

SHARKS — HAZARD MITIGATION

Motion

HON RICK MAZZA (Agricultural) [10.08 am] — without notice: I move —

That this house expostulates the McGowan Labor government for —

- (a) its reckless approach to shark attack mitigation that abdicates its commitment to public safety;
- (b) endangering the lives of those Western Australians who use our coastal waters for work and recreation, and arguing against shark mitigation before the preservation of human life;
- (c) forcing Western Australians who use our coastal waters to pay for shark deterrent technology with rebates on a first come, first served basis, when this government is supposed to act in the best interests of all in the community; and
- (d) ignoring assistance offered by the federal government and not recognising proven shark mitigation techniques conducted in other states of Australia.

The issue of shark attacks in Western Australia, and the loss of lives on almost an annual basis since 2000, will not go away. Without a proactive management plan by the state government in an effort to keep people safer in our coastal waters, these tragedies will continue. In the 100 years prior to 2000, there were nine fatal shark attacks in Western Australia. Then something changed. Fifteen lives have been lost over the last 17 years and a number of people have been left maimed. The vast majority of those are credited to the great white shark. I do not think one needs to be a marine biologist to work out that with a decreased commercial shark fishing effort, there is a dramatic increase in whale numbers migrating up our coast, which is now estimated at some 34 000. There is also an increase in seal numbers. These food sources, as a staple of the great white shark, will see their numbers increase.

A lot has been said by opponents of shark mitigation, including that we enter the sharks' environment at our own risk because it is their environment. I do not buy that contention. The reality is that the ocean has been the environment of humans who have recreated and fished in the ocean since the dawn of time. It is our natural instinct to enjoy our coastal waters. Sure, sharks are part of that environment, but human life must come first. The increase in attacks that we have seen over the last 17 years has been intolerable.

Every year thousands of people enjoy the benefit of our magnificent coastline and I, like many kids growing up in Western Australia in the 1960s and 70s, had the benefit of enjoying our pristine coastline. Surfing, swimming, snorkelling, diving, or just fishing off the beach, were things that everybody enjoyed, and the thought of shark attack was a very remote concern; it was something that happened beyond recent memory and there was little fear of a shark attack at that time.

The iconic WA coast is something that should be enjoyed by the community and visitors to our great state without the fear of imminent attack. The iconic heritage of sun, surf and sand is under threat and the community is also becoming very concerned about the number of shark attacks we are experiencing in this state.

I refer to some news articles of recent times, one from *The Weekend West* of 29 April 2017, titled "Son wants drum lines for sharks". It states —

The son of shark attack victim Doreen Collyer has pleaded with the Federal Government to intervene and take action over the rising death toll from shark attacks in WA.

Ben Foo-Collyer's heartache over the loss of his mother last year was reignited when 17-year-old surfer Laetitia Brouwer was killed by a shark off Esperance last week.

The article quotes an excerpt from his letter to the federal environment minister. It states —

"...my extreme concern over shark issues with the inaction and potential ineptitude of the current WA govt which has been displayed over the past few days."

"I'm personally requesting your assistance before someone else gets attacked which is unfortunately not a possibility anymore but inevitable. Every time each and every shark attack victims' families have to re-run their day again."

I refer now to an article from *The Australian* of May this year, titled "Put swimmers before sharks". It states —

Mr Frydenberg has sought advice on the matter. He also has called for an estimate of great white shark —

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Hon Alannah MacTiernan: Sorry member, what date was that?

Hon RICK MAZZA: This particular one? It is 19 May 2017 in *The Australian*. The article continues —

Such an estimate is important —

The estimate he sought from the CSIRO —

because fishermen and divers in WA report increasing numbers of great whites and that they are increasing in size.

In the meantime, as Mr Frydenberg says, the McGowan government should protect swimmers and surfers by installing drum lines and shark nets near popular beaches. When elected, WA Labor was irresponsible in refusing to do so following the death of Laetitia Brouwer, 17, while surfing with her family —

Off the Esperance coast.

I refer to another article, also from *The Australian*, dated 4 August 2017, titled “Esperance surfers urge action on great white sharks”. Surfers, in the past, have been a bit reticent about dealing with sharks, but suddenly, over time, they are starting to realise that the risk of going into the water now is increasing beyond what is acceptable. The article states —

Common sense regarding the threat of sharks has “gone out the back door”, says the organiser of a community meeting held in Esperance on the south coast of Western Australia last night.

...

You don’t have to be a Rhodes scholar to know that they (authorities) are putting the sharks’ lives above ours.”

Mr Capelli —

Who convened this meeting —

said the mood of the meeting, at which both conservationists and their opponents spoke, was convivial and civil. But the “100 per cent” consensus was that the number of sharks needed to be reduced.

The installation of smart drumlines, which allow authorities to catch, tag and release sharks, was also recommended.

There is growing concern from the community that shark numbers and shark attacks are becoming something that is of great concern to the way that we live our lives in this state. I am not suggesting for one minute that we wipe out all the great white sharks. What we need is a management strategy to put some balance between public safety and the environment. This may even include reducing shark numbers. Any species that is being managed where their relevant abundance gets out of kilter naturally needs human intervention to balance it back out again. I would suggest that the number of attacks in the last 17 years compared to the preceding 100 years would say that something is out of kilter.

