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Newsletter

March 2008
Vol.24 No.1

ESR Annual General Meeting

Date and Time: Thursday 13 March 2008, 7.00pm

Venue: Room 3.407, School of Engineering, University of Auckland,
20 Symonds Street, Auckland.

The business of the AGM will include the presentation of annual reports, election of the National Executive for the coming year, setting of subscriptions for the coming year, and any other business relevant to the AGM.

This meeting will be followed by the **ESR Auckland Branch Annual General Meeting** in the same venue. Again, the business will include annual reports, election of officers and committee for the coming year, and any other business relevant to the AGM.

Understanding Peak Oil

Auckland Branch, Engineers for Social Responsibility

Date and Time: 13th March 2008, 7:30pm

Venue: Room 3.407, School of Engineering, University of Auckland,
20 Symonds St, Auckland

Speaker. Neil Jacka. Consulting Civil Engineer

Topic: Geological limitations on the abstraction of oil will cause the world production of oil to peak and enter a phase of terminal decline in the near future. Although the timing of the peak and the impacts on society have been difficult to predict, the situation is becoming clearer as the peak in production approaches. This talk outlines the theory of the peaking of oil, some of the options to replace liquid fuels and the possible economic impacts of a contracting supply of oil.

Contact: Neil Jacka, njacka@towerfoundations.co.nz

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Oil depletion: The dilemma for long term infrastructure investment planning

Auckland Branch Engineers for Social Responsibility

Date and Time: 17 April 2008, 7:30pm

Venue: Room 3.407, School of Engineering, University of Auckland,
20 Symonds St, Auckland

Speaker. Archer Davis. Civil Engineer

Topic: Planners must deal with long lead times both for the delivery and for the full life span of infrastructure like roading.

Many of us are now convinced that "Easy oil" for liquid transport fuel will start to be depleted within the near future. Yet we must respond to public pressure to continue to provide roading for current growth conditions.

Many people assume that alternative transport technology and energy sources will appear as and when they are needed to fill the gap. Yet the close linkage between economic growth and oil consumption points to a squeeze on our ability to respond when our oil supply growth declines.

Contact: Thomas Neitzert, Email thomas.neitzert@aut.ac.nz.

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Newsletters by Email

A significant number of members now receive their Newsletter by email. There is obviously a saving for ESR in the cost of printing and postage, so if you would like to receive your newsletter electronically, please let us know by sending an email to johnlaroch@xtra.co.nz

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**Engineers for Social Responsibility –
Sustainable Energy Forum
2008 Conference**

Responding to Oil Depletion and Climate Change

Saturday 26 July 2008

Planning is well advanced for this year's one-day conference at Unitec in Auckland with the following speakers and topics:

- Neil Jacka - Setting the scene - Oil consumption, depletion etc.
- Garry Law - International Progress on Kyoto
- John Blakeley - Energy, Climate Change and Carbon Neutrality
- Arthur Williamson – The Energetics of Carbon Capture
- Archer Davis – Regional Planning for Energy, Transport and Emissions
- Tim Jones – National Responses Linking Energy, Transport and Emissions
- Cameron Pitches – Auckland Sustainable Transport
- James Samuel – Transition Towns
- Details of Registration will be published in the May Newsletter, but please mark 26 July 2008 in your diary.

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Sustainable Freshwater Management - Towards a Sustainable Approach for New Zealand

By Heather Stonyer

Project Manager, NZ Business Council for Sustainable Development

The NZ Business Council for Sustainable Development is a coalition of around 60 leading NZ companies ranging from Fonterra and Mighty River Power, to courier companies. Members collectively employ about 60,000 people in NZ. The Business Council's mission is to provide business leadership as a catalyst for change towards sustainable development.

They wish to concentrate on issues with important implications for New Zealand's sustainability and work on areas where there is a possibility of real action in the next 12-36 months consulting with a wide range of stakeholders. They don't require participants to agree to any or all of the proposals to ensure we propose high quality solutions not lowest common denominator consensus agreements that won't fix the problem. Not only has the Council been working on the water, but also on retrofitting residential buildings where there are large savings to be made in energy, water and improving air quality. Transport issues are also being investigated.

