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Infrastructure Needs Assessment for Distribution of Frozen Processed Potato Products in Southeast Asian Countries

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The purpose of this project is to assess the commercial feasibility of investments in cold chain infrastructure improvement needed to distribute frozen foods in and beyond major cities in Thailand and the Philippines. Quick-serve restaurants and US shippers have successfully penetrated the major urban centers of Manila and Bangkok. Growth opportunities are expected in the secondary cities. The objectives of this project are to:

- (1) develop pilot projects illustrating business opportunities with commercial potential in the infrastructure needed for transportation and handling of frozen foods to secondary cities in the Philippines and Thailand; and
- (2) draw conclusions about feasibility of projects, using risk analysis based on economic conditions and institutional constraints.

A research team visited the capital cities and major secondary cities in the Philippines and Thailand during May and June 2000. While there, approximately 80 companies were interviewed including cold storage businesses, transportation service companies (shipping lines and trucking and railway cargo service companies), port authorities, frozen food companies, quick service restaurants, banks, and government officials.

Current Situation in Cold Chain Infrastructure

The main issue in distributing frozen processed potato products in the Philippines is insufficient quality cold storage, especially in secondary cities such as Bacolod and Cebu. The expensive inter island shipping cost from Manila to secondary cities is another bottleneck. Freight rates of inter island shipping are higher than international shipping charges. For example, the cost from Hong

Kong or Japan to Manila is about \$1500 per 40-foot container while from Manila to Cebu the cost is \$1800 to \$2000 per 40-foot container. Third, although Manila and Cebu have modern seaports, the port in Bacolod is incapable of handling 40-foot containers. Because the seafood industry in Bacolod is declining, cold storage and port facilities have not been developed. It was also noticed that traffic congestion is a serious problem in Manila and makes inter-city deliveries more difficult.

Compared with the Philippines, Thailand has less severe problems in distributing frozen processed potato products from ports to secondary cities. Private cold storage facilities (owned by frozen food exporters and importers, including an importer of french fries) are modernized and can meet strict quality standards. In addition, the capacity is enough to satisfy current demand. There is only one public cold storage available in the Bangkok area and none in the other cities visited because of lack of demand. Ports in Thailand and Laem Chabang have good facilities to handle imports and exports of frozen food products. Thailand has a well-built highway system connecting the Bangkok ports to secondary cities.

Cold storage companies in both countries cited high electricity costs as a major problem. In some of the secondary cities in the Philippines (Cebu City, Bacolod City) and Thailand (Phuket), electricity blackouts and erratic voltage are also a constraint.

Proposed Pilot Projects

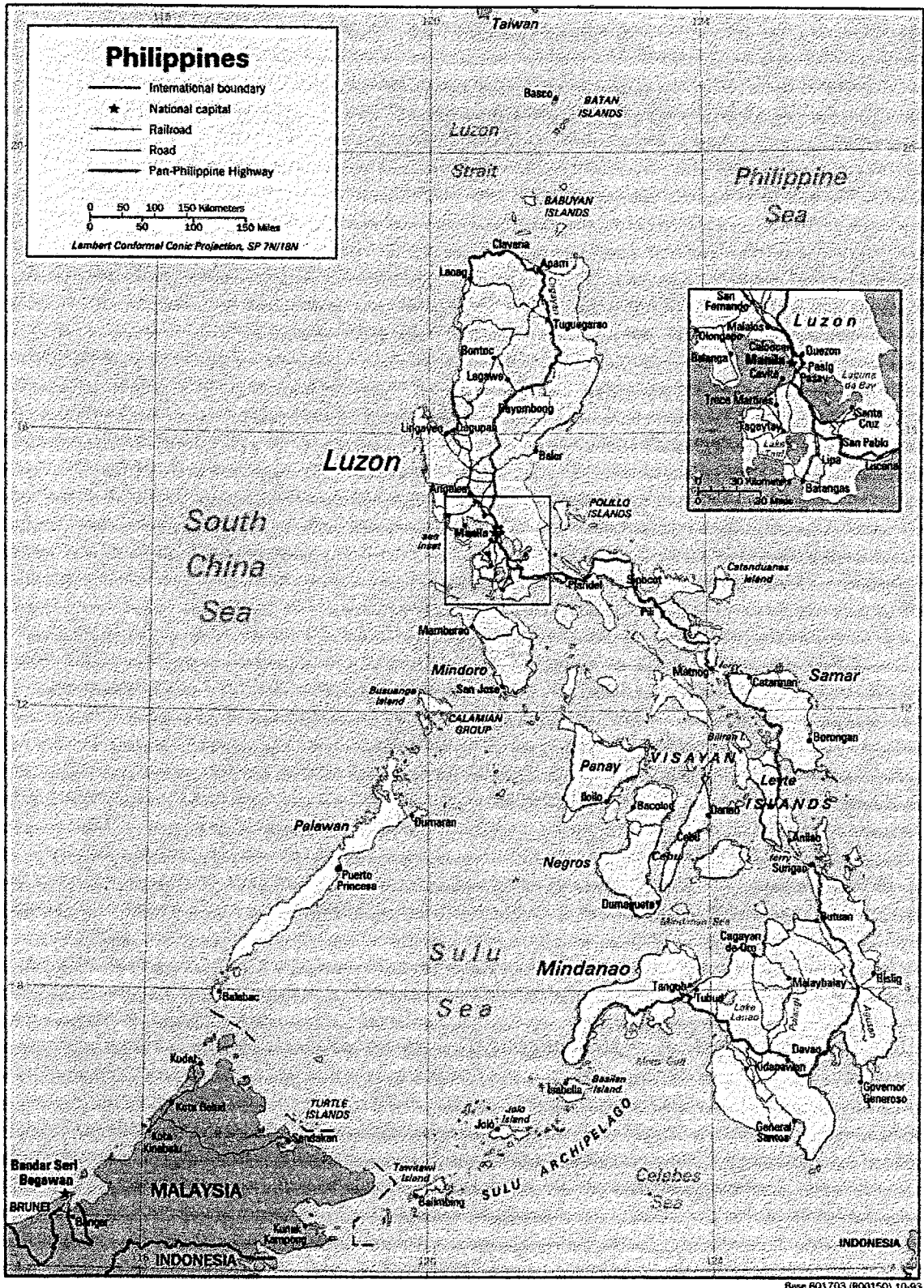
Proposed projects in the Philippines include:

