Strategic Port Improvements and Maximization of the Benefits of RoRo Shipping Services in Southwestern Mindanao

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Abstract: The primary goal of this study is to improve the shipping services and reduce transport cost in Southwestern Mindanao for efficient RoRo shipping operation. The improvement of ports and the existence of RoRo shipping in Southwestern Mindanao provide great help in the transportation and movement of goods and people in Basilan, Sulu, and Tawi-Tawi. The construction of a RoRo ramp in the Port of Lamitan resulted in modal shift from Non-RoRo to RoRo shipping. The RoRo ship calls, passenger and cargo traffic had substantially increased from 2006 to 2010 for Zamboanga-Lamitan route. Inadequate RoRo facilities, damaged infrastructure, problem with shipping operation, port administration and personnel are some of the problems and issues identified. Thus, to fully maximize the benefits of RoRo, there is a need to address those challenges and evaluate the system, infrastructure and cost of shipping for efficient RoRo operation in Southwestern Mindanao.

Keywords: RoRo Shipping, Port Improvement, Cargo and Passenger Traffic

1. INTRODUCTION

Domestic shipping services are commonly viewed as inefficient and poor in operation as well as poor in standards (Lorenzo, 1998). Old vessel, damaged ramp, high cost of shipment and lack of port system are some of the reasons. One of the strategies which the government wants to push through is the improvement of Roll-on/Roll-off (RoRo) Ports and the highways connecting to them. These projects enhance mobility and improve linkages between islands, provide access to markets or activity centers and support agro-fisheries sector.

The RoRo policy has introduced changes in shipping operations and port administration. Port charges and documentation requirements were reduced and simplified, commodity classification no longer applies to RoRo cargoes, freight rates are now based on lane-meter, and cargo handling and wharfage have been eliminated. The private sector participation and investment in the Expanded Strong Republic Nautical Highway (SRNH) have been unleashed – both in the operation of RoRo, development of RoRo terminals, and/or operation of a RoRo link (Basilio, 2008).

Under Arroyo's Administration, the Zamboanga - Basilan – Sulu – Tawi-Tawi RoRo Links declared as part of the SRNH and promote countryside development through the Road Roll-on/Roll-off Transportation System (RRTS). The objectives of the RRTS are: a). To reduce transportation cost from Mindanao to Luzon, through the Visayas specifically the cost of inter-island transportation through the establishment of a safe, efficient and cost-effective RRTS; b). To enhance tourism, transportation and commerce throughout the country; c). To facilitate the government's agro-fisheries modernization and food security programs; d). To promote private sector participation in the establishment, construction and operation of RRTS facilities; and, e). To establish a new policy to promote the development of RRTS.

The United States Agency for International Development's (USAID) Growth with Equity in Mindanao (GEM) Program supported and advocated this development by constructing RoRo ramps in Lamitan port in Basilan; Bongao port in Tawi-Tawi; Siasi port in Sulu and Siocon port in Zamboanga Del Norte. This is to promote the use of RoRo Shipping and to reduce the cost of transporting goods in the Sulu Archipelago.

The primary goal of this study is to improve the shipping services and reduce the transport cost in Southwestern Mindanao for efficient Roll-on-Roll-off operation. The improvement of ports and maximization of the benefits of RoRo will provide easier access to markets to alleviate poverty in the countryside and isolated places. It will enhance peace and order in conflict-affected areas through efficient transport and trade. It will reduce the cost of shipping. It will improve tourism and trade by making the movement of people faster, cheaper and safer. And it will ensure efficient linkages between business centers and nearby provinces.

Port statistics of Zamboanga's Port was used in the study. Interviews with port personnel and with one major shipping company (Aleson shipping lines) that operates RoRo in Basilan, Jolo and Tawi-Tawi were also conducted to gather information about ports operation.

2. EXPANDED STRONG REPUBLIC NAUTICAL HIGHWAY

Figure 1. Expanded Strong Republic Nautical Highway

The SRNH is an integrated road and maritime transport system that efficiently connects Luzon, Visayas and Mindanao. It has been expanded into the Western Nautical Highway which has 11 RoRo-capable ports with shipping companies regularly plying the route; the Central Nautical Highway having 11 out of 14 ports RoRo-capable with 4 out of 7 routes serviced regularly by shipping companies; and, the Eastern Nautical Highway which has 2 out of 4 ports RoRo-capable and 1 out of 2 routes serviced regularly by shipping companies. It covers a total of 919 kilometers of land travel and 137 nautical miles of sea travel interconnecting 17 provinces and cities.

The importance of SRNH and Roll-on, Roll-off Ports system is spurring interisland farm trade, improving distribution of basic goods, reducing travel time and transportation costs, and promoting domestic tourism. Through the SRNH-RoRo system, the delivery of basic goods and farm produce such as vegetables and livestock is made easier, economical and efficient as travel time to and from destinations as well as transportation costs are considerably reduced.