Another contention that has been suggested to me, one which I actually find to be abhorrent, is that each year we lose so many people to motor vehicle accidents, bicycle accidents or drownings, and that we should treat shark attacks as just another risk and accept the statistics. I do not accept that. We do absolutely everything we can to reduce the road toll. We do everything we can to make sure that cyclists are safer and to prevent people from drowning. We should be doing the same when people enter the water, for shark attacks. I assert that we are not doing enough to save human lives in this state. These lives lost are not a statistic; they are people. With all due respect and sensitivities to the families involved, over the past 17 years, the victims of shark attacks in WA are: Ken Crew, Cottesloe Beach, November 2000, swimming; Brad Smith, Margaret River, July 2004, surfing; Geoff Brazier, Abrolhos Islands, March 2005, snorkelling; Brian Guest, Port Kennedy, December 2008, snorkelling; Nick Edwards, Cowaramup Bay, August 2010, surfing; Kyle Burden, Bunker Bay, September 2011, body boarding; Bryn Martin, Cottesloe Beach, October 2011, swimming; George Wainwright, a US national, Rottneest Island, October 2011, diving; Peter Kurmann, Stratham Beach near Capel, March 2011, scuba diving; Ben Linden, Wedge Island, July 2012, surfing; Chris Boyd, Gracetown, November 2013, surfing; Jay Musket, near Albany, December 2014, spearfishing; Ben Gerring, Falcon Beach, May 2016, surfing; Doreen Collyer, off Mindarie, June 2016, diving; and Laetitia Brouwer, near Esperance, April 2017, surfing.

These tragic losses suggest that more needs to be done to mitigate further losses in the future. We are only weeks away from the weather warming up and people heading to the beach to enjoy a lifestyle they are entitled to enjoy without the fear of being eaten by an apex predator. It is often said that compared with being on the roads, the risks of being in the ocean are low, but there are hundreds of thousands more people on the road every single day than enter the water, so when we work the percentages, we can see that it is probably getting to the point at which it is

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not much different. Providing only one measure in the hope of minimising shark attack in the form of a shark deterrent device as the only possibility of trying to protect oneself in the water is, in my opinion, reckless and impotent, along with apparently some warning signs, which I am sure will be helpful.

Federal environment minister Josh Frydenberg has offered to assist the Western Australian government by providing a protected species exemption and has encouraged the state government to undertake initiatives that have proven effective in other states, such as exclusion nets and Shark-Management-Alert-in-Real-Time drum lines. Whether through pressure by minority protest groups and not having the courage to do what needs to be done or through some misguided belief that fewer sharks do not translate to fewer attacks, the state government has largely ignored the offers and rejected the notion that lives could be saved by implementing some of these strategies. Public safety and the value of human life has to take precedence, and playing politics with an issue is, in my mind, reckless.

Section 3(3) of the Queensland Fisheries Act states —

Despite the main purpose of this Act, a further purpose of this Act is to reduce the possibility of shark attacks on humans in coastal waters of the State adjacent to coastal beaches used for bathing.

Queensland recognises that it needs to keep its community safe in its coastal waters. Since Queensland deployed shark control equipment in 1962, there has been one fatality on protected Queensland beaches.

New South Wales has had shark control since 1937 with, again, one fatality on protected beaches in all that time. New South Wales has just started experimenting with SMART drum lines connected to a satellite receiver that alerts authorities when a shark has been caught. It is a nonlethal measure, and the shark is towed out to sea unharmed and away from the beach. I would be very surprised if that shark is not tagged. If it is not tagged, it should be so that scientists and others can follow what happens with that shark and whether it returns to the beach or moves away. In any case, that could provide some very valuable data to scientists.

I am very surprised the Premier has said that he believes that mesh shark nets and drum lines do not work in Western Australia because of our coastline. Coastlines vary all over the place, but surely with our technology we can use these things to reduce the number of shark attacks. I must say that the Premier has not ruled it out. He was quoted in an article as having said he would not rule out the use of drum lines in the future if they were warranted.

What does concern me somewhat, though, is that also in *The Australian*—this is going back to August and it was an article about the loss of Laetitia Brouwer—Premier Mark McGowan is quoted as having said —

“We saw the drum line approach three or four years ago. It didn’t work.

I think the management of those drum lines at the time was not properly thought out. They were used at the wrong time of the year for catching great white sharks, and the media surrounding it was out of control so they got a pretty bad rap. I will continue Mark McGowan’s quote —

“We know that the nets along the beaches in Western Australia don’t work because we don’t have the headlands that they have in the eastern states and besides that, it kills whales and dolphins and turtles.

I think mesh nets can still be deployed in Western Australia; I do not know why a headland is needed. I concede there are issues with whales, dolphins and turtles, but that can also be managed and at the end of the day human lives have to also be considered.

Hon Samantha Rowe: Honourable member, how do you think it could be managed so that turtles and dolphins do not get caught up in the nets?

Hon RICK MAZZA: Maybe if they are checked on a regular basis, or some other way can be thought out I am sure.

Hon Samantha Rowe: How?

Hon RICK MAZZA: How can they be checked on a regular basis?

Hon Samantha Rowe: Yes.

Hon RICK MAZZA: They could go out daily and check those nets to see what is going on there, or there is the shark barrier-type technology now in use. Turtles and things do not get caught in them. I do not think we should just dismiss that.

Several members interjected.

Hon RICK MAZZA: Mr Acting President, I think I will continue.

The ACTING PRESIDENT: Thank you, members. I think we will go through the Chair if we could, thank you.

Hon RICK MAZZA: The Premier is further quoted in that article —

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“We have a program to deal with the shark threat but we all know that every time you go in the water there is a tiny threat.”

I do not know that the threat is that tiny. I know a lot of people who used to enjoy surfing and diving who have given the activity away because of their fear of sharks.

Significant media has surrounded this issue in the last few months. I do not think warning signs and the use of a shark shield is enough. I have spoken to a few people who use the shark device and quite often they got shocked as they try to put it on; it is a bit unwieldy, so a lot of people will probably risk not using them.

I urge the government to take up the assistance offered by the federal government —

Hon Alannah MacTiernan: So what exactly was the assistance? We are very interested to know exactly what the assistance is.

Hon RICK MAZZA: That assistance, member —

Hon Alannah MacTiernan: Was this through *The Australian*?

Hon RICK MAZZA: It was through *The Australian*, and the assistance was that there would be an exemption on protected species so that the state government could deal with sharks if it needed to cull them.

