GREENPEACE

Q and A - Deforestation for Corporate Dairy

Why is Greenpeace taking this action?
To highlight the climate crisis and the fact that in the face of it, New Zealand's greenhouse gas emissions continue to climb.

New Zealand is seeing a chainsaw massacre, to make way for intensive corporate dairy farms. Current rates of deforestation are unprecedented. We've already lost tens of thousands of hectares of forests; another half million hectares is at risk (a quarter of the nation's total plantation).

Conversion of forestry land to dairy pasture is a double whammy on the climate. It destroys forests and replaces them with corporate dairy farming, which is one of the most greenhouse gas intensive forms of land use.

This action is also highlighting the lack of solutions from the main political parties to this crisis. The Labour Party - under which current rates of expansion have occurred - says the emissions trading scheme (ETS) has stopped the massacre, but this is demonstrably untrue. Meanwhile National has been happy to draw attention to deforestation, but refuses to talk about one of the key drivers – expansion of corporate dairy farming - or offer up any real solutions.

What are current rates of deforestation and conversion to dairy?
According to the Ministry for Agriculture and Forestry (MAF), 455,000 hectares of forestry land is at risk of being deforested and converted into pastoral use (an area nearly seven times the size of Lake Taupo and a quarter of the nation's total forestry plantation) – the majority for dairying. Of this total, two-thirds are in the North Island and one-third in the South Island.[1]

However, this could easily be an underestimation as projections for 2007 were off by 50 per cent.[2] Government projections only take into account the 65 per cent of forests that are over 10,000ha.

This is happening as the economic incentive to convert land to dairying is at an all time high, and as Minister for Agriculture and Forestry Jim Anderton pointed out last year: *"The overwhelming majority of this deforestation is being conducted by a handful of corporate property investors attracted by the profits from converting forests to high value lifestyle blocks and dairy land."*[3]

MAF has acknowledged that its projections of deforestation could be wrong – they state: "the actual scale of deforestation will depend on the relative land-use

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[1] MAF, Area of forest 'at risk' from deforestation, August 2006, http://www.maf.govt.nz/climatechange/forestry/ets/area-at-risk/page-04.htm

[2] Manley, Bruce. 2007 Deforestation Survey Final Report, February 2008.
[3] MAF media release, Urgent Need for Action on Forestry, 26 February 2007.

economics of forestry versus dairy and sheep & beef….greater deforestation is possible if the relative profitability of forestry declines."[4]

In the most recent MAF study the uncertainty in estimating deforestation was reiterated; "…Sometimes the information provided was incomplete because the company was not willing or able to provide details. For example:

- "*Some companies were prepared to give a general overview of their intentions but were not prepared to provide detailed information on their harvesting (and hence deforestation) profile*."[5]

What is the government doing to tackle deforestation and agricultural emissions?

Very little. Central Government is helping fund research into reducing agricultural emissions as part of a Memorandum of Understanding with the agriculture sector, but it is not currently holding agriculture to account for those emissions. Meanwhile local Government is largely prevented from taking climate change into account under the Resource Management Act, which allows big, large scale dairy farms to get the okay, regardless of their impact on the climate.

Greenpeace is presently challenging the scope of the Resource Management Act in the Supreme Court, but this is restricted to energy projects.

The farming sector is exempt from the Government's emissions trading scheme until 2013 (see below).

What does the National Party propose to do to tackle deforestation and agricultural emissions?

Very little. It has drawn attention to what it calls a "chainsaw massacre" but has not put any policies on the table to fix the problem, and will not be drawn on what it plans to do to address intensive agriculture. The party opposed the emissions trading scheme in its current form and is proposing changes to the Resource Management Act which could favour large scale dairy projects.

What are the climate emissions from forest to dairy conversions?

By way of example, in the Central North Island, Carter Holt Harvey and state owned enterprise Landcorp are converting 25,000 hectare forest land conversions to dairying.