3. PORTS AND RORO CONNECTIONS IN SOUTHWESTERN MINDANAO

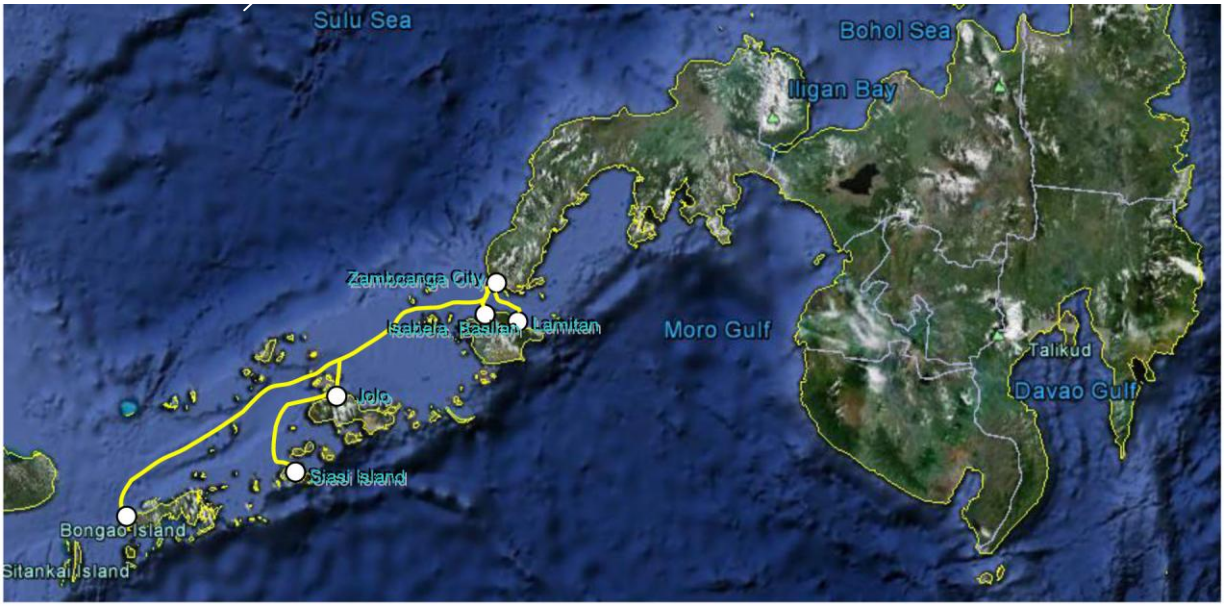

Figure 2. Southwestern Mindanao RoRo connections

The Ports and RoRo connections in Southwestern Mindanao shown in Figure 2 play a vital role in the shipment of agri-fishery products such as fruits, root crops, fresh and dried fish and marine products, copra (or desiccated coconuts) and seaweeds from Tawi-Tawi, Sulu and Basilan to Zamboanga City. Conversely, consumer goods such as sugar, flour, canned and bottled products, frozen meat, rice, personal care products and packed food items coming from Zamboanga City are shipped regularly to the island provinces using the same RoRo and Non-RoRo transport systems. Some of the RoRo ports were funded by the USAID through its GEM Program in Mindanao.

3.1 Port of Zamboanga

The Zamboanga Port serves as a hub port of RoRo shipping operations in Southwestern Mindanao. It is managed by the Philippine Port Authority (PPA). At present, there are only two RoRo ramps in the port. These RoRo ramps are heavily used by 3 shipping lines with

their respective RoRo vessels for their shipping operations to Isabela, Lamitan, Jolo and Bongao. RoRo vessels experienced delays most of the time in loading and unloading of passengers and cargoes due to inadequate RoRo Ramps which resulted to longer turn-around time and therefore increased in shipping operation cost. RoRo vessels sometimes need to anchor and give way to incoming passenger vessel to unload which were given high priority to dock as a matter of port policy.

Figure 3. Zamboanga RoRo Ramp

Ship Calls, Embarked and Disembarked Passengers, and Inbound and Outbound Cargoes of Zamboanga port are shown in Table 1 and Table 2 from 2006 to 2010.

Table 1. Zamboanga Non-RoRo shipping, passenger and cargo traffic

Year		2006	2007	2008	2009	2010
Ship Calls		7,508	6,681	5,605	4,847	6,501
Passenger	Disembarked	945,891	868,423	827,466	722,778	894,288
	Embarked	922,502	902,950	868,813	792,864	975,635
Cargo	Break-bulk Inbound	244,462	299,603	278,797	329,300	341,704
	Break-bulk Outbound	263,015	296,137	282,601	272,885	229,439
	Containerized Inbound	520,743	559,927	553,157	545,881	616,448
	Containerized Outbound	321,026	313,914	299,550	282,910	283,192

Table 2. Zamboanga RoRo shipping, passenger and cargo traffic

Year		2006	2007	2008	2009	2010
Ship Calls		1,033	1,046	1,089	1,084	1,076
Passenger	Disembarked	143,292	195,109	212,953	353,008	372,403
	Embarked	123,982	178,168	255,866	438,632	407,277
Cargo	Break-bulk Inbound	2,614	3,270	2,714	2,386	2,250
	Break-bulk Outbound	16,452	29,511	30,121	21,305	38,467

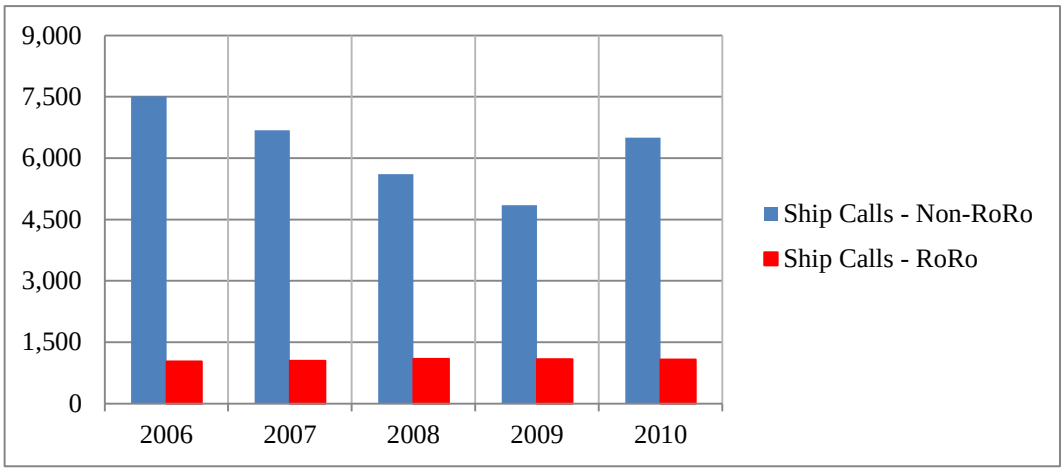

Figure 4. Zamboanga Ship Calls

Ship calls for Non-RoRo were declining up to year 2009 as shown in Figure 4 with an average annual rate of 13.55% and started to increase again in 2010. On the other hand, RoRo Ship calls were generally increasing with average annual rates of 1.39 % . Highest recorded ship calls were from Zamboanga-Isabela route both for Non-RoRo and RoRo ship calls. In 2010, 52.04% of ship calls is from Zamboanga-Isabela route, 9.50% from Zamboanga-Lamitan route, 19.18% from Zamboanga-Jolo route, and 2.72% from Zamboanga-Bongao route.

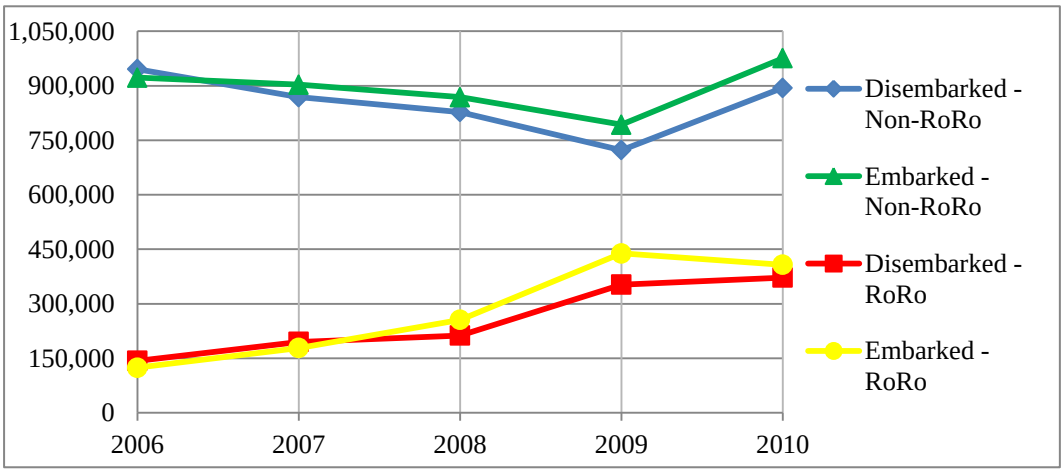

Figure 5. Zamboanga Passenger Traffic

On passenger traffic shown in Figure 5, Disembarked and embarked passengers for Non-RoRo were declining up to 2009 with average annual rates of 8.52% and 4.88%, respectively but started to increase at 23% annual rate on 2010. For RoRo, passenger traffic is generally increasing with an average annual rate of 38.86% for disembarking passengers and 50.53% for embarking passengers. Highest recorded passenger traffic was from Zamboanga-Isabela route both for Non-RoRo and RoRo passengers from 2006 to 2010. In 2010, 53.35% of passengers is from Zamboanga-Isabela route, 12.76% from Zamboanga-Lamitan route, 21.38% from Zamboanga-Jolo route, and 4.63% from Zamboanga-Bongao route.

