



Illegal Wildlife Trade (IWT) Challenge Fund Annual Report

To be completed with reference to the “Writing a Darwin Report” guidance: (<http://www.darwininitiative.org.uk/resources-for-projects/reporting-forms>). It is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

Submission Deadline: 30th April 2020

IWT Challenge Fund Project Information

Project reference	437 – IWT057
Project title	Building capacity to reduce illegal trade of shark products in Indonesia.
Country/ies	Indonesia
Lead organisation	Cefas
Partner institution(s)	Ministry of Marine Affairs and Fisheries (MMAF), Wildlife Conservation Society, University of Salford
IWT grant value	£ 353,832
Start/end dates of project	01/07/2018 – 31/03/2021
Reporting period (e.g. April 2019-Mar 2020) and number (e.g. Annual Report 1, 2, 3)	April 2020 – March 2021: Annual Report 3
Project Leader name	Joanna Murray
Project website/blog/social media	Blog - https://marinescience.blog.gov.uk/ Social media – @Joanna_M_Murray and @cefascgovuk
Report author(s) and date	Joanna Murray, Efin Muttaqin, Angga Yudhistira, Firdaus Agung, Yoga Dewanto, Restya Rahmانيar 30 April 2021

1. Project summary

Indonesia is the world’s largest shark fishing nation and the third largest trader in shark and ray (elasmobranch) products (e.g. fins). It is also a country with a fishing industry dominated by small vessels and where people have a high dependency on fisheries products to support livelihoods and food security. As such, it is a global priority for elasmobranch management and conservation. With the up-listing of several species of elasmobranch to CITES Appendix II at COP16 and 17, it has become increasingly difficult for Indonesian authorities to identify and monitor CITES-listed species in trade and ensure that use is sustainable. Unless capacity for species-specific monitoring improves, there is a risk that unregulated trade could threaten CITES-listed elasmobranchs with local extinction.

The Ministry of Marine Affairs and Fisheries (MMAF) have acknowledged that the greatest challenge for product traceability and CITES implementation is species identification, especially

where partially-processed products (e.g. fins, meat, gills) make it difficult to determine source and legality. Through advanced training programs and improved customs procedures, this project is working to increase the capacity of monitoring and enforcement agencies to identify CITES-listed elasmobranchs in trade. This in turn will strengthen law enforcement by increasing the detection probability and prosecution rate of IWT, therefore deterring the unregulated targeting and trade of protected species.

The project is being implemented throughout Indonesia, with coordinating government staff based in Jakarta, and technical verification teams at six regional government (Marine and Coastal Resources Management Units, BPSPL) offices (Denpasar, Makassar, Padang, Pontianak, Serang and Sorong; Figure 1.)

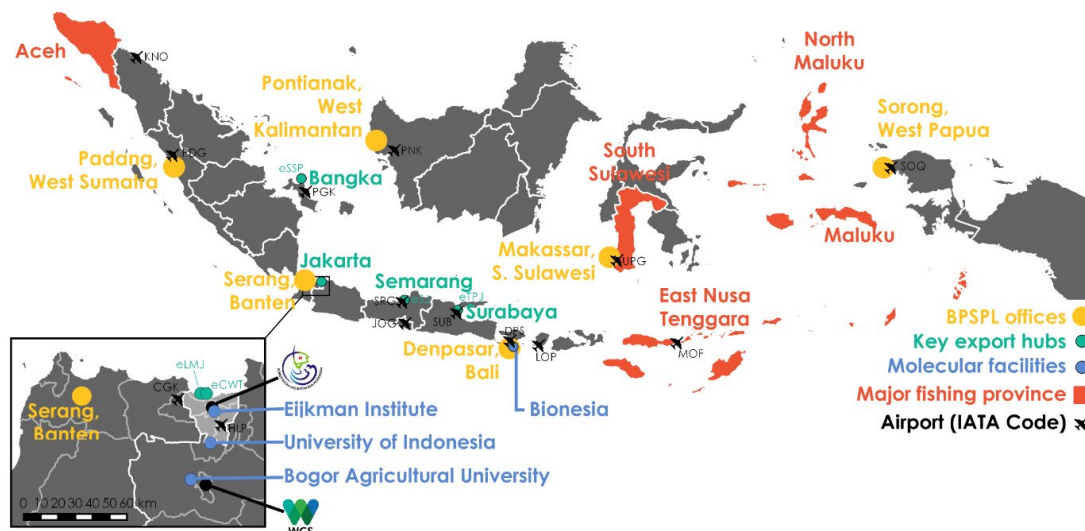


Figure 1. Location of project implementation areas including the coordinating MMAF office in Jakarta and six regional BPSPL offices (Denpasar, Makassar, Padang, Pontianak, Serang and Sorong) throughout Indonesia (figure taken from desk-based study, activity 1.1).

2. Project partnerships

In 2015, a UK-Indonesia Government to Government Maritime MoU was initiated and one area of collaboration was the desire to ‘cooperate in sustainable management of marine fisheries resources’. This IWT Challenge Fund project developed between MMAF and Cefas through their implementing arrangement under that MoU. MMAF introduced the Wildlife Conservation Society (WCS) as a partner prior to project design due to their ongoing collaboration (since 2003) to combat illegal wildlife trade. Professor Stefano Mariani at the University of Salford was identified as an academic partner with world-leading expertise in conservation genetics. Nominated leads from all partner organisations were actively involved in the design of the project during the application stage, communicating regularly including through a project WhatsApp group. They have shown a personal investment and dedication to ensuring the project is a success and have been instrumental in conducting engagement activities. A formal Collaboration Agreement between all partners was drawn up in the six months following the award of funding and signed in December 2018.

Government departments/agencies: Representatives from government departments attended the Project Inception Workshop (year 1) including; Marine and Coastal Resources Management Units (BPSPL), Directorate General (DG) of Marine Spatial Management (DJPRL), DG of Marine and Fisheries Resource Surveillance (PSDKP), DG of Customs, Ministry of Finance, Fish Quarantine Inspection Agency, Marine Research Centre Fisheries Research Centre; and research centres and NGOs including; Oceanography Research Centre, and the Indonesian Institute of Sciences (P2O LIPI). Customs officers from Batam, Soekarno-Hatta, and Tanjung Priok Customs and Excise Offices attended a WCS-lead training workshop, and the National

Training Centre was involved in the development of the training modules for the training team, both in Year 2.

NGO's: Conservation International (year 1 – Project Inception Workshop).

Industry: Trade stakeholders through visits to processing and exporter facilities for focus group discussion (year 1) and to undertake field training during the 'Train the trainer' workshop in January 2020 (year 2).

International research specialists: Project updates to international academics and specialists in the field using corkboard updates (Supp info 1); provision of training at the 'train the trainer' workshop by world experts (Dr Debra Abercrombie and Dr Rima Jabado) in CITES implementation training; Skype calls and email exchange with world experts in DNA analysis of sharks and shark products through the projects PhD studentship network.

3. Project progress

3.1 Progress in carrying out project Activities

Planned activities for this year have largely focused on achieving Outputs 2 and 3 by developing a comprehensive national training programme for verification staff involved in shark and ray trade management, and through the running of the 'train the trainers' workshop with Indonesia's new elasmobranch trade training team.

The design of the national training programme (Activity 2.2) and the selection of staff who will form the Elasmobranch Trade Training Team (Activity 2.3) was conducted over a period of eight months in a series of 12 meetings between MMAF, WCS, the National Training Centre, other relevant departments of the ministry and Cefas (Supp info 5).

The resultant training programme is comprised of eight modules and 40 hours of taught and practical learning. Modules include; (1) Legislation on Shark and Ray Conservation, (2) Biology and Ecology of Sharks, (3) Biology and Ecology of Rays, (4) Sampling, Statistical Analysis and Reporting on Shark and Ray Utilization, (5) Data Entry, Analysis and Reporting, (6) DNA sampling technique (7) Identification of Sharks listed on CITES, and (8) Identification of Protected Ray Species and CITES listed Species. The scope of these modules goes beyond what was originally planned (focus on ID only) but as the programme was being designed, it was felt that verification staff should have at least beginner knowledge of all of these topics to effectively undertake their role. In addition, verification staff from across all six BPSPL offices were selected to form the elasmobranch trade training team and take part in the 'train the trainers' workshop (as opposed to staff from Bali and Java only) to account for the regional differences in skill set and the challenges they face as identified during the regional focus groups (Activity 1.7). This additional training and increased dissemination of knowledge provides value for money by exceeding the training originally planned in the project scope.

As part of the design process, testing and evaluation of the training programme was undertaken during a [three-day workshop](#) in Jakarta in November 2019 where over 40 participants from across the six BPSPL offices, MMAF, WCS and Cefas evaluated the suitability of the modules and provided recommendations for improvement (Activity 2.7, Supp info 6). Recommendations ranged from the combination of modules (combining the ecology and biology of sharks and rays into one module), adjustments to the number of hours of practical versus taught teaching, and the requirement for additional physical samples (e.g. fins, cartilage etc) for the practical identification sessions.

Twenty participants, with representation from all six national BPSPL offices, attended the finalised five-day ['train the trainer' workshop](#) (Activity 2.5) in January 2020. National and international experts designed and delivered their modules to include the required content. Dr Rima Jabado delivered the visual identification training and the projects PhD student, Andhika Prasetyo, delivered training on DNA-based tools to species identification as part of the step-wise approach to species-specific identification of elasmobranch products (Figure 2). All 20 participants visual identification accuracy was tested (Activity 2.6) in a pre- and post-training assessment (designed by Rima Jabado, Supp info 9) which aimed to determine if participants

had increased their visual ID skills following training (Supp info 8). A twenty percent improvement in knowledge was achieved following training (66% correct answers in pre-test, 86% correct answers in post-test). Data collected on the accuracy of visual and molecular identification was collected by the PhD student and will inform the production of a peer-reviewed publication (activity 2.9) towards the end of the second year of the PhD (pending analysis of DNA samples when university laboratories re-open following Covid19).



Figure 2. Participants at the ‘train the trainers’ workshop in January 2020 undertaking training in visual species identification and the extraction of DNA for molecular approaches to species identification of products.