According to Government figures[6] this 50,000 hectare conversion will release some 40 million tonnes of carbon dioxide. In addition, the emissions (methane and nitrous oxide) released from 50,000 hectares of intensive dairy farms is around 500,000 tonnes of carbon dioxide equivalent per year.[7]

By comparison Huntly coal-fired power station released 2.7 million tonnes of carbon dioxide from its operations in 2007.[8]

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[4] MAF 2006 Deforestation Intentions Survey, December 2006, page 12.
[5] MAF 2007 Deforestation Intentions Survey, February 2008, page 10.
[6] Forestry in a New Zealand Emissions Trading Scheme (ETS), Frequently Asked Questions and Answers www.maf.govt.nz/climatechange/forestry/ets/q-and-a.pdf

[7] Eco-efficiency of intensification scenarios for milk production in New Zealand, Claudine Basset-Mens, Stewart Ledgard, Mark Boyes AgResearch Limited 2007

[8] http://www.coalassociation.org/main.php?page=1017 plus http://www.contactenergy.co.nz/web/pdf/general/2007 March Climate Change Book.pdf

But isn't the ETS going to fix this because it puts a price on cutting down forests?

The ETS only adds an extra cost to deforestation of land for conversion to intensive corporate dairying. It is clear that the chainsaw massacre is continuing because the profit to be made from converting forest land to dairy farms is more than enough to cover the extra ETS costs.

It is because the market based ETS does not significantly change the economics of climate damaging activities that the Government also passed through Parliament the 10 year moratorium on new thermal electricity generation plants and a Renewable Preference target of 90% of electricity to come renewable technologies by 2025.

We need to see this kind of specific policy focus in relation to conversion of forestry land to dairy farming. Which is why Greenpeace is calling for the main political parties to commit to an immediate moratorium on all forest land conversions to dairy farming.

Why have you targeted Carter Holt Harvey land?

While deforestation is a national issue, the large scale clearance is mainly centered in two regions: the Central North Island and Canterbury. Carter Holt Harvey is in the process of converting 25,000 hectares of its Kinleith forestry estate in Central North Island to 90 intensive dairy farms[9]. These farms are likely to be sold to corporate investors.

Who owns the forestry rights?

The forest land where conversion to dairy is occurring is owned by Carter Holt Harvey Rural Property Ltd. In 2006 Carter Holt Harvey sold its forestry rights on its land to Hancock Natural Resource Group, Inc[10]. Hancock is a subsidiary of Manulife Financial Corporation, an insurance and investment company in Canada and the United States of America listed on the New York Stock Exchange. The land is still owned by Carter Holt Harvey and conversions of forest land to dairy farms is being conducted by them for final sale.

What is Greenpeace asking for?

Greenpeace is calling for a halt to current dairy expansion, for agriculture to start taking responsibility for its emissions before 2013 (when it's due to come into ETS), for the government to actively promote low-input, low-emissions farming methods and for a national emissions reduction target of 30% by 2020.

We're asking political leaders to explain what they're going to do to fix this crisis.

What's wrong with intensive farming?

Agriculture contributes half of all New Zealand's greenhouse gas emissions, and these emissions are rising (they've increased by 15 per cent since 1990). The dairy sector is responsible for this entire increase. The Ministry for Agriculture and Forestry (MAF) expects that by 2010, these emissions will have increased by at least 25 per cent from 1990 levels. The increase could be as high as 40.5 per cent.[11]

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[9] www.ew.govt.nz/newsandevents/agendas/documents/env1126620.pdf

[10] http://canterbury.cyberplace.co.nz/community/CAFCA/cafca06/oct06.html#_Toc158368236

[11] Ministry for the Environment, Appendix A. Agriculture Emissions Projections provided by Ministry of Agriculture and Forestry, September 2007.

So at a time when everyone needs to be thinking of ways to reduce emissions, the dairy industry is planning an expansion that could see emissions rise drastically in the next two years.

Greenpeace is not targeting farming. Rather, we're highlighting the massive climate-damaging impacts of intensive, corporate dairy farming (which currently include the cutting down of millions of trees and the resulting release of carbon dioxide). This industrial-style farming is by far New Zealand's biggest contribution to global climate change.

