



Dear Mr. John Thwaites,

We wish to extend our gratitude for your invitation to meet with your advisors on the Baw Baw crisis and would like to present you with a political, legal, scientific, social and environmental digest surrounding the continued logging of Baw Baw.

The document contains the following information:

1. Literature review on Baw Baw
2. Points from The IUCN (International Union of the Conservation of Nature) Global species assessment
3. Lawyers for forest legal argument on the logging of an endangered species habitat
4. Leading amphibian scientist, Dr Marc Hero's comments on the adaptive management plan and why it will fail.
5. A variety of important letters, media releases and articles on the frog in the last 8 weeks
6. Conclusion.

The Central Highlands Alliance would like to thank you for your commitment to the task at hand and extend our informational networks to you if you require further data on the issue.

Yours kindly,

Sarah Rees
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The Honourable John Thwaites MP
Minister for the Environment
Level 3, 1 Treasury Place
East Melbourne
Victoria 3000

Dear Mr Thwaites,

I am writing to ask you to protect vital Baw Baw Frog habitat on the south-western slopes of the Baw Baw Plateau.

I believe that you have some understanding of the importance of protecting frogs as I have recently seen you at the opening of the Amphibian Research Centre and previously heard you speaking of the importance of the Growling Grass Frog as an indication of the health of Melbourne's waterways and of the need to prevent transported Banana Box Frogs from becoming established in Victoria.

The Baw Baw Frog is "Victoria's frog" - it is the **only frog found exclusively in Victoria**. As such, its fate is entirely in your hands.

Prior to 1985, the Baw Baw Frog was common on the Baw Baw Plateau and its distribution was thought to be completely contained within the Baw Baw National Park. Between 1985 and 1993, the population within the Park declined by some 98% and annual surveys conducted since that time has shown that it has continued to decline each year. Soon, **the Baw Baw Frog will be extinct within the National Park** - the area of the Plateau above 1200m altitude.

A healthier (yet still small and critically endangered) population of Baw Baw Frogs is now known to be present at lower altitudes - mostly between 1200m and 960m on the south-western slopes of the Plateau - an area that is also known for its timber trees. Since the discovery of the frogs, this area has been a "special protection zone" and the frogs have had some measure of protection. As you know, this is about to change with "experimental" logging about to take place that may have dire consequences for the survival of the species.

Experimental coupes have been planned and marked-up beside creeks and drainage lines that are known Baw Baw Frog habitat. Measurements are being taken to determine if the logging will change humidity and temperature in the vegetation close to the creek where the frog is found. We simply do not have the habitat or the frogs to spare for this experiment. In my opinion, it is **extremely short-sighted**.

I do not believe that the logging is really a "test" - the timber to be taken from the coupes is a large portion of the timber available in that altitude range. Regardless of the outcomes of the experiment, there will be only a small amount of timber left to harvest or protect. However, should the experiment show that the creek-side habitat is affected the damage done will already be substantial. The benefits are **outweighed many times by the risks**.

The experiment is only measuring temperature and humidity - and it is measured at about 1 metre from the ground. (The Baw Baw Frog's breeding sites are located in cavities below the ground amongst rocks and roots). A before-and-after count of calling males is also part of the experiment but, as the numbers involved are so small, any change in numbers will be statistically meaningless. There are other potential effects of timber harvesting that may have a greater impact on the frogs that are not being measured. One is increased runoff or siltation caused by the presence of the coupes. Another is the introduction of noxious plants including

blackberries that may impact on the microhabitat of the frog. (Introduced plants and other weeds are uncommon around the Plateau in areas that do not have a history of recent logging). A third unmeasured factor is the barrier to movement between creek systems that will be faced by the frog. (If the species is to survive there must be a transfer of genes between the small groups of frogs found across the slopes - logging coupes may prevent migration).