Data required for the collation and analysis of monthly seizure records (activity 2.8) was not available at the start of the project so a pilot study with the two largest BPSPL offices has been initiated by the project PhD student. The results of this pilot are currently being analysed by the PhD student and will also be used to understand the level of sampling required to robustly detect the presence of prohibited species in shipments going forward.

The trainers are tasked with teaching the contents of the modules to colleagues at their own BPSPL offices (Activity 2.10) in the final year of the project with an assessment on how successful this has been provided by Cefas and WCS (Activity 2.11).

WCS’s Indonesia Program collaborated with Indonesian Customs offices and held regulation meetings relating to wildlife protection and training to identify wildlife commonly smuggled including sharks and rays. These activities were conducted between 25 – 26 September 2019 and 37 participants attended from customs staff representative from many harbours and airports including the Custom of Bitung, Custom of Makassar, Custom of Dumai, Custom of Kualannamu, Custom of Ngurah Rai, Custom of Tanjung Perak, Custom of Belawan, Custom of Batam, Custom of Tanjung Priok, Custom of North Sulawesi, South Sulawesi and Jakarta (Figure 3). Training included modules on illegal wildlife trafficking through airports and harbours, identification of wildlife that commonly trade in Indonesia, regulation and the protection of the state of wildlife in Indonesia, identification of shark and ray products that are traded most and trade monitoring for marine species (Supp info 10).



Figure 3. Participants from Customs in September 2019 undertaking training in shark and ray derivative product identification (shark fins, ray fins and manta gill plate).

In February 2020, WCS Indonesia collaborated with BPSPL Pontianak, the Quarantine Agency and Marine surveillance (Area Pontianak), on an identification training course for shark and ray products. A total of eight staff from the Quarantine Agency and Marine Surveillance team attended the one-day training event which was focused on identifying derivate products from protected shark and ray species (whale shark, sawfish and manta ray) and CITES Appendix II listed species (hammerhead, silky shark, mako shark, and wedgefis). Participants received training on trade control procedures, starting from the verification process, the issuing of the recommendation letter by BPSPL staff, and the issuing of the health certificate (HC) by the Quarantine Agency when the letter of recommendation has been received.





Figure 4. Training of shark and rays identification in Pontianak (Feb 2020).

WCS continues to support law enforcement agencies to investigate the illegal trade in CITES-listed shark and ray species. A new partnership designed to combat illegal wildlife trade in Indonesia that involves MoEF (Ministry of Environment and Forestry), MMAF, Indonesian National Police (INP), Attorney General, Quarantine, Supreme Court, and Customs was formed. During the first three years of the project (2018 – 2021) eight illegal trade cases of marine products has been recorded and successfully prosecuted by law enforcement agencies. Four of these cases used information provided by the WCS (Supp info 11). A total of six cases related to illegal trade of CITES Appendix II listed sharks and protected species such as hammerheads, sawfish, manta rays, and silky sharks.

During the project, WCS have supported MMAF (BPSPL Denpasar) and PSDKP Surabaya on a case in Surabaya (January 2019; Figure 4) concerning the export of products from a company CV. Tirta Surya Sri Rejeki. The team found indications of sawfish mixed amongst the other fish products. Having confirmed with DNA testing that the product derived from one of the protected species, the director of the company was arrested and charged under Law No. 31 (2004; fisheries legislation) for trading 438 kg of sawfish fins, which equates to around 1528 individuals. In July 2019, he was convicted and sentenced to one month in prison and having to pay a penalty of USD (Supp info 11).



Figure 5. Inspection on the exported good in Surabaya by MMAF found protected shark mixed with other fishes (January 2019).

Since January 2019, WCS' Wildlife Crime Unit (WCU) has expanded their network to collect information on the IWT of marine species such as sharks and rays, dugongs, sea turtles, and destructive fishing practices. During 2019, WCS continued to support the law enforcement patrols of marine areas in Lamakera, East Nusa Tenggara (ENT) and Sumbawa, West Nusa Tenggara (WNT) to create an overt deterrent to manta ray hunting and to prevent other illegal trade of marine species activities. LPSPL Serang successfully collaborated with the Quarantine Agency and Marine Surveillance Agency to seize 375 kg of shark product from five CITES Appendix II listed and protected species (silky shark, hammerhead, wedgefisk, giant guitar fish, and protected freshwater ray). Those products were delivered from Natuna – Kepulauan Riau Province to Jakarta through Tanjung Priok Harbour.

Between October 2019 and February 2021, WCS supported the DKP Flores Timur, PSDKP Larantuka, Marine police of NTT to conduct marine patrols for a total of 24 days. There were no illegal activities indicated in this period. WCS-supported marine patrols are shown in Figure 5.

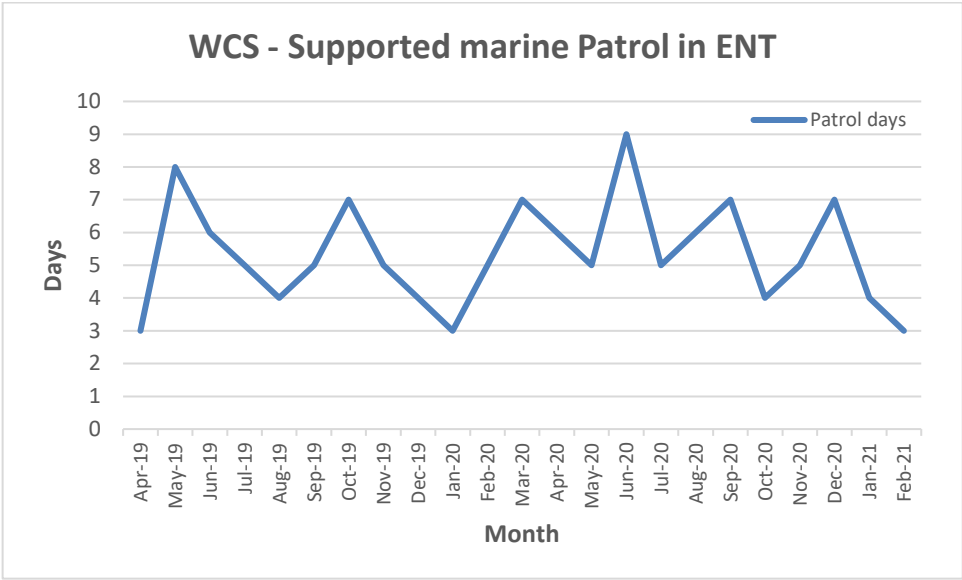


Figure 4. WCS-supported marine patrols in ENT during April 2019 – Feb 2021.

WCS have a network of journalists, who are notified when wildlife crime arrests are made and cases are in progress. This serves two purposes: to publicise the achievements of Indonesian law enforcement agencies, and to put wildlife crime cases in the public eye in order to increase transparency and reduce the chance of corruption. There have been 68 media articles from local, national and international media agencies, covering information about law enforcement successfully combating marine illegal trade (Supp info 12).

3.2 Progress towards project Outputs

Output 1. *A comprehensive understanding of the political and operational landscape of elasmobranch trade has been documented, including the identification of all key stakeholders, their resources and unification of commitments to reducing illegal trade.*

The project inception workshop brought together 47 key trade stakeholders (BPSPL verification staff, customs, quarantine and surveillance), to discuss, for the first time, the political and operational challenges they face in effectively managing Indonesia’s shark and ray product trade. This generated some discussion on how we define the legal and illegal aspects of the trade, how there are gaps in current trade regulations and poor communication regarding the existing ones among the technical ministries, and how there are currently no designated export points which makes international export difficult to manage. The current institutional setting for the management of shark and ray trade in Indonesia was also discussed. The Ministry of Environment and Forestry is the single Management Authority for CITES in Indonesia. However, in practice it is the MMAF and Technical Implementing Units that are managing the trade,

especially in relation to in-country distribution and specimen identification. Stakeholders discussed the issue of a Minister Decree No. 61/2018 that sets out the regulation for all aquatic species (protected and listed in CITES) utilisation, including for trade, submitted by MMAF. With representatives in attendance from across Indonesia's trade management we were able to map trade structure and governance from the point of capture through to export.

Regional focus groups were incredibly useful for building a comprehensive understanding of region-specific challenges and the practical interventions which local BPSPL offices have developed to improve shark and ray trade management. One example of this is the development of in-house resources, such as a web-based application for generating and storing the required documentation for export called the Letter of Recommendation. Two BPSPLs are currently using a bespoke online system, one office is in the testing stages of implementing an online system, and three offices are using a paper-based system. Other developments include visual species identification guides, posters and leaflets to educate traders and exporters and databases for storing information derived from the Letter of Recommendation process. Documentations and consolidation of these localised resources in the consultation document highlights the opportunity this project has for streamlining processes across Indonesia through improved sharing of knowledge and resources.

The comprehensive understanding of the operational landscape gained from successfully achieving Output 1 has shaped the design of the Elasmobranch Trade Training Team (Activity 2.3). The training team will now have representation from the verification staff at each BPSPL on the team, along with customs, quarantine, surveillance and chaired by MMAF. This is to ensure that we maximise the knowledge sharing and improve coordination of all BPSPL offices.

Output 2. *Improved capacity of MMAF to deliver advanced, on-going training to effectively identify and monitor the trade of CITES-protected elasmobranch species, thereby increasing the detection rates of attempted illegal trades.*

For MMAF to deliver advanced and on-going training, it is important that the Elasmobranch Trade Training Team has the correct representation from staff currently involved in the product inspection process and who are best placed to disseminate the training they receive across Indonesia. The information generated in Output 1 provided the information to ensure this happens.

A comprehensive 40-hour training programme has been developed. Twenty participants, who form the elasmobranch trade training team (with representation from MMAF and the six regional offices), have been trained by national and international experts during a five-day 'train the trainers' event. The training programme was developed in collaboration with the national training centre to ensure the programme has the required backing, standardisation and certification for its longevity and success in delivering increased capacity to effectively identify and monitor the trade of CITES-protected elasmobranch species. Pre and post training assessments demonstrated a twenty percent improvement in knowledge following the training workshop (66% correct answers in pre-test, 86% correct answers in post-test) and teaching style was assessed as each participant was required to prepare and deliver a presentation of module content at the end of the workshop. The newly trained trainers will deliver the programme to their local colleagues during Year 3 of the project.

