

# GUAM

## BUSINESS OPPORTUNITIES REPORT

PREPARED FOR THE UNITED STATES DEPARTMENT OF THE INTERIOR  
OFFICE OF INSULAR AFFAIRS



**NATALIE KULIK – SEPTEMBER 2004**  
**UPDATED BY KERI MARUSKA – JULY 2007**

Disclaimer: This document has been prepared by MBA students, or recent graduates, to disseminate information on Guam for the purposes of the 2007 Business Opportunities Conference sponsored by the U.S. Department of the Interior, Office of Insular Affairs. The views and recommendations contained in this document, however, are solely those of its author and not the U.S. Government or any agency or officer thereof. Those intending to initiate ventures in this location are advised to conduct independent due diligence.

## TABLE OF CONTENTS

---

|  |           |
|--|-----------|
| <b>EXECUTIVE SUMMARY .....</b>   | <b>1</b>  |
| <b>BACKGROUND.....</b>   | <b>2</b>  |
| <b>COMPETITIVE AND COMPARATIVE ADVANTAGES .....</b>                    | <b>3</b>  |
| Infrastructure.....  | 3         |
| Information and Communication Technology.....                          | 3         |
| Financial Services .....   | 4         |
| Transportation .....   | 5         |
| Commercial and Residential Real Estate .....                           | 5         |
| Educational Facilities.....  | 6         |
| Business Incentives.....   | 6         |
| Qualifying Certificates Program .....                                  | 6         |
| Foreign Sales Corporations (FSC).....                                  | 7         |
| Manufacturing and Trade Incentives .....                               | 7         |
| Immigrant Investor Visa Program .....                                  | 8         |
| Business Climate.....  | 8         |
| Geographical Location.....   | 9         |
| <b>BUSINESS OPPORTUNITIES .....</b>                                    | <b>10</b> |
| Construction and Infrastructure .....                                  | 10        |
| Professional and Financial Services.....                               | 10        |
| Recycling .....  | 11        |
| Education and Training: Regional Testing & Certification Program ..... | 13        |
| Fisheries and Aquaculture.....   | 13        |
| Transshipment.....   | 14        |
| Renewable Energy and Green, Sustainable Buildings.....                 | 15        |
| <b>SUMMARY OF POTENTIAL BUSINESS OPPORTUNITIES.....</b>                | <b>16</b> |
| <b>APPENDIX.....</b>   | <b>18</b> |
| <b>ABBREVIATIONS .....</b>   | <b>19</b> |
| <b>BIBLIOGRAPHY .....</b>  | <b>20</b> |

**Photo credits:**

Tumon Tourist District, *The Guam Chamber of Commerce*  
Hagåtña, capital of Guam, *Natalie Kulik*

## **EXECUTIVE SUMMARY**

---

Guam is a U.S. island territory located at the Asia-Pacific crossroads within a few hours flight to Japan, Korea, China, Hong Kong, the Philippines and Australia. It is the closest U.S. soil to these rapidly growing economies.

The island is a regional economic hub due to its strategic location, developed infrastructure, and modern telecommunications. Satellite connectivity and widely available broadband and high-speed internet connections make Guam an active member of the global business community.

Guam's financial infrastructure, including a number of local and regional banks like CitiGroup and the Bank of Hawaii, provides support for a variety of business operations. Major tax, financial advisory, law, and accounting firms (such as Ernst & Young) have chosen Guam as their regional headquarters. The island also has a developed commercial real estate market. Modern office space, major hotel chains, tropical resorts, entertainment facilities and shopping malls are all easily accessible.

Guam's deep-sea harbor is one of the largest in the Pacific and serves as a transshipment hub for other islands economies in the Western Pacific. A modern international airport serves the island and other locales within the region with frequent regular flights to the continental U.S., Japan, Korea, the Philippines, Indonesia and the other islands in Micronesia. The airport has been chosen by Continental Airlines as its Micronesian hub.

The island's tourism infrastructure accommodates over one million tourists annually. Major hotel chains like Sheraton, Hilton, Marriott, Hyatt, and Westin offer first-class conference and meeting facilities and have become an integral part of Guam's business environment.

As a territory, Guam enjoys a U.S. dollar economy, the business infrastructure of the U.S., the protection of U.S. laws, and a high level of security due to the presence of the U.S. Navy and Air Force.

As Guam diversifies its economy, the island offers attractive business opportunities for private sector firms in a variety of industries, ranging from ship maintenance and professional certification to international mediation and arbitration services.

Significant growth is expected over the next 10 years, due to the relocation of 8,000 Marines from Okinawa to Guam. This will require over US\$10 billion in new construction and procurement for infrastructure to support the enlarged presence. Other branches of the military are also moving smaller units to Guam. This will also involve further investment by the Department of Defense.

## BACKGROUND

| KEY ECONOMIC STATISTICS           |              |  |        |
|-----------------------------------|--------------|--|--------|
| Population (July 2007 est.)       | 173,456      | Gross Domestic Product (2005 est.) (GDP, \$ billion) | 2.5    |
| Total Labor Force (2002 est.)     | 62,050       | % Tourism  | 60%    |
| Total employment*                 | 51,200       | % Government, Military                               | 30%    |
| Private sector                    | 35,300 (69%) | % Other  | 10%    |
| Local government                  | 12,700 (25%) | GDP Per Capita (\$)                                  | 15,000 |
| Federal government                | 3,200 (6%)   | Imports (US\$ million) (2004 est.)                   | 701    |
| Unemployment Rate (%) (2002 est.) | 11.4         | Exports (US\$ million) (2004 est.)                   | 45     |

Sources: 2007 update: CIA World Factbook (updated June 19, 2007)  
 2004: GovGuam, Bank of Hawaii (2003), Census 2000, \* 2003 official estimates

### Geography

Located in the Pacific Ocean, just southeast of Japan, Guam is an island of approximately 212 square miles (549 square kilometers). Much of the western and central parts of the island are highly developed, while much of the southern part is less developed and has spectacular pristine landscapes and picturesque villages.

