup>5</sup> cluster to produce and commercialize a non-traditional agricultural mix (composed of hot peppers and tambaqui fish) in the Guyanese Savannah (regions 6 and 10) and Coastal plain areas (region 3,4,5). The project will reach the following specific beneficiary groups:



- a) **Contract Farms:** the MIF project will focus on developing a network of 20 new contract farms. Farmers who are interested in partnering with CADP will possess their own land, be able to secure access to finance (with adequate financial conditions) and be willing to adopt a series of quality and traceability standards. The project will focus on agriculture farms from 2 to 10 acres, which will grow hot peppers and other horticultural crops based on demand from buyers<sup>6</sup>.

<sup>4</sup> 550,000 out of 760,000 inhabitants of Guyana live in rural areas, representing 72% of the total population. The International Fund for Agricultural Development (IFAD) "Rural Poverty Report", 2011.

<sup>5</sup> Contract farming can be defined as agricultural production carried out according to an agreement between a buyer and farmers, which establishes conditions for the production and marketing of a farm product or products. Typically, the farmer agrees to provide agreed quantities of a specific agricultural product. These should meet the quality standards of the purchaser and be supplied at the time determined by the purchaser. In turn, the buyer commits to purchase the product and, in some cases, to support production through, for example, the supply of farm inputs, land preparation and the provision of technical advice. (FAO website)

<sup>6</sup> The investment required for a fish farming enterprise is too large for most small farms.

- b) **Agricultural Workers:** each contract farm will employ about 3 full time people to run daily operations plus 3-5 part time workers for regular planting and harvesting depending on its size. Women play an important role during the planting and harvesting cycles as well as in growing seedlings and monitoring the crops for pests and diseases. Because hot peppers and other horticultural crops can be grown all year long, these jobs represent an opportunity for full-time employment. Many agricultural workers are unskilled subsistence farmers and tend to be at or below the poverty line. The project will improve the skills of these workers by providing specialized training in farm operations related to crop management, equipment maintenance, storage, record keeping and post harvest processing.
- c) **Trainees:** a total of 60 students from the University of Guyana (15 students per year for 4 years) will be trained in farm management. In addition, there will be another 20 trainees (5 students per year over a 4-year period) who will be trained in quality control systems. In this way, the project will create a pool of skilled youth with experience in farming entrepreneurship and modern farming technologies that could find employment opportunities in the cluster as it expands.
- d) **Workers in related activities:** It is estimated that an additional 300 new jobs will be generated in activities related to agricultural services, processing, trucking, cargo handling, machinery, etc. The 300 new jobs are dependent upon expansion of CADP operations in 2016.

### III. INTERVENTION MODEL

The objective at the **impact level** is to sustainably increase the crop incomes of contract farms and to provide year-round employment in the cluster for non-traditional agricultural crops. At the **results level**, the objective is to facilitate the integration of contract farms into the cluster for non traditional crops through the development and delivery of key agri-business support services and access to investment capital.

**The Model.** Carana Agricultural Development Partnership (CADP)<sup>7</sup> is a newly established private agriculture development enterprise capitalizing on abundant land and water in Guyana to produce non-traditional crops, such as hot peppers, farmed fish, and vegetables for buyers in the Caribbean, Europe, and the United States. The company operates its own farms (2 farms: the first with 30 acres of hot peppers and the second with 40 acres of aquaculture) and is preparing to expand its own production acreage by 2016. As part of its business model, the company plans to build a network of 20 new contract farms (currently it has 3) that will enable it to supply larger volumes and a more diverse mix of crops. The CADP contract farming model presents a new and innovative structure to incubate a new agricultural cluster for non-traditional exports. It was designed to address the main market failures that have undermined the growth of small scale farms and their access to stable markets. This model provides contract farms access to a guaranteed market for their crops and to critical technical services (marketing, logistics, agronomic inputs, financing etc.).

**Crop selection based on a markets backward approach.** Crop selection was guided mainly by prospecting initial buyers that were willing to commit purchase orders and linkage to markets if a competitive price, traceability and quality requirements could be assured by CADP. Additional criteria included: a) crops with large local and global markets facing growing demands in order to have markets with low saturation points and b) crops that do not have unduly high entry market barriers (exports to US and Europe can be secured through USDA, HACCP or EU compliance with traceability and

<sup>7</sup> CADP is an affiliate of CARANA Corporation LLC. It was established in 2013 as a strategic partner and co-investment in the Guyanese agricultural sector to create attractive economic, social and environmental returns for its investors and the communities where it operates.

regulatory processes). From that assessment, hot peppers and tambaqui fish were chosen with CADP developing each crop under secured purchase orders from specialized buyers, all of whom deem CADP's existing production protocol compliant with their requirements.