Output 3. *Improved capacity for law enforcement agencies to effectively respond to incidences of illegal trade using evidence-based approaches creates stronger disincentives for illegal trade of elasmobranch products.*

To improve capacity of law enforcement agencies to respond to incidences of illegal trade, WCS work closely to support Customs, BPSPL, PSDKP and other law enforcement through capacity building on shark and ray identification, technical assistance on investigating the illegal trade cases and on site collaboration marine patrol with law enforcement agency (Indonesia National Police, PSDKP) in a high risk manta hunting area (Lamakera East Florest – East Nusa Tenggara). This positive effort encouraged and strengthened capacity in law enforcement.

There were two training sessions on shark and ray identification during 2019. Training identification through a technical guide was given to 41 participants from BPSPL, LIPI, quarantine agency and MMAF. Participants were trained in visual identification on shark and ray fins, manta gill plates and other derivative product such as cartilage and skin. Increasing capacity for Customs staff was carried out with a total of 37 Customs staff from 12 harbours and airports that have a key role in the international trade hub. The training was focussed on regulation surrounding surveillance and law enforcement of illegal wildlife trade, identification of derivative products of wildlife, *modus operandi* and the pattern of smuggling from catch until exit port.

Output 4. *MMAF have increased capacity to utilise their improved scientific evidence from the implementation of the step-wise detection methods to better inform national policies on elasmobranch trade management and CITES compliance.*

Work towards this output was scheduled for Year 3 of the project. However, due to the on-going pandemic of Covid-19, activities related to this output, which are centred around holding large stakeholder meetings/workshops and international travel for knowledge-sharing events, progress against this output has been delayed. We have been granted a year-long extension and hope to host these events in the final year of the project.

3.3 Progress towards the project Outcome

All planned activities for year two have been successfully completed as well as advanced progress made on delivering activities planned for year three, demonstrating the project is on track to ensuring “Indonesia has capacity to effectively trace, monitor and control trade in sharks and rays to support CITES legislation and provide a risk-based approach to legal and sustainable resource use”. However, given the worldwide pandemic of Covid-19, activities related to ongoing training, visitations and subsequent outputs (2.10, 2.11, 4.1 – 4.7) which were scheduled during Year 3 have had to be postponed due to travel restrictions and social distancing rules. A formal request was granted to extend the project for one year.

3.4 Monitoring of assumptions

Success in achieving planned activities to date assumed that we would have active engagement from project partners, relevant government departments and the wider international network of stakeholders involved in the management of the shark and ray trade. This assumption has held true; participants at the design and training workshops have shared local knowledge, resources, and opinions, field officers are eager to receive advanced species identification training and to improve the quality and transparency of the data they collect. Similarly, consultation with international identification and genetic experts has been positive with the sharing of visual ID guides for translation and through their contribution to the ‘train the trainer’ workshop in January 2020. Positive engagement has also been experienced through the generation of local, national and international media interest by actively reporting project activities on social media including Twitter and Blogs.

3.5 Impact: achievement of positive impact on illegal wildlife trade and poverty alleviation

Strengthened monitoring and enforcement of elasmobranch trade decreases illegal wildlife trade, reduces exploitation of threatened species, and promotes sustainable management of fisheries, safeguarding biodiversity and livelihoods through improved legal frameworks.

This funding has had direct impact on the trade of protected shark and ray products through the work of WCS and their collaborations with the WCU and enforcement agencies. The establishment of a large collaborative effort within Indonesia to tackle illegal marine wildlife trade has been made possible through this project, with proven results. During the first two years of the project six illegal trade of marine product cases have been brought to prosecution and three within the last project year as a direct result of information from the WCS (Section 3.1 and Supp info 11).

Improved management of shark fisheries and trade at the national-level, and successful implementation of existing shark/ ray regulations (e.g. protection of manta rays and whale sharks) will help to better protect livelihoods and food security for small-scale fishers, who are highly dependent on marine resources for their well-being. It is hoped that the increase in publicity of illegal trade in marine species, like the case of the manta gills (section 3.2, Output 3), will support and raise public awareness about the strengthening of management systems and illegal trade detection. However, the benefits of this will be difficult to measure within the lifetime of this project and will not have yet been realised.

4. Project support to the IWT Challenge Fund Objectives and commitments under the London Declarations and Kasane Statement

During the first two years of the project, progress has been made towards ensuring effective legal frameworks. Key to this is an understanding of how trade is managed within the existing framework and how our project can support this framework or provide recommendations for positive change to make it more effective. Translation into English of the Minister Decree No. 61/2018 that sets out the regulation for all aquatic species (protected and listed in CITES) during year one allowed us to provide the best advice to ensure we are continuing to support effective legal frameworks.

5. Impact on species in focus

Year one of the project was primarily a period of stakeholder engagement and identification of the key challenges and priority interventions. Training designed to improve the identification of species in focus was undertaken at the end of year two through the ‘train the trainers’ event (Supp info 5) and as such, species-level data, resulting from increased capacity and improved customs procedures following this, is not yet available. However, the post-test scores from species identification modules indicate a 20% improvement in the species identification of the trainers following the training, with 86% of species identified correctly (Supp info 8).

6. Project support to poverty alleviation

While our project is focused on strengthening law enforcement and ensuring effective legal frameworks and not directly on alleviating poverty, it will provide the Indonesian Government with the tools needed to manage marine resources in line with international commitments of CITES-legislation. This in turn will provide additional support towards improving Indonesia’s sustainability objectives, including advice on stock assessments, quotas and applicability of non-detriment findings in the future, promoting sustainable elasmobranch fisheries, therefore safeguarding biodiversity and livelihoods.

Furthermore, economic benefits can be yielded by the presence of a healthy marine ecosystem in Indonesia (often signified by the presence of sharks and rays as ‘top predators’), both directly and indirectly. Indirectly, the loss of key predators from the ecosystem due to overfishing will have knock-on consequences down the food chain as fishing effort is displaced to smaller fish species which are often relied upon for artisanal fisheries income and food. Direct benefits can be realised by having good numbers of top predators and threatened shark and ray species through the increase in ecotourism through scuba diving.

7. Consideration of gender equality issues

The Cefas, MMAF and WCS teams working on this project are of mixed genders, and throughout the project we have been successful in ensuring that the stakeholders we have engaged with have been represented by both men and women (Table 1). During the design of our project, we anticipated that we might see fewer women attend the centralised workshop in Jakarta due to family commitments restricting travel. To mitigate this, the regional focus groups provided another platform for the project to engage with these staff members more locally, and indeed we did see

increased attendance by women. At three of the six regional focus groups we had higher numbers of women attend.

Table 1. Composition of genders at engagement activities during year 1 and 2.

Activity	Female	Male
Project Inception workshop	16	31
Focus group – Satker Jakarta	10	6
Focus group - Denpasar BPSPL	3	8
Focus group - Makassar BPSPL	7	6
Focus group - Pontianak BPSPL	1	3
Focus group - Loka Sorong	7	9
Focus group - Satker Medan	4	2
Custom officer wildlife trade workshop (WCS)	1	36
Module evaluation workshop November 2019	19	22
'Train the trainer' workshop January 2020	8	12
ID training with BPSPL Pontianak	17	19

In 2019, Cefas established an Equality Diversity and Inclusivity (EDI) Steering Group and gender equality was the first 'protected' characteristic defined in the EDI handbook for staff. Cefas' commitment to gender equality has been exemplified by their decision to submit an application to the Athena SWAN Charter. This recognised accreditation scheme advances EDI providing representation, progression and success for all, although was originally established in 2005 to encourage and recognise commitment to advancing the careers of women in science, technology, engineering, maths and medicine. Cefas have drafted their application which was submitted in November 2020.

8. Monitoring and evaluation

Cefas follows ISO9001 project management structure. As part of this commitment, we have implemented fortnightly project management and budgeting meetings between project lead and Cefas PM and have regular partner communication via email, WhatsApp and Skype. This ensures that monitoring of activities and associated expenditure is tracked closely throughout the project. Attendance records, workshop minutes and visit reports, photographs and media engagement (see Supp info) have successfully been used to monitor and evaluate activities undertaken.

9. Lessons learnt

Key to the success of our project so far is the shared commitment by all partners in delivering the project plan. The Indonesian government were instrumental in the project design and are therefore fully committed as it meets their priorities and needs. The activities also integrate with and build on their existing institutions and capacities rather than reinventing the wheel. Similarly, this has also been our approach with planning species identification training. We have engaged with international experts who deliver advanced ID training around the world to learn from those examples where it has worked well, by selecting and translating existing visual ID guides, and by engaging with practitioners in Hong Kong who are the first to use molecular approaches to species identification at importing facilities.

The stakeholder engagement period in year one has allowed us to refine the planned interventions for year two, whilst at the same time getting buy-in from the technical implementing staff who will be key to the on-going success of changes to customs procedures. We would recommend that others undertaking similar projects have strong existing in-country engagement,

trust and understanding and that the intended outputs of their project match their partners priorities and needs. This is something we will continually improve upon throughout the project by supporting the Elasmobranch Trade Training Team to take ownership of the improved customs procedures and by ensuring the project looks outwards to learn from what others are doing globally to improve management of their shark and ray trade.

Our project partnership was formalised by a Collaboration Agreement. This took significantly longer to finalise than expected as it involved members of the Cefas business team meeting with the Indonesian government to discuss the terms in detail. The delay in signing the agreement meant that the transfer of funds to partners was delayed as was the hire of a WCS project coordinator. However, all partners were able to continue working on the project with WCS staff covering the project coordination role. In the future it would be advisable to begin discussion of the terms of the Collaboration agreement in advance of receiving project funding.

10. Actions taken in response to previous reviews (if applicable)

Feedback from the Year 1 annual report suggested the addition of an indicator that assesses the roles that different genders play in the elasmobranch trade. This was discussed on the phone with LTS and it was agreed that this would not be possible within the current design of the project.

