Illegal Wildlife Trade (IWT) Challenge Fund Main & Extra: Annual Report

To be completed with reference to the "Project Reporting Information Note": (https://iwt.challengefund.org.uk/resources/information-notes/)

It is expected that this report will be a **maximum of 20 pages** in length, excluding annexes)

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IWT Challenge Fund Project Information

Scheme (Main or Extra)	Main
Project reference	IWT123
Project title	Institutionalizing an evidence-based problem-oriented policing approach in Indonesia
Country/ies	Indonesia/Bukit Barisan Selatan & Bogani Nani Wartabone National Parks
Lead Organisation	Wildlife Conservation Society (WCS)
Project partner(s)	Ministry of Environment and Forestry (MoEF) - now Ministry of Forestry (MoF), Sam Ratulangi University, University of Lampung
IWTCF grant value	£545,000
Start/end dates of project	1 April 2023 – 31 March 2026
Reporting period	1 April 2024 – 31 March 2025, Annual Report (AR2)
Project Leader name	Dr. William Marthy
Project website/blog/social media	N/A
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1. Project summary

Indonesia is a mega-biodiversity country, but this rich biodiversity makes it a major IWT source country in Asia. There are numerous barriers to addressing IWT in Indonesia that generally result from weak capacity or a lack of resources within government agencies. These barriers include: limited capacity to conduct investigative activities, such as intelligence gathering and determining key criminals to target; limited understanding of criminal network operations (including linkages between landscape poaching and urban wildlife trade); poor understanding of the laws pertaining to protected species; and, inadequate preparation of legal documents once arrests are made. These problems are compounded by inadequate legal frameworks, lack of political will to arrest and prosecute major traffickers, and general corruption and complicity of certain government officials. This situation incentivises poaching, which weakens the rule of law in protected areas.

Indonesia has a well-established protected area network, and a mainstay strategy for protecting wildlife and their forest habitats in these areas is a law enforcement response, primarily through ranger de-snaring patrols and counter-wildlife trafficking to arrest traders and middlemen. In protected area landscapes where WCS partners with the Ministry of Environment and Forestry (MoEF), reformed into Ministry of Forestry (MoF) since October 2024, this combined approach has significantly driven down poaching rates but has yet to eliminate this threat, rendering critically endangered species at high risk.

While patrolling remains an essential component for actively protecting threatened wildlife populations, a long-term strategy is needed to address the underlying motivations of poachers. This must offer viable livelihood alternatives to poaching that, simultaneously, alleviates poverty and removes poachers and their households from conflict situations with government authorities. Our project seeks to address this issue because counter-wildlife trafficking efforts in Indonesia have tended to focus on the arrest and sentencing of perpetrators involved in IWT. This approach has been successful (and remains important) in prosecuting high-profile traders. However, these law enforcement actions also target low-level offenders, in particular poachers from rural communities, who engage in illicit activities to meet their livelihood needs, which is unjust and may be counterproductive.

Criminology research shows that when applying a criminal justice response across a range of crime types, increasing the certainty of apprehension and punishment rather than the severity of punishment has a stronger deterrent effect on reducing criminal behaviour. Furthermore, longer prison sentences may increase recidivism in offenders who become institutionalized, lose social ties and legitimate employment opportunities, all of which are important for reformation. Thus, the application of a problem-oriented policing approach to diagnose wildlife crime types and their underlying motivations is strongly predicted to lead to more effective strategies for dealing with them. Part of this must offer alternative solutions to the heavy-handed approaches traditionally applied to rural communities, such as incarceration, which are unlikely to yield sustainable and positive outcomes. To remove these barriers and halt wildlife trafficking therefore requires: site-based efforts that work across the entire law enforcement-judiciary chain through training and technical assistance to remove major traders; coupled with, clear community incentives to forgo poaching in return for improved livelihood security and other benefits. Hence, to address this, through this project we will: Establish a national Working Group to oversee implementation of a novel problem-oriented policing approach and its up-scaling; Demonstrate a landscape-level Integrated Prevention Model (IPM) in reducing poaching and improving rural livelihoods; Support counter-wildlife trafficking measures in provinces connected to the target landscapes (Bukit Barisan Selatan National Park and Bogani Nani Wartabone National Park; Fig.1 & 2 – all figures available in the **Supplementary Materials/SM: Figures_AR2**); and, Strengthen the legal framework for tackling wildlife crime at national and landscape levels.

2. Project stakeholders/ partners

This project builds upon and strengthens pre-existing relationships between WCS and its partner institutions. Each named partner has been instrumental in designing and delivering the activities relevant to their focus during the reporting period, including the MoF): national park authorities for Bukit Barisan Selatan (Sumatra) and Bogani Nani Wartabone (Sulawesi), as well as the relevant provincial Natural Resource Conservation Agency (*Balai Konservasi Sumber Daya Alam*/BKSDA), Education and Training Centre Agency (Pusdiklat) which is evidenced by regular meetings with them and training events to address illegal activities in the National Parks. WCS collaborates with experts from the University of Lampung in Lampung province and the University of Sam Ratulangi in North Sulawesi province to collect and analyse socioeconomic data to measure the well-being of poachers in the targeted villages in the two landscapes which serves as the baseline for measuring the impact of the project on the beneficiaries (poachers). The collaboration between WCS, the National Park authorities, and the universities also resulted to the development of alternative livelihood strategy documents which aims to provide options for the beneficiaries to have an alternative livelihood apart from illicit activities.

At national level, WCS continues the collaboration with the MoF, particularly the KSDAE, including through the SMART working group to upscale IPM implementation. The results include development of national guidelines for SMART patrol, integrating IPM approach into MoF's training program, and establishment of IPM awards based on policy reviews and best practices, a major channel to mainstream the IPM approach to the provincial level. Although there were challenges and delays to achieve the intended outputs, such as the initially planned IPM work group, and the request from the MoF to hold an IPM awards, we overcame this by negotiating and adapting to our partners in order to achieve the best outcome, considering that the MoF is the intended main user of IPM.

3. Project progress

3.1 Progress in carrying out project Activities

Activity 1.1. Establish and strengthen a government Working Group to facilitate good communication and coordination for project implementation.

As discussed in the AR1, we identified that the best approach to ensure the adoption of IPM by park management in Indonesia is to strengthen the existing SMART-RBM (Spatial Monitoring and Reporting Tool – Resort Based Management) working group, where the IPM (Integrated Prevention Model) approach is incorporated into the SMART-RBM. On 4 July 2024 WCS supported the SMART-RBM work group meeting in Bogor (Fig.3), attended by 20 participants (15M/5F) to develop an action plan for implementing SMART patrol throughout Indonesia and to discuss SMART model data that will be used to

analyse patrol results. On 11-12 July 2024, WCS supported the work group to hold a follow-up meeting in Bogor (Fig.4), attended by 11 participants (9M/2F), to discuss patrol strategy, focusing on efforts to prevent illegal activities. In each step of the work, the IPM approach through Scanning, Analysis, Response, and Assessment (SARA) process was used to introduce adaptive management methods for tackling threats in conservation areas and to determine patrol strategy. Further support for this work group includes the development of SMART patrol guidelines (see Act. 1.2-1.5). In September 2024, the Ministry of Environment and Forestry (MoEF – now Ministry of Forestry/MoF) received Herman Goldstein Award for Excellence in Problem-Oriented Policing (POP, synonymous with the IPM)[1] through a case study of WCS-supported IPM implementation in Way Kambas National Park (WKNP) in 2020 entitled "Reforming Hunters to Reduce Snaring in Sumatra, Indonesia". This achievement presents a significant opportunity and momentum to further expand IPM implementation across Indonesia.

Activity 1.2. Conduct bi-annual Working Group meetings to develop national and subnational components for the IPM strategy, review progress, and enhance implementation through adaptive management.

On 14-15 June 2024, WCS supported the SMART working group, which included the Directorate of Area Conservation (*Direktorat Konservasi Kawasan*/Dit. KK), previously known as Directorate of Conservation Area Management (*Direktorat Pengelolaan Kawasan Konservasi*/Dit. PKK) in hosting a Focus Group Discussion (FGD) to address challenges in managing and analysing patrol data and to develop a SMART-RBM guideline, in Bogor (Fig.5, **SM1**). The event was participated by 25 people from the Dit. KK, the Directorate of Conservation Planning (*Direktorat Perencanaan Konservasi*/Dit. RK), national parks, including Seribu Islands, Ujung Kulon, Halimun-Salak, and Gunung Gede Pangrango, and WCS. Participants discussed the utilization of the IPM approach to prevent illegal activities in protected areas.

In December 2024, a three-day workshop was conducted to address key topics aimed at strengthening the implementation of the SMART-RBM and IPM approaches (Fig.6, **SM2**), attended by 31 participants (21M/10F), including representatives from the Dit. KK and National Park staff from terrestrial (Gunung Leuser National Park/GLNP and Kerinci Seblat National Park) and marine (Karimun Jawa National Park, Kepulauan Seribu National Park, and Takabonerate National Park) Protected Areas (PAs). The first day focused on updating the SMART data model to ensure alignment with current field needs and management priorities. On the second day, participants discussed the draft Standard Operating Procedures (SOP) for SMART patrol implementation (see Act. 1.4). The workshop concluded on the third day with a session dedicated to developing training curricula to support effective SMART-IPM implementation (see Act. 1.3). On 13 January 2025, the SMART Working Group discussed the development and finalization of three curricula and their syllabus on SMART-RBM, which incorporate the IPM approach (**SM3**). The curricula and their syllabus covered 1) Training of trainers for the implementation of SMART training, 2) Implementation of SMART for natural resources management at site level, and 3) Analysis of SMART data for natural resources management. This meeting was attended by 22 participants (15M/7F) from the Dit. KK, the MoF's Training and Education Centre (*Pusat Pendidikan dan Pelatihan*/Pusdiklat), and WCS.

Activity 1.3. Develop an IPM training program and train >200 national and subnational MoEF staff.

From 15-18 July 2024, WCS facilitated an IPM training for Bogani Nani Wartabone National Park (BNWNP) staff and local NGOs in Kotamobagu, North Sulawesi (Fig.7, **SM4**). The training was attended by 36 people (33M/3F), comprising 30 BNWNP staff, 4 Forest Management Unit/FMU staff, and 2 representatives from local NGOs (Natural Resources Management Advocates Network and Save Yaki Indonesia). Next, following the finalization of the three curricula and syllabi (see Act 1.2), subsequently, on 17 January 2025, these documents were formally endorsed and signed by the Head of Pusdiklat (Fig.8, **SM5**). A series of meetings was then conducted to further develop the teaching materials or training modules. These modules will elaborate theoretical concepts and practical applications to facilitate effective implementation of the curricula in classroom settings. The training modules are being developed and will be reviewed and consulted with the Dit. KK and Pusdiklat. From 26-28 February 2025, the training curriculum was piloted through a training session in Gisting, Lampung Province (Fig.9, **SM6**). Twenty-six Bukit Barisan Selatan National Park (BBSNP) staff (all male), representing all resort (resort is the smallest administrative unit within a national park) management units were trained on the IPM approach. By the end of the training, the participants reached an agreement that reflected a shared commitment to adopt the IPM framework as a strategic tool to prevent illegal activities within the protected area

Activity 1.4. Support the Working Group to compile IPM lessons learned and document the model for wide replication.

