

CHAIN REACTION

THE NATIONAL MAGAZINE OF FRIENDS OF THE EARTH AUSTRALIA :: WWW.FOE.ORG.AU

Issue #103 | SEPTEMBER 2008 | RRP \$5.50

MINING & SUSTAINABILITY

GLOBAL RESISTANCE

AUSTRALIA'S RESOURCE CURSE

A SUSTAINABLE, CLOSED-LOOP MINERALS INDUSTRY

UNDERMINING HUMAN RIGHTS: THE AUSTRALIAN MINING INDUSTRY OVERSEAS

TAR SANDS AND THE AMERICAN AUTOMOBILE

A JUST TRANSITION TO A RENEWABLE ENERGY ECONOMY



- CLIMATE CAMP
- DIRTY 'CLEAN COAL' PLANT APPROVED
- ALCOA: EXPANSION IN A TIME OF CLIMATE CRISIS
- THE STRUGGLE TO SAVE MCARTHUR RIVER



On Saturday 12th July over 500 people attending Camp for Climate Action in Newcastle participated in the ticking clock human sign 'Cut Carbon - Now or Never'. Friends of the Earth congratulates the organisers and all those that participated in the success of Australia's first ever climate camp! *Photo: Ryan Scott Young*
<http://www.climatecamp.org.au>

Edition #103 - September 2008

Publisher

Friends of the Earth Australia,
ABN 81600610421

Chain Reaction Team

Jim Green, Cam Walker, Natalie Lowrey
and Vanessa Bowden

Layout & Design

Natalie Lowrey and Vanessa Bowden

Printing

Arena Printing and Publishing, Melbourne

Subscriptions

Four issues: \$A22 (within Australia)
Cheques, etc payable to Chain Reaction

Subscription Enquiries

Chain Reaction, PO Box 222, Fitzroy
Vic, 3065, Australia. Ph (03) 9419 8700,
Fax (03) 9416 2081 Email: <chainreaction@foe.org.au>

ISSN: 0312 - 1372

Copyright

Written material in Chain Reaction is free of copyright
unless otherwise indicated, or where material has been
reprinted from another source. Please acknowledge
Chain Reaction when reprinting. Permission to use
graphic material must be obtained from the artist.

The opinions expressed in Chain Reaction are not
necessarily those of the publishers or any
Friends of the Earth group.

Chain Reaction is indexed in the Alternative Press Index.

Chain Reaction is published three times a year.

Front cover: 'I am a coal miner's daughter...' by
Sharyn Munro.

Below: Michaela Stubbs and Stephen Holdsworth
from Friends of the Earth Melbourne stop the coal
trains with another 40 activists at climate camp in
Newcastle, Sunday 13th July, 2008.

Photo: Damian Baker, (<http://www.jpai.fep3.com/>).

PRINTED ON RECYCLED PAPER

contents

regular features

| | |
|------------------------|-------------------|
| Earth News | 2 |
| FoE Australia News | 4 |
| FoE International News | 6 |
| Climate Camp | 8 |
| FoE Australia Contacts | inside back cover |

FEATURE mining & sustainability

| | |
|---|----|
| At the Rockface - Roger Moody | 10 |
| A Just Transition to a Renewable Energy Economy - Geoff Evans | 13 |
| Global Resistance - Photo Essay - Natalie Lowrey | 16 |
| Australia's Resource Curse - Social Divison, Political Capture and Ecological Crisis - James Goodman | 21 |
| 'Sustainable Mining' - Limits to Growth? - Gavin Mudd | 24 |
| A Sustainable, Closed-loop Minerals Industry - Geoff Evans | 27 |
| Tar Sands and the American Automobile - Yves Engler and Bianca Mugenyi | 30 |
| Undermining Human Rights: The Australian Mining Industry Overseas - Christina Hill | 31 |
| Australia's Oceanagold Facing Deep Opposition At Didipio, Philippines - Peter Murphy | 32 |

Chain Reaction is produced in Melbourne and
Newcastle. We acknowledge the traditional
owners of these lands and the fact that
Indigenous land has never been ceded.

| | |
|--|----|
| The Struggle to Save the McArthur River! - Edwina Howell | 34 |
| Alcoa: Expansion In A Time Of Climate Crisis - Lauren Caulfield | 36 |
| Mined Your Own Waste - Helen Rosenbaum and Natalie Lowrey | 37 |
| Trial Uranium Mining In South Australia - Peter Burdon and Alys Stevens | 40 |
| Iluka Pressing Ahead With Zircon Mine in SA - Cat Beaton | 42 |
| Victorian Government Approves Dirty 'Clean Coal' Plant - Louise Morris | 43 |

other articles

| | |
|---|----|
| Tasmania's Wilderness Battles - Greg Buckman | 44 |
| Tasmania's Forests - Still Wild, Still Threatened - Aidan Hicks | 46 |



CHAIN REACTION ADVISORY BOARD

- Karen Alexander - Biodiversity campaigner [Vic]
- Greg Buckman - Author/Researcher [Hobart]
- Damian Grenfell - Globalism Centre RMIT [Melbourne]
- Jo Immig - National Toxics Network [Bangalow, NSW]
- Damien Lawson - Adviser to Greens Senator Kerry Nettle [Sydney]
- Binnie O'Dwyer - FoE representative [Lismore]
- Chris Richards - New Internationalist Magazine [Melbourne]
- Alison Tate ACTU - International Officer [Melbourne]
- James Whelan - Co-director of the Change Agency [Brisbane]
- Techa Beaumont - Mineral Policy Institute [Lismore]

The board provides big picture thematic and political advice to the CR editors,
advice on themes for future editions, as well as helping to ensure that a
broader range of sectors/ constituencies are represented in the articles.
The CR editorial team are still responsible for content, editing and
design and so any problems, omissions or other failures are ours!





EARTH NEWS

APDSE Arms Fair In Adelaide

The Asia Pacific Defence and Security Exhibition (APDSE) is a huge arms fair due to be held in Adelaide between 11-13 November. The Asia Pacific region is the fastest growing arms market in the world.

The last time the world's arms industries held a show in Australia, AIDEX'91, the Australian people, churches, unions, solidarity and green groups showed them that they were not welcome here and successfully cancelled the proposed follow-up show in 1993.

The campaign against the APDSE arms fair is building nationally. For more information, visit <www.apdsexhibition.org>.

Val Plumwood



Val Plumwood died at her Braidwood, NSW home in February, aged 68. She was involved in organisations and campaigns such as Friends of the Mongalowe River, Braidwood Regional Arts Group, the Two Fires Festival (honouring the art and activism of Judith Wright), and the fight to save Monga Forest.

Val wrote widely on feminism, ecology, philosophy and much else and held posts at a number of universities. Her books include *Environmental Culture: The Ecological Crisis of Reason*

(2002), *Feminism and the Mastery of Nature* (1993), and, with her then husband Richard Routley, *The Fight for the Forests* (1973).

A website has been set up for friends to share thoughts and information. <<http://valplumwood.com>>

Save The Koala Month In September



In research to be released during Save the Koala Month in September, the Australian Koala Foundation has found that only around 100,000 koalas are left in Australia, and numbers are dwindling fast.

Habitat loss is the leading cause of declines in populations, with increasing fragmentation of populations leading to genetic weakness. The effects of urbanisation, as well as climate change and drought, are also having heavy impacts on koalas.

The inadequate National Koala Conservation Strategy has seen over 25,000 dead koalas found in south-east Queensland alone in the 10 years since its inception.

Koalas share their habitat with over 400 threatened species, and the Australian Koala Foundation is pressing for meaningful change at the legislative level to protect Australia's biodiversity.

For more information or to become an AKF Koala Campaigner, visit <www.savethekoala.com>.

Nuclear Weapons Campaign Celebrates First Birthday



The International Campaign to Abolish Nuclear Weapons (ICAN), launched a year ago by Australian doctors, already has some major wins on the board and is spreading throughout the world.

A growing list of faith, union, environment, peace, professional groups have joined the ICAN campaign. In Australia the campaign has had major successes. The Australian government has pledged to become a world leader on negotiations about nuclear weapons including supporting a Nuclear Weapons Convention (a treaty to ban the development, testing, production, threat and use of nuclear weapons).

ICAN has been launched in numerous countries in Europe and Asia, and is gaining momentum in the USA. A draft model Nuclear Weapons Convention, produced by ICAN with other international experts, was tabled at last year's UN General Assembly. At the same General Assembly meeting, 127 governments voted to support commencement of negotiations to a Nuclear Weapons Convention – sadly, Australia was not among them.

More information: <www.icanw.org>, <info@icanw.org>, ph (03) 9347 4795.

Clean Energy Council In A Mess?

Australia's Clean Energy Council faces a legal battle with deputy chair Peter Szental issuing a writ in the Federal Court in July demanding an independent accounting audit or that the CEC be wound up. Szental accuses the Council of failing to represent its members, particularly renewable energy and energy efficiency companies. A court hearing was scheduled for 5th August.

Representatives from coal companies have been able to take CEC board positions as their companies have diversified into renewable energy sources. Two companies that own brown-coal power stations, AGL and Turnery, have positions on the Council board. The Council's chair is Richard McEnroe, of Turnery, which owns the Yallourn brown coal power station in Victoria.

The CEC formed last year with a merger of the Business Council for Sustainable Energy and the Australian Wind Energy Industry Association.

Earlier this year, the CEC board accepted membership from Gunns, the Tasmanian pulp mill operator. Gunns proposes a wood-burning 'bioenergy' plant as part of its planned pulp mill.

"The way it's going we'll have nuclear energy on the Council soon," said Rodger Meads from the solar company Conergy, a member of the Council. Strangely, the CEC wrote to the owner of the Australian <www.antinuclear.net> website asking for all mention of the CEC to be removed from the website.

In June, Meads led a delegation to federal parliament of renewable energy companies concerned about the lack of representation from the CEC. He said that the exodus of CEC staff had undermined its technical expertise and thus its effectiveness.

Climate Change Questionnaire

The 'Building the climate movement online' project aims to understand how the internet is being used to build the climate change movement in Australia, and how online tools might be used to greater effect.

The insights and ideas people shared through the questionnaire will be synthesized in a report that will be shared widely to strengthen the movement. The report will be available on the Change Agency and FoE websites.

For further details about the project, visit <www.thechangeagency.org/01_cms/details.asp?ID=73> or contact James Whelan, ph 0431 150 928, <james@thechangeagency.org>.

International Renewable Energy Agency

From 9-11 April, the German government hosted the Preparatory Conference for the Foundation of an International Renewable Energy Agency (IRENA). 170 participants from 60 countries attended and discussed the possible objectives, activities, organisation and finance of an IRENA. The German government was encouraged by the support expressed at the conference. It will further consult the governments of all the participants assembled at the conference and other countries who might want to join in.

More information: <www.irena.org>

EPBC Act Inquiry

The federal Senate has initiated an inquiry into the operation of the Environment Protection and Biodiversity Conservation Act 1999. Submissions are due by September 5.

More information: <www.aph.gov.au/Senate/committee/eca_ctte/epbc_act/tor.htm>

Another Senate inquiry has been established to consider the Renewable Energy (Electricity) Amendment (Feed-in-Tariff) Bill 2008. Submissions closed on August 15.

More information: <www.aph.gov.au/senate/committee/eca_ctte/renewable_energy/index.htm>

New Report: Growing The Green Collar Economy

Growing the Green Collar Economy identifies the employment impact of action to cut greenhouse gas emissions in Australia and examines the skills, training and workforce implications. The CSIRO analysis is based on the latest economic modelling and was released by Australian Conservation Foundation and the Dusseldorp Skills Forum.

Using two different economic models, CSIRO found:

- If Australia takes significant action to cut greenhouse gas emissions, national employment will still increase by between 2.6 and 3.3 million over the next two decades.
- Jobs in sectors that generate a lot of greenhouse pollution – like transport, construction, agriculture, manufacturing and mining – are still forecast to grow strongly in the next decade.
- In these high environmental impact industries, 3.25 million workers will need to be equipped with new, more sustainable skills.

The report is posted at: <www.csiro.au/resources/GreenCollarReport.html>



FOE AUSTRALIA NEWS

Friends of the Earth, Australia is a federation of independent local groups. You can join FoE by contacting your local group. For further details, see: <www.foe.org.au>. There is a monthly email newsletter which includes details on our campaigns here and around the world. You can subscribe via the FoEA website.

FoE National Meeting

In recent years Friends of the Earth Australia (FoEA) has been considering its governance and management structures. In part this was simply to minimise risk given the Howard government's campaign against non-government organisations that engage in advocacy and campaigning. It was also part of our longer-term processes to increase our strategic planning and campaigning effectiveness.

In January this year, it was agreed to broaden the role and mandate of the committee of management of FoEA. It was also agreed that we would bring our planning into a single cycle (various elements operate on the calendar year, while others work on a financial year cycle). To finalise this process, the July 2008 meeting became the AGM for the first time, requiring more reporting and less planning than would normally occur at a mid-year meeting.

Apart from meeting all our reporting and approval requirements, the meeting did manage to squeeze in training workshops and to hold a session with Neville Williams from the Wiradjuri nation about our engagement with indigenous communities. We approved Nat Lowrey as a mining spokesperson, with a view to broaden our non-uranium-related mining activity in coming years. Rye Senjen became a

spokesperson on industrial chemicals, indicating a similar interest in FoEA engaging more strongly in this field in future.

FoEA prides itself on being able to deliver great campaign outcomes for very little money. Our administration and support structures are very lean and the bulk of our campaign work is carried out by volunteers and part-time workers. However as the FoEA network grows we find that we need to expand our financial base. This meeting agreed to work towards a program that will allow us to build the fund-raising capacity for FoEA over the next 18 months.

A new affiliate member was approved – the Mukwano project, which seeks to support farmers living and working on organic farms in Africa and a range of related environmental initiatives.

FoEA will also become involved in a project called 'ride planet earth', which will see Kim Nguyen ride from Sydney to Copenhagen to be there before the 2010 climate negotiations. The ride is aiming to raise awareness about the need for 'developed' nations to act on climate change. FoEA also agreed to join the Global Forest Coalition.

We express our thanks to all in FoE Sydney for such a productive meeting in a great location – at Barrington, under the Barrington Tops on the mid north coast. The January 2009 meeting will be hosted by FoE Brisbane.

Wild Spaces Is Back!

Wild Spaces is the FoEA film festival that focuses on social and environmental issues. FoE has not hosted the festival for two years but we have confirmed it will be held in early 2009.

It will be run as a collaboration

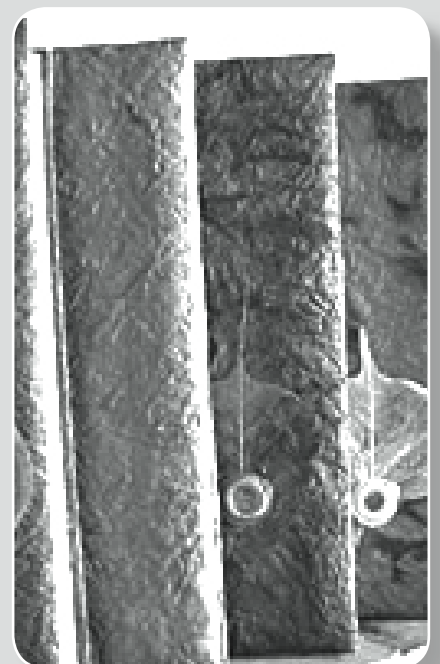
between FoEA and Engagemedia, based in Melbourne. The theme for 2009 will be climate change, it will be available online as well as being run as a simultaneous film festival in locations right around Australia, and will also expand into a number of cities in South East Asia for the first time.

For details, check out the FoEA website <www.foe.org.au>

The Ecomarket – Time For A Revolution In Shopping

In Spring, FoE will take a significant step in revolutionising the culture of consumerism with the development of a major new national campaign that takes to task the existing problems of how we shop, whilst providing a sustainable alternative in the form of a weekly market.

The Eco Market will offer an ethical approach to accessing everyday items.



The range of products available at the market will mimic that which is available at your local supermarket, however, it will have an environmental and social justice conscience.

The market is seeking to attract a diverse group of growers, producers, designers, wholesalers and retailers with proven environmental, ethical and sustainable credentials and who will be selected by the criteria of a Product Buying Policy currently under development. The policy will assist FoE in seeking vendors who are selling the most sustainable products available, with a emphasis on local, independent, organic/biodynamic, GE- and nano-free goods, bought to you with little or no packaging.

In addition, local environment and community-based organisations will be invited to establish themselves in a central 'cafe' area of the space. This will provide an opportunity to educate shoppers whilst encouraging stallholders to operate with transparency.

The development of the campaign will highlight our concern regarding the corporate control of our food. We want to re-localise food production, to influence decisions about how and where we shop and who benefits from our consumer choices. We want real choice, we want to know who produced our food and what is in it. We need to know that we are nourishing ourselves with sustainable and ethical products and FoE Australia is working to provide you with exactly that.

We are currently seeking financial support for the development of the project in the form of grants, and philanthropic and private donations. If you are interested in supporting the project or becoming involved in the campaign please email Carmen <carmen.bateson@foe.org.au> or Cam <cam.walker@foe.org.au> or phone them in the FoE Melbourne office, ph (03) 9419 8700.

Please keep an eye on our website for the announcement of the location of the first market: <www.foe.org.au/sustainable-food>



Professor Anu Muhammad. Photo by Flint Duxfield

Voices of Affected Communities tour

The people and ecosystems of Bangladesh face many of the most devastating consequences of climate change and sea-level rise. At the same time, international financial institutions such as the Asian Development Bank (ADB) continue to finance projects such as the Phulbari Coal project that directly contribute to climate change and threaten the environmental health and human rights of developing communities. To raise awareness of the unequal impacts of climate change and to voice the urgent need for Australia to support development projects that are socially and environmentally just, Aid/Watch organised a speaking tour of the eastern states in May 2008. The tour visited Sydney, Melbourne, Brisbane, Canberra, Katoomba and the Hunter Valley.

The key speaker was Professor Anu Muhammad, from the Department of Economics at Jahangirnagar University in Dhaka, who has been integral in leading the civil society campaign against the Phulbari mine.

International development projects financed through institutions like the ADB can and have played a significant role in exacerbating climate change and locking Majority World countries into unsustainable, fossil-fuel intensive paths of development.

The Phulbari Coal project is currently under consideration for funding by the ADB, yet would require the forced relocation of 50,000 to 150,000 people and further affect between 100,000 and two million people through increased regional pollution and dewatering of the Barind tract. The mine's current owners, Asia Energy, has already generated controversy after five protesters were killed and 200 injured when authorities opened fire on 50,000 demonstrators opposing the mine in August 2006.

The speaking tour was hosted by AidWatch, and supported by Friends of the Earth, Australian Ethical, the Mineral Policy Institute, Oxfam Australia and Rising Tide.



FOE INTERNATIONAL NEWS

Friends of the Earth International is a federation of autonomous organisations from all over the world. Our members, in 73 countries, campaign on the most urgent environmental and social issues, while working towards sustainable societies. <www.foei.org>

UN Talks Reach Consensus On GMO Damage Liability

FoE International welcomed the UN's decision to create strict rules to tackle damage caused by genetically-modified organisms (GMOs). Despite a last-minute attempt by six biotech giants to derail Biosafety Protocol negotiations in Bonn, Germany in May, more than 80 countries joined together to enable a consensus on liability to be reached for the first time. This group is the largest single negotiating group of parties of the UN Treaty on GMOs, and its formation is a major breakthrough in protecting the public and the environment from harm caused by GMOs.

FoE International Annual Report

The FoE International Annual Report is now available at <www.foei.org/en/publications/annual-report/2007>

A Community Guide to Environmental Health

A Community Guide to Environmental Health is a new practical tool-kit for combating many of today's environmental problems. It has been written by 120 communities from over 33 countries and is chock full of actions that communities can take to address both the symptoms and root causes



of today's pressing environmental problems.

