TREE

TWEED RIVER ENVIRONMENTAL ECHO

NEWSLETTER OF THE CALDERA
ENVIRONMENT CENTRE

THIS ISSUE

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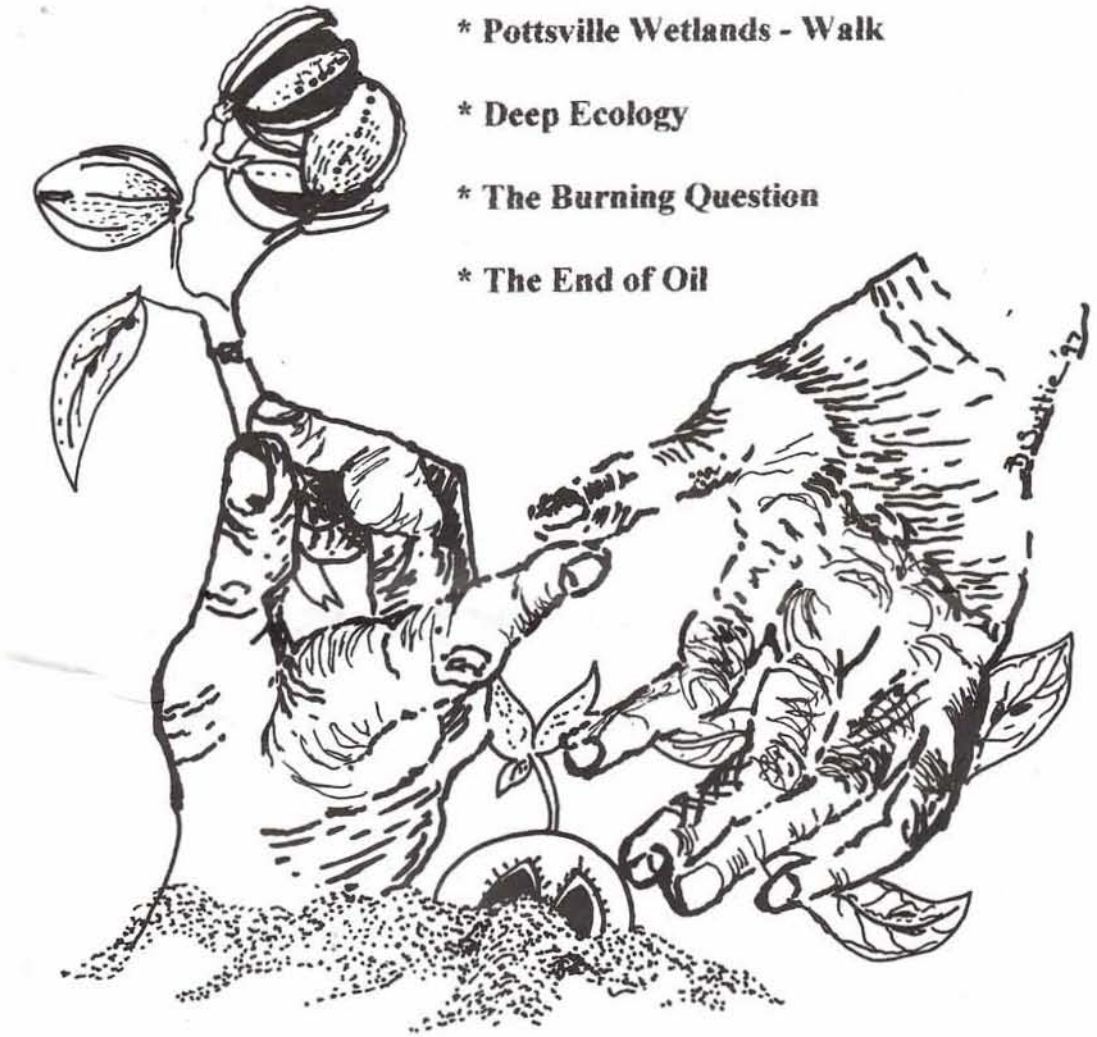

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VOLUME 2 March/April 1997

We're back! We've been busy scrabbling in the wreckage to assemble your dose of good news.

There's an organisation in Bangladesh called the Gramine bank, which lends money only to poor people, preferably women, with no collateral whatsoever. Professor Mahomed Unis was lecturing in the early seventies, and became interested in the village next door. He spoke to a women making beautiful bamboo stools and found that she was earning just two cents per day. This was because she needed to borrow from a money-lender to buy the bamboo, and in return had to sell her stools to him for the price he offered. Unis asked how much she needed for the bamboo and found that it was 20 cents. On further investigation Unis found 42 other people in the village in similar circumstances, with the total needed to supply them with all their materials for their various small business being $27.

