

Maritime Clusters – The Panamanian Case

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ABSTRACT

The Republic of Panama is well known within the maritime community mainly as a result of the Panama Canal, the Panamanian Flag Registry, and the recent flourishing and improvements to state-of-the-art container terminals. The Panama Canal is one of the world's most important waterways, and an essential path for sea borne trade to many nations. Each year, approximately 14 thousand vessels transit the canal carrying some 200 million metric tons of cargo. The Panamanian Flag Registry is the largest in the world; it encompasses 10,142 vessels and about 21 percent of the total share, in dead weight tonnage (dwt), of the merchant fleet. The Panamanian container terminals on both sides of the isthmus (three in the Atlantic side and one in the Pacific side) are managed by three of the world's top port terminal operators, and together they handle around 1.5 million TEU's, mainly for regional transshipment.

Although only three important maritime sectors have been mentioned, Panama still has a lot more to offer to the world maritime community. This paper will analyze the importance of the maritime clusters in Panama, and identify those areas where we can develop competitive advantage to consolidate our nation as a world-class service provider to the global maritime community. The paper will analyze the main clusters downstream, upstream, and laterally, and will also assess their relationships across industries and institutions that are important to enhance our future competitive edge.

I. BACKGROUND

A. BRIEF HISTORY OF PANAMA'S MARITIME SECTOR

Trade through Panama has been strictly related to its geographical position throughout the centuries. Immediately following Christopher Columbus first voyage to the America's, the initial efforts to organize trade among Spain and its colonies began. The original transatlantic spice trade was rapidly overtaken by gold and silver trafficking, when Spain would organize great convoy-like vessel fleets to and from the Americas. In 1513, Vasco Nunez de Balboa crossed the isthmus and became the first European to sight the Pacific Ocean. Panama's early importance centered on its position as a transshipment route between Spain and its New World colonies. Panama was, as a result, one of Spain's wealthiest colonial centers during the 17th century.

Panama declared its independence from Spain in 1821 and joined Simon Bolivar's Gran Colombia. The economy lagged until the late 19th century, when interest in transportation schemes across the isthmus developed. In 1850, the Panama Railroad Company started the construction of the transisthmian rail that was inaugurated in 1855. It was the first rail-and-water communication between the Atlantic and the Pacific Ocean. The 1880s, a French company headed by Ferdinand de Lesseps began to excavate a canal across the isthmus but later sold the rights to the United States. U.S. president Theodore Roosevelt supported a Panamanian independence movement, hoping a new government would grant the United

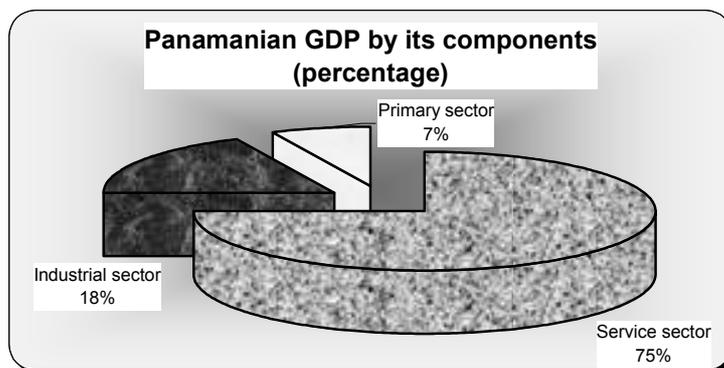
States more favorable treaty terms for canal construction. These efforts led to a Panamanian revolt and declaration of independence from Colombia on Nov. 3, 1903. The new government immediately, 15 days after the independency, concluded the Hay-Bunau-Varilla Treaty with the United States, creating the U.S.-controlled Panama Canal Zone¹. The next year after the independency, the construction of the Panama Canal started and 10 years later the canal was opened for maritime traffic. The Panamanian registry surges in 1917 and was the first open registry in the world. Colon Free Zone trade was created in 1948 and our deep-water port history started in 1979 when the Balboa and Cristobal ports were reverted to the Republic of Panama due to the Torrijos-Carter treaty.

The year 2000 was the turning point for the Republic of Panama, perhaps the most important in its history. On the last day of December of 2000, the Republic received full sovereignty of all its territory with the handover of the Panama Canal, together with the lands and infrastructure surrounding this waterway. Panama was known for centuries as a country of transit, dating back to the Spaniards..

Today, the Republic of Panama is well known within the maritime community mainly as a result of the Panama Canal, the Panamanian Flag Registry, and the recent flourishing and improvements to state-of-the-art container terminals. The Panama Canal is one of the world's most important waterways, and an essential path for sea borne trade to many nations.

There is an effort of the Panamanian government in conjunction with the private sector to develop a maritime strategy for the country. Five major activities have been identified as the centerpiece of Panama maritime cluster.

B. PANAMA'S ECONOMY



Panama is considered a service-based economy. The service sector accounts for 75% GDP, and includes the Panama Canal, container port activities, shipping, ship registry, banking, insurance, retail and wholesale and distribution out of the Colon Free Zone, and government activities (representing 14% of GDP). The industrial sector, accounts for 18% GDP, is made of manufacturing, mining, utilities, and construction. Agriculture, forestry and fisheries account for the remaining seven percent of GDP.²

¹ McCullough, David, *The Path between the Seas* (1977)

² 2001 Country Reports on Economic Policy and Trade Practices – U.S. Dep. of State. Feb. 2002

Unlike other Latin American countries, one of the advantages of doing business in Panama is the financial center of almost 120 international and national banking institutions. During the last couple of years, the government has approved banking legislation that further strengthens the economy. Panama, having a continuous dollarized economy for over a century, maintains a very low inflation rate. The Colon's Free Zone, located in the Atlantic, has suffered a decrease in the last few years because of the economic problems in other Latin American countries, but still one of Panama's most important business centers (most important free trade zone in the Americas and second in the world).

In 1993, the government of Panama began a privatization program by awarding private concessions on its government-owned businesses. In 1993, the contract for management, operation and development for the Port of Manzanillo was approved. In 1994, a concession for a private toll road was awarded to PYCSA from Mexico – Corredor Norte, also the selling of the state-owned cement company and fruit companies. The contract to develop, operation and development of the Coco Solo Norte Port was approved in 1996; also the rights to exploit cellular phone services, awarded to Bell South and Cable and Wireless, and another private toll road- ICA- Corredor Sur were approved in 1996. The concession of Panama Ports (Cristobal and Balboa) and the sale of 49% of the government telephonic company "Instituto Nacional de Telecomunicaciones" (INTEL) to Cable and Wireless were made in 1997. In 1998, the government-owned casinos, the racetrack, two sugar mills and the electrical power company were also privatized and the Panama Canal Railway Company concession was approved. Pending privatizations are ATLAPA- the large convention center, and the international airport.

