Jamie Nicholls:

Welcome all to our third webinar in Australia's Biosecurity Series hosted by the Department of Agriculture, Water, and the Environment. Hello, my name is Jamie Nicholls, and I'll be facilitating your forum today. Thank you for taking time out of your busy schedules and joining us. I'd like to begin by acknowledging the traditional custodians of the various lands on which we've all come together. Today, I'm going to do this in the traditional language of the Ngunnawal people at the Canberra region. [Ngunnawal language]. This translates to, this is Ngunnawal country. Today, we meet on Ngunnawal country. We acknowledge and respect our elders.

Jamie Nicholls:

Now, I recognise that many of you will be meeting on other traditional lands and I acknowledge the continuing connection of those custodians to the lands, sea, and community. I also extend that respect to their elders past, present, and emerging. It's important to connect like we are today via Zoom just to have this webinar to share information and interact and even be part of each other's own topic today, which of course is on bio-security.

Jamie Nicholls:

We have a great lineup of speakers today who are all involved in protecting Australia's native animals from illicit wildlife smuggling all in different ways. We'll also hear from folks on the frontline working to stop the importation of exotic animals, pests, and pathogens, that if established, could decimate our wildlife environment and the economy. You might be interested to know who else is online other than you. For this webinar, we have around 500 registrants and about 226 online watching right at the moment. And in metric units, that's half a tonne of people who registered for the webinar. We have attendees from the World Wildlife Fund Australia, Australian Veterinary Association, the RSPCA, the Wildlife Exhibitors Network, Wildlife Health Australia, Perth and Sydney Zoo, Taronga Conservation Society Australia, and the University of Queensland, Melbourne and Curtin University. We have attendees from the biosecurity department of New South Wales, Victoria, Western Australia, South Australia, Queensland, and Tasmania. We have a large contingent of attendees from our federal department as well. Welcome to our colleagues.

Jamie Nicholls:

It's nice to see we also have attendees from our capital cities, rural and regional areas, coastal towns as well some international attendees from New Zealand, Hong Kong, Pakistan, and Germany. We have quite a few registrations from Hong Kong and New Zealand as well as the one from Germany where it's 3:00 AM in the morning. And if you're online from Germany, welcome, particularly so for joining at 3:00 AM.

Jamie Nicholls:

Look we're not here to see my computer freeze all the time, we're here to see our speakers and first speaker off the rank will be Joel Willis. Joel's from DAWE's biosecurity operations division. And he'll briefly introduce his video on 3D X-rays managing biosecurity risks, including illegal wildlife smuggling at the border. So, I'll hand over to Joel. Thank you, Joel.

Joel Willis:

Thank you, Jamie. And thanks to Annabelle and Shane and the other organisers for the opportunity to share some of our exciting work in biosecurity risk screening technology. So, as Jamie said, I'm from Department of Agriculture. I look after the detection capability team in the department. So, my team has responsibility for our detector dog program, but also a lot of our detection technology initiatives, including 3D X-ray and the associated algorithms.

Joel Willis:

So, Nick Young from my team, along with my predecessor, Jess Mitchell, who I believe is probably online today making sure I look after her "baby". So, I hope I do a good job here Jess. Has driven a lot of this work and is responsible seeing the program through from its infancy a couple of years ago. As Jamie mentioned, I have a two and a half minute video to share that outlines how we're applying some of this new technology to combat the illegal wildlife trade, but before we get to that, I wanted to give you some background on the journey we've gone on.

Joel Willis:

So, two years ago, the department commenced an innovation trial where we took the existing screening technology used for dangerous goods and said, "Why can't we apply this thought to biosecurity risk items?" So, when you go through an airport and your bags are scanned before they're loaded onto the plane, and that screening technology applies an auto-detection algorithm to look for explosives. So, in partnership with Rapiscan Systems and New Zealand Biosecurity, we embarked on a two year program to develop algorithms that can detect things like fruit and meat that posed a risk to Australia's agricultural industry. So, the department purchased three 3D X-ray units from Rapiscan Systems. One unit is installed at a jet based facility for R&D purposes. And the other two units are permanently installed at the Sydney and Melbourne international mail centres.

Joel Willis:

Using the 3D X-ray and algorithm tech, the program has so far resulted in algorithms for fruit, meat, fish, plant, and vegetables. And the fruit and meat automatic algorithms are hitting at around a rate of 70% to 80% which are really, really fantastic results and we continue to develop them. The more data we feed into these models, the better the algorithms get. So, we have traditionally used 2D X-ray but have now shown that the 3D tech is two to three times more effective.

Joel Willis:

So, to build on this success, that department together with Taronga Zoo and Dr Vanessa who's speaking after me from Rapiscan have expanded this capability to combat the illegal wildlife trade. The initial algorithms were focused on the lizards, but we're now expanding into birds, other reptiles, and fish. So, I'll now get the team to play our two and a half minute video, please. Thank you.