We are targeting the ethos of an agricultural industry determined to expand and intensify at all costs.

How exactly does agriculture contribute to climate change?
One third of New Zealand's agricultural emissions come from nitrous oxide gas (from the impact on soil from livestock urine, manure and chemical fertilizer use) and two-thirds come from methane, emitted when cows burp.

Methane is a very potent greenhouse gas; 25 times more potent than carbon dioxide. But nitrous oxide is the most potent; 300 times more climate-damaging than CO2.

Nitrous oxide levels in New Zealand are rising because of increased use of chemical fertilisers, higher stock numbers, and poor soil and urine management. There has been a six-fold increase in use of nitrous fertiliser since 1990.[12] In 1990, nitrous oxide levels from dairy cattle excretion were 104.9kg per head per annum. MAF expects that by 2010, these levels will have increased to 120.24kg per head (a 15 per cent increase), or even as high as 122.29kg per head (a 17 per cent increase).[13] Emissions from the on-farm use of chemical fertilizer now exceed the emissions from New Zealand's road transport sector[14].

The overstocking of cows and the increased use of chemical fertilizer is causing not only large emissions of nitrous oxide into the atmosphere, but also nitrogen water run-off problems in rivers and lakes, and, in turn, algae blooms and weed growth that impacts everyone's use of the water.

Meanwhile methane levels are increasing per head due to higher intensification. In 1990, dairy cattle produced 70.11kg of methane per head per annum. MAF projects that by 2010 each cow will produce 82.46kg of methane per annum (a 17 per cent increase), or even as high as 83.79kg (a 20 per cent increase).[15]

Isn't New Zealand already taking significant action against climate change? What more do you want?
The Labour-led Government has introduced an Emissions Trading Scheme (ETS) under which polluting sectors must, over time, cover the cost of their greenhouse gas

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[12] New Zealand's Greenhouse Gas Inventory 1990–2005, Department of the Environment, p17
[13] Ministry for the Environment, Appendix A. Agriculture Emissions Projections provided by Ministry of Agriculture and Forestry, September 2007.

[14] http://www.mfe.govt.nz/publications/climate/nir-jul07/nir-jul07.pdf

[15] MAF, Appendix A. Agriculture Emissions Projections provided by Ministry of Agriculture and Forestry, September 2007.

emissions. Sounds good in theory, but New Zealand's biggest polluting sector – agriculture – is exempt from the scheme until 2013. Even when it is brought into the ETS, the sector will be subsidised by the taxpayer to the tune of 90 per cent of its emissions (due to the amount of free permit allocations given to it by the government). Meanwhile, the sector's emissions continue to climb and there is no regulation to stop them climbing further. Under the Kyoto Protocol, New Zealand must buy credits to cover any increase in emissions over 1990 emission levels. A recent Sustainability Council report[16] estimated the likely cost to the New Zealand taxpayer of covering agriculture's increased emissions would be around $1.3 billion; a direct subsidy to the sector.

This leads to short-sighted investment decisions such as cutting down forests to convert the land to dairy farms, and severely undermines the effectiveness of a scheme that's designed to encourage a rapid transition to cleaner technologies and practices.

Some politicians and business groups have tried to paint NZ as a "leader' when it comes to climate change but this is far from the case. Yes, we signed the Kyoto Protocol, but we've done so little since signing it that we now face an ever-increasing bill for overshooting targets. Our greenhouse gas emissions per capita are among the highest in the world and the rate at which our emissions are rising now exceeds that of the United States.

If we don't take action to reduce agriculture's emissions and halt the expansion of intensive dairying, we will have no chance of achieving significant emission reductions in New Zealand.

Is Greenpeace anti-farming?

No. Far from it. We want New Zealand to be farming into the future and passing on truly sustainable, healthy farms to future generations. This is unlikely to occur if we continue down the road of expansion, intensification and deforestation. This approach comes at proven environmental cost, and poses a real threat to New Zealand's clean and green image.