Unis lent the money himself, and then set about trying to convince the banks to lend to other poor people. He had no success initially and so set up his own organisation, the Gramine Bank, lending tiny mounts to thousands of people. This was a major success, with a 90% repayment rate, far higher than normal bank loans.

By 1979 the Central Bank was won over and there are now Gramine Banks in 52 countries, with a total amount lent last year alone of $400,000,000 in lots of a few dollars each.

The actions of the bank have produced better results than any other poverty-alleviation program, with people sending their kids to school, high nutrition levels and family planning practices twice as high as the national average.

And the Natural Step is a non-profit organisation which is convincing companies around the world to become sustainable. Its arguments are persuasive, with evidence that every company which takes its advice becomes more economically viable and successful. The results for the planet are looking good too with, for example, Electrolux, the largest white goods manufacturer in the world, producing the first cfc and hcfc - free refrigeration units as a result of their efforts.

Natural Step now advises companies totalling 1% of the world's gross domestic product, and they're growing fast.

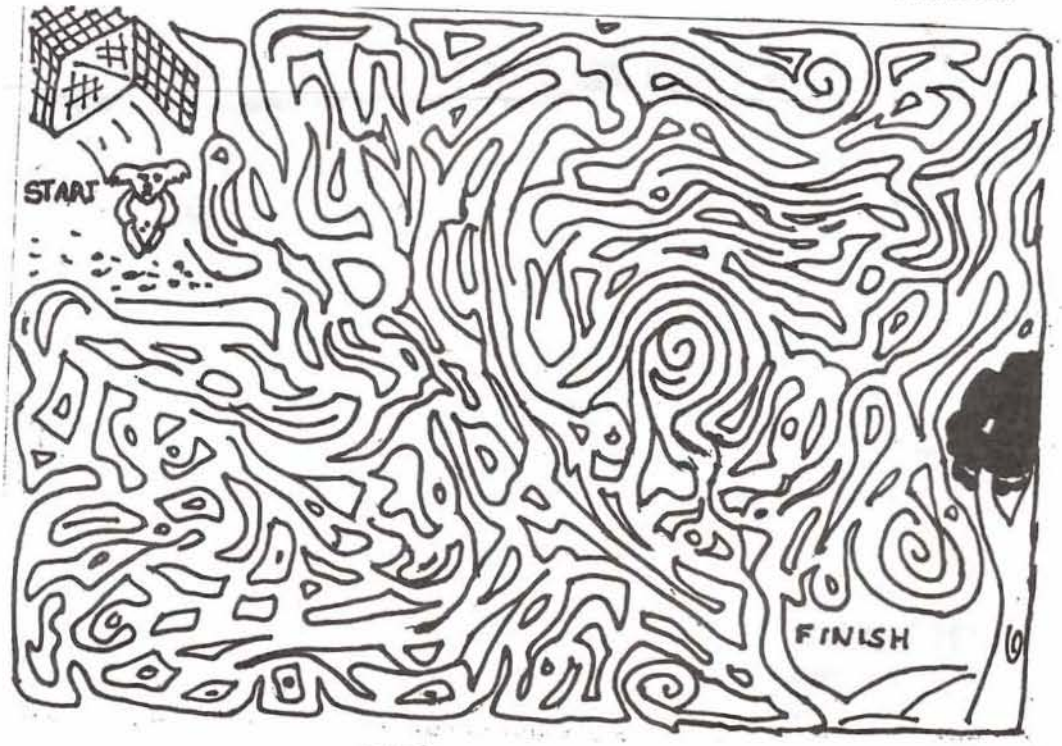
So don't chuck it in yet. There are clever people out there fighting for us, and we still have a slim chance.

Hang on to it.

Consuela.

Arnie Koala has been dumped by a big wave on Koala Beach.

See if you can help him find his way back to his tree in Cudgen Nature Reserve.



MURWILLUMBAH MANAGEMENT AREA EIS

1. The MMA covers a large area of soil landscape types which support forests of considerable diversity. To produce a comprehensive but sufficiently concise E.I.S., based on sound, scientific, ecologically sustainable principles, is a very tall order. For this reason it is not surprising to find that the E.I.S. seems to be based on the demand side (as a response to government commitments to industry), rather than the supply side (based on continuing availability).

The forests within the MMA have been "high production" forests for 100 years and now contain very few mature trees. Most of the forests (especially Mebbin and Whian Whian) have been driven towards saplings of simplified species. Plantations of mono species further drive this trend towards uniformity. Continued logging has resulted in sparse, low density, low diversity, juvenile or immature forests which seem to be under relentless assault. in many areas, few habitat mature trees with hollows remain. Short term demands have dominated long term sustainability. A long rest or "catch up" period will be necessary for many compartments.

