

Chain Reaction

Friends of the Earth Australia
Number 48 Summer 1986-87 \$2.75



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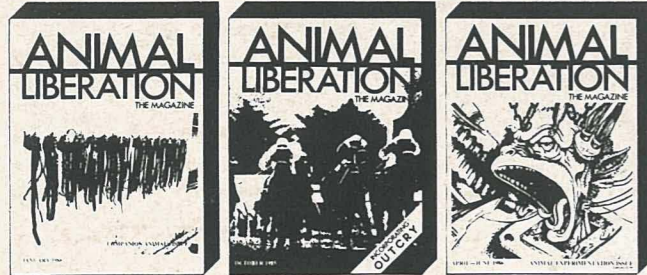
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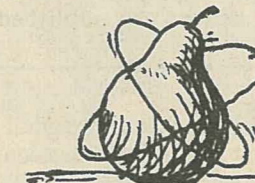
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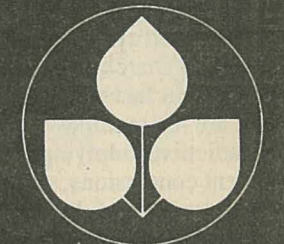
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Cover: Nicole McKinnon

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Contributions to Chain Reaction are invited. Please try to send items typed on one side of the page, double spaced and with wide margins. Keep a copy as we do not have sufficient resources to return manuscripts. These few guidelines help in bringing out the magazine better and faster.

The anarchy debate began in Chain Reaction 45 with 'Marching for Peace', a report from Frieda Black basically supporting the actions of a group of anarchists at the 1986 Palm Sunday rally in Melbourne. A letter in response by Sarah Green opposing those actions was published in Chain Reaction 46.

I notice Sarah puts anarchist in quote marks the first time she uses it and I guess that's her point throughout — that here on Palm Sunday, calling themselves or being seen as anarchist, while doing things that don't seem to have anything to do with 'free co-operation'.

This is an extremely important point for most activists, with implications far beyond anarchism. But it has different faces to it, in that there are seeming contradictions implying different conclusions, and we need to tread carefully. There is the question of people calling themselves anarchist, who are not, and there is the question of people being called anarchist because their enemies wish to isolate and abuse them.

The attacks on the women peace campers recently is an example of this second part. It may seem boring and irrelevant but I really believe that we should all know and understand some of the history of what has been done to anarchists, because it is a process which confronts us with difficult but not insurmountable problems.

In this the Centennial Year of the Haymarket explosion for which anarchists were

blamed and executed, and of the first May Day procession, which was led by anarchists (both events in Chicago, 1886) it's amazing to think just how long-standing is this media distortion correlating anti-authority actions with violence.

Let's be quite clear — the evidence proves that the executed and imprisoned anarchists were innocent and that the Chicago police were running a vice and protection racket, part of which consisted of claiming plots by agitators to build fear and hysteria. This frame-up was used by State authorities and conservative groups right around the world to blunt the militant union movement and force it into the self-constraining, respectable politics of Parliament.

Repeatedly since, the same thing has happened and the victims are always the same — the people who want to struggle around their own lives and make their own decisions about when and where. They want responsibility for themselves and power over their own lives. This takes self-confidence and assertiveness which means they are prepared to fight back if they find injustice or repression.

Basically, self-management in non-hierarchical groups is non-violent. It has to be. But the enemy must be confronted.

The trouble in Melbourne that Sarah Green speaks of arose because anarchists defined for themselves who the enemy was and how and when they were going to respond. Of course, that response came out of the personal backgrounds and psyches of those anarchists and, I would say, was terribly limited, with rather too much of the male herioc because of that.

The wonderful women of Pine Gap, Cockburn Sound and Parliament House lawns also defined for themselves who the enemy was but were much more creative in their response (see Dwayne Campbell's articles in November *Rebel Worker*). They refused to allow their spiral dances and their camp to be shaped by anyone other than themselves.

The real tragedy of much of the anarchist movement, especially in isolated English-speaking Australia, is that the solid achievements of anarchism are simply not known. Anarchists are not perfect, and nowhere has Utopia been created, but as

just one example: the Spanish anarchists controlled huge areas of land in the 1930s and initiated major changes in social justice, industrial organisation and agriculture.

These reforms, many of which would be extremely interesting to *Chain Reaction* readers, were based on the affinity group, joined together in federations, not hierarchies. In this way, the transport system continued to run, the factories continued to turn out buses, machinery and aeroplane engines, and food continued to reach collectivised shops, and the utilities continued to produce water and electricity.

So, I tend to agree with Sarah on this point. Those demonstrators who attacked the pro-Anzus group showed no knowledge of anarchism in what they did. They might have been anarchists, they might not have been. They would have to have done much more positive and constructive things for me to be convinced that they knew anything at all about voluntary co-operation and self-management — for example to undermine the social revolution in Spain.

In this and in other cases the evidence is clear of lies being told about anarchists by people whose centralised form of organisation gives them a greater chance of reaching the public through media, either corrupt or gullible.

▶ continued page 36

Keep Gippsland Green

On Sunday 23 November the East Gippsland Coalition, a grouping of Victoria's major nature conservation organisations, gave the people of Melbourne a chance to publicly express demands for the protection of East Gippsland forests from the ravages of clearfelling and woodchipping. Under the 'Keep Gippsland Green' banner, over 7000 people participated in the biggest ever demonstration over a Victorian conservation issue.

The big crowd reflected the Coalition's work in building an active and visible public base for the campaign to keep Gippsland green. Over the past year public pressure has swung the political debate from one in which the ALP couldn't make up its mind over whether to create any parks at all, to the present state where the issue is the extent of three new national parks in East Gippsland.

From the springboard of the rally and the establishment and strengthening of an activist base in marginal electorates, the Coalition looks forward to pushing the Government further on the issue. In 1987 the campaign aims to protect East Gippsland National Estate forests in national parks and quash Government plans to allow the export woodchip monster into the last of our ancient forests.



Activities at the rally were designed to bring together people and encourage them to join the fight for East Gippsland. The day began with nature rambles in the Botanic Gardens where people were introduced to examples of East Gippsland's unique and diverse plant community, from temperate rainforest to dry, open woodlands. East Gippsland is a natural wonderland of international significance.

After the rambles, people assembled in the Domain to hear Linda Parlane of the East Gippsland coalition, and Bob Brown. They spoke of the global importance of East Gippsland's forests. Bob Brown told the gathering of

the rate of world forest destruction and reminded us that people acting together have, and will, protect the earth. Linda Parlane spoke of the majesty of the forests which include the world's tallest flowering plants. She drew a comparison with the Arts Centre tower (which a few days before gained prominence as a flag-pole for a huge forests banner). The trees of East Gippsland are over three-quarters of the height of this Melbourne landmark.

The procession was led by a giant Tiger Quoll, representative of the animals of East Gippsland threatened by destruction of their forests.

This larger-than-life Quoll was a great hit with the kids and a magnificent symbol of the campaign. The rally's destination was a concert featuring The Flying Emus, Broderick Smith, Paul Kelly, with Coloured Stone and Goanna heading the bill.

The rally and concert sent a powerful message to politicians that they cannot brush aside the demands of conservationists. It was the first shot in a growing movement to 'Keep Gippsland Green'.

Contact the East Gippsland Coalition: Tel: (03) 663 1561. Report by John Stone and Peter Tucker of the East Gippsland Coalition.

EARTH NEWS

BACTERIA AT THREE MILE ISLAND



Algae, yeasts, bacteria and molds are growing so fast in the core of the Three Mile Island Unit-2 reactor that they are hindering clean-up of the reactor which suffered a partial meltdown in 1979. The reactor core is highly radioactive and the micro-organisms are estimated to be receiving doses of hundreds of rems per hour, more than enough to kill most life forms quickly. The micro-organisms are clouding the water in the reactor core making it hard for technicians, working from above, to see what they are doing. Attempts to kill off the organisms with hydrogen-peroxide have only succeeded in clogging filters and adding to the problem; radiation resistant bacteria are also seen as a serious problem in nuclear waste dumps.

Source: WISE, Glen Aplin, Volkstrant

BABY FOOD PROMOTION SCANDAL

The German baby-food company, Milupa, launched a £2 million promotional campaign during summer 1986 to obtain a larger share of the UK market. The company is also distributing 3 million samples and 4 million '10 pence off' coupons to mothers. IBFAN groups in Germany and the UK have vigorously protested against this massive commercial offensive and point out in a letter to the World Health Organisation (WHO) that it is in blatant contradiction of the company's stated intention to stop undermining breastfeeding.

Source: *Consumer Currents*

ROXBY CONTRACT DOUBTS

Western Mining Corporation and British Petroleum Co. of Australia have contracted to sell the Swedish State Power Board 300 tonnes of Roxby Downs uranium per year for ten years. Roxby Downs is due to come on stream in 1988 and this, the first contract signed, will have to be followed by many more if the 2000 tonnes per year production of uranium is not to end up as yet more fodder for the world-wide uranium glut. According to *Nuclear Fuel*, petroleum sources have hinted that the project could be delayed if there aren't enough contracts to warrant start-up.

Source: WISE, Glen Aplin, *Nuclear Fuel*

WEED POISON THREAT

Reafforestation projects in Gippsland's Strzelecki Ranges are polluting local rivers with herbicides and sediments, according to an Environment Protection Authority report. The report says regular spraying of blackberries beside streams could cause herbicide levels in the waterways to exceed permissible maximums and was compiled as a result of complaints from local residents about the water quality of the Albert and Little Albert Rivers in early 1986. The residents had complained that Conservation, Forests and Lands Department spraying of noxious weeds had contaminated their water supply and that high amounts of suspended solids in the water were damaging their pumps. One resident claims herbicides caused the death of trees along riverbanks.

The report says blackberry control spraying beside streams could be expected to cause short-term increases in herbicide levels. It quotes a 1980 report which showed that spraying along the nearby Tara River caused contamination by the poisons 2,4,5-T and amitrole well above permissible levels. Concentrations of 0.05 parts per million of 2,4,5-T and 0.24 ppm of amitrole were found 1 km downstream from sprayed areas; higher concentrations were found closer to the area. The poisons were still being detected 8 km away. The maximum permitted levels of 2,4,5-T and amitrole under the *Victorian Health Act* are 0.02 and 0.01 ppm respectively.

SUPPLY BAN

One of Australia's biggest independent food, grocery and alcohol distributors is considering a ban on supplying South African products to supermarkets. Composite Buyers Ltd, a Victorian-based company with an estimated 7.3 per cent share of the national food distribution market, is expected to discuss the move at its next monthly board meeting. Composite Buyers national marketing manager, Mr Peter Rigbye, stated that anti-apartheid activists had written to several of the group's member supermarkets asking whether they stocked South African products. A spokesperson for the Australian Anti-Apartheid Movement, which has conducted weekly pickets of Coles stores for the past three months, said the group welcomed the Composite move. 'We will be preparing a list of the supermarkets which have agreed not to stock South African goods and urging consumers to shop only at those stores,' she said. 'The positive responses of some of the independent retailers contrasts with the intransigence of the big chains.'

Source: *CARE Newsletter*

One of the main herbicides now used in the area — the water catchment for towns including Foster, Welshpool, Port Albert and Yarram — is Garlon or Triclopyr, an alkanolic acid similar to 2,4,5-T. An EPA report was submitted to the State Forests and Lands Service for comment in July 1986 and no response has been received to date.

Source: *Sun*, 22 November 1986

KAKADU LISTING DELAY

The Federal Government will introduce legislation to prevent mining in the Kakadu National Park following the failure of its High Court bid to clear the way for World Heritage listing of stage two of the park.

The High Court's three most senior judges refused an application by the Government for special leave to appeal against an interim injunction restraining it from supporting the listing of all of stage two. A spokesperson said the Federal Court injunction would allow the Government to support the listing all of stage two, except about 65 square kilometres over which the mining company Peko Wallsend has an interest. But the Government had decided it did not want those areas to be excluded from the listing. Because the World Heritage Committee does not meet again until November 1987, the High Court decision has effectively delayed for a year the Government's attempted listing of stage two. The senior judges said there was 'no evidence that delay would have any detrimental effect'.

However, a Government spokesperson said that the Minister for the Environment, Mr Barry Cohen, would introduce an amendment to the National Parks and *Wildlife Conservation Act* to prevent mining in the park. The Government hopes that the amendment will be passed in the Autumn session.

Source: *Age*

'BLACKMAIL' CAMPAIGN

The Greenpeace conservation organisation has used a bloodthirsty advertisement to force eight international sports shoe companies to stop selling shoes in Britain that are made of kangaroo leather.

Greenpeace claims to have pledges from Adidas, Diadora, Lotto, Mitre Sports, New Balance, Nike, Puma and Tacchini not to sell in Britain shoes with kangaroo-leather uppers from 1987 onwards. But two of the companies — Adidas and Mitre — told the *Weekend Australian* they would return to the British market in 1988 with kangaroo-leather shoes if customers demanded it.



Who'd want to be in their shoes?

The successful campaign used by Greenpeace in Britain may be repeated in the United States and Europe. Greenpeace is determined to stop the slaughter and now has four people in Britain, Australia and North America devoting their time to the issue. In London, Greenpeace

representative Ms Lorraine Thorne said the industry in Australia was 'self-regulatory, cruel and ecologically unsound'. She said the industry was responsible for one of the largest massacres of wild mammals in the world.

Source: *Australian*

PLANT SHUTDOWNS

Two military plutonium plants at the Hanford nuclear reservation in the State of Washington (USA) were shutdown in October 1986 by the Department of Energy. The plants will remain closed until the outcome of an investigation into widespread safety violations which was set up after an incident on 29 September in which rules designed to avoid formation of a critical mass of fissile material were broken. The two plants concerned are the Purex Reprocessing Plant and the Plutonium Metal Finish-

ing or 'Z' plant, which converts plutonium nitrate solution from the Purex plant into metallic plutonium for nuclear weapons. In the 29 September incident workers started to transfer plutonium-bearing solution to a tank where it could have formed a critical mass. Criticality would produce intense radiation and large amounts of heat and could cause an explosion at the least. Five people have been killed in the US in criticality accidents since the 1940s.

Source: *Nature*

WHAT ARE THE ODDS

Until recently scientists said that the chances of a serious accident in a nuclear reactor were one in a million years. With 400 reactors in operation that meant a risk of one in 2500 years. Now, after Chernobyl, Three Mile Island and Windscale, Swedish and West German scientists have recalculated the odds. They say the chances of a serious accident at a nuclear power station are as follows: 75 per cent chance of one in 5.4 years, and 90 per cent chance of one in 20 years.

Source: ABC Radio National *Afternoon*

EARTH NEWS

MONKEY EXPORT BAN



The Philippines has acceded to international pressure to ban the export of all wild primates from their country. The ban will severely affect the traffic in crab-eating macaques (the species used in dental research at the Royal College of Surgeons). Indonesia now remains the only major supplier of this primate.

This decision will severely reduce supplies of primates, particularly for experimental work in the US, and must be greatly welcomed. Letters supporting this action to: Mrs Corazon Aquino, Malacanang Palace, Manila, Philippines.

Source: *Liberator* (UK)

HAZMIN!

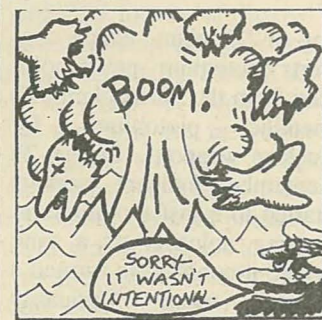
A General Accounting Office (GAO) report has found potentially dangerous soil and groundwater levels of solvents, nitrates, chloride, tritium, strontium, cadmium, selenium, mercury, iodine, arsenic and chromium at eight of nine US Department of Energy facilities which it investigated.

Source: WISE communique

ANIMAL MINE DETECTORS

The US Navy is spending millions of dollars annually studying and training porpoises, dolphins, seals and whales. Navy officials say the studies range from research on how the sleek swimmers see, hear and navigate, to training programs in which they are used to recover objects from great depths and to serve as underwater sentries. However, many of the research programs are classified and hidden from public view.

The Navy conducted a special experiment in the Charleston, South Carolina, harbour in which porpoises were used to detect mines. The test was considered highly successful because the mammals were able to detect about 80 per cent of the mines — a rate that meets or exceeds the Navy's experience with various mechanical devices. The test was part of a program focusing on the use of mammals for undersea surveillance and detection for object-recovery purposes. The source of this information stated, 'They don't try to move them, just find them.'



Lt. Cmdr Pritchard stated that the Navy has successfully trained mammals to recover objects such as practice torpedoes from great depths. Sea lions have dived to depths of 230m to attach

NUCLEAR WIND-DOWN

The British Labour Party is committed to winding down nuclear power. If Britain goes to the polls before the Spring of 1988, as is generally predicted, an incoming Labour administration would mothball two advanced gas-cooled reactors (AGRs) at Torness and Heysham currently close to completion and worth £3.6 billion.

The strategy contains the following points:

- Gradual closure of the old Magnox stations, followed by the newer AGRs.
- Cancellation of Sizewell B if the pressured-water reactor is approved by the present Government.
- Ditching the fast-reactor program and scrapping the plan for a European reprocessing plant for fast-breeder reactors at Dounreay.

recovery lines and whales have been trained under a Cold Water Marine Mammal program to do the same at depths exceeding 300m. The Navy declines to say how many mammals it has on hand now, but says the research and training efforts have involved '106 mammals over the past seven years'.

The research is centered in San Diego at the Navy Ocean Systems Command but studies are often performed elsewhere. An official stated that they had developed an effective system to transport them.

Source: Animal Liberation

- Building new coal-fired stations and beginning a major shift to the exploitation of renewable energy sources.
- Refusing to buy power from French nuclear-power stations via the Channel link.

Reprocessing of Magnox spent fuel will continue at Sellafield while an alternative way of handling the fuel is sought. The thermal oxide reprocessing plant now under construction at Sellafield will be completed, but the £1.5 billion scheme will be turned into an R & D facility for waste management. Dounreay's research activities, meanwhile, will be broadened to include wind, wave and tidal power.

A new report from the Institute of Energy on Energy for the Future criticises the failure of long-term energy policy in Britain. The Institute calls for an energy commission to plot the way forward, independent of party politics.

Source: *New Scientist*

CONFEST

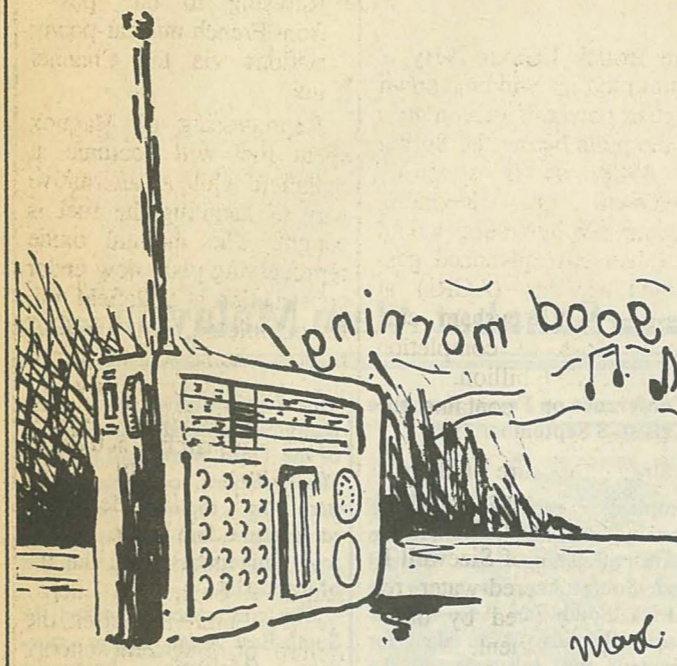
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THE MIND REELED



'China stops broadcasting backwards to USSR.' That is how the BBC's monitoring service reported the 'reversal' of China's 20-year-old policy on broadcasting to the Soviet Union. Since 27 October 1986 Peking Radio has been broadcasting its Russian language bulletins in the way you might expect — front to back — the first syllable spoken being the first one transmitted. But that was a change. Since 1967 the Chinese had been broadcasting up to four of their daily Russian news bulletins backwards. Nobody knew why. Some thought it was originally just a mistake and that for fear of losing face the Chinese never corrected it. Students of Chinese culture saw it as a subtle insult to the Russians.