Twenty-three chapters cover topics including: preventing and reducing harm from toxic pollution; forestry, restoring land, and planting trees; protecting community water and watersheds; food security and sustainable farming; environmental health at home; solid waste and health care waste; and how to reduce harm from mining, oil, and energy production.

The 600-page, illustrated report can be ordered or downloaded from: <<http://hesperian.org/EHB.php>>

Suspect Timber in EU Building Projects

FoE Europe is calling on the European Commission to adopt environmental legislation to prevent illegal timber from being sold on the European market. This follows an investigation by FoE Netherlands which discovered illegal or destructively logged timber in four EU construction projects. The timber originated from the Amazon, Central Africa, Russia and Indonesia, where large-scale illegal and destructive logging takes place and timber is

purchased from suppliers that engage in illegal logging. On March 19, FoE presented the report to the European Commissioner for Environment, Stavros Dimas, accompanied by a fanfare of chainsaws and axes.

The report is posted at: <www.foeeurope.org/activities/forests/index.htm>.

Germany: Campaigning Against Coal-fired Power Stations

In March, FoE Germany introduced online campaigning to block plans for 27 new coal-fired power plants in Germany. The first action focused on the city of Hamburg, where conservative Christian Democrats and the Green Party are negotiating on a possible governing coalition and where a huge coal-burning power plant is envisioned. Within a few days, more than 2,000 people had called upon the Green Party to insist on an alternative energy supply creating less greenhouse gas pollution. First success: both parties are considering less polluting gas-fired solutions. FoE Germany will continue the campaign until the coal-fired climate killer is off the stove.

Stop Biofuels Boom!

FoE Europe is calling on European banks to stop investing in harmful biofuels development. A report released in May by FoE Europe reveals that European banks such as Barclays, Deutsche Bank, BNP Paribas and Credit Suisse are funding the rapid expansion of biofuel production in Latin America, leading to large scale deforestation, increasing human rights abuses and threatening food sovereignty.

In addition, working conditions on some biofuel plantations amount to modern slave labour. Biofuel companies are making record profits, enabled by loans, investments and other financial support from private banks.

FoE Europe is calling on the European Commission to revise its plans for a mandatory 10% target for the use of biofuels in transport by 2020.

The FoE Europe report, European financing of agrofuel production in Latin America, is posted at: <www.foeeurope.org/agrofuels/financers_report_May08.pdf>.

EU and Business on Trial for Crimes In Latin America

In May, environmental and human rights violations committed by European companies in Latin America were examined at a people's tribunal in Lima, Peru. The tribunal was one of the events at the 'Enlazando Alternativas' Peoples' Summit being held in parallel to the official EU-Latin America and Caribbean meeting of heads of state. FoE, together with the bi-regional network Europe-Latin America, used the tribunal to draw attention to the impacts of EU politics and transnational companies on people and the environment in Latin America. Cases brought by FoE against four European companies were heard by an international panel of judges.

FoE Asia-Pacific Regionalisation Process

FoE Australia members travelled to Indonesia to participate in the regional meeting of the FoE Asia-Pacific groups from April 23-28. The meeting drew together 10 of the region's 12 member groups to discuss how to collaborate more effectively.

Derec Davies (Brisbane), Steph Long (Brisbane), Sam La Rocca (Brisbane) and Georgia Miller (Tasmania) helped negotiate an agreement for the final regional structure and implementation plan. This proposal requires final approval by the FoE International meeting later this year.

Three key institutions will be developed to guide work of the FoE Asia-Pacific region:

1. Regional assembly: The decision-making body consisting of the member groups of the Asia-Pacific region.
2. The Majelis (regional council): an elected body of representatives of the member groups of the regional assembly.
3. The regional facilitator: an employee of the regional assembly.

The Asia-Pacific region is made up of: Australia, New Zealand, Papua New Guinea, Indonesia, Philippines, Malaysia, Japan, South Korea, Bangladesh, Nepal, Sri Lanka and Palestine. FoE International is separated into four regions: Asia-Pacific, Africa, Europe and Latin America.



Vegan Indulgence is the first book from Sydney author and cooking teacher, Leigh Drew. It celebrates the very best of vegan sweet treats, satisfying every level of sweet tooth and suitable for every occasion. Each vegan recipe is accompanied by a full colour photograph. Recipes include: banana cheezcake, black forest cake, cherry pie, passionfruit melting moments, raspberry choc mud cake, tiramisu.

Available for purchase from health food stores, organic grocers, vegan retailers, cafés, all good bookshops and online at: www.aduki.net.au

aduki
INDEPENDENT PRESS

...only \$11.95

p. 03 9001 4972 T. 03 9944 2531 e. books@aduki.net.au w. www.aduki.net.au

CLIMATE CAMP IN NEWCASTLE A BIG SUCCESS

About one thousand people marched peacefully to the Carrington coal terminal in Newcastle on July 13 to protest the reckless expansion of the coal industry in an age of climate change. Children led the march along the edge of the coal rail line until a silent vigil was held in front of the massive coal stockpiles. Then, one by one, small groups of people made their way over or under the fence-line and onto the tracks. By the end of the day, 37 people had been arrested, having successfully halted all coal trains through the Carrington port for the day. The atmosphere was amazing. Walking around the camp for climate action site, the day's stories were told with huge grins and excitement.

For photos, videos, reports and inspiring stories, visit <www.climatecamp.org.au> and EngageMedia <www.engagemedia.org>.



PHOTOS: Coal being thrown off train; 'This is real action on climate change'; 'Coal is a dead end' and 'Time for Action' by Damien Baker. See <http://www.jp.a.ifp3.com/>. 'Coal is over' and crowd shot by Alan Milnes.

Knitting for Peace

Betty Christiansen. Knitting for Peace celebrates the long heritage of knitting for others. It includes simple patterns for items suitable for charity donations. Afghan rugs, mittens, socks, baby beanies, bears, even blankets for dogs in shelters. It also tells the stories of 28 'knitting for peace' endeavors, and what you need to know to start your own charity knitting group. \$29.95



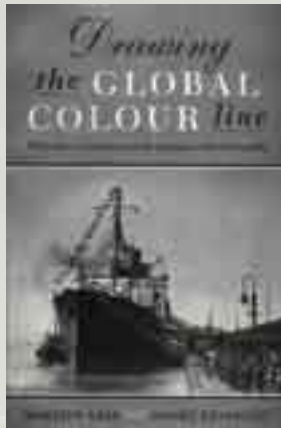
The Conscious Cook

Giselle Wilkinson. Contains 50 delicious recipes covering an eclectic mix of ethnicities, ingredients and dishes, it is completely different from other cookbooks. It looks at food, not only from the point of health and taste, but also through the lens of the global sustainability movement. \$34.95

Eco Colour

India Flint explores the fascinating and infinitely variable world of dying with plants. The book encompasses only ecologically sustainable plant-dye methods using renewable resources, and attempts to take the path of doing the last possible harm to the dyer, the end user of the object, and the environment. \$59.95

Volunteers needed!!
Contact us if you would
like to be involved.



Drawing the Global Colour Line

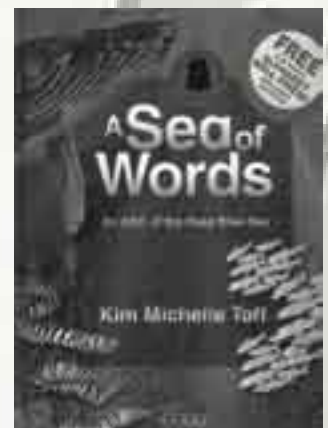
Marilyn Lake and Henry Reynolds. A pioneering account of the transnational production of whiteness in the late 19th and early 20th centuries. The authors expertly and imaginatively reconstruct how leading white intellectuals and politicians in Australia, South Africa, the US, and Great Britain fought demands for racial equality and jointly invented new doctrines of racial superiority to justify the maintenance and, in some cases, the reinvigoration of white privilege in every part of the world that Britain either controlled or in which it had once deposited its settlers. A powerful and sobering history, incisively and elegantly told. \$36.95

Macquarie Pen Anthology of Aboriginal Literature

An authoritative survey of Australian Aboriginal writing over two centuries, across a wide range of fiction and non-fiction genres. Including some of the most distinctive writing produced in Australia, it offers rich insights into Aboriginal culture and experience. The anthology includes journalism, petitions and political letters from both the nineteenth and twentieth centuries, as well as major works that reflect the blossoming of Aboriginal poetry, prose and drama from the mid-twentieth century onwards. \$39.95

A Sea of Words

An ABC of the Deep Blue Sea
 Once again award winning illustrator and author Kim Michelle Toft draws on her love of the ocean to create an exquisite interactive picture book. Each illustration a hand painted silk masterpiece, each verse an informative tongue twister and each sea creature a treasure to behold. Includes a free ABC Alphabet Wall Frieze. \$29.95



The Transition Handbook

From oil dependence to local resilience

Rob Hopkins. Most of us avoid thinking about what will happen when world oil supplies runs out (or becomes prohibitively expensive); this shows how the inevitable and profound changes ahead can have a positive outcome - leading to the rebirth of local communities that will grow more of their own food, generate their own power, and build their own houses using local materials. With little proactive thinking at the governmental level, communities are taking matters into their own hands and acting locally. This upbeat guide offers you the tools for starting the process. \$34.95

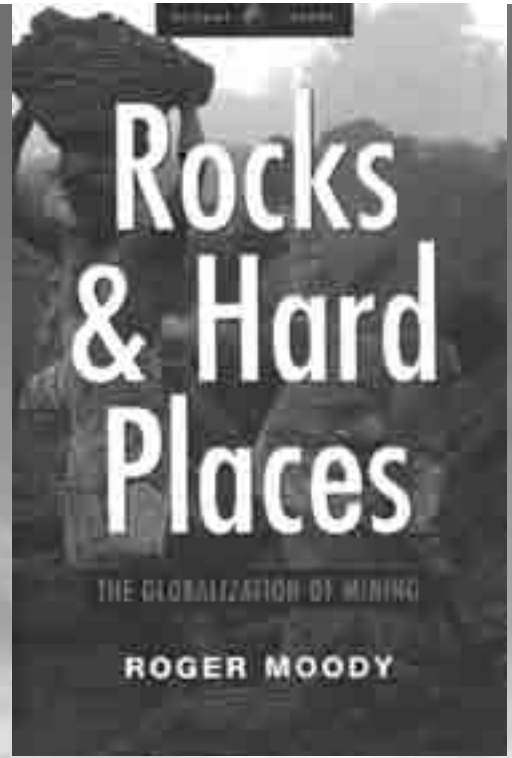
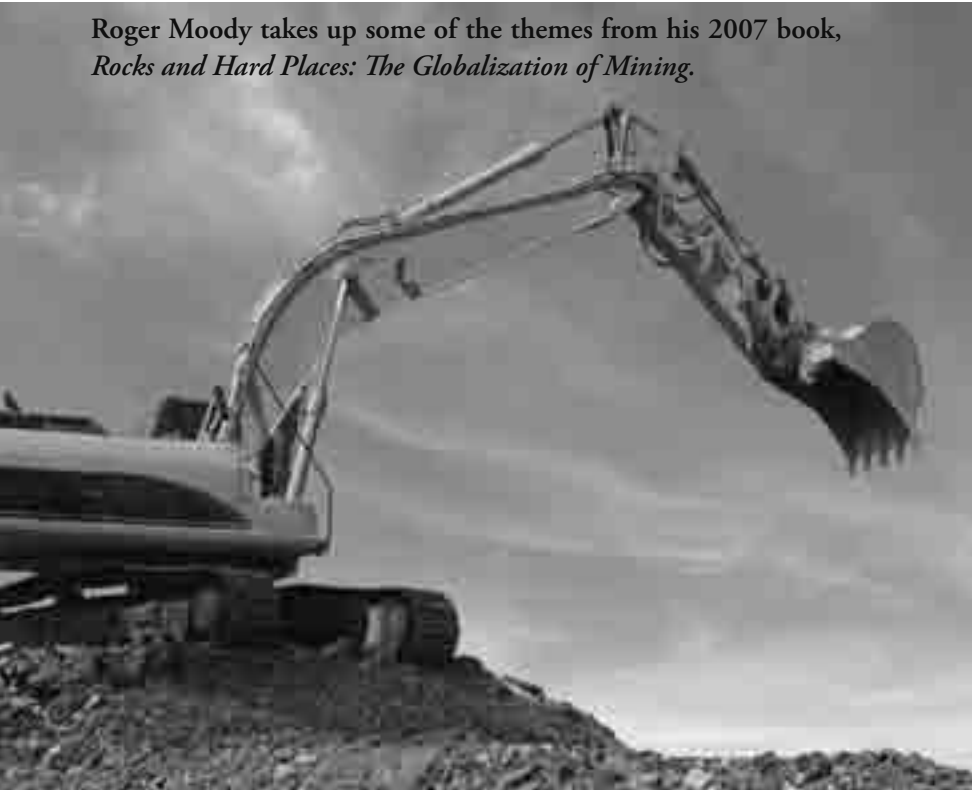
312 Smith St
 Collingwood, VIC 3066
 phone: 03 9417 4564
 email: bookshop@foe.org.au

www.foe.org.au/shop

FEATURE: Mining & Sustainability

At the Rock Face

Roger Moody takes up some of the themes from his 2007 book, *Rocks and Hard Places: The Globalization of Mining*.



All metals and minerals are finite, many created within the earth's crust by unrepeatably geophysical events of a billion or more years ago. Once uprooted, then processed, they can never be returned to their original state. Whatever the justifications for digging up more and more minerals, their stock is continually going down and the rate of depletion is accelerating. The term 'sustainable mining' – often bandied about by industry spokespeople – is clearly an oxymoron. However, it's another question whether mining can contribute to sustainable development through providing jobs, paying taxes, building infrastructure and funding ancillary social services.

All of us depend on metals and minerals to varying extents. Recycling and re-using them will never match with needs so long as 'rising social expectations' fail to be satisfied. The rapid burgeoning of a middle class in China and India – fast approaching three quarters of a billion people – makes increased demand for raw materials inevitable. *Rocks & Hard Places* doesn't start from a bald 'keep it in the ground' premise. Rather, it seeks to critique the what, how, when and where of mineral extraction; asking who should be entrusted with funding and performing it – whether the state, small-scale mining cooperatives, or the corporate sector.

Substitution is always possible

Virtually no metals or minerals have a unique utilitarian application. There are potential substitutes for metals and other extracted materials for a host of human endeavours. Slowly we are understanding the huge socio-economic and environmental penalties attached to making early choices about 'essential' minerals – in particular from the burning of coal for power and smelting heavy metals. Calculating the life-cycle costs of transmuting a raw mined substance into a finished product is now finally recognised as a necessary science.

Some mined substances are so dangerous they should never be taken from the ground. Asbestos in all its forms is banned in the US and throughout the European Union, but, inexcusably, Canada and Russia continue selling stockpiles of the carcinogenic minerals. Mercury, banned in 2006 by the European Union for use in thermometers, is still being dumped by European states in Africa and Asia in the form of 'e-wastes'. Both production and trade in these substances should be banned. But we must also evaluate the consequences of using other potentially deadly toxic heavy metals, notably lead, cadmium and nickel.

Aluminium is now widely promoted as a substitute for

steel in automobiles, in order to reduce fuel consumption and thereby greenhouse gas emissions. But aluminium refining and smelting themselves give rise to significant quantities of carbon dioxide and, tonne for tonne, are the largest industrial consumers of electricity. Should our taxes be directed solely at promoting renewable energy? Or does coal currently bulwark so many fragile developing economies that we would do better funding 'clean coal' mechanisms? *Rocks & Hard Places* doesn't attempt to answer such questions outright. But it does pinpoint the toll exacted by scores of mining projects across the globe, in terms of displacement of peoples, toxic emissions, health impacts, and catastrophic events such as the collapse of tailings containments.

Ways (not) to do it

Choosing the best methods of extraction and processing requires distinguishing between dirty technologies and potentially less damaging ones. Many mining critics (for example, Australia's Mineral Policy Institute) believe it is never justified to throw toxic mine wastes into rivers and seas, or spray cyanide onto ore to separate out gold.

An equally important question is whether raw materials should be excavated from underground shafts, open pits, or 'stripped' from the earth's surface. The first employs substantially more workers, but wreaks a higher toll in fatalities and occupational disease. On the other hand, open pit and strip mining take over much larger acreages of fertile land.

Cement manufacturers are now burning almost every conceivable type of industrial, chemical and agricultural waste in their kilns, to convert mined lime and gypsum into the 'glue' that holds together our buildings and infrastructure. While marginally reducing the toll from greenhouse emissions, this is creating additional unacceptable over-loads to our environment. With a few exceptions (such as the direct reduction of steel, pioneered in Australia), none of the new 'energy-saving', or pollution-reduction technologies have fulfilled their promises – indeed they have brought new dangers and damages with them.

Timing the mining

For two and a half decades, evidence has been growing that, if a 'lesser-developing' state relies heavily on income from mineral sales, it will add to, rather than subtract from, the continuing impoverishment of many of its citizens. In addressing this unpalatable phenomenon, the World Bank argues for better governance, accompanied by royalty and taxation regimes favourable to the industry. The strategy has clearly failed – a fact recognised by the Bank itself in its little-publicised 2005 report *Where is the wealth of nations?* Some mineral-dependent states are now 'threatening' to re-nationalise their mines; others (such as South Africa and Tanzania) are bidding for higher rents.

But there is compelling evidence that impoverishment caused by mining derives from the intrinsic nature of a global commodities system where mineral exports are prized above alternative methods of production. We must devise a truly humanist methodology which values mineral deposits before they get turned over by the drills and dozers then sent offshore.

The long term socio-cultural and ecological consequences of mining – including the loss of value embedded in soil, water, and other natural resources – have to be rigorously off-set against what might be gained from rents and other minerals-derived incomes in the immediate future. Arguably, leaving the raw materials in the ground – even at times of high mineral prices – may be the only way that many lesser-developing states can retain their diversities of real wealth, with the option remaining of resuming mining in the future.

No-go areas

Indigenous Peoples are custodians of territories which host the majority of reserves and resources currently targeted by companies and governments. Many of these are also protected areas and biosphere reserves. Last year the UN General Assembly adopted the draft text of a 'Declaration on the Rights of Indigenous Peoples' – although key mineral states, including Australia and Canada, deplorably refused to sign. The Treaty affirms Indigenous Peoples' rights to self-determination and "individual and collective land and resource rights".

States which ratify are bound to "consult and cooperate in good faith with the indigenous peoples ... to obtain their free and informed consent prior to the approval of any project affecting their lands or territories and other resources ..." The concept of 'full and informed prior consent' is becoming central to negotiations between companies, governments and communities over access to minerals on their territories. To date, the industry has almost universally failed to recognise this right, but individual companies are slowly being compelled to do so. There are few other issues that strike so directly to the heart of contemporary debates around self-empowerment, the implementation of democracy and ultimately the sustainability of our planet. *Rocks & Hard Places* provides several examples of recent resistance (not exclusively by indigenous communities) to mining, predicated on the right to self-determination.

Who should do the mining?

There are perhaps 200 million people involved in mineral extraction across the globe. The majority are not employed by multinational corporations, but comprise men, women and children, whose tasks range from sluicing diamonds from tropical rivers in Latin America, operating large cooperative tin mines in Bolivia, and hewing and hauling building materials in some of the most dangerous places

on earth, notably in Asia. This 'artisanal and small mining' sector has been hit by accusations that it encourages the peddling of 'blood' diamonds from west and central Africa, or the poisoning of the environment.