[1] 2024 Goldstein Awards Winner & Finalists | ASU Center for Problem-Oriented Policing | ASU

A lessons-learned document on IPM implementation in WKNP has been completed (**SM7**), detailing the process from problem identification, problem analysis, determination of strategy, implementation of interventions, to assessment. We also collected information to create a similar document for IPM implementation in BBSNP and BNWNP. By Y3, lessons from these sites will be integrated with those from WKNP to recommend widespread replication.
Additionally, WCS supported the SMART-RBM working group in developing three ongoing documents: 1) an SOP on SMART Patrol incorporating the IPM approach for monitoring and evaluation, 2) a book on lessons-learned from SMART patrol implementation in Directorate General of Nature Resources and Ecosystem Conservation (*Konservasi Sumber Daya Alam dan Ekosistem*/KSDAE)'s Technical Implementation Units (TIUs), which will also cover the WKNP case study in implementing IPM, and 3) a book on SMART data analysis. We will continue to assist the work group in these efforts moving forward. The revised draft of the SOP on SMART Patrol, which integrates the IPM approach, is currently under review by selected national parks.

Activity 1.5. Support the scaled adoption of the IPM across Indonesia's protected area network.
In BBSNP, the adoption of IPM is expanding from Biha to Suoh and Ngambur resorts. On 21 August and 23-26 September 2024 WCS facilitated two workshops in collaboration with BBSNP and the Indonesian Rhino Foundation (*Yayasan Badak Indonesia*/YABI) to identify and profile perpetrators of illegal activities in Biha, Suoh, and Ngambur resorts using SMART patrol data. The first workshop (Fig.10) had 19 male participants and took place in Ngambur and Biha, while the second (Fig.11) was attended by 13 participants (12M/1F) in Suoh. From this workshop, further analyses will be developed to decide on targeted interventions. The IPM approach is presently being implemented in BBSNP and BNWNP, with plans to expand it to all resorts in BBSNP and BNWNP. Following the successful implementation of the second IPM training for all resort units in BBSNP in February 2025 (see Act. 1.3), resorts such as Balik Bukit and Sukaraja Atas are planning to continue applying the IPM approach to address bird poaching activities. These two resorts have been identified as the first and second highest in terms of recorded bird poaching incidents within BBSNP, making them priority areas for continued intervention and monitoring. In BNWNP, all resorts under the national park management section (*Seksi Pengelolaan Taman Nasional*/SPTN) II will also be implementing the IPM. Head of BNWNP formalised a data analyst team consisting of three people from each SPTN, which was strengthened through a Letter of Appointments (see **SM8**). In addition, the second phase of IPM training will also be conducted for BNWNP staff in 2025.

Output 2. Activity 2.1. Develop a theory of change to inform the development of landscape specific IPM and intervention strategies (prioritising IWT information gathering, patrolling and livelihood actions).
Two additional theory of change (ToC) documents (rephrased as indicator maps) for alternative livelihood interventions to address songbird poaching in Biha, BBSNP have been developed. These interventions focus on providing opportunities through duck farming (Fig.12) and corn farming (Fig.13) as alternative income sources. In BNWNP, the initial indicator map to address poaching of anoa and babirusa for consumption in Dumoga Barat resort through alternative livelihood intervention has been completed (Fig.14). We will develop this for the approaches on ecotourism, agricultural activities, and livestock farming.

Activity 2.2. Hold multi-stakeholder workshops to socialise and jointly review the landscape-level IPM.
On 24-28 June 2024, WCS supported Dit. KK, who hosted a first batch of training on the technical implementation of SMART in Lampung (Fig.15, **SM9**)**,** attended by 60 people (54M/6F) from 20 TIUs, i.e. national parks and Natural Resources Conservation Agency (*Balai Konservasi Sumber Daya Alam*/BKSDA from Java, Sumatra, and Kalimantan. On 27 September 2024, WCS facilitated a socialization event on the IPM for BKSDA North Sulawesi, the FMU II, and Save Yaki Indonesia in Kotamobagu (Fig.16), attended by 39 people (26M/13F). Following this event, Save Yaki Indonesia applied the IPM to a specific conservation issue in Manembo-nembo Wildlife Reserve, in collaboration with the Forest Conservation Community Forum.

From 27 October to 1 November 2024, the second batch of technical SMART training, focusing on protected areas in Eastern Indonesia, was conducted in Makassar (Fig.17, **SM10**). The training was attended by 60 participants (55M/5F), representing 23 TIUs, including national park and BKSDA staff from Bali-Nusa Tenggara, Sulawesi, Maluku, and Papua regions. In addition, the BNWNP staff participated as one of the resource persons, sharing experiences and best practices in SMART implementation. These trainings were designed to introduce SMART and IPM to TIUs that had not yet adopted or implemented them.

On 8 November 2024, a FGD was conducted to explore strategies for preventing illegal activities in GLNP through IPM in Aceh. The FGD was participated by 26 people (21M/5F) from the GLNP, Leuser

Conservation Forum (*Forum Konservasi Leuser*/FKL), *Pesona Tropis Alam Indonesia*/PETAI, Orangutan Information Centre (OIC), and WCS (Fig.18, **SM11**).

Activity 2.3. Receive and analyse information on wildlife poaching and trafficking from a community monitoring network.

In BBSNP, WCS collected information from the community monitoring network regarding 277 people involved in poaching and illegal trading of songbird, tiger prey, Sumatran tiger, and Sumatran elephant located in 124 villages within 58 sub-districts, and 11 districts/cities in Lampung, Bengkulu, and South Sumatra provinces. Compared to our findings in Yr1, this number has increased significantly (>250%) because during Yr2, our work focused more to identify poaching networks in Biha as the targeted resort and trade networks/supply chain. We categorized the suspected poachers and traders into four based on their roles in the trade – poachers (60%), collectors (19%), sellers (19%), and intermediaries (2%). Most poachers were located in Pesisir Barat district (68 people), while collectors were mostly located in Tanggamus district (14 people), and sellers in Bandar Lampung city (29 people). Out of these people, 220 of them (116 poachers, 49 collectors, and 55 seller) targeted songbirds, 39 people (37 poachers and two collectors) targeted tiger prey animals (muntjac, deer, wild pig, and greater mouse-deer), eight people (five poachers, one collector, one seller, and one intermediary) targeted Sumatran tiger, three suspected poachers targeted Sumatran tiger and tiger prey, two people (one seller and one intermediary) targeted Sumatran elephant, one poacher targeted hornbill, three poachers targeted a combination of mammals and songbirds, and one poacher targeted Sumatran tiger, Sumatran rhinoceros, Sumatran elephant, and hornbill. Poachers targeting songbirds supplied the collectors in Tanggamus, Wes Lampung, Pesisir Barat, and Kaur districts. These local collectors will then distribute the songbirds to sellers in Bandar Lampung.

In BNWNP, WCS identified 122 suspected poachers and traders of wild meat for consumption in BNWNP landscape, located in 27 villages from nine sub-districts in Bolaang Mongondow and South Bolaang Mongondow districts, North Sulawesi, with the most suspects found in Dumoga Barat sub-district. This number has increased (>100%) compared to findings in Yr 1 due to the development and verification of information on existing perpetrators by BNWNP staff and, additionally, resulted from an intervention made in Mekaruo Village, Dumoga Barat district. Perpetrators in this location were identified through research conducted by a student through a research fellowship program and community assistance carried out by BNWNP and WCS. We categorized the suspects into three, i.e. wild meat poachers (77%), collectors (10%), and traders (13%). Although they live in different sub-districts, they were all connected into a network. There are no changes in the wild meat trade network pattern during this period compared to Yr1. This indication is also supported by the existing traditional markets (Imandi, Ibolian, and Dumoga) located relatively close to the national park and their homes. The suspected perpetrators were connected through money transactions, commodity flow, trading partners, and family relations. We will be collecting more data and information to identify and analyse the role of those related to the wild meat trade network in BNWNP, particularly of poachers who supplied wild meat to traders in traditional markets and to collectors. From the routine monitoring of these three markets, we recorded 14 species traded for consumption, i.e. 30 kg lowland anoa, 75 babirusas, 27,175 Celebes warty pigs, 9,915 bats, 2,825 kg reticulated phytons, and 154 kg Celebes crested macaques. This wildlife was indicated to have been taken from Bolaang Mongondow district, which included areas inside the BNWNP.

Activity 2.4. Support a data-driven SMART patrolling strategy conducted by national park-community ranger teams to deter poaching.

From April 2024 to March 2025, eight BBSNP and two BNWNP patrol teams conducted 101 patrol trips covering 16 resorts over 505 days in BBSNP (Fig.19) and 32 patrol trips covering 5 resorts over 139 days in BNWNP (Fig. 22), including 2 resorts over 29 days in FMU II Bolsel-Boltim. We covered a total of 1,112 km on foot and 4,116 km by motorcycle in BBSNP and 518 km patrol on foot, 130 km patrol by motorcycle and 85 km patrol by car in BNWNP. These patrol efforts of BNWNP consisted of 320 km of regular SMART patrols at four resorts, and 283 km of concentrated patrols at one resort, i.e. Dumoga Barat. The teams of BBSNP recorded 32 wildlife poaching incidents, 19 non-timber forest product (NTFP) points, one illegal fishing, one forest fire, and 14 land use incidents (Fig.20). The team also recorded and removed 5 traps consisting of 2 thick cable snares and 3 nylon snares (Fig.21). In BNWNP, the patrol team recorded 20 encroachment points, 42 illegal logging points, 10 illegal mining points, and 4 NTFP points (Fig.23). The team also recorded and destroyed 21 traps, consisting of 8 nylon snares (Fig.24), 12 bamboo traps, 1 cage trap, 1 mist-net, and destroyed 4 huts (used by hunter). In total, the patrol teams in BBSNP and BNWNP covered 5,961 km over 133 patrol trips and removed 26 snare traps during this period.

Activity 2.5. Conduct camera trapping to monitor priority species population trends.

WCS supported BBSNP in conducting a yearly camera trapping survey in Way Canguk Research Station and its surrounding area to monitor terrestrial vertebrate populations. Thirty camera traps were installed during two surveys from May to July 2024 and August to October 2024, covering 128 km² over

approximately 30 trap nights. The first survey yielded 834 trap nights, 3,864 animal photos, and 153 independent captures, recording key species such as tigers, pangolins, elephants, and tapirs. Results from the second survey are being analysed.