Because of the diversity and scale of the study area, many hard assessments and hard decisions have been left to a later stage, the Harvest Management Plan, or Harvesting Plan stage. Monitoring of mitigation measures is suggested as the basis for management systems including fundamental silviculture and fire management techniques.

The MMA EIS proposal has therefore been developed in a context of uncertainty in relation to the land base of forest areas to be allocated for long-term timber production. Under the IFA outcomes for the MMA, from a total of 98 State forest compartments, 81 compartments plus two part-compartments are deferred from timber harvest, and 15 compartments plus two part-compartments are currently available for timber harvest, pending completion of the CRA (see Figure 5-1). This provides a harvest level of 18 per cent of the volume allocated for harvest in 1995.

ES 5. The reduction of the overall harvest level to 18% of the 1995 level is welcome, but one wonders whether this is derived from a scientific survey of the resource, or from taking a series of "stabs in the dark" reduction estimates based on what the industry "will wear", i.e. a "rounding off" to figures like "70% of the 1995-96 level" for sawlog allocations
ES 5-1

The allocation of veneer logs from the MMA is 2,000 m³/yr, under a long-term (20 year) wood supply agreement.

Other timber products will be supplied to industry, from areas outside the IDFA, or from integrated operations within compartments (currently deferred) which may be released for timber harvest during the period pending completion of the CRA, subject to consideration by the Harvesting Advisory Board, as follows:

Non-quota product	Annual volume to industry (m³)
Poles	Up to 2,000
Small sawlogs	Up to 1,000
Fencing	Up to 500
Girders	Up to 250
Sleepers	Up to 150
Chopping blocks	On demand
Salvage logs	As available
Hoop pine	As available
Acacia logs	As available

A complete timber inventory of the State forests will be undertaken by SFNSW early in the approval period, under the direction of the Resource and Conservation Assessment Council (RACAC). The sustainable timber yield and a revised Management Plan will be developed for the MMA once the RFA is completed. Results of future timber resource inventories and cutting cycle reviews will further refine the determination of sustainable yield over time.

These figures and apologetic rationalisations suggest the arbitrary, non-scientific, nature of the "guesstimates". They are also non-specific.
* Most of the forests within the MMA are contiguous with or close to, World Heritage Rainforest National Parks. The area has the highest biological diversity in N.S W., and is one of those areas in Australia where bio-diversity is under the greatest threat (due mainly to urbanisation).

It is clear that these forests have an important habitat support basis for the more diverse Rainforest National Parks and reserves. The E.I.S. does not acknowledge this crucial aspect. Moreover the gradient from wet sclerophyll to rainforest is not clear cut (e.g. Terania Creek dispute over Brushbox), and many sclerophyll compartments or sub-compartments grade to rainforest.
- Regular fires will drive rainforest towards sclerophyll forest. Indeed State Forests seem to have a preference for sclerophyll forest at the expense of the more diverse and protected rainforest.
- Hardwood plantation species are selected for productivity without regard for other genetic qualities such as habitat values or compatibility with indigenous species. Cross breeding may occur between introduced plantation species and indigenous species. World Heritage reserves could be compromised by plantations. Indigenous provinces should be preferred for the sake of trees and wildlife.
* The impact of the continued use of fires as in "hazard reduction prescribed burns" is contentious and has not been adequately assessed. The policy is not clearly enunciated despite threats to wildlife, habitats, soil erosion, water quality, tree growth rates and tree species selection. (refer comments above) These are also threats to neighbouring reserves and private land and dwellings.
* Because of "cart before the horse" commitments made by various governments guaranteeing supply of logs, including the dubious "Wood resource Study"no alternatives to the proposal within the E.I.S. have been considered. Indications are that the proposed levels are not ecologically sustainable.
* Some important studies have been deferred to the harvest planning stage, or have been interpolated/interpreted from other data.
- No detailed soil survey work seems to have been undertaken. Rough estimates are based upon DLWC soil classification maps and detailed surveys will have to be made at the Harvesting Plan stage.
- No detailed surveys of the 3 major catchments within the MMA have been undertaken. Hydrological research from other areas of lower rainfall and different soil types has been "interpreted".
* Future roadworks, which would depend on soil surveys, hydrological surveys, and Harvesting Plans, are not enunciated. Inadequacies in the current road network are not identified in the E.I.S. The sites of future "temporary" roads are not stated. Estimates are very approximate.
* Considering the regions biological and biodiversity significance (ref 2 above), the measure for fauna protection are not adequate. Medium sized mammals within the "critical weight range" are particularly at risk. More emphasis on ecological sustainability and less emphasis on short term productivety is needed.
8. Grazing with9in the region generally is very marginal due to high costs and low yields (sale price). Cattle are very damaging to soils and juvenile plants. They spread weeds and compact soils around root systems. For these reasons there seems to be no good reason why cattle should be allowed to continue grazing within the subject forests. No assessment of the impacts of continued grazing has been stated.
9. The economic assumptions and expectations are actually very optimistic, and overstate the values of the proposals whilst understating the alternatives.