In comparison we learn little about the lives of millions of stone breakers in south Asia or those who toil down thousands of illegal coal pits in China. All of them are trying to make a living, but many are also indirectly (if unwittingly) displacing unionised miners from their jobs since increasing numbers of casual workers are now being sub-contracted to big mining companies in order to cut costs. However, the potential for democratic self-organisation within thousands of mining communities is currently being squandered. It is one of the least visible but most insidious results of the inexorable concentration of financial and political power in the hands of the world's Big Miners (whose modus operandi and public relations strategies are examined in depth in *Rocks & Hard Places*).

After weighing up the human and environmental consequences of mining, I suggest that decisions over the what, when, where, how and by whom of extracting irreplaceable mineral resources must no longer be entrusted to 'the industry.' If we rightly protest against our rivers, lakes and oceans being privatised, there is an equally compelling

case to declare that the world's minerals (including those under the sea) are also the common heritage of humankind. The biggest single challenge is to determine how to administer it sustainably.

Rocks and Hard Places: The Globalization of Mining
By Roger Moody

Zed Books, London, 2007

Order from Amazon, from Zed's Australian distributor
Palgrave Macmillan, or directly from Zed Books:
<www.zedbooks.co.uk/rocksandhardplaces>

*Roger Moody is managing editor of the Mines and Communities website <www.minesandcommunities.org>. He has worked with community organisations in South America, the Asia-Pacific and Africa. He is the author of *The Gulliver File: Mines, People and Land - A Global Battleground*; *The Indigenous Voice: Visions and Realities*; and *The Risks We Run: Mining, Communities and Political Risk Insurance*.*

No Mining, No Weapons, No Waste YES HOODIES!

Fair Trade hoodies come in a range of colours and sizes.

Two styles: Hoodie with zip at the front, print on the back
Hoodie with front print.

*All proceeds support the campaign
to end the nuclear chain and build a
clean, safe renewable energy future.*

\$60



A Just Transition to a Renewable Energy Economy

Geoff Evans

Climate scientists are saying that global warming, as evidenced by melting polar ice caps, is worse than predicted by the Intergovernmental Panel on Climate Change and that global emissions must peak by 2015 if average global temperature rises are to be kept below 2°C above pre-industrial temperatures and climate chaos is to be avoided.

Government policy needs to be driven by this science, not by political and economic expediency, no matter how challenging the transition to a clean energy economy might be. The response to the Garnaut Review needs to rise to this challenge if it is to drive energy futures towards sustainability.

Yet as the global warming threat grows, many Australian political leaders remain under the spell of the coal industry and its self-titled 'greenhouse mafia' that ran the Howard Government's climate change and energy policies for a decade (Hamilton, 2007).

Indeed, despite the obvious risks and the need for a moratorium on new coal-fired power stations and coal mines, and a phasing out of coal-dependency over the next few decades, some are still advocating new coal-fired power stations and a massive increase in coal exports.

Federal and state governments continue to gamble that carbon capture and storage (CCS) technologies will save the industry, even as growing numbers of experts note that this technology is likely to be too little, too late and too risky to be commercialised and installed widely enough to make a difference in the short window of opportunity needed for action. They are throwing billions of dollars in public subsidies towards CCS and the mythological 'clean coal' to prop up markets for coal for the global mining corporations that dominate the industry. The corporations that control the industry – BHP Billiton, Rio Tinto, Xstrata and Anglo Coal – are enjoying record profits and have led the charge against workers' rights and strong environmental protection.

Meanwhile investment and incentives for markets for renewable energy and energy efficiency technologies in which Australia could be a world leader are being seriously frustrated.

Jobs and the environment

Tackling climate change means our dependency on coal as an export earner and as a domestic fuel must be phased out over the next decades, rather than ramped up. This will mean a huge change in the national economy, and for coal-affected regions such as the Hunter and Latrobe Valleys. The challenges associated with this change are significant, but not insurmountable. Indeed, a transition to clean, renewable energy is not a 'jobs v environment' issue, but is a 'jobs and environment' opportunity.

A strong renewable energy and energy efficiency industry in the Hunter would revitalise local manufacturing and create thousands of new, high-paid, secure, skilled jobs.

Environmental organisations and labour unions refer to the process of economic restructuring from non-sustainable industries to a sustainable economy as a 'just transition'. A just transition links ecological sustainability with issues of work, equity and social justice.

A just transition process recognises the needs of both current and future generations for safe, secure and satisfying jobs. Participants in a just transition seek to build collaborations rather than conflict, and in particular, to avoid a false 'jobs vs. the environment' conflict. A just transition is needed to ensure that the costs of change do not fall on vulnerable workers and communities.


The Canadian Labour Congress (2000) was a pioneer in the theory and organising around the just transition concept and noted that a "just transition will ensure that the costs of environmental change will be shared fairly. Failure to create a just transition means that the cost of moves to sustainability will devolve wholly onto workers in targeted industries and their communities." The Congress noted that green job creation – secure, stable, quality jobs which are clean, healthy and stress-free – is the flip side of a just transition.

The Australian Council of Trade Unions (ACTU, 2007) has also noted that a just transition is needed to deal with the challenges of climate change, and this requires new partnerships of the labour movement and other sectors, including government, industry, local communities and training providers to retrain and re-skill workers' into jobs in the renewable energy industry.

Renewable energy

The ACTU policy recognises the tremendous potential of renewable energy to create additional jobs in development, installation and operation phases: "Increasing the share of renewable energy in the total energy mix is possible without damaging existing industry and with continuing growth in high quality jobs, as the EU experience demonstrates." (ACTU, 2007, p.6.)

A just transition to a renewable energy economy is possible, based on currently-available low-risk energy



“... if the Hunter’s six coal-fired power stations were phased out and there was a shift to clean renewable energy economy in the region, 7,500 to 14,300 new jobs would be created – a net gain in jobs of between 3,900 and 10,650.”

efficiency and renewable energy technologies (solar, wind, geothermal, hydro and biomass) with gas as a transitional fuel. Research shows that these technologies can meet energy needs in Australia, and the developing countries of our region (Teske et al, 2007, 2008; Mallon et al, 2007).

Renewable energy systems are more resilient and flexible than big centralised coal-fired power stations which require massive investment in a single piece of infrastructure that creates a supply, rather than demand-driven energy market. Renewables’ flexibility comes through the technologies being decentralised to multiple sites where solar, wind and geothermal resources are available – often in rural communities where investment and economic revitalisation is urgently needed.

Shifting investment towards energy efficiency and renewable energy industries would revitalise Australian manufacturing industry and create many more new jobs than in current fossil fuel industries per dollar invested.

Installation of solar hot water systems and insulation in households and workplaces would cut carbon emissions, create jobs and reduce energy bills, and particularly assist low-income households.

Hunter Valley

A Greenpeace-commissioned report from the University of Newcastle’s Centre of Full Employment and Equity, called ‘A Just Transition to a Renewable Energy Economy in the Hunter’, found that if the Hunter’s six coal-fired power stations were phased out and there was a shift to clean renewable energy economy in the region, 7,500 to 14,300 new jobs would be created – a net gain in jobs of between 3,900 and 10,650. The report estimates there will be 1,300 direct jobs that must be replaced in the phasing out of coal-fired electricity generation in the Hunter region and 2,300 indirect jobs.

The new jobs would be in manufacture, installation, maintenance, research of renewable energy and energy efficiency technologies – green jobs. (Bill et al, 2008)

There would be even more jobs created if the Hunter was to become a base for an export industry to other parts of NSW, Australia and the world. There is enormous potential for the Hunter region to make a transition into a renewables ‘Silicon Valley’.

Government interventions

A just transition needs government interventions – setting environmental goals and establishing regulatory frameworks, market incentives and regional development support. Research on successful green industrial restructuring processes in Europe have identified that successful structural adjustment to green industry involves:

- A clear decision to end investment in the affected area or industry.
- Clear environmental targets.
- Availability of satisfactory technological alternatives to the technology being phased out.
- Political leadership that promotes innovation, partnerships and the diffusion of alternative technologies for new industries, research and development, tax relief, infrastructure investments.
- A high degree of political integration among different government sectors.
- Funding for compensation to minimise social and regional disruption caused by change, including income support for low-income households to meet increased costs.
- Establishment of Regional Economic Development Funds to facilitate investment in new industries and jobs in targeted areas (Binder et al, 2001).

This is all possible in Australia’s coal communities. Active government intervention that anticipates and plans for change, provides education and training, and invests in infrastructure for industries of the future in coal communities, will offer pathways to sustainability.

Workers in coal communities need alternative employment opportunities in well-paid, secure and satisfying jobs. Workers in transition between jobs need redundancy entitlements, income maintenance and opportunities for retraining tailored to individual skills, needs and local opportunities. Workers who relocate to seek work elsewhere should receive relocation assistance. Research shows that workers with less formal education, older or disabled workers need special targeted support.

The Australian government’s response to the Garnaut Review has the opportunity to respond to the global

warming threat and drive a just transition to a sustainable energy economy. The government needs to support:

- A clear decision to phase out coal-fired power stations by a definite date (e.g. 2030), beginning with the most polluting.
- A legislated target to reduce Australia’s greenhouse gas emissions by at least 40% below 1990 levels by the year 2020.
- An Emissions Trading Scheme that reduces emissions in line with a 40% national reduction by 2020, and with all technologies and participants in a carbon emissions trading scheme treated equally. (There should be no free allocations of carbon credits or ‘grandfathering’ within this system but export-oriented energy intensive industries could seek support outside of an Emissions Trading Scheme to protect jobs).
- Use of Emissions Trading Scheme revenue to support the deployment of renewable energy and energy efficiency technologies in coal communities, and to compensate low-income consumers for higher energy prices.

A shift to a renewable energy economy would revitalise Australian manufacturing industry and create thousands of new jobs, including in coal communities. Renewable energy and energy efficiency technologies could be boosted if governments:

- Set a national target for energy efficiency to stabilise growth in energy consumption.
- Set mandatory, enforceable minimum energy standards for domestic and commercial buildings.
- Establish a national program for retrofitting solar hot water systems to all houses, schools and workplaces.
- Set an energy performance standard for residential and commercial lighting.
- Accelerate the Minimum Energy Performance Standards (MEPS) program.
- Set a national target for renewable energy of 40% by 2020.
- Establish a national feed-in tariff to encourage development of solar photovoltaic and solar thermal power.
- Develop innovative financial packages (e.g. interest-free loans) to support consumers to install energy efficiency and renewable energy technologies.
- Initiate major refits of public housing with energy efficiency and renewable energy technologies to reduce energy bills for low-income families.

... continued on page 47

Global Resistance to Mining

Text: Sakura Saunders & Natalie Lowrey

Photos: Allan Cedillo-Lissner

Indigenous Resistance to Barrick Gold

In April and May this year, Indigenous leaders from four countries opposing large-scale gold mining on their lands participated in a speaking tour in North America. All are facing adverse affects by the largest gold mining company in the world, Canadian owned Barrick Gold Corporation, the communities began the tour at the Seventh Session of the UN Permanent Forum on Indigenous Issues in New York. The delegation then continued to Toronto to attend Barrick Gold's annual shareholder's meeting, The tour also included public events in New York, Toronto, Ottawa and Montreal.

Throughout the tour, Indigenous participants shared common stories of Barrick Gold's tactics in suppressing dissident voices, dividing communities, and manipulating local and national politics. They saw patterns in the sophisticated messaging and company public relations to the mainstream media, and the destructive impacts and lack of free, prior and informed consent for local people across various continents.

More info: <www.protestbarrick.net>, <www.foe.org.au>, <www.mpi.org.au/pubs/fieldnews_June2008/>



Top right: Sakura Saunders from ProtestBarrick.net talking to shareholders as they leave Barrick Gold's AGM , Toronto, 6 May, 2008.

Bottom right: ProtestBarrick supporter, Paul York, at the action outside Barrick Gold's AGM, Toronto, 6 May, 2008.

Below: Jethro Tulin, Executive Director, Akali Tange Association, Papua New Guinea is joined by Catherine Coumans from Mining Watch Canada. Jethro is speaking to media about the deaths by shooting by Barrick Gold's security at the Porgera mine in his province.



"The community groups fighting Barrick include members ranging from local government and tribal officials, to assemblies of mothers against mining and other grassroots groups that attract thousands of supporters. Their work is courageous and dedicated, as it is dangerous and exhausting; and it serves to illustrate the on-the-ground reality for Barrick and other companies like it. Needless to say, this rarely voiced perspective on mining does not bode well for the industry as a whole, as it comes from the people who are immediately affected by its operations ... these issues are not isolated instances of abuse, but are part of a system and framework within which these abuses are inevitable. Canada, where Barrick is based, is home to 60 percent of the world's mining corporations, which run operations across the globe.

Despite being a leader in this industry, Canada has not taken the lead on mediating or taking responsibility for the behavior of their corporations abroad. As a consequence of this negligence, Canada has drawn criticism from around the world, first by environmental, religious and human rights organisations, and now increasingly from international institutions, such as the United Nations. Even the Canadian government has started to recognize the harsh reality accompanying the presence of their mining industry abroad, which is characterized by environmental destruction, political corruption, community struggles, human rights abuses, and massive amounts of water consumption."

Extract taken from 'Barrick's Dirty Secrets: Communities Worldwide Respond to Gold Mining's Impacts' <<http://www.protestbarrick.net>>



The 'Indigenous Resistance to Gold Mining' tour from left to right: Ange Atalu, Secretary, Porgera Land Owners Association, Ipili, Papua New Guinea; Sergio Campusano, Diaguita Huascoalitino Indigenous and agricultural community, Chile; Neville Chappy Williams, Wiradjuri Traditional Owner, Mooka/Kalara United Families, Lake Cowal, Australia; Mark Ekepa, Chairman, Porgera Land Owners Association, Ipili, Papua New Guinea; and Jethro Tulin, Executive Director, Akali Tange Association, Ipili, Papua New Guinea.

The tour also included: Larson Bill, Community Planner, Western Shoshone Defence Project; Sergio Campusano, President of the Tundu Lissu, Human Rights Lawyer, Lawyers Environment Action Team, Tanzania; and Evans Rubara, Norwegian Church Aid Tanzania.



Clockwise from top left: **Neville Chappy Williams**, Wiradjurii Traditional Owner, Lake Cowal, Australia, pondering the gold district in Toronto, Canada; **Sergio Campusano**, President of Diaguita Huascoaltinos, Chile, with Angolan journalist, Sousa Jamba at the Ardoch Algonquin nation, Ardoch, Ontario, Canada; **Neville Chappy Williams** meeting with New Democratic Party members in Ottawa. This meeting included discussions about Canada's lax mining laws around Canadian mining companies operating overseas; **Evan Rubara**, Communications and Media Officer, Norwegian Church Aid Tanzania, addressing a public forum via video skype in Montreal, Canada about Barrick Gold's human rights and environmental abuses at their mining operations in Tanzania; **Larson Bill**, Community Planner, Western Shoshone Defence Project, Nevada, USA speaking to shareholders at Barrick Gold's AGM; **Sergio Campusano** (President of Diaguita Huascoaltinos, Chile) presenting the issue of Barrick Gold on his lands at a NGO roundtable meeting in Ottawa; **Sakura Saunders** and Natalie Lowrey from ProtestBarrick.net, with Indigenous leaders, Neville Chappy Williams and Sergio Campusano, heading to meetings with MPs in Ottawa, Canada; and a gathering with First Nations Peoples, Toronto, Canada.



Fact:
Mining Enterprises
Use 7-10% world energy
Output < 1% world GNP
Jobs < 0.5% world jobs

Source: "El exilio del condor. Hegemonia transnacional en la frontera. El tratado minero entre Chile y Argentina" (OLCA), 2004.



Top left: Mireille LaPointe, Ardoch Algonquin First Nation, Ontario, Canada. The Ardoch Algonquin have been blockading against uranium exploration on their lands. Ardoch Elder, Bob Lovelace was jailed for two months for refusing to stop blockading. Top right: Barbara Stewart-Fisher came out to show her support at Barrick Gold's AGM wearing a "Barrick Gold is Canada's Shame" t-shirt. Barbara has personally experienced the effects of mining as her childhood home in Jamaica was destroyed by a bauxite mine. Below: As part of the "Indigenous Resistance to Barrick Gold" tour, the communities fighting Barrick Gold teamed up with groups from Honduras and Guatemala who had also come to Canada to attend Goldcorp's annual meeting and express their complaints about Goldcorp's operation, as well as Native Leaders within Canada who had been jailed for blockading against mining exploration on their lands.



Australia's Resource Curse – Social Division, Political Capture and Ecological Crisis

James Goodman

Resource abundance in Australia is often presented as an *R*asset, waiting to be exploited. Reflecting this, the recent resource boom is unquestioned – in fact celebrated – as a great windfall for the Australian people. The mining boom has undoubtedly been a key foundation of Australia's recent economic growth. But how far should it be welcomed? This article debates the impact of the resource boom in Australia, arguing we should be questioning whether the presumed blessing is a curse in disguise. In the context of accelerated climate change, and a continuing rural crisis in Australia, it is salutary to be reminded of what Sheik Ahmed Yamani, long-time Oil Minister of Saudi Arabia, said in regard to their major resource asset: "All in all, I wish we had discovered water."

The resource curse

The resource curse may be defined as the socio-economic division, political capture or environmental degradation that results from dependence on extractive industries.. The resource curse thesis did not emerge fully-fledged until the aftermath of the 1970s resource boom, when many of the countries that benefited from high commodity prices simultaneously experienced surprisingly low economic growth rates. Discussion of the issue waned with the depression in commodity prices in the 1980s, but debate has since renewed with the resource boom from the late 1990s.

Three sets of factors are cited. First, socio-economic impacts arise from changing terms of trade, weakened non-resource sectors, income volatility, dominance of foreign-owned resource companies, lack of local linkages and enclave formation in what become sharply dualised societies, divided between locally-affected populations and resource elites. Second there are political aspects stemming from the ready availability of the resource windfall, especially in terms of patronage, clientelism and corruption, along with cross-national inter-state and corporate dynamics that inter-mesh local structures with geo-economic pressures for resource access. Third, there are ecological impacts, which are visited upon living environments in the first instance, but extend far beyond immediate sites of extraction, through the commodity's life cycle.

The debate is not whether these curses exist, but how they can be avoided. Contention over the centrality of external or internal factors is central to the debate, with lead

neoliberal players, including the World Bank, arguing that dependence on mining industries should not in principle be of concern if there is efficient internal governance, including exclusively private players in the extraction industry. Others point to external pressures, especially the role of transnational corporates, global commodity chains, and cross-border corruption.

The Dutch disease

While most discussion of the resource curse focuses on non-industrialised countries, it does reach beyond this category. The main mechanism here is what is referred to as the 'Dutch disease' whereby mining hastens deindustrialisation, with the primary driver being a rising exchange rate that makes the exports from local manufacturing industries less competitive. The term was first used in 1977 by *The Economist* to describe the impact of Dutch dependence on its newly-discovered natural gas reserves, which led to an appreciation in the Guilder, a reduction in manufacturing exports, and accelerated deindustrialisation. The UK experience with the influx of North Sea Oil from 1979 is also cited, where Sterling appreciation contributed to a range of deflationary policies and the decline of UK manufacturing industries.

The reorientation of early industrialisers such as the UK is now paralleled by the experience of later 'Newly Industrialised Countries'. The emergence of China as the world's manufacturing workshop has had a direct effect on late industrialisers in East Asia. Much of the region has greatly increased its resource exports to China, creating a regional resource boom (including Australia which accounts for nearly 40% of China's iron ore imports). But the 'China effect' differs from the earlier Dutch and UK experiences in under-cutting existing labour-intensive manufacturing sectors as well as creating a resource boom. In terms of comparative advantage such transformations may be welcomed as producing a regional restructuring. But in terms of class dynamics the shifts pose a major challenge to livelihoods and living environments, signalling a regional 'race to the bottom'.

