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# ACCELERATOR LAB PACIFIC

## INSTITUTIONAL FARM

BEQA-YANUCA SECONDARY  
SCHOOL



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# OVERVIEW

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The UNDP Accelerator Lab Pacific in December 2020, partnered with the Pacific Blue Foundation (PBF), and together with the Beqa-Yanuca Secondary School, the Fiji Locally Managed Marine Area (FLMMA) Network, the Fung's Farm, the Ministry of iTaukei (indigenous) Affairs and the Ministry of Education - Government of Fiji embarked on a journey to test how we can (a) increase the availability of affordable nutritional food, (b) increase efficiency of farming production while reducing the degree of exposure to health hazards by applying innovative agricultural systems and techniques, and (c) increase the ability of the school and the community to cope with the impacts of natural disasters and the current global COVID-19 pandemic by using an institutional farming model that can provide for a self-sustaining, income generating, secure food system in a remote island boarding school setting and the nearby village communities.



## PROCESS

We had institutionalized the trial at the Beqa-Yanuca secondary school that caters for students coming in from the surrounding villages on the islands of Beqa and Yanuca, in Beqa Lagoon, with both islands accessible through a half hour boat ride from Pacific Harbour, Viti Levu, the main island of Fiji.

During the pre-trial phases, the ethnography aspects of the trial had indicated that Beqa island in general was facing disruption of food value chains due to increased unemployment related to the ongoing COVID-19 pandemic. We also learnt that many of the agricultural practices performed by the indigenous Fijian communities living there were impacting the marine ecosystem, for example, through synthetic, inorganic fertilizer runoff to the coral reefs. Together with PBF and FLMMA, we developed a survey questionnaire to gain a deeper understanding surrounding agricultural elements taking place at the school which would better inform our intervention. The survey included questions pertaining to, for example, the practices of farming, problems faced, decision making, use of labourers, availability and utilization of land, livestock, and irrigation, market shifts due the pandemic, and the different types of food being planted at the school farm, and whether it had any value for the provision of nutrition.

Triangulation of data from the survey and from the other evidences such as interviews with the School Principal and other personnel, and the direct observations on agricultural practices and produce in the school compound, revealed that there was a need to increase nutritional value of the food menus provided to the boarder students, which in turn would contribute towards nutritional food security. At this point in time, we also found that there was no specific dedicated program in the school curriculum to support the nutritional food security of the boarder students, even though the willingness to have one was voiced for some time.

Soon after, the PBF, FLMMA and the Fung's Farm with the blessings of the Vanua, the school management and the community had run workshops at the school, and had installed the new farm and the associated systems to operationalize the organic farm. We discuss seven key learnings from this trial. The learnings include information gathered around the school vision and goals; socio-cultural elements; appreciation and integration of the students; appreciation and integration of the community; socio-economic and financial sustainability; food security; financial elements; and finally, the practical implementation of the trial.

# INSIGHTS

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## School vision and goals

One of the things that inspired us to develop and test this trial, besides the need for the COVID-19 response and the aftermath of a severe Tropical Cyclone (TC Harold); was part of the School Principal's vision of transforming the school to become more eco-friendly and greener, supported by their willingness to work together with partners in environmental and development programs. Some of the school's goals had been to reduce their reliance on the communities and become more sustainable by further developing their practical agricultural program, which was greatly underutilized in the school.

The various stakeholders of the school, including the management and the communities, had been very supportive of this vision and the goals, and as well acknowledged the project and its potential. We faced several challenges during the implementation phase. Firstly, with the realization of the obligation to engage the Ministry of Education on the project, we had to wait for their official approval, a process that took several months. Furthermore, after receiving the approval, the implementation time collided with the external examination period during which the teachers and students had maneuvered and diverted from spending more time in the project into the preparation for the examinations, making the processes of the implementation slow. Nevertheless, the project received a very strong interest and support from the Ministry of Education, and they are looking at the outcomes from the trial to possibly integrate into their own program and mandate.

## Socio-cultural

In a country such as Fiji where the socio-cultural elements are still vibrant, it is advisable that local key stakeholders such as the Provincial Council, tribal chiefs, the Village leaders and community members surrounding the project site be incorporated in the planning, to garner their views, ideas and support for the project from the very early stages. Also vital is to continue to engage through dialogues, consultation, and discussions with these individuals to ascertain if there are any changes to their thoughts and their commitments as the project is implemented. By having deep collaborations with the two traditional tribal chiefs of Beqa Island, we were able to bring about a sense of community integration and ownership to the project as well. A challenge faced was that of communication, having consistent responsible contacts at the village who could be available as and when needed.



# INSIGHTS

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## **Students**

The students have been a main target group in this trial. Through their participation, appreciation, and integration, we were able to enhance their knowledge on farming methods and modern agricultural technologies. The students were enthused to learn that by using modern agriculture it could provide for an alternative source of income apart from white collar jobs. During the workshops and trainings carried out with the students, we came to know that many of the students were motivated and saw farming as a currency to make money.

The principal was surprised and as well excited to see how the students were integrated into the project from the initial phases, and how such a project could change mindsets of students, specifically for those who could not afford tertiary education or were school dropouts. The project activities had reinforced and had been an eye opener to the students of the potential opportunities should they drop out from formal schooling.