It seems more likely that backwards broadcasting was a way round Russian jamming. In the mid 1960s China had stepped up its anti-Soviet

broadcasts, but because of Russian jamming the message was not getting through. The backwards broadcasts, however, were left unjammed. Those in the know, such as Russia's professional China-watchers and Peking's own diplomats in Moscow, could tape-record the reverse broadcasts and play the tape backwards to hear a comprehensible version. The Kremlin apparently did not care about these specialists, so long as the masses never heard Mao-Zedong thought. By the early 1980s, as relations improved, China cut its broadcasting to Russia by one-third; the jamming also declined. Then, on 12 October 1986, the Russians ceased their jamming. Two weeks later the backwards broadcasts also stopped. China's propaganda now gets through loud and clear, but wasn't it more fun before?

Source: *The Economist*

BP LEAKS

A number of internal BP documents were made public at a media conference conducted by the *Watching Brief* media team in Melbourne in late October. Several pages of briefing notes and strategy papers reveal details of company and Government operations and negotiations relating to uranium mining in particular.

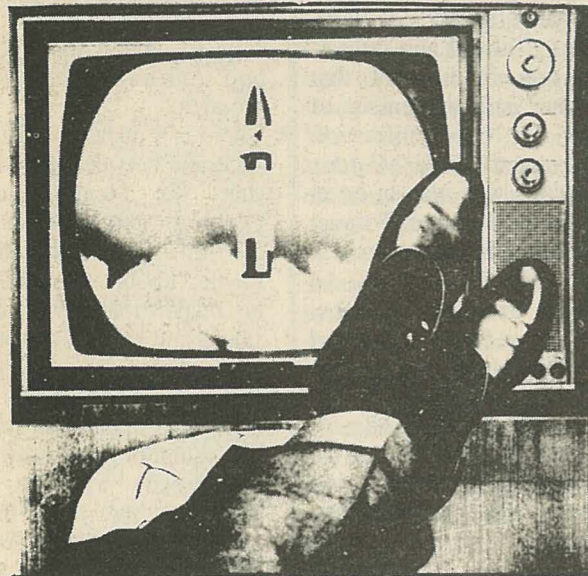
Some of the matters covered include:

- Prospects of sales of uranium to Taiwan and how to get around the fact that Taiwan isn't a member of the Non-Proliferation Agreement. Trade Minister Dawkins was seen to be in favour of the sales. Foreign Minister Hayden surprised everyone by saying he would examine the possibility, and then concluded that it would breach the law and Australia's nuclear safe-guards policy. Senator Gareth Evans, Minister for Resources and Energy, was 'very lukewarm on the matter'.
- Olympic Dam Marketing, which tires to sell uranium from Roxby, has approached the Department of Trade for approval to negotiate sales with France.
- BP is advised that the Commonwealth Government is under strong pressure to extend export licences beyond the three mines allowed at present; the decision to allow sales to France is seen as a forerunner to more mines opening. The debate should hot up and a decision is expected in 1987.

- Dawkins favours a removal of floor prices for uranium and will give special consideration to allowing uranium to be sold for less than the current floor price of \$US31 for some contracts.
- South Australian Premier John Bannon opposes any changes to the original Roxby Indenture Agreement unless there is agreement by all parties involved, or if there were the gravest possible differences between the Government and the Joint Venturers. Bannon has publicly opposed sales of uranium to France but has rejected calls to amend the Indenture Agreement on those grounds.
- There is a dispute in South Australia between the Minister for Health, John Cornwall, and the Minister for Mines and Energy, Ron Payne, about who should be responsible for health, safety and radiation protection legislation at Olympic Dam. Cornwall wants to lower the maximum levels for radiation exposure as he 'doesn't want on his shoulders the forty extra cancer deaths'. The company is backing Ron Payne, who is not supporting any changes and will monitor closely any new schemes from Dr Cornwall.
- The company is advised that 'It is important for BP to be active in community sponsorships, etc., in and around Adelaide in order to ensure community acceptance of BP if the uranium debate heats up in that State.'

Copies of the documents are available to *Chain Reaction* subscribers on request.

DON'T JUST SIT THERE



JOIN FRIENDS OF THE EARTH

Sahabat Alam Malaysia

Conference on Forest Resource Crisis 6-8 September 1986

Tropical rainforests once covered a sizeable portion of the earth, stretching from Central and South America across to Africa, South-East Asia and the Pacific Islands. Once taken for granted, the existence of the tropical rainforest is today at a point of crisis.

Nowhere has forest destruction taken place at a more frightening pace than in the Asia-Pacific region. In 1979, Malaysia and Indonesia alone accounted for 58 per cent of the total world production of hardwood logs and 75 per cent of all hardwood log exports. The share of forests to total land area fell in the Philippines from 60 per cent in 1960 to 27 per cent in 1985, in Thailand from 53 per cent in 1961 to 29 per cent in 1985. It is clear that much of the forests of tropical Asia will be gone forever by the first or second decade of the next century unless some very drastic steps are taken to reverse the current trend. Since rainforest resources are almost entirely situated in the Third World, their destruction has grave implications concerning the development prospects of those countries.

It is urgent that this rainforest resource crisis be brought to the world's attention. The conference in Penang, Malaysia, brought together from 23 coun-

tries' representatives from active non-governmental organisations of the Third World and industrialised nations, concerned planners in regional agencies, researchers and educationalists from universities, and members of the media.

The conference identified the South-East Asian insular countries (Malaysia, Indonesia, Brunei and the Philippines) as the region where tropical deforestation is highest in the world today, the main cause being commercial logging. In Central America huge tracts of rainforest are being cleared for cattle grazing in order to feed the hamburger demands of North America. Large-scale mining and construction of huge hydro-electric dams also pose a threat to the Amazon.

Reports from various Third World participants revealed critical situations exist in their respective countries. The common factor was rapid deforestation leading to drastic ecological consequences, signs of which are already evident. Experts at the conference warned of topsoil erosion, destruction of catchment areas, and the disruption of the hydrological cycle which could lead to world climatic changes.

A number of participants emphasised the plight of tribal peoples whose lands and homes were being taken over by timber companies and projects. Such people who directly depend on the tropical rainforest number about 200 million world wide. Destruction of the tropical

rainforest will destroy their livelihood and culture.

For countries which rely on timber revenue for development funding, unchecked deforestation will also threaten that source of revenue. It has happened to Thailand already: once an exporter of valuable tropical timbers, today it is an importer. The demise of the timber industry naturally results in unemployment. In Malaysia, where timber production is now controlled due to forest depletion, employment in the industry has dropped from just under 95,000 in 1983 to just over 73,000 in 1985.

The conference brought to participants' attention the fact that tracts of vulnerable forests are being destroyed for the construction of houses which are a symbol of prestige. Much tropical wood is being used for sustaining luxury consumer lifestyles in industrialised nations, with exotic furniture and disposable chopsticks being two examples.

Participants at the conference exchanged valuable information and experiences. Activist groups in the industrialised nations related campaigns for alerting their communities to the effects of their lifestyle on Third World forests and tribal peoples. Strategies for lobbying governments and institutions involved in projects causing deforestation were also discussed. Individuals and groups from the Third World related their efforts in persuading their respective governments of



the need to curtail deforestation in order to avoid ecological and economic crisis.

The conference ended with the formation of a World Rainforest Network (WRN) to link groups and individuals involved in the effort to save the tropical rainforests. In Australia, the contact is the Rainforest Information Centre, 7 Wetherspoon St, North Lismore, NSW 2480. This centre will act as the co-ordinator for Australia and New Zealand in what will be a concerted, worldwide campaign. It is hoped that the WRN will be able to get observer status at the first conference of the International Tropical Timber Organisation (ITTO) in Japan in 1987. The WRN also plans to lobby ITTO members to adopt a code of conduct for sustainable forest management and to set up a fund to protect areas of rainforest.

For further information contact the Rainforest Information Centre, 7 Wetherspoon St, Lismore North, NSW 2480.

Papua New Guinea

In September 1985 FOE PNG was at an all-time high. Our nuclear-free Pacific working group organised a month of films culminating in a panel discussion during April-May 1985. In August, further shows and poster displays were held for Hiroshima and Nagasaki Days.

It is from this point that something of a downward turn began when several of our very active core members left PNG either permanently or for extended periods. However, we are glad to report that we are redeemed by some encouraging developments concerning FOE PNG's first-ever project—the Gogol woodchipping operation in Madang province.

This is the largest logging operation in Papua New Guinea and the first on this scale in the tropics that utilises mixed tropical tree species for woodchip production. Between 1973 and 1983 a total of 3-400 hectares has been cleared. Eighty-seven per cent of the cleared forest has degenerated to secondary regrowth and grasslands, while only a small area has been redeveloped for re-forestation and agroforestry.

FOE PNG took an interest in this operation and in particular its effects on the lives of the Gogol people from its earliest days. Our former secretary, Nola Stewart, visited the area three times. Through Nola's efforts we were able to get funds from UNESCO for a tree-planting project in the area.

Early this year we learned that we had been granted \$US10000 for the project; we have received the first instalment of \$5000. We were then faced with the problem of how to make practical arrangements for spending the money. Nola had been in cor-

respondence with one of the village leaders to find out what sort of trees they would like to plant. They favoured cash crops. While from our point of view this is not quite ideal, our objective is to assist the people of Gogol. The forest on which they had depended for all their needs was gone.

The promised development project had not materialised nor had anything like the expected volume of re-forestation. Also, forest trees would be planted along with the cash crops.

With the invaluable assistance of Dr Simon Saulei of the University of Papua New Guinea in liaising with the villagers and forest officials, we have now reached the point of being able to place our first order of cocoa seeds. This initial order is by way of a pilot project and will account for less than \$1000 of the money. When we are able to assess the success or otherwise of the project we will go ahead and commit more money. We feel very optimistic about the project.

In general, our immediate plans are for an all-out recruitment effort. While the financial support of our members is important, what we need most is people prepared to give the time and effort. We need to attract the support of many Papua New Guineans.

We also hope to have a much greater input in future to the FOE International Tropical Rainforests Campaign. One of our members, Thomas Ortlaf, has offered to act as co-ordinator on this campaign. He has a special interest in forests, particularly the huge Vanimo Timber operation in the north-west corner of PNG.

From a report for the FOE International Conference 1986

★ **AUSTRALIAN CAPITAL TERRITORY**

CANBERRA: PO Box 1875, Canberra, ACT 2601

★ **NEW SOUTH WALES**

BLUE MOUNTAINS: c/- 156 Megalong St, Leura, NSW 2780

MACQUARIE UNIVERSITY: c/- SRC, Union Building, Macquarie University, North Ryde, NSW 2113

NEWTOWN: PO Box 169, Newtown, NSW 2042, Tel: (02) 517 2139

RYDE: 18 Kokoda St, North Ryde, NSW 2113, Tel: (02) 88 2429

SYDNEY: 787 George St, Sydney, NSW 2000, Tel: (02) 211 3953

UNIVERSITY OF NEW ENGLAND: c/- SRC, University of New England, Armidale, NSW 2351

UNIVERSITY OF SYDNEY: PO Box 364, Wentworth Building, University of Sydney, NSW 2006

★ **NORTHERN TERRITORY**

DARWIN: PO Box 2120, Darwin, NT 5794, Tel: (089) 81 6222

★ **SOUTH AUSTRALIA**

ADELAIDE: 120 Wakefield St, Adelaide, SA 5000

ADELAIDE UNIVERSITY: c/- Clubs Association, Adelaide University, 5000, Tel: (08) 228 5852

WILLUNGA: PO Box 438, Willunga, SA 5172

WILLIAMSTOWN: c/- Willunga FOE above.

★ **VICTORIA**

COLLINGWOOD: 366 Smith St, Collingwood, Vic 3066, Tel (03) 419 8700

OAKLEIGH: 69 Waratah St, South Oakleigh, Vic 3166

ORGANIC FRUIT AND VEGETABLE COOPERATIVE: 408 Smith St, Collingwood, Vic 3066, Tel: (03) 419 9926

PENINSULAR: PO Box 319, Seaford, Vic 3198

Action on Pine Gap

At Pine Gap

People for a Non-Violent Future an informal collective centred in Alice Springs.

Sunday, 19 October 1986 was the date from which the Australian Government may give the United States twelve months written notice to quit the joint facility at Pine Gap. People have been working for a long time to bring pressure on the Government and to turn public opinion to close the base. We felt we had done enough through the channels and found standing at the gates being talked at through a PA and then going home disempowering and, in this case, ineffective.

We talked about what we could do and our action began to take shape, solidifying out of our ideas of non-violence, personal responsibility and participation, and how we see the issue of the existence of the bases like Pine Gap. The action was to be a clear statement of our feelings about the base, having the positive element of an alternative use of the land; it serves as an example or inspiration for how people can change our world if only they will act to do so. As important as any of these, it was

to be personally empowering and fun.

Fun it was, and hard work. We walked through the night up and down ridges, along sandy creek-beds, through endless prickles, pausing more and more frequently for chocolate and toilet stops, until dawn brought us to within a few hundred metres of the domes. Four of us had tools to dismantle the base, the first task being to cut the two perimeter fences separating us from the domes and then to work on whatever we could find. The eight of us ran the last few hundred metres feeling both the tiredness of our all-night effort and the adrenalin of excitement. There was little time to do anything much as a patrol car saw us just after we began to run and it sped over to stop us. Its two occupants could do little more than hold one dismantler who was busy trying to get through the fence, while the rest of us abandoned our dismantling role and turned to the alternative aspect of our action-construction. The tiny, green,

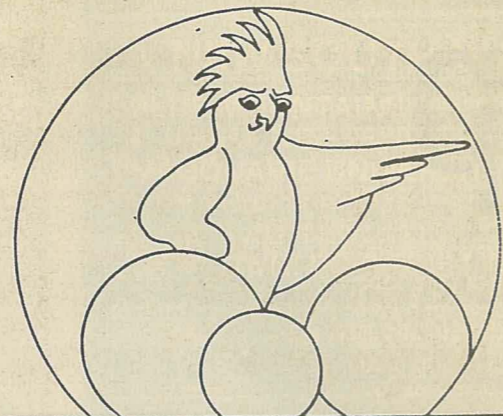
two-person tent was thrown out on the grass (prickles?) about 10 metres from the fence and domes and was soon occupied by six people, myself having joined the apprehended dismantler in keeping the Protective Services people company. We had decided on a buddy system before the action so no person was to be arrested alone. It was a wonderful sight—a small, green tent full of lively, loving people next to the huge white domes and security fences of this part of America's war machine. State and Federal Police and Protective Services reinforcements arrived and, after the six in the tent refused to be evicted, they rolled the tent over and slashed and tore it open, dragging the occupants to the paddy wagon, using painful holds on some people. We watched the sun climb above the horizon from the back of the wagon, comforting each other and sharing the elation of our successful action.

As a way of feeling strong in the hands of the police we had decided to remain silent; each of us presented an individually written and decorated card with the legally required name and address and

date of birth which experience has shown is often requested quite forcefully. The cards also said we were exercising our right to remain silent. We were all photographed and fingerprinted, the police having informed us they are allowed to use force. Their unwarranted violence during our arrests showed us they would enjoy another opportunity to hurt us so it was pretty pointless to resist in that situation. We were held for about six hours which gave us all the chance of a bit of welcome sleep, even in the depressing environment of the watchhouse. We all felt that our silence gave us a sense of solidarity and strength and also gave the police less information to be used against us either in court or in keeping us under control generally.

Very soon after our action we were happy to hear that independent actions at Caharlah in Queensland and Richmond Airforce Base in NSW followed the lines of being peaceful reclamations of the land, with vegetables being planted and chairs, a TV set, washing and a painted banner of a house being carried in. Three arrests occurred at each of these actions.

Women for Survival Peace Camp, Canberra



CLOSE PINE GAP

If you relied on TV news for information you could be forgiven for thinking that the Women for Survival Camp in Canberra began the day a woman kicked a reporter. In fact we had been camped outside Parliament House for a week by then. And if you believed everything you read in the papers, you might well think that women spent their time in Canberra pissing at politicians' feet and assaulting Senators and photographers! In an effort to balance the distorted media coverage of the women's camp, I'd like to share with you some of the actions and hopefully convey some of the spirit of the camp.

Women camped on the lawns outside Parliament House for two weeks from 13 October 1986. Parliament began sitting on Tuesday 14 October, and politicians arriving at the airport and at Parliament were greeted by groups of women singing songs for peace and chanting 'Close Pine Gap'. Chanting, banner-waving women on the steps of Parliament House were a recurrent presence

throughout the camp, especially as politicians arrived each day.

World Food Day fell on Thursday 16 October and we performed a wonderful piece of theatre outside Parliament, expressing our opposition to the proposed Plant Variety Rights legislation, to the irradiation of food and to the current exploitation and impoverishment of Third World countries by the rich countries, especially focusing on the insane extravagance of the arms race while people starve. This piece was so good we took it to perform in the mall in Canberra the same day. As well, a discussion on these issues was held back at the camp with Senators Janet Powell and Jo Vallentine and Penny Lee from the Australian Council for Overseas Aid.

About 200 women were camped there in the first week, and at the weekend hundreds of women poured in from local areas and interstate by car and off planes, trains and buses, the excitement growing with the numbers. On Friday night there was a 'Reclaim the Night'

march, one of the most thrilling I've ever been in, as hundreds of black-clad women bearing flaming torches strode up the centre of town, chanting and singing and finally dancing in the mall.

Sunday was the big day — 19 October — the date from which the lease on Pine Gap can be terminated with one year's notice. We set off on foot to the US Embassy, a sea of colour and sound, with all our banners, music and songs. One of the joys of Canberra for demonstrators is that everything is there, so on our way through the embassy belt we cheered New Zealand for its anti-nuclear stand, and hissed South Africa, calling for an end to apartheid and freedom for Azanian people.

At the US Embassy, we sang: angry chants calling for the end of foreign military use of this country, beautiful melodies expressing our love for the earth, songs of determination and hope. A woman shared a poem she had written about birth and war and the love of life; women cried and raged, and we delivered a

'Notice to Quit'. Then it was off to the Lodge, where Bob was at home, to call for the termination of the Pine Gap lease and keep up the protest against uranium mining and export.

