

Integrative Ecology and Land Use Law Reform

A Proposal for the Creation of a Victorian Public Land Use Commission

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Date: 26th September 2020

ABSTRACT

This report was prepared for in support of the Committee Inquiry into Ecosystem Decline in Victoria, which was posed by the Greens on 30th October 2019.

The document addresses the terms of reference of the inquiry, which broadly speaks to the condition of Victoria's natural ecosystems and First Peoples' connection to land and seeks to understand how existing governance could be improved.

In this report, the author concludes that the existing land use system in Victoria is fundamentally flawed in terms of its structure, a situation that has far reaching implications in terms of poor environmental outcomes, politicisation of public policy and lack of integrity.

The author posits that the existing state of Victoria's ecosystems is a result of mismanagement arising from a misunderstanding by European settlers of the natural condition of the Australian landscape and the application of a land use system that is not appropriate for the conditions.

Furthermore, the author puts forward the theory that the First Peoples' traditional land care system is a far more effective way to manage the landscape for the benefit of both people and natural ecosystems but that integration and application of this methodology is not possible under the present governance structure.

The author proposes abolishment of the Victorian Environmental Assessment Council (VEAC) and dismissal of the present Central West Investigation Final Report on the grounds it is scientifically unfounded, does not take account of the full range of issues of Ecologically Sustainable Development, nor does it represent the genuine interests of the majority of stakeholders.

In its place, it is suggested to create a new Victorian Public Land Use Commission to look at land categories in a similar way to the First Peoples, which placed humans at the centre of land use, partitioned the landscape into actively managed ecological mosaics with a specific purpose for each area and which integrated ecological enhancement (and hence sustainability) into the planned use of that land.

It is proposed that the dictates of top-down policy on environmental issues places government in the centre of a decision making process that fosters an adversarial approach to balancing sustainability requirements. This polarises debate, entrenches ideological influence, reduces efficiency and stifles industrial investment and innovation.

The author introduces the concept of Integrative Ecology as an active principle guiding the Commission's activities and proposes the development of an Integrative Ecology scoring and ranking system, by which private enterprise and government can compare, prioritise, forward plan and fund projects on a competitive basis. The Commission is to operate independently of any particular ministerial portfolio and with political and legal integrity built into its structure.

The proposed Land Use Commission will draw heavily on the National Strategy for Ecologically Sustainable Development (NSES), which was drawn up in late 1992 and entered into by the states, but which has never been formally codified into an operational body that guides government, conservation and industry in a coordinated way.

The NSES identifies the legal principles of Ecologically Sustainable Development as comprising the following six aspects:

1. The principle of sustainable use
2. The principle of integration
3. The precautionary principle
4. Inter-generational and intra-generational equity
5. Conservation of biological diversity and ecological integrity
6. Internalisation of external environmental costs

The NSES also outlines the following as guiding principles of governance:

- decision making processes should effectively integrate both long and short-term economic, environmental, social and equity considerations
- where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation
- the global dimension of environmental impacts of actions and policies should be recognised and considered
- the need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised
- the need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised
- cost effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms
- decisions and actions should provide for broad community involvement on issues which affect them

For further information on the National Strategy for Ecologically Sustainable Development, the reader is referred to the Federal Government Department for Agriculture, Water and the Environment at:

<http://www.environment.gov.au/about-us/esd/publications/national-esd-strategy>

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1. Inquiry into Ecosystem Decline in Victoria

In addressing the Terms of Reference into Ecosystem Decline in Victoria I offer the following assessments:

a) The extent of the decline of Victoria’s biodiversity and the likely impact on people, particularly First Peoples, and ecosystems, if more is not done to address this, including consideration of climate change impacts;

There is no disputing that the damage that has been inflicted on Victoria’s biodiversity is extensive, as a result of misunderstanding how it should be cared for. There is also no disputing that the First Peoples did once possess all the knowledge and acquired wisdom required to perform such management very effectively in accordance with their sustainability requirements at that time. Also not in dispute is the obvious and deeply saddening decimation of their culture, their practices and indeed almost their entire race as a result of this ecosystem decline and their inability to engage in their sustainability practices.

What is most objectionable however, is the continual promotion of an assumption that government can or should provide the solution to this problem by “doing more”. The problem is not in the doing, it is in the thinking and the evidence is in the wording of the question itself. The top-down 19th Century imperialist thinking still employed in government and indeed in this inquiry is at the root of the ignorance that caused displacement of the First Peoples, wasted countless billions of dollars and resources chasing red herrings in the pursuit of climate change solutions and has divided both politics and public opinion. Governments should be formulating ways to do less, not more and foster better collaboration and collective wisdom.

b) The adequacy of the legislative framework protecting Victoria’s environment, including grasslands, forests and the marine and coastal environment, and native species;

Government as arbiter of the solution has summarily failed and continues to fail by inserting itself in a process that is multidisciplinary and beyond the capacity of an organisation that is logically divided into separate offices, budget centres and administrative functions to effectively coordinate.