- (1) Construction of new public cold storage warehouses in Cebu City and Cagayan de Oro.
- (2) Add more outlets to an inter-island vessel to accommodate a larger volume of refrigerated containers.

Proposed projects in Thailand include:

- (1) Construction of a new public cold storage warehouse in Phuket.
- (2) Expansion of reefer van fleet in Phuket.

The preliminary financial analysis and risk assessment for the proposed projects is available if potential investors are interested.



Base 601.703 (R00150) 10-93

Figure 1. Shaded Relief Map of the Philippines.

Source: PCL Map Collection. The University of Texas at Austin. "World Atlas and Maps: Shaded Relief Map of the Philippines." <<http://geography.about.com/science/geography/library/maps>>.

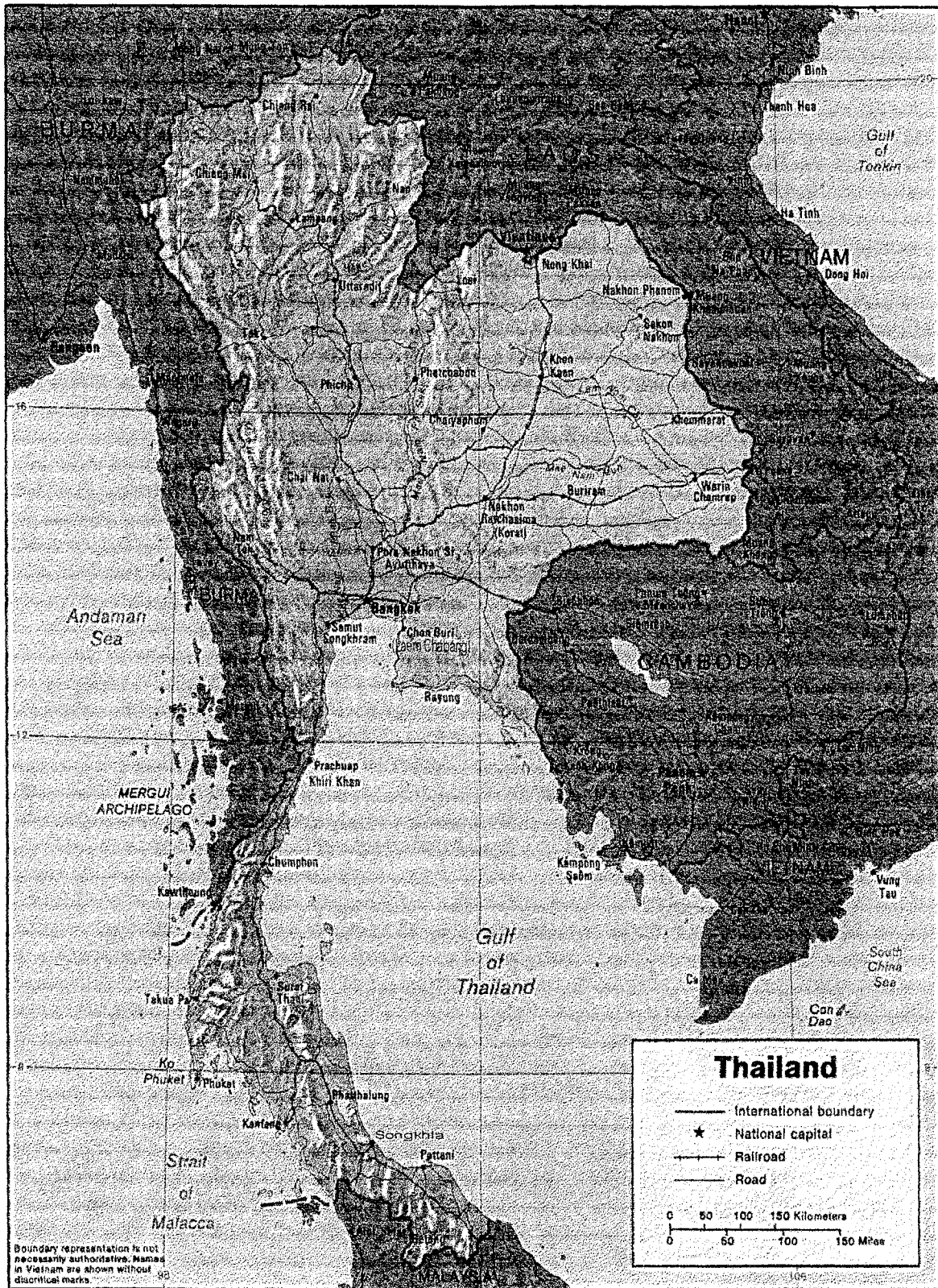


Figure 2. Shaded Relief Map of Thailand.

Source: PCL Map Collection. The University of Texas at Austin. "World Atlas and Maps: Shaded Relief Map of Thailand." <<http://geography.about.com/science/geography/library/maps>>.

Summary

The project team feels that the market is well developed and will continue to expand in the Philippines. Investment in cold storage warehouses in Cebu City and Cagayan de Oro and adding more outlets on inter-island vessels in the Philippines will be feasible given its declining tariffs, market situation, and competition. The level of capacity utilization is critical to the financial returns expected on the cold storage investments.

Cold chain infrastructure in Thailand is basically sufficient to meet the current distribution needs of frozen processed potatoes. Thai consumer acceptance of western-style quick-serve restaurant foods is lower than the level observed in the Philippines. However, it is possible that extra cold storage in Phuket and trucking fleets near ports could help improve the efficiency of distribution if the demand increases in the near future.

Innovative Marketing Opportunities for Small Farmers: Local Schools as Customers

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The U.S. Department of Agriculture's (USDA) Agricultural Marketing Services (AMS) and the Natural Resources Conservation Services (NRCS), the West Florida Resource Conservation and Development Council (WFRCDC), and the Small Farmer Outreach, Training, and Technical Assistance Project, Florida A&M University (FAMU) have worked together over the past 3 years on a pilot project titled: *Innovative Marketing Opportunities for Small Farmers: Local Schools as Customers*. A group of small farmers in the Florida Panhandle organized into the New North Florida Cooperative and established a central location in Marianna, FL, 70 miles west of Tallahassee. The Cooperative recognized a considerable opportunity in serving local school districts with fresh agricultural products.