An area rapidly developing is the cruise ship activity. In October 2000, there were inaugurated two new Cruise Ports in the Atlantic side, Colon 2000 and Cristobal in the Atlantic, and in 2001, Fort Amador in the Pacific. The attractiveness of the Panama Canal and the territory surrounding it which accounts for 7.5 percent of the country's land was maintained practically virgin for 100 years by the U.S. military, and has blessed Panamanians with an abundance of nature and an indescribable tourism potential.

For most part of the last century, Central American trade was dependent of two types of products: bananas and coffee. Panama has the smallest population in the region, nearly 3 million inhabitants, ranked second in highest GDP per capita within Central America's countries after Costa Rica. Also it has a GDP per capita higher than other 7 South American countries. As seen in the table No.1, the Panama's GDP per capita, for the year 2000, was approximately \$3,306.

Table No. 1
Year 2000 GDP per Capita, Central American Countries

<i>Country</i>	<i>GDP per Capita (1995 dollars)</i>
<i>Costa Rica</i>	\$3,672
<i>Panama</i>	\$3,306
<i>El Salvador</i>	\$1,749
<i>Guatemala</i>	\$1,554
<i>Honduras</i>	\$709
<i>Nicaragua</i>	\$482

Source: Comisión Económica para América Latina y el Caribe, CEPAL

II. IMPORTANCE OF THE MARITIME CLUSTERS IN PANAMA

Certainly Panama has created its prosperity. The building of the Panama Canal helped the developing a maritime industry around it, which has provided Panama with the necessary competitive industries that are linked both horizontally and vertically. Most of Panama's service economy is somehow related to the maritime industry. For Panama, the maritime industry is the most important economic driver.

Panama's GDP for 2001 was \$10.25 billion dollars. For the year 2001, the direct impact of Panama's maritime business was \$1.971 billion and provided over 28,875 employments. The Panama Canal alone employs close to 10,000 employees or 34% of total people employed in this sector. The following table provides a breakdown of the direct economic impact of selected elements of the maritime clusters:

Table No. 2
Panama Maritime Business Direct Impact on Panama's Economy

<i>Cluster Activity</i>	<i>Employment</i>	<i>Revenues (million)</i>	<i>Expenses (million)</i>	<i>Investment (million)</i>
<i>Panama Canal</i>	9,970	\$638	\$622	\$97
<i>Ports</i>	2,635	\$280	\$70	\$243
<i>Ship Registry</i>	500	\$55	\$50	\$5
<i>Legal, Finance, Insurance and Inspection Services</i>	2,500	\$200	\$120	-
<i>Purchases by Tourists and Passengers</i>	425	\$34	\$28	\$45

Transit Services				
- Bunkering	400	\$500	\$350	\$25
- Ship Chandling	70	\$6	\$5	-
- Repairs	375	\$15	\$10	-
Fishing Industry	12,000	\$243	\$200*	
Total	28,875	\$1,971	\$1,455	\$415

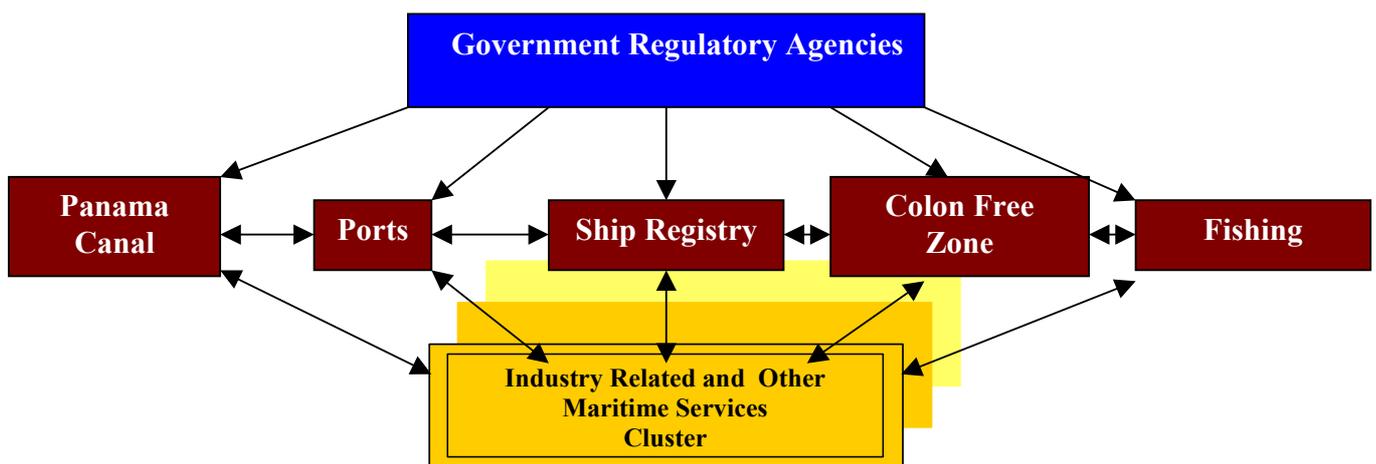
Source: Asesores Estratégicos, published in El Panamá America , July 3, 2002 * Estimate

Panama’s competitive advantages over other countries in the region are primarily in: Panama Canal, ports, ship registry, Colon Free Zone and fishery, as it is illustrated in graph No.1 bellow. These five economic activities are the primary pillars of the Panamanian economy and that is the reason why maritime world-class service providers are established and heavily investing in our country.

The role of the government in allowing fair competition among commercial rivals will create unique advantages for the entire national maritime industry. For example, many of the Italian jewelry firms are located around two towns, where streets are lined by hundreds of companies. The entire national industry becomes dynamic and sustains its advantage over foreign rivals who lack the same structure³. In Panama, the Colon Free Zone with over 1,500 companies located next to each other is a similar example comparable the Italian jewelry center.