Kira:

Hi, I'm Kira, a biosecurity officer involved in a project which aims to use the latest X-ray technology to tackle the illegal wildlife trade. At present, the detection of wildlife is secondary to other threats and risks that border agencies and aviation security screeners are searching for. The department in partnership with Rapiscan Systems and Taronga Conservation Society have developed a groundbreaking automatic detection algorithm for wildlife to help ensure Australian natives remain in Australia. The algorithm software acts as a threat engine that analyses the image data across several different data points contained within the image like shape and density. From there, the algorithm determines if a threat is likely to be present, which is highlighted by using a bounding box around the threat and tagging it as wildlife.

Kira:

It also contributes to our biosecurity by keeping animals not currently present in Australia out. This program builds on the recent success of the department's algorithm development of biosecurity risks such as fruit, meat, seafood, plants and vegetables. The inhumane treatment of the wildlife in question and the subsequent damage to our biodiversity have lasting impacts. Protecting our wildlife and environment are some of our key objectives. Our native reptiles are a highly sought after species overseas largely led by an increase in demand for pets. This includes the illegal transport of often endangered species, hatching eggs and semen as well as animal products such as rhino horn.

Kira:

These animal trafficking activities pose both a biosecurity risk as well as a humanitarian cost. With an expansion of the biosecurity screening program to include the development of automated detection for animals and animal products, the trafficking of animals and cross-border transport of illegal animal products can be detected, so inhibited.

Kira:

The wildlife algorithms are currently being developed and trialled on our 3D X-ray units at the border. The current trial is using algorithms to detect reptiles and will be enhanced in the short-term to detect other species. The algorithms can be used in either the mail or cargo environment for inbound or outbound screening, as well as in international airports when screening passenger baggage. If successful, the outputs will enhance biosecurity by intercepting high-risk animals at the border, and will also contribute to our responsibility for implementing the Convention on International Trade in Endangered Species, both into and out of Australia.

Jamie Nicholls:

Thank you very much, Joel, for introducing that video and thank you Kira. It's great to hear that 3-dimensional X-rays are about two to three times more effective at detecting specimens like the reptiles we heard than 2-dimensional. Wonderful introduction with the video. Our next speaker is Dr Vanessa Pirotta. Now, Vanessa works in a range of organisations and for a range of institutions in Rapiscan Systems in this case, and also Taronga Zoo. We are very lucky and very fortunate to have Vanessa here as well today. So, Vanessa is going to be talking about innovative biosecurity technology supporting wildlife conservation that Joel and Kira in the video just mentioned. Over to you please, Vanessa. Thank you.

Dr Vanessa Pirotta:

Well, good morning everybody. And thank you so much for this lovely introduction. I'm going to be sharing some slides with you all today to really extend on what was already said in that wonderful presentation by Kira and thank you, Joel, for presenting that. Today, this work is really... It's timely and it also has a global impact. So, it is my privilege to be sharing some of this work that we're doing collaboratively with not only Rapiscan Systems, but the Taronga Zoo and also the department. So, today I'm going to be providing an extension and a little bit more of the scientific component of this research that we're doing. So, if you've got a cup of tea or coffee, keep drinking and enjoy it because we will get to the other side or this talk very shortly.

Dr Vanessa Pirotta:

So, essentially, I love to start my presentations with redefining and just having a reflection on what is wildlife trafficking. As you've seen, this is a massive problem for Australia. This is also a problem that unfortunately is a global problem because people want to transport animals in ways that are just simply unethical. So, the action of wildlife trafficking in general is really that deliberate and illegal movement of wildlife across international borders. And you see a picture here of a blue-tongue lizard. In this case, an albino species. This animal here has unfortunately been... Well, in this case, fortunately detected in the trafficking environment. So, you can see some rubber bands on the top there. It was probably stuffed in this bag, unfortunately, with only a few little air holes. It's simply a terrible thing for an animal to go through this. It's unethical and inhumane as I've spoken about, but the drivers behind this.

Dr Vanessa Pirotta:

When we work with this type of project, we try to understand why people are doing this. What is the drivers behind this massive movement of animals between international borders? And there are a number of reasons why people do this, and this will help to understand later on for how we can detect these items. One of the reasons might be medicinal purposes. They could be ornamental. So, people like parts of animals. So, for example, we've got rhino horn, we've also got ivory. These things are bad. As well as that, the illegal pet trade is where Australia really shines because we have some amazing animals unique to Australia and people overseas see this as a really wonderful thing to have. So, unfortunately, this does involve the removal of our native animals out of our environment, which is not a good thing.

Dr Vanessa Pirotta:

So, my work really is focused at protecting Australia's biodiversity. So, on your right-hand of your screen here on my slide, we've got some key examples of Australia's reptiles, which is our fauna rather. We also have our flora that we want to protect. And on the left side, I've got kind of like the bad guys of the illegal wildlife trade. We've got reptiles such as a corn snake, red-eared slider turtle. We've got snapping turtles, you name it, and fish. These items, rather, are potential problems for our natural biodiversity. If these animals come into our environment, they could cause a lot of problems, but also if we have animals going out. So, we can think of the import and export component to wildlife trafficking. And that's really where our work comes into play at Australia's frontline. So, this all makes sense.

