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Friends of the Earth Australia
Number 46 Winter 1986 $2.75

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REVIEWS

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Winter 1986

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Editorial Collective
Ian Foletta, Gwen Gibbon, Eileen Goodfield, Claire Henderson, Larry O'Laughlin, Mick Wright.

Production
Fran Callahan, Anne Hanna, David Spiers.

Accountant
Eileen Goodfield

Advertising
Eileen Goodfield

Earth News
Gwen Gibbon
Eileen Goodfield
Jodie Phelan

Production Coordinators
Ian Foletta
Eileen Goodfield

Reviews
Ian Foletta

Subscriptions
Eileen Goodfield

Melbourne collective
366 Smith St Collingwood
Vic. 3066
Tel: (03) 419 8700

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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.

Cover: Elsa Nicholls
Back cover: Alice Springs Peace Group.
Aboriginal land 'rights'

I wish to commend you for your article 'The not so preferred model' (Chain Reaction 45). There is one point which I think should be stressed, namely that the white man was determined to usurp Aboriginal land and nothing was going to stop him. The justification based on land image was created with the sole purpose of hiding the immorality of his action. This is clearly seen from the facts that some tribes lived in a style similar to his own, e.g. villages etc., did not stop him from usurping their land as well.

Stan Pelczynski
Malvern East Vic.

New political party

The proposed formation of a new political party by Queensland Aborigines highlights the widespread disillusionment with the existing parliamentary parties. This movement will only be of value if it reflects a widespread disillusionment with the existing political system.

While elected members of a party are quite happy to criticise decisions of that party there can be no democracy. While the party system exists and the fear of party discipline prevents honest men from expressing their opinion and voting according to their principles the whole electoral system is a farce. While external forces over which the people have no control can dominate a Prime Minister, while a Prime Minister can dominate a Cabinet, while a Cabinet can dominate a Caucus and while a Caucus can dominate a Parliament we have no control over our political birthright, we are defrauded of our right to political influence when we are defenceless in the face of media, government, and international attack on our survival and abandonament of the needs of the ordinary people by the political parties.

And the growing church involvement in Peace demonstrations is overlooked, only the Anarchists' activities might have some effect. The Bertrix tendency is not itself directly of real importance. Instead of focusing on the 100,000 peaceful marchers

continued page 9

You are invited to write letters to Chain Reaction with your comments on the magazine or on other issues of interest.

Letter length should be limited to 500 words so that as many as possible can be published. Longer letters may be edited.

Weekly publication at 10 Foundation Terrace, Glebe NSW 2037. Tel (02) 210 5000.

Bhopal reject

Union Carbide has agreed to pay US$350 million in compensation to the victims of toxic gas leak at Bhopal in December 1984 (See Bert King, Bhopal, Chain Reaction 41). The settlement was reached between the US based transnational company and Indian victims. The agreement comes with long terms of payment and the government will conduct a review of the settlement. The compensation claim is US$1 billion. Source: Consumer Values

CANAPS Cake for Cain

On 23 June 1986, representatives of FOE Collingwood, Movement Against Uranium Mining, People for Nuclear Disarmament and Anti Nuclear Armed Power Ships (CANAPS) presented John Cain, Premier of Victoria, a cake and card to mark the third anniversary of the introduction of Victoria's nuclear-free legislation. The cake, in the shape of Victoria with a warship on the side, reads 'We say no to nuclear power: although by law nuclear power is permitted in this state, we still host nuclear warships in Port Phillip Bay. A contradiction in terms!'

The owner, HKG, a subsidiary of the engineering giant Brown-Boveri said that one fuel sphere became stuck in the feed-pipe and was fed with a blast of helium, the reactor's primary coolant. A carbon layer on top of the fuel pellets is meant to keep radioactivity from escaping into the helium but on this occasion some dust escaped - radioactivity about 60 per cent of what the plant is allowed to put out per day. Increased radiation was initially blamed on Chernobyl.

West Germany's Chancellor Kohl has called for a conference on nuclear safety to be held in Berlin and from Mikhail Gorbachev of the Soviet Union.

The National Power Company will be able to continue to profit.
**Philippine conference**

A major national conference on the Philippines will be held in Melbourne from 3 - 5 October 1986 at the Education Resource Building, Melbourne CAE, Carlton Campus. Called 'The Philippines and Australia: a Struggle for Justice', the intention is to draw together people from a large cross-section of the community to look at Australia's relationship with the Philippines and how Australians can help in furthering the process of achieving social justice in the post-Marcos period. Speakers include Joe Maria Sison, ex-detainee, noted writer and political analyst and Nalib Sancho, a leading figure in GABRIELLA (the prominent women's organisation). Registration fee $20.

Contact: Kate Brennan, Australian Freedom From Hunger Campaign, PO Box 256, Fitzroy, Vic. 3065 (03)417 5170

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**Apartheid rally**

Approximately 100,000 people marched and rallied in New York on 14 June 1986 demanding an end to all US ties with the apartheid regime and commemorating the tenth anniversary of the Soweto rebellion.

The protest occurred two days after the South African regime banned all protests by declaring a nationwide state of emergency. "Protestors walked and chanted 'Remember Soweto! Jail Botha, free Mandela' and other topical pieces. There were a variety of groups — student groups, women's groups, union groups and even a group Parking mud collectors against Apartheid.' Messages were received and read from Winnie Mandela, and Archbishop Desmond Tutu — "irrevocably determined to wage the struggle for liberation of our country and the creation of a just, democratic, nonracial society." The featured guest speaker was Alfredo Nzo, secretary general of the African National Congress who said "Soweto demonstrated that oppression and peace cannot exist side by side. The regime failed in its murderous mission in 1976. It will once again fail in 1986.'

At the end of the rally the anti-apartheid coordination council vowed to continue organizing future protests against apartheid.

Source: International Press

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**Uranium doublenaps**

An article on the Maytagine uranium mine near Ouelou W.A was written by Steve Mundie. The Maytagine-Woodridge uranium project has received a major boost from the uranium market, which is ever increasing. The double naps have been discovered in the vicinity of the Maytagine property by an Australian company which is planning to develop the deposit.

Link: Nuclear disarray campaigner Senator Jo Vallentine has been urging the State Government to release its emergency plan but a spokesman for Premier Brian Burke said information would not be released until after Cabinet had approved its revision. Senator Elthol, one of the representatives from the Foreign Affairs Defence Committee, opposes the plan.

Contact: Western Mail

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**Third World Brigade**

Experience Nicaragua join the third Australian Work Brigade January 1987. Nicaragua is dependent on the coffee harvest for its economic survival. We can show our solidarity and learn first hand the reality of Nicaragua (See Beri King Packing for the revolution. Chain Reaction 4)

Contact: Latin American Information Centre

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**Population milestone**

According to the estimates of the population Institute, Washington, somewhere on earth a child is born every one second. On July 7, 1986 will be the fifth billionth person on this planet. According to the figures of the World Health Organization, the world's population will reach 4.5 billion by 1990 and 5 billion by 1995.

Population projections for the next 25 years indicate that the world's population will reach 6 billion by 2010 and 7 billion by 2025. This increase is expected to bring about significant changes in the economy and social structure of many countries.

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EARTH NEWS

Sun in harness

The Malaysian government has scrapped plans for the $60 million Bukom Dam, but the proposed Bukom Dam in Sarawak is still receiving consideration. Industrial representatives from Germany, Japan, and Norway and agents of the Asian Development Bank have recently visited Malaysia to discuss the project. On the technical side one major obstacle to the dam is the questionable feasibility of manufacturing a 600 km long transmission cable capable of carrying 400 kV of electricity. On the human side, the government is confronting the organised resistance of environmental groups. Four thousand tribal peoples affected by the dam have threatened to defend their land with their lives. The final decision on the project was made in the 1980s.

Contact: Sabah Alarm Malaysia (P.O. Box 57, Locating, Benc, Penang, Malaysia)

Palm power

The Palm Oil Research Institute of Malaysia (PORIM) is now closer to producing palm oil as a viable alternative to petroleum. In revealing the progress of the palm oil diesel pilot plant, Professor Augustine Ong, who heads the project, said the trial run for the treatment of crude palm oil into methanol esters (biodiesel) had been highly successful. As a Prelude to eventually making palm oil diesel as an alternative fuel to petroleum diesel, 200 vehicles of all types and capacities have been selected to test the palm diesel until the lifetime of the engines. The trial seeks to prove that methyl esters of crude palm oil and crude palm stem can be used as fuel for diesel engines. The vehicles will run for a minimum of two years or cover 300,000 km as required by engine manufacturers.

Source: Sun Mingmei (China Features)

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Dam news

The Indian Ocean Zone of Peace is holding a non-governmental conference on the weekend 19-22 September 1986 at South Fremantle Senior High School.