Australian contexts

In 2002, there were 57 countries whose exports of fuel and minerals accounted for more than 30% of merchandise

exports. Only three of the 57 were industrialised countries – Australia, Norway and Canada. Given the recent rise in Australia's minerals and fuel exports to account for more than 40% of merchandise exports, we may speculate that Australia now holds a special status even among these three countries.

For some, Australia's anomalous international status – both prosperous and resource dependent – is proof of the potential benefits of resource dependency. The dominant account of the impact of mining on Australia emphasises its beneficial multiplier effects: mining is seen as attracting foreign investment and providing export earnings that supplement domestic savings rates, allowing a long-term deficit in manufacturing trade, and heightened prosperity. The complementarity between mining and prosperity is demonstrated by the Australian experience: for example a 2007 World Bank report specifically cited the Australian experience since the 1970's mining boom as demonstrating that 'expansion of a country's mineral base can go hand-in-hand with economic growth and technological progress'.

Against these optimistic accounts, other assessments of the 1970s minerals boom have emphasised the extent to which mining displaces other activities. In 1976 the economist Bob Gregory predicted the process in Australia would disadvantage non-mining sectors, especially the rural sector. The principal mechanism for this Australian version of the Dutch disease was the exchange rate, which would appreciate with the mining boom, leaving non-mining sectors disadvantaged. The minerals boom was seen as directly undermining Australian efforts to maintain agricultural exports and strengthen its manufacturing. Today, with the onset of a resource boom that in many respects out-booms the 1970s experience, these concerns should be revisited, and updated.

The boom and three curses

Three broad dimensions of the resource curse can be identified – socio-economic, political and ecological. There is evidence of all three in the Australian context: sharpening social divisions due to mining, increased dependence of political elites on mining corporates, and systemic mining-related ecological degradation.

Curse 1: de-industrialisation and social division.

Mining income as a proportion of Australian national income is higher today than at any time since the early Twentieth Century. The recent boom is export-led, with the value of mining exports rising one-third from 2002-07 to more than 40% of the total, twice that of manufacturing exports. By 2006, mining attracted almost one-third of all capital investment (up from sixth in 2004), yet the sector accounted for less than 2% of total employment. The influx of investment has stoked inflationary pressures, driven up the Australian dollar, and

put pressure on interest rates, further damaging the rest of the economy. With mining incomes concentrated in specific enclaves, the spatial impacts are highly uneven. At the local level mining creates sharp divisions between displaced communities and mine operators. Local divisions are replicated at the national level, with sharp divides between mining-dependent and manufacturing-focused states and territories. In Australia's 'two speed' dual economy, mining sets the pace: the tail, as it were, wags the dog.

Curse 2: regulatory capture and 'energy security'.

Government policy during the minerals boom has been deliberately facilitative, and has paid off politically as windfall tax income from the sector has enabled recurring tax cuts, extending the shelf-life of the Howard government. The 1998 Resources Policy Statement affirmed the capture of Australian federal policy by the mining industry, to the detriment of other sectors and subordinates, including mining-affected communities. The Statement set the framework for the up-coming boom, offering an emphasis on certainty in terms of property rights, especially in relation to native title rights, and competitiveness in terms of offering tax incentives, promoting a self-regulatory approach to environmental protection, and acting internationally as an industry deal-maker at bilateral and multilateral contexts. The government used its diplomatic leverage to negotiate regional resource supply agreements, and used military force and police contingents, departmental officers and international aid providers to intervene in mineral-rich neighbours, shoring-up Australian 'energy security'. Meanwhile, the boom created a win-win situation for Australia's privately-owned, low-taxed, oligopolised and transnationalised mining sector, which has retained much of its windfall profit: with the rise in commodity prices, pre-tax mining profit more than doubled yet the total tax-take for minerals and oil and gas actually fell between 2001 and 2006.

Curse 3: ecological degradation and exhaustion.

Finally, and perhaps most importantly, the ecological curses. Extracted mineral and fuel resources are unique in the sense that they cannot be replaced: they are a non-renewable endowment rather than a renewable asset. Once extracted they are lost. The process of extraction necessarily affects current and future generations, whether through its impact on ancestral domain, community patrimony or the global commons. The unique character of mineral resources, and of the living environments in which they are deposited, renders their value incommensurable, effectively priceless. They cannot therefore be reduced to the cash nexus – which can never adequately reflect their value. As one observer has put it,

resource extraction 'goes beyond typical debates over the relative merits of different economic models, reaching to the heart of the long-term viability of life on earth'. For these reasons alone, governments are under a special responsibility to manage mineral resources for the good of the peoples and the environments in which they live. These qualitative aspects of mining are played out in multiple dimensions, but perhaps the most important is the dimension of climate change.

The minerals curse and climate change

The impacts of climate change, predicted for more than three decades, are already rendering existing economic activities unviable. Clear examples are already evident in Australia, and include tourism on the Great Barrier Reef, winter skiing in the Snowy Mountains, and farming communities directly affected by drought and rising temperatures. The booming mining sector is today the principal culprit and, indirectly, the primary beneficiary of climate change.

Domestically, and over the long term, the availability of cheap coal and gas has locked Australia (and regional importers of Australian coal), into carbon-intensive energy production. From 1973 to 2000, emissions per unit of output in the Australian mining and energy sector increased by 3.5%, in contrast with all other sectors which either reduced or stabilised their emissions intensity. Meanwhile, reliance on coal for electricity increased from 48% to 55% of total output, ensuring that the rate of emissions per unit of electricity remained hardly changed in 30 years. In 2003 the government's own research agency, ABARE, investigated the issue and found total greenhouse emissions from fossil fuel combustion had increased at much the same rate as energy consumption levels. Their conclusion – important given the large-scale improvements in energy production technologies over the same 27 year period – was that 'the carbon intensity of energy use was unaffected overall by energy sector developments'.

Any assessment of the overall impact, though, must extend beyond this domestic context. There are, in broad terms, at least three types of mining-related emissions sources. First is the impact associated with the process of extraction and processing. Second is the impact felt through the domestic consumption of minerals and fuels. Third is the impact of greenhouse emissions released as a result of the consumption of energy exports or the upstream processing of exports such as iron ore. This third aspect accounts for the bulk of mining-related emissions, none of which are attributed to Australia. The Australian economy sells increasingly lucrative mining commodities in return for cheap manufactures from the region: in neither respect are the greenhouse emissions associated with the lifecycle of the exported minerals attributed to the Australian economy.

Nonetheless, we can estimate overall mining-related greenhouse emissions. Emissions directly released through

extraction and processing are relatively easily calculated, at 31 million metric tonnes (mmt), or about 5% of Australia's total emissions of 559 mmt in 2005. Emissions directly associated with the burning of fuels for energy in Australia stood at 278 mmt, or 50% of total emissions.

Emissions produced from the offshore burning or processing of Australian minerals – notably coal, iron ore, gas and oil – are harder to calculate. Under the Climate Change Convention greenhouse emissions are attributed to the country of emission, not to the country of extraction, so Australia's 'offshore' emissions are not calculated. Figures can be developed though, for individual commodities such as coal, especially significant as Australia – with 30% of global exports – is the world's largest coal exporter. Estimates of the average ratio for emissions from one tonne of coal vary from 2.4, as calculated by the Australian Greenhouse Office, to 2.1, as estimated by the US Environment Protection Agency. Taking the more optimistic US EPA estimate, Australia's coal exports in 2005 produced 490 mmt of greenhouse emissions. Limiting the estimate to domestic mining and energy, and adding coal exports, the industry produces a total of 780 mmt, or about 140% of the Australian total. We may justifiably say that for the climate, and thus for society as a whole, cheap minerals supply in Australia is truly a curse.

In sum

The resource curse appears to be alive and well in Australia's latest resource boom. Socio-economic dimensions of displacement and de-industrialisation are evident, with socio-spatial divides deepening at local, inter-state and international scales. Likewise, there are powerful political dynamics at play that favour rentier corporate elites, especially through tax minimisation, and encourage concomitant forms of political patronage, along with international rivalries and conflicts. Finally, the Australian resource curse forms part of the broader global 'curse' of climate change, which threatens now to erode the viability of not simply other sectors of the economy but of the entire society. If we are to address these systemic dynamics then we must seriously question the current resource boom.

James Goodman researches global political economy and social movements at the University of Technology Sydney. A longer, referenced version of this article appears in the latest edition of the Journal of Australian Political Economy.

'Sustainable Mining' – Limits to Growth?

Gavin Mudd

There are two traditional views of the sustainability of mining – the 'limits to growth' argument whereby all minerals are finite resources; and the 'industry' view that mineral resources are limited only by exploration, technology, economic markets and social and environmental constraints.

The present global mining boom is bringing this debate to the fore once more. The challenge is to understand all the evidence. Monash University and the Mineral Policy Institute have just published my study on the history of the Australian mining industry – The sustainability of mining in Australia: key production trends and their environmental implications. It is the first study into the long-term trends in the Australian mining industry.

Underlying the industry are several key strategic issues which are gradually causing the environmental footprint of mining to increase, both in total and as the footprint per unit mineral produced. For example, the report shows that:

- continually rising production is placing pressure on numerous economic mineral resources, with exploration increasingly finding it harder to keep pace;
- ore grades (the amount of mineral per tonne of ore) are in terminal decline – meaning that to maintain production rates more rock has to be excavated;
- solid wastes – waste rock (rock with no mineral content) and tailings (processed ore with most of the mineral extracted) – have increased exponentially over the past three decades;
- sustainability reporting is still not complete to facilitate an accurate assessment of the scale of many key issues.

Taking economic resources over time in Australia, there is clear evidence for major periods of mineral discovery and industry expansion. The evaluation and development of the Pilbara iron ore field and the Weipa, Darling Ranges and Gove bauxite mines and associated downstream alumina and aluminium smelting industries from the 1960s into the economic engines they are today are clear examples. Economic copper resources continue to rise consistently as new deposits are discovered and further drilling at known deposits increases remaining resources (e.g. Olympic Dam, Mt Isa). Conversely, for nickel, previously uneconomic nickel laterite resources have now been confirmed as economic due to the development of high pressure acid leach technology for processing extensive but low-grade nickel laterite ores.

Decline in ore grades

The extent over time of known economic resources, therefore, provides strong evidence for gradually increasing resources – demonstrating that mineral resources are not finite but indeed a function of technology, exploration and markets. However, developing these resources is getting increasingly challenging, as mineral deposits are being sought deeper, average ore grades or quality are declining, and more effort is required for every discovery. It is difficult to remain optimistic that these historical trends in economic resources can continue into the future.

The long-term decline in ore grades is perhaps the most challenging aspect for strategic sustainability in the mining industry.

History shows that ongoing exploration, new technology and markets can continue to sustain mineral resources –

Subscribe to Chain Reaction Today!



Subscribe now to make sure you receive every issue of *Chain Reaction*.

Chain Reaction receives no financial support relying on subscriptions, FoE membership and volunteers for its continued existence.

All contributions are greatly appreciated by the *Chain Reaction* editorial team.

Subscriptions:

Four issues: \$A22 (within Australia)
Cheques, etc payable to Chain Reaction.

Subscriptions Enquiries:

Chain Reaction, PO Box 222, Fitzroy, Vic, 3065, Australia.
Ph: +61 (3) 9419 8700, Fax: +61 (3) 9416 2081, Email: foe@foe.org.au

however, the challenge is not only maintaining the supply of new sources but staying on top of the environmental challenges. For many metals or minerals, the easily developed or higher-grade deposits were always mined first. As grades decline, more ore is processed, meaning larger tailings dams, plus larger open cut mines means more waste rock to be managed and rehabilitated. This increasing scale means more energy, water, chemicals and so on.

Waste rock

Although there is good evidence that economic resources for many commodities continue to rise or, at worst, appear to have stabilised, the major shift to open cut mining over the past 50 years has dramatically increased the amount of waste rock produced (or overburden, in coal mining). For many mines and commodities this remains unreported in financial and even sustainability reports. This is critical as waste rock is often the largest solid waste produced by mining, and when containing sulphides it can present a high risk of acid and metalliferous drainage (AMD). In Australia, as elsewhere around the world, there is a major legacy of severe AMD impacts on local streams from abandoned mines or where rehabilitation has not been successful (eg. Mt Lyell, Rum Jungle, Mt Morgan, and many others).

For black coal mining, the total extent of overburden is now approaching two billion cubic metres per year and continues to grow rapidly. For many metal mines, the average ratio of waste rock to ore is at least 1:1 and often as high as 5:1, though individual mines can be significantly higher. The total material movement for the Australian mining industry – including ore / tailings and waste rock / overburden – is now of the order of several billion tonnes per year, and still growing rapidly. This is a major environmental challenge to assess, manage and rehabilitate successfully – and, given the ongoing AMD legacy of numerous old mines, this cannot be taken lightly or viewed too optimistically.

Environmental footprint

To place these primary mining trends in context, additional research has investigated the environmental footprint of mineral production from sustainability reports. In this way, it is possible to relate the environmental footprint to primary production trends such as ore grade and mine scale. For example – how much water, energy, cyanide or greenhouse gas emissions does it take on average to produce a kilogram of gold, a tonne of copper or a tonne of uranium oxide? The results may cause alarm:

- producing 1 t of uranium oxide emits about 27 t tonnes of greenhouse gases and generates 2,400 t of low-level radioactive wastes;
- producing 1 kg of gold requires about 141 kg of cyanide, 691,000 l of water, releases 11.5 t of greenhouse gases and creates 2000 t of tailings and waste rock.

The key outcome is that these various sustainability metrics of mining are clearly sensitive to ore grade – as ore grade declines, the environmental footprint increases, sometimes exponentially. With ore grades in strategic decline this means that the water, energy, chemicals and greenhouse footprint per unit mineral produced will gradually increase in the future. The landmark Australian research is a mirror image of these challenges being faced globally.

Australia can continue to supply minerals for some decades of many commodities. But eventually we would need to find another Pilbara, Mt Isa or Broken Hill. History suggests that this is increasingly unlikely.

The question must be asked – in a carbon or water-constrained world, can we sustain unfettered expansion of mining forever? The answer is clearly no: there are limits. And in this regard we need to be mindful not only of Australia but the global debate about sustainability and mining.

A critical global question is therefore whether the world can sustain continued unfettered expansion of mineral consumption with no rational assessment of its associated environmental footprint. That is, can the world's population sustain the material consumption of Australia, Europe, the US and similar developed economies through mining alone?

If we extrapolate the key mining trends from the past two centuries of Australian mining, by 2050 the mining industry alone could be producing greenhouse gas emissions some 50% of 1990 levels, leaving no room for any other emissions if we adopt a target of 50% of 1990 levels by 2050. With post-Kyoto targets a fundamental global issue at present, this issue cannot be ignored.

This is a monumental and fundamental sustainability challenge for Australia as well as the global community – raising difficult questions of economic, technology, social and environmental policy.

In reality, the current mining boom cannot last forever, though the challenge is not simply a function of the economic tonnage of a particular mineral resource remaining but mainly the environmental constraints which will permit its mining, such as carbon or water.

A real debate about sustainability and mining recognises that the true environmental costs of minerals is already significant and is continuing to boom – a boom that clearly cannot increase unquestioned forever.

'The Sustainability of Mining in Australia: Key Production Trends and their Environmental Implications', is posted at
<<http://civil.eng.monash.edu.au/about/staff/muddpersonal/rr5>>

Gavin Mudd is a lecturer in environmental engineering at Monash University. He has been involved in environmental research and advocacy on mining in Australia for over a decade, specialising in uranium mining, environmental management, brown coal ash and groundwater.



SOME LESSONS FROM HISTORY

Copper:

The early mines of South Australia at Kapunda, Burra, the early periods for the Wallaroo-Moonta field, and the Peak Downs copper mine in Queensland all mined easily-smelted oxidised ores, and Australia's copper industry was based almost entirely on sulphide ores from Wallaroo-Moonta, Mt Lyell, Cobar etc by the 1890s.

Lead-zinc silver:

A similar trend is apparent for lead-zinc silver deposits. The earliest decade at Broken Hill mined and smelted oxidised ores, rapidly moving into sulphide ores. By necessity, flotation technology was developed to separate lead and zinc, and went on to revolutionise the mining industry worldwide. The next major lead-zinc-silver project at Mt Isa in far western Queensland was finer grained and more difficult to smelt but was eventually developed into a major field. Next in line was the 1956 discovery of the McArthur River lead-zinc-silver deposit in the Northern Territory. It was so refractory it took four decades to develop a viable treatment process.

Gold:

The gold sector is also another interesting case study in terms of technology and ore grades. During the 1800s, most gold ore was crushed, and gold extracted by gravity and later through mercury amalgam. The development of cyanide leaching in the late 1800s proved a great leap forward and even allowed the re-processing of old tailings. Major discoveries and fields such as Kalgoorlie quickly took up the technology, which also saved the fledgling gold industry in South Africa. The fixed gold price, combined with rising costs and declining ore grades, eventually caused the demise of the gold industry across Australia. In the 1970s, however, governments freed up the gold price, leading it to jump to \$800/oz. The newly-developed carbon-in-pulp cyanide milling process made low-grade deposits viable, using water of any salinity, and the global gold industry surged from about 1000 t/y in 1980 to averaging 2,550 t/y over the past decade. This has meant a major shift from higher-grade underground mines (>5 g/t) to lower grade open cut mines (~2 g/t). In Australia, the average ore grade in 2005 was about 2 g/t, with known economic resources averaging about 1 g/t. Concurrent with major exploration efforts, economic gold resources in Australia have improved from about 156 t in 1975 to 5225 t in 2005, with a further 5836 t in inferred and marginal resources. For comparison, between 1980 to 2005 Australia produced 5064 t of gold.

A Sustainable, Closed-loop Minerals Industry

Geoff Evans

Image: Barrick Gold's Porgera mine in the Engan Province of Papua New Guinea. The community live on the edge of the mine pit and are facing human rights and environmental issues on a daily basis.

Photo: Techa Beaumont, Mineral Policy Institute, www.mpi.org.au

It is still an oxymoron to talk of sustainable mining no matter how hard the mining industry tries to convince us that it's a champion of sustainable development – meeting today's needs equitably without compromising the health of the planet's ecosystems and their capacity to meet the needs of future generations. The legacy of environmental and human rights abuses of the industry is sufficient testimony. But the fundamental problem is that mining of non-renewable resources is inherently non-sustainable.

Sadly, many environmental and human rights abuses from

the mining industry continue today and are becoming more acute as the minerals 'boom' explodes to feed the demands of rampant consumerism and throw-away society.

Few would deny that minerals play a critical role in societies and minerals have brought great benefits to humanity. But contemporary capitalist economies are like cancers – locked into exponential growth and pushing the planet and human societies beyond the threshold of sustainability.

Applying sustainability principles to minerals use would arrest spiraling minerals consumption growth and the

environmental and human rights of mining. Minerals custodianship rather than mining would become the dominant minerals industry practice.

Consumption of non-renewable resources

By its very nature mining consumes non-renewable resources and diminishes natural capital. Rather than getting less aggressive in its assaults on mining regions current trends indicate that mining is encroaching into more environmentally and socially vulnerable ecosystems and communities – into rainforests, under oceans and into the polar regions.

It is projected that over the next 20 years more minerals will be consumed than over all of previous human history (Sampat, 2003).

Mining and minerals processing already consumes around 10% of the world's energy, and vast quantities of fresh water – a resource that is likely to become increasingly scarce and contested. While technological innovation may make new mineral resources more easily accessible, the environmental impact of mining increases as the exploitation of relatively high-grade, easily-accessible resources inexorably gives way to the exploitation of poorer quality resources. Mudd (2008) notes:

“It typically takes about 700,000 litres of water to produce a single kilogram of gold, leading to 11.5 tonnes of greenhouse emissions. Thus, although evidence suggests that mineral resources could be considered to be more complex than ‘merely finite’, simply repeating this pattern into the future is unlikely to be realistic due to tangible constraints such as water, energy and greenhouse issues.”