The potential habitat for the Baw Baw Frog may extend well below the "special protection zone". A Baw Baw Frog has been found at an altitude of around 820m. This record is listed as "unconfirmed" yet it is anything but - the frog was calling at least every 15 seconds for a period of more than 10 minutes and was found by the survey's most experienced researcher. Should the Frog not be completely protected above 1000m where it is in its highest numbers, there will be more pressure to introduce wider buffers and other restrictions to timber harvesting at lower altitudes, particularly if the experiment shows that logging has a negative impact. There is much more valuable timber between 800m and 1000m than there is between 1000m and 1200m. Even before the discovery of the Baw Baw Frog, the south-western face of the Baw Baw Plateau was considered to be a unique place suitable for national recognition largely based on the vegetation types found there including large pockets of cool temperate rainforest. In the early 1990s, there were suggestions that the boundaries of the National Park be extended down the slope on this side of the Plateau to the 1000m mark. Now, there is the most compelling reason of all to incorporate the area into the Baw Baw National Park - without it the only species of frog that is unique to Victoria will soon be found only on unprotected land.

At the very least, please delay the logging in order to allow the data-loggers measuring the pre-logging conditions (which have not even been in place for 12 months) to record more information. Already the "experiment" is far too simplistic - rushing into it makes it appear as a farce. A delay will not reduce the value of the timber. In addition, a delay will allow more information to be collected regarding the abundance of the frogs at this altitude and their requirements for survival.

The Baw Baw Frog is listed with the International Union for the Conservation of Nature as "Critically Endangered" and is showing a negative population trend. At best, timber harvesting within the small area where the frog is located will have a minor effect on its recovery - at worst, it will **push this unique animal, found nowhere else in the world, into extinction**. It is not worth the risk.

Sincerely,

Dave Black

Senior Research and Survey co-ordinator for the Baw Baw frog recovery plan.

Findings of the IUCN's Global Species Assessment:

- 15,589 species are threatened with extinction. This includes 12% of all bird species, 23% of mammals evaluated, 32% of all amphibians, and 31% of all gymnosperms.
- Amphibians have been completely assessed for the first time, and have a higher percentage of threatened species, particularly Critically Endangered ones than either the birds or the mammals.
- Red List Indices show that birds and amphibians are slipping towards extinction at an increasing rate.
- The number of documented extinctions (844 species since 1500 AD) grossly under represents the number of extinctions that have taken place in historic times, due to very incomplete and uneven sampling, both geographically and taxonomically.
- Humans have been the main cause of extinction since 1500 AD with invasive alien species, habitat loss, and over-exploitation being the main causal factors.
- Habitat destruction and degradation is the major threat faced by amphibians affecting 88% of threatened species.
- The uneven distribution of threatened species means that most known threatened species occur in a few countries. Australia, Brazil, China, Indonesia, and Mexico hold particularly large numbers of threatened species and endemics.

The Global Species Assessment is available from the following web link:

http://www.iucn.org/themes/ssc/red_list_2004/main_EN.htm

The following is from a IUCN media release:

THE "SIXTH WAVE" The rapid loss of species that we are witnessing today is estimated by some experts to be between 100 and 1,000 times higher than the "background" or expected natural extinction rate (this is a highly conservative estimate: some studies estimate current extinction rates as 1,000–11,000 times background rates). Unlike the mass-extinction events of geological history, the current extinction phenomenon is one for which a single species - ours - appears to be almost wholly responsible. Such a deteriorating situation is being referred to as "the sixth extinction crisis", after the five known extinction waves in the Ordovician, Devonian, Permian, Triassic and Cretaceous Periods.



Dr Jean-Marc Hero

Australian Coordinator, IUCN / Global Amphibian Assessment

Senior Lecturer - Vertebrate Ecology

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Bulldozing the Baw Baw Frog to Extinction – Why the science of the plan is destined to fail

The decision to log areas that contain or are adjacent to remnant populations of the Baw baw Frog (*Philoria frosti*) will contribute to the decline of a species that is already recognized as Critically Endangered. It contradicts legislation written to protect Australia's natural heritage, is unethical and an insult to the intelligence of the Australian people. The Baw Baw Frog is internationally, nationally and locally recognized as a species that is rapidly heading towards extinction. It is currently listed as "Critically Endangered" under the Global Amphibian Assessment (2004) -IUCN Red Data Book, "Endangered" under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), and is protected under the Victorian Flora and Fauna Guarantee Act 1988 (FFG Act).