Graph No. 1

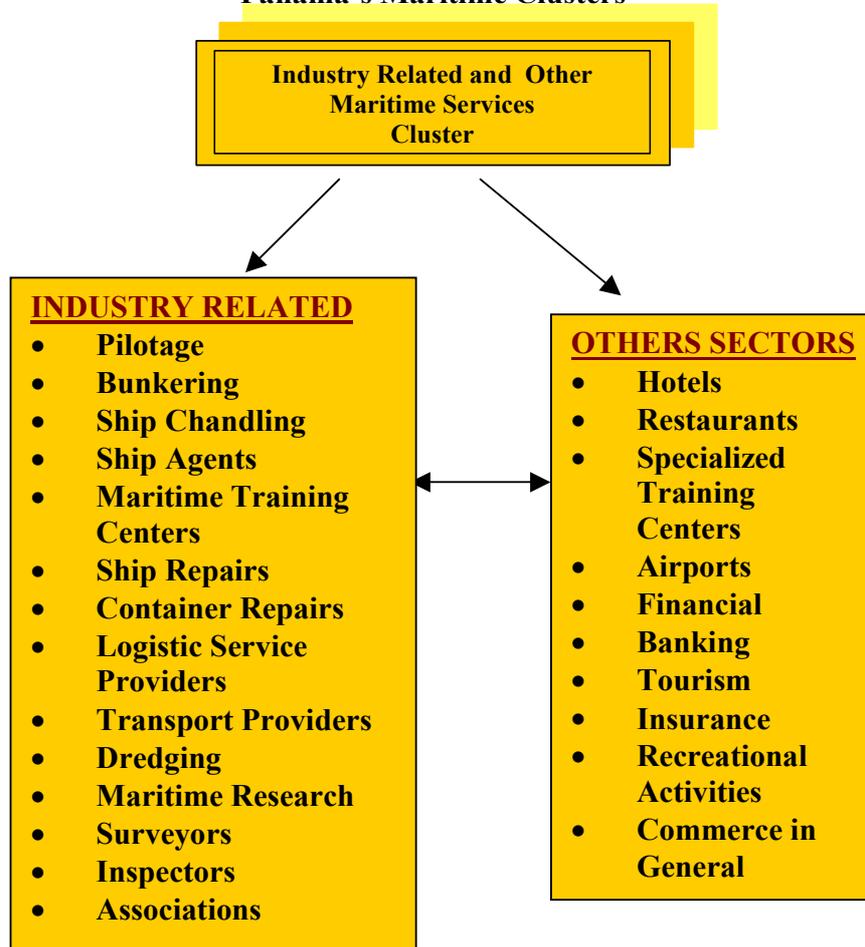
Anatomy of Panama’s Maritime Clusters



³ Porter, Michael; The Competitive Advantage of Nations, 1990

The Panamanian government encompasses different departments related to the maritime sector that plays a role as regulatory agencies. Those agencies have an important influence over national competitive advantages, its role is inevitable crucial for the development of the industry. Graph No. 2 shows some of the maritime related activities that are part of our maritime clusters.

Graph No. 2
Panama's Maritime Clusters



III. PANAMA'S MARITIME CLUSTERS

A. THE PANAMA CANAL AND RELATED CLUSTERS

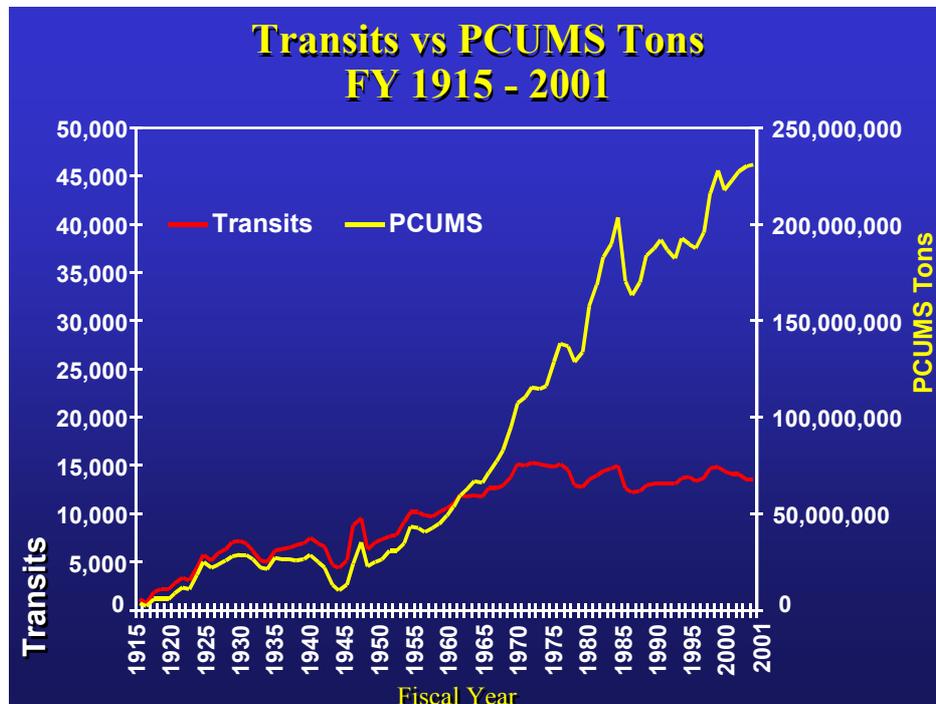
The Panama Canal is one of the greatest engineering achievements the world has known. Every year, some 4,000 ships generate approximately 14,000 transit through the Canal; dramatically reducing the distance between the east and west coasts of North America some 8,000 to 10,000 miles. During fiscal year 2001, 193.2 million long tons of cargo transited the Panama Canal.

The Panama Canal is considering an ambitious expansion program that may incorporate a new watershed in the western side of the Canal, deepening the ship channel in the Canal, and eventually building a third set of locks to accommodate the new generation of container ships.

The Canal was the magnet that attracted many other important commercial activities and made Panama home to an international banking center, the largest free trade zone of the Americas, the most important transshipment ports of the region, a stable, dollar-based

economy and the temporary headquarters of ALCA, among others. The geographical position of Panama in the middle of the main shipping routes offers international trade the opportunity to gain access to various markets, in an efficient and advantageous manner.

Graph No. 3



Canal traffic as well as industry data provide a picture of the operations of the waterway and how the surge in traffic and industry trends affect Canal capacity.