### Government and Political System

Guam's government is made up of an executive, legislative and judicial branch. A Governor and Lieutenant Governor, Felix P. Camacho and Michael W. Cruz, M.D., respectively, head the executive branch. Both of these positions are elected every four years. Guam's legislative branch is called the Senate and is comprised of 15 members who serve two-year terms. The judicial branch includes the U.S. District Court of Guam, with appeal rights to the Federal 9<sup>th</sup> Circuit Court of Appeals. There is also a Superior Court of Guam and the Supreme Court of Guam.

Guam has one congressional delegate to the U.S. House of Representatives, a post currently held by Madeleine Z. Bordallo.

## COMPETITIVE AND COMPARATIVE ADVANTAGES

Guam has a number of major advantages it can offer to private businesses and individuals who seek to operate and expand their businesses.

### *PRIMARY:*

- ◆ **Infrastructure:** Airport and seaport hubs; established U.S. banking system; telecommunication and information technologies; Class A and B commercial and residential real estate; educational facilities including university, college and certification centers providing Certified Professional Accountant (CPA) and other tests;
- ◆ **Business Incentives:** Tax rebates and exemption from U.S. import duties for exports from Guam; Immigrant Visa Investor Program (\$0.5 million minimum qualifying investment);
- ◆ **Business Climate:** Business-friendly political environment; Guam government committed to economic growth;
- ◆ **Location:** Proximity to Asia; gateway to neighboring island economies in Micronesia; a hub for regional headquarters;
- ◆ **Governance:** U.S. jurisdiction and courts, U.S. tax system; established rule of law; and U.S. dollar;
- ◆ **Security:** Strong military presence, political stability.

### *SECONDARY:*

- ◆ **Labor:** Diverse American and Asian workforce; multicultural and multilingual population; higher educational level compared to neighboring areas;
- ◆ **Established Business Clusters:** Hotel industry; financial and legal services; shipping;
- ◆ **Climate:** Tropical marine; generally warm and humid, moderated by northeast trade winds; dry season (January to June), rainy season (July to December); little seasonal temperature variation.

### **Infrastructure**

In comparison to both the small island economies of the Pacific and the developing nations of the region, Guam's infrastructure is more developed. Guam's infrastructure was built to U.S. standards and meets the expectations of businesses.

### **Information and Communication Technology**

Guam's telecommunications infrastructure is one of the most advanced in the Pacific region, and Guam has gained a reputation as a trans-Pacific telecommunications hub. Numerous international providers, including Sprint, MCI, GTE, IT&E and AT&T, link the U.S. and Asia through Guam via undersea fiber-optic cables. Integrated Switching Digital Network (ISDN), DSL, cable modem connections for local Internet access, as well as Internet DS3, WiFi Hot Spots and wireless broadband high-speed (WBA) lines to the U.S. are solidly established.

## COMPETITIVE AND COMPARATIVE ADVANTAGES

Growth in both the Internet sector (served by seven ISPs) and the cellular mobile market (served by five operators) has been substantial since early 2001.

***Cellular Network and Internet Providers.*** The telephone network features digital switching and fiber inter-office facilities as well as cellular service. The cellular connections range from roaming to wireless Digital Personal Communication Service (PCS) technology. Private telecommunication companies such as IT&E have unveiled new earth station satellites to increase worldwide transmissions. Because the FCC considers Guam domestic, local rates and access to toll-free numbers are similar to those in the U.S. mainland. Calling Guam is as simple as making a call to another state. The rates are also comparable to the local charges of U.S. providers.

***The Pan-Pacific Education and Communication Experiments by Satellite (PEACESAT) Program.*** PEACESAT facilitates both public service and private sector communications. This program manages telecommunications networks in the Pacific region that provide Internet access, videoconferencing and multipoint bridging, voice communication and data management services.

PEACESAT is supported by the National Telecommunications and Information Administration (NTIA) of the U.S. Department of Commerce. Guam also uses the Geostationary Operational Environment Satellite (GOES) and benefits from NTIA's agreements with the National Oceanic and Atmospheric Administration (NOAA) and the National Aeronautics and Space Administration (NASA) to provide tracking, telemetry, and control support.

PEACESAT provides a **fiber optic connection** to Guam as well as ISDN. Robust connections include an **OC-3 connection** to the Asia-Pacific Applications Network (APAN). The full operational use of the 8.2MHz S-Band transponder bandwidth of GOES-7 provides **satellite capacity** for Guam communications.

### **Financial Services**

Guam's **banking and financial institutions** provide a full range of services including letters of credit, collections, money transfers, foreign exchange, bank drafts, automated tellers, import and export financing, money markets, real estate appraisals, commercial and residential real estate loans and complete personal and business banking services.

The island's financial system includes commercial banks, a savings and loan association, investment banks, finance companies and venture capital firms. Bank of Hawaii, Citibank, First Commercial Bank, First Hawaiian Bank, Hong Kong Bank, First Savings & Loan of America, Pacific Islands Development Bank and Union Bank are some of the major financial institutions operating on Guam.

## COMPETITIVE AND COMPARATIVE ADVANTAGES

### Transportation

**Airport Hub.** Guam is serviced by a number of international and commuter airlines. Regular flights connect Guam to the continental U.S., Japan, Hong Kong, the Philippines, Korea, Taiwan, Australia, Indonesia, the Republic of the Marshall Islands, the Republic of Palau, and the Federated States of Micronesia.

Continental Airlines has served the region for over 35 years, and has established Guam as its **regional hub** (See Annex II). This provides a number of convenient options for travel between the U.S., Asia Pacific and the Pacific, including Continental’s Island Hopper flights and ‘Magnificent Micronesia’ program.