The Cooperative overcame initial difficulties, including lack of organization, economic difficulties, social attitudes, existing customer preferences, and lack of equipment. Realizing that effective organization was critical, these limited-resource growers formed a management team as a governing body for

the Cooperative. The management team addressed problems and handled day-to-day business activities in a unified, methodical way. The Cooperative acquired capital and purchased necessary startup equipment, such as a refrigerated trailer, cutting machines and wash sinks. The Cooperative developed a good working relationship with the Food Service Director for the Gadsden County School District by providing high-quality produce, prompt deliveries, fair prices, and courteous professionalism. The vending experiences of the 1997/98 and 1998/99 school years were positive steps for the Cooperative in building a long term, reputable business. The Cooperative's main product was fresh-cut leafy greens, but watermelons, strawberries, blackberries, and muscadine grapes were also sold. Word of mouth advertising has portrayed the Cooperative as a reputable vendor and opened doors of opportunity in other school districts, including Jackson, Leon, and Walton Counties.

The project's objectives for the 2000/2001 school year are to expand current marketing and distribution of agricultural and value-added products through additional, non-traditional marketing channels including additional school districts, military bases, and prisons.

Innovative Production and Marketing Systems to Provide Small Farmers with Sustainable Job and Income Opportunities

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Objectives

- Identify markets for various horticultural and value-added products and services
- Develop production scenarios to support identified market demand
- Develop integrated production, handling, and storage systems to support vertical market opportunities
- Estimate cost and revenue streams for selected value-added products and services
- Evaluate project's effectiveness and contribution to small farmer sustainability

This project is a two-year cooperative agreement with the U.S. Department of Agriculture, and