- The social and economic values of the timber industry within the MMA have been overstated. A combined value for casino, Grafton and Murwillumbah Management Areas contribution of $212 million is far in excess of the real value of timber production within MMA of under $20 million.
- No values have been given for the costs saved from not logging the forests, nor for the value of alternative economic activity which could be derived, such as water quality and quantity, increased ecotourism and increased honey production.
- Timber from the MMA is estimated to yield $70000 per annum over the proposed 10 year life of the E.I.S. which is estimated to have cost a total of $2million to produce.

10. The benefits deriving from wider, more adequate riparian, stream bank, filter strips, buffers have not been assessed. Nor have other erosion problems arising from the clearfelling or gung-ho "selective" logging of plantation and other forestry compartments.

11. the adequacy of habitat trees and the method by which they are conserved needs more discussion and more rigorous enforcement, e.g. how is their density determined in the field, how are they permanently marked and protected.

CONCLUSION

The E.I.S. is not an adequate planning tool because it puts the industry demand horse before the ESD based resource cart.

We believe the various commitments given to the industry which guarantee resource availability are not are not Ecologically sustainable, and overstate the estimated supply at the expense of the ecological health and biodiversity of the forests themselves, AND neighbouring reserves.

Serious consideration should be given to the "retirement" of quota volumes, as companies exit from the hardwood timber industry.

We are concerned by aspects of the plantation schemes which involve mass herbicide spraying in headwater catchments, genetic selection which ignores indigenous species and varieties, clearfelling which exacerbates erosion and turbidity.

We also resent the trend towards artificial monocultures in "normal", non plantation areas caused by overcutting and burning. We believe the State Forests should encourage more sympathetic silvicultural techniques which allow more natural ecosystems to effect selection and management. In other words a less economic-rationalist, less forest-factory approach.

The long lead time taken to produce the E.I.S. has allowed some regrettable forest practices. Most parts of Mebbin and Wollumbin have been severely over-cut, and there seems to be no respite. *Paul Hopkins Submission Caldera Environment Centre.*

NO FREEWAY COALITION RAFFLE

The TV advertisement prepared by David Bradbury for the Coalition has now been completed and booked for viewing on two channels. A preview was held at the Centre and those who attended were impressed with the result.....so watch out on your local channel.

Fund raising to date has covered the cost of the ad and now further funds are required to repay loans provided for the televising of the advertisement.

A raffle has been organised and a book of tickets enclosed with your Tree magazine.

!st Prize is a wonderful piece of glassware by Collen Heaney. Nine additional prizes have been generously donated and include, Gift vouchers from "Hair It Is", "Maggies Habitat", "Wet FX", Plants from C & N Nursery, Ian Cohen's book "Green Fire", goods from Santos, fruit tray from Supper Fruits, umbrella from Murwillumbah Disposals and bike helmet from Kearney's Bicycle Centre.

Tickets are 50c each or 3 for $1

Please return tickets to Caldera Environment Centre by 30th May.

Support the Coalition

WETLANDS AT POTTSVILLE

The struggle to protect the wetland south west of Pottsville village has been a long one, starting back in the early 1980's soon after the early stages of the Pottsville Waters subdivision were constructed.

A major step was taken recently when a 100ha section of Wetland 54 was officially transferred to Tweed Council by the developer of the Pottsville Waters subdivision (Peter Krekelberg).

It follows last year's transfer to Council of another section (Tagget's).

The transfer of these lands to public ownership is an event of great significance, and it calls for a celebration (see box). With the land in public ownership, it is now possible for interested residents to take a look at what all the controversy was about!

Legal Agreement

The recent public dedication of the wetland was the final step in an agreement made in 1994 between Tweed Council, Peter Krekelberg and the Caldera Environment Centre.

One purpose of the agreement was to settle a court action commenced by the Caldera Environment Centre (Caldera), who claimed that some drainage works in the wetlands had been undertaken without proper approvals.

The court action inspired Peter Krekelberg to make an offer under which the great majority of his wetland would be transferred to council if the Caldera did not oppose the rezoning of a largely disturbed section for residential subdivision.

Tweed Council agreed to undertake works which would restore the hydrology of the wetland to some extent. Those works should commence soon.