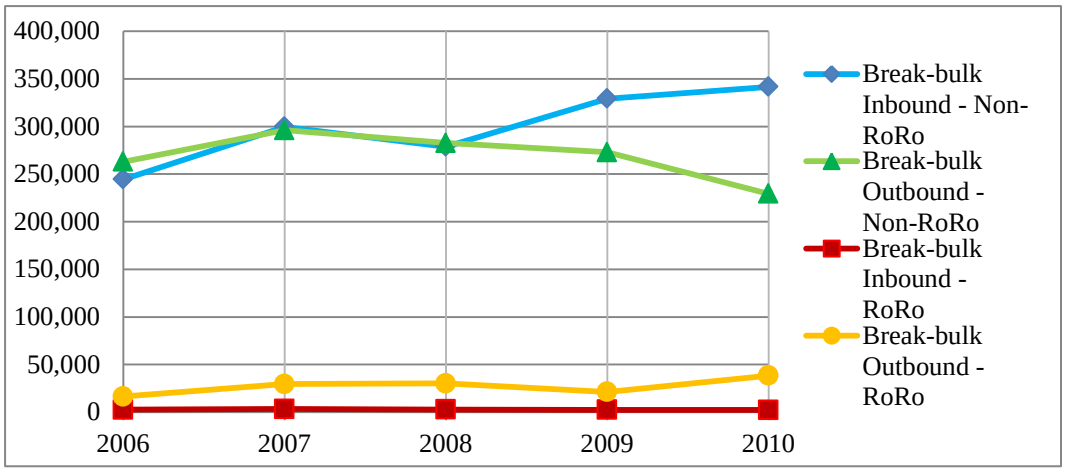

Figure 6. Zamboanga Break-bulk Traffic in Metric Tons

For Break-bulk traffic shown in Figure 6, inbound break-bulk for Non-RoRo is generally increasing while outbound break-bulk is generally decreasing. For RoRo, despite the great increase in the outbound break-bulk in 2010, this is still smaller compared with the transported break-bulk of Non-RoRo. In 2010, 10.36% of break-bulk cargoes are from Zamboanga-Isabela route, 4.23% from Zamboanga-Lamitan route, 41.36% from Zamboanga-Jolo route, and 6.35% from Zamboanga-Bongao route.

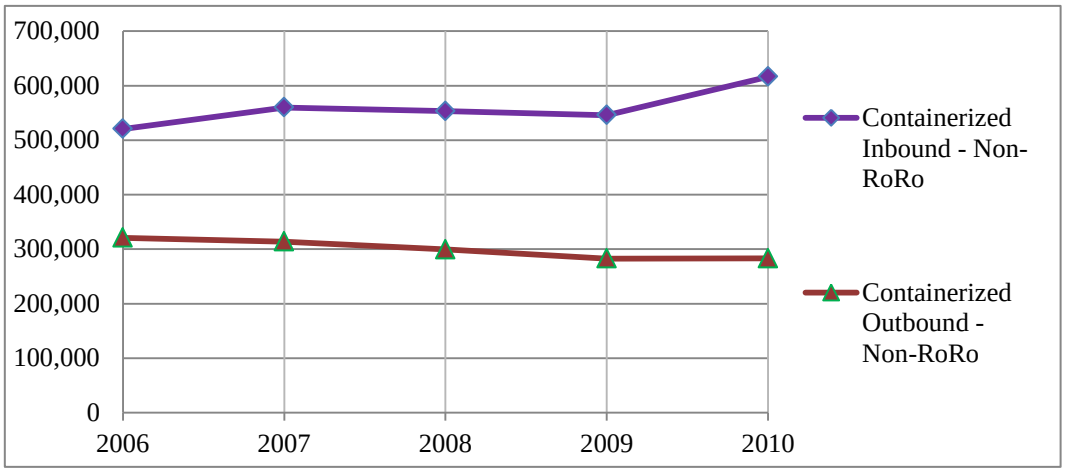

Figure 7. Zamboanga Containerized Traffic in Metric Tons

For Containerized Cargo shown in Figure 7, only Non-RoRo vessels carried or transported containerized cargoes. Inbound containerized cargoes were generally increasing while outbound containerized cargoes were generally declining from 2006 to 2010.

3.2 Port of Isabela

Figure 8. Isabela Port

The main port in Basilan is the Isabela Port in Isabela City as shown in Figure 8. It is managed by Philippine Ports Authority. The port is endowed with a natural deep harbour and anchorage area in the Malamawi Channel, a stretch of water between Isabela and Malamawi Island that protects the approaches of the wharf during bad weather.

Only one shipping company uses the RoRo ramp twice a day for its Zamboanga-Isabela route. The disadvantage of this operation to consumers is that the shipping company can dictate its price on fare and shipment fee because it has no competition. Ship Calls, Embarked and Disembarked Passengers, and Inbound and Outbound Cargoes are shown in Table 3 and Table 4 from 2006 to 2010.

Table 3. Zamboanga-Isabela Non-RoRo shipping, passenger and cargo traffic

Year		2006	2007	2008	2009	2010
Ship Calls		3,263	2,886	2,267	1,592	3,225
Passenger	Disembarked	387,396	375,146	376,180	281,414	363,739
	Embarked	345,398	384,136	385,380	342,994	431,146
Cargo	Break-bulk Inbound	11,455	10,958	5,823	8,410	13,109
	Break-bulk Outbound	27,616	23,095	16,834	18,653	22,771
	Containerized Inbound	5,535	927	612	2,448	27,495
	Containerized Outbound	58	711	9	1,185	11,832

Table 4. Zamboanga-Isabela RoRo shipping, passenger and cargo traffic

Year		2006	2007	2008	2009	2010
Ship Calls		721	678	721	714	718
Passenger	Disembarked	122,137	140,116	151,567	257,492	258,468
	Embarked	107,924	127,595	176,494	321,040	280,751
Cargo	Break-bulk Inbound	2,241	1,365	1,055	641	350
	Break-bulk Outbound	13,466	20,895	1,7006	13,027	27,159

