2017/22: Katter's Australia Party's Safer Waterways Bill, 2017: should crocodiles be culled in northern Queensland?

What they said...

'Once we were able to even fish beside our waterways, that is now a risk. So we really need to make a decision on whether we're going to look after the interests and safety of people, or back the crocodiles'

Katter's Australia Party (KAP) Queensland Member of Parliament, Shane Knuth

'No one touches Cairns crocodiles, because that's our story animal - our totem. We don't want crocodiles in Cairns touched, because they're not really an issue'

Sarah Addo, a representative of the Kunggandji Kimuy People

The issue at a glance

On October 29, 2017, the Queensland premier called upon the acting state Governor seeking a Proclamation from her to dissolve the Queensland Parliament in the lead-up to the state election. All Bills not yet passed by the Parliament therefore lapsed and are to be reintroduced and debated in 2018. https://www.timebase.com.au/news/2017/AT04462-article.html

One of these Bills is the Katter's Australia Party's (KAP) Safer Waterways Bill, 2017, which was introduced to the Parliament on May 25, 2017. http://www.parliament.gld.gov.au/documents/tableOffice/TabledPapers/2017/5517T796.pdf

The Safer Waterways Bill, if enacted, would make it mandatory for 'rogue' crocodiles to be removed from Queensland's populated waterways. It would also greatly expand the capacity of landholders to remove or kill crocodiles on their properties. Once granted authorisation to reduce crocodile numbers on their land, whether by relocation or killing, the extent of the removal would be at the landholder's discretion.

A summary of the Bill states, 'The Bill places greater value on human life, than on that of crocodiles, and seeks to responsibly reduce the risk of crocodile attack as much as possible.'

The summary also includes the statement, 'Ultimately, people who live in North Queensland are best placed to manage crocodiles.'

http://www.parliament.qld.gov.au/documents/tableOffice/TabledPapers/2017/5517T797.pdf

Even prior to its debate, the Bill appears unlikely to gain the support of the state Government. Katter has indicated that he would seek to have independents and members of his party in the Queensland Parliament block budget Bills and deny the state Government supply if it does not support his party's Bill. http://www.abc.net.au/news/2017-04-12/katter-party-plans-crocodile-management-laws-qld/8438768

The KAP Bill has met with opposition from conservation groups whose members consider it extreme and ill-informed. Crocodile expert Terri Irwin has cast doubt on Katter's knowledge of the bush, stating, 'I've never run into him at Cape York but I have run into him at a couple of airport lounges and he has the cleanest hat I've ever seen for a bloke who claims to be from the bush...' http://www.news.com.au/technology/science/animals/bob-katter-schooled-by-terri-irwin-over-his-crocodile-post/news-story/0ae56dc1d98b762f619981de7257fe73

Background

The information found below regarding crocodiles, especially in Queensland, has been taken from that supplied by the Queensland Government and is accessible in full at https://www.qld.gov.au/environment/plants-animals/crocodiles

The information supplied regarding Bob Katter's Safer Waterways Bill, 2017, can be accessed in full at

http://www.parliament.gld.gov.au/documents/tableOffice/TabledPapers/2017/5517T797.pdf

This is a link to a summary of the Bill. The Bill can be read in its entirety at

http://www.parliament.qld.gov.au/documents/tableOffice/TabledPapers/2017/5517T796.pdf

Queensland crocodiles

Australia is home to two species of crocodile, the freshwater crocodile (Crocodylus johnstoni), which is found nowhere else in the world, and the estuarine crocodile (Crocodylus porosus). Both species can live in fresh or salt water.

Freshwater crocodiles live in the inland waterways of northern Australia. In Queensland, they are found in the rivers and swamps of Cape York Peninsula, areas bordering the Gulf of Carpentaria and the north-west. East coast populations exist in the upper Herbert River, the Burdekin River catchment and the Ross River. Freshwater crocodiles also live in tidal reaches of some rivers.

Estuarine crocodiles are found in India, throughout South-East Asia and New Guinea, in northern Australia, Vanuatu and the Solomon Islands. In Queensland, they are known to live between Gladstone and Cape York Peninsula, and throughout the Gulf of Carpentaria. Although most commonly seen in tidal reaches of rivers, they also live in freshwater lagoons, rivers, and swamps hundreds of kilometres inland from the coast. They can even be found along beaches and around offshore islands in the Great Barrier Reef and Torres Strait.

People and crocodiles

Traditionally, Aboriginal and Torres Strait Islander peoples have had a special relationship with crocodiles. They are the focus of stories, songs, dances and art. Some groups regard crocodiles as religious icons or totems, while others believe they are spirits of ancestors. Crocodiles are also a food source for some traditional groups who take eggs from nests and hunt adults.

Commercially, crocodiles are now an important resource. Farmed crocodile meat is a gourmet item on many menus around the world, and their skins are recognised as a durable leather that is made into a variety of products. Crocodiles are also a major tourist attraction throughout northern Australia, both in the wild and in wildlife sanctuaries.

Conservation status

Until 1974, estuarine crocodiles in Queensland were hunted close to extinction for their prized skins. Both species are now protected in Australia, but their numbers continue to be threatened.

Habitat destruction is now considered a major threat to crocodile survival in Queensland. Increasingly, humans are crowding crocodile territory-developments in swamps, mangroves and rivers are displacing crocodiles from their homes.

The growing human population along the east coast of Queensland ultimately means more frequent encounters with crocodiles. Unless the community values crocodiles and their habitats, it will be a challenge to ensure their long-term conservation.

Management and research

While thousands of crocodiles are killed in other countries for their skins, Australia's two crocodile species are protected in the wild. This means that it is illegal to interfere with these animals, which includes removing eggs, and possessing or taking crocodile parts (such as skulls and skins) without a licence

Dangerous crocodiles in populated areas are investigated and those that are deemed to be a threat to people, dogs or stock are captured and removed. These crocodiles are then made available to commercial crocodile farms and zoos. Destroying a wild crocodile is the last resort.