Dr Vanessa Pirotta:

Many of you might be going, "Okay. We've got technology. Yeah, yeah. We want to protect our animals, but why, actually, should we care?" This is really important. We should care for a number of reasons. There are a number of reasons is because exotic pests can come into Australia via this illegal pathway. These can introduce disease. And as well as that zoonosis is something that you may or may not have heard over the last couple of years with the COVID environment. Zoonosis is where an animal can potentially transmit a disease to a human.

Dr Vanessa Pirotta:

As a result, this has implications for our biodiversity, flora and fauna, but also our multi-billion dollar agricultural industry. So, in short, we should care. Each and every one of you watching at home right now should care. If you're international, you should care because we want to protect Australia's environment. So, the good thing is we are doing things about that. And one of the ways we're doing this is by managing our biosecurity risks by using innovative technology. And I must point out this work is only one piece of the biology and conservation toolbox that we have in Australia, but it's a pretty good one. And it's one located at Australia's frontline. And I keep talking about Australia's frontline because really this is where we want to capture any types of illegal wildlife trafficking before it goes out or comes in.

Dr Vanessa Pirotta:

And so, here you can see a picture of this funny looking box, but really this is the Rapiscan's RTT 110. This is a massive, massive, massive, exciting project that Rapiscan have been working on for many years now. And to be using this type of machinery, it's very exciting because what it does is it uses 3D X-rays to produce images of wildlife, which I'll show you in a moment. It's quite big. It's a couple of metres long and if I was to stand next to it, it's taller than me. So, it's a very tall machine and very big.

Dr Vanessa Pirotta:

In addition to this, this innovative piece of technology is not just the be all and end all. It works together with a huge variety of Australia's detection toolbox. So, in addition to human detection, we've got biosecurity dogs, then we've got technology on the side there. So, we've got a combination of tools coming together at Australia's frontline, but obviously it's the technology component that I'm really talking about today.

Dr Vanessa Pirotta:

So, if you're at home and you are semi-familiar with X-rays, you might've had a tooth scanned recently, unfortunately for you. Going from 2D to 3D X-ray is a game changer. It's next level. You essentially go from an image that you can see. For example, when you're looking at the screen right now, you can see me, you can see the image, but that's all you can say. If this was a 3D image, you'd be able to look around and behind. You'd see the back of my head, you'd see the back of the computer screen. It just takes what you can see to the next level. And so, what the RTT does, it uses series of X-rays to section through an image. So, it builds up this 3D image of what you can see. So, if someone is placing an item in a bag and it's on the screen, and this might be something hidden behind it. On the 2D X-ray, you may be able to see behind it, but the 3D X-ray allows us to manipulate that image and look around underneath and completely 360. It is revolutionary to what we can do. And this is why it's so important for illegal wildlife trafficking.

Dr Vanessa Pirotta:

And I must point out that people who traffic animals don't just walk on through with a reptile under their arms saying, "Bon voyage." These people are very clever with how they do it. So, they'll place it, unfortunately, in items like a Pringles can. You've got a picture here of a cockatoo in a terrible state there, unfortunately. You then have the shingleback lizard that's been obviously hidden in something, but their legs. They tape their legs. Now, reptiles tend to be an animal that's really good to smuggle if you're a smuggler because, unfortunately, well, they don't require... They've got a little bit of air that they can survive off and they don't move around too much if they're strapped. Although many animals, we won't do the same. And also, they're cold-blooded. So, their biology lends them to not being too active when the environment's not very warm. So, that's probably why these animals are prioritised as well as being a very sought after in illegal wildlife trade.

Dr Vanessa Pirotta:

So, as part of the scientific trials, what we will do is we collected an animal. So, we're using dead animals at this stage. And then we place this into the RTT. We create an image reference library. So, we collect a lot of data on that image and also the image with different goods around it. So, what we're doing is creating this reference image library to then provide input to our algorithm. So, the more information that the algorithm has on the particular species, the more information they are likely to be ready to detect that animal or that species in the real world scenario. So, this is where the algorithms are placed at the front line.

Dr Vanessa Pirotta:

As part of this, the algorithm wildlife detection is continuing as part of my work where the team and I are collecting more and more data. This is a really cool little cross-section of some lace monitors. You can see these animals. You can see the skeletal system. If you're a biologist, this is your... absolute dream to see inside an animal, and you don't even have to get your hands dirty. So, essentially, what we're doing, we're training algorithms, we're testing, and we're creating more clever algorithms to be deployed at Australia's frontline.