The failings of a top-heavy, multiparty, politically self-interested and compartmentalised management structure, applied to a global problem are not limited to environmental issues and have had far reaching negative impacts on the economy, well-being of people, our international reputation and cultural identity, both for Aboriginal and non-indigenous peoples. As previously mentioned, the problem is clear in the language of the question: the term “environment” is equated only with the natural elements of our environment. Environment in the global and legal sense includes the economic environment, our built environment, our self image and many other factors which cannot be separated from ecology any longer. The First Peoples made no distinction between humans and their environment. The land governance structure must be overhauled before any discussion about the adequacy of legislation can be contemplated – the wording of the legislation is generally adequate and was written with the best of intentions but its implementation is not.

c) The adequacy and effectiveness of government programs and funding protecting and restoring Victoria’s ecosystems

One only needs to look at the impact of the bushfires as a pertinent and poignant example to answer this question. Despite countless studies and warnings from numerous advisers, including nearly \$1 billion spent at the federal level on repeated Royal Commissions, the bushfire problem persists and is in fact worse than ever. 480 million animals are dead. Without the appropriate structure to implement holistic, informative and apolitical discussion as a prelude to meaningful land use strategy formulation, no amount of money can or ever will protect or restore Victoria's ecosystems.

d) Legislative, policy, program, governance and funding solutions to facilitate ecosystem and species protection, restoration and recovery in Victoria, in the context of climate change impacts;

The present regulatory framework and governmental structure is not fit for purpose in addressing the problem of coping with climate change and by extension, ecosystem restoration. The system is outdated and is a hangover from a time when sustainability and climate were not understood to be universal challenges.

What is needed is an investigative and advisory structure that is not constrained by portfolio boundaries, not subject to the underlying ideological objectives of any particular political party and is representative of relevant fields of expertise and research, not stakeholder interests. This should take the form of a permanent Victorian Public Land Use Commission that guides and advises acting ministers in the execution of their respective portfolios. This task is presently performed by the Victorian Environmental Assessment Council under the portfolio of the Environment Minister, but it is riddled with failures, corruption, entrenched interests and bias. It does not and can not properly facilitate forward looking Integrative Ecology that takes into account the future sustainability needs of humans or ecosystems. VEAC simply does not possess the skills, experience or inclination to deliver such outcomes and should be abolished in its entirety, along with its Central West Investigation Final Report.

The National Strategy for Ecologically Sustainable Development contains all the necessary elements to define which advisers should be employed, how the proposed Victorian Public Land Use Commission should engage with government and the principles that should guide land use policy in every aspect of government. The conclusions of the 2005 Federal Sustainable Charter Enquiry into the effectiveness of the Strategy made the following summary observation:

“... a collective government, industry and community endeavour is required. Finally, the strategy exists in the absence of a centralised administrative framework—an arrangement which, according to one submitter, creates little more than a ‘wish list’.”

If the government is serious about effecting genuine change that will lead to positive outcomes for Victoria's environmental problems then it is time to write into legislation the creation of a permanent Land Use Commission that legally protects the system and enforces compliance with the languishing National Strategy for Ecologically Sustainable Development and all the principles thereof.

e) Opportunities to restore Victoria's environment while upholding First Peoples' connection to country and increasing and diversifying employment opportunities in Victoria;

There exists a tremendous opportunity to vastly improve First Peoples' honourable connection to Country through the principle of Integrative Ecology.

Prior to European settlement of Australia, the system of governance employed by the First Peoples was not compartmentalised according to portfolios, funding centres or centralised governance. Their system was multidisciplinary, focused on land use, took account of all aspects of their existence and held sustainability for the benefit of all people as their primary objective. Every other aspect of their lives from their songlines, migration behaviour, theological beliefs in the form of Dreamtime teachings and social structure derived from that fundamental objective. Their system worked and it worked so well that across some 500 distinct Peoples they were able to effectively coexist not only with their environment, but also with each other in a way that left no part of the entire continent of Australia untended.

The creation of the Indigenous Corporations was an essential step in the unification of the First Peoples in their struggle to achieve self-determination. It is an interesting paradox and important to be mindful that in order to detach from an imperialist system they were forced to take on the form of that same system.

It is important then, to carefully delineate the role of the Indigenous Corporations, for the simple fact that they are nonetheless still a creation of government. Continued reliance on the Indigenous Corporations as a vehicle for wider policy objectives such as climate change simply continues to place them under the hierarchy of government, where they are effectively kept in a box, subject to the funding, policy and ideology of a political master. Their sphere of influence is therefore limited to those geographic areas they define as culturally significant, again, as protected by the government. Thus their connection to Country is still on the terms of government and not in keeping with their traditional beliefs, which were that no part of Country should be left untended.

The truth of the matter, which should be deeply humbling to those in government claiming to be proponents of positive change, is this: the Aboriginal governance structure by which they implemented sustainability worked better and for far longer than anything that has come since. This should serve as the impetus and a model for change and will require a deep soul searching on behalf of all politicians to find for themselves where their motivations really lie. The participants in this inquiry need to carefully consider whether it is their adherence to the party line or their position of office that takes priority or whether the objective of sustainability is sufficiently important to relinquish some control in favour of systemic overhaul.

If the First Peoples are truly to enjoy the self-determination they seek, then separation from the fixed structures of government that allows them to interact in a global arena is required, allowing them to both learn and have input directly into global sustainability. This is genuine reconciliation – acknowledgement that Aboriginals are historically the best caretakers of natural Australia, whilst also recognising that they in turn are now (and have in fact always been) part of a bigger world.