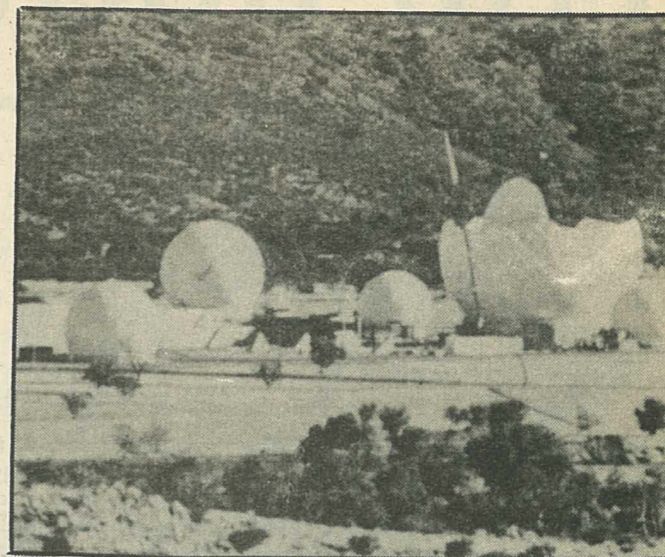
At midday we were back at Parliament for the Spiral Dance. A thousand women linked hands and encircled the House — what a thrill it was to know that we had reached all the way round, despite initial attempts by the police to prevent us. Our police liaison collective did a great job! Energy was high, and we spiral-danced around the Parliament and in the street for an hour or more, to the beat of the drums, women weaving in and out of the fluid, ever-connected spiral; such a contrast to the stark, rigid box of Parliament House.

The Pine Gap lease date is also Maralinga Day and in the afternoon Women for Survival, led by Aboriginal women, marched to the British High Commission to express anger and outrage at the explosion of atomic bombs on Maralinga, and to

call on the British Government to take responsibility for compensation to the Aboriginal peoples and for the clean-up of the wasteland they created.

It was a fantastic and successful day and so it is little wonder that from the following day, hostile politicians set out to provoke confrontation; the media eagerly joined in the attempt to obscure the issue.

One result of all the hostility and scaremongering in the media was a level of public interest so intense that crowds of people gathered at the front of the camp day and night; some came to abuse us, many stayed to talk. We talked ourselves hoarse about issues of war, peace, feminism, power; we gave out leaflets about Pine Gap; we collected signatures on our petition against Pine Gap. This direct contact with people is not often found at demonstrations and I believe it's at least as important and world-changing as any well-presented media event. Even the group of macho men who set up a protest camp against



us came down on their second day to say that they realised they'd been wrong, that they now understood what we were about, and that they were sorry for the trouble they'd caused!

As the week went on we continued to pressure Parliament both from the outside with our presence on the lawns and on the steps, and on the inside: women met with Bill Hayden to present our case; others lobbied their local Members; we presented petitions to the Senate and the House of Representatives and we managed to sneak a banner in to the Public Gallery during Question Time. Balancing the attacks of right-wing politicians, women parliamentarians sympathetic to our cause — Labor, Democrat and Independent — spoke out in Parliament on the issues of Pine Gap, the right of public protest and the importance of the women's peace movement.

Throughout it all the women's spirit and energy was strong. We worked well

together, keeping the mundane necessities of the camp going, defending the camp nightly against predatory men who couldn't cope with the notion of independent women, and supporting and caring for each other.

The over-the-top hostile reaction in the media to women's space was a clear sign of how taboo it still is in this patriarchal society for women to work together and to find our own solutions, seeking each other out against the isolation that men tried to keep us in and control us by for so long. We will not be silenced now. Women have something important to say to each other and to the world. Feminist values have to be affirmed in this violent, necrophilic culture; women's understanding of the interconnectedness of life is much needed in a society marching towards environmental and nuclear destruction, and women's space is a first necessity in the process of liberating women from male domination and so liberating us all from the patriarchal pursuit of war.

The cost of the Bicentenary

The Australian Bicentenary is almost upon us. The South Australian Jubilee, celebrating 150 years of white settlement, posed a number of problems for those not wishing to condone the forcing of an alien culture on the land and its people. From their experience with the Jubilee, **Claire Ralfs and Penny Miller** discuss what the Bicentenary holds in store.

You cannot escape the South Australian Jubilee, or its ideology. Its logo emblazons registration stickers, disposable drink containers, serviettes, is displayed on flags outside local councils and businesses along the main street of Adelaide. It is stamped on bread wrappers, sweaters, T-shirts. So far, the Jubilee has involved significant members of the trade union movement and the Aboriginal community, as well as a spectrum of community groups and local councils. There are events every day: the Royal Show and the Festival of the Arts, 'reenactments' and extravaganza openings, motorbike rallies, fun-runs, flower shows and family reunions. The Jubilee is based on a strategy using community involvement to attract tourism and investment capital.

If we look behind the liberal facade, we find an event founded on racism, supporting conservative ideologies of nationalism and colonialism. The Jubilee presents us with the image of a proud pioneering history and a happy intergrated community. In doing so it whitewashes the history of Aboriginal genocide and smooths over the divisions amongst us of class, race and gender. The sheer enormity of the event has silenced many of us in our confusion, effectively immobilising opposition.

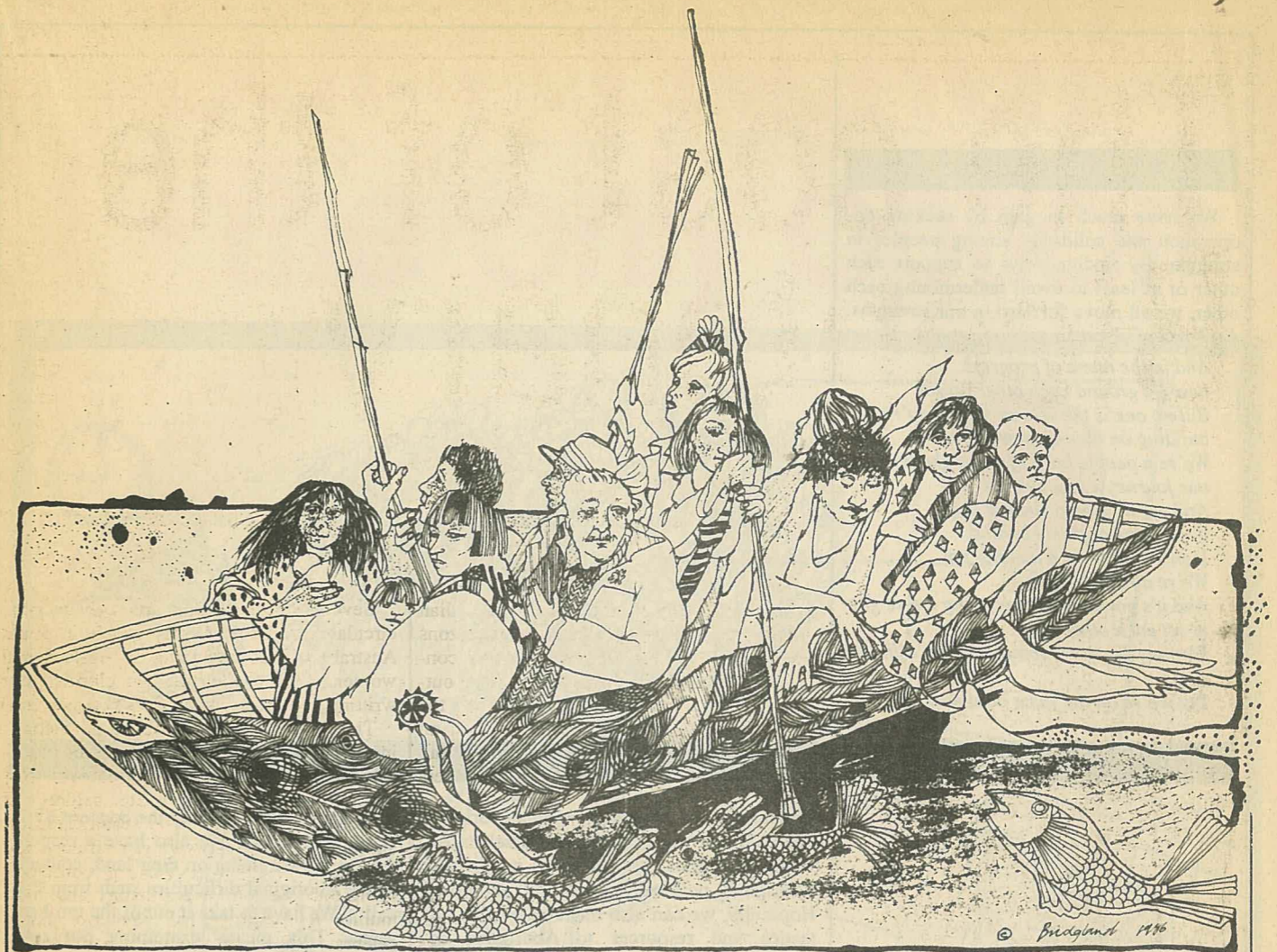
Our desire to write this article comes from the uncomfortable silence of opposition to the South Australian Jubilee and the forthcoming Bicentenary celebrations. We are both white feminists, involved for some years in the anti-uranium movement. We have had contact with the Kokatha people, traditional owners of Roxby Downs, and faced the issue of land rights. We have worked to expose the links between our anti-nuclear work, our feminism, environmentalism and indigenous peoples' struggles. In 1985 we worked with three Aboriginal women to produce the *White Invasion Diary 1986* as a challenge to the South Australian Jubilee.

Several drafts of this article have been circulated to nearly twenty people in South Australia's Left, including two Aboriginal women. This challenged and clarified our writing and consolidated links between us.

The South Australian Jubilee is celebrating a white version of history, one of peaceful settlement and development. Reenactments show the white settlers as pioneers, building the rural sector, industry and the state. The Aboriginal resistance and genocide are ignored. We are constantly being told that we have a history and community to be proud of, one we should celebrate without reservation. Aboriginal activist, Ruby Hammond, voices her condemnation of the Jubilee:

I don't think you can really expect us to celebrate, given that Aboriginal people are still dying like flies under a pressure pack and are still poor, unemployed and in ill-health. Obviously, we have nothing to celebrate in relation to being a colonised people. Our position is as bad as any other colonised country. We're not respected as warring indigenes like the American Indians, because our resistance to invasion has been deliberately whited out from history. They stole our land, our children and they forced a policy of genocide and assimilation on us... It cannot be a celebration for Aboriginal people, and if it can't be a celebration for us then it shouldn't be a celebration for non-Aboriginal Australians.

Though only a State-based celebration, the Jubilee vigorously promotes a nationalistic feeling, which will support the Bicentennial celebrations. The proud-to-be-Australian feeling that is encouraged is all part of the acceptance of confrontation between nations, competitive attitudes between different peoples and the militarisation of our society. It is founded on racism and cultural imperialism, obscuring any sense of internationalism, undermining the solidarity of people across national boundaries, and maintaining the control of international capitalism.



We are familiar with the US's use of nationalism to justify military, political and economic intervention in other parts of the globe, particularly Central America. The Australian Government is less aggressive but has a similar arrogance towards the peoples of the Pacific and the Aboriginal community. Just as we support the Nicaraguans against US military intervention, we also need to support the Aboriginal community's fight for land rights and self-determination. Challenging the Jubilee and Bicentenary is part of this.

The Jubilee aims to provide something for everyone including the 'Left', particularly environmentalists and Aboriginal communities. It has promoted, and sometimes funded, projects such as the greening of Adelaide, cycle tracks, the restoration of old buildings, playgrounds and a disability resource centre. Many of us have lobbied for such projects in the past. Now we are left with the difficult questions of whether or not to participate, whether to take employment on a Jubilee project, whether the project can be rescued by involving Aborigines or at least discussing it with them.

In South Australia there has been a collective sigh of relief that no major 'Left' organisation is significantly involved with the Jubilee. However, an uneasy silence prevails, as some amongst us take Jubilee-funded jobs and many of us attend Jubilee-funded productions. Our responses have been individual and isolated... a passive resistance of minimal effect.

It is common in politics to rank issues in order of importance. But it is a dangerous practice. Our struggles and issues are fundamentally intertwined; our common enemies ensure this. As people in struggle, we are all vulnerable to being marginalised as 'unimportant', 'not the real issue', etc. Marginalising any group, whether it be women, blacks, disabled or gays, weakens us all. The Right's strongest strategy is its ability to divide and rule. The Jubilee and the Bicentenary are being used in this manner. Pursuing Anglo-Left goals at the expense of, or on the graves of, Aboriginal groups' goals, will only keep us from developing the understanding, trust and solidarity that we all desire. A broad or cohesive Left cannot develop without the Aboriginal community.

Bicentenary Dollars

Bicentenary funding is a major divisive issue for the Anglo-Left and the Aboriginal community. Funding one group at the expense of another is an easy way for the state to entrench divisions amongst us. Using Bicentenary money seems to us only possible in the context of a resolved and clear relationship with Aboriginal Australia—such a relationship is nowhere apparent at present.

While we personally support those Aboriginal organisations boycotting the Bicentenary, we also support those groups who have decided to use Bicentenary money in their struggle. It is a very different circumstance for Anglo groups to accept funding. The involvement of some Aboriginal groups in the Bicentenary does not justify Anglo involvement. We cannot simply adopt the strategy of the Aboriginal community, assuring ourselves that it is okay to take Bicentenary money because Aboriginal organisations have publicly done so. Similarly, we cannot develop our strategy in isolation.

Claire Ralfs and Penny Miller are Anglo-feminist activists living in South Australia.

We have much to gain by seeking co-operation and solidarity among peoples in struggle. By finding ways to support each other or at least to avoid undermining each other, we all move forward in our strengths. As Ronnie Gilbert sings:

*And in the name of progress
how we ground each other down
But no one is the winner when you're
building on bloody ground . . .
We're a people born of many shores
our journey's so entwined
And we'll be on a sinking ship
if we leave anybody behind.
Don't want to be a melting pot
We're a rainbow family
And it's gonna take everything we've got
to set each other free
We may be have come here on different
ships
But we're on the same boat now.*

Developing a dialogue with Aboriginal communities (and amongst ourselves) is vital. As Anglos, we can learn much from Aboriginal political tactics and processes. Hopefully, we can also make accessible our tactics and resources to Aboriginal organisations.

While it is a useful political statement or slogan, an outright boycott of the celebrations is not really a practical option. Can we stop buying bread, using the roads, posting letters or using government services? Even if we could, as white Europeans occupying Aboriginal land, we are all implicated in the celebrations. No section of the European community, including the women's movement, has negotiated treaties with the Aboriginal communities. Whether we celebrate or not, our relationship with Aboriginal Australians remains unresolved and, too often, not even discussed. In the long term, the Jubilee and the Bicentenary are just further examples of the continued dispossession of Aborigines from their land—just another year of living under racism.

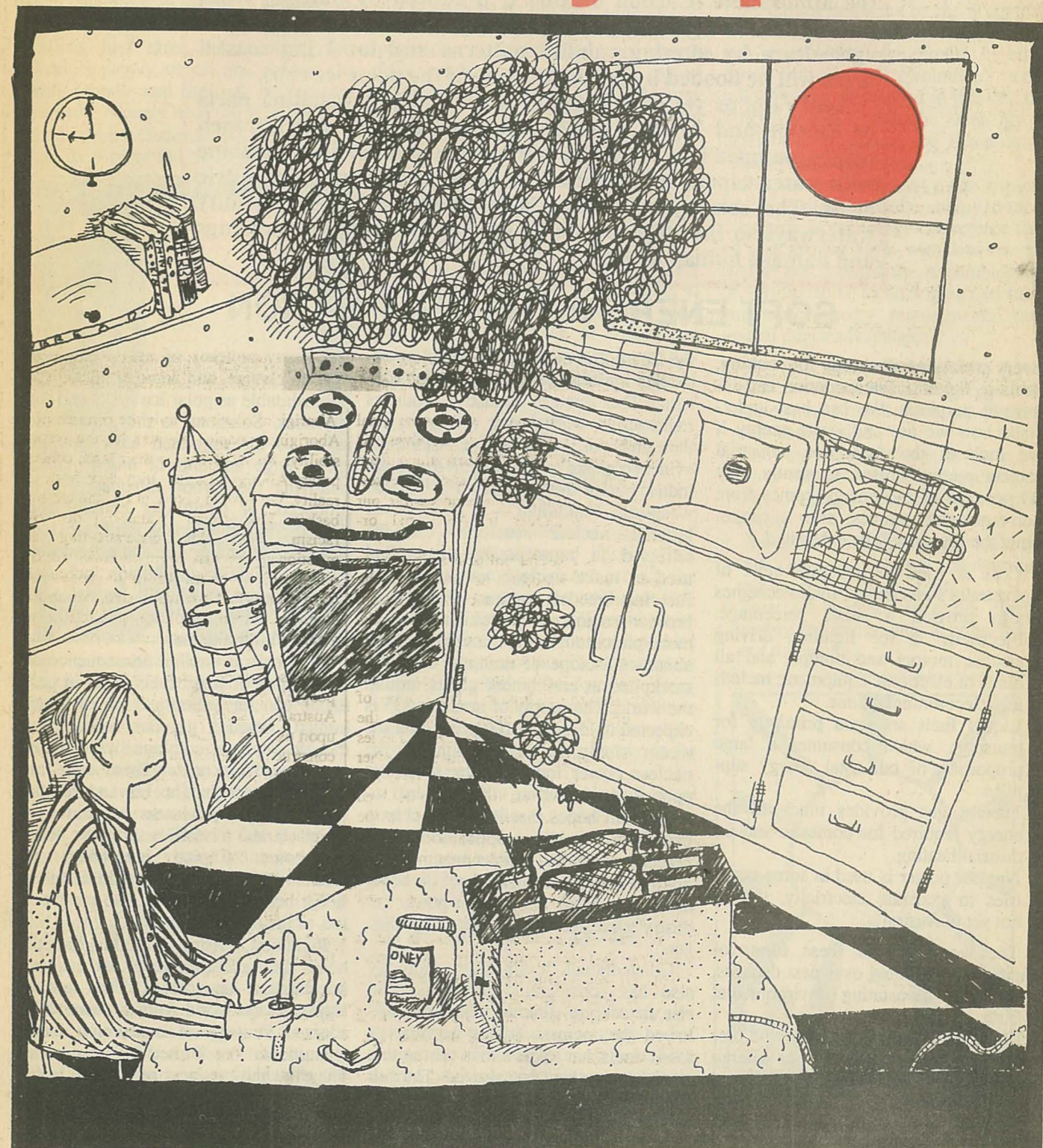
Whether we participate or not is still a question that each group and individual must face. We are a long way from a collective, all-encompassing response. However, a fundamental issue for us all is Aboriginal land rights and self-determination. We need to incorporate these issues into our lives, more than a sticker on the fridge and the motion of support passed at a meeting. We cannot continue with the racist assumption that

Aboriginal issues are only the concern of the Aboriginal people. We also have a responsibility: we are living on their land; contemporary Aboriginal difficulties stem from that reality. We have to take it out of the too-hard basket. This means examining our own racism. With this understanding and questioning we can begin to build working relationships with the Aboriginal people, and form groups that are supportive, not oppressive. Only then will it be possible to envisage a collective response to the Bicentenary.

Consciousness and respect for other people's struggles is demanded of us. In our Australian setting, with the Bicentenary upon us, it is crucial that we begin to build a constructive, unpatronising, unromanticised relationship with Aboriginal Australians. We must face up to our history. While this is hard work we believe that finding ways to synthesise our struggles, yet maintain our differences and autonomy, will be an exciting, liberating prospect, bringing a new experience of community.

The Bicentenary, in promoting the concept of community based on colonialism, racism, classism and sexism, provides us with an excellent time to promote an alternative concept of community, which is co-operative, non-sexist, non-racist, internationalist and in harmony with the environment. The Right may have set the agenda, but it is an agenda that we can use to develop empowering ways of working and living.