11. Other comments on progress not covered elsewhere

The final year of our project was designed to be a period of knowledge exchange and a forward look on next steps, achieved through Indonesia-UK delegation visits and regional engagement workshops with stakeholders in shark trade management. The worldwide COVID-19 pandemic has meant that we have been unable to conduct the final year activities, except for progress made in seizures of illegally traded products and subsequent prosecutions. We requested and were granted to delay our activities because we believe that we will achieve the best outputs for the project if we can carry them out in person as planned. However, we had not anticipated that restrictions would be in place for such a long period and so going forward, we will begin to explore how we can progress against some of the activities virtually, for example, hosting some focused discussions and seminars on fisheries management between MMAF and Cefas.

12. Sustainability and legacy

A project communication strategy was designed to promote the profile and gain public interest in the project. This includes the creation of a project blog series (<https://marinescience.blog.gov.uk/>), the use of Twitter to generate interest during key activities and to promote the blog, and discussion with the Defra IWT communication team on promoting the project going forwards. The project also gained profile when it was announced alongside UK commitments at the Our Oceans global summit in October 2018.

Our exit strategy has been strengthened now the project is running. We are confident that we now understand who needs to be represented on the Elasmobranch Trade Training Team to ensure its long-term success and we are in the process of integrating the team within the current government structure to ensure it has institutional backing. Furthermore, the Minister Decree No. 61/2018, which is critical for the implementation and continuation of project outputs has been issued. The decree has been translated into English during year one of the project to allow all project partners to ensure we are working alongside this piece of legislation.

Andhika, the PhD student, was a member of staff within the MMAF. This meant that Andhika already had an excellent knowledge base on the current shark and ray trade in Indonesia, and importantly, on completion of his PhD plans to return to Indonesia and his position in MMAF to share the knowledge and expertise he develops.

This project has attracted additional UK government funding to support interventions which were identified during the first year of this project but were not included in the project plan. This work has led to the development of additional resources for Indonesia – translation of existing ID

guides into Bahasa, as well as the development of a trunk identification guide which will now be part of a series of shark and ray identification guides coordinated by WCS.

13. IWT Challenge Fund identity

We have ensured that the UK Government funding logo has been used in project presentations, meeting invites and on workshop banners (Figure 6). We have also included the @Darwin_Defra tag in select Tweets (Figure 6) and will ensure all Tweet include the IWT Challenge Fund tag when it becomes available.



Figure 5. Selected Tweets and the banner from the ‘training of trainers’ workshop demonstrating the @Darwin_Defra tag and UK government funding logo respectively.

14. Safeguarding

Cefas has a safeguarding policy (Supp info 14) in place, to which Cefas project staff read and acknowledge their agreement. This policy has been included within this report and thus disseminated to project partners. Through Cefas’ project management framework (Section 8) a project risk register is in place and regularly updated where any safeguarding concerns can be captured.

15. Project expenditure

Table 2: Project expenditure during the reporting period (April 2020 - March 2021)

Project spend (indicative) since last annual report	2020/21 Grant (£)	2020/21 Total actual IWT Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (Cefas)				
Consultancy costs (U o Salford)				
Overhead Costs (Cefas)				

Travel and subsistence (Cefas)				
Travel and subsistence (University of Salford)				
Others (Cefas)				
Others (University of Salford)				
Cefas & Uni of Salford SUBTOTAL				
Staff costs (WCS)				
Overhead Costs (WCS)				
Travel and subsistence (WCS)				
Operating Costs (WCS)				
Operating costs (WCS Only)				
WCS SUBTOTAL:				
TOTAL				

16. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes

I agree for the IWT Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here)

Award of this project was included in the list of UK commitments that were announced at the Our Oceans global summit in Bali, October 2018. The project was seen as a strong example of UK-Indonesia collaboration around a pertinent issue as a direct deliverable under the Government to Government Maritime MoU. The Our Oceans conference saw the convening of global leaders with a shared focus of achieving sustainability in the management of our oceans and was therefore a fitting platform to publicise the start of this programme of work.

During the second year of the project, additional UK government funding was obtained to support the development of the first shark trunk visual identification guide for CITES-listed species. Funding was also secured for additional support for visual identification training for species listed at CITES CoP18 (August 2019) and which were therefore not included in the original project proposal. Award of this funding was based on the strength of the outputs generated from the current IWT funded project and the team. The final trunk identification guide will be made available internationally as part of a series of material for the visual identification of shark and ray products, co-ordinated by WCS. The series of shark and ray identification material is planned to be launched in May/June 2021.

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2019-2020

Project summary	Measurable Indicators	Progress and Achievements April 2019 - March 2020	Actions required/planned for next period
<p>Impact Strengthened monitoring and enforcement of elasmobranch trade decreases illegal wildlife trade, reduces exploitation of threatened species, and promotes sustainable management of fisheries, safeguarding biodiversity and livelihoods through improved legal frameworks.</p>			
<p>Outcome Indonesia has capacity to effectively trace, monitor and control trade in sharks and rays to support CITES legislation and provide a risk-based approach to legal and sustainable resource use.</p>	<p>0.1 By end of year one, a key partner workshop has been delivered in Jakarta, engaging with >25 key elasmobranch trade stakeholders, including governmental bodies, academic experts, regulatory bodies and representatives from regional NGO's, identifying the interventions necessary to improve elasmobranch trade monitoring processes. Three local focus groups will be run in Jakarta, Semarang and Surabaya to collate input from fishers, processors and traders.</p> <p>0.2 By the end of the project at least 15 individuals from MMAF have been successfully trained in elasmobranch identification techniques, with a significant increase in accurate identification of products of all trained staff in comparison to Y1 baselines.</p> <p>0.3 By the end of the project, increased capacity and efficiency of MMAF and law enforcement officers increases prosecution rate of illegal shark and ray traders (and reports to CITES committees), as determined against</p>	<p>In November 2018, 47 key trade stakeholders attended the project inception workshop in Jakarta (Supplementary Information 4, 5, 6) and the project partners conducted visits to all six regional hubs to gather information on Indonesia's shark and ray trade.</p> <p>The Elasmobranch Trade Training Team is currently being formed and officialised within the government training structure and international species identification experts have been contacted regarding the delivery of training.</p> <p>Initial discussion with law enforcement officers and customs agents have taken place to plan year two trainings on detecting illegal trade of marine species. Key training locations have</p>	<ul style="list-style-type: none"> • Consult stakeholders, finalise and sign off the consultation document which consolidates information gathered during stakeholder engagement activities conducted in year one. • Contract with international experts to deliver the species identification training. • Include a pre and post assessment of staff ID capability within the ID course. • Conduct training of customs officers in species identification protocols for at least four major exit ports.

	<p>baseline data (7 cases 2015, 6 cases in 2016, 2 (large) cases in 2015).</p> <p>0.4 By 2020, a five-year plan is delivered to MMAF outlining recommendations for integration of innovative customs procedure, improved detection of elasmobranch IWT, advice on trade monitoring, and draft improvements to current policies.</p>	<p>been identified. In addition, WCS Wildlife Crime Unit have supported the Indonesian government to stop trade of 16kg of manta gills during year one.</p>	<ul style="list-style-type: none"> • Continue to establish the informant network for marine species and begin to collate and analyses the data. • Continue to work closely with MMAF to align the project outputs with the Ministerial Degree.
<p>Output 1. A comprehensive understanding of the political and operational landscape of elasmobranch trade has been documented, including the identification of all key stakeholders, their resources and unification of commitments to reducing illegal trade.</p>	<p>1.1 By end of year one, all key trade stakeholders (MMAF officers, BPSPL staff, NGO's, academic researchers), have been identified, contacted, and invited to attend primary stakeholder workshop on elasmobranch trade management and species identification methods, ensuring non-gender discrimination.</p> <p>1.2 Following a two-day inception/consultation event with key partners in Jakarta with at least 25 participants, the commitments (resources, geographic coverage, skills, responsibilities) of the core stakeholder groups (identified in 1.1) have been mapped, and the gaps and streamlining opportunities have been identified by year one.</p> <p>1.3 By end of Y1 three one-day regional focus groups (Jakarta, Semarang and Surabaya) will collate information on operational processes, local knowledge and understanding of CITES commitments from fishers, processors and traders which relate to their fishery/trade routes.</p>	<p>In November 2018, 47 key trade stakeholders attended the project inception workshop in Jakarta (Supp info 2).</p> <p>Information on resources, geographical coverage, skills and responsibilities were collated from workshop minutes and feedback forms during the project inception workshop in November and presented in the consultation document (Supp info 3).</p> <p>During year 1, project partners visited BPSPL Serang and BPSPL Denpasar staff twice (November 18 and January 19) and BPSPL Makassar (January 19), Pontianak, Padang and Sorong (Feb/March 19) and one of their exporters facilities to collect information on operational processes and localised understanding of CITES using a guiding questionnaire (Supp info 4). Results were collated and included in the consultation document (Supp info 3).</p> <p>Information and knowledge collected during year one was consolidated into a consultation document which is currently under partner review (Supp info 3).</p>	