A Long History of Problems

Wetland 54 was the site of the first Interim Conservation Order ever made to protect a natural area. The ICO was made by the NSW government in 1984 at the request of the Tweed Valley Conservation Trust. It remained in place over substantial parts of the wetland until alternative protection became available under the state wetlands policy (SEPP 14).

TRANSFERRED TO PUBLIC OWNERSHIP

Unfortunately, the ICO did not cover all of the wetland or the adjacent drier types of bushland. Nor did it preclude works on adjacent land which effectively increased the drainage of the wetland. A great deal of clearing and drainage works took place in and around the wetland in the months before the SEPP 14 commenced in 1986, much of it on the Black Rocks property to the south of Pottsville Waters.

Unauthorized clearing and draining of the wetland continued during the late 80s and early 90s despite the protection of the SEPP 14. Early in this period, a large section of wetland on the Dunloe Park property was lost forever when the NSW government agreed to removed it from the SEPP even though it had been cleared and drained without consent.

Though the NSW government has not delivered similar rewards for the unauthorized clearing and drainage works undertaken in the northern part of the wetland during the early 90s, they have not effectively prosecuted the serious damage caused to the wetlands by these works.

Damage due to clearing is obvious, but the greatest problems may have been caused by drainage. There has been a direct loss of peat soil through its exposure to air and consequent oxidization. Drier conditions have also caused an increased frequency of fire, leading to further widespread loss of peat. The number and health of trees has suffered as a consequence.

One Solution

There would be a great reduction in the problems encountered at this and other coastal wetlands if they were owned and managed by public authorities. It would greatly reduce the incentive for owners to deliberately damage wetlands to increase the chance of getting a rezoning or development approval at some later stage.

However, this solution raises a number of other problems, not least of which is the need for the community to find the resources to acquire and manage these areas.

In some cases, such as Pottsville Waters, it may suit all parties if the transfer of the land to public ownership occurs as a tradeoff for a rezoning or development approval. However, this can only occur where the wetlands in question are adjacent to areas which have been identified as being suitable for urban development or subdivision.

Come and celebrate an important event in the conservation of bushland on the Tweed Coast

Walk in the Pottsville Wetland

Sunday 11 May 1997

Meet at the park east of Coast road opposite Pottsville oval 10 am

After the walk join us in a
picnic lunch at Mooball littoral rainforest reserve

Enquiries: Rhonda James (066) 761284 or Henry James (066) 726012
In case of bad weather call above numbers before 9am on the morning of the walk to find out what is happening

(Pottsville Wetlands - Continued)

Future management

The major issues facing council in its management of the wetland are (a) control of groundsel (b) managing bushfire risk in a way which promotes the habitat values of the wetland (c) provision for and control of public access (d) restoring the hydrology of the wetland to the extent possible given adjacent urban development and rights to drainage that neighbours may have gained.

Thanks to the workers

The proposed celebration is an opportunity to acknowledge the work of a person who has been involved in the fight for Wetland 54 since the very start in the early 80s. Andrew Murray was part of the team at the Tweed Valley Conservation Trust who originally sought the ICO. He was later involved in bringing the events at Black Rocks and Dunloe Park to the attention of government and the public.

He gained a detailed knowledge of the wetland through his participation in a study undertaken for the Heritage Council. His familiarity with the land was called upon in one prosecution undertaken by council in the early 90s. It was also crucial to the preparation of evidence for the Caldera's prosecution.

We expect that Andrew will come along to help guide us on the planned walk.

THE END OF OIL

Against the backdrop of a frenzied rush by governments to build freeways all over our major cities and through our ecologically sensitive coastal plain. The world is entering a period where production of petroleum is about to peak, This is happening at the same time as China and the other Asian giants are experiencing unprecedented growth and will be competing for these diminishing petroleum reserves with increasing aggression. China became a net importer of oil in 1993 and even Indonesia will need to begin importing by 2000.

Geologists acknowledge that all the major oil reserves have already been found and that further discoveries will be only of minor fields in situations with very high recovery costs, unexploited Australian Fields (e.g the stolen Timor Gap) are in this category.

Major oil companies have been bleeding money for a decade as their capital infrastructure needs replacing in a market where oil prices are being artificially held down by pressures from the Middle East producers. This unlikely scenario is due to the latter's desire to avoid depressing their markets in the west as well as to discourage the development of alternative energy sources.

As demand grows and reserves fall, the artificial low price of oil has a very limited life. Within the next few years prices will begin to rise and keep on rising. This will have a devastating effect on the world economy but countries like Australia, with the highest per capita use of petroleum, will suffer a disproportionate effect in economic and social disruption. Remember that, apart from private consumption, our economy depends on huge, subsidized availability of petroleum products

As with environmental concerns our various governments aren publicly ignoring the coming crisis and hoping that "something will turn up". With any luck the other party will be in power when the shit hits the fan. Meanwhile it is business as usual.