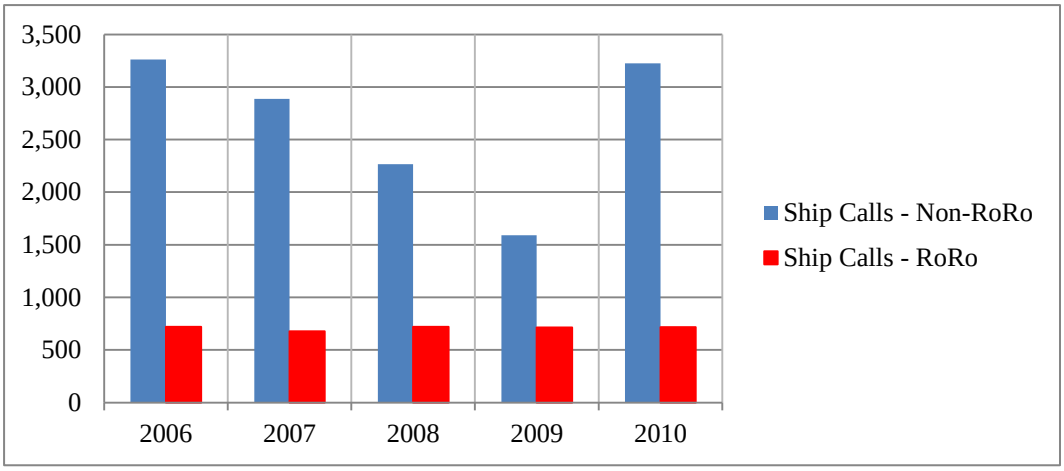

Figure 9. Zamboanga-Isabela Ship Calls

Zamboanga-Isabela ship calls for Non-RoRo were declining up to year 2009 as shown in Figure 9 with an average annual rate of 20.93% and start to increase again in 2010. On the other hand, RoRo Ship calls decreased by 5.96% in 2007, 6.34% increased in 2008, 0.97% decreased in 2009 and 0.57% increased in 2010.

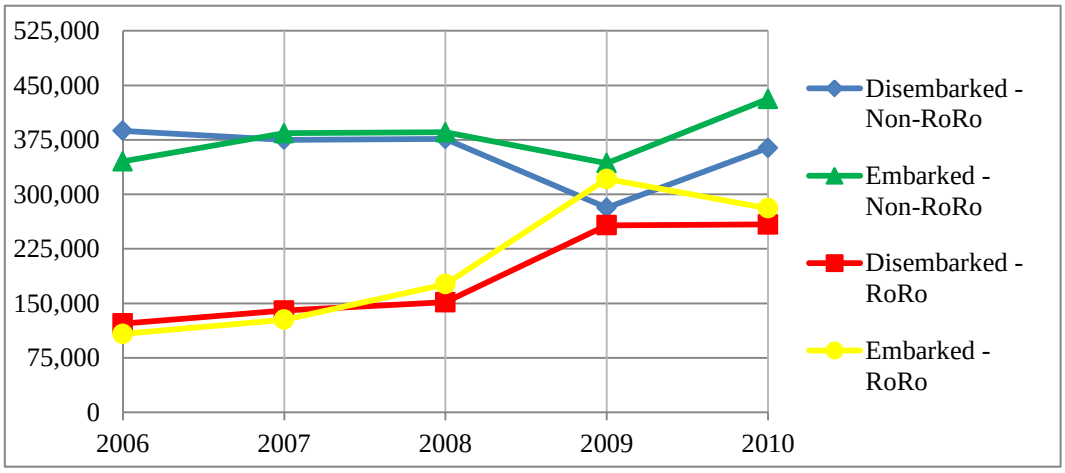

Figure 10. Zamboanga-Isabela Passenger Traffic

On passenger traffic shown in Figure 10, Disembarked and embarked passengers for Non-RoRo substantially declined in 2009 with an annual rate of 29.78% and 25.19%, respectively, but started to increase in 2010. On the other hand, RoRo passenger traffic is generally increasing and substantially increased in 2009 with an annual rate of 69.89% for disembarking passengers and 81.90% for embarking passengers.

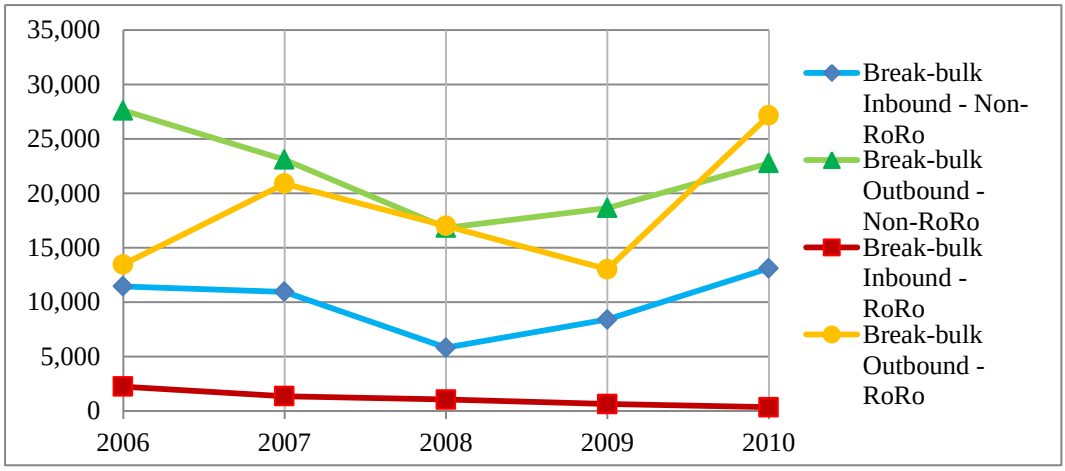

Figure 11. Zamboanga-Isabela Break-bulk Traffic in Metric Tons

For Break-bulk traffic shown in Figure 11, inbound and outbound break-bulk for Non-RoRo declined significantly in 2008 with an annual rate of 46.86% and 27.11%, and increased significantly in 2010 with an annual rate of 55.87% and 22.08%, respectively. For RoRo, inbound break-bulk generally decreased while outbound break-bulk declined significantly in 2009 with an annual rate of 23.40%, and increased significantly more than 100% in 2010.

Containerized Cargo was recorded for Non-RoRo vessels only. Inbound and outbound containerized cargoes declined in 2008 and substantially increased in 2010.

3.3 Port of Lamitan

Lamitan Port is the second major port in Basilan. This port is under the supervision of the Autonomous Region in Muslim Mindanao (ARMM) Regional Ports and Management Authority (RPMA), but later in 2008 was turned-over to the Municipal Government of Lamitan. Improvement of the port and construction of RoRo Ramp funded by USAID's GEM were completed in 2005. RPMA- Lamitan does not have database system for port operations. In this study, PPA-Zamboanga data were used in the analysis.