A far more desirable and effective system would mandate First Peoples' involvement in a truly independent Land Use Commission that encompasses the principles of Integrative Ecology and Ecologically Sustainable Development. The environmental issues that need attention are bigger than the Indigenous Corporations alone can manage on their own and certainly broader than the sphere of influence they had prior to European colonisation. Conversely, the First Peoples now have a

recognised and distinct place in a world that seeks to include all people, beliefs, hopes and desires in an outcome that benefits us all. The First People deserve their own place at the table, not as a bolt-on to an existing corporate structure that, as evidenced by the very existence of this inquiry, is failing to deliver.

f) any other related matters.

None noted.

2. Ecologically Sustainable Development (ESD)

In 1992 the Commonwealth drafted the National Strategy For Ecologically Sustainable Development (NSED), which took the general form of an agreement entered into by the states. The strategy describes the modern international view of sustainability in its many facets, of which conservation is only one part. The NSED is a well drafted and comprehensive document, drawing heavily on established international best practice and definitions.

The strategy is not legally binding however and to date no formal implementation of its complete scope exists in law or practice, despite Ecologically Sustainable Development being in and of itself a defined legal term. Instead, parts of it were integrated into government departments and ministerial portfolios, which from a state and national perspective have generally performed poorly at implementing ecologically sustainable development, as evidenced by several established metrics.

In those areas of governance where sustainability principles have been codified into law, the emphasis is still overwhelmingly on ecosystems and the natural environment, not the wider definition of sustainability or development as it relates to humans and human activities. It is precisely this narrow focus and the operation of government departments within a bounded field of understanding and influence that has led to sub optimal outcomes.

The Commissioner for Sustainability Victoria takes account of the principles contained in the NSED, however this body is largely an auditing and informing body with a focus still very much on reporting the effects of industry and human activities on the natural environment. The Commissioner for Sustainability does not take an active role in facilitating industry, policy planning or structural reform, and operates within the existing legal and structural framework of the Victorian government.

3. Peak Government

2020 marks the year where Australia has reached ‘peak government’, a situation where increased regulation, legislation and funding is demonstrating an almost completely diminished law of returns.

A perfect example arises from the 2019 bushfires and the conclusions of the Royal Commission. The bushfires have caused massive damage to the economy, biodiversity and released tremendous amounts of carbon into the environment. They have caused loss of life, both human lives and in the natural ecosystem and decimated communities, some of which may never fully recover.

The question of what causes bushfires in Australia has been the subject of considerable and often heated debate, with answers ranging from the impact of climate change to residual fuel load amongst others. These conclusions are promulgated by their various supporters and the government continues to execute knee-jerk reactions based on the prevailing popular expert opinion, in conjunction with a particular party narrative. But the solution to the underlying problem of bushfires lies not in the answers but in the question itself, which is fundamentally flawed in its scope. Instead of asking “what causes catastrophic bushfires?” a far more useful inquiry would be to ask “why do we keep having catastrophic bushfires?”. This forces us to internalise, rather than externalise the problem and to bring responsibility down to the level of the individual and the departments they represent.

The answer of course, is that we have all supported a structure that is not fit for purpose, whether by choice, apathy or ignorance. This truth is universal and applies to many of the social problems we now experience in Australia, including racial discord, energy security, disintegration of the industrial sector and the wholesale failings of land use policy to deliver environmental outcomes that are acceptable to the community and stakeholders.

To expand on this idea in an area with which I have had considerable contact, I draw the reader's attention to the Victorian Environmental Assessment Council (VEAC). VEAC is an independent advisory body that is appointed by and reports to the Environment Minister on the condition of the Victorian environment, along with appropriate land use allocation recommendations. VEAC conducts their investigations in consultation with a Community Reference Group, into which they appoint representatives of various community stakeholders, which categories are guided but not enforced by the enabling legislation.

The history of VEAC can be traced back to the conservation movement of the early and mid-1970's. VEAC was created in 2001 and prior to that time was called the Environment Conservation Council (1997 to 2001) and even earlier went by the name the Land Conservation Council (1971 until 1997). The roots of the organisation, its focus and the mission of its founding staff therefore centre around ecological conservationism.

For many people the terms "conservation" and "environmentalism" mean the same thing. This is incorrect, both practically and as a matter of definition. The Environmental Institute of Australia and New Zealand (EIANZ), defines the "environment" as including "all aspects of the surroundings of human beings, whether affecting human beings as individuals or in their social groupings". This is the modern view of the environment that is embodied and intended in the definition of sustainability, which places humans at the centre. It is quite distinct from conservation, which speaks specifically of natural systems, biodiversity, protection of wildlife habitats and endangered species – in other words, as distinct from humans.

The EIANZ's definition of the environment is also what was intended in VEACs enabling legislation, which specifies several objectives that are quite separate from conservation, such as job protection, industrial activities, public amenity and preservation of human safety. These have been summarily ignored. No representatives of unions, commercial industry, tourism or state emergency services were consulted during the production of their Central West Investigation recommendations.

Although the intent of the updated legislation was to take a wider view of the environment as an objective to serve the interests of humans, this unfortunately has not been the outcome. The evolution of VEAC as an entity has only been in principle and name, not in practice. Under the false banner of human-centric environmentalism, what is actually still being delivered is a hard leaning and old fashioned form of human-exclusive conservationism.