The broad aims include:
- To discuss the effect on the Indian Ocean littoral countries of increasing tension in South Africa and ways of meeting this.
- To provide a forum in Australia for people of differing ethnic backgrounds.
- To sponsor people from remote West Australian communities to attend as delegates and to meet international visitors.
- To make contact with grass roots peace organisations in the region.

Contact: Kash Gallop, Secretary Australian Peace Committee (WA) Tel (09) 335 3429

Peace conference

Plutonium in flight

One of the skeletons that has emerged from the National Aeronautics and Space Administration (NASA) to Congressional investigators, is the agency's shifting regard for safety as launch schedules are tightened.

In January 1986, NASA's Ames Rocket Safety Advisory panel questioned the agency's new launch policies.

Launch decisions were being made without the usual review at the National Aeronautics and Space Administration, and the launch was made from the space shuttle Galileo, which is to explore Jupiter, powered by radio isotope thermal generators containing twenty-one kilograms of plutonium. Ulysses, going to the Sun, carries ten and a half kilograms of plutonium.

If an accident occurs during the flight, plutonium could be spread through the atmosphere.

The launch, according to the orbit of the Sun and Jupiter, must take place in a short "window" that comes around only once every thirteen months. The old philosophy that technical perfection is more important than people has changed with Galileo and Ulysses. Schedule pressures are forcing solutions which might otherwise be rejected.

Source: New Scientist

Nuclear count

For the first time local scientists have proof that US warships visit Fremantle carrying nuclear weapons.

The vice-president of Scientists Against Nuclear Arms (SANA) Dr David Blake, who made the claim at a recent West Australian Institute of Technological (WAT) conference, said he was looking at the possibility of lowering the risks of a world shortage of electrical energy occurring.

If we care about the standards of living of general people, we must meet the challenge of the nuclear age and not dismiss it as the irresponsible course of leaving our countries and global national world in deep and probably irreversible decline.

What do we think is happening now?

Source: The Guardian Weekly

Radioactive carrot

The more the US government gets involved in the non-proliferation of nuclear weapons the more radiation the West Australian community gets.

Eleven people questioning the safety of nuclear power station in Suffolk, Queensland, were arrested.

A one-sided view. Ms Pamela Murray, the national consumer representative on the working party, said that a number of reputable researchers had pointed to problems with the technology and stressed that it is not so much the fact that claims can or cannot be proved, but that more work needs to be done before food irradiation can be said to be completely safe.

On the other hand Mr George Birch, the general manager of Steritech, Australia's only commercial irradiation company, is keen to see public fears dismissed.

He wants to extend Steritech's activities to include food irradiation and says that all of the Australian states Queensland, South Australia and New South Wales are ready to get involved with the use of radiation to kill micro-organisms.

Source: Sydney Mail

Food facts

Unwanted food stocks held in European Community stores are valued at more than $19 billion demonstrating the urgency for reform of the Community's farm policy. Late 1985 stocktaking revealed butter 977,000 tonnes, beef 730,000 tonnes, cereals 18.4 million tonnes, and skimmed milk powder 502,000 tonnes. The size of the stocks depressed market prices within the community and contributed to lower prices overseas.

West, the general manager of Steritech, said that if there was an accidental irradiation because it has been in the Australia, those available would be clearly labelled for consumers information.

Source: Source: Sun Mingmei (China Features)

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Source: Source: Sun Mingmei (China Features)
Foe International

The Annual Meeting will take place in Penang 6-16 September 1986.

The schedule is:

6 September: Arrival and jet-lag adjustment
7-9 September: Tropical rainforests including one day in the forest
11-12 September: Annual meeting
13 September: Break
14 September: Annual meeting
15-16 September: Jungle Holiday

Collingwood

FOE Collingwood has a bookshop, a food co-op and an anti-uranium collective. The bookshop has two main projects on which it is presently working, tied in with the International Year of Peace. We are publishing a select annotated bibliography on peace education, social justice and the nuclear environment as well as producing a poster on the nuclear question. Both of these should be available shortly.

The FOE Collingwood Anti-Uranium Collective is a group of activists primarily concerned with Australia’s role in the nuclear cycle. The disaster at Chernobyl in the Soviet Union has reinforced our opposition to the nuclear industry and instilled a sense of urgency into our group.

Following the Chernobyl meltdown our anger and frustration with the world-wide nuclear madness was channelled, firstly, into a snap rally in the Bourke Street Mall, which was attended by approximately 500 people despite short notice, followed up with an action at the Uranium Information Centre where six activists from FOE and the Movement Against Uranium (MAUM) occupied the office. For about two hours they transmitted information on the nuclear industry over a PA system to the crowd outside.

The six protesters have been charged with illegal imprisonment of the two secretaries who were closed in the office with them.

In the longer term our focus will be on the mining and export of Australian uranium, with particular emphasis on the activities of the two secretaries who were closed in the office with them.

FOE with MAUM are currently joint holders of the Coalition for a Nuclear Free Australia Secretariat. See the report from the June 1986 Consultation on page 21 of this issue.

The Food co-op was begun 6 years ago with two aims in mind - to put into practical the nuclear industry propaganda since Chernobyl, we have become more aware of the need for the more active promotion of safe energy options. A group is currently forming to research and promote solar energy.

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Attention is paid to where the food is produced, who sells it and what it contains. We try to ascertain if there is any environmental damage caused by the production of the food we sell and no product is sold which has been tested on animals.

FOE Collingwood also has a radio programme every Thursday at 10.30 am on CSR 87kHz. Tune in and find out about the ongoing activities of FOE Collingwood and the movement in Victoria in general.

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

Some of the people of FOE Collingwood with someone else's Rolls Royce.
**Making a stand**

"We believe that the land is our very life; if we lose our lands our tribes will surely die. We natives have a natural right to the lands of our ancestors before anybody else, a right that comes directly from God...Thus we wonder why are we natives considered squatters in the land of our ancestors, and why is it so difficult to clarify our land ownership, while foreigners can easily get hold of vast tracts of our land without being considered squatters?

**THIS IS OUR STAND:** This is our land, since our ancestors have lived and died in this land, we also intend to live and die in this land.'

Excerpt from 'The Tribal Filipinos' Stand about their ancestral lands. (Tribal Forum, Vol. VI No. 2 1985)

By Dianne Lucas

Tribal Filipinos number approximately 3.5 million and form a diverse collection of over 40 ethnolinguistic groups. They are members of indigenous communities who inhabit the remote interiors of Luzon (the main island of the Philippines), Mindanao and some of the Visayan Islands. Unlike the non-tribal Filipinos whose ancestors belonged to the conquered majority, tribal Filipinos are descendants of the people who refused to be conquered by successive invaders — first the Spanish, then the Americans.

When threatened by foreign domination, the tribal Filipinos either withdrew to the hinterlands or fought, first successfully, to stand their ground. Now they are the poorest of the poor. They live marginally and are treated by foreigners and many lowlanders (non-tribal Filipinos) as primitive and ignorant inferiors. They are members of indigenous communities who inhabit the remote interiors of Luzon (the main island of the Philippines), Mindanao and some of the Visayan Islands. Unlike the non-tribal Filipinos whose ancestors belonged to the conquered majority, tribal Filipinos are descendants of the people who refused to be conquered by successive invaders — first the Spanish, then the Americans.

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Negrito children.

Dianne Lucas is a travelling activist.

More deceptive tactics have also been used. The government has set up agencies such as the former PANAMIN (Presidents Assistance to National Minorities) supposedly to assist tribal communities. These agencies then appoint their own tribal leaders regardless of the tribe's wishes. This way they can control the people by herding them into tribal reservations, forcing them to abandon their traditional way of life. Para-military units are formed, such as the Integrated Citizen Home Defence Forces (ICHDF) to discipline and ensure the obedience of the community to the new rules and regulations.

So, what happens to the land once the people have been evacuated? The ancestral lands are occupied by US military bases, mining and logging concessions, agri-business plantations, cattle ranches and government projects such as dams, which the government claims to be the needs of the majority but which in fact are for the needs of the transnationals and local big businesses.

The lands the tribal Filipinos now occupy are the last frontiers of development. There is nowhere else for them to go. If they are forced from this land they and their culture will die.

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**LUZON**

In Luzon the ancestral lands of the Aetas and Negritos have been taken over by US military bases. Clark Air Force Base and Subic Bay Naval Base. At Subic Bay some Negritos continue to live on the base and in the 1960s they were granted exclusive scavenging rights in the Subic Bay dump. In 1976 PANAMIN took over the service contract and Negritos now have to compete for the jobs of sorting garbage and metal scraps. Previously they earned on the average 100 pesos a day. Now their earnings are about 30 pesos a day.

