



Justine's column



Welcome to our February edition of Agri-gate, our first for 2018, in what's shaping up to be a very busy year.

As you may have heard, the Government has a goal of planting one billion trees. Forestry offers a range of benefits – it can help people to invest in their family's

future, help diversify their income, improve productivity, help climate change, protect the environment and create jobs.

A number of Ministry for Primary Industries (MPI) investment programmes are playing a part in helping to meet this goal. One of our current priorities is planning funding rounds for our three forestry-related programmes, namely the Afforestation Grant Scheme (AGS), the Erosion Control Funding Programme and the Hill Country Erosion Fund.

The first funding round for the year is for the AGS which opened on 23 February and closes on 14 May 2018. We talk more about the AGS in this edition of Agri-gate.

In this edition we also talk about the work Crown Forestry, a business unit of MPI, is undertaking to partner with landowners to plant trees by either leasing

their land or entering into forestry joint ventures. This is one of the other initiatives under the One Billion Trees Programme.

In this edition of Agri-gate, we also feature:

- an update on the review of the Primary Growth Partnership (PGP);
- the New Zealand Avocados Go Global PGP programme;
- key findings from an independent evaluation of the Whai Hua PGP programme;
- a report outlining forestry innovations developed by the Steepland Harvesting PGP programme;
- a Sustainable Farming Fund-supported project working with students to protect the Pomahaka River in southwest Otago;
- a Sustainable Farming Fund project involving fertiliser management practices for maximising fodder beet yields and quality;
- a Hill Country Erosion (HCE) programme that's tackling erosion in the Horizons Region;
- a farm business recovery programme funded by MPI's Earthquake Recovery Fund and other organisations, to help farmers make decisions on land use following the November 2016 earthquake.

I hope you enjoy this edition of Agri-gate.





From the Chair, PGP Investment Advisory Panel

New Minister of Agriculture, Damien O'Connor, was vocal pre-election on his discomfort with the Primary Growth Partnership (PGP) and the need for change. I have talked with him about what change he seeks

and, of course, officials have briefed him and are in the midst of a review of the PGP.

The review is being undertaken in two stages. The first, currently underway, is looking at any areas that need improving, including governance processes, assessment criteria for applications and ways to help applicants to develop business cases for their proposed programmes. Phase two is assessing the outcomes to date from the PGP, and is due for completion by the end of April.

The PGP Investment Advisory Panel assumes the aim is to assess the efficacy of the PGP with the implied threat that funds could be reallocated to other programmes – possibly to satisfy political aspects rather than the return on government's investment which would, in my view, be very hard to better. It is expected that the review findings will be provided to the Minister in April, with any improvements rolled out after that.

It's perhaps difficult to understand that the Ministry for Primary Industries co-invests in programmes through the PGP because the risks to the private investors are too high to go it alone. Logically it follows that some programmes may be extremely successful, while others might not do as well. Such is the nature of innovation activities. Put another way, if all programmes were very successful, then the question begs of why government is investing as there was clearly little risk.

There will always be opposing views, with many believing in the benefits of PGP and others who are

critics, particularly those who see others in their sector funded.

The Panel provides independent advice to MPI on PGP investment and, as Chair of the Panel, I'm very comfortable that the PGP works very well. The panel is independent and non-partisan, and has wide sector and business experience. The Crown is at most a 50 percent funder and while programmes are constantly monitored and will this won't guarantee success, it certainly cuts out wastage!

The public and Ministers want good news and the opposition want to show failure. The answer of course lies in the middle but being neither a Minister nor an opposition Parliamentarian, I'm very comfortable that the PGP works and works very well. I believe Minister O'Connor is a pragmatist and supports the primary industries.

The Minister is likely to have plenty of pressure from within his own Cabinet to pull funds from the PGP for other purposes and so I await the outcome of the review with interest. At a minimum I'd expect a diversion of some funds from PGP to the Sustainable Farming Fund.