A perfect example comes from one particular member of VEAC who writes in his academic works of an approach he calls "crash through or crash", a means of railroading government policy to achieve conservation objectives which he claims "justified the means". This phrase, lifted directly from Gough Whitlam's public address of the same era as the early Land Conservation Council, speaks not only to the clear political ideologues steering the organisation, but also to dated concepts of governance that should have been left where they belong - at the end of the Cold War. The National Strategy for Ecologically Sustainable Development, which was drafted at that time, was the first attempt in Australia to describe a more universal and inclusive paradigm.

Instead, what has evolved over the last 50 years of VEACs operation is a Politburo axis in the environmental portfolio that dictates public policy on land use, without looking at sustainability holistically. Unfortunately conservation as an approach to sustainability is no longer desirable ethically or effective practically, due to the ever encroaching effects of the climate change debate and globalism, which are multidisciplinary and universal. In other words, puritanical conservation is *not sustainable*.

There has been substantial opposition to VEAC for a long time and it is a telling sign that in the public responses to their latest report, roughly one-third of all objections were solely on the grounds that this was poor conservation, whilst at least another one-third of all objections included poor conservation as one of their reasons for objection. Even conservationists are calling for overhaul of the ecological conservation system.

Interestingly, the same VEAC staff member previously mentioned is a Fellow member of the EIANZ and is supposed to be professionally bound by their charter, placing “humans” and “environment”, not “conservation” at the top of their priority list. Those who started the conservation movement and are still largely at the helm have grown up and grown old, and have not grown with the times. Their university campus style politics appear to still be living out vicariously in their recommendations to government. It is now time for a better structure that allows the intentions of the NSESD to properly find their place in Victorian governance and reduces the impact of ideological and structural bias on our environmental policy outcomes.

The early days of the conservation movement were nothing less than an asymmetrical war, with a handful of individuals, dedicated to the preservation of natural beauty being the only thing standing between institutional business interests and the devastation of natural assets. The situation is now inverted, climate change being the vehicle behind which numerous large institutions (often financial) have now banded and which provide tremendous funding to support this movement. This is no more obvious than in Victoria, where commercial interests such as the timber and gold exploration sectors are mainly comprised of small businesses, in many cases family businesses or sole principal companies such as my own.

Nonetheless, the romantic public perception persists that the institutional conservation movement are still the underdog social justice heroes, fighting gallantly against the greedy earth pillaging behemoths. This is a dangerous perception, as any concentration of power attracts the powerful and opens a door for takeover. Institutional carbon offset banking is a particularly insidious example, which sets the stage for supra governmental control of our natural resources and threatens to undermine not only our legal framework, but also our economy, our government and ultimately, our sustainability. The reasoning is very simple: banks as businesses are unique in that they contribute absolutely *no intrinsic value* of any kind to human activity in exchange for the profits they derive. Their involvement in sustainability is to be treated with vigilant suspicion and should be the subject of intense public scrutiny.

There is no auditor or watchdog in the present framework to guard against corruption or the gradual entrenchment of corporate interests in the environmental movement. It operates entirely on the presumption of noble motive that derives from the historical narrative. This is a dangerous situation and we are certainly headed for more negative outcomes, because both now and in the past, the problems we have with sustainability and ecosystem decline stem not from unchecked activities, but from unchecked *authority*.

At the centre of sustainability is land, that fundamental natural asset from which all other resources and human activities extend. Any discussion about sustainability must commence by first placing land use at the centre of this framework, as it is from discussions around the use and impact on the finite resource of land that all decisions and policy are formed. A suitable body must be created that considers the fields of expertise required to implement sustainability and how these fields of study relate to humans *as part of* the natural environment. The First Peoples understood this implicitly, without needing to define it, but our system of governance fails us by separating people from the natural environment. We see problems only in terms of what can be controlled and how those attempts to control generate a response to guide further control.

4. Entrenched Interests in Failed Power Structures

One of the key mistakes in addressing questions of sustainability, environment and conservation is to define the debate in terms of stakeholders and competing interests. This is a natural result of the historical economic and political environments that led to the identification of issues of environment and sustainability.

For example, a public approvals and appeal process that pitches conservation against gold mining is pointless and self-defeating. Gold is an essential industrial metal, used in all portable personal devices and internet infrastructure, and it is now clear, especially in a post COVID world that the need for information infrastructure and therefore gold is going to continue to increase. It follows then that gold is an essential resource for sustainability.

Most people do not know this and take the view that mining companies only operate for profit and greed. Gold companies are no different to any other business, they simply satisfy a market demand for a product, a demand which is created by consumers. Restricting access to gold does nothing to fix the problem, it only increases scarcity and drives up the price, making technology more expensive which in turn restricts our ability to communicate, work from home and hence sustain ourselves.

In this present example, rising gold prices will impact poorer communities' access to communications to a greater extent, as they comprise a reasonable fraction of the cost of consumer electronics. There is no question that we are going to see this happen over the next few years – it has already started. Similar arguments apply to energy, food, water and other essential resources. Trying to protect the environment through restrictive access to resources still leaves us with a problem of sustainability, it merely displaces the problem from one aspect of our survival to another.

No amount of rationalising one's own position can deny the truth that the people opposed to mining such as conservationists, local residents and Traditional Owners are consumers of gold and that they are no different to anyone else in that regard. Like it or not, we are all intertwined in both the cause and the solution to the problem and it is time to dig down deep and realise that if we point to others as the perpetrators of environmental issues, we are only pointing back at ourselves. Continuously seeking to only draw from the ideal of sustainability without giving something back is simply grandstanding an idea through lip service.