Transits have been increasing over the years, but more importantly, vessel tonnage has increased at a much faster pace in the last three and a half decades.

a) Economic Importance of the Canal

The Panama Canal revenues for 2001 were approximately \$630 million. Considering that Panama's economy is 75% service oriented, the Canal represent almost 10 percent of this economic sector. Including other activities indirectly generated by Canal operations, some observers estimate that Panama Canal generates as much as one fifth of Panama's economic activity.⁴

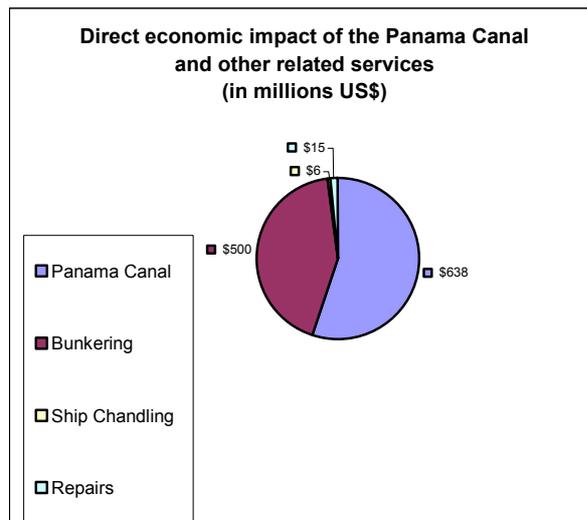
Other activities include bunkering, commercial activity of servicing fuel to vessels. This activity has flourished in Panama because of the Canal. Without the Canal, the vessels will not go out of their way to re-fuel. New investments in this area are taking place in the island of Taboguilla conveniently located in the bay of Panama approximately some 2 miles off the Canal entrance. The direct economic impact of this activity is \$500 million and employs 400 people.

⁴ Tom Carter, 1999; The Washington Times January 13, 2001; from Panama Canal Expansion Niesten and Reid, 2001

Ship chandler activities, although very small compared to other activities is strictly related to the Canal and the ports. It employs 70 people and has revenues of \$6 million. Vessel repair services generate approximately \$15 million and employ 375 people. This activity provides service to vessels that require emergency repairs or other type of maintenance while in the region⁵. Major maintenances are performed in other countries or in the vessels construction shipyard.

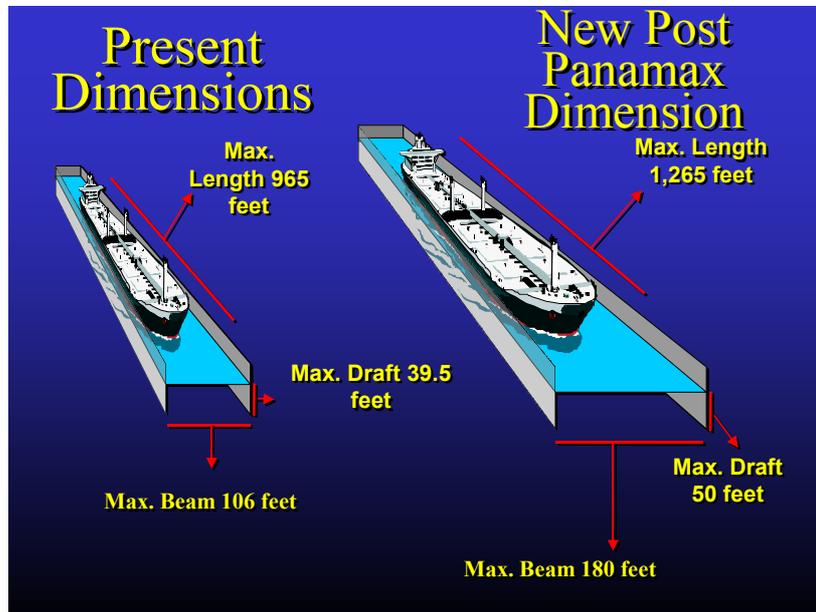
Throughout the years, the Panama Canal has contributed significantly to the development of other economic activities in the country, now the Panama Canal is getting ready for the next step, and the Panama Canal Authority is in the process of evaluating expansion of its capacity. This will require \$5 billion dollars in investment over the next 15 years, which will generate more jobs, therefore increasing substantially Panama's economy. There are plans to perform complete economic impact studies both national and international and upon completion would expose the real value of the Canal.

Current canal dimensions can accommodate ships of up 965' in length; 106' in beam and 39.5' draft. Expansion plans intend to extend capacity to ships of 1265' in length; 180' beam; 50' draft, but the engineering requirements of such an increase have yet to be clarified. See graph No. 2 below:



⁵ Asesores Estratégicos, published in El Panamá America , July 3, 2002

Graph No. 4
Comparison between Present Panama Canal Locks Dimensions and Proposed Future Locks



This expansion will also benefit other related business activities, which will experience growth similar to the Canal.

b) Impact of the Canal in Panamanian Ports

Important Panamanian ports are specialized and competitive in the transshipment of containerized cargo. There are 41 services that transit through the Panama Canal, out of these, 18 out of the 41 or 44% of the services do business in Panamanian ports in either end of the Canal entrances, and another 10 services have direct businesses with the ports. This translates to a market of approximately 3.36 million TEU's per year.

Table No. 3
The Panama Canal Authority
Characteristics of line service for container vessels in Panama
Oct-01

	<i>Number of Services</i>	<i>Number of Vessels deployed</i>	<i>Average Size of vessel (TEU's)</i>	<i>Annual Capacity of nominal TEU (millions)</i>
<i>Services that transit through the canal</i>	41	216	1,543	3.196
<i>Services that transit through Panama Canal but do not wharf in Panamanian Ports</i>	23	51	717	0.62
<i>Services that use Panamanian Ports</i>	28	189	2,001	2.93
<i>Services that use Panamanian Ports and do not transit through the Canal</i>	10	29	946	0.43
<i>Services that transit the Canal and wharf in Panamanian Ports</i>	18	165	2,600	2.53

Source: ComPairData

c) World Wide Importance of the Canal

Not only is the Panama Canal important to Panama for income and jobs, but it is also considered to be vitally important to the United States as well as other Latin-American countries economy.

Many U.S. exports and imports travel through the Canal daily. As an example, in 2001, 16.1 million long tons of cargo of containerized cargo transited the Panama Canal all-water route from Asia to the East Coast United States. Exports represent jobs for U.S. citizens because the products were made by U.S. workers. Imports enable U.S. consumers to receive needed products. As a country, the United States is the principal user, end client for the Canal.

Fruits and refrigerated cargo going to Europe from South America west coast use the Canal, in 2001 2.95 million long tons were moved in this direction. Similarly, other refrigerated cargo that moves through the Canal originates in Oceania with destination Europe and the United States east coast.

If world trade is disrupted, it can lead to worldwide economic problems. Therefore, any disruption in the flow of goods through the Panama Canal could directly hurt the U.S. and other major global economies. If one considers the thousands of ships full of goods that pass through the Canal every year and the impact that closing the Canal would have on the world economy, one can understand the economic importance of the Canal. Therefore, keeping the Canal open is directly and indirectly important to global economy⁶.