Baw Baw Frogs are listed as Critically Endangered as their populations have dramatically declined and are threatened by global climate change, restricted geographic range, a novel pathogenic fungus (that has also been associated with the extinction of at least 3 species in Australia), habitat loss by tourism development projects. Despite the critical status of this species, habitat loss due to logging concessions (approved by the Victorian and Commonwealth Governments) is a new threat that is expected to have a major impact.

Our current knowledge based on extensive scientific evidence, at least partially funded by the Victorian Government, has demonstrated that this species is extremely sensitive to environmental conditions and that it has rapidly declined over the past 20 years (e.g. see Hollis 2004). The proposal to use science as justification for logging areas containing or adjacent to known populations of Baw Baw Frogs (to assess the impact of logging on this species) is ludicrous at best and unethical at worst. Using science to prove the obvious (logging negatively impacts upon the Critically Endangered Baw Baw Frog) is an insult to the scientific community and misleading to the Australian people. To log a forest to demonstrate that it is detrimental to Baw Baw Frogs is like throwing a newborn baby into a swimming pool to demonstrate he/she cannot swim.

Federal and State Government agencies (EPBC and FFG Acts) are responsible for preventing the extinction of our national heritage. This goal is clearly stated in the Victorian FFG Act "to guarantee that all taxa of Victoria's flora and fauna can survive, flourish and retain their potential for evolutionary development in the wild". In essence - the primary goal of all governments should be to prevent this "Critically Endangered" species from becoming extinct. This requires positive actions (e.g. habitat restoration and protection) that will enhance the conditions and likelihood that the Baw Baw Frog will not continue to decline towards extinction.

Recovery actions should be used to mitigate current impacts and enhance the current population size and distribution.

The alternative - logging the proposed sites will reduce the population size, and further reduce their restricted distribution, bulldozing the Baw Baw Frogs towards extinction.



Additional notes on the proposed “logging experiment” in the Victorian Action Plan.

Any logging will have an unacceptable impact on the Baw Baw Frog as it will inevitably deplete their populations in the logged areas. Zoning prescriptions to exclude logging from species habitat (e.g. prescriptions for Leadbeaters Possums) should be implemented immediately.

The proposed logging experiment has several flaws:

1. Pre-logging surveys for Baw Baw frogs must be used to estimate the annual variation in population size. Minimums of 5 years are needed to understand how these populations fluctuate.
2. The use of standard forestry prescriptions as a “treatment” is redundant as:
 - a) All information available suggests that the species is likely to be adversely affected by any change in the microclimate of the Baw Baw habitat (Hollis 2004), and
 - b) Short-term radio-tracking data has demonstrated that the Baw Baw Frogs will move up to 82 meters away from the breeding areas – clearly demonstrating that a 20 M buffer will result in direct mortality of this Critically Endangered species.
3. The experimental design of 4 replicates in each treatment is flawed:

If a statistically significant effect is detected we will know that logging directly kills Baw Baw Frogs (the likely scenario).

If no statistically significant effect is detected, the results will suggest logging does not affect Baw Baw Frogs. However it is likely that a post-hoc analysis will find that the experiment did not have enough statistical power to detect an effect (statistically this is a type II error). That is the statistical test was not powerful enough to detect an underlying biological effect resulting in the local extinction of the Baw Baw Frog.

It should be noted that if we increase the number of replicates we would increase the expected outcome of further depleting the surviving populations of this species.

If the Victorian Government is serious about using scientific experimentation to reduce impacts on endangered frog species it should be removing trout from streams where remnant populations of Spotted Tree-frogs are surviving under the pressure of a known threatening process.

Suggested Recovery Actions for Baw Baw Frogs.

1. 1. Complete protection of all known and predicted habitat for the Baw Baw Frog.
2. 2. Proactive actions to mitigate the known threats.
3. 3. Monitoring to determine if mitigating actions are effective.
4. 4. Research to determine new or unknown threats to the species.
5. 5. Proactive actions to mitigate new threats.



Alpine management – 2020 report- A sample of where the State Government has made a commitment and risks this commitment in allowing alpine logging.

Implementation and Review -

The key to the success of the Strategy is the ownership and implementation of the actions listed throughout the document.