**Seaport Hub.** Guam has the largest U.S. **deep-water port** in the Western Pacific, and currently handles about 2 million tons of cargo a year. In Fiscal Year 2006, the port handled a total of 144,194 twenty-foot equivalent units (TEU) and serviced 1,289 vessels. From FY 2005 to FY 2006, Cargo Vessel Calls increased 4% while Total Containers Handled increased 0.5%.<sup>1</sup>

| Facility       | Length, ft | Depth, ft | Description                                  |
|----------------|------------|-----------|--|
| Pier F-3       | 750 x 85   | 34        | General cargo, passenger, fishing vessels    |
| Piers 4-6      | 1970       | 34-38     | Container/general cargo                      |
| Hotel wharf    | 500        | 34        | Passenger and fishing vessels, general cargo |
| Golf Pier      | 370        | 50        | Liquid bulk tankers, operated by Mobil       |
| Container Yard | 26.5 acres |           | 180 stalls for containers                    |

### Commercial and Residential Real Estate

Guam allows non-islanders to own real estate. Guam has a well developed commercial and residential real estate market, with both office and warehouse space, as well as vacant land suitable for construction. Most business offices are located in Hagåtña (also known as Agana), the capital of Guam, and Tamuning. Many warehouses are located in the Harmon Industrial Park.

**Commercial Real Estate.** Property prices vary by location. A commercial building in Hagåtña is valued at approximately \$61/ft<sup>2</sup>. A similar property in Tumon, a major tourist center, commands \$158/ft<sup>2</sup>. Commercial retail space rents range from \$5/ft<sup>2</sup> to \$15/ft<sup>2</sup> and may require additional 5-10% rent based on a percentage of sales.

**Residential Real Estate.** The average price for a 3-bedroom/2-bath family home starts at \$120,000 and rises to \$370,000 for luxury condominiums in Tumon. Monthly rents range from \$1,200 per month for townhouses in small villages and can be as high as \$4,500 in Tumon. Land lots with water and power infrastructure, approximately 2,000 ft<sup>2</sup> in size, are on sale from \$25/ft<sup>2</sup> for inland properties to starting at \$62/ft<sup>2</sup> for ocean front properties  
*Note: Prices are quoted from July 2004 listings of major Guam real estate agencies and brokers.*

<sup>1</sup> Port Authority of Guam website: [www.portofguam.com](http://www.portofguam.com) (July 17, 2007)



## COMPETITIVE AND COMPARATIVE ADVANTAGES

### **Educational Facilities**

Guam's educational system mirrors that of the continental U.S. Guam has 37 public and 21 private schools. Two public elementary schools, a public middle school, and a public high school are currently being built, which will increase Guam's number of public schools to 41. The University of Guam (UOG) and Guam Community College (GCC) are accredited by the Western Association of Schools and Colleges. UOG provides not one of the most comprehensive ranges of programs in the region (with an enrollment of approximately 3,500 students) also has a campus with modern facilities (and one of the best ocean views on the island).

### **Business Incentives**

Guam provides a comprehensive program of incentives for businesses aiming to operate from Guam. Among them are: Qualifying Certificates (QC), which allow for tax rebates and exemptions for investors and trade incentives. Trade incentives include favorable import duties to the mainland U.S. for products manufactured on Guam. The island also offers an attractive personal income tax structure.

### **Qualifying Certificates Program**

***Tax Rebates and Exemptions for Qualifying Investors.*** Guam's income tax code mirrors the U.S. Internal Revenue Code. The government of Guam offers a variety of tax incentives to encourage the development of new businesses on the island. One such incentive is through the QC Program, which rewards companies based on their investment commitment and ability to generate new employment, to create an economic activity of value to Guam and to replace imports.

| <b>Industry</b>                | <b>Minimum investment, US\$</b> |
|--------------------------------|---------------------------------|
| Agriculture, aquaculture       | 10,000                          |
| Home Manufacturing             |                                 |
| Commercial Fishing             | 25,000                          |
| Services                       | 50,000                          |
| Tourist Facilities             |                                 |
| Insurance (including captives) | 100,000                         |
| Affordable Housing             |                                 |
| Manufacturing                  |                                 |
| Hotels, Motels                 | 500,000                         |
| Hotels, Business Class         | 1,000,000                       |
| Hotels, First Class            | 5,000,000                       |

Qualifying firms may receive:

- ◆ Up to 75% tax rebate on corporate income tax for up to 20 years, 100% rebate for recycling for 10 years;
- ◆ Up to 100% abatement on real property income taxes up to 10 years;
- ◆ Up to 75% rebate on corporate dividend tax up to 5 years;



## **COMPETITIVE AND COMPARATIVE ADVANTAGES**

---

- ◆ Up to 100% abatement on Gross Receipts Tax (GRT) on petroleum and alcoholic beverages made in Guam for up to 10 years;
- ◆ 100% exemption of GRT on income from recycling and transshipment of recyclable materials for up to 10 years;
- ◆ 100% exemption on Use Tax for companies engaging in recycling and transshipment of recyclable materials up to 10 years

***Insurance Industry and Trust Program Incentives.*** Guam Public Law No. 23-109 authorized the issuance of QCs for Guam insurers, and Law No. 25-73 (Guam Trust Incentives Act) established mechanisms for the creation and regulation of trust companies on Guam. Incentives for insurers include the following:

- ◆ 100% abatement of GRT on insurance premiums and other revenues;
- ◆ 100% tax rebate on all corporate income tax of an insurance underwriting entity located on Guam;
- ◆ Renewal of benefits for an additional 20-year period, provided the trust remains in good standing and in compliance with Guam laws and regulations.

Insurance companies willing to establish their Asian headquarters in Guam will be able to operate both outside of and within Guam without paying local taxes on the worldwide income. They will also have an advantage of U.S.-mirrored infrastructure, banking and legal services.