Only one RoRo vessel uses the RoRo ramp once a day for its operation in the Zamboanga-Lamitan route. Again, the disadvantage of this operation is that the shipping company can dictate its price on fare and shipment fee because it has no competition. Ship Calls, Embarked and Disembarked Passengers, as well as Inbound and Outbound Cargoes are shown in Table 5 and Table 6 from 2006 to 2010.

Table 5. Zamboanga-Lamitan Non-RoRo shipping, passenger and cargo traffic

Year		2006	2007	2008	2009	2010
Ship Calls		1,071	661	524	323	362
Passenger	Disembarked	135,557	80,380	58,145	42,173	46,753
	Embarked	125,709	84,609	69,732	46,890	50,863
Cargo	Break-bulk Inbound	6,249	4,915	2,762	1,804	5,560
	Break-bulk Outbound	9,770	8,220	5,271	2,990	7,109
	Containerized Inbound					1,539
	Containerized Outbound					1,260

Table 6. Zamboanga-Lamitan RoRo shipping, passenger and cargo traffic

Year		2006	2007	2008	2009	2010
Ship Calls		310	365	368	366	358
Passenger	Disembarked	20,887	54,993	61,386	95,516	113,935
	Embarked	15,858	50,573	79,372	117,592	126,526
Cargo	Break-bulk Inbound	358	1,905	1,659	1,746	1,900
	Break-bulk Outbound	2,932	8,611	13,115	8,278	11,308

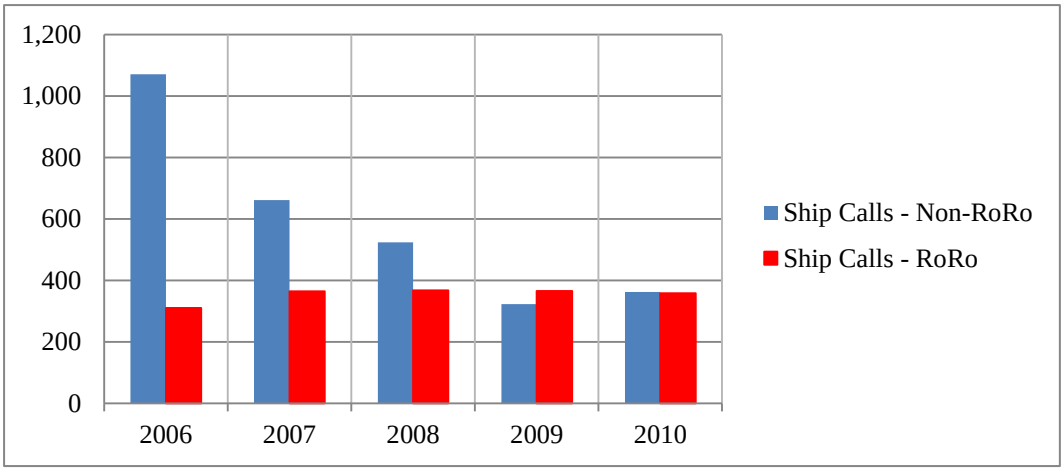

Figure 12. Zamboanga-Lamitan Ship Calls

Figure 12 shows the ship calls of both Non-RoRo and RoRo for Zamboanga-Lamitan route. For Non-RoRo, Ship calls had substantially declined in 2009 with an annual rate of 38.36% and started to increase again in 2010. On the other hand, RoRo Ship calls had substantially increased in 2007 at the rate of 17.74% but decreased in 2010 with the rate of 2.19%. In 2009 ship calls for RoRo is higher than of Non-RoRo Vessels .

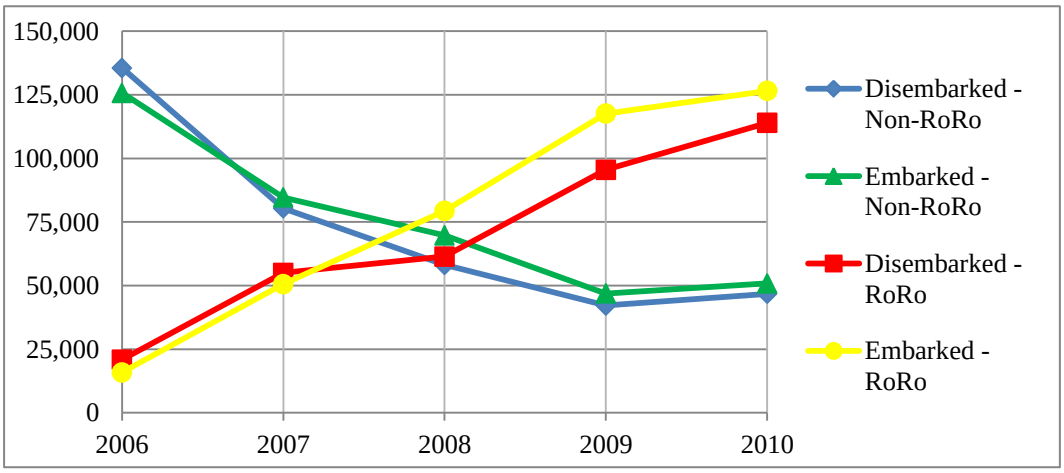

Figure 13. Zamboanga-Lamitan Passenger Traffic

On passenger traffic shown in Figure 13, Disembarked and embarked passengers for Non-RoRo were declining with average annual rates of 28.33% and 24.85%, respectively. On the other hand, RoRo passenger traffic was generally increasing with average annual rates of

83.27% and 110.54%, respectively. In 2008, RoRo passenger traffic was greater than the Non-RoRo passengers.

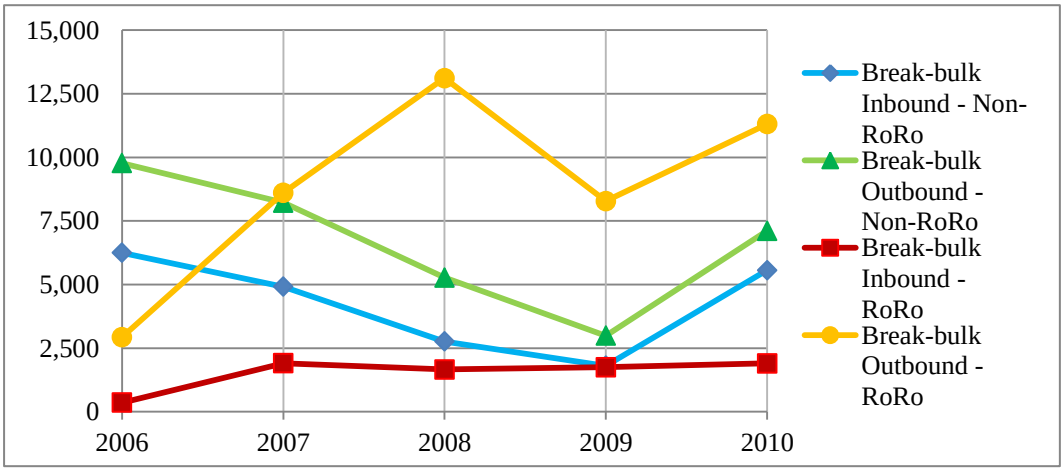

Figure 14. Zamboanga-Lamitan Break-bulk Traffic in Metric Tons

For break-bulk traffic shown in Figure 14, inbound and outbound break-bulk for Non-RoRo declined significantly in 2008 with an annual rate of 34.69% and 43.27%, respectively, and increased significantly in 2010. For RoRo, inbound and outbound break-bulk was generally increasing and increased significantly in 2007.