B. PORT AND RELATED CLUSTERS

The Autoridad Marítima de Panamá (AMP) is the entity that manages all maritime competencies in our country. It has four main components that are: Dirección General de

⁶ A Special International Report Prepared by *The Washington Times* Advertising Department - Published on December 14, 1999

Marina Mercante, Dirección General de la Gente de Mar. Dirección General de Recursos Marinos y Costeros, y Dirección General de Puertos e Industrias Marítimas Auxiliares.

There are 23 port facilities in the Republic of Panama; thirteen (13) of them operate in the Pacific coast and ten (10) operate in the Atlantic coast. The most important ones are the container terminal facilities under concession; the specialized terminals for crude oil and refrigerated cargo. The multipurpose and general cargo ports are mainly cabotage ports.

For 2001, there were 15,843 vessels serviced in Panamanian ports⁷ (private and government owned), a 3.7% increase in comparison with the previous year. Total cargo volume in Panamanian ports rose to 23.4 million metric tones, an increased of 13.4% as compared to the previous year. Port activities in Panama registered a 13.3% growth in GDP for 2001.

Port statistics compiled by the American Association of Port Authorities⁸, as the ones from ECLAC, the U.N. specialized body, show that the ports of Panama, Argentina and Brazil were the largest container ports in the region last year, when measured in container traffic volume. Colón (MIT, CCT, Cristobal Ports) handled an estimated 1.35 million TEUs in 2000, up 15 percent on the previous year. Buenos Aires' container throughput, including that of the Exolgan terminal, was 1.13 million TEUs, up by 5 percent. The port of Santos increased its volume to an estimated 988,000 TEUs, 27 percent more than in 1999. See Attachment No. 1 for complete list of other countries.

Container movement experienced the most dramatic increase reaching a total volume of 1.5 million TEU, a 16.3% increase over the previous year. Port activities decelerated due to the terrorist attacks of September 11, 2001; however, the effects were not immediate, given the nature of shipping business where freight contracting is performed on a future basis⁹.

2001 was a very important year for the port sector, the Panama Ports modernized its container handling facility in Balboa, followed by the increased volume in passenger cruise ships and the inauguration of the transisthmian railroad services in November of that year.

a) Economic Importance

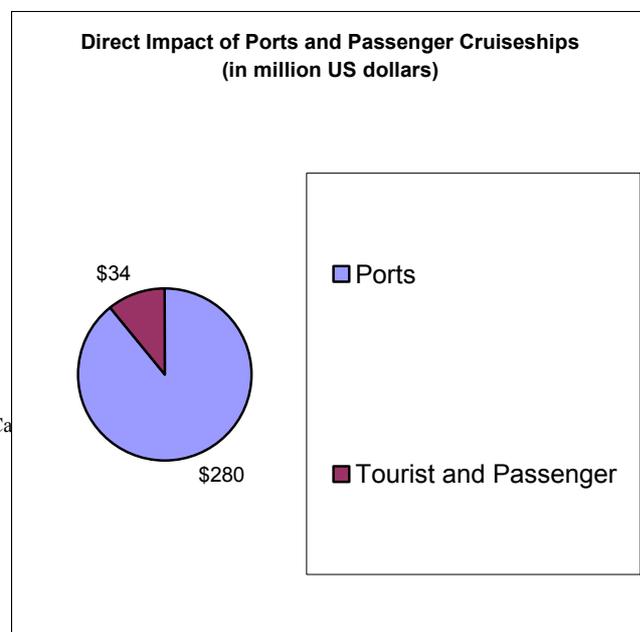
Panamanian ports are the leader handlers of container traffic in the Americas, and the Canal itself

⁷ Compendio Estadístico de la AMP Año 2001

⁸ www.seaportsoftheamericas.com/ Latin American & Caribbean

⁹ Ministerio de Economía y Finanzas 2001 Reports

Maritime Clusters – The Panamanian Case
Gerardo Maucci y Eduardo Lugo



straddles major global shipping routes. The ports generate revenues of \$280 million and employ around 2,600 employees. At the Pacific side, the Balboa Port has recently begun (7/2002) an expansion program, as global shipping and in particular container cargo increases, there is greater opportunity for Panama to benefit from transshipment cargo generated. Other private ports are also considering expansion programs.

b) Passenger Terminals

The economic impact of the cruise ship industry generated approximately \$34 million in 2001. Prior to 1980, Panama's cruise ship tourist industry was booming many cruise ships unloaded thousands of tourists to the city of Colon. The following period, for over 20 years, the only revenues received by Panama from the cruise industry were merely reduced to the Panama Canal tolls. Every year, the Canal registered close to 300 cruise transit which generated approximately \$24 million in tolls¹⁰.

In October 2000, two new modern cruise ship terminal ports inaugurated in the Atlantic, setting a new beginning for this industry. The government of Panama has introduced volume incentives that will pay back cruise ship operators from \$2.50 to \$12.50 per disembarked passengers. Also, it is hoped that the recently launched Panamanian Tourism Bureau (IPAT) international campaign it will attract a greater number of tourists.

The Panama Canal is contributing with this industry with the construction of a new modern visitor's center in Miraflores an investment of over \$10 million; also future plans include the building of another visitor center in the Gatún Locks. Additionally, several years ago the Panama Canal began offering tour operator services on board transiting cruise ships aiming to promote the country and motivate passengers to disembark in modern cruise terminals and visit other special places Panama has to offer. This way the Panama Canal is contributing with the international publicity campaigns carried by the Panamanian government tourist bureau - IPAT and other private sectors to increase tourism in Panama.

C. SHIP REGISTRY AND RELATED CLUSTERS

Flag ship registry is the process by which the maritime administration of one country grants the right of use of its country's flag to a vessel. Every vessel must be registered under a country's flag otherwise it is considered a vessel without a country or better known as a "pirate vessel".

Vessels could be registered under its country of origin or in any other open register. While traditional registers only flag or accept its own national vessels, open registers accept vessels from any nationality. In the traditional vessel registers, we could mention the United States, the United Kingdom and France among others. Panamá, Liberia, Bahamas, and Belize are examples of open registers.

¹⁰ Departamento de Planificación Corporativa y Mercadeo, ACP.

Open registers are created under international law, by which indicates that every state has the right to determine the conditions by which assigns or consents the use of their flag to merchant vessels, and therefore imposing authority and accepting responsibility over the vessels.