The incentives of the Trust Program are similar to those for insurance industry.

### **Foreign Sales Corporations (FSC)**

The Deficit Reduction Act of 1984 designated Guam as one of the sites for the establishment of FSC to facilitate tax savings. The annual fees for FSC range from \$400 - \$1,000, depending on the size of the company. Over 300 U.S. manufacturers have already established their FSC on Guam.

### **Manufacturing and Trade Incentives**

***Duty-free Export to the Continental U.S.*** The General Head Note 3(a) (iv) of the Harmonized Tariff Schedules of the U.S. (HTSUS) allows duty-free entry into the U.S. Customs Territory for the items manufactured or assembled in Guam and that meet certain requirements of the "country of origin." The requirements for goods manufactured on Guam are as follows:

- i) At least 50% of the total value of the finished product must be added on Guam;
- ii) The goods are to undergo 'substantial transformation';
- iii) The goods are to be imported directly from Guam into the customs territory of the U.S.

To make Guam's manufacturing industry more competitive with neighboring Asian economies, one of Guam's recent initiatives is to amend the General Head Note 3 (a), to reduce the percentage to 30% of the finished product to be added on Guam, including such products as textiles and apparel.

## COMPETITIVE AND COMPARATIVE ADVANTAGES

---

***Reduced Tariff Rate - Generalized System of Preference (GSP).*** This program allows products manufactured on Guam to be imported by participating nations at a reduced tariff rate. Guam is the beneficiary of GSP with Japan, Australia and the European Common Market nations. Requirements of each participant may vary.

### **Immigrant Investor Visa Program**

The Immigrant Act of 1990 created the EB-5 Investor Visa category that allows investors to obtain permanent resident status in the U.S. (Green Card) through investment in a ‘new commercial enterprise’ in the U.S. While a \$1,000,000 investment qualifies for continental U.S., in the case of Guam the investment is only \$500,000. The funds can be phased over a two-year period, but are required to be committed in full at the time of application. The additional requirement is proof that the capital was obtained through lawful means and creation of at least 10 full-time jobs for U.S. citizens or permanent residents, excluding the investor and his/her immediate family members. *Important Note: For detailed information about this program, consult immigration authorities and legal counsel.*

### **Business Climate**

***Business-Oriented Government Policy.*** Guam’s government is committed to fostering an investor-friendly business environment, to ensuring a stable political environment, and to promoting economic development for the island.

Guam’s initiatives have ranged from pioneering the successful privatization of government-owned entities in the region and launching large-scale beautification projects to spearheading substantial investments in island infrastructure.

These programs are supported by the Guam Economic Development and Commerce Authority (GEDCA), the investment and business development arm of the government. Such initiatives have laid a solid foundation for Guam to be on the fast track to emerging as an important regional business hub.

The island has already rightfully earned the reputation of being a showcase and driving force behind the development of important industries region-wide. Guam is a regional hub for such sectors as Tourism and Leisure, Shipping and Education.

***Vibrant Business Community.*** Guam has a number of very active and truly multinational and multicultural business community groups, including the Guam Chamber of Commerce, the Guam Chinese Merchants Association, the Filipino Business Community, the Guam Hotel and Restaurant Association, the Guam Captive Insurance Association, the Small Business Development Network (SBDN) supported by the Small Business Administration (SBA), the Guam Contractors Association, and the Citibank Women in Business Program.

## **COMPETITIVE AND COMPARATIVE ADVANTAGES**

---

### **Geographical Location**

As a U.S. territory, Guam's location in the Western Pacific provides an excellent base for companies looking for regional headquarters or representation in Asia. The island is perfectly positioned for export-import businesses to capitalize on the benefits and import duties for U.S.-flag jurisdictions when exporting goods to the U.S. mainland. It also provides an opportunity to capitalize on existing banking and legal services infrastructure, and telecommunication and data management services.

## **BUSINESS OPPORTUNITIES**

---

Guam is a small island economy with a modern infrastructure and developed tourism industry (60% of GDP). The current economic policy pursued by the Government of Guam in cooperation with the Guam Chamber of Commerce and private sector is to diversify the island's industrial base, opening it up to new opportunities and investors, encouraging entrepreneurship and assisting small businesses.

### **Construction and Infrastructure**

***Guam Military Buildup.*** Beginning in 2008, The U.S. military will start the process of moving 8,000 Marines from Okinawa to Guam. The move is estimated to cost \$10.3 billion, with Japan contributing \$6.1 billion toward the cost and the U.S. contributing \$4.2 billion. The military move will create significant opportunities in construction and infrastructure on Guam, and both the civilian and contracted workforce is expected to grow with the military buildup. Overall, Guam's population is expected to increase by 30,000, or 20%. This will create demand for almost everything, including housing, shopping, restaurants, and services.

Several immediately upcoming military construction projects are listed below:

- \$10 million to upgrade the Northwest Field infrastructure
- \$5.8 million to build a technical training facility at Northwest Field of Andersen Air Force Base
- \$45.2 million for a fitness center at Naval Base, Guam
- \$59.4 million to improve security of electrical systems at Naval Base, Guam
- \$51.8 million to build Phase I of the Kilo Wharf extension
- \$31.4 million to build Phase I of a potable water distribution system at Naval Base, Guam
- \$40.8 million to repair and upgrade the Naval Base, Guam wastewater treatment plant

### **Professional and Financial Services**

***Captive Insurance and Guam-based Trusts.*** Captive insurance refers to a subsidiary corporation established to provide insurance to the parent companies and affiliates not primarily engaged in the business of insurance. A captive may be a single-parent shareholder (pure captive), or owned by a group of shareholders with similar captive risks.

This approach provides an option for many corporations and groups who wish to manage risks by underwriting their own insurance rather than paying premiums to third-party insurers. The captive coverage may include worker's compensation, property, liability, employee benefits or malpractice.