Some features of the Katter's Australia Party's Safer Waterways Bill, 2017

The Bill seeks to ensure that crocodiles are removed by an authorised person if they are a threat to humans. This removal may involve killing or relocating the crocodile to an authorised farm. It would involve the removal of crocodiles from urban or public areas commonly used by people for recreation.

The Bill seeks to extend the number of people able to kill or remove crocodiles. The Safer Waterways Bill 2017 gives power to landholders to apply to manage crocodiles on their land.

Indigenous landholders have a connection with and understanding of the land and should be empowered to manage that land as they see fit. This Bill allows them to apply to do that in

relation to crocodiles. Non-Indigenous private landholders can apply for the same rights. As well as empowering landholders, it places a value on crocodiles and creates an unprecedented economic opportunity for the landholder.

Authorised landholders will be empowered in regards to all aspects of crocodile management

on their property. If a crocodile is on their property, they may choose whether to kill it, have it relocated to a farm, or let it remain on their property. If they choose for it to be euthanised,

they may do this themselves, or accept payment from another person who wishes to kill the crocodile.

If there are crocodile eggs on their land, they can choose to leave the eggs, harvest the eggs and sell them, or have someone else pay to come onto their land and harvest them.

Internet information

On December 21, 2017, The Townsville Bulletin published an opinion piece by Julian Tomlinson titled 'State Government cares more about crocodiles than humans'

The comment argues that Queensland Government crocodile management policies are preferencing crocodiles over human beings.

The full text can be accessed at https://www.townsvillebulletin.com.au/news/opinion/state-government-cares-more-about-crocodiles-than-humans/news-story/87ae80c9ff750708399b88d67dc268c3

On December 4, 2017, ABC/RMIT Fact Check published a report titled 'Fact check: Is a person torn to pieces by a crocodile every three months in north Queensland?' which substantially disproved Bob Katter's claim on the frequency of crocodile attacks in northern Queensland. The full text can be accessed at http://www.abc.net.au/news/2017-11-30/fact-check-does-a-crocodile-kill-someone-every-three-months-/9202902

On October 27, 2017, Terri Irwin, crocodile expert and opponent of crocodile culling was reported criticising Bob Katter for his limited knowledge of crocodiles.

The criticism was published in a news.com.au report titled 'Bob Katter schooled by Terri Irwin over his crocodile post'

The full text can be accessed at http://www.news.com.au/technology/science/animals/bob-katter-schooled-by-terri-irwin-over-his-crocodile-post/news-story/0ae56dc1d98b762f619981de7257fe73

On October 17, 2017, the ABC ran a report titled 'Grandmother's death sparks call for urgent action to tackle crocodile numbers in far north Queensland'

The report details the call from Bob Katter and his supporters for a crocodile cull after a fatal crocodile attack in north Queensland.

The full text can be accessed at http://www.abc.net.au/news/2017-10-17/death-of-anne-cameron-sparks-call-for-action-on-crocodiles/9055522

On September 5, 2017, The Australian published a report titled 'Terri Irwin takes on Bob Katter's "clean" hat' which examines the dispute between Bob Katter and Terri Irwin regarding which of the two is a more reliable authority on crocodiles.

The full text can be accessed at https://www.theaustralian.com.au/news/nation/bob-katter-hits-back-at-terri-irwin-over-crocodile-cull-push/news-story/78d434ac86d0590d9f5ef21987b0cae2

The Queensland Government's Department of Environment and Heritage Protection has an area of its Internet site given over to supplying information on crocodiles and the manner in which they are managed within Queensland.

This information can be accessed in full at https://www.ehp.gld.gov.au/wildlife/livingwith/crocodiles/#a great survivor

The Irwin's Australia Zoo site has information on the environmental significance of crocodiles and the inappropriateness of culling. This site can be accessed at http://www.australiazoo.com.au/about-us/media-center/our-position/crocodile-culling.php

The north Queensland tourist promotion site, Dive The Reef, has a section of its Internet site given over to crocodile management. This can be accessed at http://www.divethereef.com/guides/aboutcrocs.asp

On May 25, 2017, the KAP's Safer Waterways Bill, 207, was introduced in the Queensland Parliament. The Bill proposes, among other things, to cull crocodiles as a means of increasing the safety of human beings.

The full text of the Bill can be accessed at http://www.parliament.qld.gov.au/documents/tableOffice/BillMaterial/170525/Waterways.pdf

On May 17, 2017, The Cairns Post published a news report titled 'Traditional owners to shut down proposed crocodile cull for Cairns' Despite its titled the report outlines both the nature of local opposition and support for a crocodile cull.

The full text can be accessed at $\frac{\text{http://www,cairnspost.com.au/business/traditional-owners-to-shut-down-proposed-crocodile-cull-for-cairns/news-story/8cf9e7649303eaf0a554b635938334a5}$

On April 18, 2017, The Courier Mail published an opinion piece by Renee Viellaris titled 'Bob Katter is Right Queensland needs a crocodile cull'. Viellaris contrasts the access she had enjoyed to Queensland's waterways when crocodiles were being vigorously hunted compared to the restrictions that are necessary today.

The full article can be accessed at http://www.couriermail.com.au/news/opinion/opinion-bob-katter-is-right-queensland-needs-a-crocodile-cull/news-story/7decd7389c359b777ff87c01acbce423

Please note, access to this site may now require subscription.

On March 23, 2017, The Australian published an analysis titled 'Crying crocodile tears leads to cull calls' which considers the arguments around the decision whether or not to cull Queensland's crocodiles.

