I. Narrative

Project Goals

The purpose of this project was to bring water for irrigation to enable agricultural practices in the village. Water is essential to food security. Due to the lack of irrigation, people cannot grow nutritious crops and are unable to have healthy diets. Moreover, the village relies heavily on rainfall to water trees and fields, which has drastically decreased over the past years. The village has plenty of arable land to utilize for agriculture to produce food. They need irrigation system to be able to increase their crop fields. The project aims to install water pump and build an irrigation system, which enables villagers to produce nutritious food for the community and prevent malnutrition. The supply of water increases the productivity and stability of agricultural activities, which ultimately results in promotion of food security.

Project Summary

The planning of the project has started from 2020. The complex nature of the project required a lot of preparation and arrangements. Since, I was in the U.S. my father, Sameboy Fatkhulloev has been my point of contact in the country. He helped me to find vendors, engineers, check prices for materials, get government approval for the project execution, and create extensive project plan. Due to the pandemic and uncertainty of whether the project will take place or not, all the planning stopped. At the end of 2020, we had to resume our planning, yet, since our preliminary planning things have changed drastically. For example, a meter of pipe was around $6 in November 2019 and in a year, it cost $9. Thus, we had to replan project all over, and realized that Projects for Peace funding is not enough, since the prices increased 30-40%. Starting January 2021, I came up with a couple of fundraising strategies to close the budget gap. I created a GoFundMe page and ran fundraising campaigns on my social media, while also researching other organizations that fund the projects like mine. Mid-March, I have been contacted by Steve Schaefer, who is an Associate Director of International Admission, with the suggestion to contact Rotary Club and ask if they want to support the project. In April, I got opportunity to present my project to Rotary Club in Moorhead and received a lot of support, which led to applying for grant and receiving additional $6,000 for the project. At the begging of May I returned to my country, Tajikistan and started preparations for the project.

The implementation of the project took 10 weeks. Our team consisted of me, engineering team, and my family. First, we visited the site and held a meeting with the community. We communicated the project goals and set expectations. We spent first 3 weeks ordering materials, renting equipment, hiring workers, preparing the site, and acquiring licenses. It was one of the most challenging parts of the project. The nature of the project required a lot of engineering procedures and special equipment (water pump, pipeline, transformer, utility poles, electric wires, building blocks etc.). Because of pandemic, the trade has been very limited, and Tajikistan heavily relies on imports which have been greatly impacted. As a result, the prices increased 50-70% for the materials and there was a very limited supply. There were instances when we had to confront vendors for price gouging, and break deals with them. Another, significant difficulty we faced was inaccessibility to the site and inability to rent equipment (crane, tractor, trucks) from the region. Regardless, we have finalized all the purchases and arrangements for the equipment by mid-June and the work process begun. We started by laying down the base for the building where the pump and transformer were installed. Next, the electricity poles and transformer were installed, as we needed electricity to work on installing pump. Simultaneously, we prepared the path for the pipeline and built a cistern. Lastly, the water pump has been installed in Margedar River that is in the north part of the village about 1000-1200 meters away. It pumps water into the cistern that is located at the top of the
village, which distributes water to households through subchannels. The building was built for water pump to protect the equipment.

Beginning of July, we completed installation process and started project operation. During the first ten days we tested the infrastructure and find out that water is sandy and can damage the pump. Lead engineer, Narzullo Rajabov made the recommendation to build a barrel for the water, which will be then taken and pumped. The barrel was built immediately, and it made the infrastructure more robust by providing stronger filtration process for the water pumped.

Finally, we had an opening ceremony in mid-July, and it was one of the indescribable days of my life. Seeing happiness and the range of emotions from villagers was very heartwarming. The project has created an opportunity to have a sustainable agricultural process. The 600 gallons of water is pumped per hour, and water is mainly used to irrigate lands, which was one of the main concerns of the village to grow food. Hence, the water is pumped to a pond where livestock and other animals can drink water from. Also, households are utilizing the water for house chores, such as washing dishes and cloth, since it is a freshwater.

**Peace and Sustainability**

I visualize peace as ability for people to live a life without a worry for their basic needs. What I mean by basic needs is having food, water, shelter, and safety. Tajikistan is a mountainous country, where majority of people live in the mountains and have very limited access to the basic needs. Although Tajikistan has 60% of fresh water resources in Central Asia, only 51.4% of the population has access to clean water, according to [Circle for Blue](https://circleforblue.org). People in rural areas are most impacted by the lack of infrastructure and inaccessibility to resources. For instance, for many years, Varzi-Kanda village has been facing issues with water scarcity and food insecurity. There are about six-hundred inhabitants in the village, who make up around one hundred households. There is a lack of employment opportunities in the village. To provide basic needs for their families, most men leave to work in Russia. Sadly, many men do not return or get killed, which leads to many women become single parent and struggle to find ways to raise and feed their children. Hence, because of extreme poverty many conflicts arise between villages for the resources, like grass to feed livestock. The project is helping the village to practice sustainable agriculture and have more control over their farming. Having ability to grow nutritious food will help to prevent malnutrition in the village, which will lead to healthier community. Importantly, most farmers in the village are women, and having ability to grow diverse crops can potentially open an opportunity for them to sell some of their yields in the markets and earn money.

To ensure sustainability of the project, electricity for the pump is derived from renewable energy, hydropower. Project has been implemented by top engineers in the region and frequent maintenance check-ups will be performed. Top-quality materials and equipment have been purchased with warranty. For efficient use of water, people must take turns to irrigate their fields. The head of municipality, Bakhtiyor Odinaev has been assigned to supervise the operation of the project and report to me on the status of the project.