## BUSINESS OPPORTUNITIES

### Showcase: Bermuda

- ◆ Over two years the consolidated gross premium of Bermuda insurance companies grew 123% to \$43 billion in 2003.
- ◆ The fastest growing group of companies are recently established companies taking advantage of new captives, e.g. pet reinsures.
- ◆ Currently, over 75% of the 50 largest healthcare systems in the U.S. buy at least a portion of their coverage in Bermuda.

### Showcase: USA

- ◆ U.S. rules permit employers to fund their employee benefit programs through the use of captive insurance companies.
- ◆ In 2000 the U.S. Department of Labor (DOL) waived restrictions of the Employee Retirement Security Act (ERISA) for Columbia Energy, thereby allowing a captive to underwrite long-term disability insurance for its employees.
- ◆ In 2003 DOL exempted ADM company, allowing it to insure certain company's benefits plans through a captive.

Guam has the necessary infrastructure and financial services to further develop the captive insurance industry on the island. The attractive QC program that allows rebates up to 100% provides an opportunity for companies, especially new ones, to consider captive insurance alternatives and to choose Guam as their captive domicile.

***Guam Regional Arbitration and Mediation Center.*** Guam is positioned as a cost-effective and efficient solution for alternative dispute resolution in Asia. Forecasts predict a continuous increase in litigation costs in the U.S. court system. At the same time, Asian arbitration centers experience delays and also may use arbitration rules that do not exactly mirror those in the U.S. In addition, political and credibility issues in some locations may preclude its arbitration centers' popularity with U.S. companies.

### Showcase:

#### Asian Countries Pursue the Arbitration and Mediation Opportunity

- ◆ Singapore International Arbitration Center opened in 2002 and reduced fees 40% to attract businesses from Hong Kong and China;
- ◆ Malaysia is working to establish itself as a place for low-cost arbitration.

In the last decade, the number of cases heard in Asian arbitration centers and the number of international arbitration cases involving Asian parties has increased significantly. This growth has been attributed both to increased foreign investment in Asia and the traditional preference of Asian businesses to settle disputes in private, avoiding court litigation. Given its geographical location, excellent infrastructure and U.S.-flag jurisdiction status, Guam provides a cost-effective and neutral place for the settlement of U.S. and Asian contract disputes.

## Recycling

***Ship Scrapping, Recycling and Sales.*** The U.S. Navy and U.S. Maritime Administration (MARAD) estimate that the aging military and merchant fleet comprises about 358 ships (as of November 2000 and taking into account those ships to be added through the year 2005), all of which require disposal. 206 of these ships are originally Navy ships; 145 are

## **BUSINESS OPPORTUNITIES**

---

those of MARAD; and seven are from other U.S. government agencies, primarily the U.S. Coast Guard.

In December 1997, the Secretary of the Navy suspended all efforts to sell U.S. Navy ships overseas for recycling due to concerns about safety and health at overseas recycling yards.

The increasing number of inactive fleet ships poses several problems: increased environmental risks, the possibility that ships might sink at their anchorages, and high maintenance costs.

According to a U.S. government report, the Federal government disposed of 1,449 ships domestically, between 1970 and 1989, only 351 of which were recycled overseas. In the late 1990s the domestic recycling of ships drastically fell. Since then, the Navy has initiated paid disposal of ships via the Ship Disposal Program (SDP). MARAD has suffered a similar paralysis of its once robust domestic recycling program. This has led to a steady accumulation of unwanted ships.

Ships awaiting final disposal are held at one of the Navy's four Naval Inactive Ship Maintenance Facilities (NISMFs) or at one of three MARAD inactive ship facilities. The ships are currently in different locations in the U.S., including Hawaii, California, Texas, Pennsylvania and Virginia.

One of the major considerations for establishing ship recycling facilities in Guam is the cost involved. The average annual storage costs for a ship awaiting disposal in these facilities is \$57,000 for the Navy and \$20,000 for MARAD ships. The towing preparation and towing costs average \$312,800 per ship or \$224 per mile, with average tow distance of 994 miles. The value of scrap metal differs substantially in the U.S. and overseas. To estimate the cost effectiveness for Guam, further studies are required as well as a specific cost revenue model.

Guam's status as a U.S. territory with a deep-water seaport in the Pacific, positions it to provide a solution for the U.S. fleet's backlog problem.

### **Showcase: Domestic U.S. Recycling**

The MARAD contract for recycling the merchant ship SS Builder was valued at about \$1.6 million. After including the value of the recovered material this converts to about \$2.1 million. However, applying different valuation approaches, the value may be up to \$6.4 million.

Guam Shipyard has facilities for ship dismantling and recycling, including a Marine Stewardship Council (MSC) certified dry dock operation. The Naval Sea Systems Command (NAVSEA) certification for the dock is pending.

Neighboring Asian countries are attractive markets for metal scrap and alloys exports.

## BUSINESS OPPORTUNITIES

### Education and Training: Regional Testing & Certification Program

The Asian market for U.S. education programs is growing as an increasing number of foreign students are traveling overseas to obtain degrees and professional certifications. English-speaking countries are preferred destinations for students from Japan, Korea, China and Taiwan. Students of Asian origin currently comprise 20-30% of enrollment in major U.S. universities.

According to the Institute of International Education, in 2005/2006 the net contribution to the U.S. economy by foreign students through tuition, fees and living expenses was approximately \$13.5 billion.

| Showcase: Impact of Foreign Students' Enrollment in the US |                      |             |                                       |                            |       |       |
|--|----------------------|-------------|---------------------------------------|----------------------------|-------|-------|
| State  | Enrollment 2005/2006 | Increase, % | Estimated expenditures, \$ (millions) | Country of origin, % total |       |       |
|  |                      |             |                                       | India                      | China | Korea |
| CA   | 75,385               | 0.5%        | 2,088.4                               | 7.4                        | 8.1   | 11.2  |
| NY   | 64,283               | 3.8%        | 1,786.3                               | 10.2                       | 8.0   | 10.3  |
| PA   | 22,418               | -1.6%       | 611.3                                 | 15.0                       | 12.0  | 9.9   |

Source: Institute of International Education, *Open Doors Report 2006*

Guam has a developed network of educational institutions that can host a wide range of regional professional certifications and educational programs.