	<p>1.4 By end of year one, a consultation report, which consolidates information from the core stakeholder event and regional focus groups, outlines a unified and sustainable approach to a national-level elasmobranch trade and monitoring program.</p>	
<p>Activity 1.1 Desk-based study on collation of current knowledge, political and legal frameworks and data on Indonesian elasmobranch trade</p>		<p>A 40-page reference document including an overview of geography, products traded, current management and conservation actions and obligations, and available methods for identifying shark species was produced.</p>
<p>Activity 1.2 Ph. D student to compile global overview on elasmobranch trade and current trade regulations adopted by other nations, which will support stakeholder events and ultimately the production of an academic paper on an overview on current elasmobranch trade</p>		<p>In 2021, the PhD students 1st Chapter entitled "Disentangling the shark and ray trade in Indonesia to reconcile conservation with food security" was submitted to Marine Policy (register number: JMPO-D-20-00258). It was also made available online in Biorxiv to support Open Access. Reviewers comments were received on 20th April 2021 with resubmission planned for the end of April.</p>
<p>Activity 1.3 Key stakeholders identified and contacted regarding involvement of project and attendance at the opening stakeholder workshop</p>		<p>Fifty shark and ray trade management stakeholders from across government departments, academia and research and NGOs, were invited to attend the project inception workshop in November 2018 (Supp info 2).</p>
<p>Activity 1.4 Design of core stakeholder workshop and regional focus groups</p>		<p>The two-day stakeholder workshop and regional focus groups were collaboratively designed by all project partners.</p>
<p>Activity 1.5 Letter of invitation and agendas circulated to workshop and focus group attendees.</p>		<p>Workshop agendas were sent to stakeholders identified in activity 1.3.</p>
<p>Activity 1.6 Two-day workshop hosted by MMAF in Jakarta for core stakeholders (NGOs, researchers, Governmental representatives)</p>		<p>The project inception workshop took place on the 14th and 15th November 2018 in Jakarta, hosted by MMAF and Cefas. Forty-seven stakeholders attended (Supp info 2).</p>
<p>Activity 1.7 Regional focus groups for fishers, processors and traders held at Jakarta, Semarang and Surabaya.</p>		<p>Cefas and MMAF undertook an additional visit to inspection hubs BPSPL Serang, 13th November 2018 and BPSPL Denpasar, 16th November 2018. The three planned regional focus groups were conducted by Cefas, MMAF and WCS at BPSPL Serang (28th January 2019), BPSPL Denpasar (29th January 2019) and BPSPL Makassar (31st January 2019) with visits to exporter facilities at each. MMAF and WCS visited the three remaining trade hubs; BPSPL Pontianak, 26th February 2019; BPSPL Sorong, 4th March 2019; BPSPL Medan (Padang), 12th March 2019) (Supp info 4).</p>
<p>Activity 1.8 Production of consultation document from the workshop minutes (1.6, 1.7) from core stakeholder event and focus groups</p>		<p>A 24-page consultation document was produced using meeting minutes and group exercises from the Project Inception Workshop and from the questionnaires and minutes from regional focus groups (Supp info 3).</p>
<p>Activity 1.9 Consultation document sent to all key workshop participants to review and comment.</p>		<p>Consultation document was discussed and actions to improve were made (including the additional information) with project partners in June 2019 at a bi-</p>

	annual project meeting. WCS are leading the collection of additional information from the BPSPL offices (Supp info 3).
<p>Activity 1.10 Finalisation and sign-off of report and submission to MMAF and other relevant Governmental bodies.</p>	Finalisation and sign-off of the consultation document.
<p>Output 2. Improved capacity of MMAF to deliver advanced, on-going training to effectively identify and monitor the trade of CITES-protected elasmobranch species, thereby increasing the detection rates of attempted illegal trades.</p>	<p>2.1. By the end of Q2 Y2, a training programme for a step-wise approach to species-specific identification of elasmobranch products has been designed utilising the existing resources identified during the consultation workshop (i.e. expertise, documentation, guides), which can be used to build capacity for detection and reporting of illegal shark and ray trade (i.e. shipment documentation, CITES reporting).</p> <p>2.2 By end of Y2, >25 individuals (of equal gender where possible) from MMAF offices in Java and Bali) have been effectively trained during a two-day workshop in the step-wise approach. By the end of the project, these staff will have the capacity to independently train other officers across the country as directed by an appointed training lead in MMAF. A further 15 law enforcement officers and legal specialists will have also been simultaneous trained in the new procedures.</p> <p>2.3 By end of Y3, the step-wise approach to species detection has been implemented at BPSPL Denpasar (Bali) and Serang (Java), with at least a 5% visual assessment of a random subsample (e.g. 1 in 20 sacks/boxes), and a sample of 200 individual products selected for independent genetic verification. These methods result in at least a 30% increase in the</p> <p>A five day (forty hour) ‘train the trainer’ programme (Supp info 7), comprising of eight modules with taught and practical elements, has been designed to improve the capacity of staff verifying the shark and ray product trade in Indonesia. Modules include 1) Legislation on Shark and Ray Conservation, (2) Biology and Ecology of Sharks, (3) Biology and Ecology of Rays, (4) Sampling, Statistical Analysis and Reporting on Shark and Ray Utilization, (5) Data Entry, Analysis and Reporting, (6) DNA sampling technique (7) Identification of Sharks listed on CITES (Supp info 9), and (8) Identification of Protected Ray Species and CITES listed Species (Supp info 9).</p> <p>In January 2020, twenty participants (12 men, 8 women) from all six regional offices (BPSPL Padang, BPSPL Pontianak, BPSPL Makassar, BPSPL Denpasar, BPSPL Serang, BPSPL Sorong) as well as representation from MMAF (KKHL) attended a 5-day ‘train the trainer’ event in Jakarta which included step-wise training in the use of visual and DNA based identification of shark and ray products (Supp info 7).</p> <p>To be completed during year 3 of the project (FY 2021-2022). Delayed due to Covi-19 pandemic, one-year project extension granted.</p>

	<p>detection of IWT compared to Y1 baselines.</p> <p>2.4 By end of Y3, the remaining four BPSPL offices have received training in the step-wise approach, with improved capacity of all 6 BPSPL offices to detect CITES-listed in trade.</p>	<p>ID training with BPSPL Pontianak was completed in February 2020 but remaining training to be completed during year 3 of the project (FY 2021-2022).</p> <p>Delayed due to Covi-19 pandemic, one-year project extension granted.</p>
Activity 2.1 Gather existing learning resources from key partners on elasmobranch identification methods		<p>Resources gathered as part of desk-based study (activity 1.1) and during regional focus groups with BPSPL offices who have developed some of their own material. Additional funding was secured to have key ID resources (Pew Identifying shark fins guide (2017) and Shortfin and Longfin Mako (2019) and WCS wedgefish and giant guitarfish guides) translated into Bahasa.</p>
Activity 2.2 Design training programme and improved customs procedure, and structure of the training event		<p>The five day ‘train the trainer’ programme, comprising of eight modules with taught and practical elements, was designed over a period of eight months through a series of 12 meetings between MMAF, WCS, the national training centre, other relevant departments of the ministry and Cefas. 41 participants from 6 BPSL, LIPI, Directorate of Marine Biodiversity Conservation, Research Center of Fisheries, and Marine Surveillance attended a three-day workshop in Jakarta to evaluate the suitability of the modules and provide recommendations for improvement (Supp info 6).</p>
Activity 2.3 MMAF to identify an Elasmobranch Trade Training Team that will manage future training programs and compliance of CITES detection at BPSPL offices.		<p>Selection of the participants for the ‘train the trainer’ team were identified during the design meetings detailed in activity 2.2 and include a representative from each of the six regional shark product verification offices in Indonesia (BPSPL Padang, BPSPL Pontianak, BPSPL Makassar, BPSPL Denpasar, BPSPL Serang, BPSPL Sorong) as well as representation from MMAF (KKHL).</p>
Activity 2.4 Invitation to MMAF, two major BPSPL offices from Bali and Java, customs officials and genetic laboratory facility for training in step-wise approach to IWT detection		<p>Twenty participants from the six BPSPL offices and MMAF were invited to be members of the ‘train the trainer’ team and the trainer’s workshop in January 2020 (Supp info 7).</p>
Activity 2.5 Two-day training event in visual detection methods and then subsequent genetic material collection.		<p>Twenty participants attended a five-day ‘train the trainer’ workshop in Jakarta between the 6th and 10th January 2020. The 40 hour training programme covered eight modules on the management of the shark and ray product trade and included; (1) Legislation on Shark and Ray Conservation, (2) Biology and Ecology of Sharks, (3) Biology and Ecology of Rays, (4) Sampling, Statistical Analysis and Reporting on Shark and Ray Utilization, (5) Data Entry, Analysis and Reporting, (6) DNA sampling technique (7) Identification of Sharks listed on CITES, and (8) Identification of Protected Ray Species and CITES listed Species. Training involved taught and practical components as well as written and practical assessments before and after training. Training was delivered by national and international experts (Supp info 7 and 9).</p>

<p>Activity 2.6 Assessments on the accuracy of BBPSL officers to effectively identify CITES protect species following training.</p>	<p>All 20 participants visual identification accuracy was tested in a pre-test (30 questions) and post-test (25 questions) assessment (designed by Rima Jabado) which was designed to determine if participants had increased their visual ID skills following training (Supp info 8). A twenty percent improvement in knowledge was achieved following training (66% correct answers in pre-test, 86% correct answers in post-test).</p>
<p>Activity 2.7 Improved customs procedures refined and agreed with MMAF and trade regulators (BPSPL officers/WCS WCU) following feedback from 2.6.</p>	<p>Evaluation of the training modules was conducted following the testing workshop in November 2019. The modules were finalised by team and used for the Training of trainer workshop in January 2020. This workshop is the first step for standardised training for the MMAF training agenda and will be adopted by the Training centre and become part of the annual standardised training for new employees. MMAF also propose these modules to Indonesian Ministry of Labour to become the new Competency Standard National Working in Indonesia which applies to other government staff such as quarantine, university and the private sector.</p>
<p>Activity 2.8 Monthly submission of seizure records collated and analysed by MMAF, WCS and Cefas staff to inform the effectiveness of the training against baseline confiscations</p>	<p>A pilot study was initiated at two of the largest BPSPL offices to collect baseline data on seizures. These data are currently being analysed by the PhD student and will be used to inform a robust sampling strategy into Year 3 of the project.</p> <p>Data successfully collected for 2 months (December 2019 -January 2020) to estimate restricted products being inspected to develop further protocols for inspection. From 6 B/LPSPLs, there are 5 B/LPSPL that returned the data collection. About 1600 records have been collection within 2 months. About 3,000 tonnes of products were asked to be inspected, with more than 1,000 tonnes having been sampled and only 21.6 kg of restricted products being found. This finding will plug into analyses to examine the sampling power.</p>
<p>Activity 2.9 Academic paper drafted by Ph. D student on the dual identification of elasmobranch products.</p>	<p>Laboratory work continues validating FastFish ID to identify sharks and Sanger sequencing results have been received. Preliminary results have been presented in 3rd Shark and Ray Symposium in Indonesia on 7-8 April 2021 entitled "Lab-in-the-field: Reducing illegal trade of shark and ray products in Indonesia". Andhika participated as an expert in two pre-workshops i.e. guideline of sharks data collection in landing places and citizen science.</p> <p>On 12-14 April 2021, Andhika participated in 17th Postgraduate Conference 2021 which held by University of Exeter. In May 2021, Andhika will participate in two conferences i.e. Cefas student day and SPARC (Salford Postgraduate Annual Research Conference).</p>
<p>Activity 2.10 MMAF deliver advanced training programme to remaining four BPSPL offices.</p>	<p>On the 27th February 2020, WCS collaborated with the Fisheries Research Centre and BPSPL Pontianak on a shark and ray identification training event. A total of 36 peoples participated in the training which was focused on identifying</p>