Agriculture is the backbone of our economy, and we need to make sure it stays that way and is not sacrificed for short-term gains through unsustainable farming practices. These unsustainable farming practices are allowing our competitors to close the emissions efficiency gap between New Zealand and other producers.

Greenpeace is not targeting individual farmers – we are targeting the ethos of an agricultural industry designed to expand at all costs.

We're also against the idea of all New Zealand taxpayers subsidising the agriculture sector for its emissions. Under the Kyoto Protocol, New Zealand must buy credits to cover any increase in emissions over 1990 emission levels. Taxpayers are currently subsidising the sector $2.5million a day (at a realistic price of $30 per tonne of carbon) for their total emissions.[17]

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[16] http://www.sustainabilitynz.org/docs/TheCarbonChallenge.pdf

[17] Saddler, H. and R. Denniss, New Zealand's Expanding Carbon Footprint: Analysis of New Zealand's Emissions Trading Scheme; major flaws and barriers to emissions cuts, 2008, p17.

A recent Sustainability Council report[18] estimated the likely cost to the New Zealand taxpayer of covering agriculture's increased emissions alone would be around $1.3 billion; a direct subsidy to the sector.

This is blatantly unfair.

So what are farmers to do? Stop farming altogether?
Greenpeace is not suggesting that New Zealand halt agricultural production. But we are suggesting the agricultural sector farm in a more sustainable, less emissions-intensive way.

There are solutions to current agricultural emission rates in New Zealand; solutions that are not only better for the climate and the environment, but also good for farmers' bottom lines. It's smart farming, or what's known globally as *'bio-logical'* farming.

Smart farming is about reverting back to more traditional farming practices that involve less input and better output. It's about cutting down on chemicals, cutting back on herd numbers and looking after soil so that pasture thrives and lasts.

Bio-logical farming takes advantage of natural processes, which promote good soil, healthy crops, and healthy animals. These natural processes include: best tillage methods; proper livestock manure use; promoting soil life; reducing compaction from overstocking of livestock; using rotational grazing to maintain pasture root health through leaving residual pasture cover, and balancing the soil's minerals through the use of soil conditioners. Essentially it's about using natural systems to improve soil structure and pasture quality and to control weeds, pests and diseases.

Sounds too good to be true. Does it actually work?
Yes. Lower stocking per hectare has indeed been shown to increase milk and meat production from each animal. As well, lower costs for inputs such as fertilizers and the resulting reduction of expensive animal health problems allows farms to become more profitable and sustainable.

This was all outlined in a study by AgResearch[19], which was based on studying different demonstration farms in New Zealand. It showed that intensification of dairying farming is detrimental to farms' eco-efficiency in terms of both milk production and land use functions, and can greatly reduce their greenhouse gas emissions advantage over European systems. The study found that milk produced and delivered per cow per year was highest under the 'low input' farming system. The low-input system used no chemical nitrogen fertilizer and lower numbers of cows per hectare. This system also recorded the lowest impacts per kilogram of milk and per hectare for global warming potential, acidification, nitrogen contamination of water and energy use.

Farmers need to work towards sustainable farming methods that reduce emissions. We need policies that incentivise these changes by placing a price on emissions and rewarding practices that reduce emissions.

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[18] http://www.sustainabilitynz.org/docs/TheCarbonChallenge.pdf
[19] Eco-efficiency of intensification scenarios for milk production in New Zealand, Claudine Basset-Mens, Stewart Ledgard, Mark Boyes, AgResearch Limited, *Ecological Economics, In Press 2007.*

The New Zealand agricultural sector has an opportunity to lead the world in low greenhouse emission farming through the adoption of best practice measures that are already available and starting to be implemented on farms in New Zealand.

What risks, apart from accelerated climate change, do farmers face if they continue with intensive farming?

Agriculture generates the bulk of our export earnings and has an international reputation not only for quality products, but also for being clean and green.