Different strategies

Different strategies need to be adopted for different minerals, with inter-generational equity and precautionary principles suggesting limits on what any generation should be entitled to use – at least until such time as technological solutions enable sustainable use to be developed.

Closing the minerals flow from use and disposal to use and re-use is the only way minerals use can approach sustainability. Some minerals – such as iron and steel, aluminium, nickel and copper – lend themselves to a closed-loop system. However, the environmental impacts of recycling and re-use need to be rigorously monitored, especially where lots of materials, such as e-waste, is shipped to countries for recycling where there is poor environmental and occupational health regulation.

Some minerals such as fossil fuels (coal, oil and gas) cannot be recycled and reused. The over-consumption of these resources by current generations defies the inter-generational equity sustainability principle, and therefore their use needs to be dramatically scaled back and their use should be more high-value use with minimal environmental impacts, more likely in chemical processes than burning.

The waste products and use of minerals like uranium and coal are inherently harmful in their environmental and social impacts (e.g. radioactive waste, climate change), and their use is unlikely to ever be sustainable, and therefore reliance on them needs to be phased out.

Eco-equity and curbing consumption

There is not sufficient water and energy to drive infinite minerals use. Besides the limits on ecosystems services that mining comes up against, there is also the issue of equity. Those who consume not just the minerals, but also the water and energy to produce them will only reduce consumption if the costs of water, energy and greenhouse emissions involved in mineral use are internalised into the price of the commodity.

Even then, the rich may well be able to afford to pay, so other consumption limits need to come into play. A disproportionate percentage of the world's resources is consumed by the wealthiest people living in the Global North and by the elite in the Global South. The 15% of the world's population in the Global North consume about 60% of aluminium, 60% of copper, and 50% of steel. The average American consumes 22 kg of aluminium, the average Indian 2 kg and the average African 0.7 kg (CRU International, cited in Sampat, 2003, p.91).

Minerals demand is driven by the unsustainable consumerism of throw-away capitalist society. The unsustainable ‘wants’ of a privileged few are privileged over the sustainable ‘needs’ of everyone.

A ‘contraction-and-convergence’ process in per-capita minerals consumption (similar to that advocated for equity in global per capita greenhouse gas emissions) is needed to achieve inter-generational and intra-generational equity in minerals use.

In the US by 2005, per capita household spending (in inflation-adjusted dollars) was 12 times what it had been in 1929, while per capita spending for durable goods – the big stuff such as cars and appliances – was 32 times higher (Kaplan, 2008). Breaking from the consumerist treadmill would not just benefit the environment but would also mean less work hours and more time for play and building strong caring communities.

Designing for eco-industrial systems

To become sustainable, human economic systems need to emulate nature. In nature, minerals cycle through ecological systems, not polluting but instead becoming the raw material for other components of the system.

Consumers are insulated from the many negative impacts of their purchases by stretching the distance between the different phases of a product's lifecycle from raw material extraction to processing, use, and finally disposal.

Most minerals are used in the built environment – roads, railways, bridges, buildings and vehicles. Construction

accounts for 34% of steel, vehicle building uses about 37% of steel, 33% of aluminium and 27% of copper (Sampat, 2003).

Reducing minerals use in these sectors of the economy requires re-thinking industrial design – from throw-away to eco-design.

Closed loop and eco-industrial design and production systems emulate nature's zero waste. Waste is raw material and food for closed-loop commodity cycles. This shift towards eco-design has been described as the Next Industrial Revolution. The Cradle to Cradle Design espoused by McDonough and Braungart (2007) models human industry on nature's processes. Materials are viewed as nutrients circulating in healthy, safe 'metabolisms'. Industry must protect and enrich ecosystems – nature's biological metabolism – while also maintaining a safe, productive technical metabolism for the high-quality use and circulation of minerals, as well as synthetic and other materials.

In fact, closed-loop production systems offer massive potential savings in energy and water use, and if these ecological services were appropriately priced, financially.

Extended producer responsibility

Recycling processes need to be enforced as part of extended producer responsibility. In 1997 in the United States, 59% of the secondary aluminium was recovered from new scrap and 41% from post-consumer scrap. Yet, during the 1990s, Americans discarded seven million tons of cans – enough aluminium to make 316,000 Boeing 737 airplanes – a fleet 25 times the size of all the world's commercial airlines combined (Farrell et al., 2004).

The transition from mining to minerals avoidance and substitution, reuse and recycling must be driven by a mix of environmental, social and economic obligations on minerals companies to become custodians. In some cases it is economic factors that will drive the transition to a shift from mining to minerals custodianship. Aluminium is a case in point, and this may increasingly become a factor as energy prices rise in a carbon-constrained economy:

"The economic incentives for recycling aluminium are currently more important than environmental considerations. The energy savings in the production of aluminium from scrap can reach as much as 90% in comparison with primary production. Furthermore, the capital cost of a recycling plant is about one tenth of the cost of a smelter complex." (Dzioubinski and Chipman, 1999.)

While market signals are a powerful driver, they are not enough. Government environment, human rights and public and occupational health policies and regulations need to be the main driver of the shift to sustainable minerals use and an ethic of custodianship and responsibility.

There are massive profits in mining because regulations are weak and the real environment, human rights and

public and occupational health costs are not internalised. As pressure is put on mining companies to be accountable these costs of primary minerals will go up. Then there will be incentive to design for re-use, to recycle, and to mine waste dumps rather than go to the far ends of the Earth to access minerals.

Farrell et al. (2004, p.30) note that:

"Clearly, the time has come to reform our 'metals economy,' and we already know what path reform must take. We must fundamentally reform the way we produce metals, find ways to use metals far more efficiently, and to continue using metals that are already in circulation. Some metals mining may always be necessary, but ultimately, our most important extraction operations should take place in scrap yards and recycling centres, rather than in nature reserves and native lands."

Achieving this shift involves challenging the cosy relationships between unaccountable mining corporations, investors, financiers and politicians; curbing the rampant consumerism and growth addiction of capitalist economies; and strengthening local and global peoples movements for human societies and economies based on ecological sustainability and social justice.

It is likely that there will always be some mining, even in a sustainable minerals industry. The scale is likely to be much smaller, replacing minerals 'lost' from the system, and linked with a just transition process to protect mining-dependent communities and workers as the existing industry is scaled down.

References

- Dzioubinski, O. and Chipman, R., 1999, Trends in Consumption and Production: Selected Minerals, DESA Discussion Paper No. 5 of the United Nations Department of Economic and Social Affairs, United Nations, <www.un.org/esa/sustdev/publications/esa99dp5.pdf>.
- Farrell, L., Sampat, P., Sarin, R. and Slack, K., 2004, Mining, Communities and the Environment, Washington DC, Earthworks and Oxfam America.
- Kaplan, J., 2008, The Gospel of Consumption and the better future we left behind, Orion magazine, May/June 2008, <www.orionmagazine.org/index.php/articles/article/2962>.
- McDonough, W. and Braungart, M., 2002, Cradle to Cradle, New York, NY, North Point Press.
- Mudd, G., 2008, Rethinking the Concept of Finite Mineral Resources: Understanding the Future Sustainability Constraints of 'Peak Minerals', Paper for Institute of Australian Geographers Annual Conference, Hobart, June 2008.
- Sampat, P., 2003, Scrapping Mining Dependence. In State of the World 2003. Washington, DC, Worldwatch Institute.

Geoff Evans is an environmental scientist and researcher on transitions to sustainability. He is a former director of the Mineral Policy Institute who now works with Greenpeace on its Climate and Energy campaign and teaches and researches at the University of Newcastle.



Tar Sands and the American Automobile

Tar sands mining in Alberta, Canada. Photo from <http://tothetarsands.ca>

Yves Engler and Bianca Mugenyi

Across the globe, sprawling auto-dependent development is pushing oil extraction into increasingly sensitive environments. Far from the “light sweet crude” of the Niger Delta, the heavy oil trapped in the tar sands of Alberta, Canada is among the filthiest sources in the world.

With up to three-quarters of the final product destined for the US market, tar sands oil extraction has been labelled the most destructive process known to mankind. Viewed from above, the tar sands are as picturesque as a pair of dirty lungs and the stench of tar can be smelt for miles. Amid a tangle of pipes, waste ponds and smoke, an environmental demolition derby of 15-metre, 300-tonne monster trucks roam a wasteland riddled with 60-metre-deep open pits. Gouged out with dinosaur-sized claws, Athabaskan oil is mined, not pumped.

Describing the tar sands as “hideous marvels”, Globe and Mail columnist Jeffrey Simpson writes: “They are terrible to look at, from the air or from the ground. They tear the earth, create polluted mini-lakes called tailing ponds that can be seen from space, spew forth air pollutants such as sulphur dioxide and nitrogen oxide and emit greenhouse gases such as carbon dioxide.”

“They are voracious users of freshwater,” continues Simpson. Extracting the bitumen (crude oil) from the thick and sticky mix of clay, sand and water is no easy feat and for every barrel of oil extracted, somewhere between two and

four-and-a-half times as much water is needed to thin-out the mixture and separate the bitumen from the sand.

To obtain this staggering volume of water, whole streams and rivers in the region have been drained and diverted. We don’t need Erin Brockovich to tell us something is wrong with the water; sucked out for the extraction process and then spat out again, most of it ends up contaminated with acids, mercury and other toxins. This wastewater has left Northern Alberta studded with toxic dumping pools, better known as ‘tailing ponds’.

Not only are the tar sands being blamed for Western Canada’s first ever bout of acid rain, the residues pumped into the Athabasca River have increased cancer rates downstream, particularly among First Nations communities dependent upon the waterway. The history of oil extraction has always been the history of suffering and the tar sands are no exception.

To produce a single barrel of oil, the tar sands extraction process requires two tonnes of sand. In 2003, Alberta’s Environment Ministry reported that 430 sq kms of land had been “disturbed” for the tar sands. By summer 2006, that number had reached 2,000 sq kms, nearly a five-fold increase in three years even though only 2% of the tar sands – now hailed as one of the world’s largest reserves – had been developed.



Photo from <<http://oilsandstruth.org>>

Describing “the rush into the oil sands” a Wall Street Journal analyst writes: “For years, environmentalists have argued that higher gasoline prices would be good for the Earth because paying more at the pump would promote conservation. Instead, higher energy prices have unleashed a bevy of heavy oil projects that will increase emissions of carbon dioxide.” Rather than deter exploration, rising prices have led to increasingly unconventional and hazardous oil exploration exemplified by the Alberta tar sands.

Nuclear-powered tar sands mining

The tremendous energy required to bring the sand to the surface for separation is largely provided by natural gas. Tar sands consume about 14 million cubic metres of natural gas a day, an amount likely to increase to 35 million cubic metres daily by 2016. The process is so inefficient that the natural gas required to produce one barrel of tar sands oil could heat a family home for 2-4 days. This process uses a relatively clean fuel to assist in the production of a dirtier one, prompting oil analyst Matt Simmons to describe the process as turning gold into lead.

With over one hundred billion dollars projected in tar sands investments between 2006 and 2016, the industry is looking for a long-term, cost-effective energy source. High natural gas costs have the tar sands companies thinking big and looking north.

Not everyone is happy about this increasingly sticky situation. “Don’t ruin our land to fuel the US gas tank,”

demanded Grand Chief of the Deh Cho in response to the proposed Mackenzie Valley natural gas pipeline, which, if built, would ship natural gas almost exclusively for use in northern Alberta oil extraction.

The natural gas pipeline seems almost benign compared to some of the ideas being floated by some oil companies who are described in the National Post as “warming to the idea of nuclear power as a source for their massive energy needs.”

This is not the first time nuclear power has been proposed to liberate crude oil from the tar sands. In 1959 California’s Richfield Oil drew up a plan approved by the US Atomic Energy Commission to separate bitumen from sand by detonating a nine-kiloton atomic bomb. It was argued that the heat and energy created by an underground explosion would free the oil from the sand, but after the success of initial tests in Nevada, the idea was shelved due to concern among Canadian officials over the use of the A-bomb.

This article was originally published in The Dominion, issue #48, October 2007 <www.dominionpaper.ca/articles/1472>.

More information on tar sands:

- The Dominion <www.dominionpaper.ca/topics/tar_sands>
- Oil Sands Truth <<http://oilsandstruth.org>>
- Tar Sands Watch <www.tarsandswatch.org>

Yves Engler and Bianca Mugenyi are writing a book tentatively titled ‘Stop Signs: A road trip through the USA’ to explore the culture, politics and economics of the car.’

Undermining Human Rights: The Australian Mining Industry Overseas

Christina Hill

The operations of mining companies, including Australian mining companies, in countries where laws are weak or poorly implemented can and sometimes do have negative consequences for human rights and the environment.

The standards expected of Australian mining companies operating at home do not always translate to their overseas operations. One example of this is Melbourne-based OceanaGold, which is trying to develop a gold and copper mine in Didipio, in the northern Philippines.

Oxfam has a long involvement with the community in Didipio and our Mining Ombudsman has made many visits there to hear community concerns with the way OceanaGold has pursued the development of the mine. While there is some support for the development of the mine, many of the people in Didipio who derive their livelihoods from agriculture – including by growing rice, citrus and vegetables – believe that the proposed mine puts their future at risk.

Through our investigations we have found that the human rights of many people in Didipio, including Indigenous Peoples, have been violated, including:

- forced relocation contrary to the right to an adequate standard of housing;
- harassment and intimidation contrary to the right to life and security; and
- failure to provide accurate information in relation to the project and the manufacture of false approvals of key community representatives contrary to the right to free, prior and informed consent.

A key concern has been OceanaGold's disregard for garnering the free, prior and informed consent of local and Indigenous communities. Obtaining free, prior and informed consent requires that individuals and communities should be informed – in appropriate, accessible language – about projects that might take place on their land. The process ought to include ensuring that those communities are given the opportunity to determine whether or not a project proceeds. Oxfam Australia's Didipio Case Report



Juanita Cut-ing, a women from Didipio, tells of her fears when armed soliders accompanied a mining company representative to her house. Photo: Shanta Martin / Oxfam.

describes how the opportunity for people in Didipio to give or deny their free, prior and informed consent to this project has not been provided.

The situation in Didipio has become increasingly tense in recent months as OceanaGold has begun demolishing residents' houses to make way for the mine's development. A recent court order declared the demolitions illegal. Oxfam Australia is also very concerned about reports that demolition teams are often accompanied by company-employed security personnel wearing military uniforms, which locals believe is a tactic designed to create terror amongst residents. In all likelihood, this has contributed to increasing tensions in the village, which have more recently included the non-fatal shooting of a local man by security guards during demolitions.

Independent complaints mechanism

The conduct of OceanaGold is just one example of poor practice by the Australian mining industry and is why Oxfam Australia is calling for an independent complaints mechanism to provide recourse for overseas communities affected by Australian mining companies.

Through the repatriation of mining profits and taxes, Australian companies, shareholders, financiers and the Australian economy at large receive considerable benefits from mining activities located overseas. Australia should therefore be pro-active in ensuring that these profits

are not gained at the expense of basic human rights standards. An independent complaints mechanism would allow communities to raise their grievances with mining companies and provide a fair process for resolution. A complaints mechanism should have complaints handling, advisory and compliance functions.

There is also interest in grievance mechanisms at the International level. The UN Special Representatives on Business and Human Rights, Professor John Ruggie, has recognised the importance of effective complaints mechanisms in what he terms a framework of 'Protect, Respect and Remedy' – a framework designed to ensure that transnational corporations respect human rights.

In Oxfam Australia's view, the Australian government should establish a complaints mechanism for communities affected by the overseas activities of the Australian mining

industry. Oxfam Australia believes that such a mechanism is a necessary step to ensure better protection of the rights of those whose lives and livelihoods are affected by the Australian mining industry operating abroad.

More information:

- Oxfam Australia <www.oxfam.org.au/campaigns/mining>. The reports section includes papers on the Didipio mine and on informed consent.
- Mine and Communities <www.minesandcommunities.org>
- John Ruggie's report: <www2.ohchr.org/english/bodies/hrcouncil/docs/8session/A-HRC-8-5.doc>.

Christina Hill is the Extractive Industries Advocacy Officer with Oxfam Australia.

Australia's OceanaGold Facing Deep Opposition at Didipio, Philippines

Peter Murphy takes a closer look at OceanaGold's activities in Didipio.

Didipio is an isolated community in the province of Nueva Vizcaya, 200 kms north-east of Manila on the island of Luzon, in the Philippines. The people there are Bugkalot, whose forest lifestyle was destroyed by logging in the 1950s, and Ifugao people who came to cultivate the land there after being displaced by a dam project in Ifugao Province in the 1960s.

The Didipio River is among the headwaters of the great Cagayan River, which provides irrigation not only to local farms but also to vast tracts of rice lands in the provinces of Quirino, Isabela and Cagayan.

In March 2008, Catholic Bishop Ramon Villena of Bayombong, the provincial capital of Nueva Vizcaya, asked President Macapagal-Arroyo to suspend the operations of the Australian mining company OceanaGold following violent incidents related to the company's ongoing demolition of residents' homes.

Bishop Villena, who is also chair of the Regional Development Council for Cagayan Valley, argues that the Didipio mine project does not follow the Arroyo administration's goal of developing Northern Luzon as an agribusiness hub. The farming community is asking why fertile, highly-productive ricelands at Didipio are being gouged out and used as tailings dams. By May 2008, the Provincial Governor, Luisa Cuaresma, was taking part in human blockades of mining equipment moving up the

road to Didipio. Oxfam Australia was vigorously protesting the behaviour of the mining company.

The Didipio mine site – the 'primary impact area' is 425 hectares – is centred on a small but rich gold-copper extrusion called Dinkidi Hill, and there are many other small ore bodies in the valley, all of which are earmarked for 'development'. The mining and processing of the ore will be highly destructive for the ecology.

The project is a flag-bearer for the Australian mining industry and for the Philippines government, because it was the first foreign mining project granted rights under the controversial Philippines Mining Act of 1995, which allows 100% foreign ownership of a mining project. The law was heavily influenced by Australian advisers.

OceanaGold, with its head office in Melbourne, states that mine construction will cost US\$117 million and mining will commence in February 2009. It is still having big problems taking control of all the land it wants – the process is called Surface Rights Acquisition.

Many villagers who opted to sell their land to OceanaGold's predecessor, Climax-Arimco Mining Company, still reside in Didipio today. Some of them acquired other properties within the Didipio project area from the proceeds of their sale.

On Dinkidi Hill itself, some landowners who agreed to sell to Climax had also allowed small scale miners to operate

on their land, and also allowed tenants to build dwellings. OceanaGold has accused these locals of 'bad faith'.

In December 2007, OceanaGold decided to demolish houses it acquired under its Surface Rights Acquisition program. Village officials interviewed by anti-mining activist Bernabe Almirol in January 2008 named at least 17 families whose houses were demolished between the last week of December and the first week of January, many without proper consent.

A cooperative named DESAMA – the Didipio Earth Savers Multi Purpose Association – has represented that part of the community opposed to mining for the past 10 years. In April 2006, the Didipio United Peoples Association (DUPA) was created to marginalise DESAMA. But DUPA now also opposes the company, because of the demolitions. OceanaGold also tried to neutralise the Small Scale Miners Association, but this move failed too.

Leaders of DESAMA own most of the land earmarked for the tailings dam. They rejected the 1.7 million peso (A\$45,945) 'Final Offer of Compensation and Notice of Enforcement of Mining Rights' for this land on March 21, 2007. But the company said it would go ahead with the tailings dam anyway.