Dr Vanessa Pirotta:

And as was mentioned in Joel's previous talk, this is actually an extension of our previous knowledge where the algorithms that Rapiscan Systems have currently developed are in addition to what we're doing now. So, they cover fruit, meat, vegetables, and seeds. And this picture down here, I love it with the blue seeds. You can actually see that the blue things here are seeds, but the X-ray detection is so powerful that you can see the little circles, which is bubble wrap. So, this is fine. Very fine. And this requires a different, but similar system to the RTT.

Dr Vanessa Pirotta:

As part of our work because of our international work, we are obviously having a bit of recognition for this, which is really exciting. So, if you didn't see it, I know a lot of the departmental staff have seen it, but our work was featured on Catalyst. And if you've missed it, you can actually watch it after this talk or... Not after this talk, but after this session. We want you to stick around for Q&A. And this is a great summary of our work and what we're doing for it. I will also like to end by saying that the work we are doing is very much not only an Australian focus, but has global implications because trafficking is a massive problem around the world. And if we can create clever systems to detect at Australia's frontline, then there is potential for this to be implemented in airports all around the world. So, really, we are working on something that's very exciting, not only for Australia's fauna, but also the world's fauna. And in our efforts to protect these animals, both nationally and internationally, I think the department and Rapiscan Systems and Taronga Zoo are doing a great job at that. So, thank you very much, everyone, for your attention and I'll hand it over.

Jamie Nicholls:

Thank you very much, Dr Vanessa Pirotta. That was a wonderful presentation. As always, full of fun and vitality. Interesting commentary. What a wonderful gift you have in presenting, Vanessa. And I liked how you reinforced the need for these kinds of technologies. That diseases are a biosecurity hazard to our native wildlife. It's also very important. It's critical to stop wildlife trade, particularly, under societies. As a country, we're doing our best to prevent that export of animals. And I like how you mentioned the machine, the RTT, build up that 360 degree image and you're working on the algorithms. That's going to be the word of the day, people. Algorithms is the word of the day. The more we do to develop those, the better we are at protecting Australia's biosecurity and, of course, our wildlife itself. Thank you.

Jamie Nicholls:

Next up, we're going to have two presenters. So, Eamon Byrnes is from the Compliance and Enforcement Division of DAWE, the Department of Agriculture, Water and Environment. And Emma Young is a senior analyst with AUSTRAC. Together, Eamon and Emma will speak about tracking and disrupting the illicit wildlife of trade, imports, and exports. Eamon, I think, is speaking first. He'll give us a bird's eye view of environmental crime activity threatening our native wildlife and our environment. Emma will follow Eamon and speak on the ways Australian government is tracking and disrupting an elusive wildlife import and export trade. So, I'll hand over. I think it is to Eamon first, and then we'll hear from Emma. Thanks guys.

Eamon Byrnes:

Thanks, Jamie. And thanks everyone for the opportunity to speak to you today. Just to reiterate, my name is Eamon Byrnes. I'm currently working in the environment compliance branch in DAWE, and I'm joined by my colleague, Emma Young, is a senior analyst at Australia's financial intelligence agency, the Australian Transaction Reports and Analysis Centre or AUSTRAC. And this morning, we'd like to discuss a financial analysis project that DAWE has been undertaking in collaboration with AUSTRAC and with AUSTRAC's public-private partnership, the Fintel Alliance. To better understand and identify and disrupt illegal wildlife trafficking in Australia and in particular, in relation to the illegal trade in Australian native wildlife. Next slide. Thanks, Emma.

Eamon Byrnes:

So, in this presentation, there are really two key messages that we'd like to convey. The first one is really around the importance of collaboration. And that financial intelligence is something that isn't generated and used in isolation. And it really depends on having wildlife enforcement agencies, law enforcement partners, and private sector, and financial sector institutions are really working closely together to generate and use financial intelligence. The second key message is the importance of financial intelligence in really being able to generate insights about and better understand wildlife trafficking networks. And as wildlife trafficking groups continue to grow in sophistication, we need to be able to follow the money. Stay ahead of the curve and find innovative ways of detecting, understanding, and disrupting those activities. And just on that message around collaboration. I think we'll talk about this a little bit later, but one of the key outcomes of this project really came about simply because we're able to have wildlife crime experts and financial crime experts sitting together in a room collaborating, exchanging, and analysing information in real time. Thanks, Emma. Next slide.

Eamon Byrnes:

So, I'd just like to offer a little bit of background here about DAWE and its remit and responsibilities in relation to wildlife crime. So, the environment compliance branch within DAWE undertakes compliance and enforcement functions in relation to breaches of Australia's national environmental wars. And, in particular, this includes our key piece of natural environmental legislation. The Environment Protection and Biodiversity Conservation Act or EPBC Act. And among many other things, the EPBC Act regulates the import and export of live wildlife and wildlife specimens into and out of Australia. Under the EPBC Act, the commercial export of many species of Australian native wildlife is generally prohibited. And the maximum penalty there for an illegal export, as you can see is a maximum 10 years imprisonment, $220,000 fine for an individual or both. So, we are talking about quite hefty penalties in quite serious criminal activity.