MPI and the Panel remain committed to progressing current proposals under development that have already been approved. Business cases are being prepared for nine new programmes that fall in this category, and they'll progress through the application process as usual. Until the review has been completed, MPI will not be considering any new funding proposals.

John Parker
Chairman, PGP Investment Advisory Panel

Update on the review of the Primary Growth Partnership (PGP)

Late last year the Minister of Agriculture, Hon Damien O'Connor, announced a review of the PGP. The review, which started in January is being undertaken by MPI.

The review team has evaluated existing governance and other documentation as part of **phase one** of the review. **Phase two** of the review has begun and is focusing on outcomes and economic impacts of the PGP to date.

Once the review has been completed, the review team will present recommendations to the Minister of Agriculture.

We'll provide further updates in Agri-gate and on the [MPI website](#).

Review stages

Phase one involves evaluating existing documentation, such as progress review and programme completion reports, evaluations and audits.

It is also identifying any improvements MPI can make to its processes and systems, for example in the areas of governance, PGP programme application criteria and providing assistance to applicants on business case development.

Phase two is assessing the outcomes to date from the PGP, and is due for completion by the end of April.

PGP spotlight: New Zealand Avocados Go Global



The NZ Avocados Go Global Primary Growth Partnership (PGP) programme aims to develop a globally competitive, high value, sustainable industry delivering \$280 million annually in net sales. This five-year programme began in 2014 with five key objectives.

The programme is led by NZ Avocado with seven co-investors who are contributing both cash and ‘in-kind’ resources. Importantly, growers, packers and exporters are providing in-kind time to the programme, an essential element of NZ Avocados’ PGP programme.

Jen Scoular, CEO of NZ Avocado, says New Zealand Avocados Go Global has provided a major boost to the sector.

“We are part of an industry that has grown from \$70 million in value in 2013 to an impressive \$200 million in 2017. The Go Global programme gave us the platform as an industry to develop a strategy with audacious goals of quadrupling sales and trebling productivity in ten years. That strategy, and MPI investment to date, has been implemented and resulted in fantastic growth in value right across the supply chain.”

The market growth opportunity for New Zealand avocados has been highlighted recently by the approval of phytosanitary access for New Zealand avocados to China.

An independent review of the Go Global programme highlighted the significant step-change towards a more professional

and cohesive industry, with a clear focus on export market diversification, consistent yields, supply chain efficiencies and improved information systems.

“It’s now a much more trusting, collaborative, cohesive, communicative and coordinated industry, with a correspondingly greater public profile,” says Scoular.

NZ Avocado would like to take this opportunity to thank MPI, PGP co-investors, growers, packers and exporters for their continued support in the Avocados Go Global programme.

New Zealand Avocados Go Global projects

New Zealand Avocados Go Global is made up of five projects:

1. Market entry and growth in Asia and New Zealand.
2. Consistent and sustainable avocado supply.
3. Efficient supply chain.
4. Products from waste.
5. Information portal, knowledge transfer and adoption.

Objective 1: Market entry and growth in Asia and New Zealand

The development of market entry and growth strategies, New Zealand avocado story marketing collateral and the reporting of market insights is focused on the expansion of sales into both Asian and New Zealand markets.

Volumes to priority markets in Asia reached a record high in the 2016/17 season, increasing by 294,000 trays on the season prior. Investment in Asian markets has resulted in the development of an overarching promotions story for avocados from New Zealand and implementation of a digital promotions programme that has built an audience of 84,000 target consumers across global social media platforms, and investment into exporter supply chain education has improved the availability of ripened avocados from New Zealand.

Exporters strongly supported a proposed PGP programme extension at a recent meeting, reports Avocado Exporter Council (AVEC) Chair, Alistair Petrie.

Petrie says, “The PGP has been a real enabler. AVEC has participated actively in the AVEC working group, prioritising markets and influencing strategies. This has included the development of a New Zealand story and the resulting collateral that is now available in a collateral library supported by PGP investment.