Clark Air Force Base was established in 1902 and now occupies 55 thousand hectares. The 'colonial era is fenced but there are many hectares of 'military reservation' outside this. This is where many Negritos have been pushed to. It seems that the Clark boundaries can be extended at any time and in so doing many villages are fenced and restricted elsewhere. At present there is one village teetering on the brink of losing its land by the closing the Clark perimeter fence and its very sensitive radar receptor. The village inhabitants are regarded as a security risk and will be moved before too long.

One of the more devious pet projects was the Ministry of Human Settlement. They constructed many houses, very classy ones supposedly for the landless, homeless Negritos. They were to pay 30 thousand pesos over 25 years for the privilege of these houses. However, the houses are often occupied by lowlanders. One Negrito village called Target, very aptly named because Clark has made a firing range there. The area is a natural amphitheatre and most days of the week there are three training sessions of 30 personnel. The effect this has on the village people has not been calculated, but some believe even babies in the womb are affected.

The lack of basic human rights, the continual harassment and the desperate poverty of the Negritos makes them economically dependent on Clark Air Force Base. Some are hired as guards for Clark residences, grossly underpaid of course. They are also jungle survivor instructors and are recruited into para-military units to help capture the New People's Army (NPA). Where the Negritos hunt and collect their food, the Air Base conducts their war games.

The Philippine government has been concerned that the US bases remain in the country but it has never done anything for the Negritos who are landless, illiterate, poor and hungry.

**MINDANAO**

The island of Mindanao is another area rich in natural resources — dense forests, lakes, rivers and seas teeming with fish, and huge deposits of mineral wealth including gold.

It is the ancestral land of the Muslims and the Lumads. The Lumads are comprised of many tribal Filipino groups. They were part of the successful defence of Mindanao against complete Spanish occupation but were not so successful against American colonial invasion. Land Acts of 1902 and 1905 decreed their lands "public land". The Land Acts of 1913, 1914 and 1919 invaded landless peasants of Luzon and the Visayas to become settlers in the 'colonies' of Mindanao. These settlers had the backing of the Philippine and US governments — another 'divide and rule' tactic of the American colonial government. The Lumads were driven into the mountains and their lands were handed over to the settlers, to settlers who were already colonised and so were easy to deal with when the big corporations moved in. Which they did. Large areas of Mindanao are occupied by agri-business plantations and cattle ranches and many hectares of mining and logging concessions. There are steel, cement and chemical industries, banks, marines and shipping industries and offshore oil explorations.

There are a total of 295 local and foreign corporations in the region, 54 of which are tied to the top 1000 corporations in the country. Nine major American corporations control approximately 100 thousand hectares. There are nine mining companies and 47 logging concessions. Seven American banks have major interests in Mindanao ( Chase, Manhattan, Citibank, Morgan Guarantee Trust Co., Chemical Bank of New York, Bank of America, Manufacturers Hanover Trust and US Export-Import Bank). Much of the land has been turned into oil-producing palm plantations and tapioca plantations — all inedible products. Mindanao has been the scene of intense militarisation; 60% of the Philippines Armed Forces are deployed there, not to mention the paramilitary ICHDF forces, and the fanatical pseudo-religious groups who perform bloody ritual killings and armed by the Marcos government. Once these groups have succeeded in
The Cordillera

The Igorot (Kaigorotan) of the Cordillera inhabit the richest region of Northern Luzon. They are a warrior society. The Kaigorotan consists of many tribes whose ancestors lived in the Cordillera and became a warrior society. They defended their lands against invaders and were able to temporarily halt the lowland majority. It was with these projects that militarization increased in the area.

The people, through their peace pact, banded together and were able to temporarily halt the Chico dam construction by the International Monetary Fund (IMF) and the World Bank. It would have flooded the homes of 100,000 people.

It was with these projects that militarization increased in the area. The people, through their peace pact, banded together and were able to temporarily halt the Chico Dam construction by the International Monetary Fund (IMF) and the World Bank. It would have flooded the homes of 100,000 people.

It was in the Cordillera that Marcos proposed a series of hydro-electric dam projects that would flood many hectares of ancestral rice terraces, sacred burial grounds and village communities. The Igorot people knew the dams would benefit the huge foreign-owned corporations in the area rather than the lowland majority as the government asserted.

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The Kaigorotan were successful in imposing a US presence in the Cordillera People's Alliance for the Defense of the Ancestral Domain. Their main demand is genuine regional autonomy within a democratic government of the Philippines. In Mindanao the tribal and non-tribal people are coming together to demand recognition of the Lumad's rights to their ancestral land and to self-determination. The Church is playing an active role in reacquiring the people of Mindanao so they can take a united stand against the militarization and exploitative practices of foreign and local corporations.

In Central Luzon the Church also takes an active role in educating the Negritos. The literacy problems are being tackled with educational techniques which are relevant rather than traditional. Through this education the people will be able to organize effectively against the land-grabbing US and Philippine officials.

In September 1983 the First Consultative Assembly of Minority Peoples of the Philippines (CAMP) brought together tribal leaders from the Cordillera, Mindanao, Southern and Central Luzon. They made their first national intertribal peace pact for solidarity in defense of ancestral lands and their rights to self-determination. In November 1985 CAMP II was held.

The people of the Philippines, tribal and non-tribal are uniting to overthrow exploitation and oppression of which they have both been victims. They look to the time when they will achieve genuine and total human liberation.

Sources
- Tribal Forum: A General Overview. Author unknown.

Footnote

If, as yet, to be seen what changes will come about with the new Aquino government. As it was brought to power by a coalition rather than a social 'revolution', and its priorities seem to be elsewhere at present it will be a while before we can expect action, if there is to be any.
The accident in the nuclear reactor near Chernobyl was one of the worst in history. Finally the people are still in hospital, slowly dying of radiation sickness while about 200,000 people in Europe, USSR may die of cancer, based on World Health Organisation figures. Many will be children.

People living in the towns near the reactor have been permanently displaced. They have already received too much radiation to live near the reactor. The Soviet Union has punished several people for their part in the accident. But punishing people cannot eliminate human error. Accidents happen in every industry, they just do not usually have such disastrous consequences.

The accident began in the early hours of April 26. There may have been a failure in the cooling system, or an experiment which led to a power surge. The fuel overheated. (carbon) block surrounding the fuel rods. As the temperature climbed to about 1200 degrees, the graphite normally moderates the chain reaction. But, under conditions of a highly explosive mixture of hydrogen and carbon monoxide, the system was released. As the temperature climbed higher the crisis worsened. A chemical reaction between seawater, steam and the fuel caused the cladding uranium fuel would have released more hydrogen. Finally the mixture of hydrogen and carbon monoxide exploded. The horrific explosion ripped through the core of the heavy concrete structure erected over the entire power station. Flames leapt high above the shattered roof as tonnes of radioactive debris were lifted a kilometre into the sky. For days radioactivity melted out of the burning and melting reactor. Picapped by the prevailing winds, the debris, with its poisonous radioactive emissions, dust and gases were swept southwestern across the Ukraine.

Downwind, the fallout of the heavier debris, ash blackened the Ukrainian

“Radioactive iodine from Chernobyl was found in a mother’s milk halfway around the globe in Japan. In parts of Europe the radioactive fallout from Chernobyl was a hundred times higher than that of the weapons-tests’ fallout in the 50s.”

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**The Chernobyl reactor ablaze**

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**A SHORT LIST OF ACCIDENTS**

1957. Windscale: graphite around fuel rods in a reactor caught fire. Over 500 square kilometres were heavily contaminated with radioactive fallout, which reached as far as Denmark, U.K. Decontamination efforts are still ongoing. Many people suffered from radiation sickness and hundreds of square kilometres of land went made uninhabitable.


1966. Fermi reactor near Detroit, U.S.A.: fast breeder reactor suffered partial meltdown, when the coolant was blanked by a piece of metal.

1969. Lucens, Switzerland: a reactor built inside a mountain cavern leaked large amounts of radioactive coolant. Cavern has been sealed off.

1975. Browns Ferry, U.S.A.: electrician with a candle sets on fire the roof holding the reactor’s control cables, which burned out of control for 11 hours.


The structure is inside the heavily damaged reactor building and has steel walls 1 to 2 feet thick backed by concrete 6 feet thick. There was also a water pool in the basement of the building, holding several million gallons to quench any accident, he said. The pool is called a "bubbling pond" in the Soviet reactor and a "suppression pool" in the American reactor that incorporates it. The Shikama plant being proposed for commercial operation on Long Island, pipes are connecting the steam lead into the pool from the reactor area above. The area around the reactor, which has a nonflammable "blanket" atmosphere containing nitrogen to smother combustion, as in American units.