Eamon Byrnes:

So, investigating these types of offences and disrupting wildlife crime is a priority for my branch and to achieve that outcome, we work closely with a range of state, territory, Commonwealth and international partner agencies. And just a quick note here before I move on. That intelligence is really critical to this effort and it's all about how we can better understand and identify wildlife trafficking occurring and being able to respond to that. So, the better we understand, the better we can respond and the more information we're able to gather, the more proactive and predictive our intelligence functions can be. Next slide. Thanks, Emma.

Eamon Byrnes:

So, you've heard a lot of this already, I think, from Vanessa and Kira and... So, I'd like to just provide a bit of extra background on what illegal wildlife trade looks like in Australia, in particular, in relation to Australian native animals. In Australian native wildlife, particularly birds, fish, invertebrates are all highly sought after on overseas black markets, but it really is Australian reptiles that are overwhelmingly the most commonly trafficked live animal. Blue-tongue lizards, skinks, geckos, pythons, other species are all highly sought after as exotic pets across Europe, Asia and North America.

Eamon Byrnes:

And we have information indicating that overseas black market prices for Australian lizards can be over 10 times their domestic value. And, of course, as we've already heard, we have criminals being detected using quite cruel and inhumane methods to transport and conceal reptiles. And these include stuffing reptiles into socks, binding their legs with electrical tape and packing them in rice cookers and other electrical appliances. So, what I'll do now is hand over to Emma and she will provide a bit of background on the Fintel Alliance and the financial analysis project. Thanks, Emma.

Emma Young:

Thanks, Eamon. Yeah. So, as Eamon said, I'll give you a bit of a background for Fintel Alliance. So, Fintel Alliance was established in early 2017 as a public-private partnership working collaboratively to develop shared intelligence and deliver innovative solutions. Everyone in Fintel Alliance has security clearances allowing information to flow through clear channels. Giving us a collaborative approach to shared problems and work through solutions from different angles, something that is not possible when trying to tackle these problems individually. As a group, government and private sector members work together to increase the resilience of the financial sector to prevent it being exploited by criminals, support law enforcement investigations into serious crimes, protect the most vulnerable members of the community from criminal exploitation. And the work we have done as a group into wildlife trafficking has touched them all three of these points. By strengthening the financial sector's knowledge, supporting DAWE's investigations, and protecting our unique and vulnerable Australian wildlife and ecosystem.

Emma Young:

So, as you can see, the Fintel Alliance partners have a mixture of government agencies, domestic banks, which includes ANZ. It was also a member of the United for Wildlife Task Force. We've got foreign banks, remitters, law enforcement, and other financial intelligence units. So this gives us a great insight into different dimensions of the financial sector.

Emma Young:

So, moving on to the project with DAWE. It started with an idea stemming from a conversation with one of our Fintel Alliances partners, the ANZ. This discussion kick started an idea to research what wildlife trafficking looked like in Australia who enforced it and could financial intelligence have an impact? Our combined research put us in contact the DAWE who presented to the Fintel Alliance working group, providing everyone with an insight into wildlife trafficking in Australia and what impact financial intelligence could potentially have. So, in 2020, we started the collaboration with the dissemination to Fintel Alliance members of the top 13 entities of interest to DAWE. This initiated suspicious matter reports to be reported to AUSTRAC by our financial institutions.

Emma Young:

In February, 2020, ANZ then held a target development workshop where they wanted to demonstrate their capabilities to DAWE and AUSTRAC analysts in tracking the flow of funds for the 13 entities that were disseminated. Through the workshop, we identified a significant wildlife trafficking network. So, as Eamon had mentioned previously, just having that round table discussion from different partners and bringing all that together into one space.

Emma Young:

In 2020, AUSTRAC and DAWE also co-wrote a keywords and values report. So, this report outline reptile keywords that could be used to target the payments for reptiles along with their estimated values. This information could also be used to develop profiles, which was disseminated to Fintel Alliance members as well as over 20 financial intelligence units around the world.

Emma Young:

So, the results from the project have impacted at an investigative and strategic level. We've had 24 DAWE intelligence reports being produced in response to financial intelligence received. Seven new investigations have been opened by DAWE, including one major operation. New leads have been provided for 11 current DAWE investigations. And there has been a 1000% increase in suspicious matter reports lodged by our financial institutions. Combining our data holdings has improved network analysis for wildlife trafficking in Australia, assisting with the identification of entities and the types of roles they hold within the network. It has improved both the public and private sectors insights into the modus operandi of wildlife trafficking and how to better detect this activity. Through the release of the financial crime guide, there has also been an increase in public awareness of wildlife trafficking in Australia.

Emma Young:

So, flowing on from there, I also just mentioned one of our biggest achievements out of the project was the release of the financial crime guide stopping the illegal trafficking of Australian wildlife. Released in October, 2020, the guide was written by AUSTRAC and DAWE with input from Fintel Alliance members. The guide draws on intelligence collected for IWT in Australia and aims to educate not just Fintel Alliance members, but the whole Australian financial sector on how to detect wildlife trafficking.