Farmers interested in working with CADP follow a selection process that includes 5 steps: i) Initial meeting to explain the details of the contract and the requirements needed (land tenure, access to capital, willingness to comply with growing protocols for traceability and market access); ii) Site visit to either an aquaculture or agriculture site: a one-day tour usually covering multiple farms to gain an understanding of the technology and the rigor of the process; iii) CADP visit of the farm land to confirm that the site has the size (2 -10 acres open field), soil and water access needed, iv) Due diligence performed by CADP; and v) Contract signing which formalizes the relationship, ensuring cooperation and input purchasing support. If the farmer requires financing, CADP will help him/her providing a buying contract for collateral and building a business plan to access a bank loan.

While the contract farms will remain 100% owned by the individual farmer, each farmer will enter into a purchase agreement with CADP under which they will have access to a platform of support services to grow the crops required by the company and a secure market for their production. The model supported by the project will address a number of critical areas in order to successfully integrate contract farms into the cluster:

- a) **Access to market:** CADP will serve as the anchor firm and provide long term market access to contract farms for their crops at an agreed price. The selection of hot peppers is based on Carana's previous experience with sweet peppers. The market for this crop has rapidly expanded as US imports of fresh hot peppers have doubled from 200,000 metric tons (MT) to 400,000 between 2013 and 2015<sup>8</sup>. Furthermore, in the Caribbean pepper imports for sauce production continues to be large, creating an opportunity for import substitution. From October 2014 to October 2015, CADP and its contract farmers produced roughly 126,000 pounds of pepper mash for buyers in Guyana and Jamaica, representing approximately US\$60,000 in sales. In December, CADP will finalize a sales agreement with VEMCO Ltd, a large agro processing company based in Trinidad that is a supplier to Yum! Brands<sup>9</sup>. Currently CADP pays contract farms a competitive price of 45 to 50 cents per pound for hot peppers. This is a consistent price guaranteed for a year which allows for a stable business. Regarding fish production, CADP and the contract farms have 75 tons on-line for buyers, representing sales of US\$150,000. The fish have been sold locally and exported to Sammy's Seafood in Florida. In addition, agreements are being finalized to export to Inland Seafood in Atlanta.
- b) **Inputs and key agri-business services:** There is limited capacity in Guyana for the provision of agricultural services. Thus, through CADP, the project will support the development of an agribusiness services platform that will provide a comprehensive package of services to contract farmers such as farm design, marketing, logistics, and the provision of key inputs such as seedlings, fertilizers, equipment and irrigation systems at a competitive price. It will also provide small farms with the tools and training to comply with traceability and quality management standards that are critical for gaining access to high value markets. By the end of the project, these services will be fully funded and managed by CADP.
- c) **Research and development:** The CADP farm will serve as a R&D hub for the farming cluster by conducting continuous trials on selected crops with a view to a sustained improvement of yields, reduction of costs and better farming protocols to ensure that small farms have access to the latest generation of productivity enhancing inputs and innovations.

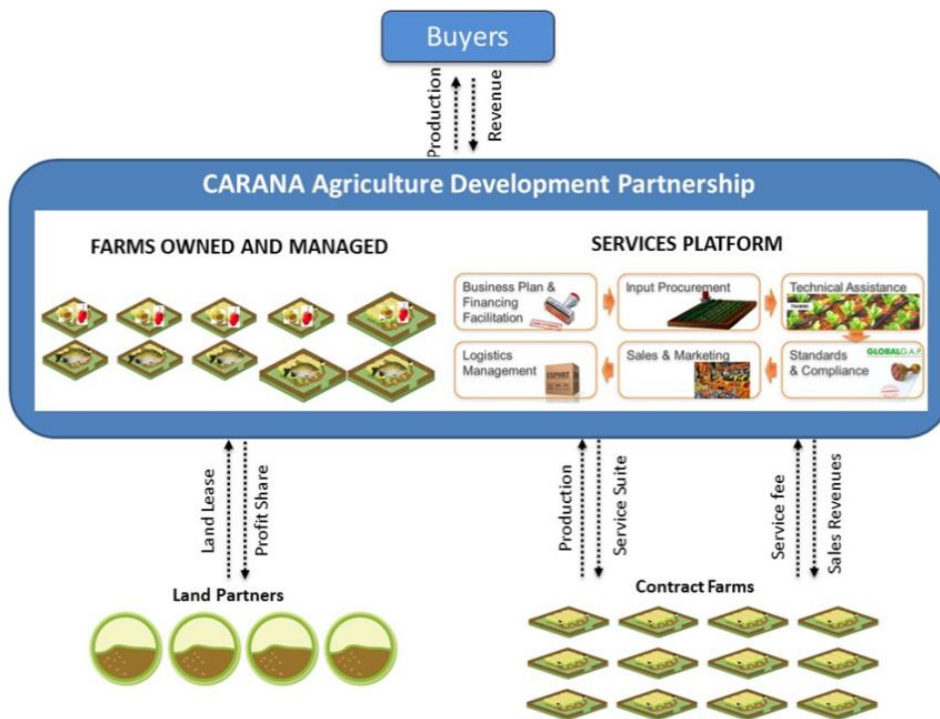
<sup>8</sup> Between 2005 and 2013, US imports of fresh hot peppers have doubled from 200,000 metric tons (MT) to 400,000 MT according to the USDA's Economic Research Service.