On February 23, 2008, the Philippines Daily Inquirer reported that DESAMA members had complained to the Commission on Human Rights that 30 heavily-armed members of the Police Provincial Mobile Group forced the entry of earthmoving equipment onto private land, on behalf of OceanaGold, to demolish more farmers' homes.

Sagittarius Security Agency was contracted by OceanaGold. Its personnel wear military-style black uniforms. On March 22, 2008 – dubbed Black Saturday by DESAMA – a small-scale miner named Emilio Pumihic was shot as he resisted the demolition of three houses at Dinkidi Hill. It is alleged that, while restrained by two Sagittarius security guards, he was shot in the arm by a third. There were about 100

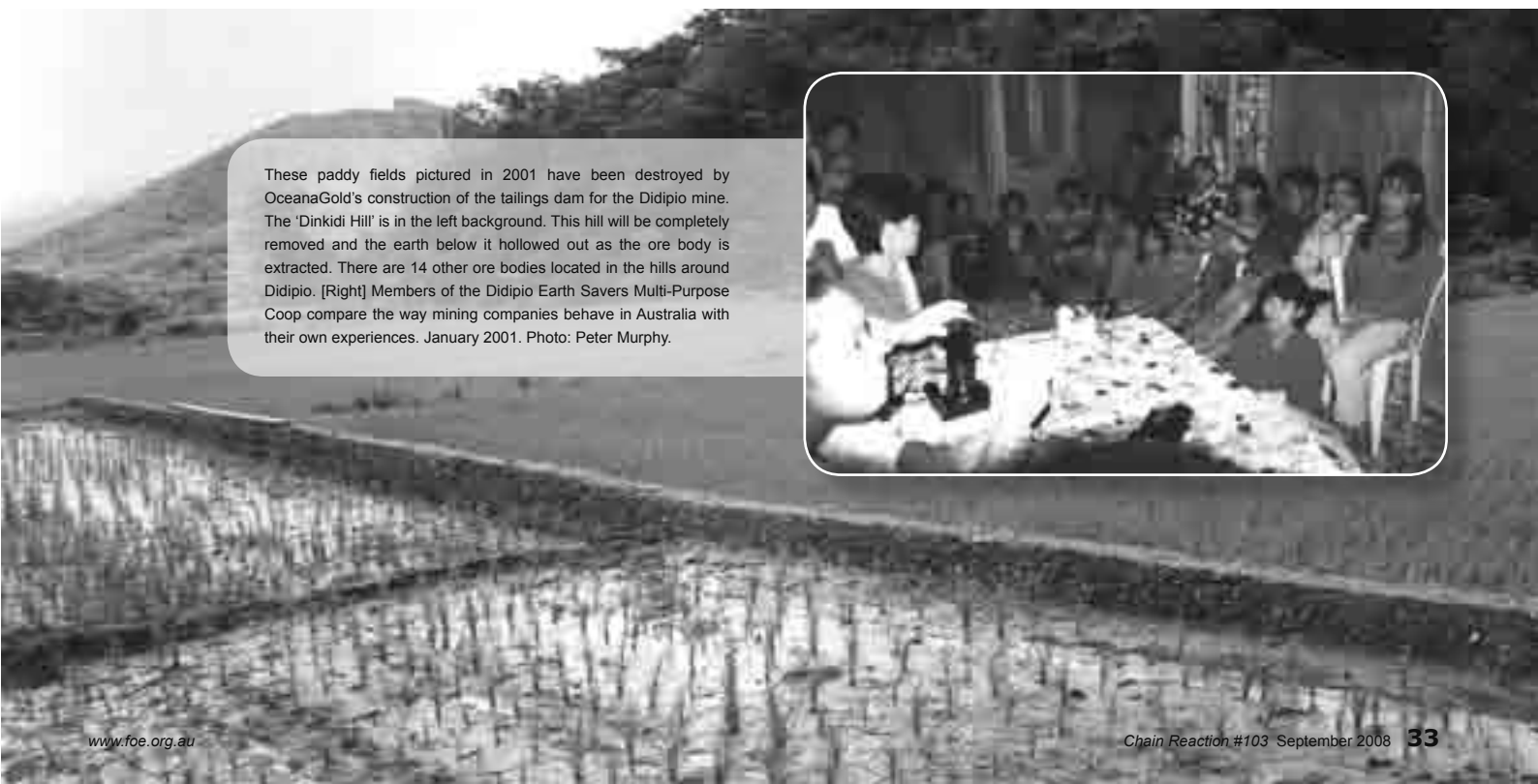
security guards present. Bishop Ramon Villena made a radio appeal about the incident.

The July 10 Philippines Daily Inquirer reported that the Philippines Commission on Human Rights has launched an investigation of OceanaGold. Commission chair Leila de Lima said the company had been accused of forcibly demolishing more than 180 houses owned by the local community. "The issue of development aggression must be fully analysed and the commission will further look into the case and find out how these mining companies affect the human rights of the communities," she said.

Rice prices have almost trebled in the last six months, from 20 to 56 pesos per kg. Didipio villagers express their disgust that good rice land has been turned barren by the bulldozers, and they express real fear that the residents of Didipio could face a rice shortage.

After their displacement in the 1960s, the cash-poor community produced all its food and a surplus at Didipio. The mine, on the other hand, will destroy the community and the ecology. With proper government services, particularly in health and education, and better transport links, Didipio could be an even greater success, and ecologically sustainable for the long term. Instead, it faces a company and a national government bent on its destruction, a national government backed up by the World Bank, the IMF, and unfortunately, by the Australian government's misplaced focus on free trade and liberalised investment.

Peter Murphy is the Secretary of Philippines Australia Union Link, and was part of a fact-finding mission to Didipio in January 2001.

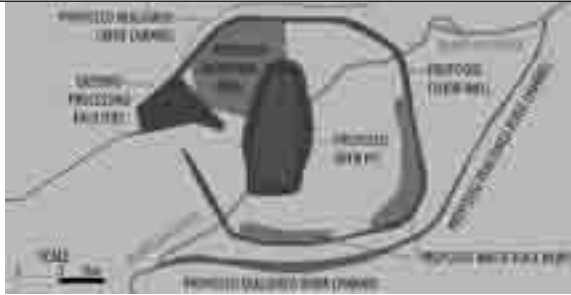


These paddy fields pictured in 2001 have been destroyed by OceanaGold's construction of the tailings dam for the Didipio mine. The 'Dinkidi Hill' is in the left background. This hill will be completely removed and the earth below it hollowed out as the ore body is extracted. There are 14 other ore bodies located in the hills around Didipio. [Right] Members of the Didipio Earth Savers Multi-Purpose Coop compare the way mining companies behave in Australia with their own experiences. January 2001. Photo: Peter Murphy.



The Struggle to Save the McArthur River

Edwina Howell



The McArthur River – the fourth largest river system in the Northern Territory – flows from the Barkly Tableland into the Gulf of Carpentaria past one of the largest mangrove ecosystems in northern Australia. The wetland of the McArthur River region is part of the living ecology of the Gulf region – a region that experiences a monsoonal climate with extreme weather conditions, where floods and droughts are annual events as are cyclones and monsoonal rainfall. Rises in flood levels of the McArthur River of 5-7 metres over 24 hours are not uncommon.

Mining company Xstrata (through a subsidiary, McArthur River Mining) has begun work on an open pit expansion of its underground zinc and lead mine 110 kms south-west of Borroloola – an expansion that will involve diversion of a 5.5 km section of the McArthur River.

Although the McArthur River Mine (MRM) is on Gudanji land, the Yanyuwa also have a significant interest in how the mining operation may affect the river as their country lies downstream from the mine extending out to the Gulf of Carpentaria, and includes the delta regions of the McArthur River and the saltwater limits of the McArthur and Wearyan rivers and the Sir Edward Pellew Islands.

The concern of the Yanyuwa and Gudanji people opposing the expansion is the integrity of the river. This is not simply a concern for the environment, it is a concern for the emotional, spiritual and social cohesion of country. There is concern that pollution of the river as a result of damage to the mine by powerful monsoonal weather will poison the roots of country and cause significant detriment to freshwater sawfish, dugong and sea turtle populations. There is immense concern amongst Yanyuwa and Gudanji peoples opposing the mine that the technology planned for the river diversion is untested.

Malarndirri McCarthy (formerly known as Barbara McCarthy), a Yanyuwa woman and member of the NT Parliament, spoke in Parliament in October 2006 about the concerns of traditional owners who oppose the mine expansion:

“Every day this week, my grandfather, Gordon Larsen, and my brother Harry Larsen, have sung the Kujika of the Rainbow Serpent and how it rests in the McArthur River where the diversion is to take place. They are worried the

Rainbow Serpent will now be cut. Every day my brother, Phillip Timothy, has spoken strongly with my sisters ... my mothers ... my grandmothers Every day they have sat outside of this parliament singing, hoping and praying that the spirituality of our people and the importance of that spirit and relationship to country would be respected here in this House of law.

“We in this Assembly must reciprocate such genuine respect given to us by the indigenous people of the Gulf, by not just listening to their story but in understanding their concerns, for these songs are songs about the river and country surrounding the McArthur River Mine, one of the world’s largest lead and zinc deposits. This kujika sung this week expresses the deep concern the indigenous people of the Gulf region have, not only for the waters of the McArthur, but also the rivers that flow into it, the Carrington and the Crooked Rivers. The rivers that flow out to the sea of the Yanyuwa into the Sir Edward Pellew Group of Islands in the Gulf of Carpentaria.”

Environment Protection Agency report

Former NT mines minister Kon Vatskalis rejected the open cut project on the basis of the Environment Protection Agency’s (EPA) initial Assessment Report. As part of the government’s administrative procedures, Xstrata was then able to submit a Public Environment Review (PER) to address the concerns of the EPA Report. In response, the EPA stated in an August 2006 report:

“In presenting the amended proposal in the PER the proponent has adopted a similar approach to that taken in the previous Environmental Impact Statement and Supplement. That is, rather than taking action to minimise longer term environmental impacts of operations, it proposes to wait to see if impacts occur and then take remedial action. This is not best practice risk management ... nor does it meet the principles underpinning ecologically sustainable development as set out in the Intergovernmental Agreement on the Environment.

“It is recognised that taking a precautionary and best practice risk management approach will potentially raise the level of capital investment required to commence operations.

“Information contained in the PER as well as discussions with representatives of the company indicated that the proponent places a high value on avoiding/deferring such expenditure.”

The EPA's August 2006 report identified that the nine areas of concern which had formed the basis of Vatskalis' rejection had still not been addressed adequately. These areas include concern that:

- the realignment of the McArthur River and Barney and Surprise Creeks may have a negative impact on the aquatic organisms in the area of diversion and flow on effects could cause damage on a broad scale;
- there is significant risk of contaminated seepage entering the regional groundwater due to the inappropriate design of the tailings storage facility;
- that the security held by government for the underground and test pit operations does not take into account what may be necessary to cover costs of remedial action in the case of such seepage;
- Xstrata/MRM's proposes to rely on reactive management techniques when dealing with potential acid drainage from waste rock;
- use of livestock water quality values for determining the risk of polluted runoff is inappropriate and would permit the company to release excessive amounts and loads of water-soluble contaminants into the McArthur River;
- there is the potential for excessive sedimentation or contamination of the river if an embankment, necessary to hold the new river course in place, breaches during monsoonal weather;
- the mine expansion will adversely impact on freshwater sawfish populations (listed as a vulnerable species under the Commonwealth Environment Protection and Biodiversity Convention Act 1999); and
- the mine expansion will have a detrimental impact on groundwater causing subsequent impact to the river including to the Jirrinmini waterhole, one of the few permanent waterholes in the mid and upper section of the McArthur River.

Another concern noted by the EPA was Xstrata's lack of community consultation and its failure to provide a social impact analysis. The EPA noted that although Xstrata has operated the mine for over 10 years, “there appears to be little trust of the company within some parts of the local community.”

Mine proponents have made highly optimistic estimates of the jobs, export revenue and royalties flowing from the mine expansion. However, then Prime Minister John Howard struggled in the face of sharp questioning on ABC radio in October 2006:

ABC: “Most of the workers are flown in for the Territory.

The company is owned overseas. The Territory taxpayers are providing \$100 million in power costs. The company's never paid a cent in royalties in 11 years. What benefit is that to local Territorians?”

HOWARD: “Well we get enormous export income. You ask me what benefit is there for the nation. The reason you would divert the river in an environmentally sustainable fashion would be to allow the expansion, and that will provide not only jobs for people you describe as being flown in but it will also provide employment opportunities both direct and indirect for local people as well. And then on top of that it will provide export income for the country.”

Approval

Despite the concerns of the EPA, traditional owners and environment groups, Chris Natt, who replaced Vatskalis not long after the initial rejection of the proposal, approved the expansion of the mine in October 2006.

Traditional owners challenged the decision. However, Justice Angel's Supreme Court ruling that the NT mining minister's approval of the development was illegal was overridden by the NT Parliament's passing of legislation that retrospectively validated the minister's decision. This legislation was passed in the middle of the night just days before the funeral of a traditional owner who had been a prominent spokesperson for his country in opposition to the mine expansion.

Xstrata had threatened to pull out completely if government approval was not rapid following the court's ruling. It appeared that pressure from the mining company was driving the government's response. News reports also suggested that the NT government feared a voters' backlash from those who saw the decision as anti-development and pro-land rights.

Despite the Federal Court challenge by the traditional owners to the decision of then federal environment minister Ian Campbell to allow the expansion to go ahead, Xstrata began digging the new river course late last year in an attempt to beat the dramatic impact of the wet season.

For more information and to support the campaign to save the McArthur River:

- contact Charles Roche at the Environment Centre Northern Territory ph: (08) 8941 7439, <ecntdaly@iinet.net.au>.
- visit <www.ecnt.org/html/cur_mining_mcarthur_new.html> and send a message to the politicians while your there.
- McArthur River blog: <<http://mcarthurriver.wordpress.com>>
- NT EPA: <www.nt.gov.au/nreta/environment/assessment/register/mcarthur/index.html>
- Xstrata / McArthur River Mining: <www.mcarthurriver.com.au>

Edwina Howell is a PhD candidate in the Department of Anthropology at Monash University, and a tutor in the Centre for Australian Indigenous Studies.

Alcoa in Victoria: Expansion in a Time of Climate Crisis

Lauren Caulfield, Corporate Watch Australia

Mining and aluminium production company Alcoa is seeking to expand its aluminium smelter in Portland, Victoria. This project will massively increase the state's energy consumption and greenhouse emissions.

The expansion was tabled as early as 2003, but last public reports indicate that negotiations concerning the Portland expansion are still underway between the Victorian government and Alcoa. Alcoa is seeking to expand the Portland smelter from a production capacity of 360,000 tonnes per year to 500,000 tonnes.

Alcoa consumes around 20% of Victoria's electricity. The Portland smelter currently emits five times more greenhouse pollution than the industry world average for equivalent aluminium facilities.

Alcoa is interested in expanding both its Portland smelter and the smaller Point Henry smelter. The expansion could necessitate at least one new power station in Victoria to meet Alcoa's energy needs. If the new power station is brown-coal fired, this will significantly increase greenhouse emissions.

Alcoa's energy usage is heavily subsidised by the Victorian government. The Portland and Point Henry smelters pay roughly \$17.50 per MWh below the competitive market price for energy, and the State Electricity Commission of Victoria wipes \$120 million from Alcoa's annual power bill. The expansion itself is likely to be further subsidised in order to entice the company to spend the \$600 million required for the project.

Based on information from the Department of Treasury and Finance and the Victorian Auditor General's Office, Alcoa's 'flexible tariff arrangements' cost the Victorian government an estimated \$200 million each year in the late 1990s. Former Victorian treasurer Alan Stockdale claimed that this "unfairly benefits Alcoa at the expense of other business and household taxpayers in Victoria".

Erin Brockovich leads the WA class action against Alcoa

The proposed Portland expansion comes at the same time as the company faces a class action by nearly 300 Western Australian residents over emissions from its three alumina refineries in the state.

Residents near the refineries in Wagerup, Pinjarra and Kwinana report that their health has been affected by the refineries' emissions.

Their legal challenge against Alcoa will take place in the United States, where it will be spearheaded by renowned US anti-pollution activist Erin Brockovich.

Lawyer Simon Morrison is coordinating the WA component of the action, and says that 280 people have signed retainers so far. This stage is a forum application, and a US judge will rule as to whether the case can proceed there.

Morrison says many residents have detailed the health effects they have experienced: "At the acute phase there are respiratory problems, skin problems, itchy eyes, burning eyes, nose bleeds ... At a more medium level there's organ failures and at the high level there are cancers."

Brockovich has announced that at least two US law firms are primed to pursue Alcoa in the US on behalf of residents surrounding its alumina refineries south of Perth.

In the smelting process, electrolysis is used to split oxygen ions from aluminium oxide to create the aluminium. This process is pollutant-heavy, leading to the creation of various pollutants including gaseous hydrogen fluoride, fluoride particulates, alumina, carbon monoxide, volatile organics and sulfur dioxides. The pollution caused by fluoride and polycyclic aromatic hydrocarbons are "especially damaging to human health in many aluminium smelters".

In order to address the environmental and health concerns about Alcoa's operations and proposed expansion, the Victorian Government can refuse to endorse any expansion to Alcoa's operations based on coal, and implement efficiency requirements to ensure Alcoa's smelters meet world's best practice standards. This may include changes to tariff arrangements to end taxpayer subsidies, and to make sure Alcoa is not protected from future climate change policies such as emissions trading schemes.

Corporate Watch Australia is a new project targeted at monitoring the practices of Australian corporations. Corporate Watch welcomes input, collaboration and news of related campaigns, events and research.

Email <info@corporatewatch.org.au>

web <www.corporatewatch.org.au>.



Mined Your Own Waste Campaign

Dr. Helen Rosenbaum, Mined Your Own Waste Campaigner, Mineral Policy Institute

The Mineral Policy Institute is currently facilitating the Mined Your Own Waste (MYOW) campaign, an international coalition of over 30 organisations calling for the elimination of the dumping of mine waste into waterways.

MYOW is working to influence governments, mining companies and financial institutions to employ safe methods of waste disposal with a particular focus on:

- Supporting the struggles of local communities to stop the disposal of waste into waterways and to exercise their rights of free and prior informed consent over any impacts of mine waste.
- Increasing awareness amongst the general public, decision-makers, financial institutions, and the mining industry of the impacts of the disposal of waste into waterways.
- Promoting the independent scientific analysis of the environmental and public health risks associated with the dumping of waste into waterways.
- Seeking the policy commitment of key stakeholders associated with mining projects to phase out the disposal of mine waste into waterways.

Mine waste in Papua New Guinea

- The **Ok Tedi mine** in Western Province: majority owned for more than 15 years by the big Australian, BHP, has desecrated the once sacred Mt Fublian. For almost 25 years the mine has discharged its metal laden waste directly into the Ok Tedi – Fly River system at about 115 tonnes per minute. It has rendered much of the 1000km Fly River system biologically dead with impacts felt as far away as Indonesia and the Torres Strait. Around 40,000 local people along the Fly and Ok Tedi River are experiencing malnutrition due to the destruction of their food sources. Coastal Papua New Guineans and Torres Strait Islanders may slowly be being poisoned.

- The planned Chino-Australian **Ramu Nickel mine** has been the subject of considerable controversy due to a proposal, developed by its Australian consultants, to dump mine waste into the ocean. Astrolabe Bay supports a thriving tuna fishery as well as innumerable small scale fishers. It is also a centre for PNG's tourism industry. The mine has already destroyed sacred sites of local people.

- Every day the **Tolukuma mine** in Central Province disposes of 430 tonnes tailings into the Angabanga River. Tailings and drainage from the mine introduce heavy metals such as mercury, cadmium, chromium, arsenic, nickel and lead to the waterway. The impacts on the environment and health of local peoples led the world's second largest pension fund, the Norwegian Government Global Fund, to divest from the mine's owner DRD Gold last year. Until last month the mine was majority owned by Emperor Gold, the Australian division of DRD Gold.