The full text can be accessed at https://www.theaustralian.com.au/news/inquirer/crying-crocodile-tears-leads-to-cull-calls/news-story/44b95a47e3dd09bae73460dddeac9eb1

On March 20, 2017, The New Daily published a report titled 'Spearfisherman killed by croc; teen mauled after dare goes wrong' which included some detail of community responses to the recent death and injuries resulting from crocodile attacks.

The full text can be accessed at https://thenewdaily.com.au/news/state/qld/2017/03/20/spearfisherman-crocodile-body-found/

On November 23, 2016, The Sydney Morning Herald published a comment by Bill O'Chee titled ' Minister, we need to cull crocodiles before they kill Queensland tourism' The comment argues that crocodiles must be brought under control before they damage Queensland tourism. The full text can be accessed at http://www.smh.com.au/comment/the-hermit/minister-we-need-to-cull-crocodiles-before-they-kill-queensland-tourism-20161122-gsvb6v.html

On June 2, 2016, The Conversation published an opinion piece titled 'Staying safe in crocodile country: culling isn't the answer/ and written by Adam Britton, Senior Research Associate, Charles Darwin University. The comment argues against culling crocodiles and suggests other means of reducing human risk.

The full text can be accessed at https://theconversation.com/staving-safe-in-crocodile-country-culling-isnt-the-answer-60252

On November 3, 2015, National Geographic Magazine published an article treating the cultural significance of crocodiles to indigenous Australians. The full text can be accessed at http://www.nationalgeographic.com.au/animals/crocodile-dreamtime.aspx

On November 8, 2014, TravelNQ published a promotion titled 'Cairns Tourist Attractions: Top 6 Attractions For a Day on Land' which listed crocodiles as the chief tourist attraction in the area.

The full text can be accessed at http://travelng.com/cairns-tourist-attractions/

On December 10, 2012, The Conversation published an opinion piece titled 'Crocodile culls won't solve crocodile attacks' by Grahame Webb, Adjunct Professor, Environment & Livelihoods, Charles Darwin University. The piece argues why culling is an ineffective crocodile management strategy. The full text can be accessed at https://theconversation.com/crocodile-culls-wont-solve-crocodile-attacks-11203

On November 9, 2012, Smithsonian Magazine published an article titled 'The Top 10 Greatest Survivors of Evolution' which discussed the age of the family of reptiles to which crocodiles belong and the age of the animals from which they are descended.

The full text can be accessed at https://www.smithsonianmag.com/science-nature/the-top-10-greatest-survivors-of-evolution-118143319/

Arguments in favour of culling crocodiles in northern Queensland

1. Increasing numbers of human lives are being lost and injuries suffered due to increased numbers of crocodiles

Supporters of a cull of crocodiles in northern Queensland argue there has been an increased number of deaths and injuries caused by crocodiles in the region and that these are related to increasing numbers of crocodiles.

When the Katter Australia Party's Safer Waterways Bill was introduced in the Queensland Parliament on May 25, 2017, Queensland Member of Parliament, Shane Knuth, stated, 'Communities across North Queensland are consistently reporting significant increases in crocodile numbers. Waterways which people previously regularly swam in are now infested with crocodiles. From 1985 to 2015 the Department of Environment and Heritage Protection recorded 25 crocodile attacks in Queensland, seven of them fatal. In the past 12 months there have been three attacks, two of them fatal. This does not include attacks on stock or other animals.'

http://www.parliament.gld.gov.au/documents/tableOffice/BillMaterial/170525/Waterways.pdf

Quoting farmers from the Cooper Creek area, Mr Knuth stated, 'There were no attacks for 60 years when we used to shoot crocs. Now there is a spate of attacks because numbers have got out of control. Never used to hear of attacks in the rivers with freshwater crocs; however, now salties have invaded the waterways. They are aggressive, territorial and nobody would or should swim in these waterways now. http://www.parliament.qld.gov.au/documents/tableOffice/BillMaterial/170525/Waterways.pdf

It has also been suggested that as crocodile numbers grow the animals are moving further south into regions they normal do not inhabit. In an article published in The Australian on March 23, 2017, it was noted, 'The southern boundary of croc country is traditionally considered to be Gladstone's Boyne River in central Queensland, but authorities are still hunting two saltwater crocodiles spotted in the Mary River, near Maryborough, just 255km north of Brisbane. Two more were removed from the watercourse in 2013 and 2014.

https://www.theaustralian.com.au/news/inquirer/crying-crocodile-tears-leads-to-cull-calls/news-story/44b95a47e3dd09bae73460dddeac9eb1 After the disappearance and apparent death of a 79-year-old north Queensland woman believed to have been killed by a crocodile in October, 2017, supporters of a cull have renewed their calls for a change to the regulations so that the state can deal with the growing number of crocodiles and fatalities.

Queensland KAP leader, Bobbie Katter, whose party has put forward a Safer Waterways Bill, stated regarding the cause of the death, 'There is no question there has been an explosion of crocodiles in north Queensland. I don't want to live in a world where we have to displace ourselves any time an animal population becomes unnatural...

Nature is out of balance right now. We are going to keep pushing the bill so we can maintain a sensible [crocodile] population.'

http://www.abc.net.au/news/2017-10-17/death-of-anne-cameron-sparks-call-for-action-on-crocodiles/9055522

Proponents of the cull argue that the number of people killed through crocodile attacks is greater than some experts claim as disappearances which are the result of people being taken by crocodiles are not always recognised as that.