The CSIRO has recently confirmed that Victoria's higher altitude resorts will be able to manage the impact of climate change and will be well positioned to offer snow based recreation until at least 2020. All resorts will, however, **proactively plan and manage for the impact of climate change**. Part of this planning includes investment in snow making and better utilisation of existing assets and infrastructure by **encouraging four season use**.

The scientific community has accumulated an increasing body of observations that gives a collective picture of a warming world and other changes in the climate system (IPCC, 2001) as a result of human activity. CSIRO has recently completed a research and modelling

project on the impact of climate change on Australia's alpine areas. The report concludes that with further investment in snow making systems, Victoria's large high altitude resorts will maintain sufficient snow cover to remain attractive, viable resorts for snow sports until at least the year 2020. The alpine resorts have traditionally focussed on winter visitors. However, conservative estimates of the levels of non winter visitation suggest that this market has more than doubled over the last decade. There are significant opportunities to expand the range of non winter recreation activities available in and around the resorts to grow this market further.

The bushfires across the Alps and sub alpine country during the 2003 summer have had a significant impact on the environment and economies of Victoria's north east. Their impact is evidence of the central role the Alps have in the region's tourism industry and

water supply catchments.

NOT IF YOU ALLOW DRAMATIC ALTERATION OF THE LANDSCAPE FROM LOGGING

In 2020:

- Visitors will enjoy the dramatic landscape, rich biological diversity and access to solitude and remote wilderness.
- The resorts will be known for their clean cool air. Visitors will enjoy physical pursuits such as skiing, bushwalking and mountain bike riding as well as passive nature appreciation.
- Visitors throughout the year will enjoy ease of access to the broader alpine environment and interpretive facilities will enrich their experience.
- AND THEY WILL EXPERIENCE THE PANORAMIC DEGRADATION OF LAKE MOUNTAINS- MT BULLFIGHT LOGGING AND THE BAW BAWS SOUTH
- FACE ROAD LOGGING.

4.2 The precautionary principle

The precautionary principle is one of the fundamental tenets of sustainable development and has been defined as follows:

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. (National Strategy for Ecologically Sustainable Development, 1992)

Application of the precautionary principle underpins this Strategy. It is particularly relevant considering the risks associated with climate change, biodiversity and environmental protection.

You know this document better than we do. Its time to protect other native forest industry investment. We have not delved too deeply into this.

Australia's frogs disappear as planet warms up

November 18 2004- WWF media release

The IUCN's Red List of Threatened Species has just been released, revealing an alarming result for Australian frogs.

The International Union for Conservation of Nature and Natural Resources (IUCN) Red List is the world's most authoritative status list of threatened plants and animals.

This year eleven frog Australian frog species have been added to the IUCN Red List including four *Cophixalus* and three *Philoria* species. Most of these 11 species of frogs are narrowly restricted species from high altitudes and mountain tops. Declines in most Australian threatened frog species have occurred along the eastern seaboard and in upland areas.

WWF Director of Conservation, Dr Ray Nias says, "This is a disturbing trend because frogs are a key bio-indicator of the health of the environment. It's believed declines in these species could be early warning signs of the impending impact of climate change on the world's biodiversity."

"An additional threatening factor that has swept through many frog species around the world, including Australia, is the fungal disease chytridiomycosis. There may even be a link between climate change and the fungal disease."

There has been a clear decline in the conservation status of frogs since 1980. Globally, nine species of frog have gone extinct since 1980, eight of these as a probable result of chytrid fungus. The IUCN Red List states that "this is the most serious wave of extinctions currently taking place".

In Australia, whole groups of frogs are now threatened. One hundred per cent of the *Philoria* genus (comprising six species) is considered threatened. Both of the globally unique Gastric brooding frogs – the only members of their family - are considered to be extinct.

Worldwide there are now more frog species on the Red List (1,856) than any other animal group. 21% of the world's frog species are critically endangered or endangered. That compares to 10% of bird species and 5% of mammal species. This year's IUCN Red List findings on frogs are based on the Global Amphibian Assessment, which is the first thorough review of the conservation of the world's amphibians

Letters to the Age

Don't log the frogs

It would be laughable were it not so tragic for the Bracks Government to allow logging of Baw Baw frog habitat to "evaluate the effects on the frogs and their habitat" ('Logs and frogs in battle of Baw Baw', 5/12). Such "adaptive management" is akin to stepping off a cliff to test whether we can fly. Already, 98 per cent of the frog's population on the Baw Baw plateau has gone. Further logging will surely push the species over the edge.