The Water Project

The aim of the water project is to develop a sustainable approach to water management taking into consideration public interest values, environment, Iwi, recreation and power generation requirements. It is proposed to move from a 'first in-first served' to an improved mixed planning and market based approach to achieve highest value actual use through transferability. It is clear that within five years the known available water resource over a significant proportion of NZ is expected to be fully technically allocated. Once full allocation is reached, unravelling past mistakes or putting water aside for future requirements becomes problematic.

Current rules formulated in environment where there has been no over allocation or water rush and have worked extremely well to date; however many catchments are now racing towards full technical allocation with the possibility of a "gold rush" to secure what remains. There is inadequacy in matching need with supply once full technical allocation has been reached, and current methods for allocating water to irrigation lock up a significant proportion of the water allocated for abstraction. Full utilization of allocated water rarely occurs and the water that is not utilized incurs significant opportunity costs, almost every year.

Inefficient utilisation results in water being tied up when it could be used or stored.

There is deteriorating water quality, an issue of growing concern particularly in some lowland streams as the unintended consequence of changing land-use patterns, particularly intensification and increased dairying. There is difficulty in addressing non-point source discharges.

Some regional plans lack specificity, which increases uncertainty, expense and duration of the consenting process. By combining of environmental aquatic ecosystems and in-stream public use benefits, there are risks for each separate in-stream value that are hidden and are unable to be compared with risks to other values. There is a lack of inclusion or understanding of customary rights.

At present water is allocated on a first in first served basis making reallocation to higher value uses difficult. Water is effectively locked up, e.g. current methods for allocating water to irrigation.

There are high transaction costs for transfer of water rights, slowing the re-allocation of water to higher value uses, and more strategic uses. There are needs for planning rules to permit transfer; current bundling of use/effects from allocation add unnecessary complexity to transfer options.

Catchment Management Plan

It is proposed that the Catchment Management Plan will integrate management of surface and ground water, defining one or more allocation zones for the catchment.

The plan will divide up all of the flow regime into four Primary Pools –

- Aquatic Ecosystem Sustainability pool
- Minor Individual Use pool (Stock water etc)
- Public Use Instream pool (recreational use, customary use)
- Consented Use Pool (CUP) (mainly consumptive uses, including municipal supply)

The Consented Use Pool will establish a precise upper limit of allocable resource and sub-pools based on supply reliability. Sub-pools may be reserved for a specific water use (e.g. municipal, energy generation) Key components relating to CUP sub-pools include:

- consumptive use shares defined
- flow-rate shares defined
- class of share related to supply reliability or existing priority allocation.

In order to establish reliability, each river or stream will have a flow reliability curve divided into perhaps four reliability bands showing the flow rate against the

% of time that flow rate will be exceeded. Each flow rate pool will be allocated % flows for each reliability band, for example at low flows the aquatic ecosystem sustainability pool may be allocated 80% allowing the remaining 20% for minor individual use and none to the consented use pool, whereas at high flows 25% may be allocated to consented use pools leaving 75% for ecosystem sustainability. As an example flow rates and allocation in the Waimakariri River were shown.

The Catchment Management Plan (CMP) will define rules for:

- Share transfer – intra and inter catchment
- Daily setting of flow-rate allocations
- Annual setting of consumptive use allocations
- Allocation decisions relating to remaining water
- Assimilative capacity limits.

CMPs will fall into the Regional Plan category of the RMA and will be subject to a ten year review (possibly out to 20 years) once the system is established. These systems are already used by some Regional Councils.

It is proposed that immediately the proportion of the CUP exceeds say 70%, entitlement to all remaining water in the CUP is granted to a Regional Water Trust (RWT) or similar (e.g. Board of Commissioners). The RWT then re-allocates some or all of its entitlement via the water transfer mechanism but within the CMP rules.

RWT could have say five trustees, three appointed by regional council, one appointed by Ministry of Economic Development and one appointed by Ministry for the Environment.

