
Commonwealth of the Northern Mariana Islands
Department of Commerce &
United States Department of Agriculture
Rural Business Enterprise Grant
Economic Restoration Project & Report:
Findings and Recommendations



Submitted by: Island Training Solutions, Contractor

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Executive Briefing

The Commonwealth of the Northern Mariana Islands (CNMI) is a United States Commonwealth and the youngest member of the US political family. While the CNMI is the youngest and smallest US jurisdiction, it realized a rapid development of its economic base in the early years of its existence; however it has suffered an equally rapid deterioration of its economic health due to varying host of dynamics. In response to downturn in the economic conditions and prospects for a swift recovery, the CNMI government embarked on a methodical series of planning efforts to aid in the diversification and development of its economic drivers.

The first step in its effort included the commissioning of a public-private organization tasked with the development of the CNMI's Comprehensive Economic Development Strategy (CEDS) plan which serves as a key component in listing and prioritizing projects aimed at promoting economic development. The 2009 CNMI Comprehensive Economic Development Strategy was utilized to aid the CNMI in prioritization of its utilization of the American Recovery and Reinvestment Act of 2009. To date, approximately 40% of the projects and needs listed in the 2009 CNMI CEDS have been completed, funded, or under construction. These projects include upgrades to water systems, wastewater, energy efficiency projects, renewable energy projects, upgrades to the public school system facilities, expansion of CNMI road systems, and upgrades to the CNMI broadband infrastructure.

While the CNMI CEDS report listed and prioritized projects, it did not address the needs to diversify the CNMI economic base. As a supplement to the CEDS report, the CNMI Department of Commerce and the Commonwealth Development Authority (CDA) hosted the 2009 CNMI Economic Restoration Summit (ERS) which was aimed at the solicitation of public input to identify various industries for development. The 2009 ERS yielded results which targeted Agriculture, Aquaculture, Education/Educational Tourism, and Call/Data Centers as industries for development to aid in supplementing the CNMI's sole economic driver of tourism. While the 2009 CNMI ERS report provided information and recommendations towards economic development, it provided minimal comparative examples of implementation measures taken in similar economic conditions. Many of the recommendations made in the 2009 Summit failed to understand the fiscal constraints on the CNMI, as well as intricate details on the implementation of particular policies which would yield positive economic impact to the islands.

In an effort to capitalize on the efforts undertaken in the 2009 ERS effort, the CNMI Department Commerce pursued grant funding available through the United States Department of Agriculture's Rural Business Enterprise Grant to aid in funding the 2011 CNMI Economic Restoration Summit. The 2011 ERS efforts included procuring industry experts in the targeted growth industries to assess the CNMI for purposes of assessing the opportunities and challenges associated with introducing and growing their respective industry in the CNMI. The industry experts provided the CNMI with an objective and practical approach to understanding the requirements for industry introduction and development.

This report will provide a discussion of the change in economic and business climatic conditions since the 2009 ERS. This will include a background of each industry, discussion on reports presented during the 2011 ERS, and findings and recommendations associated with each industry.

CNMI Economic Background

The Commonwealth of the Northern Mariana Islands (CNMI) is the smallest United States jurisdiction located in just south of the US Territory of Guam. The CNMI is comprised of three inhabited islands of Saipan, Tinian, and Rota, as well as nine other sparsely habited and uninhabited islands. The CNMI's primary economic driver is its tourism industry; however the CNMI once enjoyed economic prosperity through the textile manufacturing industry. In 2005, World Trade Organization (WTO) policy shifts prompted the exit of the textile manufacturing industry from the CNMI to lower cost destination outside of the United States to Asian countries, such as China and Vietnam.

With the 2005 World Trade Organization (WTO) decision to lift quotas on non-member nations, the competitive advantage for textile manufacturers to operate in the CNMI for purposes of gaining access to the United States market quota free was effectively voided. The WTO policy shift prompted a drastic decrease in CNMI Government revenues. According to the CNMI's 2009 3rd and 4th quarter Economic Indicator, there has been a 24.3% decrease in general fund revenues between 2006 and 2009. This has been primarily impacted by the exit of the CNMI's manufacturing industry and a crippled tourism industry. The textile manufacturing industry exited in dramatic fashion, with a drop from a peak of \$80 million in direct revenues to \$13 million in 2008. Given the events of the WTO decision, the CNMI began to lose manufacturers to operational destinations which offered significantly lower labor rates, primarily to mainland China, Bangladesh, Vietnam, and Pakistan. At its peak in 1999, the CNMI had a total of 34 manufacturers operating in this industry, employing upwards of 17,000 employees to the complete exit of the last factory in early 2009. A resulting consequence of the exit of the garment industry has been the increase in shipping rates due to the dramatic decline in exportable commodities. This impact has consequently increased the cost of commodities within the CNMI, limiting the buying power of residents and businesses and the ability to export commodities to outside markets while maintaining cost competitiveness.