The approach of considering land and resource use in adversarial terms, with government as adjudicator no longer serves our interests and a new approach with humans at the centre and government in the role of facilitator is required. This relieves politicians of the burden of making unpopular decisions and places policy guidance back in the hands of an informed public. We have a

responsibility to each other to remove the structures that pitch us against ourselves and replace them with something better, something that defines the parameters of the questions, fosters cooperation, mutual learning and a genuine understanding that what is good for one is good for all.

5. First Peoples' Culture and History in the Context of Sustainability

In considering the displacement of the First Peoples by European settlers, it is important to place their early impressions of each other in their respective cultural contexts. Contrary to common belief, the First Peoples were not hunter gatherers, they were in fact nomadic pastoralists who used firestick practices to actively cultivate land.

Thus the colonial settlers' first impressions of the Australian continent were based on the incorrect assumption that they were looking at a wild landscape, full of prime grazing land, and perfectly suited to the type of agrarian activities they were familiar with back in their homeland. They had no idea that the landscape was man-made, having been carefully and deliberately tended over many generations to be moulded into a specific form and with one purpose in mind: *sustainability*.

The European farming model, which involved the sheltering of livestock and protection of food stores over harsh winters, necessitated a settled lifestyle, so any person with a land entitlement had no choice but to protect that land holding and define its boundaries. This is an old tradition, embedded in European culture and protected by law. Again, the intended outcome was *sustainability*, driven by the need to cultivate and protect resources essential for survival in that environment.

By contrast, the Aboriginal farming model operated in completely different environmental conditions, in a vastly different ecology and required a unique suite of cultivation techniques. Food from various sources was available year-round, sometimes in different locations according to the seasons, so they would use a particular type of fire to prepare land in a discretionary fashion in advance of their return at a later time. Climatic conditions were more favourable to human habitation without the need for permanent, stable shelter, so First Peoples were free to engage in a mobile untethered lifestyle, moving in response to the needs and resource availability of their natural environment. Without the understanding that the Australian landscape at the time of European settlement was a cultivated landscape, it was a completely rational and logical conclusion for Europeans to assume these people were simple nomadic hunter-gatherers. Nothing could have been further from the truth.

The Aboriginal migratory lifestyle extended beyond not needing shelter - there are accounts of conversations between the early settlers and the indigenous inhabitants that indicate they in fact preferred their mobile lifestyle for the diversity of landscape and food it offered. They defined their lands, not by fences, but by the length and extent of their song-lines, folk-law that was sung and passed down through generations explaining their clans, their totems, their practices, their history and which formed the basis of their entire social fabric. For the First Peoples, their person, their culture and their songlines were as one.

To some extent they defined territorial boundaries by agreement between and amongst different clans and families, but generally speaking, people were permitted to collect food and hunt on each other's land. Because of their completely different cultural paradigm, there often was not any open resistance or protest on the part of the First People against European settlement of their Country, they simply assumed the colonials' mode of land use was the same as theirs – transient and non-exclusive.

There were obviously exceptions, some European settlers did commit atrocities against the indigenous people and conversely, intrusion upon Traditional sacred sites were often met with open aggression and attack. In most of those cases, the settlers, who were simple farmers, not hardened criminals or soldiers, simply packed up and left in search of less contentious ground, being as it were in plentiful supply. In general, the reality of the displacement of the First Peoples was an incremental relocation in response to the gradual takeover of their land through damage by livestock, inability to effectively engage in their traditional farming practices and a general desire of each race group to dissociate from the other.

Theology exists in every culture as a system of codes that define and guide acceptable behaviour. It arises from the needs of that culture as a mechanism for governance and social management. In the case of the Aboriginal peoples, their songlines codified their theology, describing the connectedness of all things, how those things interacted, their significance and their place in the world.

As the songlines of the various clans intersected in space and time, many of the clans came to learn of each other's songlines insofar as the objects of those songlines interacted in physical reality. Different peoples placed emphasis on various totems and threads of knowledge, in connection with the particular environmental elements and lifestyle that were relevant to them. The Aboriginal songlines are their theology and are fundamental to their cultural identity, but they came into existence as a result of their need for a social framework to guide and guarantee survival. In other words, they were a communicated and enforced plan for the sustainability of *humans* as part of their environment. They were held to be sacred because they were law and the law was a matter of life and death.

6. Ecosystem Decline and Climate Change as Considerations in Sustainability

Species extinction and climate change are naturally occurring events that predate humankind. Were these two assertions not true, our daily sustainability activities would centre around outrunning Tyrannosaurs and it is unlikely the Aboriginals would have ever migrated to Australia, being that they walked here on a land bridge facilitated by climate change. It is only once we have accepted species extinction and climate change as naturally occurring phenomena that we can commence any sort of rational dialogue about how to approach each question, as they both pose a philosophical conundrum.

I will start with the question of species extinction and biodiversity. If we are going to take the position that the objective of conservation is to preserve all species, like some sort of living museum, then we must also accept that this is not what nature intended and we are in fact creating an artificial world for our own benefit. Many would argue that this is for the benefit of conservationists only and as a primary objective is not held to be a universal belief. It may not even be practically possible for reasons beyond our control.