In any case, I urge the government to take it up and look at other ways of dealing with this issue. It should take preventive measures to reduce shark attacks and make our beaches and coastal waters safer. I commend the motion to the house.

HON ALANNAH MacTIERNAN (North Metropolitan — Minister for Regional Development) [10.25 am]: We do very much thank the member for raising this issue. I am responding, obviously, on behalf of the McGowan government, and in particular the Minister for Fisheries. I share the view of the member that this matter will not go away any time soon, and that is certainly something we accept. We accept also that we need to be constantly vigilant and always looking at how we can better research and understand what is going on, and that we continually trial new technologies and new ways to deal with this problem. I guess I part company from the member when he says that this is something people have only recently been fearful of. I must admit that during my entire childhood I was always scared of sharks. I was very much aware that the ocean was the shark’s domain, and would always seek to go into parts of beaches where there were enclosures. I still like to swim basically where the five and six-year-olds are. I do not dare to venture out any further because of my pathological fear of these creatures. There is no doubt that there have been cyclical changes in the marine life, and we need to understand that.

The fundamental difference between the previous government and our government is that although we prioritise the protection of human life and recognise that Australians and Western Australians very much want, and have a right, to be in the marine environment, either swimming or on boats et cetera, we believe that the responses have to be rational. We do not believe that it makes sense to stand with a hook and look like we want to extract revenge when that action will not change the result. We have continued virtually all the things being done by the previous government, bar one, and we have added more. The one we have not continued with is the drum lines because all the research showed that the drum lines did not work. Not one great white shark was caught in a drum line, and after they were activated in 11 incidents only two sharks were killed. There was no evidence that the killing of those two sharks had any connection whatsoever with the death that had occurred on the beach, or that it would have prevented a further death. It is a deeply emotive issue, but we need to understand that emotion and also try to act and respond rationally, member.

Hon Rick Mazza listed the names of many people who have been victims of shark attacks. I think it is important for us to look at these figures to understand some of the developments and some of the focus in our policy. Of those shark attack victims, 13 out of 15 were divers and surfers. Overwhelmingly, the people most at risk are divers and surfers. We are not necessarily against beach enclosures, but many of the proposed measures will not help those who are most at risk. That is why we have implemented this subsidy scheme for the personal shark deterrent, again after operating forensically and looking at who is most at risk and what the research tells us. Those particular personal electronic devices have been subject to considerable testing by the University of Western Australia and were found to be effective. This Shark Shield Freedom 7 was tested by UWA and found to deter sharks nine out of 10 times. That certainly constitutes significantly more protection. As we indicated, we had budgeted for 1 000 devices. So far, 543 Perth people have co-invested to buy these devices. From past experience, we know these technologies are more expensive at the beginning but once there is greater demand, the price can drop dramatically. We saw this when we were in government last time with a lot of the Waterwise technology, including washing machines. When we put significant subsidies in place, they affected the market and many more devices came on the market at lower prices and we were eventually able to abandon the subsidy. With this co-investment, we are hoping to get over the early hump when this technology is very expensive and enable it to be proven up

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and gradually develop sufficient volume so it can provide a standalone subsidy. We think that is a very, very worthwhile approach and one we will continue.

I want to run through some of the other measures we are taking. The member referred to some recent incidents at Esperance. We have extended the shark-monitoring network to Esperance through the deployment of two more shark detection receivers that were installed in June. The absence of receivers in Esperance was an obvious gap in the previous government's strategy. We located those at Kelp Beds and West Beach as two locations for the satellite link receivers after we had talked to the community through both some stakeholder meetings and an online survey. Both are popular surfing beaches.

Hon Rick Mazza: The receivers might monitor sharks that are tagged, but I suggest quite a number are not tagged. If a shark is being monitored and comes into an area where there is concern, who will monitor it and how will they then send out the alarm to people about a shark in the area?

Hon ALANNAH MacTIERNAN: I do not have notes on that, but, hopefully, someone is listening and can get us some further information. Because the VR4 receiver network has been in place for some time, we have simply extended it, so I did not necessarily get all the background detail on measures that were extensions of previous policies. We will certainly get that information for the member.

Since 2012, a tagging plan has been underway, and a total of 280 sharks have been tagged. We also indicated during the election campaign that we would work with local councils to introduce response signs along beaches with public access. This particular program for a more rapid emergency response was supported by many people. Numbering signs are in place so that people can quite clearly know which beach they are at when seeking help. That emergency system is named in honour of Ben Gerring and will improve response times. Grants are being provided to local councils to install that system. As we acknowledge, none of these are magic formulas; they are all part of a network of responses. We have provided \$200 000 to the City of Mandurah to install a beach barrier at Falcon Bay Beach. Discussions are underway between the Department of Fisheries and the City of Mandurah about this enclosure being in place by the coming summer. We have also allocated \$6.7 million to Surf Life Saving WA to allow it to continue the aerial beach patrols. There had been no commitment in the previous government's budget beyond 30 June this year—funding under the previous government ran out on 30 June. We have been able to extend that to make sure that in the coming years, that important beach patrol work will continue.

The member raised issues about the Shark-Management-Alert-in-Real-Time—SMART—drum lines that New South Wales is trialling, which are connected to a communications unit. It alerts authorities when a shark has been captured. We are not closing our minds to that and are definitely monitoring that work. That is the whole point of a trial. I go back to the original point I made. We know this is an important issue, but emotive responses that produce absolutely no demonstrable benefit will not be proceeded with. We owe it to our community to take this matter seriously and not engage in some ritualistic behaviour that might make some people feel good. All that we do will be backed by research, science and logic. As I said, we absolutely do not believe that it is appropriate to do things that cannot be logically shown to have any demonstrable benefit.