<sup>9</sup> Vemco Limited is a leading manufacturer and distributor of prominent food products in the Caribbean. Yum! Brands is a US based Fortune 500 company which operates the licensed brands Taco Bell, KFC, and Pizza Hut.

d) **Access to investment capital:** The project will partner with both CADP and local financial institutions to develop tailor made financial products for contract farms to finance costs related to farm build out and planting the first crop cycle<sup>10</sup>. The project will explore several options for channeling loans to farms, including i) a catalytic investment loan from the Bank’s Social Entrepreneurship Program for on-lending to small farms; ii) leveraging an existing guarantee program with Guyana Bank of Trade and Industry to reduce risk for lenders; and/or iii) a new financing program with local banks backed by CADP’s purchase contracts.

The focus of MIF funding will be on the integration of 20 new contract farms into the CADP network. Therefore, grant funds will be used to develop and implement the agri-business service platform and to promote access to finance for contract farms through innovative products that meet their needs.

The CADP model is designed on Carana’s accumulated experience in developing agricultural projects in Guyana from 2005 to 2014. With about US\$ 2 million in funding – initially from USAID and subsequently from the Department for International Development (DFID) of the United Kingdom- Carana piloted a traditional cluster model that built two producer associations, provided technical assistance directly to individual farmers to grow crops (such as tilapia and squash), and developed a system to assure traceability. The traditional approach of working through producer associations wasn’t successful: in 2010, about 1,000 pounds of tilapia and 6,000 pounds of butternut squash had left Guyana. The results led to a structural change whereby an anchor farm was established to aggregate production from small farms and to interface with buyers to produce to their specifications. The adjustment proved successful: export volumes increased to 8,000 pounds of tilapia and 80,000 pounds of squash. In addition, the product mix grew to include zucchini (40,000 pounds exported in 2012.)



<sup>10</sup> The major constraint is the difference between the agriculture cycle and bank requirements. For financial products to be attractive for farmers, they should include the acceptance of drip irrigation equipment and purchase contracts as collateral and a grace period of 18 months. The interest rate could be as high as 18 or 20 percent after the grace period. The cost of capital and risk is high in Guyana.

**Sustainability.** The success and sustainability of the model is based on the synergistic and mutually beneficial commercial relationship between CADP and contract farms. At the end of the project, CADP is expected to have a stable network of contract farms and the cluster will be generating sufficient revenues to cover the continued provision of the platform of agribusiness services.

#### IV. INNOVATION AND SCALE

Generally, the High Value Agricultural Market project portfolio focuses on linking organized farmer groups to anchor firms through a more traditional model. There have been very few (if any) agricultural projects that have implemented a cluster approach where the anchor firm is also the service provider for contract farmers. The approach addresses various structural failures in Guyana’s agricultural industry, focusing on developing a unique crop mix with secured buyers that can provide increased incomes, full-time employment and specialized technical knowledge to Guyanese small scale farmers.

The MIF intervention will focus on implementing the model that has evolved from the experience that Carana has accumulated by developing agricultural projects in Guyana. The cluster model will be scaled by integrating 24 small farms in to the cluster farming arrangement by providing agri-business services and facilitating their access to finance.

#### V. KNOWLEDGE VALUE

**Lessons Learned.** The project will draw on lessons learned from both the IDB and Carana. In December 2007, the IDB approved a US\$ 20 million investment loan agreement to the Government of Guyana for the implementation of an Agricultural Export Diversification (ADP) Program. The purpose of the operation was to establish facilitation services and institutions to increase exports from the fruits, vegetables and meat sectors<sup>11</sup>. The program is credited with generating strong momentum in the clusters for fruits and vegetables and aquaculture. It faced challenges in mobilizing and maintaining cooperation among farmers, thus a key lesson was that there needs to be an embedded entity to facilitate coordination and provide key services to farms in the cluster. Another lessons learned was that, though challenging, the cluster needs to be tailored to each crop’s production cycle and characteristics in order to secure buyers.