Emma Young:

So, the financial crime guide outlines a number of financial indicators. Firstly, the amount paid for Australian wildlife can vary between domestic and international partners. Sorry, between domestic and international markets, I should say, with trafficked animals commanding a larger price tag. Similarly, payments to wildlife suppliers will typically be in the thousands whereas payments for wildlife couriers will be in the hundreds of dollars. Payment details may reference the animal species purchased including slang terms for common reptiles. Traffickers may provide payment details that are false or misleading or be involved in other crime types such as fraud. Offenders may use the accounts of family members or associates to receive funds in an attempt to disguise the origin and purpose of the funds transferred. This makes the reporting of family members and associates of offenders important to investigations. Businesses receiving suspicious payments are generally in the pet trade or related fields such as animal catchers and animal rescue organisations. These business accounts maybe used to disguise and mingle payments for trafficking animals. So, that mingling of illegal funds into legal business structures.

Emma Young:

Traffickers will use a variety of payment methods. We've seen ranging from money remitters, online payment platforms, ATM cash deposits, and in-person cash deposits at bank branches. And, finally, the transfer of funds is not just limited to purchasing animals with related costs required to enable illegal trade. So, these can include animal freight costs such as transport or payments to drivers, accommodation. So, the use of short-term accommodation such as hotels and motels in areas where poaching animals is common and close by, and also for animals storage and maintenance.

Emma Young:

So, in February 2020, ANZ held a real time targeted analysis session also attended by wildlife and financial crime experts from DAWE, AUSTRAC and the ANZ. The workshop involved a live crosschecks and analysis of each agency's databases with the goal of identifying suspicious transactions. So, this slide shows the kind of example we see in practice. So, information from a financial institution, identify suspicious domestic transactions between reptile traders. AUSTRAC information then allows us to draw links between the domestic activity and money flowing in from overseas. DAWE expertise then contextualises this information. Identifying its potential relevance to wildlife trafficking.

Emma Young:

So, this session directly resulted in the discovery of a significant criminal network involved in illegal wildlife trade. So, we can credit the success of this session in having analysts and experts sitting together and discussing their findings in real time. I'll now pass over to Eamon.

Eamon Byrnes:

Thanks, Emma. And I'll try to move through these slides relatively quickly, so we leave enough time for the Q&A. But out of this real-time analysis activity in the months following, we were able to continue to utilise financial intelligence and leverage the combined information and resources of our financial partners to really get a really good understanding of some of the wildlife trafficking networks operating in Australia. Get a good understanding of the illicit supply chain, and in some cases construct a timeline of events leading up to a suspected illegal export.

Eamon Byrnes:

So, out of all of this, we were able to identify entities playing specific roles in this kind of network. And for further detail on that, I'll refer you to the financial crime guide, which is available online, but just as a brief summary, we are seeing quite complex networks. We see coordinators for the illegal activity who are responsible for arranging transactions with suppliers and buyers. We do see suppliers for the animals, although it is of course worth noting that the domestic trade in wildlife is legal in all states and territories. And some of these suppliers aren't always aware that the animals they are selling are actually destined for the overseas black market.

Eamon Byrnes:

We also have wildlife couriers who illegally export the packages and what we have is also facilitators and intermediaries for the network who are operating on behalf of syndicate controllers to organise domestic transport and collection and payments. So, we are seeing quite complex criminal networks, and this is a real organised crime that we're seeing.

Eamon Byrnes:

So, I just want to provide a very quick case study here of how this sort of works in practice. So, in late 2019, we had several parcels detected, bound for an overseas location and containing Australian native reptiles concealed in rice cookers. We have the parcel sender identified on relevant footage, but they couldn't be identified further. And that was really the financial intelligence that enabled us to identify this individual. So, what we did was identified payments to an individual who we'll call entity A in the period around the illegal export. We didn't have full details for entity A, just a name. So, we reached out to our partner agencies to obtain further information. They came back with around six or seven people with the same name and for some of those entities, we were able to obtain photographs, facial images, which we were then able to compare with the available footage. And one of those entities was a confirmed match enabling us to fully identify the criminal suspect. And so, this kind of outcome was really critically enabled by financial intelligence. Of course, it's always combined with other information sources to give us a full picture.

Eamon Byrnes:

So, last slide. Thanks, Emma. And thanks everyone for your attention today. And that concludes the presentation. And hopefully that serves to illustrate the value of collaboration between the public and private sector in enabling us to better understand and disrupt some of these networks in this serious crime that's impacting on Australia. So, thanks again and happy to take any questions.

Jamie Nicholls:

Thank you, Eamon. And thank you very much, Emma. What a tremendous presentation. Partly what you said, the wildlife trade, it's about following the money. It's about partnering organisations and it's about them meeting in the same room, Emma. You pointed out exactly that chant of ANZ getting people together and meeting in the same room to provide that expertise.