This type of registry has becoming very popular since they are less expensive and more flexible than traditional registries. In general, open registries offer better facilities in their registration and inscription processes regardless of ship owner and crew nationality impose lower tax rates and have lesser restrictions.

a) History of Panama's Ship Registry

The registration of vessels under Panamanian flag surges in 1917 under Law No. 63, however, the activity was really initiated in 1925 with the establishment of Panamanian Law No.8, which improved the previous law, making Panama's Vessel Registry the oldest open vessel registry in the world. This register allows registry under Panamanian flag of any vessel regardless of ownership, inside or outside Panama as long as it has a legal representative in the Republic of Panama. Any type of vessel or hull with the main purpose of servicing the maritime trade could be registered in this Ship Registry.

It is not until 1980, when Law No. 2 – January 17 when the activity was put under the Dirección Nacional de Consular y Naves, making this government entity the top of the functioning of Panama's Ship Registry.

Table No. 4
10 Most Important World Flag Registry per Country
Lloyd Registry

<i>June 2001</i>		
COUNTRY	Vessels	D.W.T
Panama	6,271	119,766,970
Liberia	1,586	53,169,865
Bahamas	1,295	32,325,690
Malta	1,465	28,118,464

Greece	1,520	28,039,884
Cyprus	1,454	23,308,453
Singapore	1,719	20,829,282
Norway	754	18,949,305
China	3,316	16,610,983
Japan	8,027	14,704,787
Only vessels over 100 DWT.		

Today, the Dirección Nacional de Marina Mercante, under the Autoridad Marítima de Panamá (AMP) is responsible for the administration and control of this registry. In order to assure compliance with international agreements and regulations, each year approximately 5,000 vessels are inspected through 400 agents in different parts of the world.

In 1993, the Panamanian Ship Registry became the world's largest open registry, surpassing Liberia. According to Lloyd's Register, Panama registers approximately 15% of the world's fleet or 6,271 vessels of over 100 GT. According to figures from the AMP¹¹, the Panama Registry for the first quarter of 2002, reached a total of 10,142 vessels of all sizes, representing 144.9 million deadweight tons¹².

b) Economic Importance

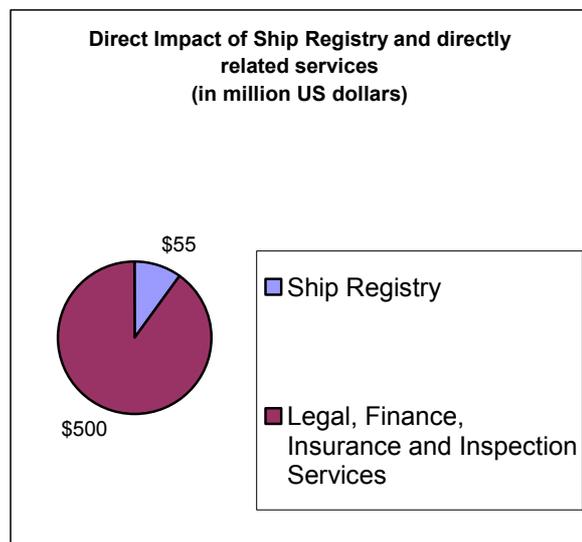
Other sources point that for the year 2000, Panama's GDP reached \$10,019 million¹³, with the Maritime Sector contributing to 19.5% or \$1,954 million¹⁴. The ship register generated approximately \$55million representing 3% of the entire maritime sector contribution to GDP. These \$55 million include rights fees charged for flagging, port concessions, consular fees, documentation services, admeasurements

¹¹ Compendio Estadístico de la AMP Año 2001

¹² Published in La Prensa, June 18, 2002

¹³ Contraloría General de la República de Panamá, 2000

¹⁴ Autoridad Marítima de Panamá, 2000



and appraisal, certificates, inspections, and examination to Panamanian marine licenses. Other services related to the ship registry include the legal, finance, insurance and inspection which account for another \$200 million in revenues.

c) Advantages of the Panamanian Registry¹⁵

- Very low fees are charged for the registration of ships under the Panamanian flag.
- There are no minimum tonnage requirements for the registration of vessels under the Panama flag.
- Ownership. Any person or company, irrespective of nationality and place of incorporation is eligible to register ships under the Panama flag.
- Preliminary registration of title/mortgage is readily accepted by US, Far Eastern and European banks as providing satisfactory security.
- Dual Registry. Vessels registered under the Panamanian flag but under charter to a company incorporated in certain other countries may also be simultaneously registered in that other country.
- All major Class Societies and members of IACS are authorized by Panama to survey Panamanian vessels.
- The Panama Canal, a joint enterprise of the Republic of Panama and the USA is a vital transit location of international shipping.
- Banking conveniences through more than 100 banking institutions including most major world banks.

D. COLON FREE ZONE AND RELATED CLUSTERS

The Colon Free Zone was created in 1948. In just over half a century it became the largest free zone in the Western Hemisphere and is now second in the world only to Hong Kong.

Originally created as a means to modernize Panama's economic infrastructure and to encourage regional trade, The Free Zone has since developed into a major world logistics center, as well as becoming the generator of a significant proportion of the country's gross national product.

The domestic product of the Colon Free Zone grew 2%, with a 0.9% growth in volume of exports and imports. Also its imports grew 3.7% in 2001 as compared to the previous year.

Table No. 5

¹⁵ <http://www.flagsofconvenience.com/panama.html>

<i>Colon Free Zone- Commercial Activity 2000 - 2001</i>				
<i>(million US \$)</i>				
<i>Detalle</i>	2,000	2,001	Difference %	
<i>Imports</i>	4,600.0	4,477.4	-2.7	
<i>Re- exports</i>	5,219.8	5,295.1	1.4	
<i>Difference</i>	619.8	817.7	32.0	

Source: Ministerio de Economía y Finanzas, Informe Económico Annual 2001

ECONOMIC IMPORTANCE OF COLON FREE ZONE

A total of 1,780 domestic and international companies are now based in the Free Zone's 400 hectares site, generating more than 14,000 direct jobs and a further 6,000 indirect. Last year, these companies imported a huge range of commodities valued at more than US\$4.5 billion, while re-exports from the Zone amounted to US\$5.2 billion¹⁶. The Colon Free Zone contribution to Panama's GDP could be considered to be approximately \$817.7 million dollars for the year 2001.

The competitiveness of the Colon Free Zone over other more recent free zones established in Latin America relies in the over 40 years of experience in doing business in Asia. Also, the Panamanian banking system provides the financial support necessary for free zone activities, unique within the region.

E. FISHING INDUSTRY AND RELATED CLUSTERS

Panama has a wide diversity of marine species, which has contributed to the development of a fishing industry. Probably for this reason, one of the meanings of the name Panama is "abundance of fish". Panama's fishing cluster has its strength in the oceans as the principal resource.