The Trust could re-allocate by transfer (possibly tendered) not based on first-in, first-served but utilising the rules in the Catchment Management Plan.

Nominal Water Access Entitlement

Two separate transferable entities to legally access water will be required – flow-rate and volume.

Consumptive Use Share (per CUP sub-pool)

The annual allocation will be notified as per CMP i.e. the total volume of water available per annum capped by Regional Council. This is particularly important for ground water takes addressing the cumulative effects of water/land use. Each entitlement holder has a share of this volume but the actual amount can vary from year to year in response to availability

Flow Rate Share (per CUP sub-pool)

This share is based on the capped flow rate available for taking. The actual flow rate allocated to sub-pool determined on a daily basis in response to changing stream flow and each entitlement holder has a share of this flow rate.

The security of supply managed through this mechanism, which is particularly important for surface water takes.

A holder of a water use permit need not hold a water access entitlement.

However, to exercise a water use permit they must have contracted for use of a third party's water access entitlement (e.g. through a water supply agreement).

A Registry will be established for water accounting and providing the information needs of stakeholders in respect to, planning, monitoring, trading, environmental management, commercial water use management.

Transaction costs associated with transferring water permits will be minimised enabling an efficient, open transfer system to operate and protect of the statutory provisions made for environmental and other public benefit outcomes.

Two mechanisms will be available for those seeking extra water: If the use has been approved the user may, negotiate a transfer flow rate shares, apply for transfer, request a compliance check and if successful implement the transfer. There will be a cap on allocation limits and the ease of transfer allows water users options of accessing under-utilised water that is more straightforward and less expensive than challenging allocation limits.

Alternatively at CMP review time as part of planning process, adjustments in pools and sub pools and the upper limits as entire flow rate are assigned.

Risk

Entitlement holders will bear risk due to natural variability in supply due to climate and/or changing science. Risk will be managed through reduction in amount of water available for abstraction through daily setting of flow-rate allocations and annual setting of consumptive use allocation. Risk may be mitigated by holding entitlement class with high supply reliability; storage associated with low supply reliability etc.

There is risk for water users from major policy and planning changes due to unforeseen circumstances at the time of consent approval or changes becoming effective after first CMP review probably 10-15 years away.

If change in allocation pools is required compensation can be paid (by regional council) if change is result of change in community values (e.g. desire for greater in-stream public good benefits where this change exceeds a threshold) or

Compensation is paid (by central government) if a reduction in the quantum of water available for taking or of its reliability is due to National Water Conservation Order, NPS or NES becoming operative.

Benefits for Stakeholders

- Environmental/Ecosystem -Better planning and protection for the environment
- Public -Better protection for community interest and water quality
- Fisher/Recreational Water User -CMP for each significant catchment will be prepared allowing for better protection of recreational interests
- Iwi -Possibility of obtaining access to the water as yet unallocated; customary use recognised, catchments managed as a whole
- Water Service Provider -Certainty of entitlement and quality management enhanced
- Irrigators -Greater security of supply and better risks/cost tradeoffs
- Generator -Certainty and security of the volume of water held in a dam even if catchment is not fully allocated
- Farmer -Better security of water available and non bureaucratic mechanism to manage quality
- Industry -Security of supply; potential opportunity to gain from improvements to discharge

This report was prepared by John La Roche from the talk recording and the PowerPoint presentation slides. John represented ESR on the NZBCSD committee, which was responsible for designing the water project.

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Four Visions

John Peet of Christchurch advises:

I've been doing a little work - mainly in association with SANZ, of which I'm a Board member, on scenarios and the place of technology assumptions. A short paper on the topic is downloadable at

<www.phase2.org/documents/four_visions.pdf>.

John advises that he would welcome feedback!