- Over its expected 37 year life, the **Lihir mine** on Lihir Island will dump 89 million tonnes of cyanide-contaminated tailings and 330 million tonnes of waste rock into an area of ocean rich in marine biodiversity and seafood resources. Fish kills as far away as Bougainville have been attributed by islanders to the mine. The Chair of Lihir Gold, Ross Garnaut was recently commissioned by the Australia's State and Territory Governments to review climate change policy in Australia, this resulted in the release of the Garnaut Climate Change Review.

- The **Porgera mine** in Enga Province has destroyed the food gardens and alienated the land of the traditional landowners. Deprived of their means of livelihood, local people fossick for gold amongst the mine's operations and waste dumps where they have been shot and killed by the mine's security forces. Villagers living adjacent to toxic mine waste stockpiles are still awaiting relocation. The mine's waste erodes directly into the river system, impacting communities for hundreds of kilometres downstream.

- The **Misima mine**, which closed in 2004, disposed of 50 million tonnes of tailings waste onto a near shore coral reef. It pumped fresh water from the small island's aquifers, depleting the islands drinking water resources.

The Porgera and Misima mines are majority owned by Barrick Gold, the largest gold mining company in the world managed out of its Perth Australia-Pacific Office.

By holding the interests of communities as paramount the Mineral Policy Institute has been able to expose national, regional and international mine waste disasters. This has included exposing the massive cyanide spill by Australian owned mining company Esmeralda in Romania and the release of cyanide pellets into Papua New Guinea's pristine rainforest at the Australian owned, Dome Resources, Tolokuma mine. <www.mpi.org.au>

For more information on the Mined Your Own Waste campaign: <research@mpi.org.au>.

Goro Nickel Mine, New Caledonia

"The cultural and natural values of this region are a priceless jewel that warrant protection and safeguarding, both for the local indigenous people who depend on a healthy environment for both cultural and economic sustenance, and as a treasure for all of humanity. Dumping mine effluent into"

- Techa Beaumont, Executive Director, Mineral Policy Institute

In the pristine coastline of Grand Terre, the main island of New Caledonia, Indigenous Kanak people are adamant that a mine waste pipeline will not pollute their unique coastline, home to whale birthing sites, traditional fishing grounds, and unique geological formations including an underwater 'cathedral', the Prony needle.

Local indigenous populations have previously blockaded the mine road and destroyed company property in efforts to protect their own environments and resources from the company's proposed activities. These efforts to prevent mine waste being dumped into the marine environment were partially successful when Nickel giant Inco-CRVD developed a proposal for on-land containment of its toxic tailings waste. However the mine has continued to dump large volumes of waste-water containing toxic chemicals and at temperatures that will affect the ecology into the marine environment.

The sustained opposition continues in an effort to prevent the Goro Nickel mine from laying the pipeline in the oceans. Local opposition and mobilisation has successfully halted the proposed construction of the pipe, while the provincial administration has indicated its own concern for the proposal by placing a 1% levy on the revenue of the mine for the proposal to use the lagoon.

This culturally and environmentally significant region has been identified for inclusion within a World Heritage nomination lodged by France and scheduled for inscription in a meeting of UNESCO in July this year. The Goro Nickel mine is yet another case study of inadequate mine waste disposal practice. The Mined Your Own Waste Coalition will support the resistance of local communities, like the Kanak People in New Caledonia, by launching the call to ban the dumping of mine waste in oceans, lakes and rivers, and to call on the industry to contain its own waste.



Above: An area where a river has been silted up from ongoing erosion from an abandoned mine in New Caledonia.

Below left: Mother and child at a cultural fair in Canala.

Below right: Community resistance in New Caledonia

Photos: Techa Beaumont, Mineral Policy Institute



Trial Uranium Mining In South Australia

Peter Burdon and Alys Stevens, Friends of the Earth, Adelaide



Under current South Australian legislation, the mining of uranium and the polluting of groundwater is permitted with virtually no assessment of its potential environmental impacts or public consultation. This occurs when a mining company is granted a 'retention lease', allowing it to mine radioactive ores on a 'trial' basis before obtaining a commercial mining lease. Such a gaping legal loophole seriously challenges the SA government's expressed commitment to the "strictest environmental standards" for uranium mining.

Current trial mines use the controversial acid in-situ leach (ISL) method of uranium mining. Acid ISL involves injecting large quantities of sulphuric acid into groundwater

to dissolve uranium present in aquifers. The sulphuric acid solution, containing the dissolved uranium, is pumped back up to the surface, processed, and the mine waste (including radioactive particles and heavy metals) is dumped back into the groundwater. The reinjected toxic and radioactive mine waste is now mobile in the aquifer and capable of spreading to pollute connected groundwater systems.

ISL mines across the world have left a track record of contamination of surrounding groundwater systems, some of which are the main water supply for communities, with attempts to rehabilitate the groundwater often unsuccessful. Some of the European cases include:

- Königstein (Germany): as of 2005, there were still 1,900 million cubic metres of radioactive and heavy metals-contaminated water within the mining zone. This pollution lies within an aquifer that supplies Dresden with drinking water.
- Devladovo (Ukraine): the surface of the site was heavily contaminated from spills, and groundwater contamination is spreading downstream from the site at a speed of 53 m per year. By 1995 it had already travelled a distance of 1.7 kms, and will reach the village of Devladovo in the next 12 years.
- Bolyarovo, Tenevo/Okop, Haskovo (Bulgaria): very high concentrations of sulfate ions are found in surface water and in the wells of private owners as a result of accidental spilling of solution. All uranium mining and milling in Bulgaria was closed down by government decree in 1992, after over 20 square kms of the country was contaminated by uranium industry activity.

ISL trial mining in SA

SA has allowed two ISL mines in the past and each has been plagued with leaks and spills during its 'trial' phase. Six spills were recorded at the Honeymoon trial mine in 1999, including one "excursion" of 9,600 litres of "process fluid", which had a significant uranium and toxic radon gas content, and another in which sulphuric acid injected into the groundwater as part of the mine process unexpectedly travelled upwards, contaminating a higher aquifer. None of these spills were revealed to the public until after the project had been granted state and federal approvals. During the trial at Beverley through 1998, 500 litres of extraction fluid were spilt, the accident not revealed until five months after it occurred. There have been over 20 spills at Beverley, including spills of 15,000 and 62,000 litres of contaminated water in January and May 2002.

The 2003 Senate report into Regulating the Ranger, Jabiluka, Beverley and Honeymoon uranium mines said that "at the very least, [acid ISL mines] should be subject to strict regulation, including prohibition of discharge of radioactive liquid mine waste to groundwater, and ongoing, regular independent monitoring to ensure environmental impacts are minimised". In stark contrast, under current SA legislation, acid ISL 'trials' do not even require an environmental impact assessment.

Oban

A further 'trial' ISL mine, at Oban, 120 kms north-west of Broken Hill, is likely to be approved by the SA government before the end of the year. A retention lease was granted by the SA government in July 2008. In October 2007, Curnamona Energy Limited announced that drilling results confirmed "economic grades of uranium mineralization over at least 3 kilometres, hosted by water saturated sands".

Very little is known about the groundwater of the Oban region. The uranium-bearing aquifer is part of an ancient riverbed, or 'paleochannel', but little is known about where the paleochannel begins or ends, where it discharges or how fast the groundwater flows. In fact, paleochannel systems are some of the least understood elements of Australian ecosystems. While part of the claimed purpose of a 'field trial' may be to improve understanding of an area's groundwater, the treatment of that same groundwater as a nuclear sacrifice zone through the 'trial' process is indefensible.

Australia's own problematic experience with ISL uranium mining (limited to the Beverley mine, and the Honeymoon and Manyingee, WA, 'trials'), combined with the experience of ISL overseas, emphasise the serious risks and impacts of this mining method. That such mining should be permitted in SA on a 'trial' basis, with only token environmental assessment or public consultation, is a grave concern. Friends of the Earth, Adelaide is calling for legislative amendment to the SA Mining Act 1971 to guarantee that full public consultation and environmental assessment occur before any such mining activities occur.

More information on ISL mining:

- WISE, Impacts of Uranium In-situ Leaching, <www.wise-uranium.org/uisl.html>.
- Gavin Mudd <<http://civil.eng.monash.edu.au/about/staff/muddpersonal/>>.
- Senate Select Committee, 2003, Regulating the Ranger, Jabiluka, Beverley and Honeymoon uranium mines, <www.aph.gov.au/senate/committee/ecita_ctte/completed_inquiries/2002-04/uranium/report/index.htm>.

Iluka Pressing Ahead With Zircon Mine

Cat Beaton

Western Australian-based mining company Iluka Resources has finalised and confirmed its plan to build an open-cut zircon mine called Jacinth-Ambrosia in the unique mallee woodlands in the far-west of South Australia.

In June, the \$450 million project entered the 'Definitive Feasibility Stage'. Iluka hopes to mine 300 tonnes of zircon in its first year and continue production over a 10-15 year period.

The Jacinth-Ambrosia site is 200 kms north-west of Ceduna, bordering both the Nullarbor Regional Reserve and the well-known Yellabinna Regional Reserve. This area is unique; its remote nature has so far protected it from development.

In 2005 the South Australian government acknowledged the fragile and unique qualities of the Yellabinna Regional Reserve, protecting half a million hectares as a 'wilderness protection area', the only one of its kind in the state. Now the region is under heavy pressure to 'develop' from both industry and government – a direct result of SA's recent mining boom. Many locals have been left wondering: 'do we have a Conservation Park or a consolation park?'

However, approval has yet to be given by the government, and at this time we urge the public to strongly voice their concerns against this proposed mine.

If approved, the Jacinth-Ambrosia zircon mine will destroy 2,000 hectares of old-growth vegetation, part of the largest stretch of stunted mallee woodland in the world. This vegetation houses many species of native fauna, including the vulnerable Slender-billed Thornbill and the vulnerable Marsupial Mole.

Iluka proposes the removal of 10 billion litres of ancient groundwater per year from the Nullarbor paleochannels. This has the potential to adversely impact on the Karst cave system, stygofauna and marine mammals.

The mine proposal includes 'drying ponds' which are likely to contain toxic or radioactive elements – common by-products of the mineral sands mining process.

The mine could further jeopardise this fragile environment and its basic infrastructure through the

development of roads and camps to facilitate the mine. It could also broaden access for introduced predators such as cats and foxes.

The mine could also jeopardise a significant part of the catchment for Lake Ifould – one of the largest fresh water lakes on the Nullarbor – and could cause significant problems for migratory animals and birds dependent on this desert lake.

There have been many gaps in the information Iluka has provided to the public about the impact of Jacinth-Ambrosia. At the time of the Environmental Impact Assessment, Iluka did not have a completed Rehabilitation Plan or Native Vegetation Management Plan.

Please write a letter, an email, or make a phone call to the following ministers, insisting they scrap the plans for Iluka's Jacinth-Ambrosia zircon mine:

- **Mike Rann. SA Premier. GPO Box 2343, Adelaide SA 5001. Ph (08) 8463 3166. Fax (08) 8463 3168.**

- **Paul Holloway. SA Minister for Mineral Resources Development. GPO Box 2832, Adelaide SA 5001. Ph (08) 8303 2500. Fax (08) 8303 2597.**

- **Gail Gago. SA Minister for Environment and Conservation. Parliament House, Adelaide SA 5000. Ph (08) 8237 9100.**

Email <gago.office@parliament.sa.gov.au>.

- **Martin Ferguson. Minister for Energy and Resources. PO Box 6022, House of Representatives, Parliament House, Canberra ACT 2600. Ph (02) 6277 7930. Fax (02) 6273 0434.**

Email <Martin.Ferguson.MP@aph.gov.au>.

For more information on the great mallee of far-west SA and the campaign to protect it including the rockhole recovery tours, email <westmallee@gmail.com> or phone Breony Carbines 0423 910492 or Cat Beaton 0434 257359. Visit <www.kokathamula.auspics.org.au> for photos, info, events and history.

Victorian Government Approves Dirty 'Clean Coal' Plant

Louise Morris

The HRL 400-megawatt coal-fired power station proposed for Victoria's Latrobe Valley was approved by the Victorian government on July 1. The station is being positioned as the first of a new generation of so-called 'clean coal' power stations in Australia.

The HRL proposal has been beset by construction budget blow-outs from \$500 million to the current estimate of \$750 million. State and federal governments have given \$150 million in taxpayer subsidies to the HRL project.

The coal station was originally to be located near the Latrobe Valley's Loy Yang 'A' coal facility, but on July 1 it was announced that the plant will be located near the Loy Yang 'B' coal station. It is unclear how the location change will affect regulatory issues including environmental assessment.

If built, the HRL station will burn 2.4 million tonnes of brown coal each year, emitting 2.4–2.7 million tonnes of carbon dioxide annually. HRL has been promoted as one of the new generation of so-called 'clean coal' power stations as it will reduce emissions from burning brown coal by 30%, giving it the emissions standards of a black coal

station. This is to be achieved by drying and gasifying the coal. It may be adaptable to carbon capture and storage if this technology is ever proven safe and viable.

The Australian Climate Justice Program and Greenpeace took HRL to the Australian Competition and Consumer Commission in 2007 on the grounds that it is misleading to promote HRL as 'clean coal'. Since the complaint to the ACCC, HRL has not described this specific proposal as 'clean coal' though other supporters continue to use the term.

There is an urgent need for a strong campaign to stop the HRL coal station, to establish a moratorium on all new coal-fired power stations in Australia, and to implement a just transition towards a future powered by renewable energy sources.

*Louise Morris is a FoE Climate Change campaigner based at Friends of the Earth, Melbourne.
<louise.morris@foe.org.au>*

Say no to coal – support FoE's campaign

Friends of the Earth is leading the campaign to halt the HRL coal station in the Latrobe Valley and to bring about a moratorium on all new coal-fired power stations. We need your support. Please access our online campaign tools to stop HRL, become a financial supporter of the HRL campaign and join our campaign. For more information, visit <www.melbourne.foe.org.au> and <www.foe.org.au> or contact Louise Morris, ph. (03) 9419 8700, <louise.morris@foe.org.au>.



YOU CAN'T DIG YOUR WAY
OUT OF CLIMATE CHANGE

TASMANIA'S WILDERNESS BATTLES

Greg Buckman takes up some of the themes in his latest book, *Tasmania's Wilderness Battles: A History*.

At the start of July, 1,000 people crowded into Hobart's Grand Chancellor Hotel to celebrate the twenty-fifth anniversary of what is probably Australia's greatest environmental victory: the saving of the Franklin River.

When the High Court decided to stop the dam planned for the Franklin River, Bob Brown said the campaign would 'send out ripples' for years to come. Indeed it has. It established the federal government's world heritage protection power – that was also used to save the Daintree rainforests in 1987 – and it led to the establishment of the Australian Greens. But the ripples started well before the Franklin campaign and extend well beyond the Greens and world heritage powers.

Tasmania is an Australian microcosm of the great post-industrial revolution clash between humankind and nature. Every part of Australia has its development issues but in Tasmania they are in-your-face. Positive and negative imagery of wilderness abounds in the state. Wilderness sells beer, it sells tourism, its on the island's number plates but you are also forever see log trucks ply its highways and a trip

to the state's western half is a trip through a procession of clearfell coupes, hydro impoundments and mining towns. So it is no coincidence that Tasmania has hosted some of the most high profiled conservation clashes Australia has known. In addition to the Franklin fight, these include the battle over Lake Pedder and the current clash over Gunns' proposed pulpmill.

The origins of the development of Tasmania's wilderness, and the resistance to it by the conservation movement, stretch back to the Great Depression. Back then 27% of the state's workforce was unemployed. After prosperous development throughout the nineteenth century, Tasmania fell into a hole in the 1930s and didn't know how to climb out. The man who seemed to know how to escape was state Labor Party leader, Albert Ogilvie. He proposed a recovery based on development of the state's natural resources. He had a three pronged strategy focused on a big push to hydro-electric development, the opening of the state to large pulp companies and the building of tourist roads to iconic destinations like Cradle Mountain and Mount

Wellington. Tasmanians liked what they heard and Ogilvie became premier in 1934.

Ogilvie kept to his script. Hydro-electric development surged ahead as did expansion of Hobart's energy-hungry zinc works and planning for Australia's first aluminium smelter (set up after the Second World War). Associated Pulp and Paper Mills established the state's first pulp/paper mill at Burnie in 1937 and roads were built to the top of Mount Wellington and the foot of Cradle Mountain.

For a long time Ogilvie's script seemed to work. Employment grew and by the early 1970s the island's unemployment rate was on a par with the national average. But, eventually, the costs of Ogilvie's magic pudding started to reveal themselves. Tasmania came to accrue the highest per-capita government debt levels in the country and, over time, the big electricity users came to shed jobs, not create them. By the early 1980s, the state's unemployment levels were at least 20% above the national average and have stayed there ever since.

But the biggest cost was borne by the island's magnificent wilderness. Wild rivers came to be replaced by monolithic concrete walls holding back sterile lakes. Pristine forested valleys were flattened. The din of cars on mountain roads replaced the music of birds and of trees and of the wind.

The arrival of the pulp and paper industry meant the arrival of industrial-strength forestry and the logging of Tasmania's forests skyrocketed. But it also sparked the state's first significant wilderness battle. In 1943 bushwalker Jessie Luckman attended a cocktail party where she heard the state government was considering giving Australian Newsprint Mills the magnificent tall trees in the Florentine Valley that were then protected in Mount Field National Park. She and others formed the Tasmanian Flora and Fauna Conservation Committee to fight the move. Given that in the 1940s Tasmania was a small, polite society with no history of resisting development, the fight was daunting for the committee. It was a real David-versus-Goliath effort. Despite some parliamentary successes, the fight was lost and the excision of the national park went ahead.

The loss of the mighty Florentine forests wasn't the only disappointment to befall the state's conservation movement. The loss of the stunning Lake Pedder was a bigger body blow. Despite passionate appeals to the hearts and minds of the public (which the 1970s campaigns to save the Great Barrier Reef and Lake Pedder were pioneers of, replacing the previous style of discreet lobbying of politicians), innovative use of media, legal manouvres and intense lobbying of the new Whitlam government, the environment movement got knocked down again.

The Franklin campaign learned many lessons from the Pedder fight and made sure it was better organised, made even better use of the media and went national much earlier than the Pedder campaign had. In many ways the 1983

Franklin victory redeemed the Pedder loss but never made up for it.

Despite the Franklin victory, Tasmanian governments still stick to Ogilvie's formula. Gunns' pulpmill is just a twenty-first century version of his 70 year old formula. Tasmania hasn't moved on. But it needs to. It needs to forever discard its factory-led development mindset and replace it with a thinking based on enjoying, rather than exploiting, wilderness; using brains instead of workshop-floor brawn and celebrating the things that make Tasmania special instead of feeling embarrassed by them. Tasmania needs a modern, sustainable, development ethos and needs to forever exorcise the ghost of Albert Ogilvie.

Greg Buckman worked on the campaign to save the Franklin River as well as on those to save Tasmania's forests. He has been a national finance manager and researcher for the Greens, has authored several books on natural Tasmania and globalisation and is on the advisory board of Chain Reaction.

