

THE ANZAAS MERCURY

ANZAAS: Empowering the Community with Science

∞ Issue No. 20, March 2004 ∞

Editor's Edict

Please enjoy this issue with news about S&T issues. Three ANZAAS members get awards, see ANZAAS News, p2. In **ANZAAS Debate** we look at how industry is taking on the sustainability imperative. Catch the forward information on Youth ANZAAS 2004. Also do not miss the great ANTENNA.
-Duncan Rouch

Adam's Airing



Comment From The Chair
By Paul ADAM

Keep Managers Out of Basic Research!

Accountants are expert on everything – or at least that is the impression the current TV advertising campaign appears to intend to give.

It is interesting therefore to read "Management of Scientific Research and Development Projects in Commonwealth Agencies. Better Practice Guide for Senior Management" issued by the National Audit Office at the end of 2003.

The Commonwealth spends more than \$2 billion a year on scientific research. There is clearly a need to ensure that these funds are properly audited and that any misuse be detected. However, should the role of the auditors extend to risk management of projects?

There is a difference between basic research and R & D. The history of R & D, in both public and private sectors, contains its share of white elephant projects, funded long beyond their use-by date. Critical input from auditors might counter professional and political pride to make early euthanasia possible. However, in basic research, it is much harder to define "success"; even "negative" results may be of importance, and the value of research may not be apparent for many years.

The guidelines document stresses that they are guidelines, and

that appropriate criteria for assessment will vary between projects. The focus of the document is R & D projects rather than basic research. Nevertheless I would have concern that institutional managers may seize upon the guidelines and use them as "one size fits all" rules to the detriment of good science and innovation.

My holiday reading also included the inaugural lecture of Professor Ffowcs Williams, holder of the Rank Chair of Engineering at Cambridge University (published in the Emmanuel College Magazine LXXXV, 68-77). That the lecture was given as Professor Ffowcs Williams retired, after a tenure of 30 years is one of those curious quirks of academia. Professor Ffowcs Williams' field is aeroacoustics, and he has had an outstandingly successful research career, including much work on reducing aircraft noise. His work is what the public would see as successful industry related R & D. It is interesting, therefore, to read the conclusions about research management – "I have no doubt about the importance of commercially sponsored research and the value of academic

Contents

<i>Editor's Edict</i>	1
<i>Adam's Airing-Comment From The Chair</i>	1..
<i>ANZAAS Debate: Industry gets the Sustainability Message</i>	3
<i>Youth ANZAAS 2004 (Apply Now!)</i>	4
<i>Traffic Forum</i>	5
<i>Remember Alan Burges</i>	6
<i>Perrin's Points</i>	7
<i>Media Report</i>	8

Printed By TS Press, 140 Johnston Street, Fitzroy Vic 3065

ANZAAS

Australian and New Zealand Association for the Advancement of Science
The University of Adelaide, Adelaide, South Australia 5005
Telephone: (08) 8303 4965 Facsimile: (08) 8303 4965
E-mail, ANZAAS: info@anzaas.org.au Web-site: <http://www.anzaas.org.au>
ABN: 79 883 488 910
ANZAAS Mercury, E-mail: newsletter_editor@anzaas.org.au
Editor in Chief: Duncan Rouch; ANTENNA Editor: Peter Toomer



collaboration with industry but I do believe that career managers are more likely to hinder than help". Professor Ffowcs Williams concluded his lecture with six views formed over his career;

1. "Research tasks that are programmed and closely monitored by government or industry tend to be dull and boring;
2. Research done to satisfy one's own curiosity is a more likely source of new knowledge than is research directed from outside;
3. Freedom from managerial interference is probably an academic's most valued reward;
4. Spin and news management are poison within a university; truth and fundamental honesty is everything;

5. Universities are places of learning; thinking of them as a business is foolish;
6. Putting bright people on to good problems and encouraging them is the best way of searching for new knowledge".

What would the accountants say?

I would welcome any comments and suggestions for issues that could be addressed -e-mail: chair@anzaas.org.au, Tel: (W) 02 9385 2076, (H) 02 9314 2453, FAX: 02 9385 1635

ANZAAS News

Member Wins Scholarship



Tom Hanna

ANZAAS Member Tom Hanna won a highly rated award, the General Sir John Monash Award for 2004. He was one of eight individuals to gain Australia's richest scholarship, awarded in December 2003 at Government House, Canberra. The award recognised their excellent academic achievement and future leadership potential. Mr Hanna will use his award to study for a Doctor of Philosophy (Physics) at University of Oxford, UK.