Next, WCS provided the logistics for the BNWNP team, who conducted a camera trap survey across 50 grids (2km x 2km each) from July to October 2024, with 3,404 active trap nights. All photos from this survey have been processed and analyzed, this included species identification and metadata tagging for every photograph (22,054 photos) obtained during the survey: 3,119 photos of anoa (Fig.25) were taken during this period, and none of babirusa (priority species: anoa & babirusa). The analysis results show that the occupancy of anoa in 2024 is 0.62 SE 0.1, with a 95% Confidence Interval (CI) ranging from 0.43 - 0.82. As for babirusa, there was no detection/photo captured during this survey which may have resulted from the spreading of African Swine Fever (ASF) virus that affected wild pig populations in Sulawesi (including BNWNP) in late 2023 to early 2024.

Activity 2.6. Work through partnering community networks to design a locally appropriate alternative livelihood support strategy for poacher reform.
Alternative livelihood intervention strategies were developed to address babirusa and anoa poachers in Dumoga Barat, BNWNP and songbird poachers in Biha, BBSNP. Based on socio-economic survey results and discussions with the poachers (Fig.26), we identified the individuals targeted for an intervention. Alternative livelihood strategy documents were completed (**SM12**), detailing the options for an alternative livelihood and the prioritized and intended beneficiaries.

In BBSNP, targeted poacher groups were identified through an integrated approach using patrol findings, camera trap data, community input, and human-wildlife conflict mitigation efforts. This information, combined with the results of socioeconomic surveys, highlighted songbird poaching in the Biha area as a critical issue. As an initial step, selected poachers were formally organized into a forest farmer group (*Kelompok Tani Hutan*/KTH), enabling them to access support from stakeholders and transition to alternative livelihoods. Each alternative livelihood beneficiary candidate was assessed and scored based on three key criteria: economic condition as motivation for poaching, level of poaching intensity, and significancy of their role impact or influence on other hunters. Those with the highest scores were prioritized for support. This structured selection process mirrors the approach used in BNWNP, ensuring consistency and fairness across both landscapes. Based on the findings, in Yr2, out of the 26 KTH members, three individuals from each landscape were selected as the initial beneficiaries of the livelihood initiative. The selection of alternative livelihood types was discussed between beneficiaries, WCS, and partners, allowing them to choose options most suited to their interests and skills, while considering its feasibility. In BBSNP, the alternatives provided include livestock farming (duck), corn cultivation, and small-scale street food vending. Duck farming was provided to one beneficiary (05_BR_026), while corn cultivation was assigned to one beneficiary (05_BR_031). Another beneficiary (05_BR_003) received support to start a street food business, selling snacks at a nearby school. The implementation of these interventions is currently in progress.

In BNWNP, ecotourism (as previously reported in AR1) and agricultural activities are being explored as potential livelihood options. However, these interventions are still in the early stages. Ecotourism, while promising, requires significant preparation and infrastructure, making it more suitable as a long-term initiative. Meanwhile, the development of agricultural livelihoods is facing challenges due to limited availability of suitable land for farming. We also plan to explore options for alternative livelihood through support to the hunters' wives in processing local ingredients into snacks, farming hydroponic vegetables, and processing rice husk and charcoal briquettes.

Activity 2.7. Implement the livelihood strategy, with rigorous monitoring and evaluation, to transition poachers to alternative livelihoods.
In BBSNP, WCS collaborated with BBSNP and YABI to provide 100 egg-laying ducks, and 15 kg of corn seeds to two key poachers as part of the alternative livelihood initiative. This effort is a joint support by the local government's animal husbandry services in Pesisir Barat District and business figures who are connected to the livelihood analysis scheme, while ensuring a sustainable financing for this scheme. Village officials are also involved in the empowerment process. On 11 September 2024, one beneficiary visited duck farms in Karya Punggawa and Gedung Cahya Kuningan (Fig.27) to learn about duck farming. Although the poaching occurred in Biha, the beneficiaries reside near Ngambur, where the Ngambur Resort staff will monitor the financial assistance development.

In BNWNP, a hatchery was established in Yr1 to support ecotourism, particularly through a foster parent program. While long-term preparations are ongoing, monitoring of maleo nesting activities continues, resulting in 253 maleo eggs recorded and secured in the hatchery, with 197 chicks released into the nearby forest. Further preparations for ecotourism development, including potential tourist destinations and capacity building will be discussed further with target poachers and key relevant stakeholders.

Socio-economic survey data collected from Yr1 were used as a baseline to assess the impact of the livelihood intervention, capturing the beneficiaries' conditions before a livelihood-related support was provided. The indicators will be measured again after the intervention concludes in Yr3. In BBSNP, three beneficiaries are men aged between 30 and 50 years old. Each earns less than IDR 2 million (~USD 121) per month per household, placing them within the low-income household category. The result of the well-being survey showed that all three were categorized as “Vulnerable” (well-being scores 15-25 out of 40 points). All three are burdened by monthly debt repayments to the bank. Two of them (05_BR_003 and 031) have two school-aged children, adding further financial pressure to their households. Before receiving the alternative livelihood support, poaching served as a major source of income, at times, substantial enough to replace their primary earnings. However, they have since ceased poaching activities after joining the intervention program.

In BNWNP, three priority candidates have been identified as potential beneficiaries. All are men between the ages of 40 and 50, with a primary monthly income per household of less than IDR 2 million (~USD 121.21), placing them within the low-income household category as well. One of them (MKR 002) relies solely on poaching as his source of income, while the other two (MKR 004 and MKR 005) also work as agricultural laborers, although they do not own any farmland. All three poachers are recipients of government funding assistance. Currently, they remain actively involved in poaching, with frequencies ranging from three times per week to twice per month. This well-being information resulted from the socio-economic survey, while a more comprehensive survey is currently underway to collect more representative data on the beneficiaries' overall well-being.

Output 3. Activity 3.1. Map and monitor IWT supply chains in the focal provinces, covering major exit points, and make recommendations for strengthening government capacity to address this IWT.

The supply chain maps of IWT for the illegal songbird trade and wild meat consumption have been finalized. These supply chains were developed based on Yr1 baseline data and two FGDs conducted in Lampung and North Sulawesi (see Act. 3.2). The first map (Fig.28) shows how songbirds are transported from Lampung Province to Java Island, divided into four parts; 1. Source Area: BBSNP is a major site for songbird poaching, especially in Sukaraja and Balik Bukit resorts (location where the most hunting tools are found). Other source locations include Riau, Jambi, Bengkulu, and West Sumatra provinces. In addition, we also found some songbirds were recaptured after being released into the wild, 2. Distribution: This section outlines the connections between poachers, their groups, intermediaries, collectors, and sellers (bird shops). In general, sellers obtain their supplies primarily from collectors, with a smaller proportion sourced directly from poachers, 3. Exit Point: Bakauheni Port is the main exit point for sending songbirds from Lampung to Java, 4. Demand: This part details how songbirds reach consumers in Java, particularly through bird shops and markets in Jakarta and Tangerang cities. The structure of this supply chain illustrates the complexity of the songbird trade. Key actors such as poachers, intermediaries, collector, and seller (bird shop) play crucial role in facilitating the circulation of songbird.

The supply chain of wild meat distribution (Fig.29) in Bogani Nani Wartabone landscape and North Sulawesi province reflects a stable market demand, which drives poachers and collectors to continue distributing it. Additionally, the involvement of restaurants further reinforces the economic value of this supply chain. There are two main regions identified as sources of wild meat: BNWNP and other regions in Sulawesi Island. This indicates that poaching activities occur not only within the national park but also across other parts of Sulawesi Island. Wild meat distributed for various purposes, including direct consumption, sale within local community and restaurants, delivery to small-and large-scale collectors, or direct transport to traditional markets. In addition, other key actors involved in the distribution stages include small-scale collectors, large-scale collectors, and meat distributors. Small-scale collectors typically operate at the village level, while the large one function at the sub-district to district level. In distribution process, poachers, small-scale, and large-scale collectors are sometimes supported by meat distributors, particularly in moving wild meat to end consumers, traditional markets, and restaurants. Wildlife is transported in various conditions, from live to parts of the wildlife, such as meat cuts or whole carcasses. These include smoked wild pig meat, reticulated pythons with internal organs removed, and bats that have been roasted and frozen.

Activity 3.2. Develop two provincial counter-wildlife trafficking strategies covering the protected area landscapes, connected urban centres and exit points.

Two CWT strategy documents were developed: 1) to address the illegal trade of songbirds in Lampung has been completed **(SM13)** and 2) to address the illegal trade of wild meat (including anoa and babirusa) for consumption in North Sulawesi is in its finalisation stage. To enrich these documents, we conducted two FGDs and interviews with stakeholders as follows: 1) FGD on the illegal trade of songbirds in BBSNP in Lampung on 25-26 June 2024 (Fig.30, **SM14**), participated by 22 staff (21M/1F)

e.g. of the BBSNP, BKSDA Bengkulu Lampung, MoF's Law Enforcement Agency in Sumatra, Quarantine Agency, and the local community, and, 2) FGD on the illegal trade of wild meat for consumption in BNWNP and North Sulawesi on 30-31 July 2024 (Fig.31, **SM15**), participated by 26 staff (22M/4F) e.g., of the BNWNP, BKSDA North Sulawesi, MoF's Law Enforcement Agency in North Sulawesi-Gorontalo, Kotamobagu district police, and the Evangelical Christian church of Bolaang Mongondow, and the local community.

The CWT strategy to address the illegal trade of songbirds in Lampung was developed as a reference for stakeholders in determining strategic and priority actions in tackling the illegal trade of songbirds in the BBSNP and Lampung province. This document presents a comprehensive overview of the illegal trade of songbirds in BBSNP and Lampung Province, covering key aspects such as poaching tools, poaching threats, supply chains dynamics, and related issues. Furthermore, it includes a theory of change (ToC), comprising a situational analysis and a structured strategy framework for addressing the trade. The second CWT strategy document aims to address the illegal trade of wild meat for consumption in North Sulawesi. Similar to the songbird strategy document, it is intended to serve as a reference for stakeholders in determining strategic and priority actions to address the illegal trade of wild meat for consumption in the region.

Activity 3.3. Counter-wildlife trafficking training provided to >200 law enforcement officials from >3 agencies (including port authorities, prosecutors and judges).
On 27 May 2024, WCS facilitated BKSDA Bengkulu-Lampung to hold a capacity building event on "Monitoring the Illegal Distribution of Wildlife in Bakauheni Seaport" in Bandar Lampung (Fig.32, **SM16**). As the main gateway connecting two major islands, Sumatra and Java, Bakauheuni seaport is a major hub for wildlife trafficking. The event was attended by 20 participants (18M/2F) from BKSDA, Quarantine Agency, MoF's Law Enforcement Agency, Seaport Police, Bakauheni Port Authority, South Lampung Police station and Jaringan Satwa Indonesia. On 12-13 September 2024, WCS facilitated the collaboration between the Pusdiklat and the Attorney General Office's (AGO) training center in finalising a training module titled "Wildlife Crime Prosecution" (**SM17**), designed for annual training of early-career prosecutors. In September 2024, the AGO training center used this module to train 350 newly recruited prosecutors (229M/121F), and in December 2024 to train 276 newly recruited prosecutors (146M/130F). In addition, in December 2024 WCS staff trained 42 judges (29M/13F) during environmental judges certification training hosted by the Court Training Agency (**SM18**).