SOFT ENERGY - the only option



The horrific consequences of nuclear power have been demonstrated by the recent accident at the Chernobyl power station. Radiation swept across Europe, risking the health of hundreds of millions of people.

Australia's CSIRO released a report in 1986 warning of inevitable increases in global air temperature — called the greenhouse effect — due to increased levels of carbon dioxide in the atmosphere. Carbon dioxide is produced by burning fossil fuels — oil, coal, gas — our major energy sources. This will affect agriculture by altering rainfall patterns and low-lying coastal areas will be flooded by partial melting of the polar ice caps.

Acid rain, as yet undetected in Australia, is devastating parts of Europe and North America. Sulphur dioxide and nitrogen oxides, pumped into the air by combustion of fossil fuels, combine with water vapour and fall back to earth as sulphuric and nitric acids. The consequences have been to destroy forests, acidify waterways so that fish can no longer survive, corrode buildings and damage human health.

SOFT ENERGY: THE ONLY OPTION

Every society needs energy for cooking, heating, lighting, transportation and industrial purposes. We can best understand how we use and waste energy if we look at the fuels our industrial society presently uses. Currently over 90 per cent of our energy comes from non-renewable sources; after a certain time, the supply will be exhausted.

- Coal is used to generate most of Australia's electricity; hydro schemes also provide a small percentage. Electricity is for lighting, driving electric motors and pumps, and all kinds of electronic equipment, including telecommunications.
- Liquid fuels are used primarily for transport, which consumes a large proportion of our total energy supplies.
- Natural gas provides much of the energy required for domestic and industrial heating.
- Nuclear power is used in some countries to generate electricity, though not yet in Australia.

The world use of these forms of energy has escalated over past decades, often with devastating environmental effects.

Nuclear power can no longer be presented as the answer to our energy problems. Thousands are expected to contract cancer or suffer genetic damage due to radiation exposure from

the Chernobyl disaster¹. But nuclear accidents are not the only cause for concern. The nuclear industry produces radio-active wastes that are toxic for thousands of years and considerable evidence exists to link the civil nuclear industry with the production of nuclear weapons. Plutonium — a product of thermal nuclear reactors — can be retrieved in reprocessing plants and used to make nuclear warheads or to fuel fast-breeder reactors. These fast-breeder reactors use plutonium to breed more plutonium from uranium 238, an abundant isotope of uranium currently stockpiled at enrichment plants around the world. The supply of uranium 235 is expected to last up to 100 years with the recent slump in the growth of the nuclear power industry, due to public opposition. However, the nuclear industry still hopes that it will be able to overcome public opposition and proceed with its breeder-reactor program. Powerful military force is being exerted to keep the nuclear-power industry alive, no matter what the dangers.

Conventional fossil-fuel technology also has considerable problems. The rise in carbon dioxide which has followed the increase in the burning of fossil fuels has meant that the earth's rate of losing heat has slowed. The full effects of this gradual increase in temperature are not known, but it is certain

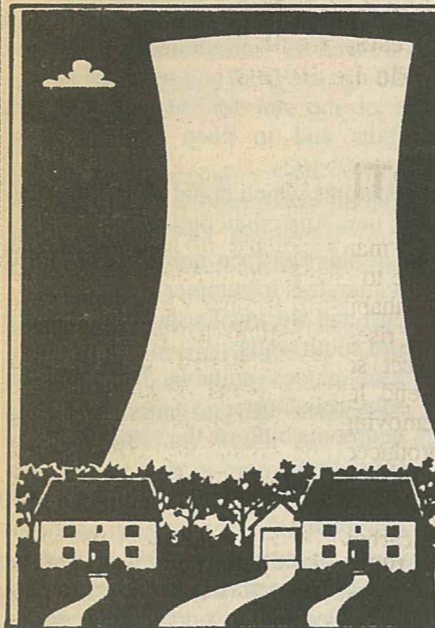
that many patterns of agriculture will have to change, and some areas will be uninhabitable as polar ice melts and the sea rises. Solutions to the greenhouse effect so far suggested have been to spend large amounts of money either removing the carbon dioxide as it is produced, or combining conservation with the introduction of more efficient processes of energy use and generation. If carbon dioxide production increases at 1986 rates, there will be twice as much in the atmosphere by 2050, or about 17 billion tonnes.

Acid rain is another consequence of the burning of fossil fuels. Coal in particular contains substances which, when burned, produce gaseous oxides and dioxides which combine with water vapour to form acids. These then fall back to the earth. The US and Britain are the major producers of acid rain which tends to fall mainly on their neighbours. Capital investment in suitable technology can reduce emissions; better quality coal also produces less of the offending gases.

Radiation, rising carbon dioxide levels and acid rain know and respect no national boundaries. They are a legacy to the world from a universally adopted strategy of consuming large quantities of our limited fuel resources. They are the products of a 'hard technology' — the inevitable result of following the hard energy path.

THE HARD ENERGY PATH

The continued use of fossil fuels not only causes serious environmental problems but commits us to the development of nuclear power. Over the last generation all major industrial countries, including Australia, have used coal then oil to fuel their development. The world's supply of oil and natural gas will dwindle and fuel will become expensive. Already more oil is being used than is being discovered in new fields. It has been proposed that synthetic liquid



fuels be produced from coal and other non-liquid fossil deposits like oil shale. However, this will cause an even larger greenhouse effect because carbon dioxide is liberated in great quantities in the conversion of the coal. Natural gas will last a little longer but reserves will peak not long after those of oil. Coal is more plentiful, but will last no more than 200 years if consumption increases as it has in past decades.

If fossil fuels continue to be used at the present rate, they will soon be exhausted and the choice will be to accept the next most developed energy technology — nuclear power — or be faced with dramatic energy shortages. Nuclear planners anticipate people will be sufficiently desperate to accept the hazards and bear the heavy cost of making the nuclear industry a major supplier of the world's energy.

Some countries have already turned to nuclear energy to satisfy a large part of their electricity needs. Electricity from nuclear reactors, despite industry claims, is more expensive than other sources and electricity satisfies only about 10 per cent of the energy needs of an industrial country. In 1985 nuclear power contributed 11 per cent of the world's electricity but only 2 per cent of total energy. Meeting an increased proportion of the world's energy needs from nuclear reactors would require diversion of financial resources away from essential needs of people including those in the desperately poor Third World.

The path to nuclear power, already well trodden without debate by some countries, is also travelled by Australia. It is known as the hard energy path.

It is not a solution, only a recipe for future environmental catastrophe. It is time we chose, while we still have the chance, a pattern of energy use compatible with our shared long-term goal of survival, the soft energy path.

THE SOFT ENERGY PATH

There are renewable-energy technologies, well advanced despite poor research funding, which can provide the energy we require. As with conventional fossil fuels, no single renewable-energy source would be expected to satisfy all requirements. However, when properly matched to the form of energy required, renewable sources combine to make a reliable, safe and environmentally benign energy supply known as the soft-energy path.

But is such a path realistic? What are the achievements to date and, provided there was the political will, could these technologies meet future demand?

ENERGY FROM THE SUN

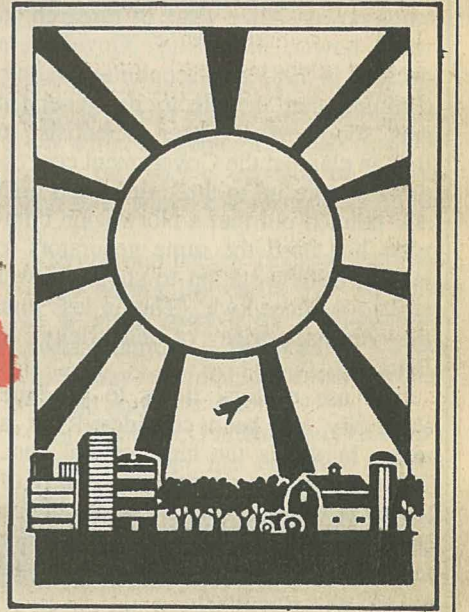
Ultimately, solar energy is our only option. The sun will continue to shine for thousands of thousands of years. Its energy can be captured either directly as heat or electricity, or indirectly from vegetation, wind and water. This

flexibility means solar energy can provide power for the most isolated communities.

Solar energy has sustained societies for thousands of years. With the Industrial Revolution the use of fossil fuels increased and replaced many of the age-old means of utilising the sun's energy, the major reasons being direct energy from the sun could not be easily controlled as it is a very diffuse energy source, and there were large profits in other forms of energy. Centralised technologies were developed to increase the efficiency and distribution of energy to meet, and encourage, the demands of industry and consumers.

But modern technology can capture and store sufficient solar energy to meet our needs. Solar energy can replace fossil and nuclear fuels with less overall cost to the community. A combination of various solar technologies can fulfil our basic energy requirements with several major advantages:

- They rely on renewable energy flows such as the sun, wind, and vegetation, rather than limited resources like oil, coal and uranium.
- They are relatively clean and safe.
- They can be utilised and understood by most people, not just technocratic elites.
- They lend themselves to decentralisation, community control and therefore reinforce democratic ideals.
- They are matched in scale, energy quality and geographic distribution to end use needs.



Soft Technologies

ENERGY FROM WATER

Harnessing flowing water is one of the oldest technologies in the world — many waterwheels can still be seen.

Hydro power uses water to spin a turbine connected to an electric generator and it supplies over 20 per cent of the world's electricity. However, major environmental damage and social disruption have been associated with big hydro-electric schemes. The Franklin River is an example of where this renewable source was better left 'untapped'.

Figures indicating the potential of hydro power must therefore be interpreted carefully. Australia reportedly has the potential to generate about twice its current level of electricity from water sources.

The use of small schemes, including existing water storage and irrigation systems can reduce the demand for projects with unknown environmental outcomes. Australia has an estimated 250 megawatts of extra installed capacity of this type.⁶

Another form of water energy is wave power. After years of research on wave power, the British Government decided in 1985 to discontinue funding, claiming that the electricity generated was too costly. Other scientists in Britain claimed the Government cost estimates were up to three times too high and pointed out that a Norwegian company had used the same generators to build a 500kw station to supply power at 3 to 4 pence/kwh. (This is less than the normal price of electricity in Britain.)

The use of tidal flows to generate electricity has been considered but a major hurdle is the huge capital cost. There are tidal proposals in the Bay of Fundy in Canada, where a pilot scheme has been built, and the Severn Estuary in Britain. A commercial plant operates at La Rance in France.

A more modular system which may avoid high capital costs and long periods of construction are turbines similar to upside down windmills tethered below the water surface. They would hopefully produce reliable and predictable power about twenty hours a day in areas of strong tidal flow. Areas studied and proposed for research include New York's East River, coastal areas around the Channel Islands in Britain and the St Laurence River in Canada. The turbines would be from 6 metres in diameter upwards, and would each generate in the range of 20-100 kw of electricity.⁷

HEAT FROM THE SUN

Currently oil, gas and electricity are converted into heat for homes, commercial buildings and industrial processes. Solar energy can supply this heat, particularly in the low temperature ranges used in heating for homes and offices and some processes in industry, but also in higher temperature ranges.

Solar industrial process heating

Results from six industrial process heating systems funded by the US Department of Energy were reported in 1985. Five of the six systems operated at over 200°C, providing energy for a variety of processes — latex production, brewing beer, refining and phenol production. The report concluded that solar energy could be used for industrial processes. Further evidence that solar energy can provide process heat is the Honeypool honey factory in Western Australia where concentrating solar collectors produce 100°C temperatures and the savings will repay the investment in approximately six years.

The world's largest industrial solar heating system is at the Cadbury Schweppes Drinks plant in Perth. Flat-plate solar collectors heat 86,000 litres

of water for use in a number of processes. The system is expected to cut annual fuel costs by 65 per cent and pay for itself in about four years.

Solar Architecture

Air heating and cooling, typically 20-40 per cent of energy consumption in industrialised countries, can be almost eliminated by 'solar architecture' where buildings are designed to make optimal use of the sun for heating in cooler months and to keep cool in warm seasons.

Features which could be incorporated into new Australian buildings:

- buildings to face north (more sun in winter, less in summer);
- east and west walls shorter than north and south walls;
- roof angles suitable for mounting solar collectors;
- bedrooms built on the south side;
- insulation;
- high thermal mass of outer building materials.

Existing buildings could be insulated and solar collectors used. Water can be solar heated for most domestic needs.

Solar architecture is uncommon and consequently expensive and inaccessible to those without capital. The Housing Trust of South Australia is doing pilot work on low-energy public housing, and although the dwellings are more expensive than 'conventional' houses, energy savings repay extra costs within a few years.⁵

ELECTRICITY FROM THE SUN

Photovoltaic (solar) cells are made of semi-conductor material which capture some of the sun's radiation and convert it directly to electricity. The technology has proved to be particularly reliable, requiring little maintenance as there are no moving parts.

The cell with the highest conversion efficiency (nearly 21 per cent) has been

developed in Australia and attempts are being made to produce more efficient cells at lower cost. However, production costs are tied to market demand and many potential users await a fall in price. Conversely manufacturers claim they could produce cheaper cells if a larger market were guaranteed. Government support for renewable technologies similar to levels received by other energy industries would allow unit costs to drop — further stimulating market demand.

ENERGY FROM ORGANIC MATERIAL —

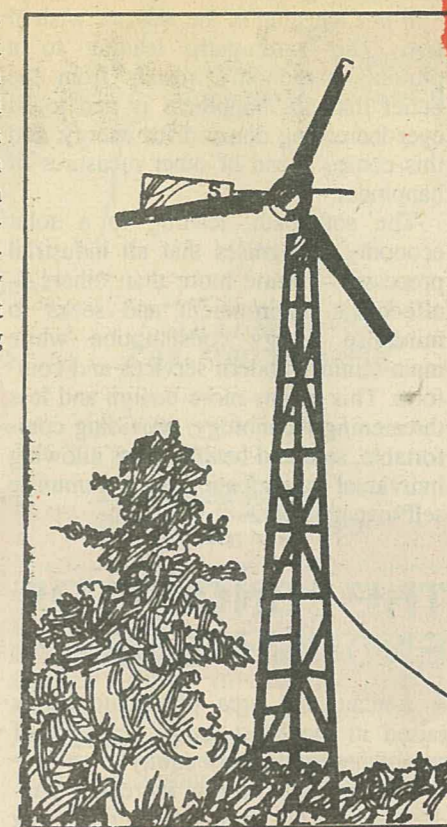
Biomass — material of organic origin — can be used either directly as fuel, or converted to another form of fuel. Wood has been burned for heat and light since the discovery of fire and in many countries, biomass is still the primary fuel in rural areas.

Biomass has major potential as a source of liquid fuels for transport, particularly ethanol which can be made from sugar cane or grains such as wheat or barley. It can be blended with gasoline or used as a 100 per cent substitute. There are no technical problems associated with its production but it costs about 50 per cent more than gasoline.

Some countries are already major users of ethanol. Brazil has 1 million cars running on 100 per cent ethanol, the remaining vehicles using a blend of gasoline and ethanol.

Care must be exercised in the large-scale use of biomass energy. Where firewood is harvested without adequate re-forestation, the land becomes bare and the soil eroded. In Brazil, the jungles are vanishing as vast areas of land are planted with sugar cane to produce ethanol. The production of fuel crops must also be balanced against the need for food crops.

Although it can provide a secure source of fuel, biomass could never maintain city traffic as we now know it, and should be accompanied by the introduction of more efficient engines and better public transport.



ENERGY FROM THE WIND

Wind has been used as an energy source for many centuries, for example for flour milling wheels. Major uses today include electricity generation and lifting bore water in rural areas. Wind energy is an instantaneous, kinetic form of energy which must be used when available or stored in some form for later use.

Wind generators have proved their economic and technical viability in areas where wind speeds average 20 kilometres per hour or more. There are over 13,000 wind generators in California alone, and in 1985 they generated 632 gigawatt hours, the equivalent of 10 per cent of Western Australia's electricity supply.

Australia has good wind-energy sites in Western and South Australia, Victoria and Tasmania — mainly in coastal areas. Two small companies manufacture wind turbines which sell at or below \$1000 per kilowatt and are price competitive with most forms of new fossil fuel electricity generation.

ENERGY FROM GARBAGE

Our society generates garbage at a frightening rate. While one of the aims of a conserver society should be to reduce waste production to an minimum, it can be a source of energy.

Several plants are in operation around the world which incinerate domestic refuse directly and provide energy in the process. There is a system in Florida is capable of incinerating 1000 tonnes each day and produces electricity for about 10,000 homes.

The cheapest form of garbage disposal is still to bury the waste in disused quarries or other suitable areas for landfill. But even here energy can be recovered as the waste decomposes. The simplicity with which methane gas may be utilised for direct heating or power production is demonstrated at a former council refuse tip in Northcote, Victoria. Three simple wells made from 100mm diameter plastic pipe have been put down into the decomposing garbage.

The continuously generated gas is drawn off by a pump and supplied to a slightly modified gas engine which in turn operates a generator. The electricity produced is fed into the normal electricity grid. It has been estimated that the 8.5 hectare former tip could produce half a megawatt for approximately 10 years.

GEO THERMAL ENERGY

Geothermal energy is drawn from the residual heat of certain rock formations. Two sorts of geological sites provide energy this way — deposits of hot underground water and formations of hot dry rock.

Geothermal energy is distributed unevenly across the earth, yet Australia has a large reserve of comparatively low-temperature geothermal areas which may be suitable for some industrial and domestic use.

For example, Portland on Victoria's south-west coast, has started to use hot water from geothermal sources to heat the town's swimming pool complex and four municipal buildings. Further developments are planned.

ENERGY CHOICES AND SOCIAL CHANGE

Soft technologies provide more than a solution to environmental problems, they can also help in addressing global and national inequities.

Many people believe that the adoption of soft technologies will result in a drop in the standard of living. Yet there is no simple correlation between standard of living and energy consumption. The average per capita energy consumption of Western European countries is half that of the United States, yet the standard of living is similar. So the choice between a hard or soft-energy path is not a choice between a high or low standard of living. Indeed, a higher

quality of life results from taking the soft energy path.

It is a question of the way we wish to live. The hard path, leading to a plutonium economy, results from the belief that our happiness is tied to an ever-increasing demand for energy, and this comes ahead of other measures of happiness.

The soft path, leading to a solar economy, recognises that all industrial processes — some more than others — affect the environment and seeks to minimise energy consumption while maintaining modern services and comforts. This means more benign and less threatening technology, providing comfortable, safe and healthy lives allowing individual participation in community self management.

THE CONCEPT OF ENOUGHNESS

A fundamental area of debate rarely raised in the West is the 'concept of enoughness and global equity'.²

Most of us expect an increased standard of living to involve consuming more and more. We have not internalised the difference between quality and quantity of life. We desire growth in our national and personal consumption as 'proof' of our well-being. Surely a more desirable goal would be stable and sustainable social and economic systems. This means that we will have to recognise the time when we have enough.

Three-quarters of the world's current energy consumption is by one-quarter of the world's population who live in the 'developed world'. What of the other three-quarters who share the remaining one-quarter of the world's energy consumption? What is their consumption pattern and what is it likely to be in the future?

It has been estimated that a subsistence standard of living would require an individual to annually consume the energy equivalent of 400kg of coal. Using 1976 figures, about 36 out of 140 nations consumed less than this on a per capita basis which approximates to over one billion people consuming less energy than required for bare subsistence.