Containerized Cargo was recorded for Non-RoRo vessels in the year 2010 only. Major outbound cargoes from Lamitan are: copra, fish, fruits and vegetables, rubber and empty bottles. Inbound cargoes from Zamboanga are: general cargo, bottled products, grocery items, construction materials, wheat and rice.

3.4 Port of Jolo

At present, the Port of Jolo in Sulu is under the supervision of ARMM RPMA. The port has RoRo Ramp but PPA-Zamboanga classified the Port of Jolo as a Non-RoRo Shipping System. The main reason is the lack of cargo trucks and other land vehicles that simply roll on or off to a RoRo vessel. Cargo coming in and going out of Jolo are loaded/unloaded manually to the ship's hull.

Ship Calls, Embarked and Disembarked Passengers, and Inbound and Outbound Cargoes are shown in Table 7 from 2006 to 2010.

Table 7. Zamboanga-Jolo Non-RoRo shipping, passenger and cargo traffic

Year		2006	2007	2008	2009	2010
Ship Calls		1,405	1,503	1,319	1,373	1,453
Passenger	Disembarked	235,615	250,005	22,8375	228,183	277,822
	Embarked	245,433	257,176	24,0639	243,864	288,627
Cargo	Break-bulk Inbound	78,319	103,673	9,6470	126,527	133,823
	Break-bulk Outbound	96,518	111,278	12,4584	110,797	119,228
	Containerized Inbound				1,551	16,893
	Containerized Outbound				1,683	8,676

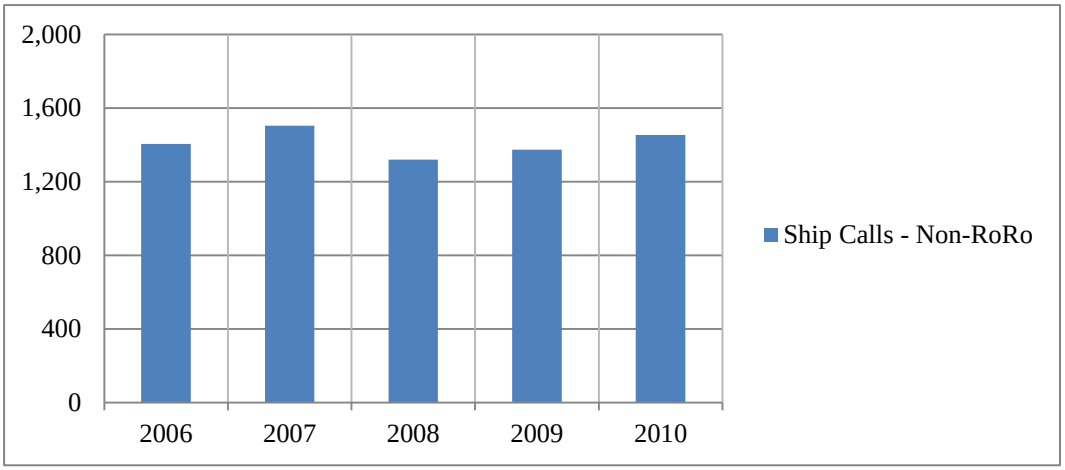

Figure 15. Zamboanga-Jolo Ship Calls

Figure 15 shows the ship calls for Zamboanga-Jolo route. Ship calls had declined in 2008 with the annual rate of 12.24% and started to increase in 2009 and fully recovered in 2010.

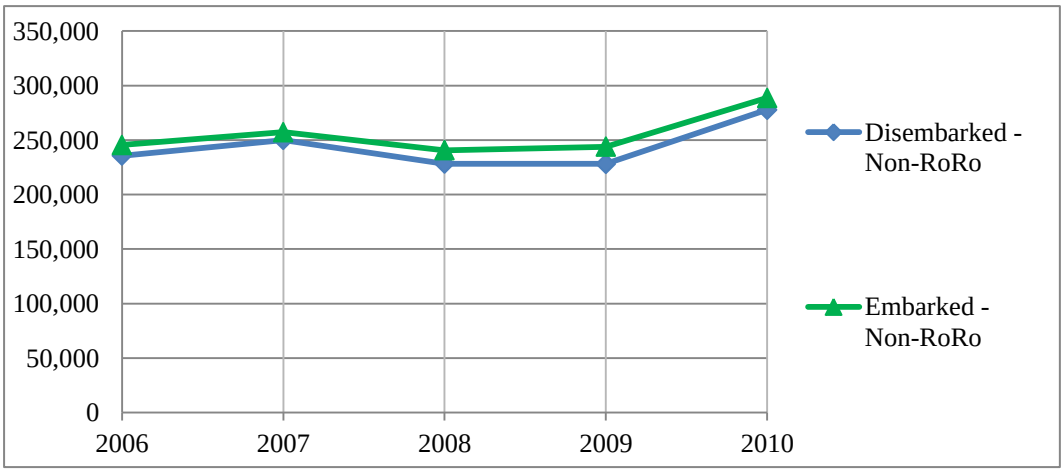

Figure 16. Zamboanga-Jolo Passenger Traffic

On passenger traffic shown in Figure 16, Disembarked and embarked passengers had declined in 2008 with an annual rate of 8.65% and 6.43%, respectively. In 2010, Passenger traffic increased significantly to an annual rate of 21.75% for passengers going to Jolo and 18.36 % for passengers leaving Jolo.