Activity 3.4. Provide high-quality data analysis products to government partners to conduct law enforcement operations across the IWT supply chain.
WCS continued updating and analysing data on bird poachers and traders in BBSNP and wild meat trade network in North Sulawesi. As a result, two analytical products were developed. On 20-22 August 2024, WCS presented BBSNP officers with an analytical product on songbird trade network in BBSNP during a meeting on crime prevention strategy development (see Act. 1.5). The analysis focused on bird poacher groups operating within Pesisir barat cluster. In this cluster, we identified 57 people who illegally hunted birds inside the national park by setting traps in various locations in Biha, Ngambur, and Balik Bukit resorts. The network map shared during the meeting helped stakeholders to identify individuals involved in poaching activities within the national park and to discuss a strategy to prevent further violations. Following this, the analysis expanded to other areas, resulting in a more comprehensive network map of actors related to bird poaching in BBSNP and its trade across the landscape and its surrounding area (Fig.33). This finding has now been used as an initial model to strengthen songbird poaching detection capability of national park staff and has been shared to BBSNP officers as a training material during the IPM training held in February 2025 in Lampung (see Act. 1.3).

In addition to songbird poaching, the national park faces multiple threats, including the poaching of tiger prey such as deer and muntjac. Addressing this issue is crucial to reducing human-tiger conflict by keeping tigers within their natural habitats. During this period, we supported the park in preventing prey poaching conducted by four people who had records to poach in Way Nipah, BBSNP. Authorities intervened before any prey was killed, issuing warnings and providing guidance. Moving forward, we will continue supporting data collection and promoting analysis to inform a more strategic approach to address tiger prey poaching.

In North Sulawesi, we developed an analytical product to highlight wildmeat trade related to BNWNP. Our analysis highlighted strong connections between actors in Bolaang Mongondow district and South Bolaang Mongondow district with key roles played by traders in traditional markets, especially in the circulation of protected species like anoa, black-crested macaque, and babirusa. These traders connected hunters, collectors, and restaurants, and increased sales to Minahasan during events where wild meat was consumed more, such as during "*pengucapan*", a celebration to give gratitude after harvest. We identified new actors- three poachers and two wild meat traders (Fig.34: cyan circles)- who together with previously identified collectors in Molibagu, Bolaang Uki, South Bolaang Mongondow,

supplied wild boar meat to traders in West Dumoga, Bolaang Mongondow, a notable hub in the regional trade network (highlighted blue line). This underscores the growing significance of the Dumoga area and its surroundings, given the area's strategic proximity to BNWNP and being one of the hubs within the supply chain. Most hunters and collectors are primarily farmers (purple and green circles) or miners (yellow circle), and possibly have direct access to BNWNP from nearby farmland. The previously identified major wild meat trader also sourced meat from them. These findings have been incorporated into the CWT strategy document addressing wild meat trade for consumption in BNWNP (see act. 3.2). In the following months, we will refine our analysis by weighing key actors based on the social network analysis metrics, their occupation, and roles, and will focus to Dumoga Raya area based on findings from recent results. These results will be used to train government agencies, including the law enforcement and BKSDA officers in North Sulawesi.

Activity 3.5. Monitor court case outcomes of project-assisted cases.
In this period WCS monitored one IWT case handled by a police officer who was trained on CWT by WCS. The case took place in April 2024, where a South Lampung Police arrested a person suspected to illegally trade pangolin scales in Sukabaru Village, South Lampung. The scales were from a pangolin the perpetrator captured in 2018 on his parents' plantation in Semanak Village, Bakauheni Subdistrict and had been stored at his home for years. In September 25, 2024, the court sentenced him with 20 months in prison and IDR20,000,000 (~USD1,185) fine.

On 25 February 2025, a camera trap installed to survey wildlife in Sukaraja Atas resort, BBSNP caught a picture of a suspected songbird poacher. Based on this information and the network analysis we made, the WCS supported the BBSNP to track an intermediary who collected and traded songbirds resulted from this poaching activity. The intermediary, a bird kiosk owner in Tanggamus district was monitored by the BBSNP staff. Having witnessed the trade of protected birds in the kiosk, on 18 March, the BBSNP staff (from Sukaraja resort) decided to apprehend him, and facilitated by WCS, collaborated with BKSDA Bengkulu and Lampung police to apprehend the kiosk owner. He was then taken to Lampung police office for further legal process. The police confiscated seven leafbirds (Fig.35), two hill mynas, and three black-thighed falconets – all protected species under the Indonesian law. WCS will continue to monitor the legal proceeding of this case. In addition, WCS also supported BKSDA Lampung in Bakauheni seaport to conduct routine search with search dog deployments. The team recorded two cases (in July and in December 2024) regarding the transportation of five zebra doves and two white-rumped shamas. These species were not protected, so no legal proceeding took place besides ensuring that the carrier had transportation and health permits for the birds.

In North Sulawesi, WCS supported the facilitation between BKSDA North Sulawesi, MoF's Law Enforcement Agency, and Quarantine Agency regarding the handling of rhino horns case in Manado, North Sulawesi Province. On 20 March 2025, the Customs Agency in Sam Ratulangi airport found a Chinese man carrying wildlife parts suspected to be 13 rhino horns (see Fig.36 for the confiscated evidence), 12 tiger canines, 4 packages of rhino horn parts, and 20 cow biles, claimed to be imitation to be presented in a festival in Manado. The Customs Agency handed over these wildlife parts to Quarantine Agency to check the health and transportation permits of the goods. Having received this information, WCS and BKSDA North Sulawesi reached out to MoF's Law Enforcement Agency to investigate the case. WCS also facilitated the DNA testing for the evidence, currently awaiting its result. The suspect is being held by the MoF's Law Enforcement Agency in Manado.

Activity 3.6. Facilitate high-impact national and international media coverage of successful government law enforcement operations.
In this period, 62 online articles related to IWT cases in Lampung and North Sulawesi were recorded across various media platforms, including national and local outlets (Fig.37). These records were analysed, especially related to recent modus operandi, and regularly shared with our government partners to support them in addressing IWT. This monitoring effort is also linked to capacity building activities organized by WCS in 2023, which involved 17 young journalists. Of those trained, eight journalists contributed to media coverage on environmental and various wildlife issues. Among the articles produced during the last year, there were seven articles on IWT produced by three journalists, i.e. from Tempo, Pantau24 and Tribunenews Manado.

To increase media coverage on IWT issues, we engaged with mass media through a series of media visits. We compiled a list of key national outlets (**SM19**) built upon our records on published IWT cases. This included Narasi, Tempo.co, Tirto.id, Kompas.id, and ANTARA News. On 11 July 2024, 3 September 2024, and 12 November 2024 we consecutively visited three medias (Narasi, Tempo.co and Tirto.id) (Fig.38) to discuss the current situation, strategies, and approaches to address wildlife trafficking in Indonesia, including the recent updates regarding revised legal framework on wildlife conservation issues. These media outlets have expressed their interest in conservation issues and offered different forms of collaboration:

1. Narasi is interested in journalist training and seeks further collaboration through Narasi Academy, a specific program designed for journalists and public to explore and develop skills in the creative industries, such as news reporting and investigative journalism.
2. Tempo.co invited WCS to participate in *Kolokium*, a section dedicated to science and technology development, to publish IWT issues in a more accessible popular science.
3. Tirto.id is interested to collaborate through a podcast to discuss wildlife conservation issues and has invited WCS to contribute as an expert in "fact-checking"—a program focused on curating information on social media, debunking misinformation, and misconceptions.

To expand our collaboration with the media in the next year, we have sent a request for a media visit to Kompas.id and ANTARA News but have yet to receive updates from them. As an alternative, we engaged Kumparan and Mongabay, as these media outlets also published a significant amount of news related to conservation issues. We will continue to follow up this initiative in Yr3.

Output 4. Activity 4.1. Assess the legislation regarding IWT and wildlife law enforcement to identify inconsistencies, loopholes and recommendations for improvement.

Assessment on regulations related to conservation area protection and prevention of IWT was completed and reported in Yr1. We have submitted the document **(**Fig.39, **SM20)** on 19 March 2025 to MoF's Directorate General of Nature Resources and Ecosystem Conservation *(Direktorat Jenderal Konservasi Sumber Daya Alam dan Ekosistem*/DG. KSDAE) along with the policy paper (see Act. 4.2.) as a basis of policy development for implementing and mainstreaming the IPM approach in the MoF, particularly KSDAE.

Activity 4.2. Conduct research on IWT and wildlife law enforcement to develop a policy paper that further supports the IPM approach.

Following the assessment results from Act. 4.1, WCS in collaboration with Dit. KK conducted a literature study on success stories of implementing IPM (afterwards referred as POP) approach in protected areas (also known as Problem-Oriented Wildlife Protection/POWP to be used in biodiversity conservation context), which served as a policy paper entitled "A Study of The Successful Implementation of Data-Driven Problem Oriented Wildlife Protection (POWP) for Protected Area and Biodiversity Conservation" **(**Fig.40, **SM21)**. This policy paper identified the enabling conditions to further implement the POWP. In this paper, we analysed five case studies as best practices in solving IWT problems using the POWP approach in Indonesia and other countries i.e. Zambia and India. These case studies implemented an adaptive-based management approach such as SARA, to develop targeted interventions that have been successful to tackle IWT. We identified some of the aspects that could support a successful implementation of this approach: 1) developing a ToC to map the problems and its potential interventions, 2) collecting a comprehensive data and information for problem analysis, 3) stakeholder mapping, 4) measuring the indicators of success, 5) developing multiple interventions to achieve the main goal, and 6) anticipating challenges in implementing the POWP approach. This policy paper has been finalised through a series of informal consultations with the Dit. KK and is essential to stipulate a legal guide on norms, standards, procedures, and criteria (e.g. Circular Letter) for implementing IPM strategy among KSDAE. On 19 March, WCS submitted the policy paper along with the regulation assessment (Act. 4.1). In the following year, we will continue to follow up the development of the legal basis built upon this policy paper with Dit. KK.

Activity 4.3. Run a series of policy dialogue workshops to obtain multi-stakeholder inputs and support.