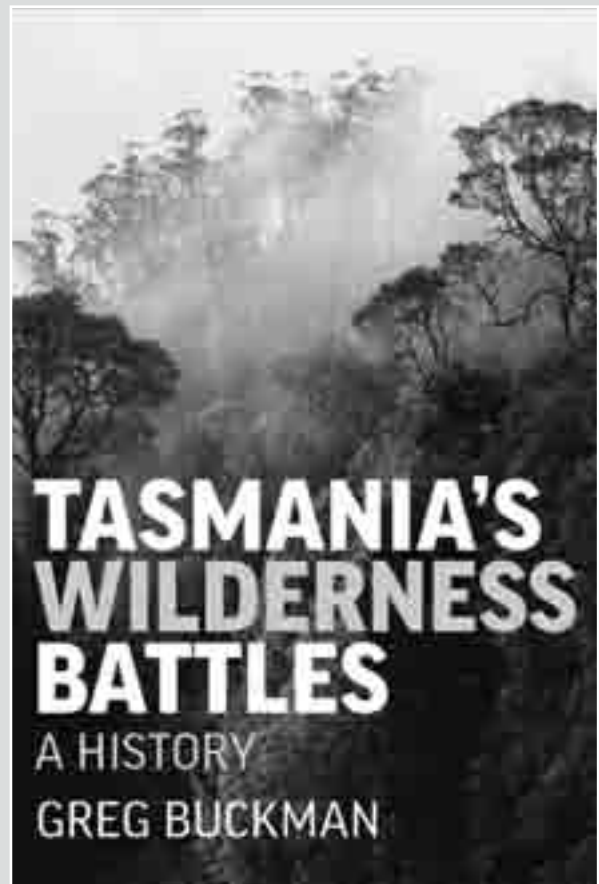
Tasmania's Wilderness Battles: A History

Greg Buckman

Published by Jacana, an imprint of Allen & Unwin

June 2008

RRP \$29.95



STILL WILD, STILL THREATENED

Aidan Hicks pays tribute to forest activists in south-west Tasmania.

While the proposed Gunns pulp mill keeps Tasmania's forests in the media headlines, the ongoing campaign by grassroots groups in the south and west of the state gets much less profile. Yet activists have kept the campaign alive for years on end, in remote and difficult circumstances.

Earlier this year I had the pleasure of visiting the long running forest blockade in the Upper Florentine Valley, one of the many areas in Tasmania threatened by logging. The Upper Florentine Valley is about 100 kms west of Hobart and is surrounded by the mountains of the Tasmanian World Heritage Area. The valley consists of giant trees, rainforest, and a range of wildlife and the area is of cultural heritage significance to both Aboriginal and European cultures. A grassroots community based organisation called 'Still Wild Still Threatened' has been representing the cause for forest protection in the valley.

On the drive out to the protesters' camp the polarised nature of Tasmanian society became immediately evident. On one hand there were the people sleeping suspended 60 metres up a tree – often in the pouring rain - in order to protect it from logging. On the other hand some members of the neighbouring town Maydena were sporting large car stickers with statements as 'Greens cost jobs' or 'Green Scum'.

Arriving at the camp, the first thing that grabbed my attention was the range of techniques used by the group to protect the forest. The blockade was situated on a proposed logging road, and a key goal of the group was to explore all non-violent means to slow down the logging progress. The group had dug huge holes on both sides of the road to

protect the camp from any vehicles approaching, allowing access only by foot. Rope and pole structures also obstructed the road and were attached to tree sits high in the canopy. There was around ten tree sits scattered around the area, where members of the group would sleep, more often than not.

Perhaps the most impressive feature of the camp was the house built in the middle of the road, built out of recycled materials from nearby towns and the immediate area. Considering the limited resources and tools, the group had shown remarkable innovation and problem solving skills to create such a sound structure. As well as providing further barriers to entering trucks, the house further provides a powerful symbolic gesture to the cause by saying that the activists are indeed there to stay.

Members of the group had also begun to revegetate the area that had been cleared for road access with ferns and other small plants, perhaps in an attempt to symbolize the return of the forest, or at the very least create the need for the logging company to clear the road all over again. Either way this form of 'guerrilla gardening' makes for an enjoyable side project for members of the blockade. The group acknowledge that forest protection does not occur through blockades alone and have used a range of measures to further the campaign. This includes community awareness raising, research and data collection, lobbying key decision makers and organising music and arts festivals.

It is difficult to contemplate this pristine place becoming another scarred and burnt portion of land; home to yet another monoculture plantation, void of native wildlife.

- Redirect all public subsidies that encourage the use and production of fossil fuels towards implementing energy efficiency programs, deploying renewable energy and supporting the upgrading of public transport infrastructure.
- Provide renewable energy and energy efficiency expertise, technologies, goods and services to less developed nations to support their transition to the post-carbon world.

Energy security can be achieved in Australia and globally by investing in energy efficiency and renewable energy, with gas as an interim fuel. Rather than locking the Hunter into coal and leaving the region with dinosaur technology as the rest of the world moves on, governments need to decide to make the switch to clean renewable energy in the Hunter Valley and other coal communities.

The switch could provide thousands of new high-paid, skilled, secure, union jobs - Green jobs - while protecting local and global environments. Green-labour alliances can inspire the broad-based community campaigns needed to make the transition to renewable energy a just transition.

References

- Australian Council of Trade Unions (ACTU), 2007, *Principles and Policy on Global Warming: ACTU Position Paper*. Melbourne, Australia: ACTU.
- Bill, A., Welters, R., Rutovitz, J., Evans, G. and Mitchell, W., 2008, *A Just Transition to a Renewable Energy Economy in the Hunter Region, Australia*, Newcastle, Australia, Centre of Full Employment and Equity.
- Binder, M., Janicke, M. and Petschow, U. (Eds.), 2001, *Green Industrial Restructuring: International Case Studies and Theoretic Interpretations*, Berlin, Germany, Springer.
- Canadian Labour Congress, 2000, *Just Transition for Workers During Environmental Change*, <http://canadianlabour.ca/index.php/just_transition>.
- Hamilton, C., 2007, *Scorcher: the dirty politics of climate change*, Melbourne, Australia, Schwartz Publishing.
- Mallon, K., Bourne, G. and Mott, R., 2007, *Climate Solutions: WWF's Vision for 2050*, Gland, Switzerland, World Wildlife Fund. <www.wwf.org.au/publications/gefreport>
- Teske, S., Zervos, A. and Schäfer, O., 2007, *Energy (R)evolution: A Sustainable World Energy Outlook*. Greenpeace International, European Renewable Energy Council. <www.energyblueprint.info/fileadmin/media/documents/energy_revolution.pdf>.
- Teske, S., Vincent, J. & Saddler, H., 2008, *Energy [R]evolution: A Sustainable Australia Energy Outlook*, Amsterdam, The Netherlands, Greenpeace International, European Renewable Energy Council (EREC).

This article was originally published in *Insight*, the magazine of the Centre for Policy Development. <<http://cpd.org.au>>

Geoff Evans is an environmental scientist and researcher on transitions to sustainability. He is a former director of the Mineral Policy Institute who now works with Greenpeace on its Climate and Energy campaign and teaches and researches at the University of Newcastle.

Friends of the Earth invites you to join the ACTIVE FRIENDS PROGRAM

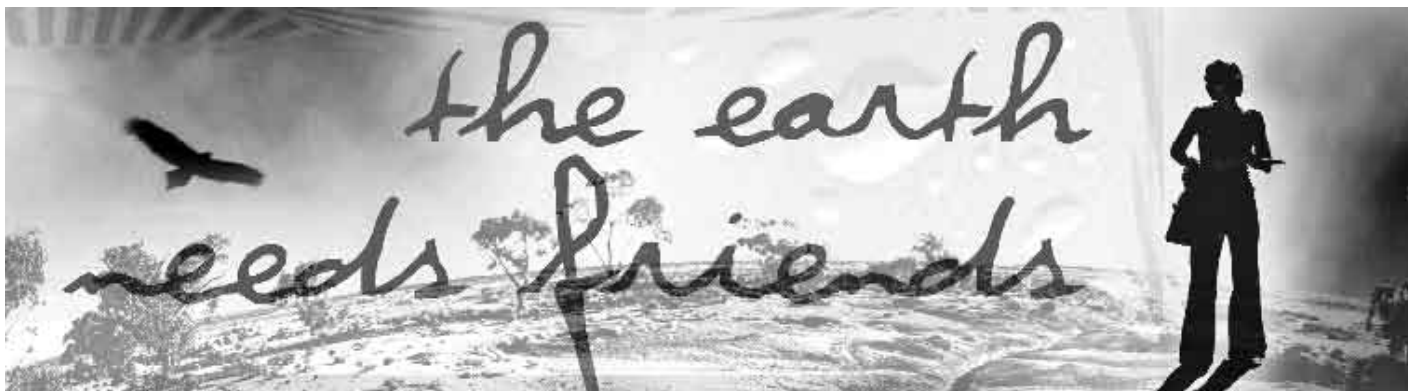
What is the Active Friends Program?
The Active Friends Program is one of the best means to support the current and future work of Friends of the Earth. It involves a regular monthly donation a self-nominated amount.

Where will Active Friends donations go?
Friends of the Earth is renowned for making a little money go a long way. Because our administration costs are always kept to a bare minimum, practically all Active Friends contributions directly support campaign work, publications and community engagement. Active Friends donations will help maintain projects such as the Nuclear Freezones Project, protecting Red Gum forests and assisting climate refugees are recognised and given aid to, to name just a few.

Why is the Active Friends Program vital to FoE?
Friends of the Earth never endorses people, parties or products and does not receive government or corporate sponsorship. To remain a radical and credible voice for social and environmental justice, we need a stable financial base. The Active Friends Program means that Friends of the Earth can engage in long term campaign planning, and quickly and effectively respond to local issues.

How can you join the Active Friends Program?
To join the Active Friends Program, please fill in the 'Active Friends' section on the reverse side of this page and post to: Friends of the Earth, PO Box 222, Fitzroy, 3065. You can cancel this pledge at any time by contacting the FoE office. All Active Friends donations are fully tax deductible.

www.foe.org.au **Friends of the Earth Australia**



You make the difference

Join Friends of the Earth

community ecology solidarity justice



Help ensure FoE remains a vibrant and independent voice for social and environmental justice. You can give your support by:

- Becoming an **Active Friend** by giving monthly tax deductible donations
- Becoming a **Member**
- Giving a one-off donation

Please return to
Friends of the Earth
PO Box 222 Fitzroy 3065

Cheques payable to 'Friends of the Earth'

Name _____ Phone h) _____
 Address _____ mobile _____
 _____ email _____

 _____ PostCode _____

Active Friends

Yes, I would like to make a monthly donation of:

- \$20 per month \$30 per month \$50 per month Other \$ _____ (\$10 min) per month

The donation will be:

- By direct debit from my bank account (this has the least admin fees!) - please fill in "Direct Debit Details" below
- By going to: www.give.org.au - please return this form as well
- By credit card - please fill in the "Credit Card Details" at the bottom of this form

If you would also like to become a member; tick here: \$20 per financial year of your active friends contribution will go towards membership, this is not tax deductible.

Individuals join FoE by joining a local group.
 Please fill out this form and post with your payment to:
 FoE National Liaison, Box 222, Fitzroy, 3065 and it will be
 sent on to your local active group.

Direct Debit Details

I/We _____
(Given name) (Family name)

Request you, and I/We, not be writing to each other because described in the schedule below any amount which Friends of the Earth or any cash or cheque made through our direct debit system. We understand and acknowledge that:

1. The bank and/or institution may in its absolute discretion determine the order priority of payment of its of any moneys due to it to this Request or any authority or mandate.
2. The bank and/or institution may in its discretion at any time by notice in writing to meet & terminate this Request as to future debits.

The schedule (Please print clearly)

Financial Institution _____ BSB Number _____
 Branch Address _____ Account Number _____
 Name or Account _____ Your Signature _____

Membership

OR become a FoE member with a yearly membership payment:

- New Member** **Renewal**
- \$120 **Supporting Member (\$60 tax deductible)**
- \$50 **Waged Person** \$60 **Household**
- \$90 **Organisation** \$30 **Low Income**
- One year** **__ years** **Ongoing (credit card only)**

Donations

OR make a one-off donation

Donation \$ _____ (thank you)
 Donations over \$2.00 are tax deductible

- Please send me information on FoE's bequest program

Credit Card Details

Visa Mastercard Bankcard Card Number: _____
 Card Expiry Date: ____ / ____ Card Name: _____
 Cardholders Signature: _____

Friends of the Earth Australia contacts:

National Liaison Officers

Natalie Lowrey (Melbourne): 0421 226 200
<natalie.lowrey@foe.org.au>

Cam Walker (Melbourne): 0419 338 047
<cam.walker@foe.org.au>

Emma Brindal (Brisbane): 0411 084 727
<emma.brindal@foe.org.au>

National Liaison Office

(03) 9419 8700
Box 222, Fitzroy, Vic, 3065

National website

<www.foe.org.au>

International Liaison Officers

Latin America: Marisol Salinas (Melbourne):
<marisol.salinas@foe.org.au>

Derec Davies (Brisbane):
07 3846 5793 <derec.davies@foe.org.au>

Stephanie Long (Byron Bay)
Email: <stephanie.long@foe.org.au>

National Campaign Reference Group

Derec Davies (Brisbane):
07 3846 5793 <derec.davies@foe.org.au>

National Campaigns & Projects

Climate Justice

Damien Lawson (Melbourne)
<damien.lawson@foe.org.au>

Biofuels

Emma Brindal (Brisbane)
<emma.brindal@foe.org.au>

Environment and Population project

Cam Walker (Melbourne) 0419 338 047
<cam.walker@foe.org.au>

Food and Agriculture

Gyorgy Scrinis
<gyorgy.scrinis@foe.org.au>

Mining

Nat Lowrey (Melbourne) 0421 226 200
<natalie.lowrey@foe.org.au>

Nanotechnology

Georgia Miller (Hobart) 0437 979 402
<georgia.miller@foe.org.au>

Nuclear

Jim Green (Melbourne) ph 03 9419 8700,
0417 318 368 <jim.green@foe.org.au> and
Michaela Stubbs (Melbourne) 0429 136 935
<michaela.stubbs@foe.org.au>

Sustainable Food

Gemma Schuch
<gemma.schuch@foe.org.au>

Transnational corporations

Cam Walker 0419 338 047
<cam.walker@foe.org.au>

Wild Spaces environmental film festival

Web: <www.wildspaces.foe.org.au>
Email: <wildspaces.regionals@foe.org.au>

Local Groups

FoE ADELAIDE

c/o Conservation Centre,
Level 1, 157 Franklin St, Adelaide, SA, 5000
Office: (08) 8227 1399
General enquiries: Kathy Whitta
Email: kathy.whitta@foe.org.au
Mobile: 0408 101 939
Media enquiries: Peter Burdon
Email: peter.burdon@foe.org.au
Mobile: 0439 294 386

BRIDGETOWN GREENBUSHES

FRIENDS OF THE FOREST
PO Box 461, Bridgetown, WA, 6255
Ph (08) 9761 1047
Email: <tomashana@bigpond.com>
Web: <http://members.westnet.com.au/bgff/index.html>

FoE BRISBANE

PO Box 5702, West End, QLD, 4101
Street address:
294 Montague Rd, West End, QLD, 4101
Office: (07) 3846 5793 F
Fax: (07) 3846 4791
Email: <office@brisbane.foe.org.au>
Web: <www.brisbane.foe.org.au>

FoE CENTRAL VICTORIA

C/- Pat Finegan
10 Manning Ave, California Gully, Vic, 3556.
Ph: (03) 5446 3707.
Email: <wilbwiz@hotmail.com>

FoE KURANDA

Di Horsburgh, Secretary,
PO Box 795, Kuranda, QLD, 4881
Ph/Fax (07) 4093 8901
Email: <dianne.horsburgh@bigpond.com>
Web: <www.foekuranda.org>

FoE MELBOURNE

PO Box 222, Fitzroy, 3065.
Street Address-312 Smith st, Collingwood. Ph:
(03) 9419 8700
Fax: (03) 9416 2081
Email: <foe@melbourne.foe.org.au>
Web: <www.melbourne.foe.org.au>

FoE MARYBOROUGH

191 Pallas st, Maryborough, QLD, 4650.
Ph: (07) 4123 1895

FoE STAWELL

c/- Rosalind Byass
PO Box 628, Stawell, 3380, VIC.
Ph: (03) 5358 1125.
Email: <rosbyas@netconnect.com.au>

FoE SOUTHWEST WA

PO Box 6177, South Bunbury, WA, 6230
Joan Jenkins, Ph: (08) 9791 6621
Mobile: 0428 389 087
Email: <foeswa@foe.org.au>

FoE SYDNEY

Postal address:
19 Eve St, Erskineville, NSW, 2043
Adam Wolfenden, 0401 045 536,
<adamwolf@riseup.net>
Holly Creenaune, 0417 682 541,
<holly.creenaune@foe.org.au>

Regional

TASMANIA

Northern Tasmania:
"Shoshin", Lorinna, 7306.
Ph/fax (03) 6363 5171
Email: <lorinna@vision.net.au>

Southern Tasmania

Georgia Miller
Email: <georgia.miller@foe.org.au>

Tas Forests contact

Carol Williams
Email: <cawillia@iinet.net.au>

NORTHERN RIVERS, NSW

Lismore:

Ruth Rosenhek
PO Box 368, North Lismore, 2480.
Ph (02) 66897519
Email: <ruthr@ozemail.com.au>

Byron Bay:

Stephanie Long
Email: <stephanie.long@foe.org.au>

PERTH, WA

Tristy Fairfield
PO Box 37, Maylands, 6009
Ph: 0411 220 704

Affiliate Members

FOOD IRRADIATION WATCH

PO Box 5829, West End, Qld. 4101
Email: <foodirradiationwatch@yahoo.com.au>
Web: <foodirradiationinfo.org>
Robin Taubenfeld, 0411 118 737

KATOOMBA-LEURA

CLIMATE ACTION NOW (CAN)
George Winston
<gwinston@aapt.com.au>

KULCHA JAM (LISMORE)

Techa Beaumont, 0409 318 406

MUKWANO

Supporting health care in organic farming
communities in Uganda. For more info contact
<chainreaction@foe.org.au>

PEDAL AUSTRALIA FOR CLEAN ENERGY (PACE)

<www.pedalaustralia.org.au>

REVERSE GARBAGE

PO Box 5626, West End, QLD, 4101
Phone: (07) 3844 9744
Fax: (07) 3844 6905
Email: <info@reversegarbage.com.au> Web:
<www.reversegarbage.com.au>

RIDE PLANE EARTH

For more information and contact details
<chainreaction@foe.org.au>

SUSTAINABLE ENERGY NOW

contact@sen.asn.au
<www.sen.asn.au>

WEST MALLEE PROTECTION

Cat Beaton 0434 257 359
Breony Carbines 0423 910 492
<westmallee@gmail.com>
<www.kokathamula.auspics.org.au>

INTERNATIONAL INDIGENOUS SOLIDARITY GATHERING

Latin America, Asia and the Pacific



For our LAND, our CULTURE, our SOVEREIGNTY
Protecting our planet, defending our communities!

23RD - 26TH OCTOBER 2008

www.latinlasnet.org/gathering/freedom.html

The Latin American Solidarity Network (LASNET) and Friends of the Earth (FoE) in conjunction with other solidarity organisations will be hosting a gathering for indigenous and non-indigenous activists who are supporting indigenous resistances and struggles.

The Gathering (Encuentro) in Melbourne aims to build bridges of struggle, friendship and collaboration between grassroots activists, indigenous leaders and their communities from Aotearoa (New Zealand), Melanesia, the Pacific Islands, Asia, Latin America, as well as from the Aboriginal and Torres Strait Island Nations of Australia.

Thursday 23rd October - WELCOME (venue TBC)

Friday 24th October - PUBLIC FORUM @ 7pm
Venue: Imiles Hall, Cor Victoria St & Laing St, Carlton, Melbourne

Saturday 25th & Sunday 26th October - CONFERENCE
All day at CERES
8 Lee St, Brunswick East, Melbourne

Building Bridges,
Organising Globally!



 Friends of the Earth