The average Australian consumption rate was over sixteen times this level. If

this consumption was extended worldwide, fuel usage would be about four times the current rate. Even if this were possible or desirable, the environmental damage would be devastating.

There must be strategies to reduce Western energy consumption, including conservation and a re-examination of the need for growth. Coupled with the use of renewable energy this will allow increased energy consumption in the developing world without further strain on the earth's resources and environment.

CONSERVATION

Conservation does not mean freezing in the dark, it simply means using our resources more efficiently. Conserving our supply of fossil fuels can tide us over during the transition to the solar future — about fifty years. Enormous scope exists for saving energy and introducing conservation measures which will effectively extend our finite fuel reserves. Western society has become dependent on an industrial system which wastes more energy than it uses. Measures that can be taken include:

Houses/Dwellings/Offices: Introduction of building regulations that encourage or require passive solar design features and solar cells and collectors.

Industry: Energy can be 'cascaded', where heat from one process is used for another process which requires less heat and so on down the line. Heat from industrial processes can also be used in local homes, offices and factories. Investment can be made in more energy efficient machinery, techniques and buildings

Transport: Investment in adequate public transport systems. Gradual restructuring of cities to reduce the need to travel long distances to work, school and recreation.

Government support is needed to encourage and assist adoption of energy saving measures. Although a simple increase in energy prices may decrease energy usage, some people would be able to afford higher prices and people on low incomes would be adversely affected. Real financial incentives and support are required for individuals to invest in energy-saving devices. The prices of these devices would be reduced if government policies led to increased usage.

CHANGING PATHS

Current Australian Government policy basically assumes that fossil fuels will continue to supply our energy requirements.

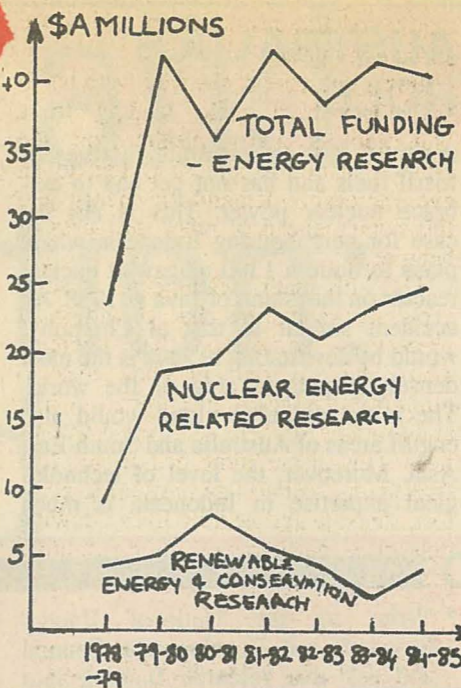
In March 1986, the Department of Resources and Technology launched a series of discussion papers on Australia's energy requirements and future energy directions, *Energy 2000 National Energy Policy Review*. The sixth paper in the series focused on renewable energy. At its launch, the Minister, Senator Gareth Evans, stated:

A fundamental question is whether the rate of development and introduction of new renewable energy technologies should be left to market forces, or whether there should be some degree of intervention by government.

The paper assumes the future of renewables should be left to market forces with minimal government assistance. It recognises the potential of renewables in Australia to supply energy needs yet consistently dismisses these technologies due to their 'intrinsic lack of economic viability'.

However, the real costs of energy are distorted as the bulk of government subsidies goes into already mature conventional energy industries rather than encouraging new technologies or supporting new energy sources to overcome institutional and community barriers.

In 1984-85 renewable sources of energy supplied 6.3 per cent of Australia's energy demands, mainly from hydro-electricity and biomass, but the report does not foresee any large increase in renewables before the year 2000, and expects a decline in relative terms. The report states that, 'From both



N.B. This includes the 60 per cent of funding going to Atomic Energy Commission for various aspects of nuclear/energy research.

price and resource depletion aspects, there does not seem a compelling argument for government initiatives in the market to encourage the development of renewables.' It is interesting to note the report only considered price increases and resource depletion over the next ten years and did not consider environmental factors.

The document does not incorporate any action plan for renewable energy development. Nor does it discuss the interaction of energy and other aspects of the environment and economy; therefore it does not recognise that renewable energy has the potential to create significant employment opportunities and export markets and lessen the havoc on the environment.³

Renewable technology will not be widely used while the predominant assumption is that non-renewable energy technologies must be maintained and upgraded. It is not possible to travel the hard and soft energy paths at the same time. The costs involved in developing the technologies of each route are high.

Long-term political choices must be made rather than short- or medium-term policies becoming strategies by default. The goal must be agreed and policies formulated in light of that goal. We should recognise the social and environmental problems associated with non-renewable energy and commit ourselves to restructuring energy use to build a society completely reliant on renewable energy sources. A deadline must be set to ensure this goal is reached and to allow adjustment and preparation for change. The transition from one energy supply system to another would require 30-50 years to replace major equipment; existing fossil fuel reserves would be used as bridging resources during this time.

These resources can be extended by implementing economically attractive conservation measures. An example comes from the Australian Conservation Foundation's 1982 study which estimated that Victoria's projected energy demand could be halved over fifty years without implementation of further efficiency improvements.⁴

At the same time research and development could be funded to improve new technologies. The Federal Government has financed energy research and development since 1978-79 through the National Energy Research, Development and Demonstration Council. The amount going to conservation and renewable technologies has been declining as a percentage of total money spent (see graph). About 55 per cent of the

JOB CREATION

Direct and indirect figures on employment generated by the renewable energy industry are hard to find. However, three studies show that tremendous potential exists. A 1978 Canadian consultant's report stated that in the year 2000 at least 20,000 people could be employed in the solar industry in Canada. Indirect employment could be as much as three times that amount.

A 1982 study of the impact on employment in Victoria concluded that 800 jobs could be created over ten years if Victorians adopted solar water heating to the level currently existing in Western Australia. A firm realising some of this potential is Somer Solar Pty Ltd, which was founded in 1976 and has since had a 100 per cent growth rate per year. The directors believed that by 1984 they had been directly responsible for the creation of some thirty jobs in Victoria and a further fifteen interstate.

A 1979 study by the CSIRO into the potential for liquid fuels from agriculture and forestry in Australia estimated that total direct employment resulting from a switch to biomass fuels would be a staggering 130,000. About half these jobs would be in the provision of raw materials and the others in their conversion to liquid fuels.⁸



funding goes into nuclear projects. This disproportion is used to make uranium mining and exports publicly acceptable by attempting to solve such problems as waste disposal.

These research directions have a doubly adverse effect on Australia's economy. They reduce opportunities for manufacturing industry in the production of solar energy equipment and the economy is deprived of financial savings from new energy conservation methods. Uranium mining, on the other hand, apart from its other harmful effects, continues Australia's dangerous reliance on mineral exports for foreign earnings.

AUSTRALIA'S ROLE

Australia has considerable reserves of fossil fuels and has not yet had to embrace nuclear power. This is not the case for neighbouring Indonesia which plans to build a 1300 megawatt nuclear reactor on the island of Java in 1988. An accident similar to that at Chernobyl would be devastating as Java is the most densely populated area of the world. The initial radiation cloud would also engulf areas of Australia and South-East Asia. Moreover, the level of technological expertise in Indonesia is much

lower than in the Soviet Union, making the scenario even more horrifying.

A fundamental change in Federal and State Government policy towards a renewable energy strategy would benefit Australia and contribute to a nuclear-free region. Renewable energy industries would ensure our own energy future and we would be in a position to share these technologies with our neighbours — a significant contribution to regional peace.

WHAT YOU CAN DO

- Write to the Minister for Resources and Energy, Senator Gareth Evans, C/- Parliament House, Canberra, ACT 2600, asking questions based on information in this booklet.
- Contact universities and other institutes of education and ask about their research and urge support for renewable energy.
- Contact your local council asking for their policies and building regulations and suggest that all new buildings incorporate solar architecture.
- Re-assess your own energy consumption.
- Write to the National Energy Research and Development Council and ask that research funding into renewables be increased.
- Write to the Minister for Science, Barry Jones, MP, Parliament House, Canberra, ACT 2600, asking about the Government's long-term (i.e. 50 years) plans for when the supplies of fossil fuels run down.
- Write to the Commission for the Future, 96 Drummond St, Carlton, Vic 3053, and ask that they address energy issues.
- Contact FOE to get copies of this booklet to pass to friends.
- Raise the issues with your local Members of Parliament (State and Federal).
- Write letters to businesses on their energy policies.
- Support campaigns for better public transport.
- Start petitions to help inform people in your area of the issues.
- Send replies to your letters, news clippings and information to the Soft Energy Action Group, 366 Smith St, Collingwood, Vic 3066.
- Join the Soft Energy group — contact Friends of the Earth on 419 8700.

JOIN FRIENDS OF THE EARTH

All members of Friends of the Earth receive the FOE national magazine, *Chain Reaction* four times a year and the FOE Newsletter six-eight times a year.

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\$30 - Households
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Friends of the Earth
 366 Smith St Collingwood
 3066 phone - 419 8700

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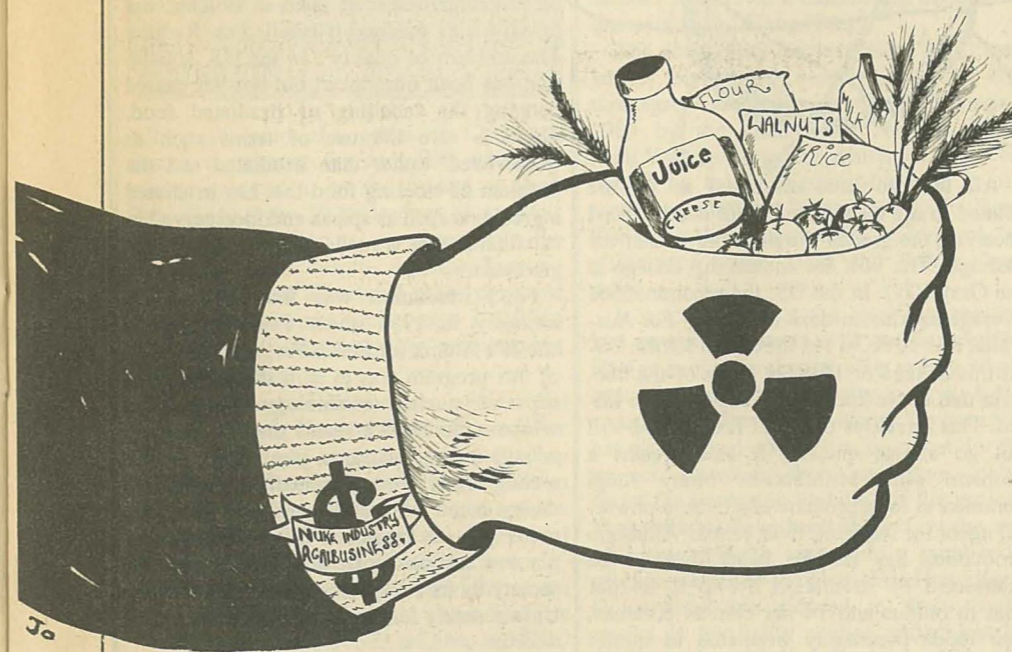
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Further copies can be obtained from Friends of the Earth, 366 Smith St, Collingwood, Vic 3066.

Food and radiation: A bad pair

A new method for preserving food is at hand. Involving the exposure of food to radioactivity, it is seen as a blessing by agribusiness. But the new technology is not without its pitfalls and problems, many of which are unknown and glossed over by the proponents. Ian Foletta discusses the technology and its effects.



'Too much food.' That was the title of an article ran in *Foodweek*, the trade publication of Food Industry Management, 5 August 1986. The article described how Baden Cameron, chairperson of the Brisbane Markets Trust, believes that 'We simply have too much of everything.' What Mr Cameron is arguing for is an opening up of the export food industry via irradiation.

At present, Australia is unable to export such foods as mangoes into the markets of Japan and the US (and the southern States) due to the presence in Queensland of the mango seed weevil. The pesticide EDB, which has been used in the past, has been banned from these countries for health reasons. Cameron estimates that the export mango trade could earn Australia up to \$A26million per year by 1990. However, before we get too excited about this claimed boost to the Australian economy we must consider what this process entails.

Ian Foletta is a member of the Chain Reaction collective and the Food Irradiation Working Group.

Irradiation has been used in Australia for some time now for the sterilisation of medical products. The material to be sterilised is passed near a source of radiation. In the plants in Australia, gamma-ray emitting Cobalt-60 is used. Electron beams, x-rays and Cesium-137 can also be used. When a material is irradiated the chemical bonds within the material break and reform. The number of chemical bonds affected in this way depends on the nature of the material and the amount of radiation (dose) to which it is exposed. At very high doses the material is sterilised.

Food would not be exposed to such high doses because proteins and DNA are affected, cells are killed, and unwanted side effects such as mushiness and adverse odours and tastes are produced in some foods. The trick is to prolong the shelf life by inhibiting sprouting and reducing the number of bacterial, fungal and insect pests found in food without making the food unpalatable. This can be done on a small number of foods using doses below that required for full sterilisation. However, there are still a number of other effects that low-level radiation has on food, effects that the proponents say are negligible.

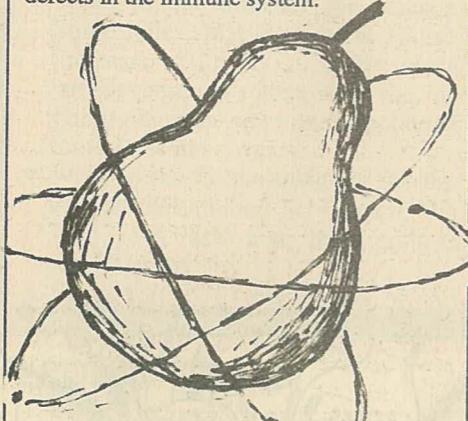
The biggest fear with food irradiation is not that it will make the food radio-active. (There is some debate over this, however, as some studies suggest that some radio-active elements can be produced, particularly when electron beams or neutrons are used for irradiation. There is also the possibility that food could be contaminated with radioactivity if there is an accident at the irradiation plant.) A major concern is the effect it has on the wholesomeness of the food. Amongst the chemicals that are most susceptible to irradiation are proteins, DNA and vitamins, particularly A, C, D, E, K and B1 and, to a lesser extent, B2, 3, 6, 12 and folic acid. For example, vitamin C depletion in fruit juice has been reported at between 20-70 per cent, in potatoes between 30-50 per cent, all at 'acceptable doses' of irradiation.

Pro-irradiationists claim that this is no more than the losses that occur in normal storage and cooking. What they neglect to point out is that this is an additional process and that the loss is accumulative. A healthy diet is one that contains fresh fruit and vegetables. Storage and even cooking (e.g. of fruit, milk, etc.) are not a part of it. Irradiated food would be processed food and those who through poverty or socialisation depend on low income or 'convenience' diets that are already lacking in essentials would have their poor diet even further eroded.

In addition to the problem of vitamin deficiency in the food is that of defining what compounds will be present when the chemical bonds reform and create new molecules. All that is presently known points to them being potentially very dan-

gerous. Called collectively *radiolytic products*, these compounds are pieces of DNA, proteins and other plant biochemicals, as well as residues of any pesticides that may have been used on the crop, that have been altered by the irradiation process. In any one particular piece of food there may be thousands of different compounds formed. It is impossible to perform toxicological tests upon these new chemicals as it is impossible to define exactly what their chemical structure is.

It is for this reason that the International Joint Committee on Food Irradiation, consisting of the World Health Organisation, the International Atomic Energy Agency and the Food and Agriculture Organisation, have ignored what toxicological tests have been done (using whole irradiated foods) and based their findings purely on what they thought should happen in theory. Amongst what they chose to ignore are reports of polyploidy, a chromosomal defect in which a cell has more than the required number of chromosomes, abnormal growth in some organs such as an increase in the size of the liver, testes, lungs, thyroid and spleen, and defects in the immune system.



All the problems discussed so far are related to the dose of radiation that the food receives, the greater the dose the greater the damage. The unit for measuring dosage is the Gray (Gy). In the US, the recommended average maximum dose is 1 KGy. For Australia, it is 10 KGy, ten times that for the US. At this dosage of 10 KGy some of the bacteria that cause spoilage of food will be killed. This increases the shelf life as food will not go off as quickly. It also creates a problem with re-infection. Many fungi common to food produce aflatoxin, a powerful agent for inducing liver cancer. Aflatoxin production has actually been found to be stimulated by irradiation by up to 84 per cent in onions and 74 per cent in potatoes, two foods commonly irradiated to inhibit sprouting.

A number of harmful bacteria are also resistant to irradiation. *Clostridium botulinum*, the causative agent of botulism food poisoning, is one of the most resistant. Without the competition of the bacteria that

are killed by irradiation this organism could grow quite freely and we would not be able to smell or see that the food was off. There is also the possibility that further organisms would become resistant to radiation if it was used on a large scale.

A Nuclear Industry

Food irradiation is a nuclear industry. It entails the use of radio-active materials and the transportation and storage of those materials. There is concern about workers' health within the industry. In the US, where food has been irradiated since 1968, there have already been accidents involving unintentional exposure of workers to the radiation source, as much as the equivalent of 20,000 chest x-rays in about twenty seconds. There is also the question of transporting large amounts of radio-active material around Australia. Cobalt-60 comes in the form of rods about the size of a pencil. To transport just four of these rods requires several layers of steel, an aluminium carrier and a 3 tonne container. The average irradiation plant would require 1000 of these cobalt rods. At present there is no uniform set of laws to cover the transportation of nuclear materials around Australia. What is applicable in Victoria, for example, is not applicable in New South Wales.

The presentation of irradiated food is another matter of concern. Irradiated food will need to be labelled as such. In the countries where food irradiation already occurs on a commercial scale such as Holland and South Africa the food is labelled as 'Radura: The emblem of quality'. In the US, legislation has been introduced but not yet passed banning the labelling of irradiated food. There is also the use of terms such as 'picowaved' rather than irradiated and the problem of labeling food that has irradiated ingredients such as spices and food served in restaurants that is made using irradiated ingredients.

Food irradiation was first investigated seriously in 1953 under President Eisenhower's Atoms for Peace Program. The idea of this program was to shift the public concept of nuclear technology away from weapons. In 1986 it seems that the industry is still trying the same ploy. With people reeling away from the nuclear power industry in the wake of Chernobyl it would be extremely advantageous for the industry to place a nuclear yoke around the neck of society by its acceptance of food irradiation. Unfortunately for the industry, society won't wear it.

For further information concerning food irradiation contact the Anti-Uranium Collective, 366 Smith St, Collingwood, Vic 3066. Phone (03) 419 8700

Power problems in Hong Kong

The Chinese Government plans to build a nuclear reactor at Daya Bay, just 50 kilometers from Hong Kong and its 6 million residents despite growing opposition to the plant. However, the campaign is not over yet. Friends of the Earth Hong Kong are in the forefront of the battle and report on the campaign.

After eight years of negotiations China has signed a contract for two 900 megawatt nuclear reactors to be constructed at Daya Bay, China, only 50 kilometres from Hong Kong. The decision to go ahead with the plant was taken despite the abandonment due to high cost of several other proposed nuclear plants, and despite over 1 million Hong Kong residents signing petitions opposing the plant.

The Chinese Government, against the wishes of Hong Kong residents, has made a final commitment on paper to the Daya Bay nuclear plant by taking out its largest foreign contract with Framatome of France and the General Electric Corporation (GEC) of England for the \$US2.5 billion reactors.

