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## SAN VICENTE ELEMENTARY SCHOOL COMMUNITY BASED MANAGEMENT

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<b>Project Title:</b>	San Vicente Elementary School Aquaculture Science and Self Reliance Project
<b>Award Amount:</b>	\$571,124
<b>Type of Grant:</b>	Social and Economic Development Strategies
<b>Project Period:</b>	Sept. 2008 – Sept. 2010
<b>Grantee Type:</b>	Native Nonprofit

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### PROJECT SNAPSHOT

- 7 jobs created
- 11 elders involved
- 745 youth involved
- \$3,065 in revenue generated
- \$334,664 in resources leveraged
- 47 individuals trained
- 36 partnerships formed

### BACKGROUND

According to the 2005 Nation's Report Card, the amount of money spent on education per pupil in the Commonwealth of the Northern Mariana Islands (CNMI) was \$4,237, which was lower than any other U.S. state, territory, or commonwealth. In 2007, government revenues in Saipan dipped from an annual \$245 million to \$160 million, stoking fears of further cuts to education funding. The economic recession has hit the town of San Vicente hard, with many people taking pay cuts and losing jobs. San Vicente Elementary School (SVES), one of 11 elementary schools in the CNMI, has eliminated several positions, including those of the science resource teacher, several

teacher's aides, and support staff. In addition, many educated San Vicente community members have left for the U.S. mainland, where there are more economic opportunities for families. From 1999-2008, San Vicente Elementary School's student population declined from 1,113 to 745.

### PURPOSE AND OBJECTIVES

The purpose of this project was to utilize the SVES Aquaculture Science Center (ASC) to provide San Vicente students with quality and hands-on instruction in science, math, social studies, and economics, providing a stabilizing resource during a period of economic decline and education budget cuts.

The project's first objective was to repair, restore, and improve the ASC and develop off-campus farms for instruction and learning. To accomplish this, the project director worked with local businesses, community members, and project staff to repair and improve the design of two typhoon-damaged tilapia tanks and install shrimp tanks, purge tanks, a student wash station, and an improved security system with a fence, camera, and alarm system. The team also set up on-campus and off-

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campus hydroponics demonstration farms and an off-campus aquaculture farm to provide places for hands-on learning about raising vegetables and fish. The on-campus farm was utilized by teachers and students during school hours, and the off-campus farms were used on weekends, after school, and for summer science programs by students and parents. Under this objective, project staff also intended to purchase and install a wind generator. Due to zoning and on-site safety concerns, however, the team purchased a stand-alone solar system instead, for use on the off-campus aquaculture farm.

Objective two was to clearly link concepts taught at the ASC with CNMI Board of Education mandated instructional objectives in science, math, social studies, and economics, ensuring that instruction at the SVES ASC was consistent with grade-level requirements. To do this, the project manager hired a teacher-consultant, who assessed the types and levels of lessons taught at the science center and the resources and instructional materials available at the center and school library. The consultant then aligned CNMI standards and 243 associated benchmarks for each discipline with lessons taught at the ASC. Next, a group of 15 teachers in grade-level teams were assembled to ensure that their lesson plans aligned with the standards and benchmarks, and to develop new lesson plans for their grade levels. By the end of the project, all 32 SVES teachers were trained in aligning their lesson plans with CNMI standards; new standards-driven, culturally-relevant teaching materials were developed; 95 percent of the teachers at SVES indicated that the standards were written into their lesson plans; and 95 percent indicated that the aligned standards had improved their instruction.

The third objective was to involve families in the aquaculture science project by starting

home gardens and aquaculture farms. In this endeavor, project staff trained 15 parents at the demonstration aquaculture farm and assisted two families in purchasing tanks, pumps, and filtration systems for their own farms. These outreach efforts inspired many parents and grandparents to participate in project activities and share knowledge with youth. In the summer math and science camp, 192 students took home plants for home gardens and worked with community elders in planting and preparing native medicinal plants. Also, 15 members of the SVES Young Farmers Club were involved in home gardening science projects, with two of them earning first place at a science fair in Guam.

#### **OUTCOMES AND COMMUNITY IMPACT**

SVES has begun preliminary testing of students in math and science, and has seen marked improvement, particularly when using performance-based assessments in which students were evaluated on hands-on farming and aquaculture tasks. In the years to come, SVES will monitor student progress by examining achievement levels on the nationally-recognized Stanford Achievement Test, a CNMI standards based assessment; and the SVES performance-based test. According to project director Valrick Welch, “Kids like raising fish and plants; they learn a lot more when their lessons are grounded in culture and hands-on activities. Because the things we do here are practical, the kids have a better work ethic. We see older students acting as peer teachers, and the younger kids listen to them almost as much as their teachers. We believe we are changing the mindset, getting kids ready for the future. Teachers, have benefited, too, gaining practical experience facilitating experiential learning opportunities for children. The involvement of parents and grandparents also has been important; it is helping kids to learn and increasing understanding within families.”