Principal products include shrimp, fresh and frozen fish fillet, lobsters, anchovies, salted fish (non-Cod), and mollusks. Also Panama produces fish-meal flour and fish oil. Extensive shrimp farming is done in the province of Coclé and Los Santos. Most of the fishing activity is done in the Pacific Ocean. Panama's fishing activity could be categorized in 4 principal categories:

- 1 Traditional Fishing:** performed in-shore with basic equipment (hooks, line, nets, etc) in small boats consisting with or without mechanical propulsion. For the year 2000, Panama's Maritime Authority registers 5,234 traditional fishing vessels in the Pacific coast of the Republic of Panama.
- 2 Continental Fishing:** performed in-land in fresh water lakes, rivers and reservoirs. The major spots for this type of activity are: Gatún Lake, Alajuela

¹⁶ Access to Panama Website – Information on the Colon Free Zone <http://www.alphaluz.com/panama/pcfzr.html>

Lake, Fortuna, La Yeguada and Bayano Dams. The main species captured are the peacock bass (sargento) and tilapia. Trout fishing has also increased in the last number of years.

- 3 Industrial Fishing:** principally aimed to more valuable bigger volume catches like shrimp, tuna, anchovy and mackerels. The Panama Maritime Authority controls this activity, its mostly performed in the Pacific Ocean and special permits are required for the activity. Industrial fishing in Panama is mainly done over 240 shrimp fishing vessels and 31 anchovy vessels. The Port of Vacamonte in the area of Chorrera is receiving approximately 85% of the catch. This port counts with a shipyard and many fish processing plants are located in the area. Shrimp exports reached 5,864 metric tons in the year 2000.
- 4 Fish Farming:** Shrimp farming is Panama's most important activity in this category. Panama registered 8,888 hectares of shrimp farm area with an annual production capability of 877 tons worth approximately \$7.0 million.

Fishing Cluster Economic Impact

The fishing sector represent one of the pillars of Panamanian economy, it directly employs approximately 12,000 people in the primary sector. In 1999, the fishing cluster share of GDP was approximately 1.87%, for the year 2000 this figure increased to 2.4%. The principal market consists of shrimp exported to the United States followed by the European markets. In second place are the exports of fish fillet of several species such as Mahi-Mahi, Snapper and Tuna to the United States with an increased volume over the last few years.

Table No. 6
Panamanian Seafood Exports
Net Weight and FOB Value

	1996		1997		1998		1999		2000	
(In millions)	Kg	U.S.D	Kg	U.S.D	Kg	U.S.D	Kg	U.S.D	Kg	U.S.D
Shrimp	11.01	\$75.5	12.6	\$95.7	14.2	\$136.7	7.56	\$68.8	5.86	\$59.4
<i>Fresh</i>	5.4	\$14.2	9.9	\$24.9	16.5	\$43.7	17.41	\$44.8	17.9	\$47.4
<i>fish/refrigerate</i>										
<i>d whole</i>										
Frozen fish -	.022	\$.073	.004	\$.025	1.0	\$1.09	6.9	\$15.89	18.19	\$48.4
<i>whole</i>										
Fish filet/fresh	2.2	\$7.86	3.48	\$11.44	3.74	\$14.89	7.55	\$26.30	12.96	\$41.15
<i>or frozen</i>										
Shellfish	1.4	\$1.9	1.52	\$1.73	1.87	\$4.16	1.59	\$3.37	1.79	\$3.18
Fish larvae	.54	\$5.36	1.1	\$9.88	1.512	\$13.7	.939	\$7.76	1.23	\$8.93
Salted	.045	\$1.48	.145	\$4.65	.218	\$5.94	.987	\$13.84	2.59	\$24.63
<i>fish/dried fish</i>										
<i>(not cod fish)</i>										
Others	1.75	\$6.9	2.87	\$5.5	.48	\$12.6	.528	\$6.71	1.48	\$9.9

<i>miscellaneous</i>										
Total	22.5	\$112.4	31.6	\$154.0	39.4	\$226.9	43.6	\$187.5	62.0	\$243.1
Increase from previous period			40%	37%	24.6%	47.3%	10.6%	(21.0%)	42.2%	29.6%

Source: Anuario de Comercio Exterior – Contraloría General de la República de Panamá

La Autoridad Marítima de Panamá, the Panamanian government agency which regulates the activity, is very concern about conservation and enforces “off-season” periods for shrimp, the most important marine species to the industry. For this purpose, satellite tracking devices have been installed on board all commercial fishing vessels in order to monitor the activity and to ensure the protection of the species.

Panama counts with a unique investigation laboratory in Achotines, Los Santos for the breeding and releasing of *yellowfin tuna*. This laboratory is managed by a Japanese agency whose mission is to replenish the oceans with this species to support the ecological pressures imposed on it.

The following table contains the value of seafood exports of various countries for the year 2000 as well as the number of employment within the primary sector of the fishing industry per country. The calculated average per employee gives us an idea of the competitiveness of the fishing industry. Iceland has the highest average value of export per employee of \$181,044; China and Guatemala were among the lowest in the list with \$493 and \$2,400 respectively. This list was chosen at random based on available data. Panama had an average of \$24,877 per employee, very close to other countries with traditional fishing industries such as Chile and the Netherlands. Although Panama’s fishing industry is about 25% of Peru’s, Panama has double the average per employee in the industry than Peru. This more or less gives us an idea of the efficiency of Panama’s fishing industry.

Table No. 7
Value of Seafood Exports per Country

Country	Primary Sector Employment (est.)	Approx. Value of Exports (Million U.S.D) 2000	Average per Employee Per year
China	6,000,000	\$2,960	\$493
Japan	270,000	\$1,162 (imports 13.3 billion)	\$4,303
Peru	65,000	\$834	\$12,830
Chile	54,000	\$1,673	\$30,981
Canada	51,412	\$2,600	\$48,148
Netherlands	16,500	\$1,279	\$24,877
Guatemala	15,000	\$36	\$2,400
Panama	12,000*	\$243	\$20,250
Iceland	6,700	\$1,213	\$181,044

Source: Food and Agriculture Organization of the United Nations. Fishery Country Profile 2000

F. MARITIME SERVICE PROVIDERS CLUSTERS

a) Maritime Services Related Industry

All types of entreport activities, including storage and redistribution of merchandise; Shipchandling and related services to on-going vessels; Container Repairs, Logistic Services, Transport Providers, Dredging, Maritime Research, Surveyors, Inspectors, among others are some of the other activities related to the maritime clusters.