Members Win Australian Honours

Two long-serving ANZAAS members have received official Australian honours, Dr Joan Clarke the medal of the Order of Australia (OAM), and Dr Susan Stockmayer membership of the Order of Australia (AM), in the last year.

Polymath Dr Clarke was awarded the OAM medal in May 2003 for research publications in six important areas; community service, welfare issues, politics, history, and scientific culture. Her scientific articles include 'Science and Technology in Australia', for the Australian Encyclopedia, and 'Scientists as intellectuals, in 'Australian intellectuals and intellectual movements' (Oxford University Press, 1988).



Dr Joan Clarke with John Landy, Governor of Victoria, at the ceremony in May 2003, at which she received her award.

In community service Dr Clarke has served as the Executive Director of the Prahran Mission since 1989, and before that was Director, Research and Social Policy, Mission of St James and St John (now part of Anglicare) for four years. Dr Clarke is a Consultant on the Anglican Archbishop's International Relief and Development Fund, as well as Chair of the Uniting Church Advisory Committee on Community Services. Dr Clarke has also served as a Board Member for the Christian Research Association since 1987.

Dr Clarke has also made substantial and long-running contributions in the much neglected area of mental health. Her motivation in this area has been informed by years of personal experience in caring for her mentally ill mother. While it was a difficult experience she saw positive lessons that encouraged her to help others in similar circumstances. "I had first-hand experience and knew how terrible and inhumane mental health services could be," she stated. She went on to play pivotal roles in building humane mental health services.

The Prahran Mission that she directs is the largest provider of psychiatric disability rehabilitation and support day services in Victoria. She was previously Chair of the Psychiatric Disability and Coalition for nine years and a member of the Mental Health Task Force that set up the Mental Health Council of Australia. She has been a Board member of the Mental Health Council of Australia since it began.

Despite the many improvements in mental health services, one of the continuing challenges for Dr Clarke is to shake the communal abhorrence of people suffering mental disease. "There is still a huge stigma," she asserted.

Dr Susan Stockmayer was awarded the AM for service to science and to the community through the development of programs to raise public awareness of scientific ideas and issues. She was also cited for encouraging young people, particularly girls, to enter the field.

Dr Stockmayer is currently Director of the Centre for Public Awareness of Science at the Australian National University (ANU), Canberra. This followed her appointment as the inaugural lecturer in science communication at ANU, in January 1996.

She has co-edited a number of book on science communication, which include 'Using Museums to popularise science and technology' and 'Science Communication in Theory and Practice', both published in 2001. The latter has been translated into Japanese.

Dr Stockmayer has also travelled overseas to provide science communication seminars in developing countries such as India and Thailand.

Before coming to Australia in 1982, she was Co-author and Assistant to the Director of the EEC funded Zimbabwe National Science Program. The task of this Program was to place process-oriented science in all schools through interactive teaching materials. It was particularly directed at remote rural schools with untrained teachers.

The ANZAAS Debate - Industry and the Sustainable Society

Here Duncan Rouch looks at the nexus between industry and development of the sustainable society. Is industry getting the message?

In the future one central task of companies will be to ensure they clean up after themselves. To “Think Global” five years ago simply meant the ability of a company to adapt to different cultures in the world market. Now commercial managers must think global in another way: to consider the whole environment in which they operate. Along with financial success companies must recognise two other key performance areas, social responsibility and environmental sustainability.

Driving Change

All sectors of the Australian community recognise and have started to act on environmental imperatives. Dryland salinity and river health are currently the major environmental imperatives. In response to community and scientific concerns both Federal and State Governments have contributed funds and leadership toward controlling dryland salinity. They also support action to improve the flows of rivers, so as to improve river ecology. In particular improving river health helps both reduce salt loads and sustain local trees as key components of local ecology. After decades of telling farmers to use all the water they want governments now push the message for sustainable use of Australia’s limited water resources. Change is in the air.

Green Chemistry

Chemical contamination of the environment by industrial processes has also been a long-running concern. The Australian agricultural chemical manufacturer Nufarm is one company taking the issue seriously. By improving production processes Nufarm have substantially reduced the waste it produced, while realising financial benefits. Manager Ron Allison, at its Laverton plant says the eventual aim is as close as possible to eliminate all waste streams from processing. One example of an improvement in production of a herbicide at the plant is the replacement of sulphuric acid, a raw material, with hydrochloric acid, a byproduct of another process.