“The investment in a digital consumer strategy in Asia has had a real impact on raising visibility of avocados from New Zealand.

“New Zealand Avocados Go Global has provided a valuable toolbox of collateral, imagery and training information that has strongly supported our successes in Asian markets.

“On all levels, the support from the PGP investment has strongly influenced the value derived from those markets.”

Collaborative exporter working groups are being facilitated to prepare for market entry into China and maximise the potential growth presented by this new market opportunity for the New Zealand avocado industry.

Exceptional market performance in the 2016/17 season puts the industry on track to achieve the industry goal of a \$75 million avocado category for the New Zealand market by 2023. The pace of value growth in the New Zealand market is accelerating, having doubled from \$19 million in 2011 to \$41 million in 2017.

Participants all along the value chain including growers, packers, marketers and retailers are each contributing in their own way to shaping the industry strategy for the New Zealand market, undertaking collective planning and implementing new activities every season to achieve this remarkable recent growth.

Objective 2: Consistent and sustainable avocado supply

On-orchard research is exploring methods to increase avocado yield and consistency including: optimising tree decline management; understanding and validating new canopy management strategies; evaluating new cultivars and the development of best practice guidelines. The New Zealand Avocados Go Global PGP programme is using a collaborative approach with working groups made up of growers, scientists and rural professionals.

NZ Avocado Research Manager and lead of objective two, Marisa Till, says the New Zealand Avocados Go Global programme is primed to deliver great benefit for our industry.

“The New Zealand Avocados Go Global programme is building a strong foundation, through the tenacious efforts of a dedicated team of researchers and the invaluable support of our funding partners,” says Till.

There is a strong link to Ministry for Business, Innovation and Employment (MBIE)-funded projects being led by Plant & Food Research, and a joint technical working group to assess delivery of both the PGP programme and MBIE projects.

Objective 3: Efficient supply chain

Supply chain efficiencies, quality improvement and facilitating export compliance are a focus for the collaborative work and consultation occurring right through the value chain, reports Industry Systems Manager Glenys Parton.

In January 2018, market access for New Zealand avocados to China was approved following a rigorous audit of a new Official Assurance Protocol by China’s General Administration of Quality Supervision, Inspection and Quarantine. Industry systems were assessed on orchard, in packing facilities, and throughout the supply chain and the first trail consignment of avocados met all requirements, clearing the border in China.

AvoGreen®, the New Zealand avocado industry’s trademarked pest monitoring and management system, was updated to successfully meet the requirements of the China market access protocol. Initial training on the updated AvoGreen® system was implemented on the trial orchards that successfully exported the trial consignment of New Zealand avocados to China.

Best practice guidelines have been developed for growers following a review of industry research reports, international literature and practical experience of industry participants.

Sanitiser types and their use in the packhouse has been investigated along with fungicide use on-orchard.

A key aim of the New Zealand Avocados Go Global PGP programme is enabling a consistent and sustainable supply of avocados.



Objective 4: Products from waste

Initial aims of this project were to investigate the feasibility of developing value-added products utilising the avocado skin or stone. Research is now also underway to see what other value-add opportunities may exist through the processing fruit sector.

Objective 5: Information portal, knowledge transfer and adoption

The 'information portal' will allow the collection, analysis and dissemination of information throughout the avocado industry. There has been extensive consultation with growers and post-harvest operators and this has already led to some improvements to the industry's information sharing and export compliance systems.

The supply chain processes used by packhouses, exporters and the industry body to manage food safety to market access to export approval all require information inputs from stakeholders across the supply chain.

The planned online solution of a centralised Stakeholder Relationship Management (SRM) System and electronic orchard diary will provide both a central repository of industry data and provide for easy access to input, manage and share industry data.