Another feature common to most reactors is that they hold the potential to generate explosive hydrogen once they overheat to somewhere above a thousand degrees. Both Three Mile Island and Chernobyl experienced hydrogen explosions. In an article published in the International Atomic Energy Agency Bulletin, in 1983, Dr. Zetkovsky has pointed out that the Chernobyl reactor design is similar in some ways to the Shikama plant being proposed for commercial operation on Long Island, pipes are connecting the steam lead into the pool from the reactor area above. The area around the reactor, which has a nonflammable "blanket" atmosphere containing nitrogen to smother combustion, as in American units.

The reactor fuel is divided into separate compartments in order to contain the damage of any malfunction. This meant that they did not "put all their eggs in one basket," Soviet official, B.A. Semenov, made this point about the Chernobyl reactor design in an article published in the International Atomic Energy Agency Bulletin, in 1983. He claimed that "the design feature having more than 1000 individual primary coolant circuits increases the safety of the reactor system, a serious loss-of-coolant accident is almost impossible." (editor's italics)

After all the computations have been made of reactor safety in East and West, we come down to the crucial need for all reactors to have an impenetrable cooling system. Almost all reactors are cooled by water. In a small number gas carries away the heat and transfers it to a water-cooling system. Loss of coolant has been involved in most major nuclear reactor accidents. The engineering of water-cooling systems now has hundreds of reactor years of experience behind it. If engineers have not been able by this time to perfect a fail-safe system they will never.

Another feature common to most reactors is that they hold the potential to generate explosive hydrogen once they overheat to somewhere above a thousand degrees. Both Three Mile Island and Chernobyl experienced hydrogen explosions.

On the basis of the industry's record so far, and with 100 reactors operating worldwide, the likelihood is that a nuclear disaster could occur as frequently as once every seven years.

A number of reactors operating in the West have containment, which are heavier than the Chernobyl reactor. Overall Soviet reactors are neither more nor less safe than those in the West.

Workers on the reactor core before the accident.

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Western governments were torn between wanting to use the Chernobyl disaster for their own propaganda, by saying that it could only happen in a communist country and distancing other rising concern about nuclear power generally. When a second reactor at Chernobyl, UNIT 2, exploded on 26 November 1986, in an accident described by General Secretary Leonid Brezhnev as an ‘act of God’, Bavorsia it was at first blamed on a second disaster at Chernobyl, only to be traced by President Mieczyslaw Lech Walesa from Bavorsia’s newest reactor at Brunssmeiel.

Europeans were not as gullible as the authorities had hoped. They knew of the West’s own disasters. The comparison of the minds of officials was all too evident from their contradictory warnings, and other assurances issued about the health effects of low-level radiation. What these officials were trying to avoid above all else was public concern focussing on the routine discharges from their own nuclear industries. Out of distrust for what they saw as an undue influence by the nuclear industry on their national radiation protection authorities, people in Britain and Europe turned to Friends of the Earth, the ‘Greens’ and other community environmental groups for advice about the Chernobyl fallout and also local sources of radioactive contamination.

The immediate issue to many Europeans are the radioactive wastes discharging from normally functioning reactors. The Dutch draw much of their water from the Meuse River and they are worried about contamination from Belgium reactors. The new French nuclear power station at Cattenom, which will pollute the Irish Sea, is also a concern.

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While people worried about how to protect themselves and their children from radioactive poisons, officials in the European Atomic Energy Community fought among themselves to have their nation’s contaminated farm products exempted from any trade embargo, so as to save their farmers any financial hardship. Farmers were buying in the remaining safe food from almost empty shelves. Children were told to stay indoors and were given stable iodine tablets to counteract the harmful effects of the radioactive iodine on their thyroids. Pregnant women were exempted from any bearing children with deformities. In Poland people were warned against radioactive milk but then sometimes were forced to serve it to children because there was no other.

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How many deaths will the fallout bring?

Once nuclear officials had recovered from their state of shock they put on their confident expert face to correct the exaggerated reports on Chernobyl’s fallout. The experts talked about the permissible radiation levels set by radiation protection authorities. They neglected to say that ‘permissible exposure’ allows for a ‘socially acceptable’ number of cancers and genetic defects among the public. The public is not given any say in deciding what is ‘socially acceptable’. Any radiation exposure, however small, involves some risk.

According to the little publicised report of the U.S. National Academy of Sciences Biological Effects of Ionising Radiations Committee (1988) 719 people from a population of one million people exposed to a radiation dose of 1000 millirem will contract cancer over a 30 period. The permissible public exposure over a lifetime is set in some countries at an average 170 millirem per year or for any one year 500 millirem. Exposures of this magnitude can mean as many as 350 cancers and 30,000 genetic defects among the public. Some scientists, such as Dr Rosalie Bertell and Dr John Gofman, argue that many more cancers must be estimated over a lifetime and from the time of exposure. Their estimates are higher. (See box)

The more conservative estimates of human damage caused by the Chernobyl accident, made by scientists who are members of government radiation protection bodies, come to about 100,000 cancers and 30,000 genetic defects in later generations. On the other hand, another scientist, Dr John Gofman, has taken the most recent and detailed compilation of radiation doses in Europe and the Soviet Union, issued by the World Health Organisation, to arrive at a much higher estimate. He has calculated that the total will be 320,000 fatal and 13,000 non-fatal cancers and 13,000 leukemias, mostly fatal.

The cost for the Soviet people will be massive – it includes the loss of a power workers and the relocation of displaced people and loss of electricity from closing other plants of the same design. Then there is the cost of entombing the reactor. Added to all are the enormous agricultural losses.

In the radiation ward

The scene in the Moscow hospital, where many of the highly irradiated power workers were taken, was described by a surgeon to be like ‘in time of war’. That war could only really be the nuclear war waged on Japan in 1945. The Chernobyl power station accident emitted more radioactivity than the nuclear weapon explosion at Hiroshima or at any test site. The nearby areas will be more permanently radioactive than Hiroshima was in the aftermath of the explosion. Most of the deaths in Hiroshima came, not from the bomb’s blast but from the effects of radiation sickness and cancer. And the death toll from radiation at Hiroshima continues to grow to this day. Chernobyl will leave the same tragic legacy.

Medical support teams world wide have done much to prolong the life of the victims at Chernobyl. Even so we know from Hiroshima that the toll from early radiation sickness syndrome among power workers will continue to rise for months and even years.

Many power workers had bone marrow damaged by heavy doses of radiation. The attempts to transplant bone marrow do not seem to have been generally successful. Bone marrow is involved with blood cell reproduction and when it is damaged the body loses its defences against disease. This leads to hemorrhages on the skin and other organs and ulcers. Death may come later from attack by some disease; the initial cause, the radiation which made the body vulnerable, may escape blame and so too the nuclear source.

A young man from Hiroshima shows skin ulcers caused by radiation exposure. The Soviet Union has not released pictures of its own victims, perhaps because they would cause a backlash against the nuclear program.

EARLY RADIATION SICKNESS SYNDROME

- AT HIROSHIMA

"My daughter had no burns and only minor external wounds. She was quite alright for awhile. But four weeks after the atomic explosion she suddenly became sick. Spots came out all over her body. Her hair began to fall out. She vomited clumps of blood many times... I felt this was a strange and horrible disease.

In a matter of days, he was covered with red, weeping skin burns. His arms were raised to his mouth and on his face were large black herpes simplex blisters, often the first symptoms of exposure. His skin literally broke down before our eyes. First the sensitive folds around the groin and under the armpits became red and ulcerated. Slowly these ulcers spread across his entire body.

- AT CHERNOBYL

"He was already showing the early signs of severe radiation exposure. His injuries were the worst of all, and his suffering grew from day to day to the next. In his mouth and on his face were large black herpes simplex blisters, often the first symptoms of exposure. His skin literally broke down before our eyes. First the sensitive folds around the groin and under the armpits became red and ulcerated. Slowly these ulcers spread across his entire body.

"In a matter of days, he was covered with red, weeping skin burns. He was barely recognisable towards the end. We administered morphine, constantly increasing the dose but that did little to ease his misery.

"The membranes that lined his intestines had eroded and he suffered severe bloody diarrhoea. He died about 12 days after the explosion."

- Dr. Richard Champlin, bone marrow specialist, who treated Chernobyl victims at the Moscow Hospital.

Age, 12 July, 1986.
For many years the Hibakusha — the survivors of the A-bombs dropped on Japan — have served as human guinea pigs for studies on the effects of radiation. There is now a growing curiosity among experts as they prepare to extend their studies to the unfortunate Chernobyl workers and the thousands living in nearby towns. Studies on these people will now add to the data gained from studies of the Hibakusha. However behind the impersonal studies will be people living and dying.