Bob Katter challenged Terri Irwin's figures on crocodile related fatalities, stating, 'Her figures that she quoted, nine people in 32 years, shows the towering ignorance of the woman. When a person goes missing, why does he go missing?" Mr Katter further stated that statistics for crocodile deaths were 'hopelessly inaccurate'. https://www.theaustralian.com.au/news/nation/bob-katter-hits-back-at-terri-irwin-over-crocodile-cull-push/news- story/78d434ac86d0590d9f5ef21987b0cae2

Scientific studies have also noted that accurate data is not always available on crocodile attacks, especially those that do not result in injury or death. David Caldicott's 2005 study 'Crocodile Attack in Australia: An Analysis of Its Incidence and Review of the Pathology and Management of Crocodilian Attacks in General ' stated, '[D]etailed information on some attacks is not always available, and attacks that do not result in injury are not usually recorded.' http://www.wemjournal.org/article/S1080-6032(05)70380-X/fulltext

2. Queenslanders' capacity to enjoy their environment is being reduced

Many of those seeking a cull of Queensland's crocodiles and stricter control regulations argue that it is not simply the loss of human life that is at issue. Human beings are being denied the opportunity to enjoy their environment because of fear of crocodile attack.

In an opinion piece published in The Courier Mail on April 18, 2017, Renee Viellaris contrasted the access she had enjoyed to Queensland's waterways

when crocodiles were being vigorously hunted compared to the restrictions that are necessary today.

Viellaris stated, 'In the 1990s, my family home in Innisfail had a jetty over the Johnstone River, which overlooked the jungled Banana Island. I would feed our "pet" groper living under the jetty, gifting it bowls of seafood scraps and then jump in the brown water to cool off with friends... I didn't realise, but I was the beneficiary of extensive croc harvesting throughout northern Australia from the 1940s-60s.

Now, Viellaris states, 'There would be no way today I'd even put my toe in that same river I grew up near', while 'North Queensland beaches are regularly being closed because of confirmed crocodile sightings'. http://www.couriermail.com.au/news/opinion/opinion-bob-katter-is-right-queenslandneeds-a-crocodile-cull/news-story/7decd7389c359b777ff87c01acbce423

Comments such as these, indicating reduced access to facilities that Queenslanders once took for granted, have fuelled calls for a crocodile cull in the

The mayor of the Cassowary Coast, John Kremastos, stated in relation to crocodile attacks in the area in which he lives, 'The biggest concern for us is the negative impact it will have on our tourism and lifestyle. For example, I believe surf lifesaving membership has decreased dramatically, especially in the nipper groups, because parents don't want their kids in the water. https://thenewdaily.com.au/news/state/qld/2017/03/20/spearfisherman-crocodilebody-found/

On December 21, 2017, in an article published in The Townsville Bulletin, Julian Tomlinson also commented on the impact that fear of crocodile attack was having on children joining surf safety clubs. Tomlinson stated, 'Surf Life Saving Queensland...[is] losing Nippers in the North at a rate of knots because - understandably - parents don't much like the thought of their kids being torn to bits by increasingly brazen crocodiles.

Struggling surf clubs have been teaching people to save lives for generations and whole families get involved, often as a result of their kids joining Nippers.

But now we're expected to just let the movement dwindle because our politicians are more scared of rabid anti-croc-culling campaigners than they are of people being eaten.' https://www.townsvillebulletin.com.au/news/opinion/state-government-cares-more-about-crocodiles-than-humans/newsstory/87ae80c9ff750708399b88d67dc268c3

Shane Knuth, a KAP Queensland MP, has stated, 'Once we were able to even fish beside our waterways, that is now a risk. So we really need to make a decision on whether we're going to look after the interests and safety of people, or back the crocodiles.

https://www.thequardian.com/environment/2017/mar/20/katters-australia-party-push-to-legalise-crocodile-hunting-after-queensland-attacks

3. Increasing tourism and the spread of human settlement is making encounters with crocodiles more likely

Those calling for a cull argue that not only are crocodile numbers increasing, but human populations in areas where crocodiles are to be found are also growing. The result, they argue, is two populations on a collision course with human lives and safety being put at risk.

According to a recent CSIRO paper, the human populations of the two largest cities in north Queensland, Townsville and Cairns, increased by 25 per cent between 2005 and 2015.

http://www.abc.net.au/news/2017-11-30/fact-check-does-a-crocodile-kill-someone-every-three-months-/9202902

Though not supporting culling, The Queensland Department of Environment and Heritage Protection has also noted the impact of growing human populations in areas frequented by increasing numbers of crocodiles. The Department has stated, 'The rapid and significant expansion of the human populations in a state of the impact of the human populations in a state of the impact of the human populations in a state of the impact of the human populations in a state of the impact of the human populations in a state of the impact of the human populations in a state of the impact of the human populations in a state of the impact of the human populations in a state of the impact of the human populations in a state of the impact of the human populations in a state of the impact of the human populations in a state of the impact of the human populations in a state of the impact of the human populations in a state of the impact of the human populations in a state of the impact of the human populations in a state of the impact of the human populations in a state of the impact of the human populations in a state of the impact of the human populations in a state of the impact of the imp population, the popularity of water-based activities in croc-country, and the suspected recovery in the crocodile population have resulted in an increased likelihood of crocodile sightings and physical interactions between humans and crocodiles.' http://www.abc.net.au/news/2017-11-30/fact-check-does-a-

crocodile-kill-someone-every-three-months-/9202902

Bob Katter has argued that the risk of crocodile attack in these circumstances is unavoidable without complete crocodile removal from heavily populated areas and culling in other areas. Following a riverside attack on a British tourist in November, 2017, Mr Katter stated that the sheer number of waterways in far north Queensland meant it was impossible for people to avoid going near waterways and thus they were inevitably at risk from

Regarding warning the growing number of tourists to the region of the dangers they faced, he argued that this would be counterproductive for another reason as it would damage the tourist industry.