A 2001 Ministry for the Environment report suggests this clean green brand is worth at least hundreds of millions and possibly billions of dollars a year. Its worth is estimated at $500 million per year to the dairy industry alone.[20]

The report strongly indicates a significant vulnerability of export value (through reduction in product quantities likely to be purchased by consumers) in the event of a degradation of New Zealand's environment.

Meanwhile the 2008 State of the Environment report reveals that there is already a risk that New Zealand's 'clean and green' brand will lose value if we are not vigilant in dealing with the problems that could threaten the image.[21]

Consumers in key overseas markets are becoming more concerned with where their food comes from and the environmental impact of its production. Agriculture in New Zealand must stay ahead of the game, and to do so, it must improve its environmental performance.

New Zealand has always prided itself on being ahead of the pack in this regard. Its traditionally low emission, energy efficient farming methods have helped counterbalance the 'food miles' concerns of foreign market consumers. But we're losing our edge. Reports indicate that even in the early part of this decade, low emission farming in Sweden and Denmark was already starting to draw equal to (and in some cases ahead of) New Zealand in terms of emissions performance.

More worryingly is that New Zealand's performance is becoming uncomfortably close to that of the UK. This increases the risk of future market erosion, particularly in light of UK supermarkets' recent initiative to implement "carbon lifecycle" labelling on products. As intensification of New Zealand dairy continues, the carbon footprint advantage that New Zealand dairy produce has historically held over the world is being lost; unnecessarily and to the detriment of future generations of NZ dairy farmers.

New Zealand will never be able to compete on quantity and feed the world – there will always be other regions (for example South America) that can produce meat and dairy at greater quantity and lower prices than us. What we *can* feed is the niche markets in Europe, North America and elsewhere that are increasingly calling for quality, environmental friendly produce. Our clean, green branding is already being questioned internationally. If we don't quickly take steps to reduce emissions, we could our advantage in these markets forever.

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[20] http://www.mfe.govt.nz/publications/sus-dev/clean-green-image-value-aug01/

[21] http://www.mfe.govt.nz/publications/ser/enz07-dec07/index.html

What is the financial cost of not tackling agricultural emissions?

At a realistic price of $30 per tonne of greenhouse emissions, 2008 to 2012 will see the cost of increasing emissions from dairy top $1.2 billion – all of which will be picked up by the taxpayer under current legislative framework. Taxpayers are currently subsidising the agricultural sector $2.5million a day (at a realistic price of $30 per tonne) for their total emissions.[22]

Dairy only appears to be profitable because it does not pay for its significant environmental impact. Not having to pay for its environmental impact therefore can be regarded as a subsidy for the dairy industry. Delaying agriculture's entry into the ETS in 2013 will cost the New Zealand taxpayer some 1.31 billion dollars[23]. Even when agriculture comes into the ETS in 2013 the New Zealand taxpayer will pay for 90% of agriculture's Kyoto bill.

In addition, farmers who have adopted best farming practices to reduce emissions are not able to get any reward for their more sustainable approach at present.

Won't climate change hit farmers hardest?
Yes. It's true that the agricultural sector is in line to suffer the most from the negative impacts of climate change and scientists state they can expect increased droughts, floods and extreme weather events, which is why it should be progressive and interested in finding solutions to the problem.

The drought of the late 1990's for example cost our economy $1 billion, and according to MAF, this year's drought in the Waikato cost the farming sector over $1.24 billion, while Fonterra estimated the cost to dairy farmers alone would be over $500 million.

There is more to farming than making money. Many farmers want to hand down productive sustainable farms with living soils to the next generation of New Zealand farmers. It would be great if farmers adopted improved farming practices and efficiency measures, reduced their emissions and didn't have to cough up money.

[22] Saddler, H. and R. Denniss, New Zealand's Expanding Carbon Footprint: Analysis of New Zealand's Emissions Trading Scheme; major flaws and barriers to emissions cuts, 2008, p17.

[23] The Carbon Challenge, Sustainability Council of New Zealand, April 2008.