	shark product (fins) from CITES Appendix II listed and protected shark and ray species.
<p>Activity 2.11 Cefas follow up visit to assess implementation of improved customs procedure and gather feedback on efficiency.</p>	To be completed during year 3 (anticipated Q2, however, delayed due to Covi-19).
<p>Output 3. Improved capacity for law enforcement agencies to effectively respond to incidences of illegal trade using evidence-based approaches creates stronger disincentives for illegal trade of elasmobranch products.</p>	<p>3.1: By end of Y3, at least two customs representatives from at least four major exit ports for shark and ray products (8 individuals in total) have been trained in shark and ray species identification protocols, in collaboration with MMAF.</p> <p>3.2: By the end of Y3, at least 30 cases of illegal trade in CITES-listed shark and ray species have been investigated, with at least 10 of those effectively being brought to judicial trial (baseline: 7 cases 2015, 6 cases in 2016, 2 (large) cases in 2015).</p> <p>3.3 By the end of Y3, at least 50 media articles have been published in the national and international media</p> <p>On 25-26 September 2019, 37 participants attended a training event on “Preventing the Smuggling of Protected Wildlife in Airports and Seaports”. This event aimed to disseminate information on revised government regulation on the protection of wildlife in Indonesia, including best practices in law enforcement to tackle the illegal trade of terrestrial and marine species. 36 participants representative from many harbours such as Customs of Bitung, Customs of Makassar, Customs of Dumai, Customs of Kualannamu, Customs of Ngurah Rai, Customs of Tanjung Perak, Customs of Belawan, Customs of Batam, Customs of Tanjung Priok, Custom of North Sulawesi, South Sulawesi and Jakarta. 12 representatives were customs offices from three major exit ports; Batam, Soekarno Hatta, and Tanjung Priok (Supp info 10). During Feb 2020, MMAF law enforcement (Marine surveillance) and Quarantine Agency participated in shark product (fins and skin) ID training in Pontianak. A total of eight law enforcement staff attended (Supp info 10).</p> <p>WCS continues to support the law enforcement agencies to investigate illegal trade in CITES-listed shark and ray species, supporting the law enforcement in one case on illegal trade (export) of 438 kg sawfish. Three suspects were brought to judiciary, where suspects were convicted guilty and punished with prison sentences and a penalty. A total of eight cases related to illegal trade of marine species have been officially processed and punished. Six of eight cases were related to illegal trade of sharks and rays. A recent case, handled by LPSPL Serang, successfully seized 375 kg of shark product from five CITES-listed and protected species (silky shark, hammerhead, wedgefish, giant guitar fish, and protected freshwater ray). This case now is on progress to judiciary process.</p> <p>In 2020 (January – December), WCS collected information on 12 Facebook groups and 19 individual accounts that advertised protected marine species. 21 advertisements on these protected species have been reported to Facebook to be taken down. In total, one sack of giant oceanic manta ray gills, 33 giant oceanic manta rays, 11 silver sharks, 11 hawksbill turtles, one green sea turtle, 16 triton’s trumpet shells, and two salt-water crocodiles were advertised across Indonesia.</p> <p>WCS-supported cases on the illegal trade of marine species products have been published in 68 media articles. Media articles have local, national and</p>

	<p>highlighting the Indonesian government's response to illegal trade in marine products.</p>	<p>international coverage with several themes such as bomb fishing, illegal trade of turtles, illegal trade of shark and ray products such as manta gill and fins. Beside that also we have documented some inspiring stories from the community and scientists regarding shark and ray conservation efforts in Indonesia (Supp info 12).</p>
<p>Activity 3.1 WCS to conduct training of customs officers in species identification protocols for at least four major exit ports</p>		<p>By mid-September 2019, 37 participants attended a training event on "Preventing the Smuggling of Protected Wildlife in Airports and Seaports". The participants were Civil Servant Investigators/<i>Penyidik Pegawai Negeri Sipil</i> (PPNS), from seaports and airports who are assigned to investigate domestic and transnational wildlife smuggling, and x-ray machines operators, who have a crucial role to play in investigating illegal wildlife trade cases and identifying the smuggling of wildlife products. Experts from three law enforcement agencies; Customs and Excise, MoEF's Law Enforcement Agency (known as <i>Gakkum</i>), and the Directorate General of Marine and Fisheries Resources Surveillance/<i>Ditjen Pengawasan Sumberdaya Kelautan dan Perikanan</i> (PSDKP), were invited to provide insights and give presentations on illegal wildlife trade cases handled by their own agencies. WCS also provided an update on the latest <i>modus operandi</i> of wildlife smuggling at airports and seaports and also wildlife transportation from source to end market. Information on shark and ray trade regulation, species identification, and the traceability of legally traded wildlife products were also important subjects at the training event.</p> <p>This training event allowed participants to engage in a broader discussion on the differences and similarities in the issues that each agency faces and to share lessons learned, so as to enable a more collaborative approach to counter wildlife trafficking. In addition to these open discussions, the participants also learned about the results from the CITES CoP18 meeting and how it will affect their work in Indonesia. An informal communications group was created as an outcome of the meeting to facilitate WCS-Customs discussions and intelligence sharing. We predict that this will greatly improve communication amongst agencies and other partners in the handling of future cases (Supp info 10).</p>
<p>Activity 3.2 Provide law enforcement agencies with evidence and support to conduct investigations and arrests of illegal traders of elasmobranch products.</p>		<p>WCS has established a Marine Wildlife Crime Unit since 2014. The team has been supporting the government to target the illegal trade of marine species, including elasmobranch products through data and information collection. In this period WCS established an information source network in East Nusa Tenggara (14 people) and Java (3 people) to collect information on the illegal trade on elasmobranch products.</p> <p>In the second year of the project, information provided by WCS to law enforcement agencies resulted in three convictions (Section 3.1, Supp info 11).</p>
<p>Activity 3.3 Publicise Indonesia's response to marine wildlife crime by publishing cases in national and international media.</p>		<p>WCS-supported cases on the illegal trade of marine products have been published in 68 media articles. The media articles cover local, national and</p>

	international coverage with several themes such as destructive fishing (bomb fishing), illegal trade of sea turtles, illegal trade of sharks and rays product (fins and manta gill plates). WCS also covered inspiring stories from the community and experts on shark and ray efforts in Indonesia (Supp info 12).
<p>Activity 3.4 Collect, collate and analyse intelligence and law enforcement data, and use for monitoring and informing enforcement action</p>	<p>Since January 2019 WCS' WCU was expanding the network to collect information on the IWT of shark-and ray and other marine species such as dugong or sea turtle. We also continue to support the law enforcement patrols on marine area in Lamakera, East Nusa Tenggara (ENT) to create an overt deterrent to manta ray hunting and prevent other illegal trade of marine species activity.</p> <p>Marine patrol in Lamakera, ENT Since July 2018 – February 2021, WCS supported DKP, PSDKP, and marine police to conduct marine patrol in East Nusa Tenggara province. The patrolling areas were Solor Barat, Solor Timur, Solor Selatan, Adonara Barat, Adonara Timur, Tanjung Bunga, Terong, Konga, Lembata, Pulau Tiga, Pulau Mas, and Lewotobi Flores Timur waters. In the last 12 months (March 2020 – April 2021) WCS supported the DKP Flores Timur, PSDKP Larantuka, Marine police of NTT to conduct marine patrol with a total of 68 patrol days. There were no illegal activities indicated in this period related to the illegal fishing on shark and ray products. However, during these routine patrols, the government provided 11 warning letters for fishermen whose fishing vessels did not have complete fishing documents/permits.</p> <p>WCS supported the Gol in responding to reports of manta landing in Solor Timur, Solor Selatan, and Solor Barat. In 2020 we recorded bycatch on 38 manta rays and 21 mobula rays.</p>
<p>Output 4. MMAF have increased capacity to utilise their improved scientific evidence from the implementation of the step-wise detection methods to better inform national policies on elasmobranch trade management and CITES compliance.</p>	<p>4.1 At end of Y3, closing ceremonies including a core stakeholder one-day conference and a three one-day regional outreach events at (Jakarta, Semarang, Surabaya) that engage with beneficiaries of the elasmobranch fishery/trade have been led by MMAF to communicate the results and associated benefits of this project to local communities.</p> <p>4.2 At the end of Y3, three key members from MMAF have visited Cefas and DEFRA in the UK to shadow scientific advisors and policy makers on the interpretation of scientific evidence</p> <p>To be completed during year 3 of the project (FY 2021-2022). Delayed due to Covi-19 pandemic, one-year project extension granted.</p> <p>To be completed during year 3 of the project (FY 2021-2022). Delayed due to Covi-19 pandemic, one-year project extension granted.</p>