The CNMI economy faces further obstacles with the implementation of PL 110-229, which extends federal immigration to the borders of the CNMI. Prior to the implementation of PL 110-229 on November 28, 2009, the CNMI controlled its own immigration, which provided the tourism industry with the flexibility to develop new markets despite the remote location of the islands. As a result, the CNMI was able to develop two non-traditional U.S. market bases, with the China and Russia markets. While the Chinese market served as the fastest growing market in the CNMI prior to the implementation of PL 110-229, the Russian market base served as the most lucrative base with respect to tourist spending. According the Marianas Visitors Authority (MVA), the Chinese and Russian markets currently contribute roughly \$197 million in annual economic contribution, however provisions of the recently enacted legislation aims to restrict the CNMI's access to these market base. Both the CNMI and Guam governments have requested that the Chinese and Russian markets be included on a joint Visa Waiver programs, however the Department of Homeland Security has not issued a final ruling on this request. Although there has been a "parole" allowance for Chinese and Russian tourists, issued by the Department of Homeland Security, this provision is not final and anxiety still remains around the negative impact that this will have on the CNMI's tourism industry.

The CNMI's struggling tourism industry has to contend with the shift in national policy via PL 110-229, as well as unexpected events inclusive of the SARS epidemic, air service merges which impact service routes to the CNMI, and the 2011 Japan Earthquake/Tsunami/Nuclear disaster. The varying degrees of complexities associated with maintaining the CNMI's sole economic driver gives further credence to the need to diversify the economic base of the CNMI.

Another damaging effect that PL 110-229 has on the CNMI is the limitations place on the accessibility to foreign labor. Due to the significantly small size of the CNMI's population, access to an adequate workforce has historically led to employers hiring foreign nationals to supplement the limited workforce. PL 110-229 mandates that the CNMI reduce its reliance on foreign labor to zero within a five year period. Not only does this limit private sector growth, but it significantly shrinks the total market base of the CNMI making it an unviable option for business to move or grow operations within the CNMI. The mandated shrinkage in the available CNMI workforce presents a significant obstacle to ensuring current businesses will have adequate resources to operate, but also presents a significant challenge for the introduction of new industries.

In addition to the exit of the garment manufacturing industry and the implementation of PL 110-229, the CNMI must also contend with a federally mandated increase in the minimum wage. Federal law requires that the CNMI increase the minimum wage floor by \$0.50 annually until such a time that the CNMI wage is consistent with federal levels. The \$0.50 annual increase has proven to be a significant barrier to business sustainability, given the ramifications of PL 110-229, increased shipping rates, a declining market base, and restricted access to an adequate and trained workforce. While there are a host of economic challenges that are external to the CNMI, internal challenges pose an equally prohibitive barrier to industry introduction and growth. These internal challenges are primarily comprised of infrastructure conditions, utility rates, land restriction, and workforce composition.

The CNMI's remote location and relatively small market size provides for an unfavorable element in ensuring competitive rates for many of the utilities required for the efficient cost of doing business. This dynamic is most evident in the power rates charged to both residential and commercial customers in the CNMI. As of the date of this report, the Commonwealth Utilities Corporation (CUC) charges residential customers a rate of 0.36326 and commercial users a rate of 0.44626, with a Levelized Energy Adjustment Clause (LEAC) Rate Tariff at a rate to 0.34426. While much of the cost of utilities is born out of the price of crude oil, the increase in global oil prices is compounded by the premium paid due to the distance and size of the CNMI market. This rate is exacerbated in the CNMI due to an aged utilities system. While much of the revenues collected by the CUC are captured to cover fuel purchases, very little is put into improvements for utility generation and delivery. The aged facilities have led to dramatic losses in efficiencies, further exacerbating the economic component of utility delivery in the CNMI. While power, water, and wastewater utility rates present a challenge for industry development, the CNMI's telecommunication infrastructure also provides a barrier to the development of industry development. Bandwidth and internet speeds, along with monopolistic environment, present challenges for the development of industries which rely on these vital components for business operations.

Despite the dynamics that the CNMI has been forced to contend with, the future economic well-being of the jurisdiction has been approached through planning and implementation of agreed upon economic priorities. This is reflective in the CEDS planning document, which identifies economic development projects which will yield the largest positive impact to the CNMI. The proposed project is listed as a high priority project, as the CEDS document recognized the importance of providing an appropriate venue and technical guidance for small business to thrive in the CNMI. In addition to the CEDS, the CNMI engaged in an Economic Restoration Summit, which was aimed at the identification of alternative industries which the CNMI will focus future economic efforts towards developing.