On 26 November 2024, WCS and Dit. KK hold a policy dialogue workshop to discuss and to gain inputs regarding the developed policy paper (Act. 4.2.). This workshop was attended by 30 participants (19M/11F) from all directorates under KSDAE including Dit. KK, Directorate of Conservation of Species and Genetic (Dit. KSG), Directorate of Conservation Planning (Dit. PK), Directorate of Utilization of Environmental Services (Dit. PJLK), and Directorate of Ecosystem Restoration and Area Development (Dit. PEBAP). In this event, WCS presented the basic theory of POWP and disseminated the policy paper, followed by presentations on POWP implementation by speakers from ASRI Foundation (Yayasan Alam Sehat Lestari) and WKNP; Fig.41). Afterwards, participants discussed challenges and best practices in POWP implementation to tackle IWT or other conservation problems (Fig.42, **SM22**). We incorporated these inputs to finalise the policy paper and had it submitted to KSDAE. Through these steps, WCS aims to support the broader dissemination and integration of POWP and IPM approaches across all TIUs at the provincial level, including BBSNP and BNWNP.

As part of the effort to mainstream the IPM to the provincial level while drawing inspiration from the Herman-Goldstein Award (see Act. 1.1), Dit. KK expressed their intention to establish an IPM award recognizing innovative solutions to challenges in protected area management and biodiversity

conservation, including on IWT. This initiative is expected to involve all TIUs under KSDAE, including national parks and BKSDA offices. The finalized policy paper (Act. 4.2.) will serve as the basis for the award's framework and be used to introduce participating units to the IPM and SARA concepts, supporting wider adoption of problem-solving approaches across the conservation units.

Collaboratively, WCS and Dit. KK developed the award concept in the form of Term of Reference (TOR). On 26 February 2025, this concept was consulted and discussed with other technical directorates of KSDAE (Fig.43, **SM23**), attended by 18 participants (12M/6F) from all directorates under KSDAE, i.e. Dit. KK, Dit. KSG, Dit. PK, Dit. PJLK, Dit. PEBAP, and Directorate General Secretariat of KSDAE. Various inputs have been received, and an assessment form has also been prepared as a tool in determining the award recipients. After receiving this feedback, the IPM award concept was finalised by Dit. KK and WCS and submitted to the Director General of KSDAE. While waiting for the Director's response, Dit. KK and WCS will continue to prepare the technical aspects of the award, including the technical mentoring for the submission, setting the criteria for the judges and finalising the assessment form. The IPM Award is planned to launch in May 2025 and will be formally announced through a Circular Letter among KSDAE, followed up with a call for submission.

Activity 4.4. Support the drafting of policy reforms regarding IWT and wildlife law enforcement.
In Yr2, WCS continued the support to the MoF regarding the revision of Ministerial Decree No. 447/Kpts-II/2003 concerning the Administration Directive for the Harvest or Capture and Distribution of Specimens of Wild Plant and Animal Species (Kepmenhut 447/2003). This regulation has served as the legal basis for utilising wild plant and animal populations for almost 22 years to date. The revision process has been internally completed by the MoF legal team in Yr1. As the follow-up, on 18 November 2024, the MoF held a nation-wide dissemination for two regulations, namely the Ministerial Regulation No. 17 of 2024 on Wildlife Rescue (MR 17/2024), and Ministerial Regulation No.18 of 2024 on Utilization of Wildlife in Captive Breeding, Pet Keeping, Trade, and Exhibition (MR 18/2024; Fig.44;). The latter revoked the Kepmenhut 447/2003. This achievement can be attributed to our support in the revision process of Kepmenhut 447/2003 under this grant. It also revoked previous regulations, namely Ministerial Regulation No. P.19/MENHUT-II/2005 *juncto* Ministerial Regulation No. P.69/MENHUT-II/2013 on Captive Breeding as well as Ministerial Regulation No. P.52/MENHUT-II/2006 on Exhibition of Protected Species.

Additionally, MoF held a series of meetings to develop Government Regulation as mandated by the Conservation Law (Law 32/2024). On 25 and 27 November 2024 WCS attended the session concerning species and genetic preservation, where WCS provided mind map/framework of aspects that need to be regulated and inputs during the meeting, e.g. development of a protected species list. These regulations will serve as the umbrella for the newly enacted regulation (MR 18/2024) which establishes the core norms for species preservation and its utilisation and thus, is critical to halt IWT. Since then, the development has been halted as the Conservation Law is currently under review in the Constitutional Court.

However, through a coalition of civil societies (CSOs) called POKJA Konservasi—which WCS is a member of—we continue to advocate for critical matters to be considered in the development of Government Regulations, particularly as mandated by the Conservation Law. A policy brief was developed on behalf of POKJA Konservasi and on 13 February 2025 it was conveyed through a courtesy meeting with the Director General of KSDAE (Fig.45). The advocacy process was to be resumed lately as POKJA Konservasi was invited for a discussion with KSDAE concerning Preservation Area on 25 March 2025—a term newly introduced in the Conservation Law—which would also be regulated in the Government Regulation. Despite using a new term, it derived from well-known concepts, including ecological corridors and high conservation value areas, as explained by Director of Ecosystem Restoration and Preservation Area during the meeting. The area outside the conservation area is essential for the success of conservation measures, including fulfilling the Kunming-Montreal Global Biodiversity Framework goals such as 30x30. He also explained that the drafting of the Government Regulation is still ongoing internally in which POKJA Konservasi responded to offer support, particularly on Preservation Area, including providing technical assistance and facilitating an expert meeting.

In addition, following activity 4.3, we also supported the Director General KSDAE's Circular Letter regarding arrangements on the IPM Award initiative. The letter will contain directions to all KSDAE' UPT to participate in the award. This will encourage all TIUs of KSDAE to implement IPM further by incentivising them at first and envisioned to be continued gradually, which would help in addressing the IWT challenges in and outside protected areas. In the following year of the project, WCS will continue to support KSDAE in developing the Government Regulation mandated by Conservation Law and the Circular Letter concerning the implementation of the IPM Award.

Activity 4.5. Support the Indonesian government to run a series of policy dissemination workshops on IWT and wildlife law enforcement.
As part of the IPM award activity series, we plan to hold a symposium session aimed to sharing and transferring knowledge among the KSDAE' TIUs on tackling the challenges related to protected areas and biodiversity conservation in their working sites. The agenda will also be a discussion session to strengthen the collaborative management between the KSDAE's TIUs, Forest Park UPT (TAHURA), and KSDAE partners (i.e. NGOs) in addressing those problems. The symposium is aimed to be held in August 2025 in commemoration of Indonesia's National Nature Conservation Day. The symposium will showcase case studies submitted by the award finalists (six teams). They will present their case studies to the judges and all symposium participants (e.g. government authorities, academics, NGOs, and other conservation communities). During this session, the finalists will receive feedback from panellists, which also counts as the final score to determine a winner. In the final stage of the event, the winner will be announced and awarded with prizes, as well as envisioned to become champions in fostering wider IPM adoption in Indonesia.

At the higher regulation level, WCS through POKJA Konservasi reiterated the commitment to support the development and/or implementation of Government Regulations concerning critical matters such as preservation area, wildlife exhibitions in electronic media, as well as the biodiversity conservation fund mechanism that could support the law enforcement process, including post-law enforcement treatment such as confiscated wildlife release and rehabilitation. As mandated by the Conservation Law, these derivative regulations shall be made within one year after the Law was enacted on 8 August 2024. Since the process has been resumed, we intend to support public consultations and/or disseminations of the aforementioned Government Regulations under this activity through POKJA Konservasi in the following year of the project.

3.2 Progress towards project Outputs

Output 1. A national Working Group is established and oversees the design, implementation and documentation of a problem-oriented policing approach in two landscapes and its subsequent up-scaling across Indonesia's protected area network.
Output 1 has largely progressed as planned and is likely to be achieved by the end of the project. Instead of establishing a new working group to solely focus on IPM, we leveraged the existing SMART-RBM working group (indicator: 1 IPM working group established) to mainstream the POP approach. Strategies for the development and implementation of the IPM approach have been formulated through a series of meetings (indicator: 3 out of 5 work group meetings held), workshops, and training sessions (see Fig.3 – 7 for meeting photos). The IPM training program has also been established, evidenced by three curricula and syllabi on SMART and IPM formally endorsed and formalised by the Pusdiklat in January 2025 (see **SM5** for the curricula). By the end of Yr2, three IPM training sessions have been held for BBSNP and BNWNP officers, participated by a total of 67 government officers (indicator: 1 IPM training program developed; 67 out of 200 MoF staff trained). Building on this foundation, the Dit. KK is currently planning to roll out IPM training based on the approved curricula to 10 additional national parks across Indonesia, planned in Yr3. Next, a lesson learned document on IPM implementation in WKNP has been completed, while the SOP on SMART patrol that incorporates IPM approach is currently under review by the SMART-RBM working group (indicator: 1 IPM lessons learned document completed; see **SM7** for the document). Recognizing that IPM heavily relies on data generated from the SMART system, the two approaches (SMART-RBM & IPM) were strategically integrated in the form of this SOP. Currently, the IPM approach has been adopted in the BBSNP and BNWNP, as evidenced by the collaboration in efforts between WCS and the NPs to address songbird poaching in BBSNP and wildmeat (babirusa and anoa) poaching and trade for consumption in BNWNP (indicator: IPM adopted in 2 PAs).

Output 2. The effectiveness of an Integrated Prevention Model is demonstrated in reducing poaching and improving rural livelihoods in two demonstration protected area landscapes in Sumatra and Sulawesi (>700,000 ha).
Output 2 has largely progressed as planned and will largely be achieved by the end of the project. The intervention strategies of IPM have been developed for two resorts (Biha in BBSNP and Mekaruwo in BNWNP – evidence provided in AR1 report). This included the intervention through routine and targeted forest patrols and alternative livelihood provision. BBSNP and BNWNP have used SMART for patrol data management since 2014 and 2017, respectively, to support analysis and decision making on IPM strategy and implementation. In Yr2, to raise awareness on IWT and to socialize the IPM, WCS, in collaboration with other PAs conducted four multi-stakeholder meetings/workshops (indicator: 4 out of 10 multi-stakeholder meetings, see Fig.15 – 18 for meeting photos), participated by a total of 99 people from more than 40 government and 4 NGOs. Next, by Yr2, IWT information in the two landscapes regarding songbird trade and wild meat trade have been collected for 24 months (indicator: 24 out of 36 months). This includes updating data of identified poachers and collecting new data on active poachers in each PAs (see Act. 2.3)**.** This was not limited to songbird, anoa, and babirusa poaching but also to priority species such as tiger, elephant, and hornbill that we continued to monitor as they held high importance in

biodiversity and in maintaining healthy ecosystems. SMART patrol have also been conducted in 24 months in both landscapes by Yr2 (indicator: 24 out of 36 months of patrolling, see Fig.19-24 for patrol maps and patrolling activities in each landscape). In Yr2, yearly camera trapping was conducted each in BBSNP and in BNWNP (see Fig.25 for camera trap result on anoa). Population density of tiger in BBSNP (Way Canguk Research Station) and anoa and babirusa occupancy in BNWNP were measured and available to be compared to baseline (indicator: repeat camera trap survey conducted in each landscape; baseline: tiger population density in BBSNP was 2.21 individuals per 100 km^2 in 2022; in BNWNP, anoa occupancy in 2023 is 0.70 SE 0.10, and babirusa occupancy in 2023 is 0.74 SE 0.10). Next, in collaboration with University of Lampung and University Sam Ratulangi, two alternative livelihood strategies have been developed for poachers in each landscape (evidenced in profiling and alternative livelihood strategy documents in **SM12**). In BBSNP, 25 identified songbird poachers have been approached, while 52 individuals were engaged in BNWNP. Through consistent outreach and dialogue, the park teams have developed a better understanding of the underlying drivers of poaching and implemented alternative livelihood as one of the interventions, i.e. through livestock rearing or farming (indicator: >12 months alternative livelihood support implemented in BBSNP).