The general principle behind green chemistry is that it utilises innovative chemical processes to reduce hazardous chemicals and improve efficiency, states Professor Colin Raston of Monash University’s Centre for Green Chemistry.

The Waste Mountain

Typically when industry takes materials and processes them into desired products, then transports them to market, a substantial amount of waste is usually generated. This waste includes wood-derived materials, plastics and, often hazardous, chemicals. The amount of waste produced in making a laptop computer is close to 4000 times its own weight. For every tonne of paper manufactured 98 tonnes of resources are used.

The Australian Dairy industry in the past has been a substantial producer of environmental waste, such as large volumes of effluent from cheese manufacture. Dairy companies realised this nutrient rich effluent has the strong capability to disastrously upset the balance of local ecologies. As a result they have proceeded with a two-part strategy. Firstly, they extract materials from the waste that have market values in their own right, such as whey proteins. Secondly, the

final effluents are cleaned to acceptable standards, that allow recycling of the water content for some purposes.

The Resource Crater

While waste production has continued, many resources are being depleted in increasingly unsustainable fashion. These limited resources range from petroleum and natural gas to old-growth timber and mined chemicals. The imperative with limited resources is to redesign industrial processes so that these resources are at a minimum recycled, and at best not used at all.

The Holistic Deal

“Is it rational to have a pricing system that discounts the future and sells the past?” ask Hawken et al. in their book *Natural Capitalism: The Next Revolution*. Gaining the best from re-evaluating resource use and waste production requires a whole-of-system approach. That means the resource and waste components should be integrated into the financial system. That includes both the cost of sustaining the environments from which resources are taken and production of waste and its disposal. Thus the true costs of resource extraction and the waste component of production is costed in the financial system, so they can be managed like all other company components. For example, a key part of a company’s management is risk management. In the past risk management has involved dealing with narrowly defined and direct financial hazards. In the holistic approach environmental and community hazards must also be dealt with by risk management. Being environmentally and communally responsible can provide marketing advantages for a company, as well as decreasing costs of production.

A further benefit of the holistic approach is the integration into central management of both the occupational health (OH&S) of company staff as well as the well being of the local communities in which a company operates. The disastrous fire at the ESSO Longford plant in Victoria is an example of the cost of not integrating OH&S, as well as environmental protection, into a company’s risk management.

Getting There

Busy managers tend focus on day-to-day issues in the life of a company, so what are good ways to help them quickly get to grips with practical improvements to the environmental-based performance aspects of their companies? One effective approach to this issue is environmental benchmarking. This involves finding another company in the same industry that has leading environmental practices, whether it is within Australia or overseas. A report is commissioned on the leading practices of the benchmark company, which as it is a standard reporting tool, provides outcomes that are easy to understand by managers of the investigating company. Such reports also explain to managers why wastes are generated, which helps them to develop more efficient ways of doing things.

Industry has the capability to save energy, resources and money by reducing waste in all its activities. It has a critical role to play in sustaining the environment and in publicising that these benefits can be achieved without compromising performance, product, or profit.

Youth ANZAAS 2004

To be held at the University of New South Wales, Sydney,
NSW From Monday 5th to Friday 9th July 2004

What is Youth ANZAAS?

Youth ANZAAS is a national conference for students of science in Years 9 to 12. Every year, six students are chosen from each Australian State and Territory to participate in an exciting three-day program of science activities and experiences. Organised by the Australian and New Zealand Association for the Advancement of Science (ANZAAS) and sponsored by the Department of Education, Science and Training (DEST) and, for 2004, by the Faculty of Science, University of NSW, Youth ANZAAS is an opportunity for young people to experience first hand the leading edge science that is taking place in Australia today.

Travel arrangements

All travel expenses from the successful applicants' home to Sydney are met by ANZAAS. Students will travel from Western Australia, Northern Territory, South Australia, Victoria, Queensland and Tasmania by plane. Students will travel from the Australian Capital Territory and New South Wales by bus.

Conference delegates will arrive at New College, University of NSW, Kensington, on the evening of Monday 5th of July and will depart on the morning of Friday 9th of July. Interstate students will be met at their Sydney arrival point and transported to New College. They will be returned to their departure point on Friday morning. Non-resident students will make their own way to and from the conference activities which may extend from 8:30 in the morning to 9:30 at night.

Accommodation

Resident delegates will be accommodated in New College, located in the Kensington campus of the University of New South Wales.