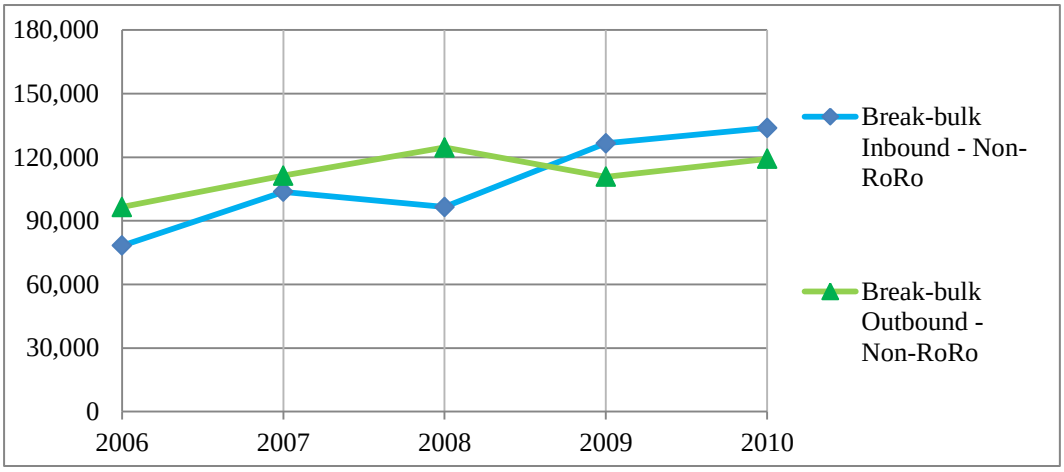

Figure 17. Zamboanga-Jolo Break-bulk Traffic in Metric Tons

For break-bulk traffic shown in Figure 17, inbound break-bulk had declined in 2008 with an annual rate of 6.95% and had increased significantly in 2009 with an annual rate of 31.16%. For outbound break-bulk, it increased significantly in 2008 but decreased in 2009 but started to increase again in 2010.

Containerized Cargo started to grow in the year 2009 and significantly increased in 2010.

3.5 Port of Siasi

The Port of Siasi in Sulu is under the supervision of ARMM RPMA. The port has a RoRo ramp but one of its breasting dolphins had been damaged. Most of the vessels use ship-side docking instead of the more convenient Mediterranean docking to adjust to the situation.

At present, there are three shipping lines which operate at the port of Siasi. Most of their vessels are not classified as RoRo vessels because a large portion of the vessels were converted to passenger's cabin and they cannot anymore accommodate rolling cargo. These are RoRo type vessels but cannot provide RoRo Service as a result of the physical adjustments.

Based on the data from PPA –Zamboanga, for the Zamboanga-Siasi route, the passenger and cargo traffic were minimal. Highest ship calls recorded is 12 ship calls from 2006 to 2008. Passenger traffic was recorded in 2007 with 102 passengers going to Jolo. Highest Cargo traffic was in 2007 with 1, 348 metric tons of break-bulk cargo outbound from Jolo and 850 metric tons of break-bulk inbound to Jolo.

3.6 Port of Bongao

The Bongao Port in Tawi-Tawi is under the management of ARMM RPMA. The port has a RoRo ramp funded by USAID'S GEM and completed in May 2006. The RoRo ramp has increased the berthing capacity of the port allowing four steel-hulled vessels to dock simultaneously. PPA Zamboanga classified Bongao port as Non-RoRo shipping system from 2006 to 2010. The vessels that operate in the Zamboanga-Bongao route are RoRo vessels but shippers do not use self-powered vehicles (rolling cargo) to unload and load break bulk cargo into the RoRo vessel. At present, based on an interview with the PPA manager, the PPA Zamboanga is now recognizing Bongao port as the RoRo port system. RPMA-Bongao does not have database system for their port operation. Source of data is PPA-Zamboanga.

Table 8 shows Ship Calls, Embarked and Disembarked Passengers, and Inbound and Outbound Cargoes from 2006 to 2010.

Table 8. Zamboanga-Bongao Non-RoRo shipping, passenger and cargo traffic

Year		2006	2007	2008	2009	2010
Ship Calls		213	218	207	210	206
Passenger	Disembarked	37,669	41,239	51,372	54,126	60,822
	Embarked	38,060	40,986	50,627	55,066	61,931
Cargo	Break-bulk Inbound	14,651	17,126	20,363	20,989	16,703
	Break-bulk Outbound	17,547	26,810	25,982	23,020	22,177
	Containerized Inbound				1,224	2,268
	Containerized Outbound				1,008	783

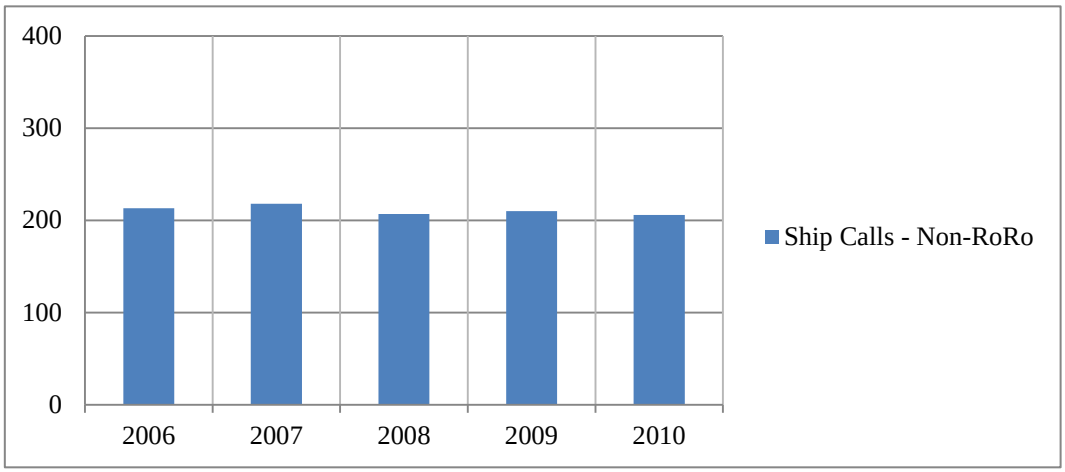

Figure 18. Zamboanga-Bongao Ship Calls

Figure 18 shows the ship calls for Zamboanga-Bongao route. The ship calls increased by 2.35% in 2007 and 1.45% in 2009, but decreased by 5.05% in 2008 and 1.90% in 2010.

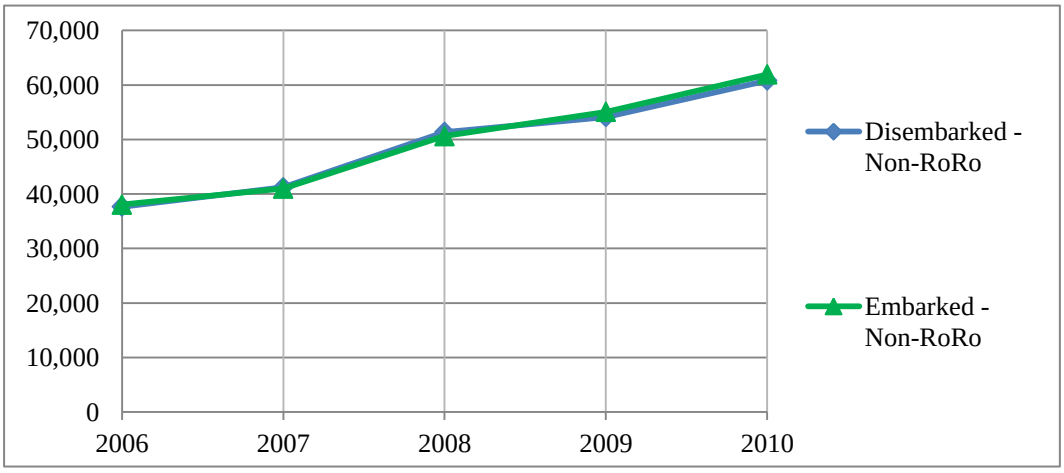

Figure 19. Zamboanga-Bongao Passenger Traffic

On passenger traffic shown in Figure 19, disembarked and embarked passengers were increased from 2006 to 2010 with average annual rates of 17.26% and 17.48%, respectively.