Output 3. Counter-wildlife trafficking strategies targeting >10 high profile intermediaries at major trade hubs and exit points, including seaports, implemented in two provinces connected to the target protected area landscapes.

Output 3 has largely progressed as planned. The IWT supply chain assessments regarding songbird trade in Lampung province and wild meat trade for consumption in North Sulawesi province have been completed by Yr1, and updated for Yr2 (indicator: 2 out of 2 repeat provincial IWT supply chain assessments; see Fig.28-29 for the supply chain maps). Two provincial-CWT strategies have been developed (CWT strategy to address songbird poaching in BBSNP, Lampung completed, and CWT strategy to address wild meat trade for consumption in BNWNP, North Sulawesi at its final stage) as a result of consultation with relevant government agencies and stakeholders through FGDs, interviews, and literature reviews (see discussion photos in Fig.30-31, meeting notes in **SM14&15**, and final CWT strategy documents in **SM13**). WCS has supported five IWT training events either as event facilitator, trainer, or in developing training module on CWT (i.e. wildlife crime prosecution) to a total of 768 people from more than eight government agencies (judges, prosecutors, BKSDA, Quarantine Agency, MoF's Law Enforcement Agency, Seaport Police, Port Authority, Lampung Police, and one NGO (indicator: >700 out of 200 law enforcement officials from 8 out of 3 agencies trained by Yr2; see Fig.32 and participant list in **SM18**). Next, WCS produced data analysis products (Indicator: 24 out of 24 months of high-quality data analysis products developed), continued case monitoring (indicator: 12 out of 24 months of IWT case monitoring by Yr2), and monthly tracking of online media coverage (Indicator: 141 out of 100 online media articles recorded by Yr2, see **SM19** for list of articles) were continued. This shows that our work is progressing as expected and will likely be completed according to the project timeline.

Output 4. Key wildlife regulations in Indonesia are reformed and disseminated to strengthen the legal framework to tackle wildlife crime at the national, provincial, and landscape levels.

Output 4 has largely progressed as planned. One assessment on legislation regarding IWT and wildlife law enforcement entitled "Regulation Analysis on Conservation Area Protection and Prevention of Illegal Wildlife Trade" has been completed in Yr1. One policy paper on IWT and wildlife law enforcement entitled "A Study of the Successful Implementation of Data-Driven Problem-Oriented Policing Approach for Protected Area and Biodiversity Conservation" has been completed in Yr2 (see **SM21** for the paper). This policy paper highlights six key elements that could increase the success of IPM implementation in Indonesia extracted from five case studies in Indonesia and other countries (i.e. Zambia and India). This document will be used as the basis to develop the policy regarding the IPM further. The assessment and the policy paper have been formally submitted to KSDAE. Two policy dialogues at the national level have been conducted. First, it acted as a dissemination forum for the developed policy paper and second, it as a discussion forum to initiate the IPM award (indicator: 2 out of 3 policy dialogues, see Fig.41-43 for the events). This has been attended by 48 participants in total from across six directorates under KSDAE (Indicator: 48 out of 50 participants from 6 out of 3 agencies). As advised by Dit. KK, this policy dialogue has become a major channel to mainstream the IPM to the provincial level, including the BBSNP and BNWNP as the targeted protected areas under this grant, without necessarily conducting other separate provincial-level policy dialogues. In parallel, the supported revision of Kepmenhut 447/2003 in Yr1 has resulted in a newly enacted regulation (Ministerial Regulation No. 18 of 2024). Following the mandate of the Conservation Law, we will continue to support the development of the Government Regulation as the umbrella for this newly enacted Ministerial Regulation. This aims to strengthen the current regulatory framework regarding IWT and wildlife law enforcement, as this Government Regulation will also incorporate the core norms of species preservation and utilisation as well as its administrative sanctions. In mainstreaming the IPM, a circular letter will also be developed in Yr3. In disseminating the policy, we will support the government in conducting a public consultation or socialisation forum in Yr3. In parallel, the IPM approach will be widely disseminated through a series of IPM Award activities aimed to be held

in Yr3. This will be conducted at the national level and is envisioned to involve all the KSDAE's TIUs across Indonesia without necessarily conducting other separate provincial-level events.

3.3 Progress towards the project Outcome

Outcome: Enhanced strategic decision-making, underpinned by crime prevention strategies, significantly disrupts IWT networks in two biodiversity-rich landscapes and connected provincial trafficking routes, with rural community livelihood incentives providing sustainable livelihood outcomes.

Indicator 0.1: By Yr3, post-project implementation of the IPM is secured through assignment of site-based data analysts, activity inclusion in annual work plans and budgets of two project-assisted PAs, with subsequent adoption in an additional two PAs (Baseline: 0 PA analysts). This indicator has been completed in Yr2. Data operation teams responsible for managing, updating, and analysing SMART data to support informed decision-making have been formally established in each PAs through official decrees: SK.08/T.7/BIDTEK/KSA/1/2025 for BBSNP with 10 analysts, and SK.13/BTNBNW/TU/PEG/1/2025 for BNWNP with 14 analysts (see Section 3.1 above and see the decrees in **SM5)**. The IPM has also been adopted in BBSNP and BNWNP.

Indicator 0.2: By Yr3, >70% of the poachers identified as operating in the poaching hotspots in two PA landscapes have fully transitioned to alternative livelihoods and show increased (>20%) indices for wellbeing, compared to baseline data collected when selecting project beneficiaries and BNWNP (Baseline: In Yr1, poaching hotspots have been mapped and targeted, i.e. Biha resort in BBSNP, and Mekaruwo in BNWNP. In Yr2, 25 poachers were identified in BBSNP, three of whom were targeted for livelihood intervention. In Yr2, 52 poachers were identified in BNWNP, three of whom were targeted for livelihood intervention. Pre-intervention data to measure wellbeing index baseline (19, 23, and 23 out of 40) have been collected from the three targeted poachers in BBSNP, and their change will be measured at the end of Yr3). By Yr2, three poachers in BBSNP received support for alternative livelihood through KTH forum in the form of livestock farming, and agricultural activities. All 25 members of the KTH are also involved in the PA's restoration effort. Alternative livelihood intervention in BNWNP is underway. Having determined to support alternative livelihood in the form of eco-tourism, farming, and local food processing, we are currently looking for available farmland and other specific options to implement this strategy (see Section 3.1 above). The indicator might not be fully achieved. It takes time for poachers to adopt alternative livelihood, and increased wellbeing. It is highly likely the well-being indicator could only be reached after the funding ceased.

Indicator 0.3: By Yr3, >75% threat reduction in poaching hotspots identified by the IPM in Yr1 (Baseline: Poaching hotspots in BBSNP and BNWNP have been mapped and analysed, determined by number of poaching tools found, access to villages, and number of perpetrators living nearby the area. In BBSNP, Biha resort was the targeted site for intervention, having high number of poaching tools found (0.26 incidents per km of patrol effort). Although the indications were not as high as Sukaraja Atas and Balik Bukit (who had highest numbers), other factors were put into consideration, such as the number of poachers nearby the area, and the willingness of the Resort Head to address the problem. In BNWNP, we targeted Dumoga Barat resort for intervention, due to its high poaching activity. From 2017 and 2023, Dumoga Barat recorded the highest number of hunting-related incidents—reaching up to 1.25 incidents per kilometer of patrol effort). In 2024, despite a significant increase in patrol effort to 702 km, no signs of bird poaching were detected in Biha resort, indicating a potential (100%) decline in such activities in the area compared to 2023. A notable decrease in poaching indicators was observed, with only 0.21 incidents recorded per kilometer of patrol (83.2% decreased). Having indications of such positive results, it is important to note other factors to determine poaching reduction, such as information on poachers who are still actively conducting illicit activity (5 out of 25 KTH personnel are still active). We also need to continue monitoring the condition in other resorts, ensuring minimum shifting on poaching areas (see Section 3.1 above, particularly poaching hotspots maps in CWT strategy documents, **SM13,** or Fig.46 and Fig.47, poaching tools found during patrol (**SM24**)). The indicator is likely to be achieved.

Indicator 0.4: At least 10 major traffickers of priority species at provincial level are being, or have been, successfully prosecuted by the project end (Baseline: None (0)). By Yr2, three major traffickers in BBSNP and BNWNP were apprehended. One of which, a pangolin trafficker, has been prosecuted. One major trafficker involving allegedly the transportation of 13 rhino horns and 12 tiger canines in North Sulawesi, and one key songbird trafficker in Lampung were arrested and are being investigated by the Law Enforcement Officers (see Section 3.1 above and Fig.35 and Fig.36 for the government action in handling the wildlife case). The indicator might be largely achieved. WCS will increase the engagement with stakeholders to ensure increased willingness and efforts to prosecute IWT cases.

Indicator 0.5: By Yr3, the population decline of at least two priority species has been halted and stabilised (Baseline: In BBSNP, three poaching hotspots previously identified in Biha Resort were targeted for bird surveys using the point count method in May and July 2024. The surveys recorded a total of 69 bird species, including 14 species protected under national law. 74% of the species identified were categorized as songbirds. In BNWNP, annual camera trap surveys have been conducted at

designated monitoring sites to assess the occupancy of key threatened species, including babirusa and anoa. In 2023, the estimated occupancy rate for babirusa was 0.74 (±0.09), indicating that 74% of the surveyed area was occupied. Similarly, anoa showed an occupancy rate of 0.68 (±0.07), suggesting its presence in 68% of the survey area). Annual camera trap surveys were conducted and analysed during this period for BBSNP and BNWNP. Further analysis to measure the population density or occupation will be held after camera trap surveys in Yr3 have concluded (see Section 3.1 above). This indicator might not be fully achieved due to the spread of AFS that affects babirusa population.

3.4 Monitoring of assumptions

Outcome Assumption: The IPM identifies the full network of key offenders operating in the two target landscapes and the correct measures for persuading these offenders to transition from illegal to legal livelihood activities, which delivers sufficient benefits for them to not regress, thereby demonstrating to MoF decision-makers that the evidence-based approach offered by the IPM is cost-effective and highly applicable for enhanced protected area management, including MoF 'Priority Species' recovery, in Indonesia, and this leads to IPM adoption in an additional two PAs by the project's end.