Non-Resident Students

Twelve non-resident delegates will be chosen from the Sydney region.

Registration

**All participants paying the non-members rate will become ANZAAS members for the 2004-05 financial year.*

1. Residential

Cost: \$420.00 (includes GST) for non ANZAAS members*

\$400.00 (includes GST) for ANZAAS members

Registration includes the conference, activities, accommodation, and all meals.

2. 3-Day Non-residential [Tuesday, Wednesday and Thursday]

Cost: \$380.00 (includes GST) for non ANZAAS members*
\$360.00 (includes GST) for ANZAAS members

Registration includes the conference, activities, lunches and dinners.

Non-residential students must organise their own transport to and from the conference.

Supervision

Students will be under the supervision of qualified personnel at all times. Consumption of alcohol, smoking and use of illicit drugs are not permitted at any time during Youth ANZAAS.

Attire

Attire will be casual wear, except for the Conference dinner when a higher standard of dress is expected (shirt and tie for men). Closed footwear is essential for laboratory visits. Early July in Sydney is the middle of winter. The weather is changeable with temperatures ranging from 5°C to 20°C. Heavy rain may be experienced.

Program

A provisional program will be available by early April 2004. The program will include a hands-on extraction of DNA, other activities that may be included are; visits to the Anatomy Museum, the reactor at Lucas Heights, and a chemical factory; lectures by noted scientists.

Application forms

For application forms and information about the selection criteria please contact the Youth ANZAAS Organiser:

Ms Anita Pavic
Faculty of Science
Robert Webster Building
UNSW
SYDNEY NSW 2052
Telephone: +61 2 9385 7307
Fax: +61 2 9385 6127
email: youthanzaas@unsw.edu.au

Tasmanian Division hosts public forum on Hobart traffic flow

The Tasmanian Division of ANZAAS hosted a public forum on the topic of 'Through Traffic in Central Hobart: Issues and Options'. It was held in the Physics Lecture Theatre at the University of Tasmania on 25 September 2003.

The meeting was proposed by Dr Peter Smith following a chance remark on TV by the Lord Mayor of Hobart, Mr R. Valentine. The initial stimulus was the issue of log trucks which are the subject of a wider public debate. The population of Hobart is growing and this is placing pressure on the ability of Hobart streets, particularly Davey and Macquarie Streets, to carry the increased traffic loads.

Increased flow of private and public vehicles can be expected to place further stress over the next few decades. History shows that decisions on traffic have a long term impact and

thus decisions made now will have an influence far into the future. For example, Hobart's initial street design was based on flow to and from the port area and thus perpendicular to the current dominant traffic flow.

The meeting allowed several experts in the field to air their views. The Lord Mayor, Rob Valentine, made an introductory statement on the topic and Bob Cotgrove, Barry McNeill, John Livermore, Brian Risby and Robert Morris all address relevant issues. While the audience was not large, it did include several members of the Hobart City Council and a vigorous discussion session followed the presentations, both in the lecture theatre and over tea/coffee afterwards.

A copy of papers presented was available on the night at a cost of \$10. While addressing Hobart issues, the principles discussed are applicable in other cities in Australia. Copies of the papers are available from the Tas Div, Sec/Treas, Dr Peter Smith, Telephone&Fax 03 6225 1067



....apply for Youth ANZAAS 2004!

What *is* Youth ANZAAS?

Youth ANZAAS is a national conference for science students in Years 9 to 12. Every year, six students from each State and Territory are selected to participate in three days of science activities and experiences.

Behind-the-scenes tours, lectures with leading scientists, hands-on research, cutting edge technology – all this and more awaits you at Youth ANZAAS 2004!

Who organises Youth ANZAAS?

Youth ANZAAS is organised by the Australian and New Zealand Association for the Advancement of Science (ANZAAS) and is sponsored by the Department of Education, Science and Training (DEST), and for 2004, the Faculty of Science, University of NSW.

When and where is it held?

Youth ANZAAS 2004 will be held in Sydney at the University of NSW from 5-9 July.

We pay to get you there!

ANZAAS will pay the travel costs of successful applicants from home to Sydney. Participants pay the conference registration fee, which covers all meals, travel around Sydney, accommodation, and tours.

How do I apply?

Contact the conference organiser or your local ANZAAS representative to obtain an application form, or download a copy from the ANZAAS website: www.anzaas.org.au.

