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CAWTHRON MARLBOROUGH ENVIRONMENT AWARDS 2023

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JUDGES' REPORT

COMMUNITY INNOVATION

RAI VALLEY COMMUNITY STREAM MONITORING PROJECT

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INTRODUCTION

The Rai Valley Community Stream Monitoring Project was created by two charitable trusts – NZ Landcare Trust and Conservation Kids NZ. It is a collaborative education programme supported by the Mountains to the Sea Trust, Te Hoiere Project and Marlborough District Council (MDC).

The aim of the project is "to provide Rai Valley families a platform in which to be able to learn to assess stream health, understand the data and participate in restoration of streams in their community".

This project uses the SHMAK monitoring protocol, an holistic approach in measuring a variety of habitat and water quality measurements. Over a 12-month period, seven sites were monitored by seven families, individuals or groups. Based on the data, three sites were chosen for restoration planting.

This equated to 34 hours of monitoring and 1500 sq m of restoration planting from 100 volunteer hours.

GENERAL INFORMATION

The two 'parent' trusts have a strong environmental focus. NZ Landcare Trust was established 26 years ago to support the vineyard and agricultural industry to work more sustainably through a range of workshops and upskilling activities. Conservation Kids NZ, which works out of Envirohub Marlborough, runs monthly whānau activities to instil in children a love of conservation.

The vision of the Rai Valley Community Stream Monitoring Project was to get everyone on board through a transparent and positive process, particularly with farmers, some of whom were initially ambivalent about the project.

Participating whānau included farming families, home-schooled children as well as children from Rai Valley Area School. They were allocated streams with the purpose of collecting scientific data for a true picture of stream health. They were also encouraged to develop a 'feel' for the streams, to understand it's 'wairua' and many have developed a personal connection to their waterways. They are beginning to see when the stream is flourishing and the effects of flooding on the flow, stream life and water quality.

In March 2021, a training day was held with Anna Crowe from MDC to learn and practice the SHMAK kit. The idea of different whānau monitoring different streams, either on their own land or land of some significance to them, formed the basis of the project. A plan was developed involving training days for both the community and whānau.

Over the next 12 months, each of the families undertook the stream health assessment, aiming for one assessment per season to give a complete picture of the stream health. An affirmative inquiry framework was used to collect data and communicate results with the data entered into the Water Citizens Database. Water clarity testing gives farmers a factual base to know the stream's health and if it needs remediation.

A strong theme for this project was the understanding that tamariki are the next generation of farmers so it's important to immerse them in this learning.

Covid slowed down the implementation of these workshops and the organisers have had to be adaptable and resilient about changing their plans. Sessions at the community hall have different stations for a variety of activities – such as buckets of stream water, clean water and samples of invertebrates.

E-DNA samples were sent away to look at a one-off snapshot of streams and the results revealed more stream diversity than originally thought with evidence of freshwater mussels, long and short fin eels, galaxiids and freshwater koura. The children are keen to share this news with the community and this helps maximise the long-term effect of the project.

Planting is undertaken to mitigate issues of run-off and erosion along streams as identified by the children. There has been considerable planting of pioneer species, flax and geographically appropriate plants. This is long-term work to help maintain stream health, some of which is done by whānau and some by the school.

Learnings from this project have been communicated widely through Te Hoiere Project newsletter, various social media, an interpretive sign at Bryants Reserve and an informative short film. A report detailing findings was shared with the participating families and landowners,

Te Hoiere Steering Group and Mountains to the Sea. Each family also had their own folder with photographs, results and additional activities. While the project has now finished, the project team is looking at adapting the structure for use in schools next year.

THE JUDGES WERE IMPRESSED BY:

- The learning and engagement of the whānau talking to the judges was impressive. The children were well informed and competently handled and explained the stream testing equipment, clearly articulating their findings. Their concern for their streams and observations of the changes showed a knowledge and appreciation of the importance of healthy streams. Willow said, "Two things I found fascinating about the river testing was seeing the change in the river over the whole year and how much life was in the river." Marcus and Meika said that they found fascinating, "all the bugs and life you never (normally) notice in the water". The peer-to-peer and within-family sharing was immensely rewarding and no doubt more effective than traditional teaching styles.
- Stream health in a rural landscape is a political and emotionally charged topic. In addition to educating the individuals involved, this project used storytelling in different formats to inform the wider community on how they can collect and use data to make informed choices on restoration and management.
- The whānau folders were a comprehensive record for whānau with pictures and charts documenting their activities, progress and achievements.

PROBLEMS AND HOW THEY HAVE BEEN TACKLED

- Managing logistics - organizing quarterly monitoring at seven sites, taking into account regular flooding, illness and other work/life commitments from the organisers and participating families was the hardest part. The project leaders had high expectations of completing sampling four times per year at each site. However, this wasn't always possible.
- Planned events had to be postponed and finally cancelled, such as the "Fish Fest". Once the testing programme was underway, an attempt was made to bring everyone together with this celebration of family achievements. The aim was to have information stalls to increase local engagement alongside wider interest from Blenheim. It was postponed three times because of Covid and flooding.
- Regardless of these challenges, much has been achieved and the educational outputs exceeded initial expectations. There is a quiet sense of pride in what has been achieved.
- Undertaking meaningful restoration within budget. Some of the streams required significant restoration actions, such as willow control or fencing, either within the project area or broader catchment. These actions were outside the scope and budget of the project. Therefore, the project team selected sites where a tangible impact could be made and provide showcase areas in the community.

SUMMARY

This small rural community has had a lot of challenges thrown at it with significant flooding events and Covid. In spite of this, whānau have put in a year's worth of extracurricular work to learn about their local environment, develop some stream monitoring skills and engage in remedial work through planting.

This is true citizen science as the children explore and investigate the streams to identify the smell, composition and appearance of a healthy stream and know what needs to be done to remediate it. They have also learnt what works and how to be flexible and resourceful.

There has been buy-in from the community, particularly the school. Parents are keen to do more and are working to eco-source seeds and are helping with remedial planting along the banks – true kaitiakitanga. This intergenerational investment means that they will never look at a stream in the same way again. With such community engagement and under the umbrella of the Te Hoiere Project they are optimistic that a good plan for the future will be supported.

SUGGESTIONS

- This is a great story to tell so there is no need to wait for an event to publicise what's happened. There are many positive messages about children's learning and engagement with the environment and the Rai Valley stream monitoring results may help lay to rest some urban myths about poor farming practices and waterway contamination. Exploring different communication channels would communicate this very positive approach to the climate and biodiversity crisis.
- This holistic, hands-on approach to learning is very transferrable to other schools and youth groups; particularly for fostering science in schools and action for the environment. The groundwork has been done and there are action plans and guidelines that other schools could use.
- It would be useful to explore partnerships to spread the message and get more streams 'adopted' throughout Marlborough. NMIT is a possible partner and so too are the Iwi of Te Tau Ihu who would bring a unique perspective and may be interested in whānau and tamariki blending the matauranga Māori perspective with western scientific methodologies.