There are many alternative energy sources available from solar to nuclear. They are all far more costly than oil and some are unacceptably desructive to the environment. Nevertheless, it is the best of these sources that we must rely on in the future and they will become more cost effective as they are developed. However, in the foreseeable future, we will never see an energy source as cheap as petroleum and far reaching economic and social change will have to accompany the development of new sources.

I will conclude with a quote from the reference used for this article, "*The need for Australia and the world to reduce their dependence on liquid petroleum fuels is urgent, especially for the major use –transport. We are a privileged generation that will witness within a decade the shrinking of its present wealth and mobility. We must have the courage now to explore new ways of living whereby we can all live well, but consume less. With wisdom and good leadership that inspires people to act, even a better life than we have now may be possible".*

Tom Tabart

Reference: The Decline in the Age of Oil (Petrol Politics: Australia's Road Ahead) by Brian J Fleay. Pluto Press Aust.

THE BURNING QUESTION

Summary of report prepared by Tony Hayes Agricultural Officer Condong 1995

The Place of cane fires in modern harvest operations is constantly being reviewed. in some areas of Queensland, most of the crop is harvested "green" ie, without pre-harvest burns. In other (usually wetter) areas and in New South Wales, nearly all cane is burnt prior to harvest. The question is often asked, **Why burn at all?**

This issue is extremely complex and all aspects need to be carefully examined before changing present practice.

Firstly, we should consider the two types of canefield fires -

* Pre-harvest burns are carried out to remove all loose and dead leaves, dried out weeds and extraneous matter to facilitate the harvest operation.

The characteristics of pre-harvest burns are fast, hot fires, with tremendous updraught. Burn is often incomplete and large carbonaceous ash particles ("black snow" or "black gold") are a feature. These are the fires that attract tourists and feature on postcards. Pre-harvest burns are hot, dangerous and dirty. This job disrupts other farm work and every farmer would prefer not to burn.

* Post harvest burns are carried out several weeks after harvest. The purpose is to remove extraneous matter that will interfere with surface drainage, prevent field from warming up and interfere with weed controlling cultivation. This burn is the first stage in "ratooning" cane.

The fires are hot and slow burning with a varying degree of combustion. Smoke is dense and mainly fine particulate matter. It is these fires that can cause traffic visibility problems and may aggravate respiratory problems - particularly among farmers themselves. However post harvest burns are simple, require little or no exotic energy and leave excellent fire breaks between fields.

There are alternatives to post harvest burning, incorporation of residues, zero or minimum till or minimum till plus chemical weed control.

Advantages of Green Harvest

1. The farmer doesn't have to burn. This saves time and disruption, and for most that means money.
2. Organic matter is conserved
3. There is no smoke
4. The resulting trash blanket can in some situations completely suppress weed growth.
5. On sloping and hillside country the trash blanket gives excellent erosion control.
6. Trafficability in fields is improved. There is no need to cultivate between successive ratoon crops.
7. Cane trash has many potential uses eg, paper, fibre packaging material, mulch, fuel etc.
8. Higher sugar content. This is a doubtful proposition.
9. Deterioration loss is significantly lowered. Cane will start to deteriorate as soon as it is burnt.

Disadvantages of Green Harvest

1. Difficulty in harvest. Visibility is greatly reduced by a cloud of trash and dust.
2. Cane loss is increased. In Queensland losses are estimated at 3% for burnt and 8% for green harvest. A loss of this magnitude in NSW would cost the local industry approximately $5.5million.
3. Fire Risk. The harvester and ancillary equipment work in a highly combustible environment.
4. Current harvesters do not have the capacity to efficiently harvest and clean heavy, lodged (fallen or sprawled) crops that are characteristic or our high yielding standover crops.
5. Flood debris
6. Energy use is approximately twice that of burnt cane.

Future Developments

1. There are obvious advantages to be gained from green harvest. To exploit these advantages we need to eliminate, or minimise the effects of the disadvantages listed.

Initially, there is room for some compromise, eg, post harvest burning can be reduced substantially. recent season length reduction made possible by continuous crushing has meant that less of the crop is harvested in unfavourable ratooning period.

theres is cope for some green harvest now. in uncertain wet periods growers may opt to cut some cane green until the weather pattern is more clearly defined. in some cases, outside rows of fields may be cut to serve as breaks, or as a rough test of CCS, prior to committing an entire field to harvest. Indeed, one small Tweed harvest operator/farmer currently cuts most of his crop green.