I want to talk about shark nets and drum lines. The minister has provided me with a little more information on this. A 2012 beach netting review conducted by Queensland's Bond University looked at the effectiveness of shark meshing and shark exclusion barriers implemented on the east coast and the likelihood of them being successful in WA. The report found that shark nets and drum lines were not recommended. Permanent drum lines were deployed up and down our coast by the previous Liberal government as part of the shark-cull policy. However, as I have said before, the deployment of these drum lines was not effective. Our community has a variety of views. It is not that we do not value or believe that human beings have the right to go into the water, but many in our community were concerned that the by-catch, the quantum of marine life being affected without any demonstrated value to human beings, meant that it was just not sensible to continue with that policy. The Minister for Fisheries tells me that it is important to distinguish between nets and beach enclosures. Nets are deployed simply to kill marine life but do not provide a physical barrier to the area. Beach enclosures are designed to prevent large marine life entering the beach area and provide a physical barrier to protect swimmers.

The member told us that he had read in *The Australian* that Minister Frydenberg wants to help us and to work with us. From what I can gather from the member's quoting of that article in *The Australian*, the minister appears to be prepared to allow —

The ACTING PRESIDENT (Hon Dr Steve Thomas): Sorry, minister, but the time for your response has expired.

HON JIM CHOWN (Agricultural) [10.41 am]: I rise today to give some support to Hon Rick Mazza's motion on what I believe is a very important issue in Western Australia. Obviously, hundreds of thousands of Western Australians access our beaches on an annual basis. It is part of our lifestyle. It is part of what we do as Western Australians. We are very proud of the fact that we have some of the best and cleanest beaches in the world. In the last 17-odd years, shark attacks have become quite a threat. Some of the statistics that

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Hon Rick Mazza put forward are quite chilling. I will not go through all of them other than to say that since the 1900s, there have been a total of 27 shark attacks and, of those, 15 have taken place in the last 17 years. Something is happening in our oceans. What has not been mentioned today is that in the past 17 years, there have been 15 unfortunate deaths, but there have also been 38 documented attacks on people in the water. That is a total of 53 attacks. Each of those fortunate survivors of a shark attack was a potential death. I believe that figure should be put into the statistics.

Hon Rick Mazza: One young man lost an arm.

Hon JIM CHOWN: People are losing arms and legs to these animals as they go about their recreational activities in the water. They are scarred for life, both mentally and physically. I am somewhat encouraged by the minister's response about using Shark-Management-Alert-in-Real-Time drum lines. I think it is absolutely imperative that we use any form of mitigation to stop this happening at Western Australian beaches. The minister says that we need to test these things. As stated by Hon Rick Mazza, this testing is taking place in Queensland and New South Wales. Why are we not testing them ourselves on our coastline? Our coastline is a little different from other coastlines in Australia; in fact, Western Australia has the longest coastline in the country. Most of these attacks occur where most of the population is located, and that is probably between Geraldton and Esperance. I think the government should do its own testing of all forms of mitigation to stop shark attacks, or to at least bring them down to the previous level.

The ocean is a difficult environment; there is no doubt about that. But ever since human beings came out of the primeval swamp, they have mitigated their environment to ensure that people are safe. Physically, we cannot attack something like a shark, a lion or a tiger, or anything else that threatens us, but we can use, and we have used, our intelligence to ensure that the community's environment is safe. I will not support those people who say that the ocean is the environment of the predator. We have as much right to be there as they do. I ask those people who say that we enter the ocean at our own risk and that it is bad luck if we are taken by a shark: what will they do when a dugite comes into their backyard? Most rational people would dispatch it or remove it, because it has the potential to kill a person or their family or anybody else in the backyard, including pets. I do not believe sharks are any different. A three-metre shark has a girth of approximately 1.8 metres. It is a big animal. The average size of a great white shark is between four and five metres. It is as big as a Volkswagen. We know that the numbers are increasing. Fishermen and divers, and anybody who has anything to do with the ocean, will tell us that in the last 17 years the number of these animals has increased exponentially. Of course, with our population growth, more and more Western Australians are accessing the ocean.

The initial government policy on shark shields targets surfers and divers as the people who are predominantly being attacked. It is not a bad policy, but I was surprised when the minister said that there had been only two deaths in recent years of people who were swimming. Is the government saying that a person who is taken by a shark while swimming does not count because they are in the minority of those fatalities? I would certainly hope not.

Several members interjected.

The ACTING PRESIDENT: Order!

Hon JIM CHOWN: I will not take an interjection at this stage. I am saying that a plethora of mitigation issues should be entertained on this matter, including SMART drum lines and nets at beaches that the population of this state accesses for recreational purposes. The previous government had a drum line policy, which it withdrew due to enormous public concern, but at least it tried. I do not believe there was one shark attack during that time, but a number of sharks were taken. The drum lines were fairly crude; they were not SMART drum lines, but it was still better than doing nothing. As I have said previously, I encourage the minister to start putting SMART drum lines at our beaches and to start financing appropriate netting to stop shark incursions into recreational areas.

The government's policy on shark mitigation is the only new policy we have seen from this government. It keeps rolling on with the ones from the previous government, bar the drum line policy, which we dropped anyway. I believe that if we were in government, we would be looking at SMART drum lines and a number of members on the back bench would be encouraging the Premier of the day to investigate SMART drum lines along our coastlines. Only 1 000 Western Australians will be able to access the rebate for the shark protection device. It is a one-off rebate. As the minister said, at this stage only 543 people have taken it up. This instrument is worth some \$750. I guess it depends on the value that people put on their life, but \$750 is a lot of money for people, and the \$200 rebate is just an encouragement. It is not a good policy. We are talking about the whole population. As I said previously, we are talking about hundreds of thousands of Western Australians who access beaches.

Two things terrify me: the first is snakes and other is sharks. If there is a shark sighting of any kind at a Western Australian beach today, the beach is vacated; people get out of the water, as they should. But they do not come back for four or five days. The information permeates through the community and becomes news. That never used to happen. People vacate our beaches for very good reasons. They are fully aware that the number of shark

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attacks has increased dramatically, but hopefully it will not continue to increase. I encourage the minister to listen to what is being said on this matter in this house and increase the amount of money provided in the budget for shark mitigation and start putting out SMART drum lines, netting or whatever is required on an experimental basis.