Framatome is expected to provide the two 900 megawatt pressurised water reactors (PWRs) valued at \$US523 million, and GEC is to provide the turbines worth a total of \$295 million. The production of the PWRs by Framatome will be under licence to Westinghouse USA, and are the same type of reactor as the 1-year-old reactor at Three Mile Island in Pennsylvania which had a partial meltdown in 1979.

There are indications in most industrial nations that the type of PWR to be used at Daya Bay is becoming obsolete. Besides being too costly to build and operate, it is subject to frequent shutdowns for inspection, maintenance and refitting. The Koeberg nuclear plant in South Africa near Cape Town is, like the Daya Bay plant, an 1800 megawatt Framatome nuclear power plant. This plant started up in 1984 but within eleven months had to be closed down because faults were discovered in the primary coolant pipes. Not a comforting thought for the residents of Hong Kong.

The Daya Bay nuclear plant is China's largest joint foreign venture. The joint venture agreement was signed on 18 January 1985 by the Guangdong Nuclear Power Joint Venture Company, which is 75 per cent owned by the Guangdong Nuclear Investment Company and 25 per cent by the Hong Kong Nuclear Investment Company, an affiliate of China Light and Power Company.

It is expected that the huge construction and operational costs will be financed by foreign exchange generated by selling 70 per cent of the plant's electricity to Hong Kong consumers. The Hong Kong Government has also backed a \$US77 million loan for the project. However, there are grave doubts about the economic viability of the project. These doubts have been fuelled by the veil of secrecy which surrounds a number of studies relating to the plant. The Hong Kong Government has refused to disclose the results of feasibility studies undertaken by the Guangdong Nuclear Power Joint Venture Company and China Light and Power in 1981. Critics of Daya Bay have cast doubts over the proposed cost of both the plant and the electricity generated. They assert that the joint venture company has assessed costs and estimates based on wrong assumptions

regarding anticipated growth in electricity demand, and that the unit cost of nuclear electricity for Hong Kong could well exceed the cost of coal-fired electricity.

The Hong Kong Government has also aroused suspicion regarding the safety of the plant by not releasing a report undertaken by a consultation company contracted by the Government, and a \$US128,000 report being compiled by the United Kingdom at the Nuclear Authority. In addition, there are a number of major concerns which both the Chinese and Hong Kong Governments have refused to address in a responsible way.

There is no contingency plan for evacuating the Hong Kong population in the event of a disaster at Daya Bay. Furthermore, owing to the peculiar geographical location of Hong Kong, it does not seem possible to devise a feasible evacuation plan for Hong Kong's 6 million residents.

At least 24,000 Chinese villagers and residents of rural townships face almost certain death should there be an accident at the Daya Bay plant; the whole Hong Kong population faces the risk of radiation-induced cancer. China does not have any operational PWRs and has no experience of managing such facilities.

The Chinese authorities have not yet decided where the nuclear waste from the Daya Bay plant will be disposed. (In 1985 at a Hong Kong FOE dinner, a visiting Chinese nuclear official said that the plutonium produced was not 'waste, it's very useful for bombs'.) A skilled workforce, grounded in the discipline of quality control, who can carry out critical assembly and welding work, is essential. It is doubtful whether such technicians can be found in either Hong Kong or the People's Republic of China.

French disconnection

The French nuclear industry has been proceeding almost without hindrance. Now that stage is coming to an end. Opposition is growing in the wake of Chernobyl and the very economics of nuclear power are creating problems. While those that oppose nuclear power see this situation as inevitable for any hard-energy path, the proponents are still hopeful of a 'recovery' for the industry. **John Hallum reports on the state of play and the future directions of a technology developed beyond sense.**

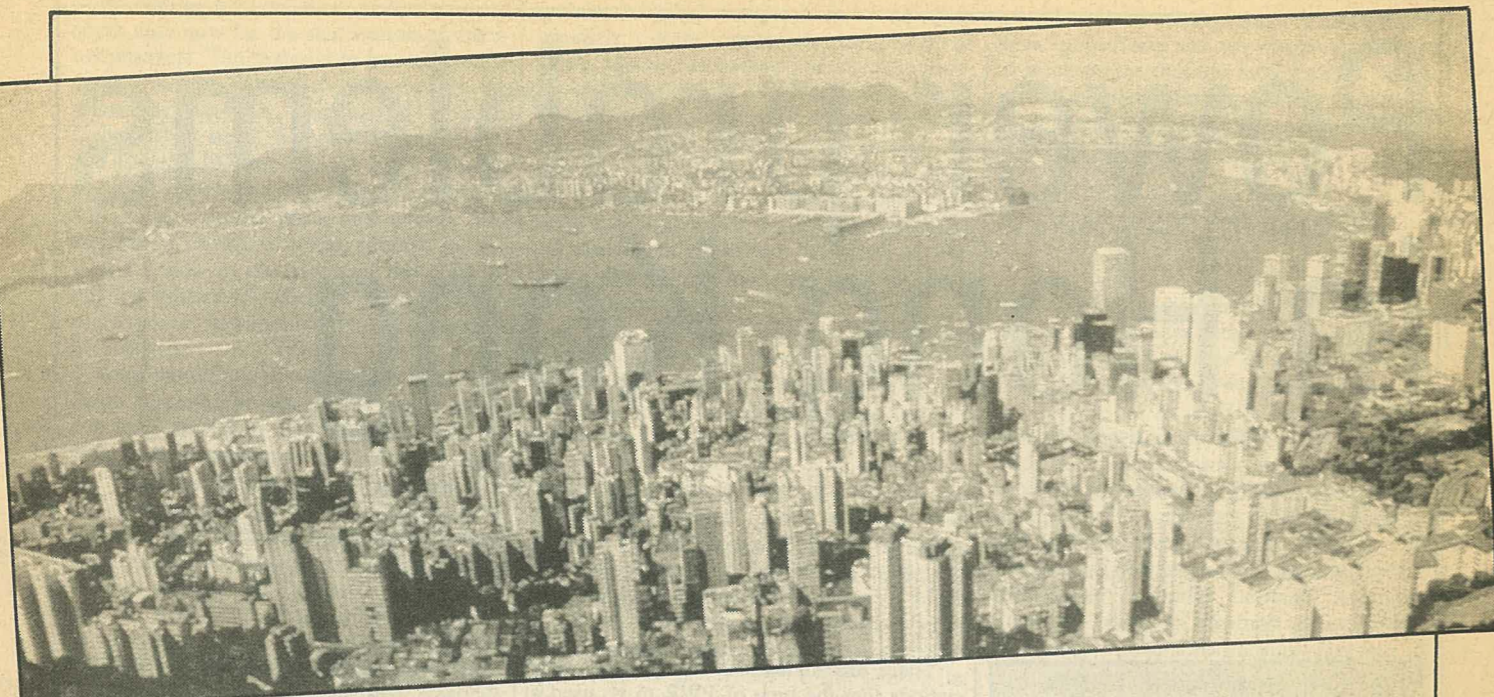
With the Hawke Government's decision to export uranium to France, it is a good time to look at the supposedly inexorable growth of the French nuclear program.

The French industry has been more successful than the now well-publicised debacle that is the US nuclear industry. But the juggernaut is slowing. In the late 1970s France was ordering 6-8 reactors a year. Under the Mitterand Government, orders were slowed to one or two slightly larger reactors a year, and under the new conservative Chirac Government they are down to one a year. There are dark rumours that by 1988 and 1990 there will be none at all.

The slowdown is partly due to the very success of the French nuclear program. France's market for electricity is saturated. It produces more of its electricity from nuclear power than any other country: 70 per cent by early 1986, up from 58.5 per cent a year earlier.

Marcel Boitteaux, Chairman of the State-owned Electricite de France (EDF), admitted some time ago that 'We will start to be a little over-built in nuclear (power) by 1987, maybe 1986.' In January 1986 he admitted in *Le Monde* that France would have two 1300 Megawatt plants too many in 1990. He said the over-capacity meant that nuclear plants would have to be operated for less than 2300 hours per year, the threshold below which they cease to be competitive with coal.

Boitteaux blamed the glut on over-enthusiastic projections of future energy demands. The EDF had projected a demand for 415 billion kilowatt hours a year by 1990. Now the projection is down to 340-390 kilowatt hours. Environmentalists and the CFDT trade union group had long since predicted that the forecasts would be too high but had been laughed at. The CDFT has now predicted that France will have twelve nuclear reactors too many by 1990. Despite the looming over-capacity, France can't seem to stop ordering plants, not yet anyway. As of May 1985 France had the



In a bid to meet an agreement on the price of the plant it was decided that China would provide certain parts of the plant rather than import them. However, Framatome has refused to guarantee the quality of the parts produced in China.

In the wake of Chernobyl, the prospect of these reactors operating so close to Hong Kong and its 6 million residents has sparked a massive wave of public opposition. The anti-nuclear movement in Hong Kong has been joined by 117 labour organisations, youth groups, social welfare organisations, unions and district boards. A major petition campaign has demonstrated the depth of concern over the nuclear power plant, with over 1 million signatures being collected already. Sahabat Alam Malaysia (SAM) and members of Asia Pacific People's Environment Network (APPEN) together with the Joint Conference for Shelving Daya Bay

Nuclear Plant and Hong Kong FOE, have called upon China to abandon the construction of the Daya Bay plant. In view of the substantial opposition from Hong Kong to the proposed nuclear project, a public hearing should be held to investigate and assess the desirability of the project.

It would seem timely for China to be planning an alternative energy program rather than travelling the nuclear path. In a report titled *The Decline of the World's Nuclear Energy* published in the Beijing journal *World Economy* in September 1984, Yang Haiqun, a member of the Economic Institute of the State Planning Commission, argued that the economics of nuclear power were making it a dying industry in nearly every industrial and newly industrialised country. He suggested that the money should be spent on the development of a long-term renewable energy program, including the es-

tablishment of a Renewable Energy Industry Bureau, and that expenditure on the nuclear program should be halted, as China is blessed with an abundance of coal, oil and natural gases as well as hydropower, wind and solar energy potential.

In view of the safe, alternative energy sources which could be expanded by the Chinese Government, and the ability of both the Chinese and Hong Kong Governments to satisfactorily ensure the safety and commercial viability of the Daya Bay Plant, the public demand for the shelving of this controversial nuclear-power plant must be heeded.

The information in this report was taken from APPEN action alert of 30 October 1986, and the Hong Kong FOE newsletter.

What you can do to help

• Send letters and telegrams of support to the Joint Conference for Shelving Daya Bay Nuclear Plant and Hong Kong Friends of the Earth. Our solidarity and support at this stage is crucial.

Ms Linda Siddall, Mr. Fung Chi Wood,
C/- Friends of the Earth,
1424 Princes Building,
Central,
HONG KONG.

• Send letters and telegrams of protest to the following:

Premier Zhao Ziyang,
Beijing,
PEOPLE'S REPUBLIC OF CHINA.

Mr Deng Xiaoping,
Vice-Chairman,
Beijing,
PEOPLE'S REPUBLIC OF CHINA.

Mr Zan Yunlong,
General Manager,
Guangdong Nuclear Power Joint Venture
Company,
GNPJVC Building,
Shenzhen,
PEOPLE'S REPUBLIC OF CHINA.

• Send copies of letters and telegrams to the following newspapers in China and Hong Kong and as well to APPEN, C/- SAM 37, Lorong Birch, 10250 Penang, WEST MALAYSIA.

Editor,
Renmin Ribao,
2 Jintai Xi Lu,
3838 Beijing,
PEOPLE'S REPUBLIC OF CHINA.

Editor,
Guangming Ribao,
106 Yongan Lu,
0342 Beijing,
PEOPLE'S REPUBLIC OF CHINA.

Editor,
South China Morning Post,
Tong Chong St,
HONG KONG.

world's second largest nuclear program with 41 plants in operation, 23 under construction, and six in the planning stages.

In January 1986 the Mitterand Government authorised EDF to apply for a site permit for the Le Carnot project; two large (1450 Mw) reactors to be built on an island at the mouth of the Loire. They were to replace the Le Pelerin project, started in 1979 and abandoned in 1982 because of citizen opposition. The Government had many more plans up its sleeve. The Industry Minister, Laurent Fabius, wrote to Marcel Boitteaux confirming that one reactor a year would be ordered up to 1989. He said electricity demand actually justified only one new plant to 1990 but the Government 'wants to preserve the advance of the French nuclear industry.'

The reactor manufacturer, Framatome, still hoped the program might be extended to one and a half or two reactors a year. These hopes were dashed in April when Remy Carle, EDF's head of design and construction said EDF's efforts to sell more electricity were likely to be 'hampered' by low oil prices. He said the letter from Laurent Fabius authorising one new plant a year assumed an electricity demand of at least 370 billion kilowatt hours per year by 1990. But if the demand was at the lower end of the predicted range there might be no orders for 1988 and 1990. The future of the Le Carnot plant and three other planned plants, Penly 3 and 4, and Civaux, is now in doubt. In June the Chirac Government emphasised that one reactor a year was a maximum and that 'premature, uneconomic' investments would be unthinkable. One can almost hear the teeth gnashing at Framatome.

In fact, EDF has been burdened with over-capacity since 1984 when it formally agreed to buy 'all the tonnes of coal and all the kilowatt hours' offered over the next five years by Charbonnages de France, the nationalised coal company. This has hit the nuclear program. Three 950 Mw reactors — Bugey-2, Gravelines B-2 and Tricastin-4 —

were all shut down in August 1984 due to lack of demand, while fifteen coal stations were also placed in reserve. Three oil-fired units and one gas-fired unit were decommissioned.

While EDF's capacity has increased by 38 per cent from 1980-1985, domestic electricity demand has grown by only 21 per cent. One-third of this increase has come from the nuclear industry itself, largely from the mammoth enrichment plants at Tricastin. These plants consume about 8 per cent of France's electricity, roughly the output of the four nuclear plants nearby. Much of the remaining rise in electricity demand is accounted for by EDF's promotion of electrical space heating.

EDF is trying to sell its excess electricity overseas. A 2000 volt cable has been constructed to the UK, and Britain's electricity authority says that French electricity will be 25 per cent cheaper than its own. But EDF is having trouble selling to Spain (electricity exports down 50 per cent in 1985) and West Germany. According to *Nucleonics Week*:

Officials of the Saarland State are complaining that under French regulations, radio-active emissions from the new Cattenom nuclear plant in Lorraine may exceed those allowed from German plants by a factor of five.

EDF's largest customer so far has been Switzerland. Total exports contracted from 24.8 billion kilowatt hours in 1984 to 23.4 in 1985, hardly the dynamic growth it is counting on.

The Breeder Program

France is said to lead the world in fast-breeder technology. Its only rival, since the US abandoned the Clinch River breeder project, is the USSR. The French Superphoenix fast breeder is, at 1200 Mw, the biggest operating. Its German twin, the SNR-300, has yet to receive a licence.

But the French fast-breeder program faces a crisis in direction. Things started to unravel for it in December 1984 when Marcel Boitteaux said that Superphoenix would cost

20 billion francs, including 5 billion francs for financing (about \$A2.1 billion). This was not bad by world standards, but the French were not pleased. Boitteaux told the French parliament that building the plant had been 'harder than we expected'. EDF, who owned 51 per cent admitted it was too expensive. He said, 'The fast breeder reactor is needed as an alternative, should the tensions linked to uranium supply become too great.'

The next French breeder is now seen as a 'receding target'. Meanwhile, the breeder construction consortium, Novatome, is having financial problems and may have to lay off many of its 750 workers. Maybe this is just as well. It would seem foolish to start design work on Superphoenix-2 without at least twelve months' operating experience on Superphoenix-1.

When the first Superphoenix was connected to the grid in January 1986 it had cost 25 billion francs for the plant itself, engineering, fuel, a spent fuel pool, financing and exchange losses. It was 2.3 times as much as Palluel-1 and 2 reactors.

Remy Carle put an optimistic face on it, saying that with experience gained in building the first commercial fast breeder, the next would cost only 1-1.7 times as much as a conventional pressurised water reactor. But the EDF estimated fast breeders would cost at least 30-50 per cent more than conventional reactors.

France and Germany have ended up in a messy dispute after agreeing to co-operate on fast-breeder reactors. EDF has refused to help fund studies on a West German fast breeder without 'ironclad' guarantees that a site in West Germany will be found and licensed in time. Germany will not co-operate in a new French project until the German project is completed. France wants to build its next breeder by 1994 but says that if no compromise with Germany is reached by the end of 1986, research and engineering teams will have to disband. Novatome fears it will be a 'long crossing of the desert' before any further breeders are ordered.

Chernobyl

The Chernobyl disaster strengthened opposition to nuclear power in France, but its effect on the industry has been less than shattering. Shortly after the accident, Framatome said:

It's not good for business, but on the other hand, there's not much new construction, so we'll have more attention on safety at existing plants. It won't have any effect in France in the long range.

On 2 May EDF held a press conference 'to discuss Chernobyl and assert that French reactor design is different'.

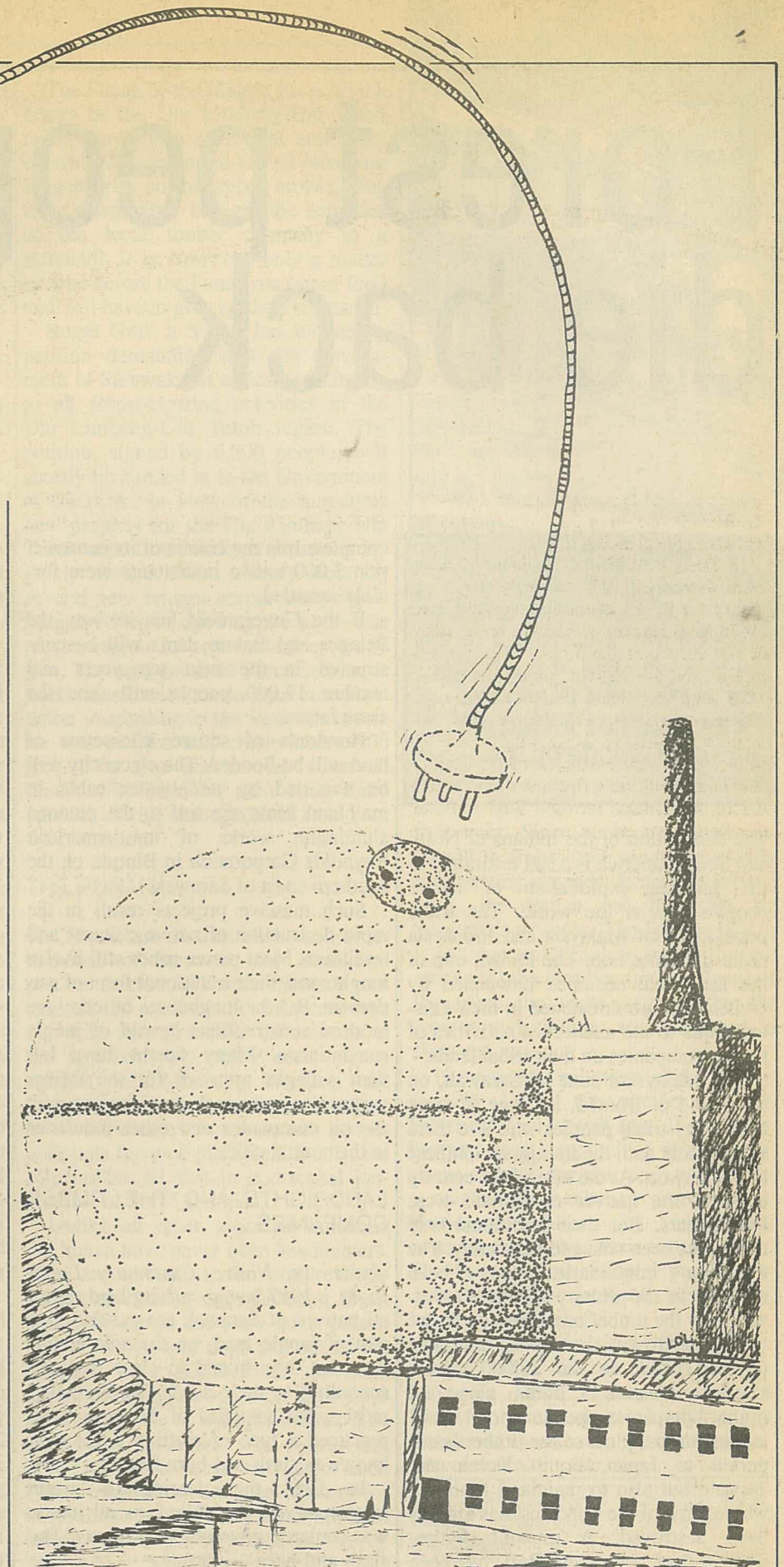
But some doubt has been raised about EDF's older gas-graphite reactors. According to one report:

If analysis of the Chernobyl accident shows up some new element that calls into question the safety of Chinon A3 or even the other French graphite reactors and if solving the problem proves too costly, EDF could be led to shut down the gas-graphite units.