Economic Restoration Summit Background

In 2008, the CNMI Department of Commerce began engagement in the economic development planning efforts given the dire economic conditions within the jurisdiction. The initial planning efforts were spearheaded by a Commission of public and private sector stakeholders and funded through the US Department of Commerce, Economic Development Administration. This commission developed a Comprehensive Economic Development Strategy (CEDS), which outlined specific economic development projects that would have the largest economic impact to the CNMI. While the CEDS outlined specific projects, the CNMI Department of Commerce continued its development planning to identify industries that the CNMI could focus on developing for purposes of diversifying its economic pillars, rather than the reliance on the traditional industry of tourism. This effort was funded through local revenues and corporate sponsors, which culminated at the 2009 CNMI Economic Restoration Summit (ERS). The ERS comprised of a public session, which solicited ideas, comments, and recommendations from the general public on the islands of Saipan, Tinian, and Rota. The public session was then followed up with a government session, which brought the recommendations of the public session to policy makers an in effort solicit ideas, policies, and practices that could aid in the development of the identified industries. Both the public and government sessions culminated in an Economic Restoration Summit which brought the finding from the two preceding sessions to a final planning effort, which yielded the identification of four (4) specific industries which the CNMI could develop, which would provide for realistic and sustainable growth. The four (4) growth industries that were identified as a result of the ERS are Agriculture, Aquaculture, Education, and Call/Data Centers.

With the results of the 2009 ERS, the CNMI Department of Commerce has pushed to develop industry specific plans as recommended in the ERS report findings. The development of the targeted growth industries have been pre-empted by efforts that the CNMI has taken to facilitate these industries to take shape. Following the 2009 ERS, the CNMI Secretary of Commerce met with the US Department of Homeland Security's Education Division to discuss the need to have the educational institutions in the CNMI approved for the Student Exchange and Visitor Information Systems (SEVIS) certified. This partnership resulted in a host of CNMI educational institutions receiving a specialized course and certification process in an expedited time frame to ensure that complexities associated with the implications of PL 110-229. Other progress made towards the development of the targeted industries include the 2010 development and organization of the CNMI Aquaculture Producers Association and the subsequent export of pathogen free aquaculture shrimp to Asian markets.

The efforts made by the CNMI in the CEDS and ERS were further validated by the US Department of Interior's Office of Insular Affairs during their November 2010 Summit. The CEDS and ERS were used as a primary foundation and premise to focus the discussions had at the OIA Summit. While validation of the CNMI efforts and marked progress has been made towards the identified industries, the CNMI lacked the industries understanding of the feasibility of the targeted industries for maturation in the islands. While an internal assessment conducted during the ERS of 2009 yielded a framework for industry development, there was minimal assessment by industry professionals on the feasibility and sustainability of the targeted industries given the CNMI's unique dynamics. Little to no attention was paid in previous efforts towards understanding the requirements for the introduction and maturation of the targeted industries. Less attention was paid to assessing the CNMI's ability to provide those requirements at a cost competitive rate.

In 2010, the CNMI Department of Commerce applied for funding under the United States Department of Agriculture's Rural Business Enterprise Grant to provide funding to address the information gap required to further develop the targeted industries. Subsequent to an award for grant funding, the CNMI commenced with the 2011 Economic Restoration Summit, which was aimed to provide the CNMI with the industry assessment of the feasibility, challenges, and costs to realize the introduction and maturation of the four (4) targeted industries. The 2011 ERS was preceded by the development of a Bridge Report (attached in Appendix I), which is aimed at providing an assessment of the changes in conditions, as well as to mark progress towards the recommendations made in the 2009 ERS report.

The 2011 ERS was attended by key professionals in the four targeted growth industries all of whom were tasked to assess the CNMI's economic conditions and discuss the implications of those conditions relevant to the introduction and sustainability of their industry. Each professional brought over a decade of experience operating within their specific area and was able to speak from a position of objectivity on the industries feasibility within the CNMI. The Summit meetings were attended by over one hundred and twenty (120) community members comprised of a representative cross-section of the CNMI. Among the participants were local government officials, federal government officials, local business leaders, small businesses, small business resources agencies, and the educational community.

Prior to the Summit, meetings and informational meetings were held on the islands of Tinian and Rota to discuss the CEDS, previous ERS findings, and framework of the 2011 ERS (attached in Appendix 2). Tinian and Rota community members were able to participate in the summit via video teleconference and live streaming through the Northern Marianas College website; however meetings were held on the islands prior to the summit to ensure that the needs of the respective communities were addressed throughout the summit and subsequent summit reports. While the efforts of the 2011 ERS are geared towards diversification of economic drivers in the CNMI as a whole, the distinct economic conditions of each respective island must be considered when assessing the viability of a specific industry.

It must be noted that the identified industries agree with the sentiment of the majority of the CNMI's community. While there is general acceptance that the identified industries require the attention and effort for introduction and maturation, the gaming industry on the islands of Tinian and Rota has been largely ignored in past efforts. While this report will not focus on the barriers related to the gaming industries on Tinian and Rota, the CNMI must provide emphasis on this industry in future efforts as gaming is heavily interconnected to a variety of peripheral services and industries. Future study and planning must incorporate Tinian and Rota's gaming industry into the overall tourism and economic development planning.