On the other hand, if we are to argue that the biodiversity that existed prior to European settlement is the objective, then we must accept the truth that this too, was a man-made construct. In this case it was not preservation for the sake of posterity – it was a practical choice to improve the First Peoples' survival prospects. The things that the Aboriginals held as sacred were the things that kept their necessary resources in reliable and plentiful supply for the purposes of their human sustainability. To complicate this answer even further, consider that the sustainability requirements of the First Peoples are very different now to what they were then.

Finally, if we take the position that leaving nature to its own devices and not interfering at all is the pathway to conservation then we have the situation we have arrived at now – the forests have been locked up, left to deteriorate, fuel load has increased and massive bushfires have torn the landscape apart. Clearly this is not a desirable outcome and satisfies none of the objectives of conservation, sustainability or policy. So the uncomfortable conclusion is that none of these three answers are morally or practically correct in an absolute sense and that our present policy, which attempts to satisfy all three, is doomed to failure. There is lack of consensus.

Now if we apply the same rationale to climate change we have to consider: what is the stated objective of climate change policy? To date no one seems to have answered, or even asked, this simple question. Are we seeking to control climate change? If so, then we are on a fool's errand, we are not ready to take on this task, as I will demonstrate shortly. Are we seeking to adapt to climate change, and if so, how? This is a more realistic question, but if that is the case, then a better question would be: can we model and predict climate change? Of these three options this is the best because it removes a great deal of uncertainty and hysteria. It places the policy makers back in control of the debate, rather than the media and impressionable ill-informed politicians. Poorly and hastily executed climate change initiatives, implemented in a hotch-potch fashion have proven to be very costly and often lead to worse outcomes than climate change itself.

The Earth's climate is powered entirely by the sun. Any activity on earth that impacts climate change is due to its influence on how the sun interacts with Earth, not from direct heating, which is negligible. The largest inputs to the climate change equation therefore do not even originate from activities on the surface of the Earth. As a qualified astrophysicist, I can safely say that the inputs to the climate equation that are the most poorly understood are also those with the greatest effect and the most unstable behaviour. They also in general are the factors over which we have the least control. I have yet to see an environmental scientist or a politician pushing a climate change initiative who has even the slightest knowledge of upper atmospheric science, astrophysics or deep earth geology, which also has a tremendous and cyclical effect on earth's interaction with its atmosphere and incident radiation.

Anyone claiming to have a solution to climate change is either an academic narcissist or a consummate liar. It is the equivalent of following a sailor who tells you the earth is flat and then explains how to use the motion of celestial bodies to navigate the oceans. The frame of reference is not understood to either the fool or the fool who follows. Not only do we not have a solution for climate change, we do not understand some of the most fundamental contributors to the problem. For that matter we haven't even defined the problem itself. Until that is done in a manner that considers all inputs to the question, describes the problem in a relevant way and accounts for the available resources for a solution, we will continue to lurch along with non-integrative and conflicting policies, developed in isolation by different departments and often with negative outcomes.

There is no single government department under the present structure that is capable of undertaking this task. The end result is over-regulation, red and green tape that continues to stack up, inefficiencies, overlapping and conflicting laws, a stifled economy, poor protection of human and cultural rights and damage to the environment. The increasing politicisation of these issues is sufficient evidence that what appear on the surface to be failures of policy are in fact failures of regulatory structure. More policies, more money, more legislation, more baseless, overpaid government jobs, digging holes only to fill them back in again. It is time to *stop doing* and *start thinking*.

7. Historical Land Use Models

Land is our most fundamental physical resource, from which all other resources, activities and sustainability extend. Structuring land use allocation in terms of protected and unprotected areas, (e.g. national parks, agricultural land, public land) and defining these over huge contiguous areas places them under the respective administration of selected autonomous government departments. This is an unworkable usage overlay for a bushfire prone landscape and is at the heart of the problem. It is thus apparent that the original assumptions of the European settlers, who placed their own legal framework of land governance on a landscape with which they were not familiar, is the cause of many policy failures, which include bush fires, ecosystem decline, Traditional Owner displacement, failure to comply with international agreements and a whole suite of other national issues.

The present land use law system makes our land impossible to manage cost effectively and excludes both the public and industry from an integrated role in implementing sustainability. It disempowers government, community, academics and Traditional Owners alike. To continue with such a system is unconscionable in light of the information we have to hand.

The First Peoples developed and maintained a sophisticated system of land mosaics, which provided them with an integrated system of land management, allowing for their various social activities and industry in a structured and predictable manner. These were arranged around different types of soil, and grouped into adjacent areas of land that suited different purposes, for example, hunting/gathering (groomed for a specific type of food), access for people and animals, wind and fire breaks, shelter, raw materials for fabrication and construction and specified areas for cultural/sacred activities. They understood in great detail the relationship between fire and the natural landscape, that it was an essential part of Australia's ecology and a tool to be integrated into their land use strategies. Their land mosaics were an essential part of their safe and effective use of fire and also a result of its use over generations.

It is not a well known fact that the First Peoples, as well as being pastoralists, were also miners and actively engaged in trade as well. They extracted useful minerals such as greenstone and ochre for sacred ceremonies, which they traded all across the continent. So their sustainability requirements were not so very different from that of the European settlers, they simply had a better structure of governance with which to manage them under Australian conditions.