A very good question about shark tagging was asked during this debate. What is the point of tagging sharks unless there is something onshore that alerts the appropriate authorities or the surf club that a particular shark that is three, four or five metres long is in the vicinity? What is the point of tagging sharks other than trying to understand where they go? We are all aware of the trips that sharks take around Australia. There is so much more that we can do, but it will take government finances to do it; surf clubs and local communities do not have the money. I think it is the responsibility of government to put more money into shark mitigation and to look at every form of mitigation. This issue will not be resolved with a rebate on 1 000 shark shields. It will be resolved by adopting modern technology, using plethora of anti-shark alert mechanisms and disposing of large sharks that are close to our shoreline. I will finish with this: I think it was 1999 when the great white shark became an endangered species.

HON DIANE EVERS (South West) [10.51 am]: I attended the Senate committee public hearing on 28 July, so I have a little bit of up-to-date information on what was happening until a few weeks ago. It is very interesting that the motion as it has been put refers to shark mitigation. “Mitigation” means to reduce the severity of something, and I am not sure we are talking about reducing the severity of a shark. What I am concerned about is that the point of the motion is to say that we should bring back the killing of sharks. The killing of sharks —

Hon Colin Tincknell: There’s a lot more to it than that.

Hon DIANE EVERS: There is, and I will get to that. I will put that aside for now.

There is no science to prove that killing sharks will reduce the risk of shark attacks. A study that will tell us how many sharks are out there is being done, but there is no previous study on which we can compare the numbers. We cannot say whether there are more or fewer sharks until a study is done over a number of years. We cannot say that there have been more deaths because there are more sharks because that is not based on science. We know that more people are living here and going to the beach. People are going further out into the ocean to do activities such as diving and surfing and other ocean experiences. We know that more people are moving to this area who do not have the experience of living near the ocean and who did not grow up knowing that there are sharks out there and that they should be a little concerned about going out too far. We really need to put other approaches in place. We cannot just go out and kill sharks. There could be 10 000 of them out there and we know that they travel long distances, even 100 kilometres a day. Indeed, they travel from Bass Strait around to our north west coast. They are out there. To go out and say, “We’ve killed one!” is great, but it is not going to reduce the risk by any measurable amount, so why go out and kill one? But then people will say we will not just kill one, we will kill 100 sharks. Why not kill 1 000 sharks? What I am trying to say is that until all sharks have been killed, there will be a risk, so what is the point starting that measure?

The drum lines did not kill a single great white shark. Okay; maybe the best science was not used when they were introduced. They were introduced as an emotive reaction to a very terrible situation. I would never diminish the harshness and despair that a family feels when losing a friend or family member. But even the people who were swimming from Perth to Rottnest Island asked that the drum lines be removed because by putting in drum lines with bait on them —

Hon Jim Chown: That is absolute rubbish. The drum lines were removed well before the swim took place.

Several members interjected.

The ACTING PRESIDENT: Order, members!

Hon DIANE EVERS: The drum lines were removed —

Several members interjected.

The ACTING PRESIDENT: Order, members! Hon Diane Evers, if you address your comments through the Chair, you will be offered some protection, otherwise I suspect that you will be inviting interjections, which is disorderly.

Hon DIANE EVERS: When a drum line takes a shark it proves that there are sharks in the water. Great; we know that. It also proves that there are sharks in the water where the drum line is. If I were a swimmer, I would prefer to swim at a place where I thought there would be no sharks. We need to bring in a lot of different measures, including education. Again, we grew up knowing that there were sharks out there. We need to make sure that we educate people. Some people have suggested that we are doing everything we can, but we are not. We can put in a number of measures and I will continue to go through them.

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We need to educate people to know when to swim. For example, they should not swim in colder waters because there is more likely to be sharks in the water. We must educate people to not swim when schools of salmon are running and when whale carcasses or other things attract sharks to the area. Sharks are animals and they look for food, but they are not looking for humans. If sharks were after humans, there would have been a lot more attacks. They are looking for food.

Another reason that there are more sharks is that we have been overfishing and they are coming closer to shore. We need to educate people that the further out they go, the more chance there is that they may be bitten by a shark. We need to put up signage, a measure that Sharon Burden asked for after she lost her son to a shark bite. She wants more signage on the beaches at which sharks congregate because those areas are conducive to sharks and are where they like to live.

We need swimming enclosures. Communities have asked for swimming enclosures in certain areas. It is a great idea. There are shark deterrent devices for higher risk activities. I understand that under the current system, shark deterrent devices are not yet available to surfers because they have not been proven, but once the research is completed they will be offered to surfers. The subsidy offered on the first 1 000 shark shield devices was a trial. Maybe more people will take it up; they have not all been taken up. We can look to further technological devices such as the one that involves putting in the water a device that gives a 50-metre radius shark deterrent. That means that one person does not have to carry it on themselves and worry about the electric field.

There could be shark stations onshore on beaches. That is another device that is run by solar power and it has mobile connection to get an immediate response to emergency services. We can look for sharks using drones and we can set up an alarm. We need to teach people first aid so that they know what to do onshore if a shark victim needs assistance.

The motion suggests that we should start killing sharks, but the last episode cost \$1 million and it did not kill one great white shark. It was a complete fiasco based on an emotional response. It is a perfect example of the conservative side of politics wanting to spend money, use taxpayer dollars and expend our valuable resources on expensive and pointless activities. We need to stop playing politics.

Several members interjected.

The ACTING PRESIDENT: Order, members!

Hon DIANE EVERS: Let us mitigate the risk, but instead of breeding fear and ignorance at every opportunity, we should use education, communication, drone technology, deterrent devices and safe swimming enclosures. The idea of killing sharks just will not work. We must look at other ways of doing this. We need to listen to the people. It was clear that the public did not want drum lines, but it is also clear that they want some response, and I believe the government is onto it and that it will create opportunities that will allow people to learn more about when to swim and when not to swim, and the places to avoid. We need to educate our population rather than just telling people to be fearful. It has been suggested that going out and killing sharks is similar to killing snakes in the backyard. That is in a backyard; the ocean is not a backyard.