Pre-Summit meetings and Finding

There were a total of two (2) pre-summit presentations and meetings. The minutes from both sessions are located in Appendix II. The sessions were focused on informing the communities on Rota and Tinian of the efforts and understanding their desires and expectations from this effort. As stated previously, the communities on Tinian and Rota placed a heavy focus on the development of the gaming industry. With one (1) licensed full-scale casino on Tinian and one small-scale casino on Rota, the gaming industry is seen as a tremendous source of revenue within those communities.

Much of the concern expressed in the pre-summit meetings centered on the marginalization of input from these communities. Their infrastructure needs, land use, and costs of business are rarely considered when doing overall planning and implementation. While the communities do share the same level of support for agriculture and aquaculture industries, they would like to see gaming included as an industry for development. They also expressed a desire to be fully included in the CNMI's planning relating to education and ecological tourism niche markets.

It must be noted that agriculture, aquaculture, and eco-tourism all have been identified as industries that would have the largest potential on Tinian and Rota. Due to the low land utilization for other commercial activities, the islands will significantly impact industry growth in these areas. While this dynamic is exciting, the islands must contend with issues such as shipping, costs of goods, power, workforce availability, and hard infrastructure needs, all which significantly impair the growth of any industry in those communities.

While the issues faced on the islands of Tinian and Rota must be addressed to varying degrees when assessing the CNMI as a whole, consideration must be given to the exponential impact that each economic stressor has in those respective communities as a whole. Other considerations, such as thresholds based on community population should also be a focus of any such economic study.

Summit Report: Summit Topics, Industry Findings & Recommendations, Moving Forward Plan of Action

Agriculture

Presentation Summaries

The presentations made on Agriculture were conducted by Mr. Ross A. Manglona, Director of the Northern Marianas College's Cooperative Research Extension & Education Services (CREES), and Mr. Frank Cruz of the University of Guam. The presenters discussed the variety of barriers and obstacles associated with the development of agriculture in the CNMI as an economic driver, as well as provided recommendations and concepts aimed at mitigating the identified obstacles. Agriculture presentations can be viewed in Appendix III.

The identified challenges include introduction of invasive species, pest management, high costs of operations, regional market size, logistical challenges, and the potential for natural disaster (typhoons). Lack of data, lack of an organized and concerted effort to promote and develop the industry, and a lack of infrastructure support are additional obstacles faced within the industry. Both presentations made during the summit promote value-added agriculture as means to combat many of the challenges inherent in agriculture in the CNMI. The benefits of value-added processing include a lower operational cost, ease of export, and longer shelf life of products.

The presentations also encouraged the CNMI to explore export markets. While export in raw form requires additional costs and infrastructure, the CNMI is well positioned to export to Asian markets and minimize importations to the CNMI for products it can grow locally. Education and government policies were also the highlights of the presentations which focused on promoting agricultural sciences as a course of collegiate study. Policies which focus on protecting local farmers, as well as providing incentives by way of credits or subsidies, were discussed as methods to promote the local agricultural industry.

Summit Discussion & Findings

Agriculture has been largely introduced in the CNMI as a business option, which is evident in the participation and sustainability of the Tuesday night and Sabalu morning Farmers Market. Despite the acceptance that agriculture is a viable business option, there has been little movement on the formal organization to promote the industry. This particular industry topic was well attended by a number of existing practitioners, all who actively participated in the session discussions. The presentations made by the summit participants can be located in Appendix III.

The break-out session findings indicate that the agricultural industry faces challenges surrounding infrastructure required to promote a mature industry. Water availability, inter-island transportation and logistics, water quality, lack of quality assurance & value-added facilities, limited land space, and lack of organization are all stated areas of concerns for participants. In addition to the infrastructure dynamics, the group articulated a concern for the lack of understanding of business fundamentals required for industry development. These concerns included marketing dynamics, such as composition of the market base, market saturation points, export strategies, labor and wage issues, distribution, and accessibility to financial resources.

Discussion also focused on issues relating to local governance and business environment concerns specific to the CNMI. Allowing CNMI food stamp recipients to purchase produce from the Tuesday night and Sabalu morning Farmer's Markets was recommended as a strategy to boost local produce sales. Leveraging federally funded resources, such as the Workforce Investment Agency, to aid farmers with labor costs was also a recommendation of the participants. The responsible CNMI agencies should explore the opportunity to implement these recommendations as a way to demonstrate marked progress towards the development of the agriculture industry.

Recommended Next Steps

The agriculture industry presents the most compelling argument for true development in the CNMI. The required infrastructure is not currently in place and it should be noted that while the required infrastructure needs be met through federal resources, the economic feasibility and saturation point should be explored prior to development of an Agricultural Industry Master Plan (AIMP). It is recommended that the CNMI provide two consecutive planning efforts to bring the agriculture industry to maturation. These elements include the commissioning of an Agricultural Economic Study (AES) on the agriculture industry in the CNMI followed by an Agriculture Infrastructure Development Plan (AIDP).