8. Integrative Ecology

Many parts of Australia have low intrinsic value over huge swathes of area – by including these land areas in an overarching national program of land use allocation, there exist opportunities to improve the value of these areas for any one of a number of purposes through “terraforming”, that improve our sustainability, such as:

- energy crop farming that self irrigates desert land and simultaneously provides soil rejuvenation
- novel power technologies that can integrate with agriculture such as solar chimney power plants integrated with large scale greenhouses that also deliver water savings through evaporative recovery
- symbiotic mining projects that create new habitats to improve biodiversity or mitigate the impacts of national drought and flood.

This opens the door to a whole new field of tertiary study, that I will term “Integrative Ecology”, which seeks to look at our sustainability requirements holistically, internationally and with reference to law, ethics, culture and industry. I will draw a distinction between “Ecologically Sustainable Development”, which considers how to minimise the impact of human activity on ecosystems, and “Integrative Ecology”, which seeks to build ecological enhancement into human activities in a forward looking manner. Such thinking has also been termed “industrial symbiosis” and “closed-loop business systems”.

This paradigm views built-in ecological enhancement as an objective of all human activity, rather than as a competing interest the benefit of which must be somehow quantified and weighed up. This concept isn’t new – the First Peoples codified it into law.

Integrative Ecology provides the opportunity for an exciting new paradigm of forward looking sustainability. Australia is in the unique position that our landscape, being as it is in many places public land, yet a wilderness in need of repair, can start as a blank slate to implement a gestalt shift in thinking and serve as a flagship for the world.

9. Towards Land Use Law Reform - A Victorian Public Land Use Commission (VPLUC)

What is desperately needed is a cooperative effort between conservation, industry, government and the population to effectively “terraform” Australia’s landscape back to the mosaic based overlays developed by the First Peoples. Some of the land care initiatives they engaged in can be demonstrated to have life cycles exceeding 400 years, as evidenced by the age of trees that had been specially promoted and tended for specific functions.

We need to develop a new unified songline, one that includes both the First Peoples and the New Peoples, and acknowledges that we now have common threats, common resources and common sustainability objectives in a new international context. To plan and implement such a forward looking program in the modern political arena is a monstrous task and is an all-or-nothing affair – it is after all, a matter of life and death. If politicians and government departments are genuine about “acknowledging the Traditional Owners, past, present and future”, they should stop apologising for the land use system they keep reinforcing, acknowledge the philosophy behind the Traditional Owners’ land use system and start taking positive steps to reform in that direction.

Here I propose a separate, impartial, independent and permanent commission, charged with the sole purpose of determining a more balanced and distributed use of land in keeping with the principles of Integrative Ecology across the whole of government. Industry and the general public, as both users of land and the source of funding for sustainability *must* have input and full transparency on the Commission.

Innovation should be the driver of the Commission’s activities. The National Strategy For Ecologically Sustainable Development provides the perfect backdrop for land use law reform and should be used as the foundation document to guide the charter of the Commission.

The Victorian Public Land Use Law Reform Commission should have the following features:

Role

The role of the Commission is to develop and advise on a long-term migration plan from the existing land use allocation system to an integrated, distributed system of overlays and policies in accordance with the stated objectives of the NSESD.

The early stages of this plan will be to identify existing legislative instruments that are not compatible with this strategy and develop a staged plan for replacement, amendment or restructuring of those instruments. This process should also include existing instruments that could be combined to reduce red and green tape or policy overlap. This is in keeping with the directives issued in 2020 from the Federal Government.

The key driver of the strategy is to identify the similarities and differences between the land use requirements prior to and following European settlement of Australia and how these have since been shaped by modernisation and globalisation. This is then to be integrated into a new land use overlay that takes into account Australia's unique ecology with consideration given to bushfire safety, industrial and public use, recognition of cultural significance and the present existing titles and uses.

The Commission is to define and develop a merit based Integrative Ecology scoring system, independent of the carbon economy, that allows for the meaningful assessment and comparison of sustainability projects, policies and administrative centres. This must necessarily include a weighted assessment of the national and state sustainability priorities. This may be further developed into a research and decision making tool and made available for planning purposes to government departments, industry and for information services seeking to understand public priorities.

In the later implementation stages the Commission's role will be to facilitate and advise government and industry on infrastructure, rehabilitation and environmental projects, with an emphasis on those that seek to satisfy the defined principles of ESD and national sustainability priorities in a competitive way. Each of the six legal principles of ESD must be considered in a quantifiable manner in the Commission's KPIs and Integrative Ecology scores. Existing information services such as the Commissioner of Sustainability Victoria may be used for input into these metrics.

The Commission will undertake an annual review of sustainability priorities and initiatives and perform an audit on the present land use allocation to ensure it is in keeping with future projected requirements. It will also be able to issue budget recommendations for funding, grants and concessions for sustainability initiatives in the public and private sector on a weighted merit scored basis.

Appointment

The Commission would consist of a panel of expertise to be appointed with approval from nominated ministers and their respective shadow ministers. All appointees must have a career portfolio demonstrating best practice in domestic and international contexts appropriate to the role as well as having made material contribution to their field academically. All members must be Australian citizens and NGO funding of any position on the Commission is not permitted.

Register of Interests

All members of the Commission, whether permanent members or temporary appointees shall be required to make a declaration of interests and disclose the origin of any funding they receive especially in support of their position on the Commission.

This register of declared interests shall be maintained and made available for public scrutiny.