Services such as Pilotage for example is very necessary since vessels are not permitted to enter or leave the Canal or waters adjacent including the ports of Cristobal and Balboa, without having a Panama Canal Pilot on board. Vessels docking or undocking at any of the terminal ports (Balboa, Cristobal or Manzanillo) are required by law to have a pilot on board. The Panama Canal Authority presently supplies harbour pilotage services at both Balboa and Cristobal. Harbour pilotage services at the Port of Manzanillo are provided by a private concessionaire, usually the fees are charged per draft foot.

Other commercial activities such as Shipping Agents provide specialized services to vessels within the Panama Canal area. There are many shipping agencies established in Panama, some dating back to 1914. They facilitate in finding any kinds of service required by international vessels transiting the Canal, fees are charged based on a percentage of services supplied.

Equally important complementary activities include Maritime Training, an example in Panama is Trainmar, an international organization which prepares professionals in the maritime industry as well as transportation and logistics, with centers in Costa Rica, Brazil, Haiti, Mexico, Colombia, Cuba, Dominican Republic, Ecuador, Guadalupe and Trinidad y Tobago.

b) Other Related Sectors

i) Tourism

Panama is now considered Central America's undiscovered jewel. Panama is easily the most overlooked country in Latin America; and today's many eco-travelers are quickly discovering this unspoiled paradise. During the year 2001, there was an 8% increase on tourist spending. Tourism registered a "good year" at the end of the first season of cruises, which ended with 59 cruises, 53,385 passengers and 27,944 crew members arriving at the Colon Port 2000. These tourists purchased a wide variety of tours, which included; Fuerte San Lorenzo, Gatún locks, Gatún Lake, Hotel Meliá Panamá Canal and Bananas Village Resort located in Isla Grande¹⁷.

Nevertheless, the attack on September 11 on the United States (origin of most of Panama's tourism) affected that activity. Hotels recorded maximum capacity the following three days after the attack, afterwards it diminished due to flight cancellations. Tourist expenditure until the month of August 2001 had grown to 7.5% in relation to the previous year, reaching an

¹⁷ Ministerio de Economía y Finanzas, Informe Económico Anual, 2001

import level of US\$ 323.1 million. Nonetheless, between September and October remained constant to the previous year, even though it was expected to have a greater increase on the cruises new season.

ii) Hotels

Hotels and restaurants employ about 40,000 people¹⁸. Hotel Costa Blanca Royal Decameron located in Farallon, a chain of hotels that among many tourists has received many Canadians and Italians has started another stage in their expansion of their location. They have done a very strong advertising campaign in Europe to promote its hotel chain. They have also signed an agreement to develop the Center of Biodiversity in Amador developed by the architect Frank Gehry, which includes besides of the “World Aquarium,” the edification of the patrimonial museum in Colon and a nature interpretative center in Fort Sherman. This center which phase of design is about to be completed will be built on 7.81 hectares at a cost of US\$ 50 million and will sample the flora and fauna of Panama, an aquarium and will show the geological formation of the Isthmus three million years ago.

The hotel and restaurant sector represents in revenues approximately \$160 million per year has registered a decrease of 1.3%, affected mainly by the competition, which has evoked a decrease in the percentage of room occupation in the last years. During January – August of the year 2001, the average occupation per room was of 33.3%; after the September 11 attacks a reduction was observed in the occupation levels, but overall there has been a recovery in the occupation average in the last months of the year.

iii) Other non maritime services

Investments related to international trade such as port operations, construction and operation of container yards and dry docks, warehousing for international transshipment, etc.; all of these which complement the well-established network of Panamanian International Services: Banking, Corporate Legislation, Insurance and Reinsurance, Shipping Registry and Colon Free Zone.

Also, the land and facilities turned over to Panama from the former Canal Zone have an outstanding potential for business. These areas include military bases, housing units, warehouses and sport complexes, among others. They are located along the Panama Canal. The land alone, totals 360,000 acres of prime quality most of which is available to private investors.

IV. CONCLUSION AND RECOMENDATIONS

The monetary figures, the direct impact of Panama’s maritime business was \$1.971 billion for 2001 or 19.6% (excluding the Colon Free Zone), and providing over 28,875 jobs. Panama’s competitive advantages over other countries in the region are primarily in the five mentioned economic activities (The Canal, the ports, Ship Registry, Colon Free Zone, and the fishing industry). These sectors are the pillars of our economy.

“Well-trained labor, lots of competition and demanding customers” are the keys to success according to Michael Porter.

¹⁸ Cámara de Comercio, Industrias y Agricultura de Panamá

This paper's intention is merely illustrative and should not be in any ways related to Panama's Maritime Strategy. There are several efforts where the Panamanian government, international entities as well as the private sector are uniting efforts towards the development of Panama's competitive sectors.

Recently, Panama's Ministerio de Economía y Finanzas with aid from the Banco Interamericano de Desarrollo (BID) has initiated a project called "Compite Panamá" where if implemented will impulse Panama towards excellence of services. The main four clusters are: Bocas del Toro, Colon, Agroexportación and Logística y Transporte"

In the area of Logística y Transporte, it is necessary to improve the systems and processes for the import and export of cargo. Computerizing most of the existing paperwork required to process cargo in customs, sanitary inspections, quarantine, among others, will improve greatly the volume and quality of service Panama could provide.

Compite Panamá when approved and completed will serve as input in the elaboration and completion of a Maritime Strategy that will when implemented should help Panama obtain maximum economical potential for Panamanians. Some of these keys to success should be taken into serious consideration, and there is still a lot to develop in the area of training. Panama should invest in its people to prepare them as conscious and responsible citizens in order to create more competitiveness for our nation. As Michael Porter says:

"Clusters must include not only the people who live in the area under consideration but also the politicians who decide as well as enterprises that make use or want to make use of the area. According to Porter, "A cluster allows each member to benefit as if it had greater scale or as if it had joined with others without sacrificing its flexibility".

The politicians and the Legislators who develop laws should be included in the thinking process as by involving them from the start is crucial for the success of any major planning such as the transformation of a nation. Most important is to exclude personal interests to benefit only a few individuals; this will ensure the most benefit for the nation as a whole.

Recommended keys to success in the development of maritime clusters are:

- Develop within the government regulatory agencies a reliable and accurate data collection mechanism.
- Determine Panama's market share in the maritime industry by sector and sub sector.
- Determine the percentage GDP by economic activity and the value of exports.
- Determine the ratio of investment and employment and its relation to economic growth of the cluster.
- Determine the cluster profitability, return on investment, return on equity, and other financial indicators to attract foreign investment in the country.
- Identify and define functions among the different Panamanian government agencies and private sector directed to strengthen the maritime cluster of Panama.



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