In July the CFDT union group called for two independent commissions to draw up action plans for nuclear information, for day-to-day and crisis situations. It also asked for a national debate of energy priorities. French public opinion was swayed when it was revealed that France suffered radiation levels on a par with Italy, where extensive precautions were taken. Chernobyl's radiation had not magically stopped at the border. But the French authorities said there was no cause for alarm and recommended 'no special measures'.

By the end of May public confidence was shaken by reports of a near miss at the Bugey plant in 1984 in which 'systems failures led to an automatic reactor shut-down and a total loss of plant power' and one of the two sets of emergency generators failed to start up.

John Hallum is an independent energy researcher employed by FOE Sydney.



Forest people die back

In the Malaysian state of Sarawak on the island of Borneo, timber companies are logging the rainforest. For the people who live in the forest the logging is a final blow. Peter Graf has visited the area and reports on the situation.

The destruction of the Indians of North and South America is a sad testimony to the ruthless exploitation of native peoples around the world. The tribal populations of Malaysia and Indonesia share the same fate. The Punan, one of the last tribal societies untouched by civilisation, are threatened in their existence due to the unchecked activities of timber companies on their tribal lands.

The Malaysian state of Sarawak, on the island of Borneo, is home to more than thirty tribal peoples who live there side by side with the immigrant Chinese and Malaysians. At the turn of the century most of the natives of Borneo were headhunters. But their traditional way of life has been changed drastically. The Christian missionaries have been replaced as the primary agents of civilisation by the timber companies, who are rapidly destroying the tropical rainforest of the island. In the 22,000 square kilometre district of Baram alone, 26 timber companies operate a total of 44 logger camps. Most of the timber is exported to Japan, South Korea and Taiwan, but also to mainland Malaysia where most of the rainforest has already been destroyed. A gigantic hydro-electric dam, the Atang Bari, has been

completed; in the course of its construction 3,000 native inhabitants were forcibly resettled.

If the Government has its way the Pelagus and Bakun dams will be constructed in the next ten years and another 17,000 people will face the same fate.

Hundreds of square kilometres of land will be flooded. The electricity will be exported by underwater cable to mainland Malaysia and to the planned aluminium works of the American Reynolds Corporation in Bintulu on the southern coast of Sarawak.

Such massive projects result in the rapid destruction of native cultures and traditions. Most native tribes still live in longhouses, their traditional form of settlement. But the longhouses of today are modern constructions devoid of jungle romanticism. Many youths have left their villages to work for the timber companies or to seek employment with the oil companies and other industries in the coastal cities.

LANDRIGHTS AND THE TIMBER COMPANIES

Under the *Native Customary Lands Right*, a 1957 law governing land rights, all natives of Sarawak are entitled to a plot of jungle land, on the sole condition that they intend to clear the land according to their needs. Traditionally, most tribal societies of Sarawak have practiced a type of shifting cultivation known as slash-and-burn farming.

In 1958 the clearing of virgin rainforest was prohibited, as all jungle was declared government property. The slash-and-burn farming of the

Aborigines became subject to government authorisation. However, such permits were rarely granted.

Instead, according to the local environmental organisation, Sahabat Alam Malaysia, it is an open secret that clearing permits are frequently bought directly by members of the Government or their relatives. They sell them to the timber companies who, in turn, pass them on to sub-contractors. One of the effects of this system is that the people who finance such ventures remain virtually anonymous.

The competition among timber companies for such licences is becoming increasingly intense because there is less and less rainforest left to clear. It comes as no surprise that the Government would even sell permits for land which, according to the provisions of the *Native Customary Lands Right*, belong to native tribes — without the knowledge of the rightful owners, of course. In cases like this, the lack of written certificates of ownership has proven fatal for many tribes. Approximately 20 per cent of the surface of Sarawak is legally in their possession but only 2 per cent have been surveyed and confirmed in writing as tribal lands.

NATIVE RESISTANCE

Recently there has been a marked increase in the number of conflicts between timber companies and natives. The timber companies exploit the natives by taking advantage of their ignorance (in matters concerning land rights), by intimidating and bribing them. The Punan tribes in the region of Ulu Limbang-Ulu Tutoh in northern

Sarawak are an example of this. The first Punan in this region were forced to give up their nomadic existence about twenty years ago. The pressure of the timber companies on their tribal lands has dramatically increased since. Large sections of rainforest south of the Sungai Tutoh River have already been depleted. Many Punan have been resettled in longhouses built by the timber companies by way of compensation. However, becoming settled has become a necessity for the Punan for an additional reason — there isn't enough rainforest left to sustain their traditional hunting and gathering activities. The government now teaches them to cultivate rice and *ubi kentang*, a type of sweet potato, to replace sago, the staple food of the traditional Punan diet. To the Government, the end of nomadism with its civilising influence on the Punan, is a positive development. The Punan have become easier to control, particularly with respect to the influence of alleged communist terrorists who, according to the Government, are still hiding out in the rainforest near the border of the Indonesian province of Kalimantan.

The civilised Punan occasionally still go hunting in untouched (that is, remote) territories. They usually hitch a free ride on the trucks and Land Rovers of the timber companies who, fully aware of the wrath of the Punan, have tacitly accepted this system of free transportation. But the trips to the vanishing hunting grounds are becoming longer and longer.

In October 1985 a bridge across the Sungai Tutoh River at Long Bakawa, built with Japanese capital, was inaugurated, opening up further Punan territories to the bulldozers of the timber companies. The Punan proceeded to mark their lands with bush knives and repeatedly demanded a stop to the large-scale deforestation. All these appeals, as well as a petition addressed to the Government and the timber companies, have remained unanswered. The timber companies eventually conceded negotiations on some kind of financial compensation. The scheme devised by the timber companies is clearly aimed at 'buying' the village chiefs. They are to get SFr.1.50 for each exported tree, leaving SFr.0.50 to be divided up among the remaining 10-15 families of each longhouse.

The Punan of the Magoh River, in the centre of the Ulu Limbang-Ulu Tutoh region have been somewhat more successful. Threatening to kill all incoming loggers with poison-tipped arrows, they have temporarily brought the activities of the local timber company to a standstill. It is, however, only a matter of time before the Punan run out of food and will have to give up their resistance.

Roger Graf, a Swiss, has initiated a petition demanding that the Government of Sarawak put an immediate stop to all forest-clearing activities in the Ulu Limbang-Ulu Tutoh region. The petition, signed by 6,800 people, will shortly be handed in to the Government of Sarawak. In view of the numerous new projects for the Ulu Limbang-Ulu Tutoh region international protest is urgently needed. Plans already exist for several new bridges across the Sungai-Magoh River to open up the north-east of the region to commercial exploitation. The area south of Long Seridan is to be transformed into a giant rice plantation. According to the Japanese investor this project will create about 100 jobs. The time seems near when all Punan will have to earn their daily handful of rice through hard labour on the plantation.

THE PUNAN

The Punan are the last of the native inhabitants of Sarawak, the Malaysian part of Borneo, who are virtually untouched by civilisation. In more than one way they are quite different from the approximately thirty other native peoples of Sarawak. Whereas the Punan, within the boundaries of their tribal territories, are a nomadic people with huts for each individual family, the other tribes all live in communal longhouses of 10-15 families.

Unlike all other tribes of Sarawak, the Punan have never been headhunters. They are nomads of the rainforest and subsist on hunting and gathering. Even today, the Punan use blow-guns, poison tipped arrows, and dogs and spears for hunting. Their staple foods are meat (boars, monkeys, birds) and sago flour from the trunks of wild palm trees. The sago flour is mixed with water and boiled down to a pasty mush. Each Punan tribe has an assigned territory for its nomadic life. Punan shelters are built entirely from plants of the rainforest.



A Penan settlement in Long Leng, Baram, Sarawak

The Punan stay in one place for about three months, then move on in search of another spot with an abundance of ripe fruit trees. Since boars are equally attracted to fruits, such areas are usually rich hunting grounds. Besides meat and sago, the Punan eat fruit but no vegetables or roots. The bag, even if it is just one small bird, is evenly divided among all the families (up to fifteen) of the tribe; the fruits gathered by the women and children are distributed in the same way.

The nomadic existence of the Punan severely limits the number of inhabitants in any given area. If one tribe happens upon a spot which promises an above-average harvest, they will invite a neighbouring tribe to share in the abundance. After the visit the neighbours return to their own territory. The Punan are an integral part of the ecosystem of the rainforest which they have never disturbed.

Eight nomadic and four partly nomadic tribes still live in the Ulu Limbang-Ulu Tutoh region of northern Sarawak; but their existence is threatened by the commercial exploitation of the rainforest.

This report was sent to us by Peter Faigl, Botany Department, University of Queensland.

INTERVIEW

Phillip Toyne

The ACF: Where to now?

The Australian Conservation Foundation (ACF) is Australia's largest conservation organisation. This year the ACF appointed Phillip Toyne, former legal adviser to the Central Lands Council, to be its Director. Larry O'Loughlin from *Chain Reaction* spoke to him after two weeks in his new job.

ACF's name and address at its national office in Hawthorn seem to suggest a big, staid organisation. Appearances soon change that impression. The offices are bland and unimpressive, with photocopiers in the corridors and thin partitions dividing work areas. A busy train line passes by the Director's office and one can watch the top of trains through what was once a lovely arched window, until another partition divided it from the next office. (I wondered if people ever signed those partitions!)

Phillip Toyne was sitting at a small desk pushed into the corner of a room that looked like an afterthought—a space between two doors. The new Director was wearing moleskin trousers and a healthy Central Australian suntan. He rose from his desk, greeted me and sat at the opposite end of a school surplus laminex-topped table.

So I believed him when he said that ACF was not a wealthy organisation with wondrous resources at its command.

'We're desperately seeking to keep our campaign staff up and we're trying to expand our operations. We've got no

office in South Australia, for instance, and we badly need one. It's a brick-by-brick process and the Northern Territory and South Australia are the missing bricks. The great strength of the organisation is that at least it has councillors coming from each area, so there is a good cross pollination of ideas and views that way. But we need a campaigning presence everywhere.'

I wondered aloud whether there was a difference with organisations from out bush being far more grass roots than ACF.

'It's recently become obvious that the ACF has too much to do for the employed staff to cover the field, and there's an exciting new push inside the organisation to redefine the role of members into a much more vigorous one than it has been in the past.

'That's being done in two major ways—a relook at the role of the branches so that they will have some significant role, not only in cam-

paigns, but in the preparation of policy. Also, the role of the volunteers. We want to utilise our volunteers in a whole range of things. Recently we had volunteer orientations to get people more attuned to what the organisation is on about. It is much better if volunteers are involved in the work of the organisation, and not just spectators to it.'

Hard financial times and a lack of resources seem to indicate that ACF will be cutting back on its activities. But Phillip Toyne was not ready to accept limitations.

'It does mean that we must be more stringent in assigning priorities. We have got to maintain a national view of things so that we're not finding ourselves buried in local issues from which we can't extract national messages.'

He cited as a good example, the ACF's decision not to get involved in the dispute over the high-tension power lines through Brunswick, Victoria, which is rapidly becoming a powerful

issue in several local council areas. Although the ACF is not involved, he still sees that it has a role to play. 'It ought to have an interest in the question of whether high-tension lines constitute a health threat to people because there are literally thousands of kilometres of power lines going through residential areas around the country.'

Phillip Toyne also wants to be sure that the ACF rationalises its campaigns and activities so that it does not duplicate the work of other organisations or compete with them. He says he brings no blinding new insights to these problems or how to resolve them, and believes that the best thing to do is to talk.

I see another glimmer of light and ask whether the ACF will now be supporting other sorts of activity beyond policy formulation and lobbying, citing rallies and blockades as examples.

'ACF has always been engaged in those sorts of activities. People tend to forget that ACF injected a large amount of money and energy into the Franklin campaign. I suppose that what concerns the Council is that the organisation contributed so much and no one knows they were there. Everyone knows that the Wilderness Society was there, and for very proper reasons. They did a wonderful job. But there must be concern for ACF if they're doing contributory work and not being recognised for it. It has to affect membership levels for a start. We've got to make sure that ACF's work is well known, both to the community at large and to the members.'

It is his impression that

'I see enormous potential for cementing links between Aboriginal groups and the environment movement, and the peace movement for that matter. We can no longer afford the luxury of special-interest groups and running our own way.'

ACF is very keen to raise its profile politically and become a more vigorous lobbying voice, especially nationally, and that it was felt that his experience with Aboriginal land rights involved similar skills. I asked whether this meant that Aboriginal issues were going to become more important.

'There is a great deal of commonality of interest between Aboriginal politics and conservation politics, because both groups are suffering from the same sorts of problem, that is, being dropped off the agenda of national concerns in the face of economic imperatives that are being put on us by business and the mining and timber industries in particular. The Federal Government is doing everything it can do to reinforce this. The big task ahead of the conservation movement is now to assert that there are quality-of-life values that have to be added to any equation of what's going to be done in this country. We have got to start tackling the political structures to make sure that we can start injecting these views into the debate. Also, we've got to develop the capacity to challenge economic judgements and that's something that ACF's working on now.'

The ACF is currently preparing a major submission on the economy to present to the Senate Standing Committee on Trade and Manufacturing. 'Our basic proposition will be that it is economic madness to simply exploit our national resources—our forests and our minerals—to fling off vast quantities of unprocessed materials overseas and then have to import manufactured materials at much higher cost. Our argument will obviously be that we've got to strike a balance where we have sustainable growth based on renewable

'It is economic madness to simply exploit our national resources—our forests and our minerals—to fling off vast quantities of unprocessed materials overseas and then have to import manufactured materials at much higher cost.'

resources and that we've got to be extremely wary about the use of our national resources and not take short-term profit from resources which must run out. That's going to rely on expert economic advice, and that's something I don't have; very few people in the environment movement do, but it's something we've got to go beyond.'

ACF receives more money

tion because, when it comes to dealing with government, I'm not saying that they have to pull their punches, but they have to fight very hard to get their money each year.'

Phillip Toyne sees that one of the ACF's great strengths is that the bulk of its money comes from private sources and that gives the organisation a great deal of latitude to run campaigns as hard as they can. 'At the same time, I



from the Federal Government than any other single conservation organisation in Australia. I asked how this affects the things ACF can say and its relations with the Government.

'We get only 10 per cent of our money from the Government and it's critically important. But I'm used to working for Aboriginal organisations that get all of their money from government and they're in a much more tender posi-

think the ACF needs to maintain open lines of communication with decision makers like Ministers. Obviously we can't afford to alienate the Government so completely that no talking can be done. It's not by accident that my first trip away has been to Canberra where I've been meeting with Cohen, Holding, Senator Evans and other people who are going to have a direct bearing on decisions that are

going to be made over Kakadu, woodchipping and so on. It's absolutely essential that we have immediate contact.'

I can see that Phillip Toyne is going to be very busy with the ACF and ask whether that means he is going to be lost to Aboriginal issues. 'I've worked in Aboriginal work for 14 years and I feel at the end of that time. The Aboriginal groups and I both need a change—new advice, new directions and so on. But I see enormous potential for cementing links between Aboriginal groups and the environment movement, and the peace movement for that matter. We can no longer afford the luxury of special-interest groups and running our own way.'

He sees that the peace movement, the environment movement and certainly the Aboriginal movement are being set upon by huge opposing forces. 'We're under the enormous pressure of a very right-wing Government and it's going to be worse under a coalition Government. We need to organise to survive and we need to broaden our support base for that reason. That is why the Getting Together and the Broad Left Conferences were so vital in that process, even if they're discouraging at the time, I think they're a step in the right direction.'

'ACF may have a role to play in this process. We've got to identify the most effective role it can play. I don't have any magic answers, but I really want to look at that; I don't want to just sink into the role the organisation has always had.'

LETTERS

from page 2

Were these Melbourne people really anarchists or not? It just so happens that there was a very large gathering of anarchists in Melbourne just after that Palm Sunday. Discussions there revealed that: only one known anarchist was among those arrested, and he had been standing watching the fight, not participating; the literature being handed out by those people who did attack the pro-Anzus groups was not anarchist but International Socialist, that is, anti-anarchist. There was also the case of a church fire in South Melbourne attributed by some to anarchists because of graffiti left at the scene, but again, informal conversations have provided no reasons to believe that.

One result of the stigma has been to convince some people that they show their seriously-held anarchism by burning down churches or disrupting opposition events. There are certainly some very good reasons for being critical of the Palm Sunday procession organisation and Helen Caldicott. But destructive heckling and/or throwing stuff is not going to achieve anything.

If people who are interested in long-term, people's power forms of organisation don't stay

vigilant and prepared to question all attempts to stampede opinion, we don't have any chance at all to turn this world around.

Bob James
Newcastle 2300

Bob James is a freelance historian whose book *Anarchism and State Violence in Sydney, 1886-1896, is being distributed by All Books. He has been an activist for years and now believes a knowledge of how social attitudes came about historically can help radicals*

The almost inevitable advent of statehood for the Northern Territory provides a unique opportunity for the establishment of a participatory democracy by peaceful means.

How is this to be achieved?

Firstly, we require a Constitutional Congress, not one selected by the government of the day, one that is accessible to any interested organisations or persons on a voluntary basis.

As interim decisions on sections of the Constitution are made, these decisions should be passed for discussion to the member organisations, to area committees, to town committees, street committees and, if necessary, to street section committees. The results of these public discussions should then be fed back along the same path to the Congress. This system would ensure that a reasonable consensus would eventuate. Finally, a referendum should be held, with yes or no voting on

each section. Payment for attendance at the Congress would be made only in cases of proven undue hardship, thus ensuring that only publicly concerned citizens are likely to participate.

The alternative is an imposed Constitution that suits the incumbent government, not one that suits the people. Newspapers would be doing the community a service by opening their columns for debate.

C M Friel
Alawa, NT 5792

Thank you once again for your last issue. It is full of very well researched and relevant articles and I find that I urge all my friends to read it as well. Some I hope will join. It is unfortunate that most of the information is so bloody negative, but of course you alert people on the issues of concern.

