

**“The Art and Science of Impact Assessment”
Perth. Western Australia.**

Closing Plenary Keynote Address

“To dance beneath the diamond sky with one hand waving free”

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PART 1

1. Thank you for the Rose-Hulman Award

Thank you Bob, and thank you IAIA for selecting me as the recipient of the 2008 Rose- Hulman Award. There are few occasions more rewarding but more humbling than being recognised by your peers. My immediate reaction on being advised by Bob Connolly of the award earlier in the year was “what were you thinking?” Because anything I have managed to achieve in impact assessment over the past 33 years of involvement has been as only one of many people.

Therefore in accepting this award, I give full recognition, acknowledgement and credit to all those friends and colleagues who have trodden the path with me:

- those EPA members, assessors, regulators and consultants in this State and elsewhere in Australia;
- those educators from Murdoch, CEMP - Aberdeen, Manchester, and Oxford Brookes Universities in particular; and
- those colleagues from other countries – Canada, US, Netherlands, NZ, Portugal, Hong Kong & China and many more – some of whom are in the audience today.

Thank you for your enrichment of what has been a large part of my life’s work.

It’s been 20 years since I first joined IAIA – nowhere near as long as some in this room. And it was 20 years ago that Australia’s only other IAIA Annual Conference was held in Brisbane in 1988.

A few of us from Perth, notably Angus Morrison-Saunders and John Bailey from Murdoch University and myself, and with support from Gerard Early of the Australian Federal Environment Department, had been muttering for years about making a bid for the Conference on behalf of Australia. Our motivation was to contribute back to this great organisation which has proven to be so supportive, helpful and stimulating for our professional careers. As well we felt that Australia should accept responsibility for hosting IAIA having enjoyed being a guest in so many other countries over those years.

Fortunately just when the heavy lifting started, I had to resign from the team which organised this Conference when I changed careers last year. But I am in awe of what they have achieved. As well, it's been wonderful for we Western Australians to show off our home to you all.

So thank you once again for the great honour you do me.

PART 2

2. Introduction

Now I'm allowed something of a rant with a few thoughts on the world, the universe and everything – and IAIA's place in these. (I add the usual disclaimer – these are my views and don't necessarily represent those of my employer).

This Conference's theme is the Art and Science of Impact Assessment. But I want to show some examples of how *art* in the form of popular culture, when teamed with *science* have influenced public policy on the environment.

I've called this bit: "*....to dance beneath the diamond sky with one hand waving free*".

It's somewhat of a performance appraisal of my generation regarding the likely condition of the planet when we're through with it. And it concludes with a proposition for IAIA and its constituent members to look at five things we can do for the future environmental quality of the planet.

Many of you will recognise that 1964 Bob Dylan quote with its message of personal freedom, of optimism, of why now is all that matters. This is how my generation started out. And if you don't recognise it, Google it and you'll learn something.

Some of you might also remember this chorus from the 1969 Joni Mitchell song "Woodstock":

*"we are stardust
we are golden
and we've got to get ourselves back to the garden"*.

The concept of human beings originating from the exploded heart of a star as stardust was popularised by the American astrophysicist and broadcaster of Cosmos, Carl Sagan. That, and the realisation that our own sun would one day expand as a red dwarf star and engulf the earth put a finite boundary around the life of the planet – albeit of some billions of years duration. Moreover, as is often quoted, the photographs distributed by NASA and shown by Professor Ian Lowe at the opening plenary, of the blue planet floating in the blackness of space showed the fragility of "spaceship earth" and beamed it into the lounge room TVs of much of the developed world.

The incorporation of ideas into mainstream popular culture is a good indicator that an idea's time has come. Until then popular culture had been somewhat short of seeing the earth from the perspective of the universe rather than the other way around and in a way that was backed by a measure of scientific reason.

Environment in popular culture also meant the emergence of environment as a mainstream political issue. This groundswell of environmental concern has been attributed by many to be catalysed by the 1962 publication "Silent Spring" by Rachel Carson. This book linked the widespread use of pesticides – in particular DDT – with impacts on biodiversity through accumulation in the food chain as well as being a potential human carcinogen. And incidentally a book I bought with my pocket money as a young high school student in 1966.

That community-based environmental concern led directly to a political outcome - the signing on 1 January 1970 by President Richard Nixon of the National Environmental Policy Act in the USA. As

an aside, Western Australia's first specific environmental protection legislation was passed that same year. It was a global phenomenon.