Comments: This assumption still holds true. The IPM is being implemented at two sites; BBSNP and BNWNP. Targeted poachers and their network were analysed to determine a suitable approach for them to transition from illegal to legal livelihood activities. The IPM has also been introduced at site level and is being implemented through the SMART-RBM approach which is currently the focus at the national level for it to be adopted by all park management in Indonesia.

Output 1 Assumption: There is a clear understanding within key government agencies on the IPM approach and its applicability for addressing IWT, which creates strong political, active partner participation in the Working Group and high-level support for the PA landscape actions, with Working Group meetings proving effective in evaluating project performance and adapting the intervention strategy over the project years, which in combination greatly increases the probability of IPM success, strong government buy-in and upscaling across the PA network.

Comments: This assumption still holds true. WCS leveraged mainstreaming IPM to address IWT through the existing SMART Working Group, through Dit. KK. WCS actively engaged with the government and its partners to ensure a clear understanding of the IPM, its concept and how it is implemented in the effort to overcome IWT. This was done through meetings, workshops, training sessions, as well as piloting IPM at different sites. The commitment made by the work-group was evidenced with the development of SMART SOP that included IPM approach, national-level IPM training program, and IPM Awards.

Output 2 Assumption: All of the key stakeholders are engaged by the project and recognise the need to develop an integrated data-driven approach (through the IPM) to reduce wildlife crime in the landscape, and these stakeholders also understand and fulfil their respective roles and responsibilities in successfully implementing the IPM and are willing and able to adapt the intervention strategy based on the applied research findings that emerge over the project years. To complement this approach, there is strong support and commitment from community partners to design and implement livelihood interventions that provide sufficient improvements to community wellbeing, thereby offering a viable alternative to illegal and unsustainable natural resource use.

Comments: This assumption still holds true. Key stakeholders, i.e. BBSNP and BNWNP understood the importance and benefits of adopting IPM within their current work, particularly for the RBM at each site. This is evidenced by their eagerness to participate in IPM trainings, as well as stated and discussed during regular meetings at the sites. The design of the alternative livelihood strategies were highly supported by the national parks, with support from WCS and universities as partners. The national parks also understand the importance of community support in aiding the poachers transforming to alternative livelihood, as evidenced with all their involvement to monitor the poacher's progress in the new livelihood.

Output 3 Assumption: WCS remains a credible and trusted partner with law enforcement agencies that are receptive to capacity building and inter-agency partnership opportunities to jointly tackle IWT, and the project provides reliable information on the extent of wildlife trade that, in turn, elicits time-critical law enforcement actions at key points of intersection that yield the greatest impact towards dismantling major trafficking networks.

Comments: This assumption still holds true. WCS maintains the relationship and is trusted by MoF's agencies, including the Dit. KSG, BBSNP, BNWNP, BKSDA Bengkulu-Lampung, BKSDA North Sulawesi, MoF's Law Enforcement Agency, Pusdiklat, and other agencies such as the police, customs, and quarantine agency. In Yr2 WCS facilitated the collaboration between these agencies that resulted to the apprehension of three people suspected of wildlife crime. WCS also asked to update training modules on CWT to be used for annual prosecutor training hosted by AGO.

Output 4 Assumption: The Government of Indonesia remains committed to reducing IWT through improvements to its policy framework related to site-based enforcement and its criminal justice system, and project-assisted expert workshops and policy assessments identify the required reforms, barriers to reform and how to overcome these, which are addressed through policy revisions that are widely disseminated and further empower government agencies to take action against IWT.

Comments: This assumption still holds true. WCS continues to support the Government of Indonesia in reducing IWT as evidenced by the support to the MoF in revising Kepmenhut 447/2003 in Yr1, which led to the newly enacted regulation, MR 18/2024. Following the mandate of the Conservation Law, we will continue to support the development of the Government Regulation as the umbrella for this newly enacted Ministerial Regulation. The government also highly committed to mainstream IPM to nation-wide as strengthened by policy dialogues on IPM and the plan to initiate IPM Awards.

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

Short term poverty reduction: Awareness of IWT risks and local solutions regarding livelihood security will be raised for >500 people in IWT villages in the two landscapes. Criminology theory teaches the Pareto Principle, whereby a few key actors (~20%) are responsible for the majority (~80%) of criminal activity. To have impact, the project will target these key actors, with the IPM removing the most notorious poachers and, therefore, their households from at-risk situations by supporting their transition to viable livelihoods. WCS's experience from a Sumatra pilot site is that this will trigger a snowball effect, and the project will support an estimated 50+ additional poachers who voluntarily switch livelihoods. These beneficiaries are expected to have improved (>20%) indices for wellbeing, measured through socio-economic surveys.

Long term poverty reduction: Dismantling IWT networks will have concomitant benefits, including a reduction in other criminal activities (illegal logging and mining), which are often driven by the same people and blight community livelihoods and prosperity. By expanding IPM implementation from several priority villages to six or more villages in each landscape is expected to raise awareness in >1500 people and transition >100 poachers to sustainable livelihoods.

4. Thematic focus

This project contributed to two thematic focus: 1) in ensuring effective legal frameworks and deterrents, and 2) strengthening law enforcement. Through this project, WCS and the government partners made efforts to ensure effective legal frameworks by conducting relevant assessment and developed policy paper entitled, "A Study of The Successful Implementation of Data-Driven Problem Oriented Wildlife Protection (POWP) for Protected Area and Biodiversity Conservation" which is highly relevant to address IWT. The development of these documents went through policy dialogues with different units within the MoF, which ensured the benefit and efficiency of their contents. This then became the basis for an IPM Award and later on planned Circular Letter, as means to mainstream IPM implementation nation-wide (see Section 3.1., Act. 4.1 – 4.3). Additionally, WCS continued to support the government in updating and revising the derivative laws of this newly enacted Conservation Law. This included the revision of Kepmenhut 447/2003, which was revoked into MR18/2024 amongst other laws. We are currently supporting the development of Government Regulation as mandated by the Conservation Law, to become the umbrella law for MR18/2024 which establishes the core norms for species preservation and its utilisation and thus, is critical to halt IWT (see Section 3.1., Act. 4.4). Next, WCS continued the engagement and capacity building with government officers, that led to increased knowledge and willingness to enforce the law. This, added with the support of information collection and analysis, development of CWT strategies, funding for DNA testing, led to the legal process carried out by collaborative government agencies in handling three wildlife crime cases (involving rhino horn, tiger fang, pangolin scales, and protected songbirds; See section 3.1., Act. 3.2 - 3.4). Previously, in songbird cases, the suspect was rarely apprehended due to the lack of willingness by the officers, and that it was not considered as a priority species. Hopefully, through this project that mindset could be shifted, hence increasing the awareness to tackle the illegal trade of this protected species.

5. Impact on species in focus

This project contributes significantly to positive impacts on species, mainly through three key interventions, namely: implementation of the IPM to reduce poaching in the two PAs (i.e. providing alternative livelihood, supporting routine patrols, see Section 3.1., Activity 2.4. & 2.7.); strengthening government CWT capacity through development of CWT strategies and capacity building strategies (see Section 3.1., Activity 3.2. & 3.3.); and strengthening the legal framework to tackle wildlife crime at the national, provincial, and landscape level (see Section 3.1. & 4.4.). These interventions are expected to reduce poaching pressures on threatened species, in particular helmeted hornbills, Sumatran tiger, Sunda pangolins, anoa, babirusa, and songbirds, among many others. Our efforts are also focusing on non-protected species which trades were conducted illegally or unsustainably, such as those collected inside a protected area, or whether the trade is lacking permits required for transporting and trading the

species (products). We also continue to tackle IWT online by monitoring and reporting cases on Facebook and e-commerce sites to the MoF, as described in Section 3.1, Activity 3.5.

6. Project support for multidimensional poverty reduction

This project does not target directly to address poverty reduction. However, indirect results linked to that are expected through alternative livelihood. Through this project we conduct socioeconomic assessment to analyse their social and income characteristics. The findings from the assessment will inform the design of intervention to improve community livelihood while facilitating the transition away from illegal activities. The main type of project support provided to rural community groups, who are characterised by being from low-income households, is through empowering them to collaboratively address IWT through provision of alternative livelihoods. Additionally, another indirect result is the provision of forest ecosystem services that benefit the lives of those residing in proximity to these areas. By taking measures to prevent illegal activities such as poaching and encroachment, it can ensure the integrity of forest ecosystems, thereby contributing to the well-being of the community.

7. Gender Equality and Social Inclusion (GESI)

Gender consideration has been an integral part of planning and preparation for all meetings, workshops, trainings and field activities, and where possible we capture gender disaggregated data for project monitoring and evaluation and to inform where greater consideration needs to be given.

GESI Scale	Description	Put X where you think your project is on the scale
Not yet sensitive	The GESI context may have been considered but the project isn't quite meeting the requirements of a 'sensitive' approach	
Sensitive	The GESI context has been considered, and project activities take this into account in their design and implementation. The project addresses basic needs and vulnerabilities of women and marginalised groups, and the project will not contribute to or create further inequalities.	x
Empowering	The project has all the characteristics of a 'sensitive' approach whilst also increasing equal access to assets, resources and capabilities for women and marginalised groups	
Transformative	The project has all the characteristics of an 'empowering' approach whilst also addressing unequal power relationships and seeking institutional and societal change	

WCS has been committed to Gender Equality and Social Inclusion (GESI). In March 2025, WCS launched a GESI Policy that aims to affirm WCS's commitment to GESI and ensure it is integrated in the whole process of our activities, including the planning, implementation, monitoring, and evaluation. We have started to conduct GESI analysis in various landscapes in Indonesia. At the national level, Indonesia has strong legal basis to support the implementation of gender equality. Through the Law No. 7 of 1984, the government of Indonesia has ratified the result of the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW). This Law then has been operationalized to the ministerial regulations in various sectors, including the Regulation of the Minister of Environment and Forestry No. 31 of 2017 on Guidelines for the Implementation of Gender Mainstreaming in the Field of Environment and Forestry. Apart from the legal context, our learning process in the GESI framework reveals dynamics in practices, environments, roles, responsibilities, representation, and resources. In North Sulawesi, women play a significant role in daily life. While men are typically the primary income earners, women are mainly responsible for reproductive roles. However, in many households, women also actively contribute to increase the family's incomes. Beyond the household, women are engaged in public activities, including participation in village social groups and church-related events. Despite their active involvement, leadership positions remain largely male-dominated. When it comes to natural resource management, both men and women generally have equal access to resources, but decision-making and control over the resources are still predominantly held by men.