MPI releases evaluation report on Whai Hua PGP programme

At the completion of each Primary Growth Partnership (PGP) programme, the Ministry for Primary Industries (MPI) commissions an independent final evaluation. These evaluations assess the programme's outcomes against its initial objectives set out in its Outcome Logic Model. Outcome Logic Models for all programmes are available on the [MPI website](#).

Final evaluations are a key part of the governance and reporting process for PGP programmes, and comprehensive summaries of the evaluations are published on [MPI's website](#).

The evaluation of Whai Hua concluded the programme has focused on innovation across the value chain, with the large majority of the programme's intended outcomes achieved across a broad range of farm production, including milk processing, marketing and efficacy research and development.

For example, the programme established an elite herd of 510 cows containing naturally high levels of a target compound which research undertaken by the programme has shown to have immune-enhancing properties.

This programme has also successfully developed a skim milk powder product containing high levels of this natural immune-enhancing compound. Research by the programme indicates this compound in bovine milk acts in a similar way to its counterpart in human milk – a breakthrough for the programme.

Market development opportunities for the skim milk powder product are being pursued with target customers, and a broader range of new product

opportunities emerging from the programme are being actively pursued by the programme partners. The Whai Hua partners expect the programme to create economic benefits for New Zealand ranging from \$5 million to \$16 million per year by 2021.

Further examples of achievements by the programme are available on the [MPI website](#), including the programme's completion report.

We also expect to release the summary reports for the independent evaluations for the FarmIQ, New Zealand Sheep Industry Transformation Project and Steepland Harvesting PGP programmes once they've been completed. These programmes all finished in the latter half of 2017.



Report shows forestry harvesting innovations

A newly released report shows the range of innovations that have boosted productivity of forest harvesting on steep slopes, launched a new era of mechanisation and, importantly, reduced serious harm injuries.

Steepland Harvesting a \$7.6 million, 7-year Primary Growth Partnership (PGP) programme completed in September 2017 and led by Forest Growers Research Ltd (FGR), aimed to make forest harvesting on steep slopes both safer and more efficient. The programme's theme was "No worker on the slope; no hand on the chainsaw."

The programme developed and commercialised seven innovative harvesting products such as the ClimbMAX winch-assisted harvester that can operate on slopes of up to 45 degrees, and tele-operated (out of line-of-sight) control systems, which allow harvesting machines to be operated remotely. The latter is believed to be a world first.

Eleven of the million-dollar-plus ClimbMAX machines have been produced, of which eight have been exported to Canada and the USA, creating an export line for the Nelson manufacturers of the machines.

A further three prototypes products have been developed, including a tree-to-tree felling machine, which can move across the forest without touching the ground.

"The programme has been a catalyst for further innovation in mechanised harvesting systems

across the forest industry," says FGR Chief Executive Russell Dale.

"Since 2012, more than \$80 million has been invested by the industry in new harvesters, winch assisted machinery and other equipment designed to enable safe work in tree felling and extraction."

Around 165 workers have, as a result, been removed from hazardous roles such as chain saw felling and log extraction. WorkSafe New Zealand data shows that serious harm injuries in forestry reduced from 170 in 2010 to 28 in 2016.

The programme has also led to significant economic benefits.

"We estimate that the sector wide economic benefits of the programme are around \$151 million dollars since the programme started, made up of operational costs savings of \$71 million and \$80 million in sales of forest harvesting machinery and equipment made in New Zealand," says FGR Harvesting Programme Manager Keith Raymond.

Steepland Harvesting's final report is part of the Ministry for Primary Industries' governance and reporting process for PGP programmes. More information about the programme's achievements are in the published report on the Steepland Harvesting page of the [MPI website](#).

MPI has commissioned an independent evaluation of the Steepland Harvesting PGP programme, and the findings will be released on the [MPI website](#) once completed.



The prototype tree-to-tree felling machine developed by the Steepland Harvesting PGP programme.



The ClimbMAX winch-assisted harvester developed by the Steepland Harvesting PGP programme.