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Poor Options Give Good Biofuels a Bad Name

Chris Bathurst and David Painter

This presentation was made to a public meeting jointly hosted at the University of Canterbury by Engineers for Social Responsibility [Canterbury] and IPENZ [Canterbury] on the evening of 12 June 2007. The focus was on biofuels for transport in New Zealand. A brief history traversed oil for lighting; kerosene from petroleum seeps; and oil from drilled wells made into kerosene, with the 'petrol/gasoline' discarded as useless – until the 'horseless carriage' arrived in the late 19th Century. Petroleum is thought to have been formed by the action of temperature, pressure, time and catalysis on submarine, sedimentary deposits of biomass, mainly phytoplankton.

Rudolf Diesel ran his first engine on peanut oil: "... such oils may become in the course of time as important as the petroleum and coal tar products of the present time" (1912). In 1908, Henry Ford designed his Model T to run on a gasoline/ethanol blend, calling it "the fuel of the future". Some of us are almost old enough to recall the "gas producers" which allowed cars in New Zealand to keep running [on wood] during the petrol rationing of the Second World War.

Biofuels as liquid transport fuel have been significant in Brazil since the 1930s, based first on sugar cane, but now diversifying. Biodiesel from rapeseed [canola] in Europe and ethanol from corn [maize] in USA have become important contributors in recent decades. There is now something of a 'feeding frenzy' as countries rush to implement biofuel options in an attempt to counter reducing petroleum supply and increasing cost, or satisfy mandated 'sustainable fuel' targets. World production was about 40 giga litres of bioethanol and 10 giga litres of biodiesel in 2006. There are well-publicised biofuel issues: 'peak oil' is variously estimated to be 'soon, now, or recently passed'; we are still coming to grips with how much petroleum goes into manufactured products other than fuel [8.8 tonnes to make one car]; land-based crops compete with food production; biofuels are not 'drop-in' replacements for petroleum fuels; total production is still very small compared to transport fuel demand; new conversion technologies ['second generation'] are unproven at commercial scale; energy ratios [out in biofuel; in to produce it] are sometimes poor; not all options are positive towards greenhouse gas emissions; and there are other issues specific to particular countries.

Biofuels have a great start in the thermodynamics stakes because the sun, through photosynthesis, supplies stored energy to plants [thence to animals, milk, tallow, etc.]. But it is important to also note the energy [whence?] required for: seeds, fertiliser, tilled soil, process plant, feedstock and product harvesting and transport, before you get to put biofuel in your car's tank. Paraffin and naphthene

hydrocarbons, as refined from petroleum into the 'JetA', 'petrol' and 'diesel' we have been used to, have a great combination of mass and energy density as liquid transport fuels. Alcohols [ethanol, butanol] also burn well, but unnecessarily carry around some of their own oxygen, lowering energy density. Fatty acid alkyl ester from reacting vegetable oil with an alcohol in the presence of catalyst ['biodiesel'] has properties much like diesel in a not-too-cold environment. Production of biofuels must take into account the physics and chemistry, and especially the ecosystems involved, which are often complex, and the particular economic and social factors applying in a specific country and location.

Total production of biofuels in New Zealand is still very small, but options are being chosen and implemented now. It is not appropriate to simply mimic what is being done elsewhere in the world: some are fundamentally poor options; some are not appropriate in our climate and economy. Choosing liquid biofuel options as part of future transport in New Zealand involves: values; hard science; soft science; engineering and technology; ecosystems; social systems; infrastructure networks; and international influences.

Some biofuel is already produced in New Zealand and some is already turning wheels. Twenty megalitres of ethanol is produced annually from the dairy industry byproduct, whey. There is boutique production of biodiesel [alkyl ester] from waste vegetal oil and tallow. Commercial announcements have been made about biodiesel from rapeseed [canola], biodiesel from algae and biodiesel from imported palm oil. Many suggestions based on current or proposed research have also been put forward: ethanol from sugar crops [e.g. beet], ethanol from cellulose crops [e.g. maize 'corn'] or woody crops [e.g. Eucalypt species] and oil from algae.