The previous interventions that Carana implemented with funding from USAID (the Guyana Trade and Investment Support (GTIS) Project) and subsequently the Department for International Development (DFID) of the United Kingdom, also provide valuable lessons. First, scale was critical in both input purchasing and production. This not only included grouping farmers to make bulk purchases and achieve certain economies of scale but also pooling production to consistently meet volumes required by buyers. Second, economic feasibility data should drive planting decisions versus yield data. Initially, Carana grew a large basket of crops with basil being one of the top yielding herbs. However, the option was not pursued because logistically, basil was simply too expensive to ship from Guyana with too great a risk. Basil must be picked, shipped and arrive at market in a tight 24 hour window. Third, experimentation on the crop mix must be continuous to improve production and bring down costs. CADP is built with an emphasis on research and development to continually look at new crops, fish species and input packages that can provide good margins and be efficient.

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<sup>11</sup> Program LO-1929/BL-GY.

Lastly, the recent MIF study, “Strengthening Sustainable Agriculture in the Caribbean”<sup>12</sup>, highlights strengthening farmer clusters as a priority area for further donor investment as support. Clusters are a tool for pooling resources, establishing links with other sectors, and building resilience.

**Knowledge gap.** The model that will be implemented will bring a new perspective to MIF’s agricultural project portfolio. The Linking small farmers to high value markets (NAM) agenda knowledge gaps that will be addressed are: a) what innovative models exist within specific value chains; b) what organizational structures can be used to encourage the work with unorganized farmers; and c) how can smallholder farmers be linked to anchor companies so they can position their products in a sustainable way?

**Key Evaluation Questions.** The project will incorporate a mid-term evaluation and a final evaluation. The project seeks to incubate an innovative cluster model which, if successful, would provide invaluable knowledge for future projects using SME clustering. Additionally, the project can be replicated through the region and has potential for local expansion.

Key evaluation questions for the final assessment may include: (i) to what extent did the anchor farm model result in sustainable and economic benefits for the smallholders producers; (ii) did the contract farms become profitable and how long did it take for them to perceive economic benefits; (iii) how sustainable are the linkages between contract farms and the anchor firms? How satisfied are the small farmers with the model; (iv) are the jobs created sustainable? Can the model incorporate more jobs in the future; (v) is this model replicable in other sectors/regions/countries and which are key success factors of this anchor farm model; (vi) what are the main lessons that have emerged from this innovative cluster model; (vii) how can the effectiveness and sustainability of the anchor farm model be strengthened; (viii) are the contract farms capable of accessing new markets without the support of the anchor farm?

## VI. EXECUTING AGENCY AND STRATEGIC PARTNERS

### Executing Agency

The project will be executed by CARANA Corporation, a member of the Palladium group of companies. CARANA is an international services contractor that has worked on other IDB, DFID and USAID projects. Through the management of more than 250 projects, CARANA has lifted large numbers of people out of poverty through sustainable investment, policy reform and job growth. Its Agribusiness Practice has experience in multiple value chains, product areas, and markets and has been particularly successful at moving up-market with higher value products.

CARANA has been active in Guyana since 2004 where it has implemented two key interventions, the USAID Guyana Trade and Investment Support (GTIS) project and the succeeding DFID funded Guyana Agricultural Diversification program. Both these projects have provided lessons and experiences that have shaped the design of the CADP farming model.

### Other Strategic Partners

- a) University of Guyana will be strategic partner for the development of human capital to work on cluster farms. A trained pool of skilled workers is need to provide key services (farm management and equipment maintenance) to

<sup>12</sup> Tandon, Nidhi; “Streghtening sustainable agriculture in the Caribbean”, Compete Caribbean, 2013



to farms in the cluster. The University and Carana will collaborate on an internship/trainee program under which 60 students will be trained in related fields to provide support services to CADP and contract farms.

- b) Financial institutions like Republic Bank or the Guyana Bank of Trade and Industry (GBTI) are also key partners for the project. Because they should provide adequate financial products for the level of investment required by contract farms to build out farms and access critical technologies such as drip irrigation technology.

## VII. COUNTRY OFFICE COMMENTS

The proposed intervention is aligned with key development challenges and priorities as articulated in the Inter-American Development Bank's Country Strategy for the Co-operative Republic of Guyana 2012-2016 in that it addresses the need for product development and modernization of traditional sectors such as agriculture as well as the infusion of private investment for economic development. The country strategy specifically articulates the need to "strengthen capabilities for private firms to facilitate adoption of new production technologies and encourage product and export diversification". The intervention is structured to promote new investment in modern agricultural practices and to link producers to existing markets via the Executing Agency's anchor farms.

Carana Corporation has a track record of commercially oriented development initiatives aimed at building sustainable market oriented exports in sectors of the country. Based on over a decade of working in Guyana including support to Guyana Trade and Investment (GTI) projects and management of a Compete Caribbean project to develop sports fishing in the Rupununi, Carana Corporation has developed in depth knowledge of the culture, business climate and pragmatic approaches to export markets that will inform implementation of this project. The project can play a catalytic role in transforming Guyana's subsistence farming to a viable and scalable export oriented business sector that can provide sustainable and higher value jobs for the local population.