Conference Organiser:
Ms Anita Pavic
Faculty of Science
Robert Webster Building
UNSW
SYDNEY NSW 2052
Telephone: +61 2 9385 7307
Fax: +61 2 9385 6127
email: youthanzaas@unsw.edu.au

Obituary

Alan Burges

By Paul ADAM

There have been many scientists who have made outstanding contributions to their disciplines in Australia, having arrived as immigrants. There are also those who after education in Australia have achieved distinction overseas. Although there is rightly concern about a perceived braindrain of postgraduates, we need to remember that our trade is not constrained by boundaries and that movement of scientists around the world is not a new phenomenon.

One eminent Australian scientist who died recently at the age of ninety was Professor Alan Burges, for many years one of the most distinguished botanists in the UK.

Alan Burges hailed from East Maitland in the Hunter Valley, and obtained a BSc(Hons) and MSc in Botany from Sydney University. In that era Australian universities did not award doctorates, so he progressed to Cambridge and obtained a PhD in plant pathology, before becoming a Research Fellow at Emmanuel College (a college with very strong links to Australia). During the war he served in RAF Bomber Command, rising to the rank of Wing Commander. After the war he was briefly on the staff of the Botany School, Cambridge, before returning to Sydney in 1947 to take up the Chair in Botany at Sydney University, in succession to Eric Ashby.

While at Sydney he was active in the affairs of ANZAAS, being Secretary from 1947 to 1952. He played a key role in organising the Hobart, Brisbane and Sydney congresses in 1949, 1951 and 1952. He was elected a Fellow of ANZAAS in 1954. While at Sydney University he was active in research on soil science and ecology, producing a classic paper on podsolisation in dune soils on the Central Coast (and thus predated Spike Milligan in bringing world attention to Woy Woy).

In 1952 he returned to the UK to take up the Chair of Botany at Liverpool and then, in 1966, becoming the first Vice-Chancellor of the New University of Ulster at Coleraine.

Although his own research was on mycology and soil science his lasting memorial is *Flora Europaea*. The *Flora Europaea* project was a remarkable example of international collaboration over several decades to produce the first unified flora of the continent. Burges was one of the group of Cambridge and ex Cambridge botanists who, at the International Botanical Congress in Paris in 1954, held a now famous gathering in a bar on the banks of the Seine which led to the flora project. Although not a taxonomist, Burges was to play a leading role on the editorial committee of the *Flora*.

His other great legacy is the New University of Ulster. This was one of the new wave of British universities that was the product of Harold Wilson's vision for a reinvigorated higher education system, but the onset of the troubles made establishing an institution in the province difficult. That Burges was able to build a strong successful campus, despite its proximity to Londonderry says a great deal for his vision, organization and negotiating skills, diplomacy and commitment to the role of tertiary education.

It is difficult, in this era of hyper specialization, to envisage anyone playing such important roles across a range of disciplines (botany, mycology, soil science, ecology). Burges was a remarkably gifted world citizen (and from my own few meetings with him, someone who could be characterized by that currently unfashionable term – gentleman) – but some

Professor Norman Alan Burges

Date of Birth: 5 August 1911

- PhD, University of Cambridge, UK, 1937.
- Research Fellow, Emmanuel College, University of Cambridge, UK, 1938.
- Served in RAF Bomber Command (despatches) during World War II, 1939-45.
- Professor of Botany, Sydney University, Australia, 1947-52.
- Dean of Faculty of Science and Fellow of Senate, Sydney University, Australia, 1949-52.
- Gaskell Professor of Botany, University of Liverpool, 1952-1966.
- Honorary General Secretary, ANZAAS, 1947-52.
- President, British Ecological Society, 1958-59.
- President, British Mycological Society, 1962.
- Member of the Committee, Nature Conservancy, UK, 1959-66.
- Member, Waste Management Advisory Council.
- Honorary LLD, QUB, 1973; Honorary DTech, Loughborough, UK, 1975; Honorary DSc, Ulster, 1977.
- Various publications in scientific journals on plant diseases and fungi, as well as two books on soil biology and several reports on Education in Northern Ireland.
- Enjoyed sailing.

Perrin's Points



NOTICES TO MEMBERS FROM
THE HON. SECRETARY

DIVISIONAL MEETINGS –

Members are urged to support Divisional meetings of all kinds, and to particularly encourage the younger members to organise and participate in Divisional activities. It is crucial to the long-term survival of ANZAAS as a credible entity that the younger members begin to be brought into the management of the Association.

Divisional meetings can be good recruiting grounds for new members.