As most of you know, for all intents and purposes, NEPA was the start of impact assessment as we know it. "Silent Spring" is an interesting case study regarding the influence of popular culture coupled with science, on environmental policy. The discoverer of DDT's insecticidal properties, the Swiss scientist Paul Müller, received the Nobel Prize for Medicine in 1948 because of DDT's role in control of malaria. By 1962, it was in the cross hairs through "Silent Spring" and ended up being banned in the US by 1972 followed by most other countries. The case study shows that humans can take decisive action when they want to: in DDT's case "saviour to pariah" in 24 years.

3. What happened in the past 20 years?

The past twenty years in the developed world have been characterised largely by stability through low inflation, low interest rates, and moderate economic growth – significant disposable income in first world countries fuelled consumerism on a scale not seen before on the planet.

Following the doom and gloom of the 1972 Club of Rome's "Limits to Growth", of Paul Erlich's prediction of mass starvation across the globe, of the 1970s oil crisis, what did my generation do? We paused briefly to produce "Our Common Future" in 1987 about sustainable development but then went and spent our way out of the economic doldrums. And when we'd used up our savings, we borrowed heavily against our equity, and spent some more. By any measure this was unsustainable behaviour.

The environmental cost was still not being counted in the price of goods and services. This includes of course climate change and global warming. Incidentally just in case you thought climate change was a modern popular cultural bandwagon issue let me quote from "Newsweek" of 26 January 1970:

"The greenhouse theorists contend that the world is threatened with a rise in average temperature, which if it reached 4 or 5 degrees (Fahrenheit) could melt the polar icecaps, raise sea level by as much as 300 feet and cause a worldwide flood."

Business as usual over the past 20 years has meant that a lot of words have been written about sustainability, sustainable development, environmental protection and the like but there have been precious few real gains in changing the way we work and the way we live. The philosophy of "Live fast, die young and make a good looking corpse" had been applied to the earth. This was not very smart.

4. Next 20 years?

I support the conjecture that we're at the start of a new global era – every bit as significant as, for example, the British Industrial Revolution of the 18-19th centuries and the growth in American manufacturing in the 19-20th centuries. This is the major structural change to the global economy led by the BRIC countries (Brazil, Russia, India, & China). The dominant force in global demand is in the process of shifting from *first world country consumerism* to BRIC countries' *domestic demand*. Let me provide an illustration.

In the next twenty years, the McKinley Global Institute has estimated that in China:

- 350 million people will be added to the urban population - more than the whole of USA today;
- 221 Chinese cities will have 1m + people in them. Europe has 35 and Australia 5 today; and
- 5 million new buildings will be erected in China of which 50,000 will be skyscrapers: This is equivalent to about 10 New York type cities.

That demand from China and other rapidly growing countries is leaving the world short of:

- energy;
- water;
- food; and
- raw materials.

These are pretty fundamental to both life and quality of life.

It's basic economics that when supply tightens, prices rise. Nowhere is this more important than energy because as the cost of energy rises, it takes everything else with it. Oil is tipped by some commentators to hit \$US 200 per barrel by the end of the year due to both demand and supply pressures – as written up in yesterday's daily newspaper. It was \$US 10 per barrel 10 years ago.

Markets, in responding to the demand, are putting, and will continue to put, considerable pressure on assessment and approval regimes as well as direct increased pressure on the environment through overexploitation of undervalued ecosystem services. It also seems likely that globally the ecological slack we once had has been consumed. It should be clear to most people that we've reached the pointy end of environmental quality on a global scale.

5. Looking over the horizon

What should IAIA and its constituents do over the next 20 years? I put forward five propositions:

1) Help Manage Change

Structural changes in the world economic order are upon us. One of the powerful benefits of impact assessment is to help manage change. However, let's not manage change to a new and different form of unsustainability. Impact assessment as a key policy tool in managing change has to respond to the pressures being placed on global life support systems by human actions. But in the process of helping manage change, impact assessment practitioners really do need to better address the paradox of a process designed to find flaws and problems with proposals (desirably with public involvement) but ending up mostly with the outcome that the proposals do actually proceed. Practitioners know why. But this paradox is one of the great under-miners of IA in the community's mind.

2) Agitate for enforcement and compliance

I have no confidence in persuasive arguments or in education and extension, to deliver on the human race voluntarily stopping excreting in its own nest. The unencumbered free market won't do it although it has an important place in harnessing market forces for optimum outcomes. *The only things that will cause behavioural change on the scale needed, and at the speed necessary, is to make environmentally damaging and unsustainable practices unlawful or expensive.* Nothing else will get us there in time. Impact assessment outcomes must link directly to implementation, enforcement and compliance mechanisms. IA practitioners should agitate for it to happen through community-led political change. We need to encourage and support champions. The media needs them therefore so does this cause.