2. Harvesters have developed the capacity to handle increasingly difficult crops. Future research needs to concentrate on better energy efficiency and reduction of cane loss in cleaning.
3. Fire protection strategies need to be developed and implemented. For instance, some burning of strategically placed fields may be desirable to reduce the potential of runaway fires.
4. Better cane varieties. A comprehensive variety improvement programme has been in operation for over half a century. To achieve and identify the characteristics sought in one variety, we cross breed many varieties of sugar cane including wild types, proven performers, newly developed varieties and successful commercial canes from our area.
One characteristic "Harvestability" needs special consideration for green harvest. For many years we have sought erect growing varieties suited to mechanical harvest. Now, we additionally seek a loose trashing habit, ie, the trash isn't necessarily shed, but held lightly so that it may be separated easily at harvest time.
This is a difficult goal but we are making progress. recent releases, Delta and Concord are improvements.
Most importantly, our industry always seeks a better way. our research efforts have intensified on all fronts, growing, harvesting, transport and milling. We will continue to solve our problems in the future, as in the past and we will improve our sustainable productivity.

Identification of Native Rats

Reference Jose Haeden and Leigh Taylor Blue Mountains Wires

Members of the public regularly ask "How do I know if rodents are native or introduced"? The following gives an insight into the common species of rat and how they can be identified.

Australian native rodents have had a raw deal up to date. They have received little study in comparison with the glamorous marsupials and fared particularly badly since settlement, with 12 per cent now extinct and a further 20 per cent classed as critically endangered or vulnerable.

Two species of native rat in Australia are the Black Rat and Swamp Rat. Although related to the introduced Black Rat (Rattus rattus), these natives arrived in Australia over one million years ago, don't carry disease and avoid human habitations. Native rats fed on sedges, grasses, fungi and insects. By day they shelter in hollow logs or burrows. These animals breed in the warmer months and only live one or two years. The Bush rat lives in a variety of habitats which provide thick undergrowth. The Swamp rat prefers wetter areas with dense layers of sedges and may be active during the day. Understandably there is a lot of confusion about identification, so use the table below as a quick reference guide.

QUICK REFERENCE OF THE DISTINGUISHING FEATURES OF RATS

Species	Tail length	Feet	Feral or Native
Bush Rat	Same as head and body length	Pink	Native
Swamp Rat	Tail shorter than head and body length	Dark	Native
Black Rat	Tail longer than head and body length	Pink	Introduced
Brown Rat (uncommon)	Tail shorter than head	Pink	Introduced

DEEP ECOLOGY

The following are excerpts from a speech given recently by the inspiring American "deep ecologist" Joanna Macy.

First we must see what's going on and then realise that there is **no technological answer.** A faint green haze of realization will be interspersed with pockets of emerald green. With the close of the 20th century there is a Time Of Great Turning - greater even than the Agricultural Revolution. There is no guarantee that the move for sustainability will happen in time, however there will be enormous pressure on self-preservation.This will require great ingenuity, **and there is no reason that it can't happen!**

But How? There are three levels of action.

1. ***Defensive action.*** This method will slow down unwanted "progress". It is the way of the activist. It's danger is that it often leads to "burn-out" then guilt. It is important to realise that you are **not** really abandonning ship just "dropping back" like a "head goose".
2. ***Structural analysis*** - What are the political structures driving us to destroying ourselves? This leads to a whole range of workshops aiming to de-mystefy the problem. This in turn leads to new social and economic arrangements : consumer Co-Ops single currency,sane and sustainable practices.
3. ***Consciousness shift.*** Finally there are spiritual and psychological changes. We are awakened to profound and ancient kinship and break away from arrogant isolation.In this process we need to pause with the realization that we are already "home". How lucky we are! In Bob Brown's words "We are the universe knowing itself."

What will help us navigate this turning?

I. Come from gratitude that we are human and have the ability to change our karma.Allow ourselves to be astonished by our own capacity to love . Sharpen it.

II. Don't be afraid of the dark.It will last a while. Let it be okay that we don't know the solution.Do not fear our anger.It is a cover for our need for justice. Seeds germinate in the dark.

III. Dare to visualize.Imagination is the most atrophied of our capacities.

IV. Roll up our sleeves and remember, the past contains the whole.All global crises are interlinked. Enjoy **whichever** you choose to identify with.

V. Act our age! Our true age is 5 billion years.It is time we clothed ourselves in the authority and dignity of our age.

The beginning of a new millenium may lead to exacerbated fears, panic, apocalypse or rebirth. The choice is ours.

Books written by Joanna Macy include:"The Dharma Of Natural Systems","Despair and Empowerment in the Nuclear Age","World As Lover World As Self".

Vivien Royston

Landcare

Although Landcare is a relatively new term, there are already around 100 Landcare groups in far north coast and over 1000 in NSW and around 2600 groups across Australia. Landcare groups are often made up of farming families and their rural neighbours, but may also comprise school children, town people, teachers, parents and even whole neighbourhoods.