ELECTION OF OFFICERS – Important: all members are requested to read the next paragraph very carefully.....

The Constitution of the Association requires that the prescribed Offices shall fall vacant after a term of three years. The incumbent officeholders **cannot** offer themselves for re-election as they have held the office for two consecutive terms. The Offices of **Chairman, Deputy Chairman, Secretary and Member-at-large** will fall vacant at the next Annual General Meeting.

Nominations for the vacant posts are now called for by the Secretary to be received by the close of business on 30th June 2004

Has the office got your current and correct e-mail address for the ANZAAS Discussion list?

The incumbents are:

Chairman: Assoc Prof Paul Adam, School of Biological Science, UNSW, SYDNEY NSW
[02] 9385 2076 fax: [02] 9385 1653
p.adam@unsw.edu.au

Deputy Chairman: Dr. Bob Vickery
22/2, Pacific Street,
BRONTE,
NSW 2024
tel: 02 9369 2705
fax: 02 9385 1558
vickery@mpx.com.au

Secretary Robert Perrin,
ANZAAS
The University of Adelaide
ADELAIDE,
South Australia 5005
tel: [08] 8303 4965 [O]
fax: [08] 8303 4965 [O]
secretary@anzaas.org.au

Member-at-large: Dr. Peter Smith,
55, Lipscombe Avenue,
SANDY BAY,
Tasmania 7005
tel: 03 6225 1067
fax: 03 6225 1067

More details can be obtained from the Central office.

NATIONAL SCIENCE WEEK 2004

For reasons which have escaped those of us at the pointed end of NSWK, those worthies who oversee the dates of NSWk have contrived to stage it during the start of the Olympic Games – there are no prizes for guessing where the media attention will be!

Members intending to stage ANZAAS events, or events in which ANZAAS is involved, are urged to ensure that the event is concluded by the opening of the Olympic Games to ensure the maximum opportunity for media coverage.

Media Report

By Victor BIEN

Credibility of Science in Trouble Again



This came into sharp focus in a protracted battle between Hutchison Telecoms trading as Orange and the local community at Oatley in southern Sydney. Hutchison was forced by a High Court decision to take down a telephone tower erected in a popular park in the suburb. Subsequently in an effort to persuade the local community that such a tower is safe they took out

a full page advertisement in the local paper explaining their case and suggesting that they should be able to install the tower in a local shopping area further away from a school without further complaint. No such luck! This caused a furore as great as the demonstrations and the submission to the local council to back the case to get rid of the tower from the park in the first place! Hutchison was accused of running a campaign of "dividing the community".

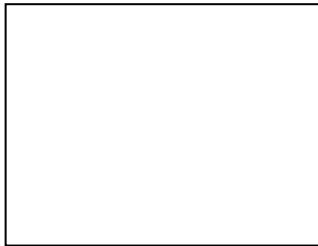
The ad by Hutchison explaining why the radiation from the tower was harmless being I recollect one or some million times lower than the recommended standard, that the radiation from TV signals are hundreds of times stronger etc. was scientifically sound but that did not wash at all!

I know the lady principal campaigner through the P&C. She is a sane reasonable person except over this issue of

"radiation" from phone towers which we in the scientific community agree with Hutchison is not really a problem. Her campaigning would not have had any "traction" if sufficient numbers in the community did not share her concerns.

How has this scientifically invalid state of public opinion arisen? Surely it largely stems from the term "radiation". This term connotes atomic bombs, nuclear reactor meltdowns and people dying from "radiation" sickness and a litany of abuse of public trust by people who knew better. The fact that "radiation" also refers to TV and radio signals not to mention the radiation from mobile phone handsets themselves doesn't compute. Mixed up in all this unfortunately are decades of break downs of scientific credibility. We can name many. Here are a few that came to mind in writing this: outrageous hiding the dangers of asbestos for decades from ordinary people and workers by companies and governments; irresponsible exposure of Australian troops to Agent Orange during the Vietnam war; cynical buying "scientific research" by British American Tobacco to "show" that cigarette smoking is "safe"; many false assurances that the handling of nuclear material is "safe" etc. The abuse of public trust over the decades has broken down the credibility of any scientifically based "assurance" that may be given.

Abuse of public trust of scientific matters is so serious it should be severely jumped on by the scientific community whenever it happens.



If undeliverable, please return to:
Australian and New Zealand Association for the Advancement of Science
The University of Adelaide, Adelaide, SA 5005