Jamie Nicholls:

You also showed why it is a trade. It's huge dollars involved. And there are questions in the chat we'll get to in just a moment. It's about increasing the resilience of our financial networks. There's a really interesting term you used, and strengthening the investigations, we can on the wildlife trade. The Fintel, the alliance, bringing those people together, those groups together from private industry and public. So, thank you for also passing through that entity chain. It's very interesting. These people have faces, they're human beings, and I love how you connect them using both your organisations. You connect the dots, and trying to stop this trade. So, thank you both, but we'll go straight to questions. And the first question I'll read out is for Emma. And are payments for this behaviour made by the banking systems or in cash? Another instrument widely used cash. Another instrument widely used. So, over to Emma, please.

Emma Young:

Thanks, Jamie. Look, the domestic trade, I think we did identify cash in terms of cash deposits that are paid from a domestic breeder perspective. So, what we might find in a network is that one person's trying to source a number of reptiles that they may not have access to. So, those payments, we found were paid for in cash and deposited into people's accounts. So, that's where the Fintel Alliance came into it. So, anything under $10,000 cash isn't recorded with AUSTRAC. So, it came down to that reliance on our banks to look for that activity, but we did identify cash deposits being made, but obviously from that, but smaller amount, which wasn't recorded with us, but through the banks. But in terms of the international transfers and identifying that correlation between what has been paid to all the breeders and identifying that payment that came through internationally as well.

Jamie Nicholls:

Fantastic. Thank you. Thank you, Emma for answering that. And I'll go to our second question and please continue to put those questions into the chat. A question now from Shan Sire. And Shan's asking Eamon. What is a black market value of any reptile example and how does that compare to the fine of $220,000? Are there any moves to increase supply in the legal trade and thus drive down prices on the black market? So that's for Eamon.

Eamon Byrnes:

Yeah, thanks for the question. I won't go into specific details of the prices, but it does vary among certain species. I will say that certain commonly found species across Australia tend to be valued a little bit low on the black market when compared to animals that are rarer, more vulnerable often, or animals that have been actually bred to grow and sort of create certain characteristics in coloration or patterning, and those sorts of animals... Particularly animals that are more threatened, lower population numbers do tend to command a much higher price on the black market. So, I hope I've answered that at least in part.

Jamie Nicholls:

Thank you, Eamon. Now, I think you answered it. Thank you very much. Next question is to Vanessa from Christine Hoff. Now, one of those questions that have already been answered in text is about, can ivory and tortoiseshell products be detected by this 3D X-ray technology. And Vanessa says, "No, not yet." Good question. So, Christine's asked a second question. Would be great to further discuss as we're working on traceability tools to detect the tortoiseshell trade. And she's just saying, as we all are connecting with each other, Christine has provided an email and this is what these webinars and having this contact via Zoom meetings and the like are so important to keep our work focused. Okay. Next question is more a comment, I think, from Sam Chatfield. Thank you, Sam. And as a wildlife rehabber in charge of reptile section, he's got a close and quick contact with the DPI, Department of Primary Industry, when an exotic comes in. So, what else can Sam and his team do to better prevent trafficking, Vanessa?

Dr Vanessa Pirotta:

Well, that's a great question. And we really appreciate that and acknowledge all of the people who work towards preventing animal trafficking or at least trying to restrict and detect because it's a big thing. I guess, one of the answers to your question... There's a number of different answers. In terms of ways that we can help stop this happening, well, unfortunately the way in which people are doing it as you've seen a quite clever and quite strategic, and I can only imagine that the pandemic has had an impact on that. So, I would say that the best way that you can help with this sort of scenario is by being a wildlife rehabber or facilitator to see the movement of animals post their incident is a great way of assisting. And so, I would imagine that you're already doing that, which is great, but this is obviously a bigger problem. That's why federal government is tackling this.

Dr Vanessa Pirotta:

And so, I guess what we can do as a collaborative of community is raise awareness to this as we've seen with Emma and Eamon's presentation. Having awareness to these problems is a big, big, big part of it because people are able to use social media and to talk about these things happening. This may deter some people who they know of maybe doing this. I'm sure that there may be people who have inside knowledge watching this today very eagerly to see how the Australian federal government is doing just that in terms of trying to detect this activity.

Dr Vanessa Pirotta:

So, my best advice to answering your questions is, thank you so much for assisting with your rehabilitation and facilitation of the animals post-trauma and seizures. Keep working with people if you're able to assist, say, for example, someone gets a detection case and then you are actually able to deal with that animal. There are zoos other facilities, and I've spoken about that on the chat that will actually house these animals post-capture and detection. In some cases, some animals unfortunately are not able to be saved. And a vet will deem it suitable in some cases where the animal has to be euthanized.

Dr Vanessa Pirotta:

So, there are a number of things that we can do, but as a general public and the general audience watching this today is to simply have a discussion about wildlife trafficking, raise awareness of it. And we will continue to work behind the scenes to hopefully stop this terrible activity or at least detect and restrict it.