A ghost town

A hundred thousand Ukrainians were ordered to evacuate leaving behind their homes and belongings. Most of these people cannot return for an indefinite time, some possibly not in their lifetime. Even weeks after the disaster villages in Byelorussia, 150 kilometres to the north of Chernobyl, were still being abandoned and livestock removed. This involved the uprooting of another 80,000 adults and children. Yet beyond the immediate region, which was blackened by ash, the countryside, the gardens and flowerbeds of the Soviet Union, remained tantalisingly serene and fertile in the early summer sun as the people fled for their lives. The power station's nearest neighbour, the service town of Pripyat, became a ghost town. The people in the town were saved from still higher fallout, than they actually received, by the upward rush of gases, which carried much of the debris high into the sky, where it was carried off by winds. The ad

In the United States, at the Oak Ridge Nuclear Research Laboratory, calculations on the soft neutron accident, based on CIA intelligence, were kept secret until mid-May. Now it is known publicly that some people were exposed to the neutron radiation.

During the Chernobyl crisis, the chairperson of the Australian Atomic Energy Commission, was quoted as saying, "It is difficult to grasp the imagination", because they did not want the official secrets, which turned out to be gross under-statements.

The Australian Atomic Energy Commission has directed much of its research towards uranium mining and to solving the nuclear industry's problems, such as high-level waste disposal. This can only be done by because it sees its research efforts as contributing to the viability of the world's nuclear industry and consequently to maintaining Australia's uranium market.

Much Australian uranium consigned to European countries first goes through Soviet enrichment plants and gets mixed with Soviet uranium. Australian uranium should be on the agenda of the Vienna declaration at the International Conference on the Peaceful Uses of Atomic Energy, which meets in Vienna next month. There, the idea of setting up an international centre to monitor and inspect uranium in transit, has been strongly influenced by scientists with personal interests in the nuclear industry.

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Now that the nuclear establishments in the East and West blocs have much in common. Though official secrecy in nuclear matters may be more important in the Soviet Union than elsewhere, it is symptomatic of national establishments. The slanging match between the two blocs regarding the respective nuclear technologies puts up a smokescreen over the common interest in protecting their countries' nuclear industries against growing world-wide opposition.

A ghost town

"If we don't fight we die," said the farmers, and so they and their families ate and drank unchecked food.

Official secrets: East and West

There are practically no children left in Kiev, a city which normally has a population of over two million. Most were sent away in the first weeks after the accident at Chernobyl nuclear reactor, 130 kilometres away.

Without children the city seems strangely calm. Playgrounds are empty and pedestrian traffic under Kiev's famous chestnut trees is curiously one size.

Viktor Ivanovitch sent his small son off in that first wave in early May, to relatives in the far west of the Ukraine. Last week the little boy caught flu and returned. But his father, a young professional, is planning to send the boy off again.

"The doctors recommend it," he said. "The consequences from Chernobyl are just not known." — Caleb esteemed, The Age, 10 June, 1986.
Though public debate on the nuclear power issue has been lacking in the Soviet Union it has, at times, raised its head in professional circles. Andrei Sakharov, in 1958, added his voice to Linus Pauling in the United States, to call world attention to health and general dangers posed by radioactive fallout from nuclear weapons explosions. It was the first world alert from leading scientists to radiation dangers from a nuclear source.

Peter Kapitsa, a founder of Soviet nuclear science spoke out about the dangers in 1976. Kapitsa had been among the nuclear pioneers working, in the 1920s, with Sir Ernest Rutherford at Cambridge. He has been described as the father of the Soviet atomic bomb, but in fact Kapitsa had refused to work on the bomb project. He proposed that nuclear plants be put on remote islands. Though his suggestion was rejected by Soviet authorities it is inconceivable that anyone with Kapitsa’s reputation would be totally ignored in Soviet scientific circles.

In the October 1979 (the same year as the Three Mile Island accident) issue of the theoretical journal Kommunist two energy specialists expressed the view that the safety and economics of nuclear power were unassailable. However this questioning of the safety and worth of nuclear power brought forth a damming rebuttal from the Soviet Academy of Sciences. It was an attack not on the rebuttal, not the original questioning of nuclear power, that was widely publicised by pro-nuclear elements in the West.

It is incumbent upon representatives from Australia to such conferences to acknowledge this genuine concern among their own people and to voice it in international forums. They can do this in the knowledge that these concerns, even if muted by political pressures, are shared across the ideological barriers.

So much pain for so little gain.

The technological wizards

It is no longer feasible for ruling elites to employ experts persuading the public that their policies are beneficial, correct, inevitable and also safe. The Chernobyl/Challenger (the rocket disaster at Cape Canaveral) Syndrome amounts to a mortal blow at the scientific foundation for the legitimacy of the modern mega-industrial state. We have been witnessing a growing concern about the powers of science and scientists and their perceived immunity from social and ethical accountability (as in biological engineering).

“Our previous fears that the grand techo-necromancy projects might work, taking society along unacknowledged paths, are now compounded by the new fears that they might not work, with a multitude of catastrophic consequences.”


An industrial economy uses only about 10 per cent of its energy in the form of electricity. That means nuclear power satisfies less than 2 per cent of the Soviet’s total energy demand. It is a trifling gain for the enormous risk being taken.

Perhaps one of the side-effects of Chernobyl will be a boost to the development of non-polluting and alternative energy systems in the years conservation has greatly reduced the demand for energy. It has been estimated by a U.S. study group that conservation of energy could cut industry’s energy demand in the industrialized world by 30 per cent by the year 2000. These projections are based on the experience of the European Economic Community, which between 1971 and 1978 generated 95 per cent of its extra energy output from greater energy efficiency and not from additional fuels. Conservation programs, which are being promoted by power companies are likely to eliminate the energy equivalent of 30 large nuclear reactors by 1992.

Solar power, despite no longer government support compared to the uranium and nuclear industries, is beginning to demonstrate its worth in several areas.

In the southern states of Australia, up to 60 per cent of hot water for household and factory use can be obtained from solar collectors. In the far north it is as much as 90 per cent. Recently a solar hot water system was deslloyed in Australia for sub-zero conditions and according to the developer “it is poised to secure a substantial market in Japan.” Both in Australia and California the efficiency of photo voltaic cells to generate electricity has been improved to a point where they can now compete with conventional power stations.

Australia has the opportunity to develop alternative energy sources which will complement the conservation of energy. At Experence in Western Australia work is under way to show there have been several attempts to complement the energy sources. It has been estimated that wind generators along the coast of South Australia could supply 10 per cent of the State’s electricity. California is the pace-setter in the use of wind power. There are now 5000 megawatt of energy from wind power and 1000 megawatt of electric power from wind power is being used. The energy output of one of the large wind generators was achieved at a fraction of the capital cost, in the same time, and this pollution producing method is far more economic than nuclear power.

To stop it ever happening again...

“Our all live on Three Mile Island” was a widely expressed feeling after the reactor accident there in 1979. Now our fears of the anti-nuclear issue have been so properly and more appropriately identified with the name of Chernobyl.

It is now up to the proponents of nuclear power to explain what benefits can possibly outweigh the extraordinary risks to life on our planet. The tragedy of Chernobyl is not just a problem associated with the whole nuclear power cycle. At every stage — uranium mining, enrichment, the nuclear reactor, re-processing for plutonium and storage of the waste — the health of workers is being damaged, the environment polluted and in the long-term the whole community endangered.

The nuclear industry has been little more than a front for many nations to develop nuclear weapons. India, Iraq and South Africa have used their nuclear power facilities to develop nuclear weapons.

Pakistan, Iran, Brazil, Argentina and South Korea have all expressed their intention to take up the nuclear weapon option if they see it in their national interest to do so. A number of nations have not signed the Non-Proliferation Treaty in the case that it only means very little since it allows a signatory nation to withdraw from its requirements upon three months notice.

We cannot have nuclear power without continuing the spread of nuclear weapons.

Nuclear proliferation and radioactive pollution from accidents and wastes are the inevitable end products of Australia’s uranium mining and export from the Ranger mine and the Roxby mine if it is developed. Even before Chernobyl the nuclear industry was being described as being like a patient with a chronic disease, which has been going for a decade. In the U.S.A. no electricity utility has placed an order for a new reactor since 1978; many orders have been cancelled. The costs of nuclear electricity have skyrocketed and now exceed coal-generated electricity by 80% because of the expensive modifications needed to try and improve safety. The partners in the Roxby Downs venture have claimed that they will have a market for their uranium in the 1990s, when they expect that the nuclear power industry will begin to grow again. Chernobyl has dashed that hope. It does not make economic sense for the South Australian Labor government to continue the uranium mining infrastructure of the Roxby venture with no likelihood of ever recovering a cent of it. Continued support for uranium mining in the ALP would show that the party submits to the lobbying by mining interests.

12 Chernobyl
The 'Getting Together' conference organised by environmental groups and the 'Broad Left' conference organised within the political left, which were held in Sydney earlier this year, both talked of such coalitions. The formation of a 'green' party is mooted repeatedly. Some Democrats have sought to develop policies, which would ultimately turn it into a green party.