Living in Mallacoota and very much loving the area I have written to 400 of my guests and urged them to write in about the woodchip issue for East Gippsland. Over 80 have sent copies of their submission to me and I am very happy to have such good friends.

Your article on the woodchip industry in Number 47 Spring 1986 was a good update. There is one aspect of the whole issue that baffles me and I feel might warrant research and maybe a further article in *Chain Reaction*.

Why do government employees and politicians go for the woodchip option when there is such an obvious distaste for this within the population? What makes these people tick? Why would they go for the unpleasant alternative? Asking these questions as a naive person I would have to answer myself and say, they are for it, against groundswell of opinion, because they are better informed and perform their duties honestly.

Am I right??!!! I hope not, because if they are I would have to reconsider everything I have ever understood about environmental values. Please find out for all of us and maybe interview key people with questions of this sort.

Peter Kurtz
Mallacoota, Vic 3889

It is interesting to note the difference between the vitriolic attacks being made on the Women for Survival in Canberra and the almost complete lack of concern for the much more serious violence to be seen at any weekend football match.

Could this be because the women are protesting for peace and the sporting fields are used as training grounds for the violence and contempt for others so necessary for the mindless cannon fodder of war?

Or is it because these women have thrown off the yoke of macho madness that has such a paralysing grip on the mental processes of a large section of the population?

Despite the frightened squawks of protest from the goody-goody housewives and the predictable outbursts from the more inane of our politicians, the political parties of all persuasions would do well to read the message — there is an increasing number of people in Australia who want a say in policy decisions such as defence, economic direction and environmental protection.

Australia has been under the economic and political satrapy of the United States for too long.

C M Friel
Alawa, NT 5792

You are invited to write letters to *Chain Reaction* with your comments on the magazine or on other issues of interest. Letters should be kept within 300 words so that as many as possible may be published. Longer letters may be edited. Write today to *Chain Reaction*, GPO Box 530E, Melbourne, Vic 3001, Australia.

REVIEWS



Films

The Fringe Dwellers, produced by Sue Milliken, directed and written by Bruce Beresford. Distributed by Virgin Films Ltd, London, through Roadshow Australia.

Reviewed by Ian Foletta

Based on the novel of the same name by Nene Gare, *The Fringe Dwellers* deals with an Aboriginal family living in a small rural town in Queensland. The title describes the manner in which the Aborigines survive, living on the edge of white society; the film deals with the way they react to this.

In general, the Aboriginal community is shown as one of drunkenness, idleness and gambling. The camp is a mess of squalid humpies, an image that whites like to portray so as to justify their prejudices. But

the image is also sympathetic. The culture and values of the people and their clash with white society is also shown. Skippy, the king of a people who no longer exist, is a drunkard. You can still sense the spirit of the dingo in him and his sadness at no longer being believed in. The stories of Skippy and the others who still believe in the spirits now only serve to scare the children and amuse the adults. They are on the fringe of their own traditional culture as well as white culture.

The film deals mainly with problems internal to the Aboriginal community: the sadness of the older Aborigines like Skippy, the inability of others such as Mollie and Joe Comeaway to understand the spirit world, and their displacement from it and from the 'white fella' world which is seen as being complex to the point of being ridiculous.

Trilby Comeaway, the 15-year-old daughter of Joe and Mollie, is defiant. She doesn't want to live in a humpy and the film revolves around her attempt to find some-

thing better. With her sister Noonah, a trainee nurse at the local hospital, she convinces the family to move into a Housing Commission house on the estate. This move is not as highly regarded by their parents as it is by the sisters. Eventually the move fails and the family are back at the camp.

The film's director and scriptwriter, Bruce Beresford, describes it as one about a family: 'Colour, racialism, mistreatment and all the rest of it, is not a central theme of *The Fringe Dwellers*. It is implicit, but to me the story is one of a family.'

This is where the film falls down. It is not the story of a family but rather the story of an entire people. It is unfortunate that Beresford did not see it that way or else he may have made a film that examined the Comeaway family in its entirety. 'Colour, racialism, mistreatment and all the rest of it' are quite important factors in defining the Aboriginal lifestyle in the 1980s. But there may be very good reasons for viewing the *Comeaways* in the manner he did — namely, commercial success.

When Beresford first read *The Fringe Dwellers* some seven years ago he wanted to make the film then. Unfortunately he didn't get the support he expected from the people he discussed it with. He says 'They told me "Nobody wants to see a film about a bunch of Aborigines".' It is indeed a sad fact that people do not want to watch a film about Aborigines but instead prefer history of the form given in *The Man From Snowy River*. Perhaps this why Beresford left the political to focus on the personal, so that the white audiences, which, being a commercial release this film would be aimed at, would not feel too guilty.

Overall the film is worth seeing if for no other reason than to prove that people do want to see films about Aborigines. But it must be remembered that the issues are glossed over in a compromise for commercial success, a compromise that may go undetected by mainstream audiences.

Ian Foletta is a member of the Chain Reaction collective.

REVIEWS



Ocean dumping of waste 1957.

Journalists Barlett and Steele won the Pulitzer prize with *The Philadelphia Inquirer*, a book based on a series of articles that appeared in that newspaper late in 1983. Written in journalistic style, it is immensely readable, though its contents are horrendous. The authors draw from the records of local, State and Federal agencies and courts throughout the United States, providing a comprehensive bibliography.

The situation is bleak. The authors document at least 150 locations across the US where high-level and/or low-level radio-active wastes are stored. They explode the myths perpetuated by the authorities that a 'safe' solution has been found by examining the existing technology. There are chapters which examine the accumulation of high level waste, and the unsuccessful search for repository and dump sites.

Forevermore examines the history and failure of the fuel-rod reprocessing industry both in the United States and overseas. Initial moves to establish a commercial nuclear-power industry were based on the assumption that used fuel rods would be recycled into fresh fuel in a reprocessing plant. This centrepiece of the nuclear industry has failed on economic, technological and environmental grounds.

The book also considers the way in which the reprocessing myth is still used to peddle the 'peaceful' uses of nuclear power in countries interested in developing nuclear power. The links between the Reagan administration's advocacy of reprocessing and the nuclear weapons cycle are demonstrated. In a chapter entitled 'The Politics of Neglect', the political process which has led to official policy on nuclear waste being that of neglect by default is examined.

It is alleged that the Congress, the White House and the bureaucracy have repeatedly misled the American public by giving overly optimistic assessments of technology and announcing ambitious programs that have little chance of success. They have initiated projects then scrapped them based on policies of false assumptions.

A tangled web of State and Federal regulations, many of which have never been implemented, has led to a situation where no central record-keeping system exists to document what wastes are where. Nor is there any uniformity of approach in dealing with waste across the nation.



Books

Forevermore — Nuclear Waste in America by Donald L. Bartlett and James B. Steele, Norton, London, 1985. Distributed in Australia by Jacaranda Press.

Reviewed by Lyn Allen

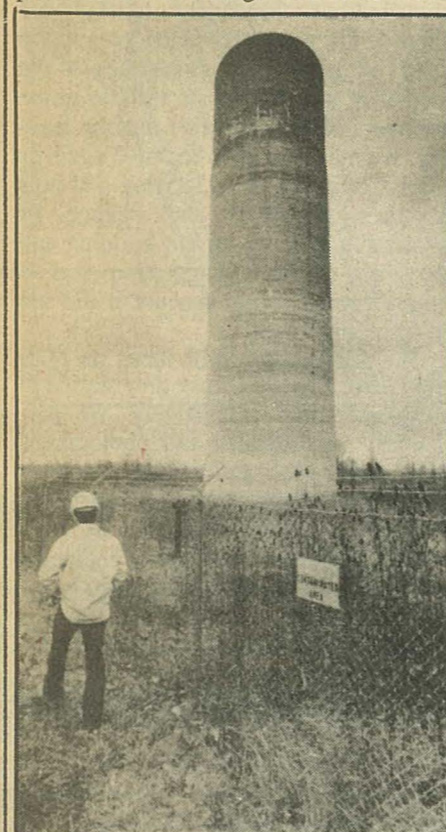
Everything you always thought was happening and worse. *Forevermore* confirms the worst fears of the anti-nuclear lobby — there is no safe method yet devised for the disposal of nuclear waste, nor is there any real political will to solve the problem.

Forevermore examines the issues surrounding nuclear waste in America: the amount produced, past management efforts, the politics of disposal, state of current technology and the outlook for the future.

Because authorities do not wish to admit that they have been approaching waste management irresponsibly for years, official policy is likely to continue to favour 'doing nothing' as the preferred waste-management technique.

Forevermore highlights the tremendous difficulties — political, technological and environmental — associated with the treatment of radio-active wastes.

Australians would do well to heed the lessons of the American experience. While this country does not have the legacy of a rampant nuclear-power industry, it does have the makings of a nuclear-waste management problem: the Maralinga test sites, waste



Manhattan Project waste stored in a silo.

from uranium milling and mining, the aging Lucas Heights reactor and a multitude of radio-active isotopes in use in industry and medicine. The Northern Territory Government has signalled its support for the establishment of a nuclear-waste dump in Central Australia, and the Queensland Government occasionally indicates its interest in uranium enrichment.

Australia can and must learn from the American experiences of nuclear waste. For this purpose *Forevermore* is an excellent primer.

Lyn Allen is the co-ordinator of the Northern Territory Environment Centre and is the Australian Conservation Foundation's Northern Territory councillor.

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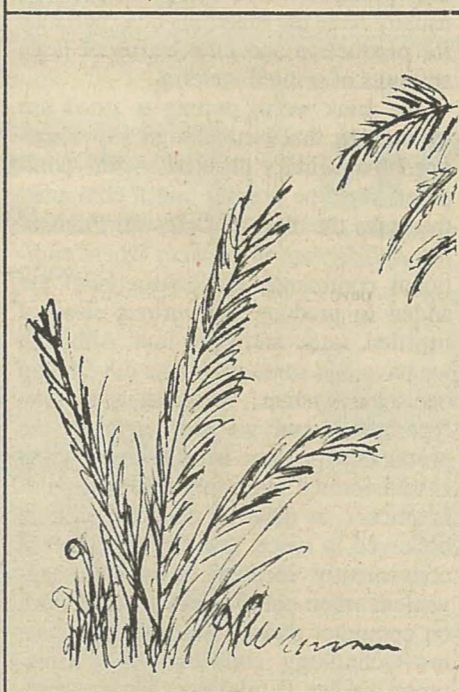
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BACKSTAGE

This is the fourth issue of *Chain Reaction* for 1986 and we would like to thank everyone for their support. There was a time in April and May when it was doubtful we would even manage one issue and, if we're going to be brutally frank, there was a proposal in late 1985 that the magazine be abandoned entirely. (It could have been folded down, but would have been awkward for posting.)

The Sydney collective and then the Melbourne collective had disintegrated leaving only two people consistently working on the magazine, which was nearly broke.

Then Friends of the Earth Australia at their national meeting in January 1986 gave *Chain Reaction* \$5,000 for promotion, a new Melbourne collective was established in March and April, and its membership approved by FOE groups around the country.

The new collective faced a situation where an edition of *Chain Reaction* had not been produced since December 1985 and subscriptions were beginning to lapse. But we have struggled on, with Eileen Goodfield and Ian Foletta especially putting long hours into production and subscriptions. One of the collective's first decisions, which then became a shared task, was to move from our salubrious offices above a porn cinema in Swanston Street, Melbourne, to the cosy shed at FOE Collingwood. There were good reasons for this move, the main one being that we could effectively trade rent for magazines. It has also led to improved *Chain Reaction*-FOE links, which slumped some years ago when *Chain Reaction* split away in a midnight flit.

We have made changes to the way the magazine is produced, to save time and money, and we hope that we can continue to produce the high-quality, informative magazine that we inherited and that *Chain Reaction* readers have come to expect. At the same time we hope to avoid burning out our best workers.

Two major changes have been to produce more liftouts and to use *laser setting* rather than typesetting. There are many reasons behind these decisions, and we would like your comments.

We print extra copies of the liftouts, and try to provide good background material that can be used as an accessible resource for some time. They also provide deeper coverage of important issues and events (Soft Energy — The Only Option; Chernobyl — the Aftermath) and can be used directly as campaign material (Bases of Insecurity). They can also be the product of groups directly involved in the issues, which helps *Chain Reaction* with additional labour and ideas. It also helps participating groups where they would not usually have the materials or experience for production and distribution of large amounts of printed material.

We think we're putting to good use technology that has been greatly developed for military purposes — the computer. We type articles into a computer, then take the disks to *Dead Set Publishing & Information Services* where additional commands (or instructions) are added to produce the various sizes of justified, *italic* and **bold** text. Although we have had some problems developing our new system, it is cheaper than typesetting, and we are closer to the production process because our typing is transformed with only a few steps. It is quicker, as material does not have to be keyed in twice, and the typesetter is conveniently located. It is also convenient when contributors send in work on computer disks. (We still appreciate low-technology contributions — sometimes the pen is mightier than the computer.)

The collective has worked fairly well in a low-key sort of way, with our major arguments being about covers. We continue to try to sort out how the collective should operate given different levels of involvement for different people. We try to operate by consensus; but most of the time we just agree with each other instead.

We now have a year behind us and we're looking forward to 1987 which will include the 50th edition of *Chain Reaction*, a revision of the popular activists' contacts list, and more original and informative material. Keep sending contributions, especially letters, and short, pithy pieces for Earth News. We need extra help in production — the load may get heavier in 1987 as some members of the collective may be leaving. We may also have to move again as FOE Collingwood is looking for new premises following the change of ownership of their current building and the Food Co-op's suggestion that it might have to move because it did not have enough space.

The 50th edition will focus on FOE and *Chain Reaction* since they started in 1973 and 1975 respectively. We particularly want stories and photographs from earlier years and will try to contact people. However, we do not have everyone's address and do not know all relevant people. You could help by sending suitable material without being asked individually. The deadline is Friday 22 May 1987.

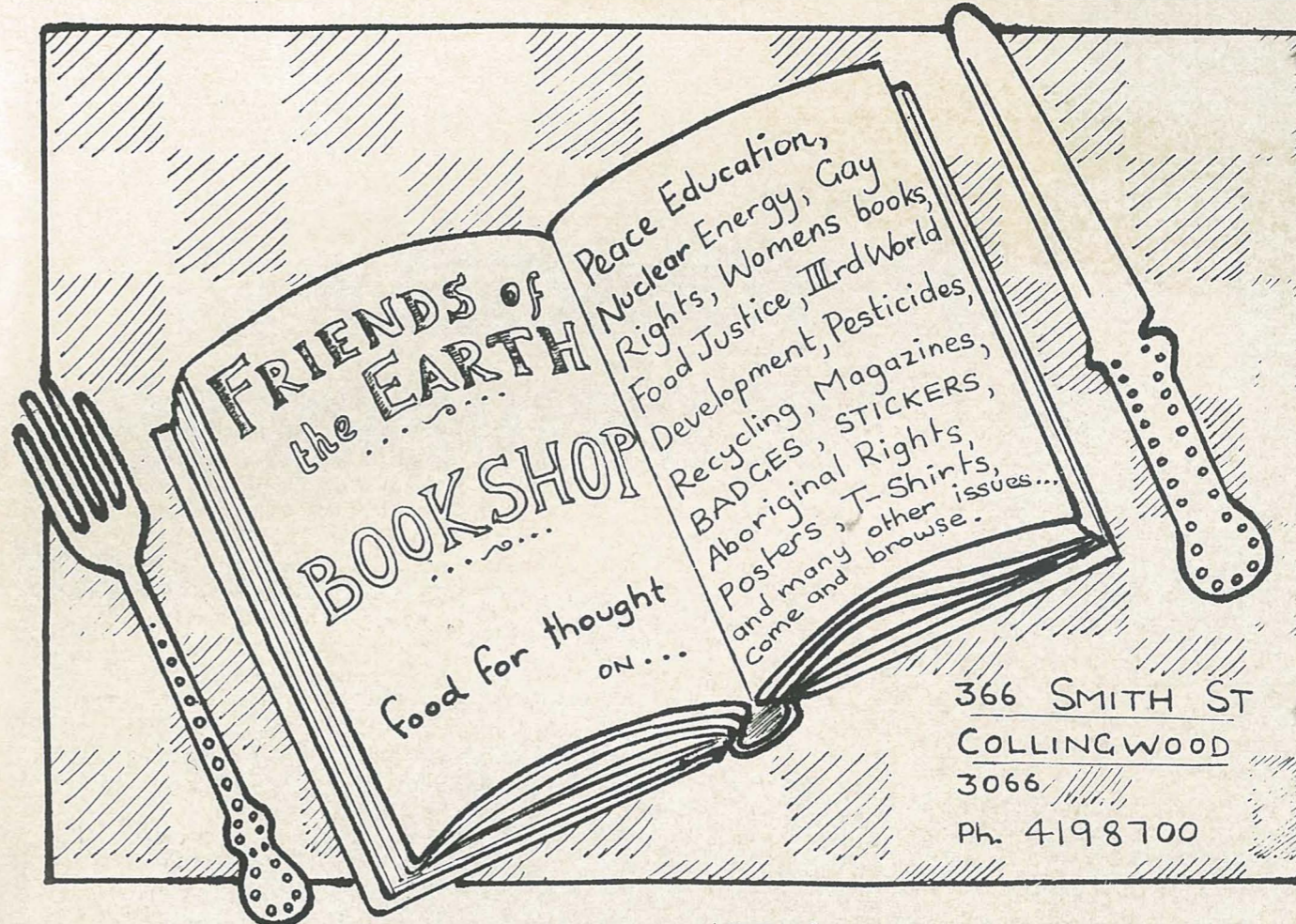
Since we are feeling optimistic, here are our projected 1987 deadlines:

Deadline for Articles

- CR49 Friday 27 February
- CR50 Friday 22 May
- CR51 Friday 14 August
- CR52 Friday 6 November

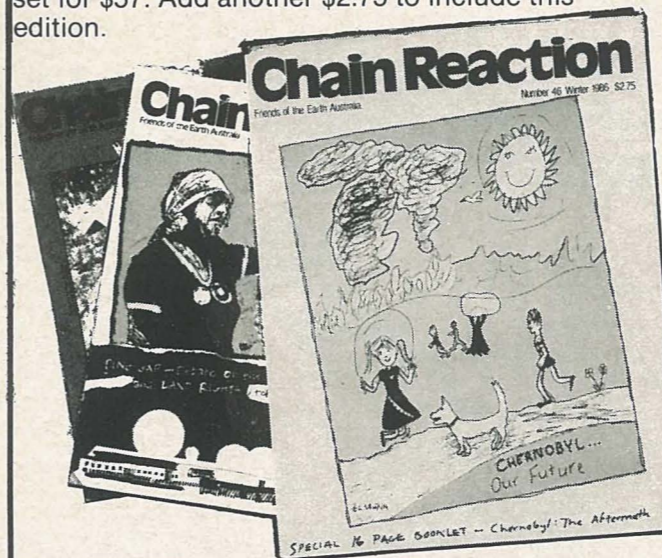
Mailout

- CR49 Friday 3 April
- CR50 Friday 19 June
- CR51 Friday 11 September
- CR52 Friday 4 December



BACK COPIES

Thirty-nine back copies of *Chain Reaction* — all those published from autumn 1976 (except vol 2 no 3 of which we will supply a reprint of the major stories) are available as a set for \$57. Add another \$2.75 to include this edition.



Chernobyl: The special feature on Chernobyl that appeared in CR 46 is also available as a reprint for \$1.00.

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