The AES should explore crop production costs, crop importation mitigation costs, land availability, cost-benefit of land use for crop production, market saturation points per crop, export markets per crop and associated costs, and infrastructure costs. National and local tax benefits and credits, along with any legislative exemptions provided to farmers will also be considered in the AES. The AES should utilize sound economic modeling to calculate elements such as employment creation, power & water consumption costs, impacts on the reduction of imports and increase in exports, estimated contribution of the industry to general fund revenues, logistic challenges, and available workforce resources to sustain the agriculture industry. The results of the AES will be utilized to provide the CNMI with sound economic data to determine the optimal size of the industry to ensure that levels do not surpass points of diminished returns. This data will be critical in the development of the AIDP, as the optimal industry size and requirements will be dictated by the results of the AES.

The CNMI's AIDP will outline the specific requirements to bring the agricultural industry to maturation. The plan elements must include infrastructure development (ID) needs, ID sequence, and ID scales based on optimal industry size. The AIDP ID plan should coincide with CNMI Central Government Capital Improvement Plan (CIP) to ensure leveraging of available CIP projects which address the ID needs of the agriculture industry. The plan will be required to conduct infrastructure inventories on each island to assess current ID assets required for industry maturation. This ensures that ID needs are not duplicative and allows for planning of industry maturation in phases based on current assets, as well as projects industry growth as a result of infrastructure investments to be made.

The AIDP will also address crop production cycles, production rates, and crop types utilizing export market demand data, as well as CNMI import data. This element will address questions on what type of crop the CNMI agriculture industry should produce, crop quantity, and resource requirements for production of the identified crop. This particular element is crucial to the successful organized and sustainable co-operative. It ensures that supply meets market demand and minimizes cannibalization of the industry with a particular crop type.

The development of both the AES and AIDP will aid the CNMI in understanding market needs and industry capacity. It will allow local and federal stakeholders, as well as practitioners to fully understand the requirements to bring the Agriculture industry to maturation. The plan should be developed and implemented no later than one (1) year from the time of this report. Given the CNMI's current fiscal restraints, it is highly recommended this plan be developed with the use of federal funds. Funding opportunities made available through the US Department of Commerce's Economic Development Administration, the US Department of Agriculture's Rural Development, and the Small Business Administration should be actively pursued to aid in the development of this funding.

Aquaculture

Presentation Summary

The Aquaculture presentations were made by Dr. Addison Lawrence from the University of Texas A&M and Mr. Catalma from Saipan Aquaculture. The presentations were made from both a research aspect, as well as from a practitioner engaged in aquaculture. A short-coming of the presentations made was the emphasis on shrimp aquaculture and the lack of information on other stock which could be raised through various aquaculture technologies. Dr. Addison began the presentations with an emphasis on the Texas A&M patented Raceway Technology which was presented as ideal for island nations and economies. Much of the presentation focused on the research data gained through the use of the Raceway Technology and the increase in production amounts, stock size, and disease resistance of the farm raised shrimp. The presentation focused on the benefits of aquaculture utilizing Raceway Technology due to the low land and water requirements, production predictability, and the absence of environmental impact.

The subsequent presentation documented practitioner experience from an established aquaculture producer. Saipan Aquaculture Inc. (SAI) raises shrimp for local market consumption and brood stock export. The firm began in 2005, and began producing shrimp for export in 2007, and has matured in its operation to begin selling to US military installations. According to a 2009 Oceanic Institute assessment, SAI is the fourth largest shrimp producer in the United States. Despite the maturation of the firm, SAI must contend with a variety of factors which have stunted the growth of the sole commercial aquaculture operation in the CNMI. These dynamics include high utility and shipping costs, feed supply, a reduced local market, and workforce challenges. While the challenges were discussed, opportunities in aquaculture development in the CNMI include the pending Marianas Military relocation, the close proximity to shrimp export markets in Japan and South Korea, and shifts in consumption trends away from meat towards seafood.

Summit Discussion & Findings

The aquaculture breakout sessions yielded a health discussion which centered on pragmatic issues to include infrastructure requirements, shipping, regulatory and legislative climate, and financing. The discussion identified that the aquaculture industry is feasible for development in the CNMI and that adequate interest and resources are available for the maturation for industry growth. The participants in the breakout sessions appeared encouraged at the prospect of developing the aquaculture industry into an economic driver to support the economic mainstay of tourism.

The summit discussions focused on challenges inclusive of the high cost of seed stock, shipping, and utility rates that is required to sustain aquaculture operations. These challenges can be met through the use of new technologies inclusive of Dr. Lawrence's proposed Raceway Technology which promotes the reduction of water requirements, as well as use of alternative energy sources such as wind and solar power to offset utility costs for aquaculture operations. While government regulations do not inhibit the growth of this industry, the lack of a firm regulatory framework does not provide an adequate environment to introduce new firms into the industries. Investors are unsure of what the requirements are, and potential customers are unaware of the regulatory oversight provided to the firms operating in the industry, which can raise doubt about the safety and quality of the stock.