"What the present requires is a considered and articulate commitment to an ecological and socialist vision of Australian politics, and the development of new networks of alliance and cooperation between presently disparate oppositional groups" wrote Richard Tanter in the February issue of Peace Studies. "...What is needed is a renewed commitment to spelling out a radical vision and demonstrating the relevance of this alternative to these separate struggles".

Some have chosen to work with established political parties, either inside their forums or by exerting pressure from outside. Others argue that, while political parties may at times be allies, they should not be the main focus of the anti-nuclear movement. If it becomes too closely allied to any one party, the movement can have its aims distorted by what matters for electoral success.

The broad coalitions taking shape as a result of the Chernobyl disaster represent a renewed awareness of pending ecological catastrophe. It is important that they concentrate their energies out in the broader community and not in more closed circles of the committed. The way they work should reflect the generally felt need for more personal participation and a growing appreciation that the aims of the social, environmental and peace groupings are inextricably linked; that in order to advance significantly on any one front we need to bring about basic changes in the structures and values of our society.

The short-term thinking and exploitative values, which allowed the nuclear industry to become a reality are the same as those which allow the destruction of wetlands, rainforests, the coastline, national and world heritage areas. The same forces seek to desecrate the sacred sites of the Aboriginal people and deny them their land rights; they are the values which lie behind the practice of sexism and racism in our society. And so we are learning that the struggle for social justice, peace and environmental sanity is a part of the struggle against the threat of nuclear destruction.

"Australian uranium could have been in the destroyed Chernobyl reactor."
It has been said that Nicaragua fights on five fronts. The first and main front is the military one. This small, impoverished country is showing its enormous capacity for survival. The Contras, led by the remnants of the Somoza dictatorship’s National Guard, have been driven back to the Honduran border. On the Costa Rican border, Eden Pastora’s small group of counter-revolutionaries have thrown in the towel.

On the political front, diplomatic activity never ceases to strive for peace in Central America, to expose the Reagan administration as being opposed to peace and to find agreement with the Contadora nations — Mexico, Panama, Colombia, Venezuela, and the Contadora support group — Argentina, Brazil, Peru, Uruguay — on the mechanism to establish peace.

On the economic front, it is the struggle to feed the people. The peasants can endure incredible shortages of goods, but if the people can be fed, the revolution will survive. ECONOMICS = BEANS + RICE. As Daniel Ortega, the Nicaraguan president has said, Nicaragua is not on a subsistence economy but on a survival economy.

The fourth front is Church-State relationships. The Sandinistas say the church problem is not one of government versus church, it is a problem within the church; nevertheless, it is a serious problem. The orthodox, hierarchical church, led by the Archbishop of Managua, Cardinal Obando of Bravo, a virtual supporter of the Contras is still powerful in the towns. Then there is the arm of the church, called liberation theology, the church of the poor. This is a powerful factor in Latin America, starting from the 1960s, strongest in Brazil, and strong in Nicaragua, reinforced by the three wonderful priests of the Sandinista government — Miguel D’Escoto, Ernesto Cardenal and Fernando Cardenal.

Finally we have the fifth front, that of overseas support, international solidarity. This is one front on which Nicaragua cannot fight, this is where we participate. It is even more important now with the vicious American embargo. So you the reader can help.

Arts Action for Peace has adopted ‘Pencils for Peace’ as one of their projects for 1986 International Year of Peace. The logo has been designed by the artist, Rolf Heimann. The pencil as a weapon for peace is the theme. So organise a group, collect and send in your donations of writing ‘weapons’. They will be taken to Nicaragua by a delegation leaving in August 1986, and then later by a work brigade at the end of the year.

The Sandinistas’ great achievements have been in the fields of literacy, education, health, and agrarian reform. Let’s give them the chance to keep up the good work in the schools. Education is a political weapon, against foreign domination and for freedom.
Fight for the Shannon

The Shannon River is at the centre of a struggle to protect the awe-inspiring forests of its basin from clear-felling. Despite the halting of logging in 1983, the decade-long battle to save the Shannon Basin continues. The pressure to allow timber cutting is intense. To date the West Australian government has not fulfilled its promise to declare the Shannon-D'Entrecasteaux region a national park. John Renshaw reports.

In 1976, a review committee which included several foresters who wanted the Shannon River basin to be made available for intensive wood production, rejected a proposal put forward by the Conservation Through Reserves Committee that no clear-felling be permitted in the area during the fifteen year licence period of the 1978 Woodchipping Industry Agreement. The Conservation Through Reserves Committee also recommended that towards the end of this period a substantial area of the wet sclerophyll forest in the basin should be set aside and conserved in perpetuity as natural forest.

In 1983 the State Labor government was elected with a policy of declaring the Shannon Basin a national park. It instructed the then Department of Forests to manage the basin as though it was a national park and to terminate logging in the area. A detailed management plan is presently being drawn up by the Department of Conservation and Land Management (CALM), a draft of which has been released.

However, despite great opposition, clear-felling has proceeded in the area since the plan was first proposed. At present about three-quarters of the approximately 22,000 hectares of karri forest and extensive areas of jarrah forest remain in an unlogged state. But the Shannon's present status as only a management priority area for the conservation of flora and fauna affords the forests little security. An ominous warning in the draft management plan is that the area is only referred to as a forest park. This demonstrates that there continues to be pressure from foresters within the Conservation and Land Management Department to permit the basin being given secure long-term protection as a national park.

The 40,000 hectares of the Shannon River Basin contain a substantial area of karri and jarrah forest of great beauty and uniqueness. Compared to other river basins in the karri forest region, the Shannon is relatively undisturbed and could serve as a benchmark with which to scientifically compare the effects of large scale forestry on the flora, fauna and water systems in other forests. The pure stands of karri and jarrah and the mixed stands of karri and marri are interspersed, especially in the lower reaches, by heath, scrub and rock communities, to form a complex ecosystem of karri forest types not adequately represented in current reserves. The Shannon River National Park would protect a large area of this karri forest within a contiguous area. This would maximise the chance for survival of the natural karri forest ecosystem as an evolving entity in perpetuity.

The present national parks within the main karri belt are too small, both from an ecological and a tourist perspective. Only about 4% of the karri forest in the main belt is in national parks. The report has stated that it is preferable to have an area of at least 20,000 hectares to ensure adequate conservation of flora and fauna. The Shannon thus represents the most important of the series of karri forest reserves proposed by forest conservation groups in 1982. Together with important proposed additions to the Warren, Busselton and Walpole-Nornalup National Parks and an improved management priority system, the Shannon forms part of what would be a much better system of karri forest reserves.

The proposed Shannon-D'Entrecasteaux National Park would provide for a wide range of recreational activities. In South Western Australia there is no park or reserve that encompasses an entire river basin, least of all one as beautiful and relatively undisturbed as the Shannon. Recreationists, from day trippers to wilderness seekers, could experience a large diversity of experiences and scenery ranging from high virgin forest to scrubby heath and beautiful river pools. One of the important reasons for protecting the Shannon and D'Entrecasteaux areas is to protect the virtually pristine condition of Broken Inlet. Such a reserve would become a tourist asset of international and national importance with far greater earning potential than its timber resource.

The old Shannon town and mill site has been redeveloped and outstanding recreation facilities have been provided at this site. It is heartening to note that good steps are being taken to protect the virtually pristine condition of Broken Inlet.

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5. Ibid.

References

Contact: Campaign to Save Native Forests, 794 Hay St., Perth, WA 6000. Tel: (09) 321 2269.

Chain Reaction
Another leak from Ranger

The Ranger Uranium mine, situated in Kakadu National Park 250 km south east of Darwin, is attempting to control its water situation so as to achieve a no release of contaminants goal, particularly from the region designated as the Restricted Release Zone (RRZ), which accumulates water that is considered too polluted to be safely disposed of into the environment.

This zone includes the mine pit, the tailings dam and water used in the milling of the uranium ore. However, water is accumulating in this region to such an extent that it is interrupting mining. To alleviate this problem, Ranger wishes to discharge water from the RRZ into nearby Magella Creek from where it would flow into Kakadu National Park. To date permission for such a discharge has not been granted.

Ranger claims that the problem has arisen because of lack of accurate information regarding rainfall in the area leading to difficulties in planning water management schemes. Willy Wabeke, a mining engineer who has worked in the region, claims that the water problem is a direct result of the mining practices at Ranger creating a situation where the underground water table can seep into the mine, and where the water stored in the retention ponds and tailings dam can seep into the water table. In an interview with *Chain Reaction*, Willy Wabeke explains:

*What information exists about the condition of the retention ponds and tailing dam?*

Willy Wabeke says he has been trying for seven years to get the details of the bottoms of the dams and ponds but no-one will give it to him. What he would like to know about is the structure beneath the ponds. Ranger claims that they’ve grouted the whole lot but they have never anchored the ponds to the host rock. To do this they drill holes and place steel rods 50m long into them and pour concrete so that it all settles. On the bottom of these rods are wedges which hold the pond.