Mr Katter stated, 'If you educate tourists you won't have any. And we all know what happens then.' http://www.abc.net.au/news/2017-11-28/viral-videoshows-woman-being-bitten-on-leg-crocodile/9201190

A further incident involving tourists at risk in a crocodile habitat occurred in January, 2018, when three English backpackers had to be saved from rising floodwaters after their campervan was submerged in a crocodile warning area. The group was camped at a riverside area near Gordonvale, about 24 kilometres south of Caims, https://www.theguardian.com/australia-news/2018/feb/06/britons-rescued-from-van-roof-in-queensland-crocodije-danger-<u>area</u>

Some of those calling for a cull have suggested that without this action Queensland tourism is at risk. In an opinion piece published in The Sydney Morning Herald on November 23, 2016, Bill O'Chee argued, 'What would be bad for tourism in the Whitsundays would be a spate of crocodile attacks on unsuspecting foreign tourists. If that were to happen we could kiss goodbye a billion-dollar industry.

It is time we embrace common sense. That begins with a proper acknowledgement of the dangers that crocodiles now pose, and a rational discussion of how best to protect humans over crocodiles in that tiny portion of Queensland around our coastal towns.' http://www.smh.com.au/comment/thehermit/minister-we-need-to-cull-crocodiles-before-thev-kill-queensland-tourism-20161122-gsvb6v.html

4. A reduction of restrictions on culling crocodiles and harvesting their eggs would be of economic benefit to Queensland

Though it is not part of the KAP Safer Waterways Bill, in 2016 Bob Katter proposed crocodile safaris as a way of both reducing crocodile numbers and contributing to the Queensland economy. The proposal followed a fatal crocodile attack on a New Zealand tourist. Mr Katter tweeted, 'Croc numbers in Nth Qld R exploding. Croc shooting safaris can put nature Back-in-Balance.' https://www.sunshinecoastdaily.com.au/news/bob-katters-croc-cull-calllets-have-shooting-safa/3036012/

In the Northern Territory, where crocodiles are unofficially culled, there is greater support for commercialising the activity by allowing tourists to pay to be part of the culling.

In a report published on the ABC's Triple Hack on November 7, 2016, it was noted, '[T]he line between tourism and hunting has already been blurred.' In the Northern Territory there are already two men licensed to sell tourists the experience of a legal, professional crocodile hunt. 'The tourist who signs on can do everything up to pulling the trigger.' http://www.abc.net.au/triplej/programs/hack/should-we-allow-crocodile-safari-hunting/7820042 The KAP's Safer Waterways Bill deliberately proposes making a profit from the activities involved in controlling crocodile numbers. The Bill's proposes note, If managed responsibly, crocodiles have the potential to be a great asset for Queensland, rather than just a danger to people. http://www.parliament.qld.gov.au/documents/tableOffice/TabledPapers/2017/5517T797.pdf

The Bill proposes, 'As well as protecting human lives, the Safer Waterways Bill 2017 aims

to create a significant and sustainable crocodile industry in Queensland through controlled egg harvesting. The Northern Territory currently has a successful egg harvesting program. Evidence suggests egg harvesting can help sustain crocodile populations, rather than diminish them, and creates a huge economic opportunity, which is currently untapped in Queensland.'

http://www.parliament.qld.gov.au/documents/tableOffice/TabledPapers/2017/5517T797.pdf In the Northern Territory, the leather taken from young crocodiles reared from hatchlings is the basis of the territory's highly profitable crocodile leather industry. During the 2014/15 financial year, the total economic contribution of the crocodile harvesting industry to the Northern Territory's economy in value added terms was \$54.3 million. http://www.parliament.qld.gov.au/documents/tableOffice/TabledPapers/2017/5517T797.pdfhttps://business.nt.gov.au/ data/assets/pdf file/0009/438921 crocodile-industry-eca-final.pdf

The Safer Waterways Bill, 2017, states, 'It is hoped that anytime a crocodile is euthanised, whether it be on a private property, or on state land, that the crocodile carcass is fully utilised, for example by selling teeth, meat or skins, or by producing blood and bone from unsaleable parts of the carcass.' The Bill clearly promotes Queensland adopting the view that crocodiles are an economically exploitable commodity. http://www.parliament.qld.gov.au/documents/tableOffice/TabledPapers/2017/5517T797.pdf

5. Crocodile numbers can be reduced without threatening species with extinction

Supporters of culling argue that crocodiles are no longer a threatened species and that their numbers can be reduced without placing their survival in jeopardy.

In a report published on the ABC's Triple Hack on November 7, 2016, it was noted, 'Experts say the total croc population is holding steady at the level it was in the nineteenth century, meaning the species is finally returning to some kind of "natural balance".' http://www.abc.net.au/triplei/programs/hack/should-we-allow-crocodile-safari-hunting/7820042

The expert report the ABC cited is a 1985 Australian Government Department of the Environment and Energy report which notes the steady increase in crocodile numbers since the 1970s when crocodile hunting was prohibited. http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl? taxon_id=1774 The report notes that in 1985 the Convention on International Trade in Endangered Species no longer listed Australian crocodiles in this category. Supporters of a cull note that crocodiles numbers have increased since that time.

A report published in The Guardian on December 23, 2016, noted, 'Protected for more than four decades after being hunted to near extinction, the

ancient reptile - on the credible numbers that are available - has staged a remarkable recovery.

In the Northern Territory there are now as many as 100,000 saltwater crocodiles, up from just 3,000 in 1971. There are similar estimates in neighbouring Queensland but the true population will not be known until the first systematic government survey is completed over the next three to five years.' https://www.theguardian.com/environment/2016/dec/27/welcome-to-crocodile-country-the-remarkable-comeback-of-australias-jaws-of-the-north The KAP Safer Waterways Bill, 2017, claims that its aim is not to eradicate crocodiles but to prioritise human life. It claims that human beings can be protected without threatening the survival of crocodile species. It states, 'It aims to eliminate from our waterways all crocodiles that pose a threat to human life, while protecting crocodiles from becoming endangered as a species."

Arguments against culling crocodiles in northern Queensland

1. Crocodiles are a significant species in terms of their evolutionary history and their ecological importance

Crocodiles are among the world's oldest surviving species and as apex predators play a significant role in maintaining the health of north Queensland ecosystems.