Guam Community College (GCC) provides 11 academic and professional programs and 40 technical and vocational programs. GCC's average annual enrollment is 4,500 students. The University of Guam provides five Baccalaureate (BA, BA ED, BBA, BS and BSW) and Masters (MED, MPA, MS and MA) programs.

A number of private companies provide continuing education and professional certification, including Prometric, Sylvan Systems (e.g. CPA certification and other standardized tests like SAT, GRE, GMAT) and Pearson.

### Fisheries and Aquaculture

**Fisheries.** Guam's location, natural deep-water seaport and existing infrastructure provide opportunities to develop a fishing and an aquaculture industry. With an ever-increasing demand for fresh and frozen deepwater fish in neighboring Asian countries such as Japan and Korea, Guam is perfectly positioned for commercial fishing.

However, even with these resources, Guam currently imports approximately \$12 million worth of fresh fish annually for domestic consumption. Production from fisheries or aquaculture could substitute a portion of these imports.

Guam currently has the capacity to expand its fishing industry by developing a long line fleet and by expanding the capacity of Guam Fishermen's Cooperative. These undertakings could significantly reduce the island's dependence on imported seafood.



## BUSINESS OPPORTUNITIES

### Showcase: Global Demand for Fish

World Fish Center forecasts that by 2020:

- ◆ Per capita fish consumption is projected to grow throughout the developing world along with China's average annual rate of 1.3%
- ◆ Fish is expected to become about 20% more expensive relative to live-stock, vegetables and poultry
- ◆ Real fish prices are expected to rise 4 -16%, depending on the commodity

Guam provides a number of incentives for commercial fishing that include a liquid fuel tax exemption up to \$0.15 per gallon and a waiver of GRT. The government of Guam also subsidizes land lease at Hagåtña Boat Basin that is available to the Guam Fishermen's Cooperative Association.

**Aquaculture.** Guam possesses a number of opportunities in the aquaculture industry, and firms can benefit from such business incentives as the QC and GSP Programs.

### Showcase: Global Demand for Aquaculture Products

- ◆ The market for ornamental fish is estimated at approximately \$4.5 billion, with the U.S. share comprising 11%

World Fish Center forecasts that by 2020:

- ◆ Aquaculture will represent 41% of global fish production
- ◆ Aquaculture growth trends are almost twice as high as those for captured fish in most of the world

The Guam Aquaculture Growers Association is authorized to facilitate business development and licensing in the community.

Several local farms already produce such popular species, as clown fish and neon goby.

## Transshipment

Guam's port is one of the major shipping centers in the Western Pacific and has the capacity to move containerized, break-bulk and fresh fish cargo. It has convenient access to Guam International Air Terminal. Guam is also in close proximity to major Asian markets for fresh fish.

Ten shipping lines currently serve Guam's Port, connecting it to the continental U.S., Hawaii, Micronesia and the Far East. The majority of fishing vessels calling at the port are Japanese and Taiwanese long liners engaged in commercial tuna fishing for Asian sashimi markets. In compliance with the Jones Act only Horizon Lines and Matson serve U.S. ports from Guam, due to stipulations of the Jones Act.

## BUSINESS OPPORTUNITIES

---

### Showcase:

#### Overcrowded Asian ports

- ◆ Bottlenecks in Asian ports are forcing freighters to line up for a month or more to pick up cargo to feed industrializing China's hunger for raw materials
- ◆ Singapore Port is a focal point for 200 shipping lines to more than 600 ports in over 120 countries. There are approximately 1,000 ships in the port at any one time
- ◆ The container-handling capacity of Chinese ports has ranked No.1 worldwide since 2002, followed by the United States. Chinese ports successfully won leadership in container-handling capacity in 2003, with the total handling volume near 50 million standard containers, an increase of 32% over 2002.

While many Asian seaports are overcrowded and have limited potential for growth, Guam has potential to expand its port facilities.

Guam's port has developed a master plan for future expansion that includes new deep-water cargo piers, cruise ship facilities, state-of-the art fishery facilities, and an industrial park. The plan also envisions warehouses, icehouses, and repair and other service facilities.

## Renewable Energy and Green, Sustainable Buildings

Renewable energy solutions based on solar, wind and geothermal resources constitute a long-term opportunity to develop cost-effective and environmentally friendly energy markets on Guam. Currently, there are only a few solar heaters installed on Guam. However, alternative energy technology is projected to develop into a high volume consumer market in the coming years. Such progress will open Guam's market to renewable energy.

An additional opportunity for Guam is construction of environmentally-friendly buildings, which would bring a number of benefits, including energy and water savings, lower operating and maintenance costs, reduced environmental and emission costs, and improved indoor environment quality.

Green or sustainable buildings are perceived to be much more expensive than conventional buildings; however, according to research by the Renewable Energy Trust and Massachusetts Technology Initiative, the average premium for their construction is slightly less than 2%, while total 20-year net financial benefits are between \$50 and \$70 per square foot. These savings amount to over ten times the additional cost associated with sustainable building techniques.