Hon Jim Chown: Yes, it is. It is our backyard. Where do you think we came from?

The ACTING PRESIDENT: Order, members.

Hon DIANE EVERS: The ocean is home to many other animals than ourselves. We need to protect those animals like we protect animals on shore. People are fearful of a risk that is very small—much smaller than many others. We talked about drowning, which causes 40 deaths a year. Why are we not offering free swimming lessons to all new immigrants if they are not used to the ocean and do not know how to swim? Why do we not offer free first aid training for all families and people with new babies? We need to start educating our population rather than expecting people to live in fear and avoid things. They should have a healthy respect for going into the ocean and a healthy respect for the waves, the sharks and the water itself that can kill them. When going out, they should have a healthy respect and realise that there are risks, just as there are risks every day of our lives when we get into a car or an airplane, climb a flight of stairs or whatever. I think the problem is that this is one of those uncontrolled things. We all fear the shark because it comes up out of nowhere. Every day we go out on the road and the same thing can happen, but because we have become so accustomed to it, we allow that to go on. Members should look at their own motivations. Is it a fear or is it a political thing? We need to look at this from a scientific point of view and make sure that we do the right thing so that we do not just respond with a very expensive, unnecessary and possibly impossible task of trying to kill all the sharks that might one day try to bite a human. We have to look at it holistically and at the environment as a whole. Why are the sharks coming to beaches and what can we do to mitigate the risks?

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HON AARON STONEHOUSE (South Metropolitan) [11.02 am]: I will start off by saying that I love sharks; they are magnificent creatures. In fact, last night I went to Joe's Fish and Chips at Warnbro Centre shopping centre and got myself a nice big piece of shark with some chips as well! It was fantastic and made for a lovely meal. Hon Jim Chown said that the two things that scare him the most are snakes and sharks. The thing that scares me the most is stepping on a fish when I am in the water; that is a horrible experience. I feel a slither under my foot and it is terrifying. I live in Warnbro and when I can—when it is not so cold—I go out kayaking around Warnbro Sound. It is a beautiful beach and there are some islands out there. People are not meant to go on the islands, but we can paddle around them and there is a lot of animal life out there. Although the risk of being attacked by a shark—especially in a kayak—is remarkably low, the thought of it is still in the back of my mind and is not something I can forget about. The fear is always there, no matter how irrational it might be. I take a rather nuanced position on this issue, and one that I think might piss off everybody —

The ACTING PRESIDENT: Hon Aaron Stonehouse, I am afraid that language might not necessarily be deemed parliamentary. Perhaps you might rephrase that.

Hon AARON STONEHOUSE: Apologies. My position might upset both sides of the argument. I wonder whether we should take responsibility for the safety of those who enter the water. There is a risk that everyone knows about and we accept a certain amount of risk when we go into the water. Should those who do not go into the water be subsidising shark attack mitigation for those who do go into the water? Although I ponder that question, I cannot ignore the fact that the government, whether I like it or not, has already assumed that responsibility to guarantee a certain amount of safety for people in the water. If the government insists on taking this responsibility to mitigate shark attacks, it must take every reasonable measure in that effort. We cannot continue to—I was going to use another word that might be unparliamentary—make such little effort in this endeavour. If we are responsible for protecting the lives of those who enter the water, we must be willing to have a frank and honest discussion about the best method to mitigate shark attacks. It may be drum lines, nets, shark shields, or maybe Colin Barnett with a hook in a boat 24/7 out in the water protecting us from great whites. I honestly do not know. I am not a marine biologist so I am no expert in this matter. I am willing to discuss it with an open mind. Too often, these debates get taken up by the major parties and it becomes almost an ideological debate. Much like the great battle of ideas between road and rail, we now have a great battle of ideas between drum lines and shark shields. In my view, when lives are on the line, petty differences must be put aside. We must not continue to play politics. We must keep open minds about what method of attack mitigation is most appropriate. Lastly, if we are going to have a discussion about shark attack mitigation, we must agree to the basic premise that human life is precious and is measurably more valuable than animal life. That is not to say that sharks do not have their own value or that efforts should not be taken to preserve shark populations, but if we cannot agree that a human life is more valuable than a shark's life, this discussion cannot move forward.

HON COLIN TINCKNELL (South West) [11.06 am]: I commend the honourable members who have spoken, and Hon Rick Mazza for moving this motion in non-government business. It is an issue that is very important. In my maiden speech I said that the number one commodity in this world is people. The lawmaking system in Australia is through Parliament and we need to be very serious about looking at all angles of this issue. We have heard about wetsuits, nets, sonar, drum lines, and tag-and-tow-away approaches. One area that I want to bring members' notice to today is the Clever Buoy trials that went on at City Beach recently. I hope that the government gets behind these trials and continues to fund them. Over a three-month period, 28 sharks were detected at City Beach and the beach was closed 19 times. This was just recently. We really need the government to get behind those trials and to continue them. To give members some idea, the World Surf League has contracted Shark Mitigation Systems, which is part of this group using the Clever Buoy system, to protect its surfers during world surfing events. Obviously, it is taking this seriously no matter where its events are held around the world. Mick Fanning, a famous surfer, has been attacked once, and nearly for a second time.

People go into the water for many reasons and that will never change. We need to protect our citizens and it is the government's duty to do that. Unlike the Minister for Regional Development, I swim every single day, and over the last four or five years I have noticed a close to 75 per cent drop-off in the number of people who use the beach every day. The psyche of Perth people going into the water has changed. The risk of shark attack has always been there. I remember as a young boy swimming at North Cottesloe every day and thinking about sharks, but I never saw one. A day hardly goes by now when we do not hear an alarm or the beach is not cleared because a shark has been sighted. Things have changed and that is what we have to realise. I understand the Greens not wanting us to kill sharks ad hoc. One Nation is not in favour of that, and Hon Rick Mazza, who is a big supporter of recreational fishing, is not in favour of that either.