There was a robust discussion on the need for a market plan, which would be aimed at addressing the potential export markets, market segments, and marketing platforms. The discussion focused on the need to ensure that a targeted approach was identified and heavily exposed to realize industry growth. Financing was also identified as an area that required attention. The low commercial lending that has historically occurred in the CNMI has not served to promote entrance into the industry. With fairly high entry costs, the Commonwealth Development Authority has been seen as a mainstay to provide access to capital for aquaculture projects. A recommendation was made to develop a government run hatchery which is intended to be privatized as the industry develops. No details or specifics were provided on this recommendation; however the concept received support during the summit discussions.

Recommended Next Steps

The aquaculture industry is currently in the infancy stage in the CNMI, with the establishment of a successful shrimp production facility. While the SAI operation has proven to be a stellar example to the commercial viability of the aquaculture industry, the operational challenges inherent to doing business in the CNMI will continue to inhibit the maturation of the industry. CNMI utility infrastructure and costs coupled with shipping issues pose the significant barriers to the full development of aquaculture in the CNMI. The CNMI's aquaculture industry must be diversified in order to realize the greatest yield the industry has to offer. This is currently underway with NMC-CREES sponsored Abalone project. The diversification of the industry allows for advanced development through various product offerings. This dynamic will promote export activity versus that of a single product offering.

With an economically unfeasible local market base, aquaculture producers must be able to effectively develop product for export. US military installations serve as potential large scale export customers with close proximity to the CNMI, however providing a cost competitive product becomes an issue when contending with barriers of utilities and shipping. A 2010 US Congressional action allowed for a subsidy for shipping for aquaculture and agriculture products; however the limit placed on the subsidy did not yield a large impact to commercial operations. It is recommended that the CNMI develop a program designed to mitigate issues around the two most significant barriers, shipping and utility costs, to realize industry maturation. The program should encompass components centered on reducing costs to commercial operations engaged in aquaculture through local tax credits, government funded subsidies, and ease of access to working capital specifically for utilities and shipping.

One recommended form of funding to address these barriers is by way of a revolving loan fund specifically for shipping. The fund could provide subsidies to export firms with a capped percentage based on total volume exported. Fund replenishment can be derived through an increased percentage of Business Gross Revenue Taxes for participating firms. While the increased tax may appear to offset the benefit of the subsidy, the concept is to drive export volume which drives a long-term reduction of shipping rates. The impact of export volume on shipping rates has been realized in the CNMI during the height of the textile manufacturing industry. While it is anticipated that shipping services will realize an increase in rates due to inflation in oil prices and the general cost of doing business, rate reductions are dramatically impacted by export volume. This component is critical to an island economy as it has a correlating impact on import prices, which impacts disposable income within the islands. As import costs are driven by shipping rates, the cost of goods sold increases parallel to shipping costs, which reduces the disposable income of residents within the CNMI. As an island economy, the CNMI considers shipping rates as a key element to the economic health of the jurisdiction. The ability for the CNMI to mitigate the increased costs of shipping, primarily for the export of goods and services, will serve as a foundation to the healthy maturation of the aquaculture industry.

Along with shipping, commercial utilities pose a significant barrier to participating in the commercial aquaculture sector. It is recommended that the CNMI explore tax credits to be provided to firms operating within the aquaculture sector. The CNMI may also consider a reduction in rates for commercial firms engaged in aquaculture as a way to encourage industry growth. While the tax credits and utility rate reduction should be explored, the commercial firms should also shoulder a burden to driving this cost down. A program centered on an accelerated schedule of rate reductions or an increase in tax credits using firm employment numbers, export volume, BGRT remittances, payment history to CUC and implementation of renewable energy measures as criteria would encourage a balanced approach to addressing the utility issues.

As discussed during the summit, it is recommended that the CNMI develop an aquaculture market plan. The plan should aim to identify export markets, market saturation points per stock, market segmentation, as well as pricing strategies for aquaculture exports. The plan should also address labor requirements and recommended instructional tracks to prepare the CNMI workforce to support the industry upon maturation. Assessment of the optimal number of firms participating in the industry as well as the optimal variety of stock to be produced should also be considered in the planning. Infrastructure development (ID) requirements must also be addressed as a component of the study. The plan should be developed and implemented no later than one (1) year from the time of this report. Given the CNMI's current fiscal restraints, it is highly recommended to pursue federal assistance in the development of this plan. Funding opportunities made available through the US Department of Commerce's Economic Development Administration, the US Department of Agriculture's Rural Development, and the Small Business Administration should be actively pursued to aid in the development of this funding.

Call/Data Centers

Presentation Summary

The Call/Data Center presentation was made by Mr. Jack Johnston of the Pueblo Economic Development Authority located in Pueblo, Colorado. Mr. Johnston possesses over a decade in call center operations with AT&T and has been involved in several call center openings, mergers, and closings. The presentation provided an assessment of the CNMI's current operational environment, industry trends, and call center realities to summit participants. Mr. Johnston also provided a high level recommendation on the development of a "chase package" which is what is shopped around to outsourcing centers to convince them to locate within a specific jurisdiction.