Not only are crocodiles among the world's oldest surviving species, they are descended from reptiles that are even older. In an article published by the Smithsonian Magazine on November 9, 2012, it was noted, 'While crocodylians as we know them today-the alligators, gharials and crocodiles that live at the water's edge-have been around for about 85 million years, they belong to a much more diverse and disparate group of creatures that goes back to the Triassic.' The article continued, 'Crocodylians are the last living representatives of the crocodylomorpha, an even bigger group that originated over 205 million years ago. They shared the world with the dinosaurs...' <a href="https://www.smithsonianmag.com/science-nature/the-top-10-greatest-survivors-nature/the-top-10-greatest-survivo

The Queensland Department of Environment and Heritage Protection has stressed the significance of crocodile species and thus the importance of preserving them. The Department's Internet site states, 'Today, crocodiles are one of the few remaining links to the prehistoric past. As predator and prey, crocodiles play a valuable role in the health of many aquatic environments.

https://www.ehp.qld.gov.au/wildlife/livingwith/crocodiles/#a_great_survivor The Department further explained the importance of crocodile conservation, stating, 'Australia is one of the very few places in the world where estuarine crocodiles have a good chance of survival in the wild, and the only country where the freshwater crocodile is found. Because crocodiles are an important part of the food chain and help keep our wetland environments healthy and stable, protecting them is vitally important.

https://www.ehp.qld.gov.au/wildlife/livingwith/crocodiles/#a_great_survivorhttps://www.ehp.qld.gov.au/wildlife/livingwith/crocodiles/#the_future_for_crococ In 2005, conservationist Steve Irwin stated, 'Crocodiles are apex predators and an important part of our ecosystem - without them our river systems and marine environment will suffer.' Crocodiles' role is explained further on the Internet site of Australia Zoo, which Irwin founded to promote public awareness of the importance of conservation. The site notes, 'Crocodiles are...crucial to the ecosystem, keeping waterways and wetlands healthy.

Crocodiles eradicate the weak, sick and injured wildlife, leaving only the healthy to prosper. They are also credited with keeping the populations of prey species in balance. http://www.australiazoo.com.au/about-us/media-center/our-position/crocodile-culling.php

Not only does their predation affect other species, but birds, snakes, and fish eat crocodile hatchlings, making them a significant food source as well as a predator. http://www.divethereef.com/guides/aboutcrocs.asp

2. Crocodiles are of cultural importance to indigenous Australians and are of value to Queensland tourism

Crocodiles are culturally significant to indigenous Australians. Within indigenous culture, a totem is an object or animal in nature that is adopted as a family or clan emblem. Different clans are assigned different totems and in some cases individuals are given personal totems at birth. In the Torres Strait personal pendants are worn and these pendants are mostly carved out of wood, turtle shell or shells and often represent the person's totem. There are well established rules as to when the pendants can be worn, often only allowed during ceremonies or rituals. The crocodile is an important totemic animal. http://www.gbrmpa.gov.au/our-partners/traditional-owners-fraditional-owners-of-the-great-barrier-reef/language-totems-and-stories
Further, storytelling is an important oral tradition of many Aboriginal and Torres Strait Islander people. Across Australia, Dreaming or creation stories convey how ancestral spirits created all things on earth, such as the land, sea, rivers, mountains, animals and plants. These stories have been handed down for thousands of years. Dreamtime stories portray Indigenous knowledge and understanding of the world and include cautionary tales involving animals, one such story is that of Gunadar the Crocodile. http://www.nationalgeographic.com.au/animals/crocodile-dreamtime.aspx
Sarah Addo, a representative of the Kunggandji Kimuy People, said local traditional owners regarded crocodiles as sacred animals within Cairns' waterways, and they would not support a cull. https://www.cairnspost.com.au/business/traditional-owners-to-shut-down-proposed-crocodile-cull-for-cairns/news-story/8cf9e7649303eaf0a554b6359383

Crocodiles are an important tourist attraction for Queensland. Tourism is Australia's largest service sector export industry, accounting for nearly 10% of total export earnings. The industry directly employs over 500,000 people. Crocodiles are a major tourist attraction throughout northern Australia, both in the wild and in wildlife sanctuaries. https://www.qld.gov.au/environment/plants-animals/animals/crocodiles Travel North Queensland promotes Hartley's Crocodile Adventures as number one among Cairns' 'Top Six' tourist attractions. https://www.qld.gov.au/environment/plants-animals/crocodileshttp://travelnq.com/cairns-tourist-attractions/

As an example of industry development involving crocodiles, Hartley's Creek Crocodile Farm, situated 40 km north of Cairns, is a fully integrated business based on a wildlife park featuring Australian crocodiles, a farming operation based on captive breeding techniques, an export registered crocodile meat processing plant, a reptile tannery and a leather goods factory. The parent company, Austpan Pacific Pty Ltd, employed 35 people within its first two and a half years of operation and is anticipated to employ 90 people when the operation is at full scale. It is estimated that returns from tourism will soon reach an annual income of \$3m.

https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/Completed_inquiries/1996-99/wild/report/c11

Daintree tour operator David White has argued that culling crocodiles would negatively impact on tourism in the region.

http://www.cairnspost.com.au/business/traditional-owners-to-shut-down-proposed-crocodile-cull-for-cairns/news-

story/8cf9e7649303eaf0a554b635938334a5

3. The threat crocodiles pose to human life has been exaggerated

Opponents of crocodile culling argue that the number of human deaths attributable to crocodiles used to justify culling is grossly exaggerated. Recently, for example, Bob Katter claimed that one north Queenslander was being 'torn to pieces by a crocodile every three months'.