Representation

The Commission's core members should not represent stakeholder interests, but instead should comprise the various fields of expertise that form key inputs to the debate. Nominated representatives of private enterprise, peak bodies and community interest groups can be brought into the Commission as speakers in response to particular initiatives of the Commission. Representatives of land use bodies, stakeholders and industry groups should not be paid by the Commission or government for their position on the Commission, they should be funded from their respective industry bodies. Accreditation and a membership mark would be issued by the Commission to those industries who contribute by way of representation.

As a suggestion the following permanent positions should comprise the bare minimum:

Climate change adviser

A person with a broad understanding of various earth sciences, including ecology, solar science, atmospheric and geology with experience in machine based deep learning for modelling time-variant systems.

Aboriginal land management

This person should ideally be non-aligned with any specific Peoples, but must have a good connection with Aboriginal groups, including those not aligned with an Indigenous Corporation, understanding of songline folklore, fire stick farming practices, history of the various First Peoples, Indigenous Corporations activities and present cost and funding centres within government.

Economist with international market experience and contact with foreign policy

An understanding of how Australia's foreign policy aligns with other trade partners and international treaties is essential so that sustainability is related to an international context. This person should have a good understanding of novel commodities markets such as carbon futures, international money markets, commodities such as gold, steel and coal, disruptive technologies, banking and trade.

Ethics adviser with international experience

This adviser must have experience not only with human ethics but corporate ethics as well, Consumer behaviour drives corporate objectives and in many cases, restraints on corporate behaviour through trade barriers or regulation have unexpected flow-on effects to people, both domestically and abroad.

Biodiversity adviser with knowledge of Australia's flora and fauna

Also with an understanding of water management and atmospheric science. Ideally such an adviser will also have solid experience in Aboriginal approaches to land management.

Legal adviser

The Commission will be required to deliver reports and recommendations to government departments that will have far reaching implications for Australia in terms of foreign relations, compliance with international accords and trade agreements, trade unions, Indigenous Corporations and may extend to Constitutional law and interaction between different levels of government.

Energy adviser

Must have experience in project delivery in both renewable and non-renewable energy sectors and have the experience to model and predict energy trends in different countries and sectors.

ABOUT THE AUTHOR

I am an electrical engineer, physicist and young entrepreneur with broad experience in the renewable energy sector. I was a key contributor to the development of solar photovoltaic technology in Australia during a scholarship internship at the University of Sydney with BP Solar. At that time we were a world leader and remained so until cheap offshore production effectively shut down manufacturing in Australia.

I hold a Bachelor of Science in Physics and Information Systems, a Bachelor of Electrical Engineering and a Masters Degree in Business and International Strategic Technology Management. I am presently undertaking a scholarship Masters Degree in Digital Currency at the University of Nicosia, which is considered the world leading institution in blockchain and disruptive technologies. I have previously been a Full Member of the Institute of Engineers Australia and also held memberships with the Association of Professional Engineers, Scientists and Managers Australia and the Australian Computing Society. I hold various other vocational qualifications issued by the EPA, the Business Council for Sustainable Energy and numerous other certifying bodies.

I lived in Kinglake during and for two years after the Nillumbik bushfires in 2009 and was successful twice in securing government grant funding to support small business recovery in the area. I have also been successful in securing grant funding from Austrade for the development of business management systems in the building sector. Since that time I have continued to be active in my development of active green solutions to ecological, security and energy issues faced by Australia. I now consider the carbon debate to be of a very narrow and outdated scope and have expanded my view to include other considerations essential to sustainability.

In my present line of work I am the head engineer of a green energy group that has assembled a multi-tiered business model for “energy farming” – growing biofuel crops for direct conversion to both agricultural fuel and electricity directly on-farm. The model provides 100% carbon neutral energy solutions, flexible electricity and fuel security, soil regeneration, carbon sequestration as well as continuously available off-grid and feed-in baseload capacity. It is capable of operating completely free of any existing infrastructure and complements present agriculture, rather than displacing it. It is a closed-loop business system and startup costs are generally recouped within the first one to two years.

The initiative is connected to several other research projects, including a university soil health research program, specialised energy crop research and an oil seed husbandry program. Other processing technologies are being developed that allow industrial and agricultural wastes such as grease trap waste, tallow, glycerol and biomass chaff waste to be used as inputs to the process.

I am also the principal of a self-funded R&D firm, developing a range of geophysics instrumentation technologies that have wide application in ecological surveying, civil engineering and minerals exploration. I am presently engaged with a consulting geologist in the gold sector and have sought interest from mining JV partners to assist with funding an exploration program to trial the technology. I am very pragmatic about the decision to enter the gold sector - it is the fastest growing economic activity in Victoria at this time and represents the customer base most likely to fund this research.

In the longer term, our mission is to bring sustainable energy farming techniques to the mining sector to power industrial operations locally in a carbon neutral and low-impact way. This will

provide ecological improvements, integrated rehabilitation programs, generate employment for farmers and local communities whilst delivering the commodity outcomes demanded by the resources market.

I was warned before embarking on this R&D program that the gold sector in Victoria was “not worth your time” and have come up against a plethora of convoluted and dysfunctional regulatory structures that, apart from bogging down the process to the point of being almost untenable, are demonstrably not delivering satisfactory solutions to most of the issues they purport to address. As an apolitical sustainability advocate, this submission is an attempt to interpret and present in context some of the problems I see with the existing land use framework in Victoria, how it reached this point and what could be done to improve the system.