In 2008, Passenger traffic increased significantly with an annual rate of 24.57% for passengers going to Bongao and 23.52 % for passengers leaving Bongao.

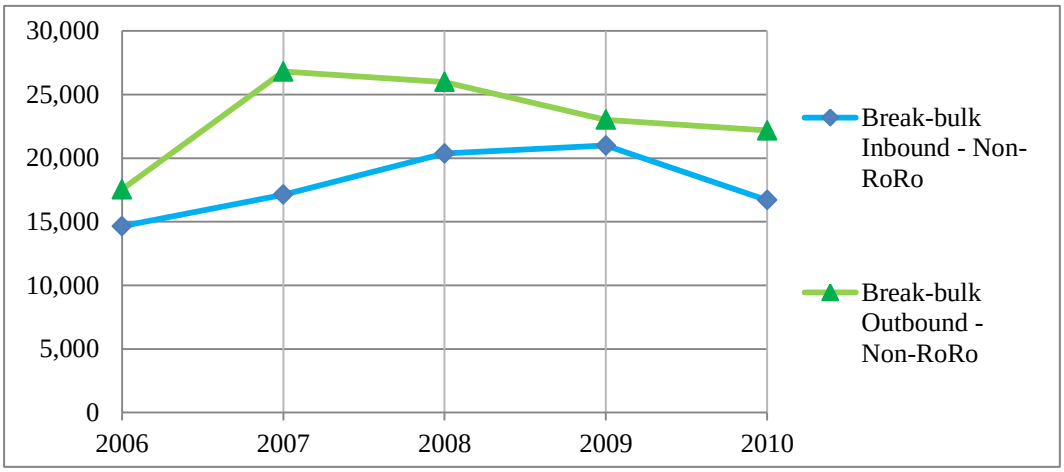

Figure 20. Zamboanga-Bongao Break-bulk Traffic in Metric Tons

For break-bulk traffic shown in Figure 20, inbound break-bulk had increased significantly in 2006 to 2010 with an average annual rate of 12.96% and had decreased in 2010 with an annual rate of 20.42%. For outbound break-bulk, it had increased significantly in 2007 with an annual rate of 52.79% but had decreased from 2009 to 2010 with an average annual rate of 4.83%.

The top cargoes from Zamboanga to Bongao are: general cargo, bottled cargo, metal products, wheat, and transport equipment. Cargoes from Bongao to Zamboanga are: seaweed, bottled cargo, coconut and its by-products, general cargo, and transport equipment. Containerized Cargo started to grow in the year 2009 and significantly increased in 2010 for Bongao to Zamboanga.

4. PROBLEMS IN RORO OPERATION

Based on an interview with Aleson Shipping Lines which is one of a major RoRo service provider in Basilan, Jolo and Tawi-Tawi, the problems they encountered in the RoRo shipping operation include: government authorities and port workers arbitrarily impose charges which are different from to the published fees in the port of operation, high maintenance cost of vessels, lower fares, and need of a larger area for maneuvering of vehicles.

On the other hand, on the government side (PPA) and shippers, the problems they encountered are: high freight rates of shipping company, no competition (only one service provider) in several routes, need of larger passenger way and yard, need of larger cargo yard and port workers complaint for getting displaced by rolling cargo handling (minimal manual handling of cargo) once full RoRo vessel operations are operated in support of the full implementation of RRTS.

5. CONCLUSION

The existence of RoRo shipping in Southwestern Mindanao provides great help in the transportation and movement of goods and people in Basilan, Sulu, and Tawi-Tawi. It is effectively operated in Zamboanga-Isabela route and Zamboanga-Lamitan route. The construction of a RoRo ramp in the Port of Lamitan resulted in modal shift from Non-RoRo to RoRo System. The RoRo ship calls, passenger and cargo traffic are generally increasing while Non-RoRo is declining from 2006 to 2010 for Zamboanga-Lamitan route. This means that passengers and businessmen are now realizing the benefits of the RoRo System in Lamitan.

In Jolo and in Bongao, RoRo shipping is not being operated because of the absence of rolling cargo (cargo trucks and other land vehicles that simply roll on or off to the RoRo vessel.). Cargo coming in and going out of Jolo and Bongao are all loose-cargo type that is loaded and unloaded manually or by ship's forklift, in and out of the ship's hull.

Inadequate RoRo facilities such as RoRo ramps in the port of Zamboanga, damaged infrastructure such as a breasting dolphin in the Port of Siasi, problem with port operation such as arbitrary cargo handling fees and freight rates, high maintenance cost, need of larger yard and issues on displacement port workers and lack of database system in the RPMA ARMM-operated ports are some of the problems and issues that slow down the operation of RoRo shipping services. Thus, to fully maximize the benefits RoRo, there is a need to evaluate the system, port infrastructure and the cost of shipping toward economically efficient RoRo operations.

The need for efficient RoRo system, increased private sector participation in the implementation of RoRo system and services, improved operation, monitoring and maintenance of the existing RoRo infrastructure are some of the challenges that need to be addressed to achieve strategic port improvement and maximization of benefits of RoRo system in Southwestern Mindanao.

6. RECOMMENDATIONS

To achieve the efficient RoRo services in Southwestern Mindanao, the following are highly recommended:

1) To enhance RoRo shipping in Southwestern Mindanao, Zamboanga Port as a hub port should be improved. An additional RoRo facility should be constructed to respond to the need of additional ramps for RoRo vessels.
2) To make the RoRo transport more cost-efficient and discourage monopolies in the port of Isabela and Lamitan, PPA or RPMA should invite/ attract other shipping companies through deregulation of routes and rates. The application of RoRo tariff rates, which eliminate cargo-handling costs, should be expanded and documentation of purely RoRo cargo should be applied.
3) The government should pursue a prioritized program for port development so that they will serve as gateways to provincial centers and tourism destinations. The port of Bongao, Jolo and Siasi should be improved, enhanced and upgraded to serve as efficient RoRo shipping service centers. Repair of the damaged breasting dolphin and improvement of RoRo Ramps should be implemented and realized through the collaboration of ARMM RPMA and LGU proponents.
4) Lastly, data information system is very important in every port. The port management should establish database system and train port personnel to become skilled in data information system particularly in the RPMA ARMM-operated ports.

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