LUKE CHAMBERLAIN, Kensington

Poor, Poor Frog

It appears really spiteful of the Department of Sustainability and Environment to conduct any logging whatsoever in habitats known to be as ecologically significant as those around Mt Baw Baw, and even more galling is that these habitats are known to contain the remnants of the critically endangered Baw Baw Frog.

Visitors to the resort will be among the first to miss a future of its distinctive contribution to their wild evening choruses - an experience which for so many Melbourne families helps remind them in some small way of the magic of our very existence.

It is incomprehensible that there is now a situation where it is an almost legal fact that no amount of environmental protection legislation or scientific opinion at either a state, commonwealth or international level can now stop some sort of bitter forestry manager waving a parochial Regional Forest Agreement and willfully penciling out on a map the possibility of all those future family experiences.

I never agreed to that abuse of Victoria's' forests, and maybe I'm not the only Victorian who feels the same way.

Alex Thomas. Fitzroy (solicitor)

Soft demonstrations for the frog – The Kermit choir.



Logs and frogs in battle of Baw Baw

By Claire Miller

December 5, 2004

The State Government is planning to log the last untouched forests on Mount Baw Baw where the critically endangered Baw Baw frog is barely surviving.

The frogs have all but disappeared from alpine heath lands within Baw Baw National Park, with the population falling by 98 per cent from an estimated 10,000 to 15,000 in 1984.

Alarmed by the rapid decline, scientists searched further afield and discovered a few thousand more surviving in forests on the plateau's southern flanks.

The frog is on the International Union for the Conservation of Nature red list, and is protected under state and national laws. But the last frogs are living amid some of the most valuable timber left on public land.

Almost all the surrounding area has been logged since 1980, or will be logged by 2009. The Government has few options under a 1996 law requiring it to deliver an average 350,000 tonnes of pulpwood a year to Paperlinx, formerly Amcor, until 2030.

The Government is planning to conduct an "adaptive management" experiment starting this month, in which nine areas will be logged to evaluate the effects on the frogs and their habitat.

Scientists and environmentalists have condemned the experiment, saying it will hasten the frogs' decline.

Dr. Jean-Marc Hero, the union's Australian co-ordinator for its 2004 global Amphibian Assessment, said the experiment was unethical and illogical.

He said the habitat should be protected first, then the reasons for the decline investigated.

"It is just ridiculous to say that part of the solution to the frogs' recovery is to log its habitat to see if you can log it more," he said.

"If it was the last koala population, would you still be knocking down the trees? I think because it is a frog, they think they can get away with it. All the habitat should be included in the national park."

Sarah Rees, of the Central Highlands Alliance, said the experiment was another example of the Government's inability to protect old-growth forests and water catchments

"Baw Baw has been relentlessly woodchipped, more than any other forest in the state," she said.

A spokesman for Environment Minister John Thwaites said the trials would go ahead. "We think that within a few years, having carried out these operations, we will have established the knowledge and information needed about the way to best protect this important species," he said.

The Baw Baw frogs are found nowhere else. The species is sensitive to changing environmental conditions. Threats include global warming, a new pathogenic fungus implicated in at least three other Australian frog extinctions, and recreational pressure. Populations are slow to recover because the frogs are long-lived and slow to reproduce.

A 2004 report by Greg Hollis, of Melbourne University's zoology department, identified logging as a potential threat to Baw Baw frogs because it could destroy habitat, change temperatures and other vital conditions in nearby areas, put sediment into breeding grounds, and isolate populations.

The Age

World's green markers on the brink

By Stephen Cauchi
Science Reporter
October 16, 2004

Frogs and other amphibians are dying off in Australia and around the world in unprecedented numbers, according to the most comprehensive study conducted of their status. And, in many cases, no one knows why.

More than 500 scientists from 60 nations contributed to the Global Amphibian Assessment, the key findings of which were published yesterday in the journal *Science*.