Helping to achieve one billion trees – Crown Forestry

Crown Forestry, a business unit of the Ministry for Primary Industries (MPI), is seeking land to plant trees. This is one of the first initiatives under the Government's One Billion Trees Programme.

Crown Forestry wants to talk with landowners considering commercial planting and who have blocks of land that meet certain criteria (see side box).

“Crown Forestry would lease the land or enter into a forestry joint venture for a one rotation (30 year) term,” explains Warwick Foran, General Manager for Crown Forestry. “The Crown would pay for all establishment and management costs, including rates and ongoing costs of crop protection, and pay a negotiated rent to the landowner.”

Rental will reflect local conditions and the need for a commercial return, so the quality of the land and the proximity to ports or processing plants will be important.

The landowner would retain all rights to any carbon credits.

Any areas of regenerating native forest within the block would be left as they are as unplanted enclaves within the forest.

“We'll carry out a brief screening of nominated land, and if it appears suitable we'll prepare a forestry feasibility study that will include a full financial report,” says Foran.

“This information will be shared with the landowner and will form the basis of a lease or forestry joint venture proposal for the landowners to consider.

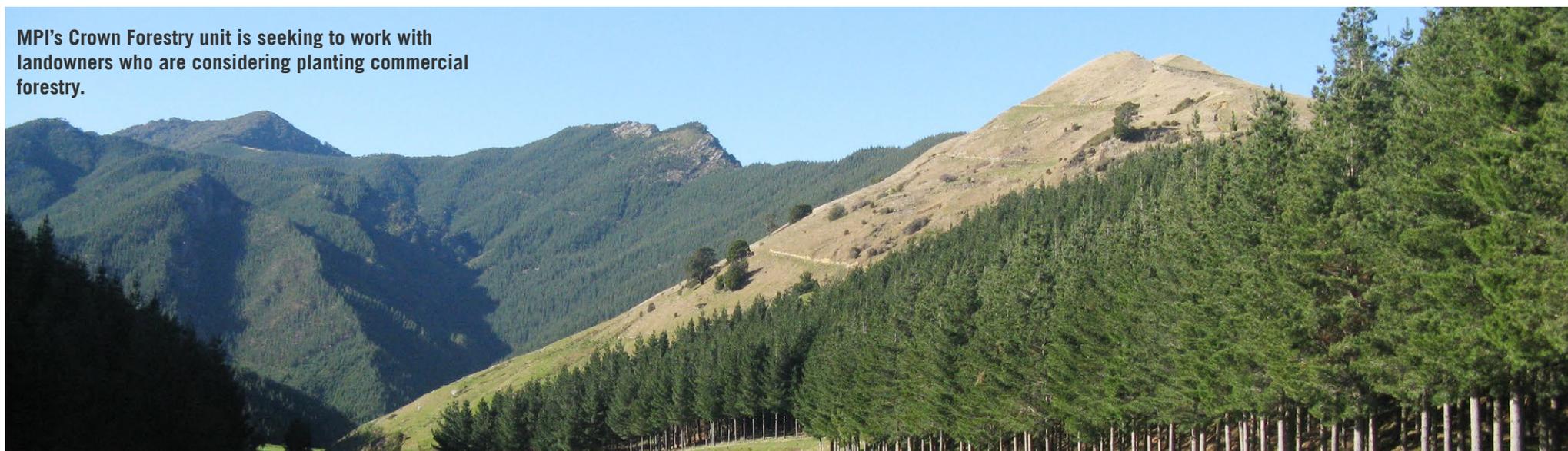
“Proposals will be tailored to reflect local issues. Once an agreement has been reached Crown Forestry will commence forestry operations on the land.”

If you're interested in learning more please contact Crown Forestry at crown.forestry@mpi.govt.nz or www.mpi.govt.nz/crown-forestry

What criteria does the land need to meet?

