

GLOBAL GRANTS COMMUNITY ASSESSMENT RESULTS

Use this form to report community assessment findings to The Rotary Foundation when you apply for a global grant.

Assessing the strengths, weaknesses, needs, and assets of the community you plan to help is an essential first step in designing an effective and sustainable global grant project. See [Community Assessment Tools](#) for full instructions and helpful tips.

This form will help you report the results of your community assessment, and it's required when you apply for any humanitarian or vocational training team grant. Complete a separate form for each beneficiary community (e.g., school, health care system, or village), using information that is both current and specific to each community. Remember, you can't use global grant funds to cover the cost of doing an assessment, but you can use district grant funds.

COMMUNITY OVERVIEW

Describe the characteristics (such as geographic information, main sources of income, population size, and access to education/health services) of the specific community where this project will take place.

Sampaloc Lake (Figure 1), the largest and most accessible of the seven lakes, is located in the heart of San Pablo City at coordinates 14.079524oN and 121.328782oE, and elevation of about 120 meters above sea level (asl).

Based on the bathymetric study conducted by Laguna Lake Development Authority (LLDA) in 2011, Sampaloc Lake has a total surface area of 96.57 ha and a perimeter of 3.748 km with estimated mean depth of 8.60 meters and maximum depth recorded at 23.5 meters (PDMED-LLDA, 2011). The estimated volume of water that the lake can hold based on the 3-D generated profile (Figure 2) is 8,460,926.18 cubic meters. Having no inlet, the water recharge of the lake comes from rainfall and underground rivers and springs. Its water drains into its only outlet, the Sabang Creek which flows into the Balatuin (also known as Bañadero) River and connects to Malaking Ilog River that separates San Juan, Batangas and Sariaya, Quezon.

Source of income is mainly derived from aqua-culture products, growing Tilapias in floating fish cages in Sampaloc Lake. On the other side of the circumferential road of the Lake are residential areas and about a hundred meters away from the shoreline is the seat of the local government. Both private and public school are also close by. The development of the circumferential road back in the 1980's made the Lake more accessible, so much so

that informal dwellers began to establish their homes along the shorelines, followed by big restaurant and night clubs back in the year 1999. The absence of proper waste disposal meant, that most, if not all domestic waste went directly to the lake waters. As the population grew so did the presence of floating fish cages, which contributed to the pollution due to unconsumed fish food that settled down to the bottom of the lake. As the organic matter accumulated at the bottom of the lake, the organisms worked to decompose the organic matter and resulted in the dissolved oxygen level to decrease dramatically. When the top level of the lake water becomes cooler and heavier during the rainy season, a natural phenomena occurs known as water inversion, when the cooler and heavier water sinks down and the warm and lighter water with depleted dissolved oxygen will rise up. This will cause all the fish in the fish cages to struggle for oxygen and eventually die resulting to what is known as “Fish Kill. It was not until the year 1997 when a movement by the citizenry under the name of the Friends of the Seven Lakes Foundation (FSLF) conducted a series of protests and rallies to get the local and national government to take notice of the abuses and total disregard of the condition of the once dying lake. It took more than 20 years for the government to remove the informal dweller, business establishments, and excess floating fish cages that have been the main sources of the pollution and the degradation of the lake. At present, there are still occasional Fish Kills as it has only been five years since the last remaining informal dwellers were removed and the floating fish cages were reduced to the limit set by the Law under the Philippine Fisheries Code, which states and allows no more than “10 percent of the suitable surface area of the lake” for use in aqua-culture. As the condition of the lake begins to improve, the focus of the City Government is to make the lake a tourist attraction and to do so, further clean-up of the water quality is needed. After decades of negligence, it is only now that the lake is given a chance to recover. Unlike the coastal waters, the lake's capability to cleanse itself takes far more time and this is why mitigation efforts are necessary to accelerate the process of improving the water quality, which is consistent with the objectives of the stakeholders. Once it has improved, it can also be tapped as an alternative source of potable water with simple filtration system. Currently, there is a constant presence and rapid proliferation of algae and water hyacinth around the shorelines, which is an indicator of the heavy presence of nutrient load in the lake waters.

COLLECTING COMMUNITY ASSESSMENT DATA

When you conducted the assessment, who in the community did you speak to? At least two different community representatives and beneficiaries who are not involved in Rotary (such as teachers, doctors, or community leaders) should be included in the discussions.

Rotary is in constant liaison with the Friends of the Seven Lakes Foundation (FSLF) thru its Chairman Msgr. Jerry Bitoon, an NGO composed of members from different professions and is also affiliated with other civic organizations and government agencies in the local and national level. FSLF has been an agent of change since 1997, until this day and has been a key player in pushing for the rehabilitation of Sampaloc Lake. They have been closely monitoring and working with the local government represented by the San Pablo City Tourism Department and City Environmental and Natural Resources Office, Ms. Andrea

Teodoro of the Fisheries and Aquatic Resource Management Council, a local fisherfolk and other stakeholders such as the residence around the lake itself, and Professor Rowena Baconguis, PhD. from University of the Philippines who is conducting research studies on the Community Based Management System of the lake. A common development theme is towards the achievement of a sustainable management system that can support and maintain a pollution free lake. Last, but not the least is the LLDA, which is the main agency that is in charge of the management of the lake,

When in the last year did the discussions occur?