It is not a case of one measure will work. We need to look at all these measures. We are calling for more research. The eastern states have done the research and are fairly confident about their shark mitigation measures. We are not confident in Western Australia because the research has not been done. Not since the 1970s has any world

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research been done on shark numbers, particularly great whites. That research needs to be done so that we can make more informed decisions. Hon Diane Evers said that we need to have the science on this issue. I agree that we need the science. However, while we are waiting for the science to come, we need to protect the citizens of Western Australia. That should be the government's number one responsibility. We cannot afford to wait until we have the science. We need to act now.

Shark mitigation measures have been put in place in the eastern states that are working very well. We seriously need to look at those measures. Yes, the coastlines are different. However, testing and trialling these measures is better than doing nothing. I fully support the former Premier for acting when he did. He realised that the science and research had not been done, but he knew that it was his duty to act. Not everything that he tried has worked. However, I commend him for doing that. It is great to hear the Minister for Regional Development say that the government is serious about this issue. Now that federal funding is available for this cause, we should look at that seriously. Prevention is always the answer. It does not matter what situation we are looking at. We should not wait until people are injured and we have to patch them up in hospital, or people die. That is not the answer. We need to look at prevention now.

If the measures that are being used in the eastern states were not working, why has there been a major reduction on the east coast in the number of shark sightings, shark bites and shark deaths, and why are WA's figures going up rapidly every day? As Hon Rick Mazza pointed out, we are getting close to summer. People want to go to the beach, and they will go to the beach. Unfortunately, people will not be going to the beach in the numbers that they should be. Western Australians have been brought up to enjoy the beach and the ocean. However, that culture is changing, and that is a real shame.

HON COLIN HOLT (South West) [11.12 am]: What a cracker of a debate this has been. It is good to have these sorts of debates in this house, because it is a perfect reflection of the sentiment in the community. Everyone has a different view about the approach we should take to this issue. That is reflected in the contributions that have been made by members of this house. It also highlights the challenge that is faced by any government in responding to this issue. The former government had a response. Some people thought it was a great idea; some people thought it was not a great idea. Not everyone agrees with the response from the current government. That is why this is an interesting debate and why I want to add my two cents worth to this issue.

There are two sides to this argument. The first is about minimising the risk to regular users of the beach, such as swimmers, surfers and divers. No matter what we do, people will continue to enjoy the dive spots and wave spots along our coastline, and they will always be at risk. We need to look at how we can minimise the risk for our citizens who want to continue to enjoy those pursuits. I agree that a shark's life should not be of greater value than a human's life. However, I do not agree that culling is the way to go. Culling does not minimise the risk. Drum lines do not minimise the risk either. The government should be leading the way in trying to minimise the risk for people who want to enjoy our coastline.

In Albany, there is a shark enclosure at Middleton Beach. People who go to Middleton Beach have two choices—swim inside the enclosure or swim outside the enclosure. I know what I would do—I would swim inside the enclosure. That is a great initiative at a local beach. We need more shark enclosures along our coastline to ensure that people are given these choices. No matter what we do, people will take personal responsibility and choose to either swim outside the enclosure and not minimise the risk or swim inside the enclosure and minimise the risk.

As an advocate for personal responsibility, I must say that I like shark shield technology as an option for people who want to use it. I do not mind the policy that has been implemented by the current government to subsidise shark deterrent devices. However, I do not think it goes far enough. Maybe in the future it will help drive down the cost of these devices and enable more people to use them. The minister representing the Minister for Fisheries quoted a report from the University of Western Australia that found that nine out of 10 devices were effective.

Hon Alannah MacTiernan: It was not nine out of 10 devices.

Hon COLIN HOLT: It was 90 per cent effectiveness for that particular device. That should encourage more research to be undertaken into these devices. One of the biggest issues is how we can instil confidence in surfers and divers in particular that this technology will keep them safe. Therefore, greater emphasis should be placed on investment in research. Let the regular users of the coastline take responsibility. The cost may be a bit prohibitive. Divers probably spend 2 000 or 3 000 bucks on their gear. They might want to spend another 500 bucks on a shark deterrent. Surfers might travel many miles to get to a bigger surf break. They might also want to spend an extra 500 bucks on a personal deterrent device. That is where I am coming from. I am not a big fan of drum lines. We need more research into how we can alert people that there is an imminent risk of shark attack. Some of the SMART drum lines are able to alert people that there is a shark in the area. There was a tragic shark death at Mandurah recently. Some guys had been in a boat earlier that day and had seen a big shark in the area but they had no way of alerting people of the danger. We need to improve the process of communication.

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The other side of the argument is our international reputation as a place for people to visit and enjoy our fantastic beaches and aquatic pursuits. Some people outside our state may regard sharks on our coastline as a great attraction and welcome the opportunity to see them. From my personal experience, many people think of Western Australia as a place with an endless number of shark attacks. We need to promote what we are doing to keep people safe, such as installing shark enclosures at our most popular beaches so that people who come to Western Australia can enjoy our beaches and coastline. The government wants to increase the number of tourists who come to our state. I hope it will find some way to allay people's fears and encourage them to come to Western Australia. That can only be done by providing more safe swimming enclosures, and perhaps also enabling people to borrow or hire a personal deterrent device. This government is in office now, and it needs to work on this issue just as much as the former government did. The government needs to have a plan for the best way to approach this issue, on a number of fronts. I am encouraged by what the minister representing the Minister for Fisheries has said. This issue will never go away. There will be more shark attacks in the future; it is inevitable. We live in a risky environment. A point was made about the risk presented by getting in a car, but we minimise those risks. We have rules on the road, and car safety is better than ever with airbags, seatbelts and speeding fines. All that sort of stuff helps to minimise risks. I am not sure whether we have taken a great step in the field of sharks and other risks like that. It is good to see that the Minister for Environment is in the house to hear and continue to contribute to the debate. It is good to have these debates and have the opportunity for this side of the house to contribute. It is good to see the minister is here to listen.