- Two hundred or more plantable hectares that has not been plantation forest before.
- It does not require conversion of indigenous forest or regenerating indigenous forest.
- It has reasonable fertility.
- It has good access within the land block and to district roads and state highways.
- It has terrain suitable for current forest harvesting systems.
- Weeds can be controlled by aerial spraying.
- It has been identified as suitable for production forestry in the relevant district council and regional council plans.
- It is not already registered in the Emissions Trading Scheme.

MPI's Crown Forestry unit is seeking to work with landowners who are considering planting commercial forestry.



Safeguarding our water – how the Sustainable Farming Fund is helping a community to take action

A collaboration between a group of southwest Otago farmers, Year 7 and 10 pupils from Blue Mountain College, and the Pomahaka Water Care Group is making large leaps towards protecting the Pomahaka River for future generations.

It's part of the Pomahaka Catchment Project – a project aimed at improving water quality in the local catchment through investigating and promoting good management practices. The project has backing of around \$142,000, awarded in 2015, from MPI's Sustainable Farming Fund (SFF). This three-year community project is now in its final year.

What's being done to protect the water?

The project involves riparian planting – planted spaces that are close to water sources. Riparian planting is critical to helping keep streams and other waterways clean. It acts like a sieve and helps to filter out sediment and nutrients before they enter waterways. The plants will also provide shade for aquatic life and help to improve biodiversity.

How does it work?

The Pomahaka Water Care Group (PWCG), a group of around 160 farm owners who are passionate about protecting the Pomahaka River, has grown seedlings which the pupils

are transplanting into pots for sale to farmers. Local nursery, the Blue Mountain Nursery, is providing land for the plants to grow and flourish.

Once the plants have grown, they'll be sold to local farmers for \$5 each, with community groups helping with planting and weeding. For every plant sold, these groups will receive \$2 to put towards future community projects, with the other \$3 covering the cost of materials.

The project's good work has already attracted orders for 22,000 plants, and the project hopes to grow this number further.

"This project fits squarely with the ethos of the SFF," says Morag McConnell, Manager Sustainable Growth Programmes at MPI.

"The SFF supports community-led projects that build productivity and resilience in the primary industries. Projects are led by farmers, growers and foresters who come together to tackle shared problems or develop new opportunities that deliver economic, environmental and social benefits to New Zealand."

To keep up-to-date with the Pomahaka Water Care Group work, check out their [website](#).

Pupils from Blue Mountain College and the Pomahaka Water Care Group transplanting seedlings into pots, and showing the results of their work.



Farm business recovery programme underway

For many farmers affected by the Hurunui/Kaikōura earthquake in November 2016, it will never again be business as usual.

The earthquake collapsed hillsides, created lakes and scarred landscapes with pastures, fences and water-systems all falling victim to the seismic shifts.

Over one year on and farmers are at last in a position to look at land remediation and future land use – and for many, this might mean looking at alternative opportunities alongside their traditional farm business, such as forestry, honey, farm tourism, carbon credits and regeneration of native vegetation.

Farmers are being supported through this process by the three-year, \$1.8 million Farm Land and Business Recovery programme funded by MPI through its Primary Industries Earthquake Recovery Fund. Additional co-funding is coming from Environment Canterbury and Beef + Lamb New Zealand.

The programme is being led – and driven – by the farming community and this is reflected in the make-up of its recently-formed governance group, with farmers making up the majority of the 12-member group. It consists of three separately funded projects across the three regional zones – Clarence/Kekerengu, Kaikōura/Inland Road and Cheviot/Conway – that are being co-ordinated as a programme to help with information sharing and administration, and provide greater value for participating farmers.

Group spokesperson, Cheviot farmer Simon Lee, says a founding principle of the programme is that it is farmer-led with local community engagement. Two farmers from each region sit on the governance group.

He says rather than fund remediation work on individual



Farmland near Kaikōura damaged by the November 2016 earthquake.

farms, the programme is designed to provide farmers with sound information upon which they can base their future management decisions.