> *In a nutshell, Landcare is about ordinary people who have taken up the challenge of working together to find local solutions to land degradation problems in their area.*

Landcare groups first identify any problems in their locality. Problems such as soil erosion or other forms of land degradation might exist on Landcare group members' own properties. In towns, people interested in Landcare might focus their attention on an area of nearby urban parkland, a disused quarry site, a neglected creekbank or if on the coast, a beach dune, headland or creek estuary.

They then develop a local plan to remedy the problems, often with the help of various government department technical staff. Some Landcare groups from to simply investigate a problem. Many take the next step and plan "hands on" works programs and then set about getting the job done.

They can do this by utilising a variety of resources, for example, local fundraising events, Local Government support, State/Federal funding and sometimes local or national business sponsorship.

Generally, with increased resources, Landcare groups are able to achieve more on the ground works, reach a wider audience through signage, and often pursue a higher profile in the media and press.

Most importantly, involvement in Landcare activities provides an ideal chance for all to take positive steps to help determine the future health of their land and local area.

For further information on Landcare activities on the far North Coast contact Bronwyn Scott on 725488 or enquire at your nearest office of the department of Land and Water Conservation.
Reference Landcare - An Overview

Ongoing pollution problems in Burringbar Creek has inspired the formation of the Shire's newest Landcare group at Burringbar. The group will address the problems within the catchment and surrounds of Burringbar Creek.

Camphor Laurel

The Tweed Total Catchment Committee has formed a sub committee to address the problem of Camphor Laurel infestations within the shire. Their first formal activity is a field day to be held on May 3 at Kunghur. There will be demonstrations on methods to kill the trees, mulching, replacement planting with native species, displays on the use of Camphor timber for commercial purposes and talks by local representatives.
The committee has also applied for funding to prepare a management plan on approaches to address the problem within the shire. For further information contact Bruce Hungerford on 725488.

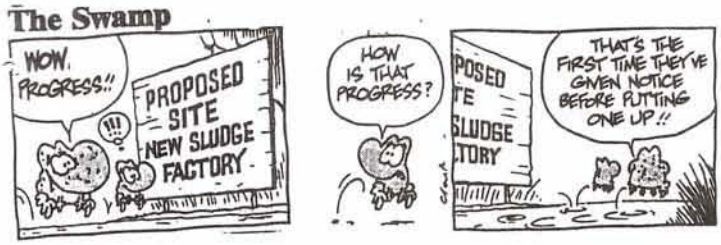
Tweed Coast Surfriders Foundation **CLEAN UP DAY**

The Surfriders hold a beach Clean Up day on the first Sunday of every month

May - North Kingscliff June - Cudgen July - Cabarita

For further information Contact Stuart Ball Ph: 07 55369891

The Swamp



CALDERA ENVIRONMENT-CENTRE!

YOUR LOCAL ENVIRONMENT CENTRE
General Meeting Tuesday 13th May
Tuesday 10th June
Upstairs at the Courthouse Hotel
Main Street Murwillumbah *5.30pm*
SHOW YOU SUPPORT **BE THERE**

TREE is published on a bi-monthly basis and preparation is undertaken during the last week of the month. The next edition will be closing in late May and available in the third week of June. Editorials, Letters to the Editor and activities are welcomed. **Assistance** with collection of items, editing, line drawings, cartoons, typing and layout would also be welcomed. Advertisements may be lodged at the shop or phone 721121.
Tree is edited and collated by Rhonda James, front cover by Barbara Suttee. The editor and committee of the Caldera Environment Centre do not necessarily agree with the opinions and comments expressed in Tree.

CALDERA ENVIRONMENT CENTRE in Commercial Road operates on a voluntary basis. Currently assistance is **urgently** required to assist in the continued functioning of the shop and environmental activities.

Assistance is required in the following ways,
Shop volunteer co-ordinator - Assistant to the treasurer - Typist - Public Relations

THE CENTRE NEEDS YOUR HELP

YOUR MEMBERSHIP IS DUE IN *Now*

SUPPORT YOUR LOCAL ENVIRONMENT GROUP - Act Locally

AUSTRALIA 45c

CALDERA ENVIRONMENT CENTRE **PO Box 5090,** **Sth Murwil**
Become a member of the CALDERA ENVIRONMENT CENTRE and receive your copy of "TREE" magazine.

'Tweed River Environmental Echo'
Newsletter of The Caldera Environment Centre

UKL 2484

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Phone.....

MEMBERSHIP Single Regular	**$20**	**Family Regular**	**$25**
Single Concession	**$12**	**Family Concession**	**$15**