On present knowledge and technology, some options seem poor for New Zealand. Maize ethanol has a relatively poor energy ratio, even after decades of use in the USA. It would compete for good arable land used for food production and would have difficulty competing economically with whey ethanol. Ethanol from sugar crops also has drawbacks related to arable, food-producing land competition and possibly suspect energy ratios. Ethanol has some minor, surmountable, drawbacks as a petrol extender. Rapeseed biodiesel also competes for good arable land and has an added disadvantage that rape hybridises aggressively with other Brassica crops. This raises potential problems for the Brassica seed export industry already thriving in parts of Canterbury. Palm oil biodiesel has to be imported from countries now moving to use it themselves for biofuel. In some of these countries there are already problems of unwise deforestation which could be exacerbated by a rush to biofuel plantations. At least until further study takes place, the energy ratios must be suspect. Biodiesel [alkyl ester] has combustion properties similar to diesel, but has even poorer low-temperature performance.

So which options hold promise? Ethanol from whey is a byproduct from a major, growing, New Zealand industry. It uses existing technology, provides waste cleanup and there is under-utilised capacity. Oil from algae has very high areal productivity, a beneficial carbon balance, potentially high energy ratio and produces a broad-spectrum oil. It can provide wastewater cleanup and is extendable to other uncontested growing media. Biodiesel [alkyl ester] from [the lipid part of] algae shares some of the benefits of oil from algae, but without the same high energy ratio and broad-spectrum product. Bioethanol from woody crops overcomes some of the problems associated with cellulose and sugar crops, but introduces a further pre-processing step. Should that step also have a high energy ratio and useful byproduct, this option would become promising.

There are promising biofuel options for New Zealand; they are not the same as those now preferred in other parts of the world. Short-term options to satisfy mandated biofuel targets might not be good options for the longer term. The single most immediately significant transport fuel option for New Zealand is conservation. It has few downsides and numerous advantages. Conservation includes: upgrading vehicle fuel efficiency; down-powering the vehicle fleet; sustainable urban design and incentives for sustainable living; effective public transport and incentives to use it; moving nearer to full-cost pricing of fuel [including environmental costs]; and education with incentives for sustainable living.

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About AVAAZ

Avaaz.org is an independent, not-for-profit, global campaigning organization that works to ensure that the views and values of the world's people inform global decision-making. (Avaaz means "voice" in many languages.) Avaaz.org members act for a more just and peaceful world and a globalisation with a human face.

Avaaz receives no money from governments or corporations, and is staffed by a global team based in London, Rio de Janeiro, New York, Paris, Washington DC, and Geneva.

To contact Avaaz, please write to info@avaaz.org. You can also send postal mail to their New York office: 260 Fifth Avenue, 9th floor, New York, NY 10001 U.S.A.

Website <http://www.avaaz.org>.

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Social Responsibility and Irresponsibility

You may have seen the Mitsubishi advertisement regularly on television showing a four wheel drive car driving rock faces, over beaches and up rivers. This really makes me angry!

Driving vehicles up rivers for pleasure should be banned, particularly with the spread of didymo in South Island rivers, probably soon to be found in North Island rivers. Also you can imagine the devastation to fish and other life in the river and the resulting pollution from vehicles driving up rivers. To my mind it is totally irresponsible for a major car company like Mitsubishi to advertise on television in this way, effectively encouraging people to drive up rivers.

Last year I wrote MPs and the CEO Mitsubishi. Mitsubishi were quite unsympathetic and have obviously taken no notice. I talked to Lindsay Gow deputy CEO at Ministry for the Environment who agreed with me but said his ministry could not do anything.

What can we do? I suggest you should not purchase Mitsubishi vehicles and tell your friends to do likewise. I will write more letters particularly to organisations like Forest and Bird. Perhaps you might like to do the same?

- John La Roche

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The Landmine Ban Treaty

On 15 August 2007, Iraq acceded to the Mine Ban Treaty, and became the 155th State Party to the Convention. This is an incredible and amazing event!

3 and 4 December 2007 marked the 10th anniversary of the signing of the Mine Ban Treaty in Ottawa.

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A Development on DU weapons.