"Supporting the development of farm plans, which will aid solution choices, will be a key part of future-proofing farm businesses, the environment and the community in which they operate", says Lee.

The programme will also include trial work around pasture-recovery on damaged land, land stabilisation and alternative land uses. The funding will be used to pay for expertise in all of these areas and information and outcomes will be shared through field days, workshops and

other communication channels.

The Lincoln-based Agribusiness Group will act as project managers and their role will be to support community groups as they identify and prioritise activities and coordinate service providers.

Lee says the earthquake – which came on the back of prolonged drought in the region – means many farmers are looking to future-proof their livelihoods and this may mean changing aspects of their management or looking at alternative income streams.

The feeling he gets from affected farmers in his area is that now the initial repair work has been done, their main concern is what to do with damaged land.

"This programme will provide them with the information and support they need as they evaluate their options," he says.

MPI Investment Programmes Director Justine Gilliland says the aim of the Primary Industries Earthquake Recovery Fund is to support projects that investigate long-term land use options, and also fund professional advisory services for future land use planning, for land damaged by the 2016 November earthquake.

"The earthquake caused significant erosion and damage to land in Hurunui, Kaikōura and Marlborough," says Ms Gilliland.

"Deciding how to remediate and use the damaged land is a considerable decision, and it's important that farmers have access to good information."

With the governance group now established, the programme will begin with a series of workshops to develop work plans.

Funding to tackle erosion in the Horizons region

Annual costs associated with hill country erosion are estimated at \$100 million to \$150 million from loss of soil and nutrients and lost production, as well as impacting water quality and biodiversity.

The Ministry for Primary Industries' (MPI's) Hill Country Erosion (HCE) Programme supports communities through regional councils and unitary authorities to protect the estimated 1.14 million hectares of hill country classified as erosion prone.

Many of the regional initiatives focus on developing and implementing Whole Farm Plans to identify the most suitable land use for erosion prone land. This includes afforestation and riparian planting. A mix of exotic and native species are used, with mānuka plantings increasing in popularity.

Around \$8.78 million of HCE Programme funding for the period 2015–2019 has been awarded to our regional council partners (Horizons, South Taranaki, Wellington, Hawke's Bay, Northland and Waikato). Regional councils will contribute around \$35.68 million (\$26 million from Horizons Regional Council) toward a total budget of \$44.5 million through to 2019.

Around 1.65 million trees are planted each year across the six regions supported by the HCE Programme. Between 2015 and 2019, the team expects to have planted around 6.5 million new trees. There will be a funding round held later this year for the next four years of activity.

Case study – Horizons Regional Council and the Hill Country Erosion Programme

Horizons region contains 1.5 million hectares of farmed land, the largest amount for any region in New Zealand. However, farming is severely limited by erosion on some of this land, with over 200,000 hectares identified as high priority for erosion control that is currently unplanted.

Following the devastating storm event in the region in 2004, the Hill Country Erosion Programme was used to implement the Sustainable Land Use Initiative (SLUI). This has been successful in treating erosion-prone land, and implementing changes at farm-scale across the region. Working with farmers to identify risks and opportunities within their farm businesses has been the key to successful adoption of changes in practices over time.

Historically these changes have been aimed at targeting

erosion, but have had much wider benefits to the environment and economy. For example, trees planted by the SLUI contribute carbon sequestration under New Zealand's international climate change accords. They also make better economic use of marginal land within farms.

The SLUI has a large network of farms and strong alignment with the Government's goal of establishing one billion trees.

Forestry is a viable economic and sustainable land use for much of the Horizon region's hill country. Over the past 10 years the SLUI has planted 13.4 million trees, creating around 12,000 hectares of new forests across the region. This includes planting mānuka and a range of alternative forest species, such as redwoods and cypress.