## SUMMARY OF POTENTIAL BUSINESS OPPORTUNITIES

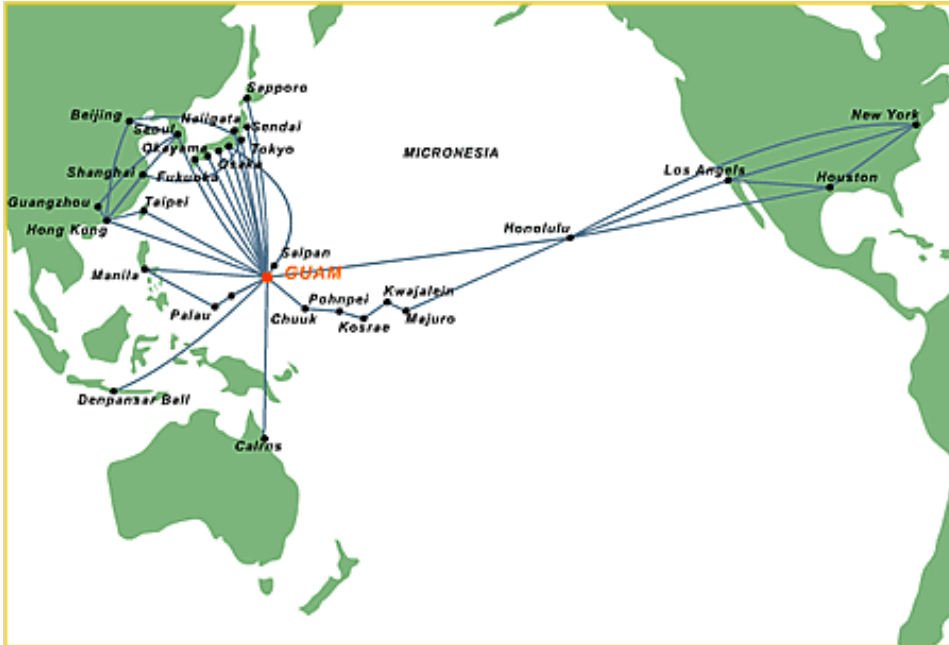
| Project  | Description  | Contact Details  |
|--|--|--|
| <b>Alternative Dispute Resolution: Guam International Mediation and Arbitration Center</b> | Development of Guam as a regional center for alternative dispute resolution  | Ms. Claire Cruz<br>Development and Marketing Manager<br>GEDCA, Ste 511 5 <sup>th</sup> Fl. ITC Bldg. Tamuning, Guam 96911<br>Tel.+1 (671) 647-4332<br>Fax: +1 (671) 640-4146<br>Email: ccruz@investguam.com  |
| <b>Captive Insurance and Trusts</b>  | Development of Guam as a domicile for captive insurance and trusts   | Ms. Claire Cruz<br>Development and Marketing Manager<br>GEDCA, Ste 511 5 <sup>th</sup> Fl. ITC Bldg. Tamuning, Guam 96911<br>Tel.+1 (671) 647-4332<br>Fax: +1 (671) 640-4146<br>Email: ccruz@investguam.com  |
| <b>Construction/ Infrastructure</b>  | Military build-up on Guam  | Captain Gail Bovy<br>Joint Guam Program Office<br>Director Operations and Communications<br>Office of the Assistant Secretary of the Navy, Installations and Environment<br>U.S. Department of the Navy<br>1000 Navy Pentagon<br>Room 4E635<br>Washington DC 20350<br>Tel. +1 (703) 602-7788 |
| <b>Corporate Headquarters/ Support Offices</b>   | Provide U.S. companies corporate headquarters venue and support offices services, especially for companies expanding to Asia | GEDCA<br>Ste 511 5 <sup>th</sup> Fl. ITC Bldg. Tamuning, Guam 96911<br>Tel.+1 (671) 647-4332<br>Fax: +1 (671) 640-4146   |
| <b>Film Industry</b>   | Establishment of Film Commission to promote Guam as a location for film productions  | GEDCA<br>Ste 511 5 <sup>th</sup> Fl. ITC Bldg. Tamuning, Guam 96911<br>Tel.+1 (671) 647-4332<br>Fax: +1 (671) 640-4146   |
| <b>Fisheries</b>   | Expanding local fisheries industry to serve the local market and potentially export overseas                                 | GEDCA<br>Ste 511 5 <sup>th</sup> Fl. ITC Bldg. Tamuning, Guam 96911<br>Tel.+1 (671) 647-4332<br>Fax: +1 (671) 640-4146   |

## SUMMARY OF POTENTIAL BUSINESS OPPORTUNITIES

|   |   |  |
|---|---|--|
| <b>Private Hospital</b>                               | Development of a private hospital   | Guam Hospital Development Forum<br>116 Chalan Santo Papa Street<br>Agana, Guam 96910<br>Tel. +1 (671) 688-7476   |
| <b>Regional Education &amp; Certification Program</b> | Provide continuing education, certification and expansion of degree-granting programs on Guam for students from Asian countries.  | Dr. Harold Allen<br>President<br>University of Guam<br>Executive Offices, Admin.<br>Bldg., 303 University Station,<br>University Drive Bldg.<br>Mangilao, Guam 96929<br>Email: <a href="mailto:hlallen2002@yahoo.com">hlallen2002@yahoo.com</a><br><br>Dr. Herominiano Delos Santos<br>President<br>Guam Community College<br>P.O. Box 23069 GMF<br>Barrigada, Guam 96921<br>Tel.+1 (671) 735-5527 |
| <b>Retail</b>   | Establishment of retail chains and franchises   | GEDCA<br>Ste 511 5th Fl. ITC Bldg.<br>Tamuning, Guam 96911<br>Tel.+1 (671) 647-4332<br>Fax: +1 (671) 640-4146  |
| <b>Shipyard Services</b>                              | <ul style="list-style-type: none"> <li>• Provide repair and maintenance for U.S. military prepositioned ships</li> <li>• Repair, refurbish and sell U.S. military ships to foreign countries</li> <li>• Dismantle and dispose of U.S. military ships</li> </ul> | GEDCA<br>Ste 511 5th Fl. ITC Bldg.<br>Tamuning, Guam 96911<br>Tel.+1 (671) 647-4332<br>Fax: +1 (671) 640-4146  |
| <b>Solid Waste disposal</b>                           | Outsourcing and privatization of solid waste disposal services  | GEDCA<br>Ste 511 5th Fl. ITC Bldg.<br>Tamuning, Guam 96911<br>Tel.+1 (671) 647-4332<br>Fax: +1 (671) 640-4146  |
| <b>Tourism</b>  | <ul style="list-style-type: none"> <li>• Privatization of marina operations at the port</li> <li>• Investment in tourist attractions</li> <li>• High-end, luxury hotels</li> <li>• Sports tourism</li> <li>• Eco-tourism</li> </ul>                             | Gerry Perez<br>Guam Visitors Bureau<br>401 Pale San Vitores Road<br>Tumon, Guam 96913<br>Tel.+1 (671) 646-5278<br>Email: <a href="mailto:gperez@visitguam.org">gperez@visitguam.org</a>  |
| <b>Transshipment</b>                                  | Establishment of transshipment center for fisheries   | GEDCA<br>Ste 511 5th Fl. ITC Bldg.<br>Tamuning, Guam 96911<br>Tel.+1 (671) 647-4332<br>Fax: +1 (671) 640-4146  |