HON TJORN SIBMA (North Metropolitan) [11.20 am]: I want to commend Hon Rick Mazza for bringing on the substance of this debate. I think it is in tune with general community sentiment. I would like to thank other honourable members for their heartfelt contributions.

I want to address two broad issues. A number of times this morning I have heard about the need to focus on and be guided purely by reason. I do not think that is the full picture. I do not think there is any problem in also being guided by emotion—principally, the completely natural human emotion to want to preserve one's own life and the lives of those we love. As unlikely as it may seem, I spent the better part of my youth as a surfer, surfing twice a day. People of my ilk are not going into the water, principally out of fear, but also because of family pressure, particularly if they have children. At no point are we likely to ever reduce to zero the risk of injury or death caused by shark attack. I do not think anybody in this chamber suffers from that delusion. As Hon Rick Mazza and my colleague Hon Jim Chown indicated, it is, however, clear that the number of attacks—both fatal and non-fatal—have increased markedly over the last decade and a half. Although one may still say that the individual risk one faces of being attacked by a shark is infinitesimally small, or does not bear comparison well with bee stings or car accidents and the like, I think that somewhat misses the point of the debate. A reasonably popular statistician, mathematician and author called Nassim Nicholas Taleb wrote a book called *The Black Swan* and a variety of other popular statistics books. *The Black Swan* refers to an event that, although statistically improbable, would have catastrophic effects if it did occur. I cannot think of a better black swan comparison than a shark attack.

Hon Alannah MacTiernan: Member, can I just make something clear? Our view is that this is a real issue, but we need to have a rational, effective response to what is a real issue.

Hon TJORN SIBMA: I could not agree more, minister, which leads me to the reason bit. I think the debate has deteriorated somewhat by the fetishising or demonising of particular mitigation methods to the exclusion of, or with preference to, other measures. I am encouraged, minister, by your government's commitment to maintaining an open mind on this matter and I encourage the minister to continue to do so.

HON COLIN de GRUSSA (Agricultural) [11.23 am]: I do not want to speak for too long but I want to raise a couple of points from some meetings held in Esperance. It is pretty clear from all the debate today that this is a very emotional issue and that there are many different sides to the story. It is a very difficult issue because there is no one-size-fits-all solution.

My colleague Hon Rick Mazza mentioned Mitch Capelli. I know Mitch; he teaches my youngest daughter at a school down in Esperance. Mitch is one of those motivated young people who wants to get something done and has gone to considerable lengths to do it. He held a water safety and first aid course in May after the unfortunate shark attack that claimed the life of Laeticia Brouwers. Recently, the Ocean Safety Forum was held down there. Mitch said that people at the forum held a wide spectrum of views—as there are in this place—but everyone was very respectful of each other's opinions. He said that the reaction was really positive and that a lot of exciting ideas were thrown around—ideas that had not been thought about previously. Those ideas included the use of technology with tethered drones, signage and all sorts of things. I want to refer to them a little bit in my remarks today.

A friend of mine in Esperance, Dave Riggs, is very well known down there as a bit of an expert on marine life and sharks in particular. He does a lot of filming in Bremer Canyon and so on. Dave was also present at the Ocean Safety Forum. For some years now he has had an idea of what we might do, particularly in the Kelp Beds

Extract from Hansard

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area, which is where both Laetitia and Sean Pollard were attacked. Kelp Beds is about 300 metres long and 500 metres out to sea. In about April every year, which is the beginning of the southern right whale migration, sharks become an issue down there and they seem to be quite aggressive at that time. We are not sure why because we need to do more research. I agree completely with the minister on this. We need to do the science because we must have the science before we can make decisions about what we can do to mitigate the risk of shark attack. We have the SharkSmart website, which is great, but it is not really possible for people to check their phones at the beach, particularly when there is no signal anyway. One of Dave's suggestions—which I think is quite a clever idea and a pretty effective solution—is to hire a great big solar-powered electric sign. We see them on roadworks all the time. They could be linked straight back to the local shire or to Dave; he suggests that one person be the point of contact. People are watching the beach all the time and as soon as something was reported, we could pop up a message on the sign and people going to the beach or at the beach could see it. If people know a shark is there, it is then their decision to take the risk to go in the water but at least they are informed. It is great to have websites, Twitter feeds and all that sort of thing but, as I said, they do not work out there. We could also link that to a monitoring system. These sorts of ideas come from people in our community who know and understand, to a reasonable degree, what is happening in the ocean. Quite often the simple solutions are the best. I think we need to make sure that we encompass discussion and do not allow a one-size-fits-all approach because that will not work. It is about having a different approach to suit different areas. My colleague Hon Colin Holt spoke about Albany and the enclosure at Middleton Beach. That is a great solution for populous areas and we could use different mechanisms for other areas. I think it is important to make sure that whatever we do, we understand better what these animals are doing and where they are moving, which will require investment in research and science. I hope this government will continue to make sure that happens. From what the minister said this morning, I am confident it will.

Motion lapsed, pursuant to standing orders.

Statement by Minister for Regional Development

HON ALANNAH MacTIERNAN (North Metropolitan — Minister for Regional Development) [11.28 am] — by leave: I thank members for leave to make this statement. Hon Rick Mazza sought some clarification about the satellite detection scheme and how it operates. We have just had some clarification from Hon Colin de Grussa but my formal advice is that when a shark is detected by this mechanism, it is automatically uploaded by satellite receiver in real time to a SharkSmart.com website and to the Royal Life Saving WA service Twitter feed. Information is given out that way. I take on board the suggestion that has been made about the electronic signboard, and I will take that to the minister for consideration.