The RMIT/ABC's Fact-Check disputed Katter's claim, noting, 'Long-term figures from the Queensland Department of Environment and Heritage Protection show a rate of one fatal crocodile attack every three years from 1985 to now.

These figures accord with data from the Australian Bureau of Statistics, which is only available to 2016.

The department's data shows fatal crocodile attacks in Queensland have increased in recent years, but not to the rate Mr Katter claims.

In the past 10 years there were six deaths, a rate of one every 20 months. There was one death per year in the past three years.

http://www.abc.net.au/news/2017-11-30/fact-check-does-a-crocodile-kill-someone-every-three-months-/9202902

The Department of Environment and Heritage Protection register starts in 1985. Between then and now there have been 33 crocodile attacks in Queensland, 11 of them fatal.

The department's data shows there has been one attack every year over the 33-year period, and one death every three years.

A 2017 research paper published by the CSIRO, Patterns of human-crocodile conflict in Queensland: a review of historical estuarine crocodile

A 2017 research paper published by the CSIRO, Patterns of human-crocodile conflict in Queensland: a review of historical estuarine crocodile management, contains earlier figures.

It found that between 1971 and 2015, there were 35 recorded crocodile attacks, 12 of which were fatal.

While confirming that attacks have risen in recent years, the paper said a far greater proportion of attacks were fatal between 1971 and 1995 than between 1996 and 2015.

http://www.abc.net.au/news/2017-11-30/fact-check-does-a-crocodile-kill-someone-every-three-months-/9202902

The Queensland Department of Environment and Heritage Protection has noted that the problem is at least as much related to growing human populations in areas that are crocodile habitats as it is to growing crocodile numbers. The Department has stated, 'The rapid and significant expansion of the human population, the popularity of water-based activities in croc-country, and the suspected recovery in the crocodile population have resulted in an increased likelihood of crocodile sightings and physical interactions between humans and crocodiles.' http://www.abc.net.au/news/2017-11-30/fact-check-does-a-crocodile-kill-someone-every-three-months-/9202902

Crocodile expert, Terri Irwin, has suggested that calls for culling are the result of a perception problem which exaggerates the risk crocodiles represent compared to other dangers human beings face. Irwin has stated, 'Statistically and sadly we have lost nine people in the last 32 years to crocodile strikes, in the same time period that more than 77 people were killed by horses.' http://www.news.com.au/technology/science/animals/bob-katter-schooled-by-terri-irwin-over-his-crocodile-post/news-story/0ae56dc1d98b762f619981de7257fe73

4. The Safer Waterways Bill 2017 threatens the survival of crocodiles

Opponents of a cull, as proposed by the Safer Waterways Bill 2017, argue there can be no guarantee that such an action will not drive crocodiles to the brink of extinction as was the case in Queensland before the ban on killing crocodiles was imposed in 1974.

Queensland crocodile farmer, Juergen Arnold, is wary of culls. He has conceded that the limited culling of problem reptiles in urban areas might be a 'possibility' but warns against ever again allowing crocodile numbers to plunge close to extinction.

https://www.theaustralian.com.au/news/inquirer/crying-crocodile-tears-leads-to-cull-calls/news-story/44b95a47e3dd09bae73460dddeac9eb1
Mr Arnold has further stated, 'I don't think they are endangered now. The bigger problem is that their habitat keeps getting smaller.'
http://www.cairnspost.com.au/news/cairns/industry-wants-croc-egg-harvesting-with-mareeba-salty-sightings-on-rise/news-

story/3171e693c3a5af948b49b74f798a9db9

Others concerned about crocodile survival, however, point to the fact that it is not possible to know what the current crocodile numbers are and just how greatly they are being affected by shrinking habitat as previously unoccupied areas of northern Queensland are used for housing.

Sarah Elks, author of a report published in the Weekend Australian on March 23, 2017, stated, 'No one is entirely sure how many crocodiles there are in Queensland. While the Northern Territory government has monitored crocodile numbers annually since the early 1970s, Queensland has never carried out a comprehensive statewide survey. Without that baseline data, it's impossible to tell how successfully crocodile numbers have rebounded in Queensland since the 1974 hunting ban, despite anecdotal reports suggesting the population has exploded.'

https://www.theaustralian.com.au/news/inquirer/crying-crocodile-tears-leads-to-cull-calls/news-story/44b95a47e3dd09bae73460dddeac9eb1
The Queensland Department of Environment and Heritage Protection has stressed how vulnerable to extinction crocodiles remain. It has stated, 'It is estimated that less than one percent of eggs laid by estuarine crocodiles hatch and survive to adulthood. Overheating, flooding and predation by goannas and feral pigs claim a high proportion of unhatched embryos (an estimated 70-80 percent). From the small numbers that do hatch, more than half die in their first year of life, mainly from predation by birds of prey, fish, snake-necked turtles and other crocodiles. Once they have reached maturity their only enemies are each other and humans.

Habitat destruction is now considered a major threat to crocodile survival in Queensland. Increasingly, humans are crowding in on crocodile territory - developments in swamps, mangroves and rivers are displacing crocodiles from their homes.'

 $\underline{\text{https://www.ehp.qld.gov.au/wildlife/livingwith/crocodiles/\#vulnerable_to_extinction}}$

5. There are better ways to increase human safety

Opponents of a cull argue there are more effective measures to increase human safety.

On June 2, 2016, The Conversation published a comment by Adam Britton, Senior Research Associate, Charles Darwin University, titled 'Staying safe in crocodile country: culling isn't the answer'. Britton argues, 'The easiest way to keep people safe is to make sure they understand the risks.' https://theconversation.com/staying-safe-in-crocodile-country-culling-isnt-the-answer-60252

Britton argues that in absolute terms and relative to crocodile fatality rates in other countries, the number of people killed by crocodiles in Australia is very small. He attributes this to the good management practices that are in place in Australia. He writes, 'Attack risk in Australia is low, largely because of the success of long-running campaigns to warn people of the dangers of swimming in crocodile-populated waters.'