Jamie Nicholls:

Thank you, Vanessa. That's a really, really good answer to that and please people, keep an eye out on those answered questions because some of those have been answered by text. I've got a quick question before we go onto the next one. It's for either for Joel or for Nick. And it's about the algorithm. So, I think they're currently used in airports, but how much can they be used or will they be used in international mail centres as well, for example, for seeds and that's for either Joel or maybe Nick.

Joel Willis:

Thanks, Jamie. I can fill that one. So, in terms of the algorithms for the existing ones we have for fruit and meat and plant and vegetables, they are currently being used in the mail environment. So, at the two biggest mail centres in Australia post centres in Sydney and Melbourne. So, they're live. They're up and running and they're working really well. The wildlife algorithms are going through offline trials at the Melbourne mail centre, and we hope to deploy them towards the end of the year. The really good thing about the wildlife algorithms and heard about the issues around Australian natives potentially being targeted and exported.

Joel Willis:

Now, in terms of biosecurity, we tend to obviously worry about imports, but by having automated detection algorithms, we can apply these to the X-ray units that are used to screen outgoing parcels for mail centres. They're normally screen for aviation security purposes, but if we can apply these algorithms over the top of that, then we have an outbound capability that we normally wouldn't have had because we did concentrate on the inbound components. So, short answer is, absolutely mail centres are our focus at the moment. And in terms of airports, we're in the process of expanding our 3D capability through a couple of partnerships with Australian international airports. Thanks, Jamie.

Jamie Nicholls:

Thanks, Joel. While we have you, can I just get you to add about that ivory question. Just expand on that just a little bit, please.

Joel Willis:

Yeah, sure, sure. So, that's a really timely question actually. As Vanessa said, efforts today, they're focused on the whole animals and using deceased animals that we've obtained through Taronga Zoo that have unfortunately had to be euthanized for other reasons, but just in the last couple of days, we've being in talks with Rapiscan about starting up a new project to expand that to ivory and also rhino horn. A key factor when we do these algorithms is having access to the samples to be able to train the AI that, fortunately or unfortunately, depending on how you look at it. The Department of Agriculture has a range of samples that have been seized in the past for both ivory and rhino horn. So, we're going to run those through our X-rays and train algorithms to detect those things. And I did notice a couple of comments about tortoiseshell too. So, that's absolutely something we'll have to look into as well. Thanks.

Jamie Nicholls:

Thanks, Joel. Another good reason for having these webinars to connect us. Now, just noting the time people. We've got a few minutes left. One more very quick question, and I'll give that to Eamon and Emma. We will answer the rest and include that on a response in the website as well because we do only have a short period today, but it's from an anonymous attendee to Eamon and Emma. So, with COVID impacting on international travel and how we move around, has there been a flow on effect on wildlife trafficking trade? I'll be interested though. Is that increasing or decreasing from Eamon or Emma?

Eamon Byrnes:

Yeah, I'm happy to fill that one. Thanks, Jamie. And a really good question. Yeah, what we are seeing is an obvious impact of COVID is the decreased in instances of trafficking via air travellers. That's quite an obvious one and that's reflected in the data. And there are particular groups that do operate that way that are no longer able to do so. I think there have been some flow on impacts. I think things like the illegal trade in live succulents and plants and plant material has increased from my perspective and that obviously has some significant biosecurity impacts associated with it. And obviously some of these groups are going to find other ways to illegally export or even import native or exotic wildlife. So, we're always on the lookout and remaining alert to some of these groups changing their methodologies in response to some of the COVID travel restrictions.

Jamie Nicholls:

Okay. Eamon, that's fantastic. And I'm sorry about cutting short that response, but we just want to thank you all very much for joining. Also, I just want to say we've just released... the department released its first biosecurity podcast, Detect and Protect on detector dogs. Jeff Smith, and Colleen Eiser have put that together and it's hosted by the great Steve Peios. If you like football, he's a commentator. So, please, visit the website for that one.

Jamie Nicholls:

We'll be sending out an email to participants just informing them of other activities going on as well, but most of all, I just want to thank our speakers today as well. It takes a lot to get on and prepare. So, thank you to Joel Willis and Nick Young from DAWE, Dr Vanessa Pirotta from Rapiscan Systems and from Taronga Zoo. Eamon Byrnes from DAWE and you heard from Emma as well from AUSTRAC.

Jamie Nicholls:

So, panellists, you make the world go around, you provide your expertise and knowledge to keep us all entertained. We've got great people in contentgroup putting this together. And, of course, Shane Faulkner and team for making this happen. There'll be another webinar coming up. You can see on your screen. Some of those are websites and some of those contexts, but most of all, just look after each other people. Be safe, be kind. We're in COVID lockdown in Canberra. Many of you have been in lockdown for much longer. So, please keep connected to your family and friends and colleagues and just be really, really kind to yourself. Thank you for joining the discussion today and participating, and love having you around. Take care. Bye from us from DAWE and from our presenters as well. Thank you and goodbye.