The presentation highlighted the benefits of operating within the CNMI. In addition, the CNMI has a stable well-educated English-speaking population base with little competitive opportunity available. This provides a conducive environment for call center operations which combats employment attrition as a primary cost driver. While the CNMI has available resources to support the entry of a call/data centers into the jurisdiction, attracting firms to operate within the jurisdiction may be of concern due to high telecommunications costs, as well as high utility costs. While the summit presentation did not discourage the CNMI from the development of a call/data center industry, it was recommended to identify the optimal number of firms to participate in the industry. The presenter cautioned on "over growing" the industry as this dynamic tends to cannibalize the industry and worsens elements such as workforce attrition.

Summit Discussion & Findings

The summit discussion on call/data center focused on benefits of developing the call/data center industry within the CNMI. Some of the benefits discussed included the availability of large scale space available from old garment factories, which are ideal settings for call/data centers. Other benefits included the CNMI's inclusion as a US Territory with an English-speaking population base, as well as the tax benefits of operating in the CNMI versus other US jurisdictions. The industry does not contend with many of the dynamics associated with the maturation of other identified industries, such as shipping and air service. These dynamics are not a factor in the development of a call/data center industry and while the CNMI may have to contend with shifts in the workforce resources, those issues can be mitigated through the limitations on the number of firms who participate in the industry.

With the on-going operations of a small call center through IT&E's existing directory services, the introduction of the industry has been established. While IT&E has been able to sustain its call center operations for over two years, a significant consideration is that they own the telecommunications infrastructure. While it cannot be expected that IT&E provide the same benefits to competing call/data centers, the monopolistic nature of telecommunications in the CNMI serve to inhibit the entry of new call/data center operations.

Recommended Next Steps

As with the aquaculture industry, the CNMI has an established firm already operating within the industry. The consideration is that the sole firm operating a call center in the CNMI is the monopolistic owner of the telecommunications infrastructure within the jurisdiction. It is recommended that the CNMI explore options to mitigate the cost of telecommunications to encourage industry development. While presentations and discussion all yielded positive attributes that the CNMI possesses by way of workforce and affiliation with the United States, cost barriers remain a stumbling block to encourage investments into the industry.

Outside of changes to the regulatory framework which governs telecommunications, the CNMI is in no position to require IT&E to provide cost competitive rates to encourage industry development. While the regulatory framework remains an obstacle, the CNMI should explore options within the industry which do not rely heavily on the telecommunications infrastructure. As an example, the CNMI can consider processing centers as a way to encourage industry growth. This includes inputting of data into systems, processing financial transaction as a third party, and other peripheral services customarily found with the industry.

It is recommended that the CNMI reconsider the position of full scale industry development and focus on niche development. This should consider workforce, infrastructure requirements, and target markets. The CNMI should also assess the potential customer base and cost benefits to customer organizations for outsourcing peripheral services to firms based in the CNMI. Information garnered from these assessments can be used to develop “chase packages” to specific customer organizations. The assessment should be developed and implemented no later than one (1) year from the time of this report. Given the CNMI’s current fiscal restraints, it is highly recommended to pursue federal assistance in the development of this plan. Funding opportunities made available through the US Department of Commerce’s Economic Development Administration, the US Department of Agriculture’s Rural Development, and the Small Business Administration should be actively pursued to aid in the development of this funding.

Educational Tourism/Eco-Tourism

Presentation Summary

The presentations made on the Educational Tourism/Eco-Tourism were conducted from both a research and practitioner aspect. The Educational Tourism presentations were made by Mrs. Jill Nickels-LaCroix and Mr. Christian Wei, Jr. Mrs. Nickels-LaCroix possesses over a decade of experience in educational tour packaging for institutions such as the University of Denver, Baylor University, and the University of Texas. Mrs. Nickels-LaCroix’s presentation was followed by Mr. Christian Wei, Jr. of Eucon University. Eucon University has been operating in the CNMI as a fully accredited institution focused on international student recruitment to the CNMI.

Both presenters highlighted the benefits of educational tourism as a niche market to supplement the tourism mainstay. The information provided emphasized the unique position of the CNMI to major source markets, its affiliation with the United States, and its pristine and safe natural environment. The presentations focused on the clean nature of educational tourism, as well as the financial viability of the industry. The presentations included points on ways the CNMI should market its educational tourism industry, as well as the various programs that could be offered to bolster the educational tourism efforts in the CNMI. There were no immediate identifiable challenges that the CNMI would need to contend with to bring the industry to maturation.

The Eco-Tourism industry presentations were conducted by Dr. Linda Cox of the University of Hawaii at Manoa and Mrs. Merced Aldan-Ada from the CNMI Council on the Humanities. The Eco-Tourism component was recommended during the first Economic Restoration Summit for inclusion under Educational Tourism. The presenters emphasized the synergistic nature between the two tourism niches. While Eco-Tourism seemed to supplement the primary tourism industry, the presenters emphasized the need to control growth of this niche industry. The premise for eco-tourism is centered on the natural environment and the need to maintain pristine resources to promote growth in eco-tourism. The presenters emphasized the need for balance in development of Eco-Tourism in order to achieve optimal economic benefit from the industry.