Through the Sustainable Land Use Initiative, the Horizons region has:

- planted 12,000 hectares of new forests;
- treated a total of 26,000 hectares through new planting reversion, riparian strips, etc;
- planted around 13.4 million trees;
- identified more than 200,000 hectares as high priority for treatment.

Funding to date:

- **MPI funding to date:** \$18.25 million since 2007.
- **Co-funding (council and landowners):** \$62.5 million since 2007.

Aerial view of the erosion on land north of Whanganui following the 2004 devastating storm event in the region.

MPI SFF research project: **Agronomic solutions for fodder beet crops**

A Ministry for Primary Industries' Sustainable Farming Fund (SFF) project managed by Plant & Food Research has delivered some interesting results towards determining good fertiliser management practices for maximising fodder beet yields and quality.

The project, Agronomic Solutions for Fodder Beet, is funded by the SFF along with industry partners FAR, Beef + Lamb NZ, DairyNZ, Agricom, Agriseeds, Cropmark Seeds, DLF Seeds, Seed Force, Ballance Agri-Nutrients, Ravensdown, Bayer CropScience and the South Island Dairying Development Centre SIDDC.

In the 2016/17 season, seven field trials from Waikato to Southland focused on nitrogen, potassium and boron fertiliser, all supported a consistent message about the nutrient requirements of the crop. These trials are being repeated in the current season to validate the results along with detailed monitoring for disease, insect and weed management.

Lead researcher Dr John de Ruiter says there are significant savings to be made on fertiliser costs as the crop dry matter (DM) yield did not respond to the high inputs of potassium fertiliser as previously recommended.

The range of potassium (K) uptake was 91–1,100 kg K/ha. DM yield attained was not related to the uptake of K.

“Nitrogen (N) fertiliser boosted yield on lighter soil types, but invariably the maximum economic yield was attained at low N fertiliser inputs regardless of soil type,” says de Ruiter.

“The range tested was between 0 to 300 kg N/ha, and there were only small effects of N fertiliser on yield with an average of 21 tonnes DM/ha, though the range over all sites was 14-35 tonnes DM/ha.

An opportunity was identified to improve N fertiliser



Fodder beet trial at Orari, South Canterbury with no N fertiliser (left centre) and 200 kg N/ha (right centre).

management with full pre-season soil N monitoring to determine the potential N supply, and save on N fertiliser not required for maximum yield. In addition, there were no growth or plant health effects of boron fertiliser application.

De Ruiter says fodder beet is an excellent high energy supplementary feed crop, used primarily for wintering dairy stock. Other uses are emerging such as autumn feeding to boost milk production, storing the beet for spring feeding, and feeding it to beef cattle and sheep.

“We are also addressing the gaps around understanding disease on fodder beet as crops are under increasing fungal and viral pressure,” he says.

Field days will be held in late March to demonstrate to growers the best options for optimising profitability, minimising costs and maximising yield. Field day locations will be Cambridge (22 March), Wanganui (23 March), Orari (27 March) and Mossburn (28 March). Check out www.far.org.nz for further details.

Afforestation Grant Scheme funding round now open

The 2018 funding round for our Afforestation Grant Scheme (AGS) opened on 23 February and closes on 14 May 2018. The AGS supports landowners to plant trees on their land. Trees tick a lot of boxes for New Zealand, from improving the air we breathe and curbing soil erosion to bringing much needed jobs to rural areas, plus forest cover is the best form of erosion control. Afforestation is also a crucial way of helping to mitigate climate change.

Through the AGS, MPI provides grants of \$1300 a hectare for farmers to plant new small to medium-sized forests of between 5 to 300 hectares.

The AGS is contributing to collaborative efforts to meet the Government's goal of planting one billion trees.

Further information about the AGS, including how to apply and the eligibility criteria, is available on the MPI website at www.mpi.govt.nz/ags



An example of *Pinus Radiata* planting in Otago in 2017, funded through MPI's AGS.