Many of the students on the island are also divers or their family are fisherfolks, so they were able to connect the dots using sustainable agriculture and the declining marine stocks in their fishing grounds. Similarly, parents appreciate that their children at the bare minimum have gained a skill or knowledge from the project. They have learnt the basics of organic and sustainable farming, the use of simple though efficient techniques and readily available resources. The children reciprocated this knowledge and shared the lessons learned with their families back in their villages.

## **Community**

During the experiment, we saw a wider community participation and appreciation for the school farm. The nine villages on the island had committed that each village will help with the farming activities every month on a rotational basis. Yet, overall there had been challenges in securing committed individuals from the community who would make the taskforce and overseeing the project implementation phases because of the geographical sparsity of the village locations and that of the project site, the Beqa-Yanuca Secondary School.

Initially, members of the community were designated to be part of the implementation taskforce, but lack of commitment from some of the members in the task force later proved to be challenging, as it had caused disruption and delays to the project deliverables and timelines. This indicates that when taking up such projects, we need to be mindful of the presence of other governance structures, the interplay, and dynamics of communities, and amend our approaches accordingly as we tread along.

However, through this experiment, the parents of those children boarding at the school are now less worried of their children not eating nutritionally healthy food. The Assistant Principal confirmed that the parents are now aware and convinced that the school can produce healthy food and vegetables that are part of their children's everyday diet.

# INSIGHTS

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## **Socio-economic and financial sustainability of the school farm**

The specific elements of how much of the produce is to be utilized by the nearby communities and sold off island is still yet to be ascertained, with the decision lying with the School Principal and the management. We have learnt that the production of vegetables has eased the burden of the parents of buying food for their children when they go to school and board. One of the installed systems, the Homebiogas, produces two products: 1) cooking gas, supporting all the cooking needs of the school, eliminating the need to buy gas cylinders and burn wood in stoves, and 2) liquid organic fertilizer, in an ecologically-friendly way and is used in the school farms, supports the efficient and productive growth of crops, enriching the soil, while reducing pollution.

## **Food security**

Additional nutritional food besides the main menu supported by the Ministry of Education, is wholly dependent on the initiatives that are part of the school curriculum and led by the agricultural or other teachers at the school. Overall, in this space, we wanted to increase nutritional value intake of the school boarders by supplementing their meal menus. Through this project, despite the challenges and the delays, the school is producing, and the products are being utilized in the student's daily meals. However, we had not yet tested the efficiency and productivity measures of the farm.

The challenge is on the number of intake of students at the school, their habits and food culture, which will also determine the type of food to be grown. The other challenge is the monitoring by the Government on food to be grown, which is also standardized. So perhaps, when we fully close the project, we hope to strengthen the entire system. This may require a monitoring and evaluations system to gauge quantitatively how much the farm is producing, how much additional food is being secured, and the additional values in reality, for example crop types, amounts produced per week, days students are feeding on it, and so on.



# INSIGHTS

## Practical implementation

The major challenge with this element of the project had to do with time management, where meetings had constantly shifted and re-scheduled. There was a need for the project leaders to always communicate and strengthen the project work plan with the custodians of the project, in our case the Beqa-Yanuca Secondary School, and more important to introduce and engage the wider community on the work plan, giving them sufficient time to contribute.

The key successes of this project helped in strengthening the approach taken by PBF and project implementation partners on a similar project at two other schools in Beqa Lagoon, which were funded by the Canadian High-Commission, where the scheduling of the entire workplan was built on the availability of the community members, and was aligned to the availability of the school's staff and students. In this respect, the biggest learning has been to consult if not all but as many stakeholders as possible to devise the workplan.

We must also ensure that our schedule is flexible and accommodating for broader participation, especially when working with communities that are traditional and rural. The utilization of local labourers and tradespeople can also strengthen the support and outcomes of such projects, and we had initiated the creation of a pool of labourers and tradespersons on the island itself, to reduce the reliance on those from the mainland for similar types of projects, such as another Green School project that will be implemented by the Pacific Blue Foundation later this year at another primary school on Beqa Island.



# LEARNING TOGETHER

The learnings from the farm at Beqa-Yanuca secondary school had been extremely useful. The insights captured from our experiment became a strong scholarship case leading to the successful development and implementation of similar projects by the PBF and their partners, who were able to deploy a strengthened approach of the Green School project at two other schools in the Beqa Lagoon area: at Uluinakorovatu Primary School at Naceva village, Beqa Island, and at the Yanuca Island Primary School.

The applied practices were highly successful and implemented in a shorter time frame, and had resulted with great benefits, such as wider community support and participation, constant production of organic fertilizer and cooking gas, abundance of vegetables, compost, and seedlings. All these resources are used by the school for its own needs and excess is sold to the community.

There has also emerged an additional model where the parents utilize excess vegetables produced and barter it with meat and root crops to the school. Currently, the major challenges however lie with training those that are responsible for the project for business financial literacy and management. At the Beqa-Yanuca Secondary School however, further steps would be to facilitate the development of the financial plan of the farm, and to work with nutritionists to better target crops to supplement the composition of the menu at the school while increasing the ability to obtain a nutritious diet.



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