The FSLF organization, its Board of Directors meets at least once a month to discuss various projects they are currently undertaking. Our Club has been attending most of meetings. It was in one of the meetings that the proposal for a Floating Garden Filter (FGF) was conceived. In the meetings, guests from the local government, other civic organizations, and as well as the national agency who is in charge of managing the lake represented by LLDA are also in attendance.

What methods did you use to collect information from community members (such as community meetings, interviews, or focus groups)?

During our meetings with FSLF, other stakeholders such as the fisherfolks, local and national government agency and other civic groups were present and has come to a consensus that the FGF on the lake, can and will be a beneficial to all parties concern.

TARGET POPULATION

Who is directly benefiting from the project? List the groups that will benefit (such as schools, hospitals, vocational training centers, cooperatives, or villages).

Sampaloc Lake fisherfolks, residents around the lake, sport fishermen, tourists, schools and San Pablo City as a whole. The establishment of FGF(s) in Sampaloc Lake will primarily benefit the fisherfolks and the community around the lake as well as promoting the biodiversity in the area.

Describe the process of how the beneficiaries were identified.

Attempts to bring back the beauty and glory of Sampaloc Lake have been initiated by FSLF back in 1997. They were instrumental in bringing the issues of the lake from the local level up to the national level of government so that the problems facing the dying lake will be acted upon. It was thru our series of meeting with FSLF that the beneficiaries were not only identified, but were encouraged to work with FSLF for the last 20 years or so, with the goals and objectives to conserve, protect, and rehabilitate the said lake. This helped and/or facilitated our understanding of the needs and objectives of the community.

COMMUNITY STRENGTHS, NEEDS, PRIORITIES, AND PROJECT DESIGN

Describe what matters to members of the community as they were expressed during the assessment.

It seems that the consensus of the various group during the meeting hosted by FSLF is the need to improve the water quality of the lake, which all sectors can appreciate and benefit from. If the water quality was to improve, this would result in the reduction of fish kills every year and increase in production for the fisherfolks, increase tourist activities with the creation of a floating garden and to introduce recreational water activities, develop new commercial establishment around the lake that will contribute to local economy and employment. The presence of the FGF will surely augment and enhance the beauty of the lake area and at the same time promote biodiversity as the FGF will be a floating haven for all types of animals (birds, insects, amphibians, fish,..etc).

Describe the community's strengths and resources.

The community is in close proximity to the public and private school from elementary to college level. The FGF can and will be a floating laboratory and students can go onboard to observe and learn what the system is all about. College and even High School level student can assist in conducting regular sampling and monitoring of the water quality. Both public and private schools have already shown interest to participate in the project once it is up and ready. The local fisherfolks are willing to help by devoting their time in the maintenance and repair of the structures, if and when necessary as they have realized that better quality of water can help improve the growth and survivability of the fish in their floating fish cages.

Stakeholder's support and cooperation in the establishment of the FGF and the volunteerism of various group in the community is key to the success of this project.

Describe any challenges and gaps in the community's behaviors, skills, and knowledge.

Philippine Clean Water Act of 2004 (Republic Act No. 9275). An Act providing for a comprehensive water quality management and for other purposes. This Act provides for the abatement and control of pollution from land-based sources, and lays down water quality standards and regulations.

The Act shall apply to water quality management in all water bodies: fresh, brackish and marine waters. It shall be the policy of the State to: prevent, control and abate pollution of the country's water resources; promote environmental strategies for the protection of water resources; formulate a national program of water quality management; promote commercial and industrial processes and products that are environment friendly and energy efficient; etc. The Act among other things shall provide for: the designation of water quality management areas by the Department, in coordination with the National Water Resources Board; the designation of water bodies where specific pollutants from either natural or man-made sources have already exceeded water quality guidelines as non-attainment areas for the exceeded pollutants; a national program on sewerage and septic management; domestic

sewage collection, treatment and disposal; water pollution permits and charges; offences and penalties...etc.

With all these laws, rules, and regulations, the enforcement is soft at best and selective at times. This is apparent when Sampaloc lake in the late 1990's was left to die due to unabated anthropogenic activities as the government, both national and local, continued to ignore and failed to enforce the law, until the a group of local citizens in the community bonded together to form FSLF which exposed the various factors that has caused the lake to be close to becoming a dying lake. It was only then, after a series of rallies and protests by the group for two years and with the help of the major media -- television, radio, and newspapers that covered the activities of FSLF -- that the issues and/or problems of Sampaloc Lake was given attention to by the various government agencies concerned. The efforts of the concern government agencies to act and correct the situation were slow which is why the organization is still in existence until this day to function as a "watchdog" to constantly remind the government agencies to implement what is mandated of them by Law.

What issues will the project address, and how does the community currently address those issues?