3) Seek empowerment through strategic alliances

Impact Assessment practitioners and the systems with which they operate are going to need powerful friends to effect beneficial change in the future. There seems to me to be considerable advantage in forming strategic alliances to the mutual benefit of the parties. Insurers are likely partners as are financiers. Insurers are in the front line when it comes to predicting and responding to risks from human-induced environmental changes – and in particular the effects of climate change. Both insurers and impact assessment practitioners cover the same ground to a large extent – they just do different things with the results. Insurance premiums for example, are one way to make environmentally damaging and unsustainable practices expensive.

4) **Help humans regain foresight**

David Suzuki claims that humans have lost the vital skill of foresight. He goes on to say that foresight was one of the most important abilities that enabled early humans to survive and flourish in evolutionary times. By foresight he meant the ability to think in abstracts, to invent the future and to recognise that we humans could affect that future by what we did in the present. In particular, to both avoid hazards and exploit opportunities. So why, when leading thinkers, scientists and ecologists point out that human beings and the natural world are on a collision course, don't we do something about it? Foresight and impact prediction are inextricably linked, with the important difference that foresight implies taking action on predictions. If Suzuki is right – and I think that the point he makes is valid – then impact assessment is a key mechanism to help regain foresight.

5) **Act with courage**

We need to take the long term view and never give up. The problem is that virtually nobody is paid to take a view on the next 20 years. No fund manager has a 20 year performance benchmark, no Company or Government CEO has long term performance indicators, and no Government will be in office for 20 years. Mostly there is no real incentive for anyone to think long-term anymore. But someone has to.

Courage too is a virtue needing exercising in the tough times coming up. But at least it's a virtue appreciated by human beings who like to obsess over brave heroes, as any fan of Harry Potter can tell you. Author J K Rowlings has said in interviews that courage is the virtue she prizes above all others. Mind you, Rowlings also said

“Never trust anything that can think for itself if you can't see where it keeps its brain”.

That's not a bad label for myopic self interest – that common human attribute which severely tests courage.

6. **Conclusions**

I wonder what happened to my generation:

- to the naïve hope;
- to the technological back-lash;
- to the disdain for consumer goods;
- to the rejection of our parents' lot; and
- with the emergence of environmental concern at a global scale?

Peter Townsend wrote about it in 1965:

“...Things they do look awful cold. (he said) Hope I die before I get old”.

“Not bloody likely” I hear my lot say. This is not the preferred end for the greediest most self-centred and self-indulged generation in human history. We're all going to live for what will seem forever to those younger than us. Far from “*getting ourselves back to the garden*” as Joni Mitchell would have it, we've clear felled the garden and sold it off to the BRIC countries. So will human beings in the future “*dance beneath the diamond sky with one hand waving free*”? I think that the answer is “*No unless...*”

No unless we seriously improve on our limited capacity for cooperation as a species – an important role for IAIA and similar international organisations to foster.

No unless we harness the powerful combination of hope and innovation. Hope is a major driver of the human spirit – every gambler and every dreamer knows that.

No unless we exploit beneficially the full human potential for new ideas.

A little consumer example - 20 years ago if you wanted to listen to 600 songs, look at 3,000 photos, listen to the radio, have access to a calculator, play games, link up with hundreds of millions of computers world-wide, send and receive messages or talk to anybody on earth at the push of a button, you'd need a wheelbarrow load of very expensive equipment and a lot of long

extension cords. Today, you need a mobile phone in your pocket worth a couple of hundred dollars.

I see IAIA expanding significantly into the BRIC countries and the future leadership coming from there. The thinking behind IAIA07 in Korea was correct even though we were disappointed at the time that Perth was the losing bidder for last year's conference.

I see IAIA in 20 years time as the premier international organisation respected as a global forum dedicated to fostering environmental hope. This is because we don't have any other public policy tools for the job that exist and survive in so many jurisdictions, have maintained political support for 38 years and are generally inclusive of the community's views.

I see IAIA above all catalysing professional engagement and learning at an accelerated pace as we move to a difficult and unpredictable future.

Humans will survive as a species. The planet will survive until it gets engulfed by the sun... but with what quality of life and with what quality of environment?

I don't think that my generation's performance appraisal has gone too well. Despite the optimism of the 1960s and 1970s for a youth-led revolution, the ugly reality has been that it's a case of business as usual - on steroids. However the consequence now of not succeeding in changing how we live and how we work is, as David Suzuki says, "*a blind date with disaster*".

Thank you.