According to the study, of all 5743 known amphibian species - which include frogs and toads, salamanders and caecilians - one-third, or 32 per cent, are under threat of extinction.

By contrast, only 12 per cent of bird species and 23 per cent of mammal species are threatened. Worryingly, the decline of amphibians may herald further bad news for the environment. They are regarded by scientists as "canaries in the coalmine" since their permeable skin is sensitive to changes in water and air quality. "Amphibians are one of nature's best indicators of overall environmental health," said Russell Mittermeier, president of the American-based non-profit corporation Conservation International.

"Their catastrophic decline serves as a warning that we are in a period of significant environmental degradation."

Simon Stuart, a senior director at CI, said: "Since most amphibians depend on freshwater and feel the effects of pollution before many other forms of life, including humans, their rapid decline tells us that one of Earth's most critical life support systems is breaking down."

Two reasons for the decline of amphibians include human exploitation of their habitat, or removal of their habitat. But, says the report, there is a third reason - "enigmatic decline". This is decline, even where suitable habitat remains, for "reasons that are not fully understood, although disease and climate change are emerging as the most commonly cited causes".

Australia and New Zealand, according to the report, have a greater-than-usual number species in this category compared with other countries.

Unfortunately, species in this category "present the greatest challenge for conservation because there are currently no known techniques for ensuring their survival in the wild," the report says.

In Australia, the Caribbean and the Americas a disease called chytridiomycosis has hit amphibians hard, says *Science* - a disease that may be linked to drought and climate change.

According to the Federal Department of the Environment, Australia has 214 species of frogs. It lists 15 as endangered, 12 as vulnerable and four as extinct. The creek frog, white-bellied frog and Baw-Baw frog are among the endangered species.

Worldwide, according to the three-year study, 1856 amphibian species are threatened with extinction.



CONCLUSION- Its in your hands...

The Central Highlands Alliance are requesting that the State Government respond to this extinction crisis with **an immediate cessation of logging in the site of global zoological significance**. In light of drought, rapid species extinction, biodiversity loss and global climate change this is no-longer a luxury of choice but an act of responsible State management, it won't be our generation that suffers from the ecological mistakes we are making, it will be our children.

The government must recognise that that our dying ecology can no longer perform for our growing populations without progressive policy making. The Australian Studies suggest that Australia's native forests provide pivotal environmental benefits, such as keeping our water supplies clean, estimated to have an annual value of \$14 billion dollars. Pollination carried out by animals, birds and bees is set at \$3 billion dollars a year. That's how much it would cost Australians if the 'free' service were not provided.

The State Government cannot keep handing little chunks of damaged land back to the Victorian people every election term and calling itself 'green'. The land requires some adventurous and modern reform that strives to protect what's left, restore that which is damaged and transition the last of the industry into professionally managed plantations. No one has said this job is easy, but there is no safer choice for our state nor Country.

The general public and conservation movement applaud the Bracks Government's previous responses to ecological crisis' like the Box Iron Bark forests and the Otways and ask that recognition of the Baw Baw issue be met with similar responsibility and command. In addition to the extinction crisis is an even bigger problem that this area also provides Melbournians with 60% of its drinking water, consequently, many parties would meet the protection of the Baw Baw region with jubilation.

Victorians need their water and love their only endemic frog. It is an abhorrent trade off for a pound of woodchips.

Mr. Thwaites, it's in your hands to protect Victoria and protect the life of our vulnerable species, please make your decision from a thoroughly investigated platform. **The economic rationale of a woodchip industry *should not* take precedence over the ecological value of life.**

Groups supporting a cessation of logging in the site of Global Zoological significance to ensure the protection of the Baw Baw Frog *Philoria Frosti*.

Endangered Frog Research Centre
The Amphibian Research Center
The Central Highlands Alliance
Friends Of Baw Baw
The Friends of the Earth International
The Friends of the Earth Australia
The Australian Conservation Foundation
The Wilderness Society
Environment East Gippsland
The Yarra Ranges Environment Coalition
The Threatened Species Network
Teachers for Forests
Otways Environment Council
The Upper Bunyip Action Group

Yours Kindly,

Sarah Rees
President
The Central Highlands Alliance