A news item last November reported a new move in the United Nations First Committee, towards a ban on the use of depleted uranium in weapons.

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Depleted Uranium

For the second time in First Committee, a draft resolution related to depleted uranium (DU) has been tabled. In 2002, Iraq tabled draft resolution A/C.1/57/L.14 in First Committee, entitled "Effects of the use of depleted uranium in armaments." Only 35 states voted in favour of the resolution and it was not adopted. The European Union, Pakistan, and United States objected to DU being characterized as a weapon of mass destruction, and the EU and US argued that scientific studies by the World Health Organization (WHO) and UN Environmental Programme had found no evidence that DU in armaments has a notable impact on human health or the environment.

This year, the Cuban delegation drafted the text and secured sponsorship from the rest of the Non-Aligned Movement (NAM). In a letter circulated to fellow delegations, the Chairman of the Coordinating Bureau of the NAM explains the text "is fully consistent with the international concern on this issue and the factual information available in this regard."

The draft resolution, "Effects of the use of armaments and ammunitions containing depleted uranium" (A/C.1/62/L.18), considers the potential harm caused by DU armaments and ammunitions on human health and the environment, and subsequently requests the Secretary-General "seek the view of Member States and relevant international organizations" on these harmful effects and submit a report to the General Assembly next year. It also requests member states "refrain from using armaments and ammunitions containing depleted uranium until studies to determine the effects of such armaments and ammunitions on human health and the environment are completed."

DU is a by-product left over when natural uranium ore is enriched for use in nuclear reactors and nuclear weapons. It is a toxic, dense, hard metal. If it is ingested, inhaled, or enters the body through other means, it creates risks as both as a toxic heavy metal and as a radioactive material. DU munitions explode upon impact and release uranium oxide dust. It has been used by the US and other militaries in Kosovo, Afghanistan, and both recent conflicts in Iraq.

The WHO's depleted uranium fact sheet notes that uranium released from embedded fragments (shrapnel wounds) may accumulate in the central nervous

system tissue, though it is difficult to draw firm conclusions from the few studies reported. The one area of potentially demonstrable health hazard is liver and kidney damage due to long-term exposure, because both the kidneys and liver help to filter ingested uranium out of the human body.

There have been striking coincidences of increased cancer rates, childhood cancers, still-births, and birth defects in southern Iraq (Basra), and among military personnel involved in areas in which DU has been used extensively in both the 1991 Gulf War and the ongoing conflict in Iraq. Whether these cancers are causally linked to DU has not been irrefutably established.

At the Fourth International Conference on DU Weapons, Professor Manfred Mohr of the International Association of Lawyers Against Nuclear Arms argued the use of DU armaments raises questions under the principles of international humanitarian law, including those of distinction, indiscriminate effect, proportionality, and precaution.

For more information about Professor Mohr's remarks and the rest of the Conference, please see RCW's Conference Report. For more information about DU, please see RCW's backgrounder and the International Coalition to Ban Uranium Weapons website.

Ref: <http://www.reachingcriticalwill.org/political/1com/FCM07/week3.html#DU>

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John Peet offers the following internet links as being of interest.

The following links to a range of resources of different types, some amusing (but serious too), some a bit heavy. Excellent to give to the deniers!

[http://digg.com/world_news/How to Boil a Frog presents Peak Oil](http://digg.com/world_news/How_to_Boil_a_Frog_presents_Peak_Oil)

Also this one:

<http://www.energybulletin.net/39308.html>

Published on 10 Jan 2008 by [Energy Bulletin](#). Archived on 20 Jan 2008

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Letters to the Editor, contributed articles, and notices of meetings and events are warmly welcomed by the Editor.

All going smoothly, the next issue of this Newsletter should be on the streets at the beginning of May. This implies a closing date of mid-April.

Statement to the Wellington Conference on Cluster Munitions 22 February 2008

Delivered by Mary Wareham, Advocacy Director, Oxfam New Zealand
On behalf of the Aotearoa New Zealand Cluster Munition Coalition

Kia Ora and thank you Mr. Co-Chair for this opportunity to take the floor on behalf of the Aotearoa New Zealand Cluster Munition Coalition, the group of nineteen domestic non-governmental organisations that has been providing civil society support to this conference.