APPENDIX

I: GUAM MAP – REGIONAL CENTRALITY



II: GUAM MAP



## ABBREVIATIONS

---

|          |  |
|----------|--|
| APAN     | Asia-Pacific Applications Network                                    |
| CPA      | Certified Professional Accountant                                    |
| DOI      | U.S. Department of the Interior                                      |
| DOL      | U.S. Department of Labor   |
| ERISA    | Employee Retirement Security Act                                     |
| FSC      | Foreign Sales Corporation  |
| GCC      | Guam Community College   |
| GDP      | Gross Domestic Product   |
| GEDCA    | Guam Economic Development and Commerce Authority                     |
| GOES     | Geostationary Operational Environment Satellite                      |
| GRT      | Gross Receipts Tax   |
| GSP      | Generalized System of Preference                                     |
| HTSUS    | Harmonized Tariff Schedules of the U.S.                              |
| ISDN     | Integrated Switching Digital Network                                 |
| MARAD    | U.S. Maritime Administration   |
| MSC      | Marine Stewardship Council   |
| NAVSEA   | The Naval Sea Systems Command  |
| NISMF    | Naval Inactive Ship Maintenance Facilities                           |
| NOAA     | National Oceanic and Atmospheric Administration                      |
| NTIA     | National Telecommunications and Information Administration           |
| PCS      | Digital Personal Communication Service                               |
| PEACESAT | The Pan-Pacific Education and Communication Experiments by Satellite |
| QC       | Qualifying Certificate   |
| SBA      | Small Business Administration  |
| SBDN     | Small Business Development Network                                   |
| SDP      | Ship Disposal Program  |
| UOG      | University of Guam   |
| WBA      | Wireless broadband   |

## BIBLIOGRAPHY

---

1. Guam Economic Report, Bank of Hawaii, October 2003
2. The Guam Comprehensive Economic Development Strategy, April 2003
3. Guam, Pacific Islands Reports, The Contemporary Pacific – Political Reviews, Vol. 16, No.1, Spring 2004, East-West Center
4. Guam Business Support Services and Facilities, Guam Chamber of Commerce, July 2004
5. Guam U.S.A., GEDCA, June 2004
6. Destination GUAM U.S.A., GEDCA, June 2004
7. GEDCA's Developing Guam Newsletter, Vol.5, issue 1, 2004
8. GEDA Triennial Report, 1999
9. Living with a Climate in Transition: Pacific Communities Plan for Today and Tomorrow, Eileen Shea, Asia Pacific Issues Series, East West Center, March 2003
10. PEACESAT Program, University of Hawaii at Manoa, official website
11. Market research report, Totel, Total Telecommunications, October 2003
12. Who Will Control Guam's Cyberspace?, Pacific Islands, March 2001
13. IT&R Company History, <http://www.itecnmi.com/corporate/history.asp>
14. Internet Providers, HowTo Guide, Pacific Daily News, 2004
15. Port Authority of Guam Cargo and Vessel Statistics, FY'92-FY'03, Port Authority of Guam
16. Today's Realty Listings, premier Guam real estate agency, July 2004
17. Report of the Interagency Panel on Ship Scrapping, USGPO, Washington, DC, April 1998
18. Demolition Database, Lloyd's Maritime Information Services, October 2000
19. U.S. Ship-submarine Recycling Program, 2004, Wikipedia
20. Mapping the Bio-Island, InterTradeIreland, 2004
21. Bermuda Insurance Update, 2004, Volume 2
22. State-of-the-art building integrated photovoltaic system introduced in zero energy home, Michael Keesee, Solar Advantage Home Program, CSC Solar Forum, November 2003
23. Small Wind Energy, Interstate Renewable Energy Council, 2004
24. Green Building Costs and Financial Benefits, Gregory H.Katz, Massachusetts Technology Collaborative, 2003
25. Public Sector Goes Green, Sandy Vaseneda, The Council of State Governments, February 2004
26. Solar to Market Initiative, Zapotec Energy Consulting and Engineering Services, July 2004
27. Green Power Program, Massachusetts Technology Collaborative, August 2004
28. Tourism in a 'Borderless' World: The Singapore Experience, T.C.Chang, Asia Pacific Issues, May 2004, East-West Center
29. Chinese fuelling local growth, Asian Labor News, March 2004
30. A new era in Asian shipping, Asian Times online, September 2000
31. Marine Port China 2004, Xinhua-PRNewswire, May 2004
32. East vs. West Coast Ports, The Journal of Commerce, August 2004
33. The Rise and Rise of Arbitration in Asia, Ernst & Young, 2003
34. Fish to 2020: Supply and Demand in Changing Global Markets, C.Delgado et al, International Food Policy Research Institute, 2004