	<p>into policy and knowledge sharing on marine product traceability systems.</p> <p>4.3 By the end of the project, in addition to improvements to elasmobranch trade regulation, high level recommendations on next steps towards improved fisheries management and research will be presented to MMAF in a five-year plan</p>	<p>To be completed during year 3 of the project (FY 2021-2022).</p> <p>Delayed due to Covi-19 pandemic, one-year project extension granted.</p>
Activity 4.1 Three directorate staff visit the UK for a week to shadow Cefas and Defra staff on science-based policy advice		<p>Indonesian partner visit to the UK was scheduled for the week commencing 22nd June 2020 which included visits to the Cefas laboratory, Border Force CITES team at Heathrow and Defra (Supp info 13). Due to Covi-19 pandemic this is now being reschedule for Q4 of project Year 3 (FY 2021-2022).</p>
Activity 4.2 Directorate staff produce visitation report		<p>Scheduled to be completed during following the June 2020 visit in year 3, however now also rescheduled to Q4 of Year 3 of the project (FY 2021-2022) due to Covi-19.</p>
Activity 4.3 Three regional workshops delivered in Jakarta, Semarang and Surabaya to communicate the improved trade procedures of MMAF to detect illegal wildlife trade		<p>To be completed during year 3 of the project (FY 2021-2022).</p> <p>Delayed due to Covi-19 pandemic, one-year project extension granted.</p>
Activity 4.4 One-day conference with core stakeholders from 1.6 to share project outcomes and knowledge sharing.		<p>To be completed during year 3 of the project (FY 2021-2022).</p> <p>Delayed due to Covi-19 pandemic, one-year project extension granted.</p>
Activity 4.5 Feedback following the engagement workshops is consolidated and fed back to MMAF on potential improvements in a report		<p>To be completed during year 3 of the project (FY 2021-2022).</p> <p>Delayed due to Covi-19 pandemic, one-year project extension granted.</p>
Activity 4.6 Five-year plan produced that summarise the results from the project, lessons learned and future directions for improvements to elasmobranch trade management		<p>To be completed during year 3 of the project (FY 2021-2022).</p> <p>Delayed due to Covi-19 pandemic, one-year project extension granted.</p>
Activity 4.7 Sign revised implementation agreements between MMAF and Cefas.		<p>To be completed during year 3 of the project (FY 2021-2022).</p> <p>Delayed due to Covi-19 pandemic, one-year project extension granted.</p>

Annex 2: Project’s full current logframe as presented in the application form (unless changes have been agreed)

N.B. if your application’s logframe is presented in a different format in your application, please transpose into the below template. Please feel free to contact IWT-Fund@ltsi.co.uk if you have any questions regarding this.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Impact: Strengthened monitoring and enforcement of elasmobranch trade decreases illegal wildlife trade, reduces exploitation of threatened species, and promotes sustainable management of fisheries, safeguarding biodiversity and livelihoods through improved legal frameworks.</p>			
<p>Outcome:</p> <p>Indonesia has capacity to effectively trace, monitor and control trade in sharks and rays to support CITES legislation and provide a risk-based approach to legal and sustainable resource use.</p>	<p>0.1 By end of year one, a key partner workshop has been delivered in Jakarta, engaging with >25 key elasmobranch trade stakeholders, including governmental bodies, academic experts, regulatory bodies and representatives from regional NGO’s, identifying the interventions necessary to improve elasmobranch trade monitoring processes. Three local focus groups will be run in Jakarta, Semarang and Surabaya to collate input from fishers, processors and traders.</p> <p>0.2 By the end of the project at least 15 individuals from MMAF have been successfully trained in elasmobranch identification techniques, with a significant increase in accurate identification of products of all trained staff in comparison to Y1 baselines.</p> <p>0.3 By the end of the project, increased capacity and efficiency of MMAF and law enforcement officers increases prosecution rate of illegal shark and ray traders (and reports to CITES committees), as determined against</p>	<p>0.1 Attendee lists from stakeholder events; surveys and photos from stakeholder workshop; national and social traditional and social media records; organogram</p> <p>0.2 Training records for all BPSPL officers and MMAF training staff; staff surveys on training capabilities/confidence in detecting species-specific elasmobranch products before and after training; independent validation of trade assessments (visual vs genetic identification).</p> <p>0.3 Seizure record trends from Customs Agency available from project duration; intelligence database built on illegal wildlife traders; documented evidence of successful prosecutions including police records and court documents; copies of CITES committee reports.</p>	<p>0.1 Indonesian governmental regulatory agencies (MMAF/BPSBLs) and regional trade stakeholders (fishers, processors and traders) actively engage in workshops and are willing to share views and opinions. <i>MMAF have actively pursued support from Cefas in improving elasmobranch trade. WCS have a demonstrated success in delivering stakeholder workshops.</i></p> <p>0.2 - 0.4 Management authority staff engage in centralised training, standardisation of shark and ray product identification and improved customs procedures. <i>Improvement of elasmobranch detection methods will be tailored to MMAF requirements and are easily integrated into current operations at minimal cost.</i></p> <p>0.2 – 0.4 Staff changes does not prevent continuation of improved process to detect elasmobranch IWT. <i>Training a team of 10 core Elasmobranch Trade Training Team will ensure improved procedures can be dynamic around changing workforces and evolving trade dynamics. All</i></p>

	<p>baseline data (7 cases 2015, 6 cases in 2016, 2 (large) cases in 2015).</p> <p>0.4 By 2020, a five-year plan is delivered to MMAF outlining recommendations for integration of innovative customs procedure, improved detection of elasmobranch IWT, advice on trade monitoring, and draft improvements to current policies.</p>	<p>0.4 Recommendation reported presented to MMAF, draft policies, renewed implementation agreement signed between MMAF and Cefas.</p>	<p><i>training materials will be held and managed by MMAF.</i></p> <p>0.2 - 0.3 The results of the improved customs procedures do not improve the detection capabilities of trade regulators. <i>MMAF have expressed much needed training requirements and by using the world's leading experts on elasmobranch ID and fisheries management that have a proven track record in regulatory improvements, the likelihood of successful outcomes are maximised.</i></p>
<p>Output 1</p> <p>A comprehensive understanding of the political and operational landscape of elasmobranch trade has been documented, including the identification of all key stakeholders, their resources and unification of commitments to reducing illegal trade.</p>	<p>1.1 By end of year one, all key trade stakeholders (MMAF officers, BPSPL staff, NGO's, academic researchers), have been identified, contacted, and invited to attend primary stakeholder workshop on elasmobranch trade management and species identification methods, ensuring non-gender discrimination.</p> <p>1.2 Following a two-day inception/consultation event with key partners in Jakarta with at least 25 participants, the commitments (resources, geographic coverage, skills, responsibilities) of the core stakeholder groups (identified in 1.1) have been mapped, and the gaps and streamlining opportunities have been identified by year one.</p> <p>1.3 By end of Y1 three one-day regional focus groups (Jakarta, Semarang and Surabaya) will collate information on operational processes, local knowledge and understanding of CITES commitments from fishers, processors</p>	<p>1.1 Organogram of governance structure and trade routes; scoping report; stakeholder meeting invitation list.</p> <p>1.2 Photographs from workshop; attendee lists; workshop minutes; media engagement.</p> <p>1.3 Feedback forms from attendees; photographs from the event; focus group minutes; media engagement</p>	<p>1.1 All active scientists, NGOs, and charities working on elasmobranch conservation are willing to collaborate on this project. <i>Many key stakeholders (WWF, PEW, IUCN Shark Specialist Group, scientist) have already been contacted and have shown enthusiasm and interest in contributing to this work.</i></p> <p>1.2 – 1.4 Stakeholders involved with workshops and focus groups will be prepared to share local knowledge, resources, and opinions on the current elasmobranch trade chain. <i>WCS have a proven track record in successful engagement with fishers and traders, which was demonstrated through their previous Darwin funded project. Ensuring participation of communities directly involved with the trade chain will maximise the likelihood of buy in to the project.</i></p> <p>1.2 – 1.3 The work from this project generates sufficient media interest locally, nationally and internationally so</p>

	<p>and traders which relate to their fishery/trade routes.</p> <p>1.4 By end of year one, a consultation report, which consolidates information from the core stakeholder event and regional focus groups, outlines a unified and sustainable approach to a national-level elasmobranch trade and monitoring program.</p>	<p>1.4 Consultation responses; consultation report; participant feedback surveys</p>	<p>that the progress of this work can be communicated throughout. <i>Cefas have a dedicated communications team that has demonstrated success in media engagement. Likewise, WCS have recently had strong media engagement from their Darwin funded projects and wider initiatives in country.</i></p>
<p>Output 2</p> <p>Improved capacity of MMAF to deliver advanced, on-going training to effectively identify and monitor the trade of CITES-protected elasmobranch species, thereby increasing the detection rates of attempted illegal trades.</p>	<p>2.1. By the end of Q2 Y2, a training programme for a step-wise approach to species-specific identification of elasmobranch products has been designed utilising the existing resources identified during the consultation workshop (i.e. expertise, documentation, guides), which can be used to build capacity for detection and reporting of illegal shark and ray trade (i.e. shipment documentation, CITES reporting).</p> <p>2.2 By end of Y2, >25 individuals (of equal gender where possible) from MMAF offices in Java and Bali) have been effectively trained during a two-day workshop in the step-wise approach. By the end of the project, these staff will have the capacity to independently train other officers across the country as directed by an appointed training lead in MMAF. A further 15 law enforcement officers and legal specialists will have also been simultaneous trained in the new procedures.</p>	<p>2.1 Training programme agenda; supporting resources;</p> <p>2.2 Training workshop attendee list; training certification; results of pre-and post-training assessments and confidence survey; press releases and social media engagement from the event.</p> <p>2.3 Monthly seizure records submitted from BPSPL office to MMAF and Cefas; results from genetic verification</p>	<p>2.1 Consultation with identification and genetic experts has allowed the sharing of resources needed to develop an effective step-wise detection protocol for improved CITES compliance. <i>Having already connected with several experts (WWF, WCS, PEW, IUCN Shark Specialist Group) in country regarding this project, all have expressed strong interest in participation and support.</i></p> <p>2.2 & 2.3 The implementation of the improved customs procedure will increase the capacity for BPSPL officers to investigate suspected IWT and increase the accuracy/confidence in detecting CITES listed species. <i>Current means of species-level detection is poor and staff confidence is low. It is therefore highly likely that increased training in visual methods will improve staff abilities to detect illegal products. Furthermore, the availability to innovative genetic procedures will increase the chances of detected illegal species. Evaluating the new procedure half way through implementation allows adaptations to be made to improve</i></p>