We are encouraged that the draft treaty text was not weakened or compromised over the course of this crucial meeting. We believe it critical that all governments endorse the Wellington Declaration and move on to negotiate a strong ban agreement with no loopholes or delays. We warmly welcome the groundswell of support we have heard this morning for the Declaration. The ringing endorsements make us very proud. We welcome the new countries that have joined the Oslo Process over the past week especially from the Pacific.

We are grateful to our international guests as well as to the New Zealand public and our government for the strong and constructive stance they have taken over the past week to support the draft treaty prohibiting cluster munitions. New Zealanders have played a significant part in achieving this outcome by expressing their strong support for a clear and unequivocal ban against cluster munitions.

More than 1,000 members of the public and many conference delegates came to Civic Square on Wednesday 20 February to support the cluster bomb ban. Later that night at Parliament, the delegation of cluster bomb survivors handed over a total of 3,367 petitions to the Minister of Disarmament and Arms Control Hon. Phil Goff. In the 24 hours since the handover another 1,500 petitions were received by the coalition, a number that is expected to rise further.

We're grateful to the coalition's member organisations including their staff and volunteers for their tireless work to prepare such an impressive array of engagement events and activities to enable the public, media, and delegates to this conference to learn more about why cluster munitions urgently need to be tackled.

Over the past week members of the Aotearoa New Zealand Cluster Munition Coalition have organised an array of events including four public talks, two Nobel lectures, and a film screening. We have produced a daily Cluster Ban News update for conference participants and have also engaged in significant media outreach, securing stories in major news outlets around the country.

We are thankful to our Minister of Disarmament and Arms Control Hon. Phil Goff and Ambassador Don MacKay for their kind cooperation and skilful leadership. The transparency and inclusiveness surrounding this meeting have created a very positive atmosphere. On behalf of the Aotearoa New Zealand Cluster Munition Coalition, Oxfam NZ has for months been engaging directly with Ministry of Foreign Affairs officials on preparations for the conference. Immigration New Zealand and New Zealand high commissions around the world provided prompt and positive support for the 142 civil society participants who came to the conference from 44 countries.

The Wellington Conference demonstrates that by working in partnership, government and civil society can achieve significant results. We hope our positive experience will serve to invigorate and strengthen the global movement to ban cluster munitions as it prepares for its greatest challenge yet of negotiating a strong cluster ban treaty that saves lives.

In our newsletter this morning we called on all delegates to stand strong--kia kaha--in the months ahead. We also say ka kite ano: we hope to see you again here in our beautiful country.

<http://www.stopclusterbombs.org.nz/2008/02/22/nzcmc-makes-statement-at-conference/>

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Cluster Munition Coalition Aotearoa New Zealand

Engineers for Social Responsibility is a member of the organisation Cluster Munition Coalition Aotearoa New Zealand. ESR joins other organisations such as Amnesty International NZ, Aotearoa Lawyers for Peace, Campaign Against Landmines, Oxfam NZ, Peace Foundation NZ, National Consultative Committee on Disarmament, UN Association NZ and UNICEF NZ.

In an eerie re-run of the famous landmine campaign a global campaign is gathering pace with the aim of prohibiting the use, production, transfer and stockpiling of cluster munitions that cause unacceptable harm to civilians, and to ensure the provision of care and rehabilitation to survivors, clearance of contaminated areas, and the destruction of stockpiles.

The next major international conference is to be in Dublin in May this year. The final details of a global treaty are expected to be finalised and a treaty signed.

Web. <http://www.clusterbombs.org> and www.icbl.org/

Morgan Williams, ex-Parliamentary Commissioner for the Environment

Morgan Williams, PCE, stood down from his role in March 2007. The comments he made, as he reflected on 10 years in an extraordinary role, are still very relevant a year on.