The FGFs will enhance the lake water quality and thus helping the local fisherfolks increase their production. The FGF will be an added attraction for tourists that will visit the lake and hopefully local businessmen will invest in water sports activities as well as shops around the lake as tourism flourishes and new employment for the people in the community will increase proportionately.

The unused fish meal from numerous floating fish cages and the presence of domestic waste emanating from areas where informal dwellers have congregated, whose effluents are channeled to the canals that directly discharge to the lake waters, contribute to an increase of nutrient load, which in turn increases the microorganism's activities as they carry on the decomposition process. Unfortunately, the increase in activity by the microorganism depletes the dissolved oxygen at the bottom of the lake, which can be detrimental to the fish causing them to suffocate for lack of dissolved oxygen. In order to decrease the occurrence of unconsumed fish meal from sinking to the bottom and adding to organic material built-up, the fisherfolks have adapted the used of floating fish food.

The rapid growth of the algae and water hyacinths around the shorelines are controlled by regular lake clean-up by various private and public groups, but it does not directly address the real problem which cause these plants and algae to proliferate. It is a result of heavy nutrient load brought about by decaying matters that have entered the body of water. Should a water turn-over or water inversion occur as a result of the cooling of the top portion of the lake waters and the bottom portion with less dissolved oxygen will rise up causing the fish on the top and inside the floating fish cages to be gasping for air until they eventually die, thus causing a fish kill..

As an effective method to improve the water quality and enhance the biodiversity of the lake area, the FGF system can be easily replicated in other lakes and other fresh bodies of water. This can lead to institutional partnership and cooperation among stakeholder groups and sectors in ensuring the protection, restoration and sustainable development

and management of the lake. FGF is the most natural way to remove pollutants and reduce organic nutrients in an environment-friendly way versus the other costly wastewater treatment interventions.

The community is currently aware and informed about the strategic solutions in the removal of pollutants and the beautification of the lake using the FGF technology. Tactical corrective interventions like cleaning, removal of debris from lake waters, removing water hyacinths are short term solutions that are costly and cumbersome. FGF is a low-cost system that requires no specialized skills to construct and maintain with no energy cost. It could easily be replicated in other parts of the lake and/or rivers.

Provide the specific details of the project design and how it will solve these issues.

The establishment of FGFs will contribute to the production of oxygen, absorb dissolved nitrites, provide habitat for fish and support aesthetics in consonance to the overall goal of restoring the environmental integrity of Sampaloc Lake. The nature-based solution is supportive of the goals and objectives of the Local Government Unit (LGU), LLDA, Department of Environment and Natural Resources, Bureau of Fisheries and Aquatic Resources and other government organizations for water quality improvement as well as aesthetic and biodiversity enhancement of the lake.

For sustainability some members of the community from the five (5) barangays will be tapped as partners in managing the FGFs and in return can harvest vegetables and ornamental plants from the FGFs which can be propagated and sold for additional sources of income.

Describe the long-term plan for the project (such as oversight, financial responsibilities, and expected behavior change) after Rotary's involvement ends.

The FGF system and the lake itself can also serve as living laboratory for students and the public in general. It can provide an opportunity to create awareness and engage community in resolving water quality issues and provide model in lake management.

Upon the completion of the project, the regular maintenance of the system can be delegated to the sponsoring organization (in the case of replicated FGFs) or turned over to the LGU (barangay) and local community including fisherfolks and women's organizations. Memorandum Of Understanding/Memorandum Of Agreement will be executed to ensure that agreements can be executed by the partners and cooperators.

With the establishment of FGFs, the expected water quality improvement of Sampaloc Lake coupled with the enhanced aesthetic and biodiversity will result to greater appreciation of the social, cultural, educational, and spiritual values of the lake by the people in the community as well as tourists/visitors. The lake will then become a venue for nature-based recreation among friends and families for relaxation and overall health and well-being. The lake can also be used as a living laboratory for learning and understanding about lake ecosystems and its importance to the people that will eventually lead them to be engaged in different protection and restoration efforts initiated by the government and other

environmental advocates. The lake being aesthetically enhanced can also serve as venue for spiritual respite for those seeking peace and tranquility by being in tune with nature.

The improvement in water quality of the lake will allow wildlife (above) and aquatic organisms (below) to flourish in the FGF system. The project has the potential to offer alternative livelihood through vegetable and ornamental gardens using the concept of hydroponics when the right nutrient levels in the lake water is achieved and maintained. The natural attraction that FGF will provide can potentially increase the number of tourists that will bring about better opportunities for livelihood, i.e., selling of souvenirs, food shops, and other small tourism-related enterprises in and around the lake. In addition, the LGU can earn some revenue from the businesses that will thrive around the lake area. The minimal maintenance cost can be sourced from possible revenue from the FGFs through harvesting and selling of plants cultivated from the FGF system and even donations for the upkeep of the said structure. The full benefits can be attained when the FGF system is replicated and sustained in other parts of Sampaloc Lake and to other lakes and rivers in the Philippines.