All presentations echoed the same sentiment with respect to supporting tourism through synergistic niche markets. This concept was the highlight of the summit's key note speaker, Former Honolulu Mayor, Muliufi Hannemann, in his opening address. Mr. Hannemann's discussion focused on the need for the CNMI to explore diversification of industries which support its primary core competency of tourism.

Summit Discussion & Findings

The summit discussion for educational tourism centered on the lack of regulatory framework for the industry. With a loose regulatory framework, the perception of quality is diminished, thus presenting a barrier for firms participating in the industry. Misleading marketing, unregulated operations, and exuberant fees are all issues that threaten the maturation of the educational tourism market if not strictly regulated. The discussion also identified the lack of infrastructure and the condition of the CNMI's infrastructure as a potential barrier to industry development. Without amenities such as public transportation and adequate housing, the student experience is greatly compromised. The condition and appearance of the CNMI's infrastructure is an inhibitor to student recruitment and retention.

The eco-tourism discussion identified marketing and air service as primary issues inhibiting growth of the industry. The lack of web-based marketing was identified as an area for opportunity, as well as the need to improve the visitor arrival experience. As with the general tourism industry, the lack of air services also serves as a barrier to eco-tourism. Without reliable and affordable air service, the CNMI is not a position to fully develop the eco-tourism and edu-tourism industries. The discussion recommended that the CNMI develop an approach which incorporates eco-friendly and cultural concepts into infrastructure development, utilizing areas such as zoning to achieve a good balance between development and eco-tourism.

Recommended Next Steps

Both the Educational-Tourism and Eco-Tourism industries are meant to support and supplement the CNMI's core competency of Tourism. It is recommended that all future CNMI Tourism Master Plans incorporate these industries in the planning phases. It is recommended that the CNMI Department of Commerce works closely with the Marianas Visitors Authority (MVA) to develop a robust regulatory framework for the Educational Tourism industry. The CNMI Department of Commerce is tasked with the oversight of the CNMI's Education Institution Certification, and while the industry is in its infancy stage, it is critical to ensure that a balanced and well-enforced regulatory system for educational institutions accepting foreign students is in place. The CNMI must work with public and private educational institution to develop appropriate programs which can be marketed through MVA's current promotional efforts. It is also recommended that the MVA target specific customer bases through various networks specifically for educational exchange programs.

It is recommended that the CNMI identify Eco-tourism sites throughout the jurisdiction and streamline marketing efforts to promote the industry. The promotional efforts should be included into the MVA's current marketing schemes, however it is recommended to begin utilizing web-based mediums to promote the industry in a standalone effort. Targeting specific customer bases through social media outlets should be explored as a way to achieve industry growth.

Concluding Remarks

The CNMI Economic Restoration Summit (ERS) series has proven to provide useful and insightful information through the CNMI Department of Commerce's planning efforts. Coupled with the Comprehensive Economic Development Strategy (CEDS), the CNMI is well positioned to assess current assets and challenges with respect to industry diversification, as well the required infrastructure to realize such development. The 2011 ERS effort yielded a stronger basis to pursue development of specific industries, while others require a great deal of adjustment. As evident in the ERS findings, the industry of aquaculture, eco-tourism and edu-tourism present the greatest potential as they are currently in the infancy stage of development and provide strong synergies with the CNMI's existing core competency of Tourism. Although these industries present promising potential to support the CNMI's economic base, the requirements for development must be carefully crafted and executed. Local policies governing these industries must present an environment that encourages investment into these areas, both public and private. It is important to note that development is not the sole responsibility of the public sector and while there is a tremendous stake by government agencies to ensure sound economic policy and industry standards, the private sector must make efforts to invest in these industries.

With the re-introduction of state based agencies, such as the Small Business Development Center and the USDA Field office, CNMI local businesses have more resources available to aid them into business ventures. It is recommended that all public sector agencies consult with the planning efforts presented in the ERS series and the Comprehensive Economic Development Strategy (CEDS) documents as a way to ensure that clients are aware of the industry dynamics. Agencies and citizens should also become familiar with the CNMI's Capital Improvement Projects offices as way to understand planned infrastructure which either support or hinder the development of a particular industry. It is strongly recommended that agencies inclusive, of the CNMI Department of Commerce and the Commonwealth Development Authority (CDA) focus their efforts on implementing the recommended next steps outlined in this report.

While critics of efforts such as the one presented in this report may cite planning as being futile, it remains fundamental to the success of any given economy. As noted by the Honorable Lt. Governor Eloy S. Inos' opening remarks at the 2011 ERS, "As we are the youngest member of the United States political family, we must be reminded to assess our past missteps, understand the current state of affairs, and effectively plan to avoid the dynamics that have driven our islands to the current economic conditions". Although comprehensive planning is foundational to economics, execution is equally important. Execution in policy, planning, and investment are all requirements to ensure that economic diversification is realized.