Adequate reflection on a decade in such a privileged role is difficult. I remain in awe of those who crafted the 1986 Environment Act that empowers the PCE. There was a high degree of consensus then on the need for an independent environmental watchdog, and the Act has lived up to its promise. It has provided Helen Hughes, the first Commissioner, and myself with a very robust platform to work on. More importantly, over 20 years Parliament has not sought to constrain the PCE's scope.

This, I trust, will continue, given the enormous sustainability challenges New Zealand faces. These will generate ongoing tensions. For that very reason, the PCE's independent voice will remain essential in our tiny democracy where independent state-funded voices are rare.

Probably my greatest highlight has been the opportunity to work with so many inspirational and passionate people, in the PCE and widely within society. PCE teams have made a lasting contribution, for two reasons. First, we have expanded studies of bigger systems - of cities, oceans, farming, and education for sustainability - with the aim of reshaping thinking and dialogue. Second, our focus has been on environmental sustainability, as distinct from environmental management with its emphasis on mitigation of effects.

In taking a strong sustainability approach, we recognise that economies, like music, language, and law, are all human constructs. Economies depend on our natural capital - our lands, waters, atmosphere, and biodiversity. This approach has attracted some criticism but the recent marked increase in political focus on sustainability, driven by energy and climate change concerns, is a heartening sign that attitudes are changing rapidly.

Some of our most significant contributions have come through our systems' studies. The cities and their people (1998) highlighted the short-term approaches and under-investment in infrastructure and civic amenities that blight our cities, where 85% of us live. A follow-up study tour to the Brazilian city of Curitiba revealed what can be done for a city's people with good leadership, long-term plans, and institutions that are the keepers of the long view.

From cities we turned to our oceans, Setting course for a sustainable future (1999). Despite enthusiastic Ministerial support for our recommendations most

have seen little progress in seven years, marine reserves being the exception. Given the urgency on many marine matters, as illustrated by the ongoing decline of some major fish stocks, this is a big disappointment.

Our 2004 study of farming intensification, *Growing for Good*, generated more debate and media articles than any other PCE work. Dialogue around it has refocused thinking on what makes New Zealand farming and food systems globally competitive and environmentally sustainable.

The most challenging area of enquiry was explored in *See change: Learning and education for sustainability* (2004). Inertia in formal education remains, with education for sustainability still often seen as simply another subject to squeeze into crowded curricula - rather than being the core 'language' of the 21st century.

Our whole way of life will depend sooner rather than later on every citizen being able to appreciate the demands they make on natural capital, and their contribution through lifestyle choices to living within finite limits.

'Eco-literacy' will become the essential literacy for successful societies in the years ahead.

Many thanks to all who have helped me during my PCE decade: your combined contribution has been immense.

So what am I doing next? My desire is to stay engaged in the advancing sustainability ideas and ideals arena for at least another decade through some part-time University positions I am currently negotiating, some directorships and continuing to speak and write on the subject. Much of this activity will be in partnership with Pam who is completing a PhD in the field of tertiary education for sustainability. And yes, - we intend to make time for other pursuits including some travel before the carbon cost becomes too high!

Morgan Williams
Parliamentary Commissioner for the Environment
Jan 1997 to March 2007

Web. <http://www.pce.govt.nz>

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ESR Yahoo Group Email Discussion

If you would like to join the ESR email discussion group, you should send a blank email message to ESRNZ-subscribe@yahoogroups.com .

Later, if you wish to drop out of the group, that is as easy as sending an email message to ESRNZ-unsubscribe@yahoogroups.com .

Web sites of interest

- INES Web Site www.inesglobal.com
- ESR Web Site www.esr.org.nz
- RedR New Zealand www.redrnz.org.nz
- NZ Campaign Against Landmines www.calm.org.nz
- Water for Survival www.oxfam.org.nz
- Sustainable Energy Forum www.sef.org.nz
- Campaign against Cluster Munitions www.stopclustermunitions.org
- Halliburton information www.halliburtonwatch.org

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Viewpoints expressed by contributors to this Newsletter are their own and are not necessarily those of ESR.

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