According to my knowledge this was never done.

Ranger has dug trenches by the side of the ponds for the water that seeps out to collect in but they have never dug these collector trenches to the depth of the ponds, that would cost a fortune. What has happened is that with all the blasting since they began in 1978 they have fractured the base rock. When I worked in Kakadu we did dye tests to investigate the water seepage in the mine. We put a dye in a billabong nearby and about a week later the dye was found seeping into the mine. In another part of the mine where water was disappearing we placed dye in the mine and later found it in a creek.

When we first sank a small shaft at the exploration site there wasn’t any water. Now holes drilled even in the dry season are full of water. They have used over 3,000 tonnes of explosive at approximately 10,000 tonnes of ore per blast. Each blast is like a little earthquake. All the dams at Ranger are in a radius within which you can physically feel the blast. The tailings and retention ponds are about 8fla, the bottoms of the ponds is so large an area that, gives the effects of these blasts. The rock base can’t be solid. The water problem is being caused by the effects of these blasts creating cracks. The whole thing is now leaking like a sieve giving Ranger massive problems in the open cut. The water is seeping down from the ponds pushing the water table up. As they go deeper, the worse it gets.

The main pit at Ranger Uranium Mine, June 1986, full of water.

The borrow pit at Ranger.

The mill at Ranger.

When was the problem first apparent?

In 1981 islands appeared in the tailings dam. The rules were that there should be at least six feet of water on top of the tailings. This was reduced to eighteen inches because they couldn’t maintain six feet. Ranger’s version is that the workers didn’t lay the pipes that carry the slurry from the mill to the tailings pond properly so that the slurry wasn’t evenly spread out. This is an unlikely explanation when you consider the size of the islands created. These islands were so big that they required dynamiting to spread them so that they were covered with eighteen inches of water. I believe that the islands were caused by seepage lowering the water level.

All mines have these problems. Roxby Downs already has massive water problems. Max Walker, the cricketer, wrote an article in *People Magazine* where he visited Roxby Downs and he commented on the water there, coming out of the roof, the walls, the floor, everywhere. With the massive mining techniques at Roxby they will be using five tonnes of explosive a day. The rock strata at Roxby isn’t homogeneous but layered sandstone. If you open that up, with shock-waves the water will seep for miles.

The mill at Ranger.

What is the solution to the problem?

Stop the mining. They have no hope of getting the mine to the depth that they want. At the moment they are at a depth of about 30 metres and they want to go as deep as 500m. The water will stop them.

They have to fill up the pit with about five metres of clay, not one metre as they have said. But there is no clay in the Northern Territory. They had similar problems at Rum Jungle and Mary Kathleen. They claim that they are doing a good job but all they did was fill in the holes with a rock fill and then rolled soil on top of it. They need about five metres of clay but they said they only needed one. In fact they didn’t use any because clay is so expensive. There is no water barrier. The Finniss River on which Rum Jungle uranium mine was situated is now dead, even the rocks are bleached. Even Conzinc Rio Tinto Australia (CRA), the company that mined Rum Jungle, are saying that the area is dead. We must stop the mining now and we must try to stop the spread of the water. The rehabilitation programs as advocated by the mining companies are meaningless. It is not feasible to rectify the damage already done to the below surface geological structure.

*Chain Reaction* 17

Willy Wabeke is a retired mining engineer who worked in the Kakadu region during the 1950’s at the Finnis River Copper mine and the Moline uranium mine.
Sydney's toxic waste dump - the Pacific

The Sydney Water Board is currently embarking on the first stage of a multi-million dollar publicity campaign aimed at convincing the public that the solution to the sewage pollution of beaches is in hand. The days of faceless lumps on the sand and chemical stinks in the waves are almost over. Television ads show surfers performing in pristine, sparkling waves. Double page colour-spreads in magazines display bikini girls and high divers.

The solution all this wasted hyperbole is trying so desperately to sell is the extension of the ocean outfalls at Malabar, Bondi and North Head. Construction work has commenced on all three projects. The total cost in 1985 figures is put at $450 million and commissioning is expected for Malabar and Bondi in 1990/91 and North Head in 1992. The question is will it work and if it does, for whom? Richard Gosden reports.

One section of Sydney's sewage can be broken down into two broad groups, about 50% coming from domestic sources and approximately 50% from business and industrial sources. Almost all Sydney's liquid wastes are transported by water through 15 sewer systems to be discharged in the ocean. Everything from toilet flushings and bath water to waste chemicals and heavy metals.

Because the volume of sewage has been increasing over the years, the noticeable pollution of beaches has also correspondingly increased. The Water Board's plan is to transport the sewage further out to sea. This strategy can be likened to the way Europe dealt with air pollution from coal burning power stations. When the immediate neighbour was polluted the smoke stacks were raised. This facilitated the further spreading of pollution until now when the whole continent suffers from acid rain. Extended ocean outfalls are like longer smoke stacks. But longer number of fish types. The purpose was to in some cases, no property for absorbing, diluting and purifying such wastes.

The Water Board Standards for Acceptance of Liquid Trade Waste To Sewers limits certain toxic metals and other industrial wastes according to concentration. Any amount of these substances can be disposed of down the sewer provided they are diluted enough. (More concentrated wastes can be disposed of if a strength charge is paid to the Water Board). The levels to which toxic substances must be diluted are set in accordance with what is considered safe for Water Board workers and equipment, and not what is safe for the marine environment.

At present there is no legal way of disposing of heavy metals, sulphides, pesticides, chlorinated hydrocarbons etc. except down the sewers as these substances are considered too dangerous for the landfill at Castlecrag. This means the ocean is turned into a toxic waste dump potentially having a disastrous effect on marine life. The engineering design for the proposed deepwater outfalls expects to achieve a 40:1 dilution at this boundary. It is possible then to calculate the average annual amount of these restricted substances which SPCC specifications allow to go out the outfalls. (see table below).

In a survey of the marine environment in the vicinity of the Hyperion outfall off California instances of skin tumors and fin erosion among fish have been reported. Samples of Dover Sole 10% had fin erosion in 1977 and by 1979 it was up to 32%. Fin erosion appears to be the result of exposure to contaminated sediments.

Virtually all of the possible pollutants in discharged waste are attached to organic waste particles and are thus present in the sediments. The correlation with the number of species of marine life is inverse; thus, the number of species decrease as pollutants increase. Often fish accumulate PCBs in muscle tissue at about two tenths the level of that in the sediment.

In the early 70's when the newly formed SPCC was cleaning up Sydney's river system the method generally used was to encourage industrial polluters to connect up to the sewers. An observer at the time of the implementation of new Water Board and SPCC policies towards industrial and highly dangerous wastes, N.G. Burton, predicted that in this process of cleaning up the rivers

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<td>700</td>
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<tr>
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<td>109.8</td>
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<tr>
<td>COPPER</td>
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<td>7</td>
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<tr>
<td>NICKEL</td>
<td>31.4</td>
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<tr>
<td>CHLORINATED HYDROCARBONS</td>
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<td>35000</td>
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</table>

Chain Reaction 19
North end of Bondi Beach when blown by a strong southerly. The second most polluted sewage field is kept submerged by the density of sewage diffusers which will not be able to meet in the summer period provided the tides and travel distances considerably in excess of the lengths of the tunnels under construction. The sewage field at Bondi Water Outfall however, claim that a 'submerged field' will be forming during the summer period in the middle of the year (in summer and winter) Effluent being released from a submarine diffuser has a natural tendency to rise to the surface being less dense than seawater. However at submarine outfall sites on the US west coast it has been discovered that the ocean water is stratified with a cold dense layer on the ocean floor and a sun-warmed less dense layer on the surface. When the effluent is successfully mixed with the cold layer, so that it takes on the same density, it is prevented from rising into the warm layer on the surface by the stratification effect. This is the effect aimed at by Sydney and much reference is made to the California model of the sewage outfall in which there are different conditions prevailing in Sydney and the experts at the Water Board and SPCCA, Canberra, 1977.

A. J. Marshall, ex SPCC Engineer, claims that on the west coast of California a 20 Chain Reaction

The final piece of evidence that the SPCC were not doing enough to stop the sewage outfalls, fossil fuel power stations and their resultant pollution was the fact that many of the sewage effluents are so low in density that they are not able to rise to the surface and fall back into the sea. The second most polluted sewage field will not be more than a surface field) will not be more than a surface field and will serve to deposit toxic sediments further out to sea. A well known marine biologist currently campaigning against the sewage induced sea grass-depletion and sea-urchin plagues, in Botany Bay and along the Sydney coastline, has said that the sewage is deposited 3 km out to sea in deep water it will be impossible to do detailed monitoring of detrimental effects though vast damage to marine life is expected. Out of sight and out of mind is just what the Water Board wants.