	<p>2.3 By end of Y3, the step-wise approach to species detection has been implemented at BPSPL Denpasar (Bali) and Serang (Java), with at least a 5% visual assessment of a random subsample (e.g. 1 in 20 sacks/boxes), and a sample of 200 individual products selected for independent genetic verification. These methods result in at least a 30% increase in the detection of IWT compared to Y1 baselines.</p> <p>2.4 By end of Y3, the remaining four BPSPL offices have received training in the step-wise approach, with improved capacity of all 6 BPSPL offices to detect CITES-listed in trade.</p>	<p>submitted by {insert name of genetics facility}; academic paper drafted on results of dual identification techniques by Ph. D student</p> <p>2.4 Training reports and certificates from remaining BPSPL offices; pre- and post-training survey assessments; feedback from the MMAF training lead.</p>	<p><i>implementation and efficiency of processes.</i></p> <p>2.2 - 2.4 BPSPL will have the capacity and enthusiasm to collect and submit regular qualitative and quantitative data on traded elasmobranch products . <i>Longstanding working relationships between MMAF and WCS (Darwin Initiative grant 22-008) demonstrate the ability for both parties' commitment and capabilities to collect high quality data. Furthermore, Cefas's demonstrated ability to work with national/international fisheries data will ensure there are sufficient processes at BPSPL and MMAF to collect and report pilot study data</i></p> <p>2.3 & 2.4 The BPSPL offices and genetics facilities will remain committed to delivering the customs procedure within allocated timeframes and provide sufficient feedback to ensure improvements can be made for the final procedure. <i>Working agreements</i></p>
<p>Output 3</p> <p>Improved capacity for law enforcement agencies to effectively respond to incidences of illegal trade using evidence-based approaches creates stronger disincentives for illegal trade of elasmobranch products.</p>	<p>3.1: By end of Y3, at least two customs representatives from at least four major exist ports for shark and ray products (8 individuals in total) have been trained in shark and ray species identification protocols, in collaboration with MMAF.</p> <p>3.2: By the end of Y3, at least 30 cases of illegal trade in CITES-listed shark and ray species have been investigated, with at least 10 of those effectively being brought to judicial trial (baseline: 7 cases 2015, 6 cases in 2016, 2 (large) cases in 2015).</p>	<p>3.1: Training records from all customs representatives; test scores from independently verified assessments</p> <p>3.2: Law enforcement records from cases; i2 intelligence database</p>	<p>3.1 Government and law enforcement agencies support the implementation of the proposed custom procedure and agree with the benefits that this will offer in the long-term. <i>WCS's Wildlife Crime's Unit has a successful track record of collaboration with customs agencies and other law enforcement institutions to combat illegal wildlife trade. Customs directors have stated their support for this project during proposal development discussions. Cefas's longstanding experience in project management and protocol design within fisheries management will ensure high quality deliverance of product and continued sup.</i></p>

	<p>3.3 By the end of Y3, at least 50 media articles have been published in the national and international media highlighting the Indonesian government's response to illegal trade in marine products.</p>	<p>3.3 Media articles; social media impact metrics including engagement and retweets</p>	<p>3.2 & 3.3 Improved capacity of Customs Agency to detect IWT leads an increased detection rate of IWT and a decrease in the level of IWT attempts from traders who are now more aware and compliant to current regulations. <i>The Indonesian government has already shown a strong commitment to combatting illegal shark and ray trade, with 29 legal cases against illegal elasmobranch traders since April 2014, leading to 19 successful prosecutions with over US\$70,000 levied in fines and 122 months of jail time. WCS's monitoring data indicates that high profile arrests in enforcement hotspots had a strong deterrent effect and led to a decline in illegal trading. Therefore, we anticipate that expanding and intensifying the WCU approach to strategic locations will continue to deliver these results. Further, WCS and MMAF have existing relationships with major industry players who are willing and eager to receive support to ensure their businesses are compliant</i></p>
<p>Output 4 MMAF have increased capacity to utilise their improved scientific evidence from the implementation of the step-wise detection methods to better inform national policies on elasmobranch trade management and CITES compliance.</p>	<p>4.1 At end of Y3, closing ceremonies including a core stakeholder one-day conference and a three one-day regional outreach events at (Jakarta, Semarang, Surabaya) that engage with beneficiaries of the elasmobranch fishery/trade have been led by MMAF to communicate the results and associated benefits of this project to local communities.</p> <p>4.2 At the end of Y3, three key members from MMAF have visited Cefas and DEFRA in the UK to shadow scientific advisors and policy makers on the interpretation of scientific evidence</p>	<p>4.1 Photographs and media engagement from the event; attendance lists; event feedback surveys on understanding of topic and value of the communication.</p> <p>4.2 Visitation reports from the three MMAF employees providing feedback on training; photographs and media engagement;</p>	<p>4.1 & 4.3 Field officers collect necessary data needed to quantify results and produce recommended documentation. <i>Effective project management and delivery by project team will ensure collation and appropriate documentation of this process. Interim evaluations and monitoring of the data and implementation are conducted monthly.</i></p> <p>4.2 The provided recommendations are applicable to current Indonesian regulations and policy and MMAF are in the position to propose amendments to</p>

	<p>into policy and knowledge sharing on marine product traceability systems.</p> <p>4.3 By the end of the project, in addition to improvements to elasmobranch trade regulation, high level recommendations on next steps towards improved fisheries management and research will be presented to MMAF in a five-year plan</p>	<p>4.3 Final five-year report delivered to MMAF during closing seminar; renewed implementation agreement between MMAF and Cefas.</p>	<p>the government. <i>MMAF have already committed to enforcing new trade restrictions on up listed CITES prohibited species. These new processes will be designed to support these efforts and there will be strong incentives to adopt the improvements.</i></p> <p>4.3 MMAF are in the position to dedicate time and resources to the continued managing of the IWT detection program. This team can continually monitor the trade, engage with stakeholders to ensure awareness of processes, and are able to provide educational training in schools and/or local communities. <i>MMAF have already demonstrated an ability to engage with local communities through their collaboration with WCS. This project, with the addition of long-term commitments from Cefas and the British Government, will ensure these activities are supported into the future.</i></p>
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Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)

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1.1 Desk-based study on collation of current knowledge, political and legal frameworks and data on Indonesian elasmobranch trade

1.2 Ph. D student to compile global overview on elasmobranch trade and current trade regulations adopted by other nations, which will support stakeholder events and ultimately the production of an academic paper on an overview on current elasmobranch trade

1.3 Key stakeholders identified and contacted regarding involvement of project and attendance at the opening stakeholder workshop

1.4 Design of core stakeholder workshop and regional focus groups

1.5 Letter of invitation and agendas circulated to workshop and focus group attendees.

1.6 Two-day workshop hosted by MMAF in Jakarta for core stakeholders (NGOs, researchers, Governmental representatives)

1.7 Regional focus groups for fishers, processors and traders held at Jakarta, Semarang and Surabaya.

1.8 Production of consultation document from the workshop minutes (1.6, 1.7) from core stakeholder event and focus groups

1.9 Consultation document sent to all key workshop participants to review and comment.

1.10 Finalisation and sign-off of report and submission to MMAF and other relevant Governmental bodies.

2.1 Gather existing learning resources from key partners on elasmobranch identification methods

2.2 Design training programme and improved customs procedure, and structure of the training event

- 2.3 MMAF to identify an Elasmobranch Trade Training Team that will manage future training programs and compliance of CITES detection at BPSPL offices.
 - 2.4 Invitation to MMAF, two major BPSPL offices from Bali and Java, customs officials and genetic laboratory facility for training in step-wise approach to IWT detection
 - 2.5 Two-day training event in visual detection methods and then subsequent genetic material collection.
 - 2.6 Assessments on the accuracy of BPSPL officers to effectively identify CITES protect species following training.
 - 2.7 Improved customs procedures refined and agreed with MMAF and trade regulators (BPSPL officers/WCS WCU) following feedback from 2.6.
 - 2.7 Monthly submission of seizure records collated and analysed by MMAF, WCS and Cefas staff to inform the effectiveness of the training against baseline confiscations
 - 2.8 Academic paper drafted by Ph. D student on the dual identification of elasmobranch products.
 - 2.9 MMAF deliver advanced training programme to remaining four BPSPL offices.
 - 2.10 Cefas follow up visit to assess implementation of improved customs procedure and gather feedback on efficiency.
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- 3.1 WCS to conduct training of customs officers in species identification protocols for at least four major exit ports
 - 3.2 Provide law enforcement agencies with evidence and support to conduct investigations and arrests of illegal traders of elasmobranch products.
 - 3.3 Publicise Indonesia's response to marine wildlife crime by publishing cases in national and international media.
 - 3.4 Collect, collate and analyse intelligence and law enforcement data, and use for monitoring and informing enforcement action
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- 4.1 Three directorate staff visit the UK for a week to shadow Cefas and DEFRA staff on science based policy advice
 - 4.2 Directorate staff produce visitation report
 - 4.3 Three regional workshops delivered in Jakarta, Semarang and Surabaya to communicate the improved trade procedures of MMAF to detect illegal wildlife trade
 - 4.4 One-day conference with core stakeholders from 1.6 to share project outcomes and knowledge sharing.
 - 4.5 Feedback following the engagement workshops is consolidated and fed back to MMAF on potential improvements in a report
 - 4.6 Five-year plan produced that summarise the results from the project, lessons learned and future directions for improvements to elasmobranch trade management
 - 4.7 Sign revised implementation agreements between MMAF and Cefas.

Annex 3 Standard Measures

Annex 4 Onwards – supplementary material (optional but encouraged as evidence of project achievement)

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to IWT-Fund@itsi.co.uk putting the project number in the subject line.	Yes
Is your report more than 10MB? If so, please discuss with IWT-Fund@itsi.co.uk about the best way to deliver the report, putting the project number in the subject line.	
Have you included means of verification? You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	Yes
Do you have hard copies of material you want to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	No
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	Yes
Do not include claim forms or other communications with this report.	