Britton further notes, Those who live locally are generally most keenly aware of the dangers. Sadly, a disproportionate number of attack victims are visitors who aren't as aware of the risks. The real problem can therefore be interpreted as a failure to communicate risk and therein lies the solution.' https://theconversation.com/staying-safe-in-crocodile-country-culling-isnt-the-answer-60252

Britton has outlined the safety precautions that need to be taken in order to minimise the risk of crocodile attack. These are: 'don't enter the water in crocodile habitat. In these areas, stay away from the water's edge, don't disturb water consistently in the same place, don't approach or tease crocodiles, camp at least 50 metres from the bank, and don't go out in small, unstable boats.' https://theconversation.com/staying-safe-in-crocodile-country-culling-isnt-the-answer-60252

The 'Crocwise' Education Campaign, in operation in Queensland since October 2001, was developed by the Environment and Heritage Protection Department to inform the public about the value of crocodiles and their habitat. It also provides information about the importance and dangers of crocodiles through various strategies. These include:

media announcements, educational posters and brochures, talkback radio, warning signs, ranger talks, displays, stickers, magazine articles and websites. Throughout north and central Queensland, yellow warning signs are placed at access points to waterways where estuarine crocodiles might live. https://www.ehp.gld.gov.au/wildlife/livingwith/crocodiles/#management_and_research

Opponents of a cull further suggest that such action may actually increase the risk of attack rather than reduce it.

Critics of culling have argued that the measure may make people less safety-conscious because they believe they are no longer at risk. In an opinion piece published in The Conversation on December 10, 2012, Grahame Webb, Adjunct Professor, Environment & Livelihoods, Charles Darwin University, stated, 'The idea that culling the wild population as a whole would help public safety may be true if the cull was very severe, and aimed at bringing the population back to the pre-protection levels. However, if the population was reduced by say one half: "which politician would say it is now safe to go back into the water?".

It clearly would not be safe. Is it safer to see abundant crocodiles in a wetland, where swimming would not even be considered, or be lulled into a false sense of security by having a lesser number of more wary crocodiles?' https://theconversation.com/crocodile-culls-wont-solve-crocodile-attacks-11203

Further implications

In the immediate future it appears unlikely that the Queensland government will establish a program to cull crocodiles in that state.

In June 2017, the Queensland Government issued a revised crocodile management plan for the state. The Queensland Government's approach to the management of crocodiles is based on crocodile management zones. Different parts of the state are located within different management zones. The particular zone is determined by the overall risk to public safety that is present there. Factors used in evaluating the risks to public safety in different parts of the state include: the size of the human population in an area; the size of the crocodile population

in an area; whether crocodiles are resident or transitory in an area; the viability of various management options in an area. The degree of intervention to be applied to protect human safety in each zone varies, but at no point approaches the broad-focus culling being proposed by the KAP's Safer Waterways Bill, 2017. https://www.ehp.qld.gov.au/wildlife/livingwith/pdf/wl-mp-croc-manage-plan.pdf

Given how recently the management plan was put in place, it is far too early to determine its relative effectiveness.

It appears that there is currently no enthusiasm for crocodile culling in Queensland. An analysis published on the Guardian on December 27, 2016, stated, 'Fewer than 14% of residents believe treating crocodiles as dangerous animals was the key to managing them, and only 3% called for culling, hunting or harvesting.

More than a quarter of north Queenslanders supported conserving and protecting crocodiles, and most (52%) wanted an approach that balanced human safety and crocodile conservation.' https://www.theguardian.com/environment/2016/dec/27/welcome-to-crocodile-country-the-remarkable-comeback-of-australias-jaws-of-the-north

However, public attitudes on the issue may prove changeable.

In an article published in the Courier Mail on October 8, 2017, it was noted, 'Queensland crocodile sightings have soared by more than 38 per cent with reports the reptiles are expanding their territory into areas traditionally thought to be croc free. The management of the state's crocodile population is shaping up to be a major election issue with 477 crocodiles sightings reported.' If a judgement such as this should prove correct, there is likely to be a clear regional split between the areas that favour culling or some other more rigorous control measure and those who do not.

Bob Katter repeatedly argues that those living in the south of Queensland do not appreciate the crocodile hazards faced by those in the north of the state. The KAP's Safer Waterways Bill, 2017, recommends the establishment of a Queensland Crocodile Authority to oversee the operation of the management procedures it puts in place. In its preamble it states, 'The Bill ensures the Queensland Crocodile Authority is based in Cairns, and it is expected that all staff would live in that area, rather than fly in and out.' The Katter Australia Party clearly believes that only locals really know the local risk. http://www.parliament.qld.gov.au/documents/tableOffice/TabledPapers/2017/5517T797.pdf

From an electoral point of view the split Katter envisages may turn out to be correct, with those in the north of Queensland supporting members who vow to reduce the crocodile threat and those in the south voting for members who will act to conserve crocodiles. The Queensland Government's policy regarding crocodile conservation may ultimate be determined by the political losses and gains involved.

What the New South Wales Government's belated decision to place shark nets around towns on the northern New South Wales coast reveals is how rapidly popular opinion on a conservation issue can change within communities that see themselves as threatened. The Baird Government's forced change of policy also reveals how dramatic the retribution can be for any government that has been slow to act to protect local citizens. Premier Baird's drop in popularity and subsequent decision to quit the leadership of his Party seems to have been influenced by his initial decisions to ban greyhound racing and not place shark nets around towns on the states northern coast. Both these initial decisions were highly unpopular with key sections of the electorate and both were reversed to try to win back voter approval.

The Queensland Labor Government was re-elected in November, 2017. Premier Annastacia Palaszczuk is likely to watch the crocodile issue carefully when considering any possible change of policy between now and the next election.