Notes

2. This belief stems from seeing the ocean as a sink of high assimilative capacity. See: C. Joy, W. Hicken and M. Buchanan, Water Quality Management: Botany Bay working paper no 2, Canberra, 1769, p. 4.
11. Caldwell, Cottle, ed, Installation and Operation of Sewage to land can cause problems such as damage to grass and soil. As the Water Board monitors beach pollution on the SPCC it is highly unlikely there will ever be a report on whether or not the new effluent will be of no use. In fact the intention of prosecuting would be doing it now when the Water Board is ready to admit to the public to get further beach pollution. We can only assume the Water Board had developed some folk cunning about wind conditions.
12. Effluent sample taken at the Rangers uranium mine, the state of play regarding the declaration of a Federal Marine National Park and the scaling down of operations at Roxby Downs in SA.

The CNFA conference was successful in a number of important ways. Many activists met face to face for the first time and set up strong links which will be invaluable for future campaigns. The CNFA will consolidate its information in its newsletter and the WISE bulletin and seek to extend the opportunities for well coordinated national campaigns. We look forward to developing more links with each other and with like-minded groups on the effective anti-nuclear alliances aimed at strengthening our combined impact.

Footnotes:

1. British, French and US warships may be visiting Australian ports in October 1986 as part of naval exercises already planned by the Australian government.
2. A ‘national action’ and rallies in each state will be planned by the CNFA. The CNFA are planning a large protest campaign aimed at seeking access to the US embassies to buy back our land. Some of these protests will be linked to the CNFA conference in Sydney and by FOE and MAC in Melbourne (a background briefing and report is due to be published in the WISE bulletin).
3. Of the papers presented will be printed in the WISE bulletin. The CNFA conference was successful in a number of important ways. Many activists met face to face for the first time and set up strong links which will be invaluable for future campaigns. We look forward to developing more links with each other and with like-minded groups on the effective anti-nuclear alliances aimed at strengthening our combined impact.

Over the weekend of 7 to 9 June 1986 the Coalition For a Nuclear-Free Australia (CNFA) held a National Conference at Camp Eureka north-east of Melbourne, Larry Marshall reports on the proceedings.

Over 40 anti-nuclear activists gathered at a comfortable weekend camp venue for a series of discussions, forums, workshops and meetings. Major anti-nuclear groups from all over Australia were represented including:

1. Campaign Against Nuclear Energy (CANE) 
2. Friends of the Earth (FOE) Vic
3. Greenpeace
4. Movement Against Uranium Mining (MAUM) NSW & Vic.
5. Nuclear Free & Independent Pacific (NFP) ACT
6. Nuclear Free WA Network WA
7. People for Nuclear Disarmament (PND) Vic, NSW & Tas.

World Information Service on Energy (WISE) Qld.

A written report was received from the Northern Territory Environment Centre, NITCE. As the NT is the heart of Nuclear Free Melbourne! A range of workshops and information sharing sessions enabled participants to discuss the links in the worldwide nuclear network. Some of the major discussions and resultant directions for CNFA are:

• The campaign against Nuclear ships visiting Australian ports a growing stronger worldwide. There are versions of a Peace Fleet now operating in France, Sweden and Germany, and there is a Peace Fleet now operating in France, Sweden and Germany.
• The Greenpeace has taken another strong action in Darwin and the CNFA is being increasingly supported by the maritime unions.
• Members of CNFA joined the rally at Sydney University on Monday 9 August 1986 to protest against the U.S. Ratham (a non-nuclear capable refit) in the heart of Nuclear Free Melbourne!
• The Anti-Naval Base Coalition is also growing strength as it works towards highlighting 19 October 1988 when the lease for the US Navy's South Pacific Command expires.

The Alice Springs Peace Group has called for National Actions to begin on the year's final day in the Federal Government commitment to the withdrawal of the lease for the Nuclear Base.

There is a growing awareness among anti-nuclear activists that the struggle by the Aboriginal people for land rights is at the very heart of the criticisms we have of the way our society operates. The structures which have allowed the destruction of the Aboriginal culture and the murder of the Aboriginal people are the same structures which now oversee the destruction of the environment and threaten life on this planet. We spoke of working together with Aboriginal communities in each state and planned some responses to the Bi-centennial Celebrations in 1988. The CNFA must respond to this event and it is time to listen to Aboriginal people in our work to design the most effective approaches for all of us.

There are enormous implications of the Nuclear Free Plan for melbourne and northern territory environment centre.

• Nuclear-Free Australia (CNFA)

From: Nuclear Free WA Network WA

To: Nuclear-Free WA Network WA

Subject: WA Network WA

Date: 1986.06.09

Message: WA Network WA

Dear Friends,

As the Water Board

Yours sincerely,

David Jones

Chairman
that is to separate a non-vegan diet means AIDS and the New Puritanism 
disease ' with the full force of religious
sympathetically .
community , experiencing eontradictory
emerging community . Neither gays, nor
masquerading as knowledge. Instead of
clear
the epidemic is still around, without a known
too care this topic could not be fully concluded.
Altman, however, points to several possible
behavioural and emotional points to be
considered:

One of the problems in talking about sex is to
desentegrate what people actually do from what
they think about it — that is to separate
behaviour from ideology. It is not merely that
gay men have drastically altered their sexual
behaviour in response to AIDS: even more
importantly, the epidemic has forced us to think
different styles and set and reexamination of
the assumptions about the sort of gay life gay men
have been constructing over the past ten years.
Overall, 'AIDS and the New Puritanism'
offers a clear-sighted view of the gay community
and its ability to respond to the
deadly disease. The insight into the psyche
of a community having to come to terms
not only with a threat to individual lives
but also to itself as a whole and to the right
to self-expression is impressive.

AIDS and the New Puritanism (paperback)

Reviewed by Tom Worsnop

AIDS burst upon the world as a 'gay
' disease with the full force of religious
 crusading, multimedia hype and expertism
quite easily translates to an Austrahan

This

is explored ; the problem facing mainly gay
men is discussed from a viewpoint very
importantly this book, more than most

have been constructing over the past ten years .

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AIDS and the New Puritanism (paperback)

Reviewed by Tom Worsnop

An important aspect of AIDS is the way
gay community, experiencing contradictory
effects now experienced by gay and social
shame applies to gay sexuality, and also at the self-respect of an
emerging community. Neither gay nor
the rest of the world was given a clear
derstanding of the AIDS epidemic
diagnosed is the core of any gay

only their social and psychological effects
and the treatment they receive, but also the way in which gay
people are perceived by society and the media.

Vegetarianism is a philosophy that
embraces the ethical principle of non-violence towards all
living beings. It is based on the belief that eating
animals is wrong and that it is better to eat
plants. The primary goal of vegetarianism is to
promote the health of individuals and the
environment, and to reduce animal suffering.

Vegetarianism is a popular lifestyle choice
in many countries, particularly in Western
societies. It has gained more acceptance in recent
decades, and it is now considered a healthy
and ethical way of eating. However, it is important
not to confuse vegetarianism with veganism,
as the latter involves abstaining from all
forms of animal products, including milk,
cheese, and eggs.

Vegetarianism is not only about eating
plants, but also about the ethical treatment
of animals. It is a way of life that emphasizes
compassion and respect for all living beings.

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forms of animal products, including milk,
cheese, and eggs.
Ms. Caulfield travelled extensively to observe a number of activities currently being undertaken in rainforests. She describes in detail an almost laughable lack of any detailed environment for the need of greater care and understanding of the complexity of rainforests. Throughout In The Rainforest, Caulfield includes an analysis of the factors that cause the destruction of the rainforests apart from the need for rainforest products and the land it grows upon. It becomes increasingly clear that governments throughout the world have ultimate responsibility for the state of the rainforests. The issues behind the exploitation in each and every country with rainforest include land distribution, population densities, distribution of wealth, farming techniques, land management, logging and mining practices, education, foreign investment, export markets, energy consumption, and the list goes on. There is also the issue of the violation of human rights each time an area of rainforest inhabited by indigenous people is flooded, flooded or similarly destroyed. 

In The Rainforest is not difficult reading. However, it is often saddening. Human folly on such a large scale is irresponsible and the effects are tragic. Thankfully the reader is frequently rewarded with beautiful descriptions of those forests we do have left which must surely serve as an incentive for us to become active in their preservation.

I thank Ms. Caulfield for her sane, intelligent and rational book. I only hope we can prevent it.
Help Close the Gap

Please send me...

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NAME ____________________________
ADDRESS __________________________
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Please send cheque or money order to:
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Alice Springs NT 5750

CLOSE PINE GAP
EAGLE AND GALAH

CLOSE UP PINE GAP!
JOIN US AT THE GATES OF PINE GAP
Oct 19 '87
CLEAN-UP PINE GAP