In BBSNP, women's participation in public spaces continues to require significant improvement. Public spaces, particularly forums for village development planning and decision-making, are still often considered as the spaces for men, both by men and women. However, the regulatory frameworks where there is a requirement for a minimum of 30% female representation in village meetings, provide a foundation for a change. While some village governments have started to involve women in planning discussions, this practice is still inconsistent, in which continued advocacy and reminders are necessary to ensure women's active participation. In certain villages, women attending these discussions are village officials, but efforts are continued to do to include a broader representation of women in these spaces. The division of gender roles in communities surrounding BBSNP reflects traditional patterns found in

Indonesian agrarian societies. Men are predominantly engaging in productive activities, such as working in the fields, while women put more focus on household responsibilities, including household management and family care. Despite this traditional division, many households show flexibility in these roles. Women frequently contribute to productive activities, such as assisting their husbands in agricultural work to boost family income. Similar with the situation in North Sulawesi, access to resources around BBSNP can be obtained by both men and women, but decision-making or control over the resources is held by men. Based on this information and these lessons, it offers valuable insights that enrich overall strategies for implementing an evidence-based, problem-oriented policing approach in Indonesia. This is particularly crucial for addressing illegal practices of the communities and initiatives aimed at enhancing their livelihoods.

8. Monitoring and evaluation

There have been no changes to the M&E plan over the reporting period. Technical administration and monitoring to assess how the project is meeting its deliverables and indicators is conducted by project staff, who are overseen by the Project Lead (William Marthy), supported by the WCS Senior Program Managers (Sofi Mardiah and Anton Ario) and Senior Monitoring and Reporting (M&R) Coordinator (Hanifah Siregar). For example, staff are responsible for training and coordinating data collection that demonstrates if indicators are being met (e.g. meeting notes, photos, case records, etc.), and this information is then fed to an internal data coordination via a database and checked throughout by the Senior M&R Coordinator. Administratively, as planned, quarterly coordination, planning, and evaluation meetings are held with all core project staff, and regular planning meetings are held monthly; this ongoing and informal monitoring is a vital aspect of the project.

9. Lessons learnt

Partnership: Strong engagement with the MoF, especially KSDAE is essential for the adoption of IPM. This close engagement enabled secure communication to inform, discuss, and navigate any changes needed to achieve the goal, which need to be aligned with government needs and interests. For example, regarding the target to hold three policy dialogue sessions (one at a national level and two at provincial levels), the close coordination with Dit. KK made us understand their point of view that conducting a national-level policy dialogue is sufficient, as they will continue to mainstream this goal through their chain of command. This level of coordination enabled us to brainstorm any initiatives to accomplish the goal. The IPM Award was an initiative identified during this brainstorming, where it could answer the need to incentivise the adoption of IPM as well as to improve government staff technical capacity, such as their writing skills and analytical thinking. In addition, strong engagement with the KSDAE was beneficial to drive policy development. Amid the Constitutional Court review, the process of developing the regulation (i.e. Government Regulation) must be put on hold. However, well-maintained relationship with the KSDAE made it possible to obtain the latest updates on the process directly from their legal and technical teams. This enabled us to provide strategic and timely support as needed to foster the process.

Capacity Building: Efforts to address threats in the national park highlighted the urgent need for robust data collection and analysis to strengthen law enforcement. Most responses from law enforcement agencies remained reactive, meaning that a case investigation was only conducted when clear evidence was brought out by a party. We considered this happened due to limited data availability and a weak motive to pursue songbird and wildmeat cases due to them being mostly not protected species. While officers showed a growing willingness to sanction offenders, especially repeat poachers, many cases still ended with the officers giving them a warning or guidance, particularly for villagers living near the park, possibly to prevent social tension. Enhancing data systems and analytical capacity is essential to identify high-risk actors, enabling investigation, law enforcement, and prosecutions, while also supporting prevention actions. Better data practices will allow a shift from reactive policing to proactive strategic interventions. In addition, a IWT case was successfully identified and acted upon by trained personnel which highlights how targeted training can directly contributed to enforcement outcomes. The investment on building skills and data analysis followed by efficient coordination have proven essential and critical, therefore needs to be continued to enable proactive responses on IWT. Moreover, technical training needs to be paired with system level support (SOPs, guideline, strategy document as well as interagency coordination) to create sustainable change in enforcement capacity.

Livelihood: the exploration of alternative livelihood has underscored the importance of aligning intervention strategies with the on the ground realities and long-term feasibilities. The strategies in both sites have provided us insights and have led us to consider a broader range of livelihood options. The options should be a longer-term initiative rather than an immediate source of income and need to be flexible and contextualised.

Media engagement: media proved to be an effective tool in raising awarenesses about IWT and promoting public understanding of the IPM approach. Proactive, well-coordinated media outreach can amplify the impact of conservation, enforcement efforts and support long-term behaviour change by

informing and influencing public perception. Next steps, close collaboration with government communication teams and careful framing of messages are essential to ensure alignment with their priority and ensure broader dissemination of the key message around conservation, IPM adoption and impact on IWT.

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

Responding to AR1 review, issues raised have been responded to in HY2 and AR1 as follows:

1. Please provide photos of field activities in reports → photos added, please see in this link: **Supplementary Materials: Figures_AR2** [redacted] attached with the submission email. To note, in AR1 we have already put all photos of field activities in the Supplementary Materials, which we submitted together with the narrative report. This style is also followed in this report, where we put all photos in a separate document due to the page limit in the narrative report.
2. Please specify the Outcome indicator 3 baseline of current poaching hot spots in the project areas, and the 2 priority species as the outcome target for protection → baseline of poaching hotspots and targeted species were specified in HYR2 and AR2, and in addition the poaching hotspots are mapped in this report (see Section 3.3). Species targets are re-mentioned in this report (see Section 3.1, Act. 3.2).

11. Risk Management

The existing risks mentioned in the risk register still hold true. Please see the attached project risk register in **SM25**.

12. Scalability and durability

There was an increase for 2024 BBSNP state budget and allowed the park authority to allocate more funds to increase forest patrol from five (in 2022) to eight days (in 2023 and 2024). This will contribute to reinforcing the project's exit strategy, ensuring the sustainability of the adopted strategy particularly in maintaining patrol activity beyond the project lifetime by the park, all of which were results from the project's assistance. The project has also supported WCS reinforcing the implementation of IPM in priority resorts. The IPM strategy has guided patrol team members, comprising both BBSNP and NGO partners, to allocate more time to 1) high-priority areas with a high intensity of illegal activities (through the implementation of a targeted patrol scheme), and 2) engage in personal approaches with individuals identified as key poachers. Like the work in BNWNP, the IPM has been adopted by our government partners, where the government staff, including inspiring leaders in CWT received capacity building regarding ethics and discipline in the effort to increase the park's management effectiveness. Our capacity building strategy aims at the inclusion of the IWT and IPM training programs into MoF's education and training center, which when enacted will be embedded in the agency and will be open for regular and continuous use even after the project has closed.

The project's achievement demonstrates strong scalability, highlighted by strong engagement with key stakeholders, particularly government agencies such as KSDAE, BBSNP and BNWNP, who are critical for future adoption. Through Working Group participation, training and IPM pilot implementation, these stakeholders have gained a practical understanding of the IPM's strategy, its benefits and how it can be replicated across landscapes. Evidence of this has been seen in the BBSNP's increased state budget allocation in 2024, which enable longer and more frequent patrol days – directly supporting project strategies and sustaining interventions beyond project's lifecycle. The IPM strategy has guided patrol team members, comprising both BBSNP and NGO partners, to allocate more time to 1) high-priority areas with a high intensity of illegal activities (through the implementation of a targeted patrol scheme), and 2) engage in personal approaches with individuals identified as key poachers. Additionally, policy-level buy-in is illustrated through the integration of IPM into the SMART SOPs and the development of the national IPM Award, which is designed to promote uptake across all Technical Implementation Units (TIUs) under KSDAE.

In terms of durability, the project has built a strong foundation for long-term impact by institutionalising knowledge and embedding IPM approaches into government systems so that can function beyond its lifespan. A key milestone was the integration of IPM components into the SMART SOPs and the national training program under the MoF's Education and Training Center (Pusdiklat). Once adopted, this curriculum will ensure continuous knowledge transfer on IPM and IWT response, accessible to all relevant government units. Policy-level momentum was further reinforced by the development of the IPM Award—an incentive structure created in coordination with Dit. KK to reward and encourage IPM implementation nationwide. Additionally, through regular mentorship and collaboration, the project helped shift values and behaviours among park staff, with increased emphasis on proactive enforcement, ethical standards, and strategic decision-making. These efforts collectively support a strong exit strategy, through these embedded tools, increased budgets, and policy alignments form a solid foundation to sustain outcomes, with ongoing impact anticipated even after the project concludes.

13. IWT Challenge Fund identity

DEFRA is well-known in Indonesia as a UK government department that has been supporting various efforts to conserve species and address wildlife trade in Indonesia for many years. This project works with key agencies, both at local and national level, and with high-level government officials, which directly benefits the publicity of the IWT Challenge Fund. Various national and international NGOs also recognize the IWT Challenge Fund, taking part in proposals for valuable activities, outputs, and outcomes in different landscapes. During work planning between WCS and the MoF, WCS disseminated the commitment from IWT Challenge Fund in the form of activity and its funding. During meetings, workshops, policy dialogues, training, or FGD, when the government allowed, WCS included IWT Challenge Fund Logo on banners, as can be seen in Figures 7, 31, and 42. Next, to increase visibility, WCS submitted an article regarding one of the achievements from this project, that is the MoF's and WCS' win in Herman Goldstein Awards for reducing poaching activities in WKNP using IPM (see article in this link: [redacted]

14. Safeguarding

[redacted]

[redacted]

15. Project expenditure

Table 1: Project expenditure during the reporting period (April 2024-March 2025)

Project spend (indicative) since last Annual Report	2024/25 Grant (£)	2024/25 Total actual IWT Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)	[redacted]			
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Others (see below)				
TOTAL	**149,76**	**149,76**		

Table 2: Project mobilised or matched funding during the reporting period (1 April 2024 – 31 March 2025)

	Secured to date	Expected by end of project	Sources
Matched funding leveraged by the partners to deliver the project (£)	[redacted]		USFWS, Bureau of International Narcotics and Law Enforcement Affairs (INL), Private Foundation
Total additional finance mobilised for new activities occurring outside of the project, building on evidence, best practices and the project (£)	NA	NA	NA

16. Other comments on progress not covered elsewhere

No additional comments.

17. OPTIONAL: Outstanding achievements or progress of your project so far (300-400 words maximum). This section may be used for publicity purposes.

I agree for the Biodiversity Challenge Funds to edit and use the following for various promotional purposes (please leave this line in to indicate your agreement to use any material you provide here).

NA

Annex 1: Report of progress and achievements against logframe for Financial Year 2024-2025

Project summary	Progress and Achievements April 2024 - March 2025	Actions required/planned for next period
Impact A project demonstrated problem-oriented policing approach is adopted by empowered government agencies and effectively deployed to maximise impact that maintains forest integrity, recovers biodiversity and improves forest-edge livelihoods at scale.	Problem-oriented policing through the IPM approach is being adopted at national and local level. At national level, government agencies are empowered through SMART working group, IPM training program, and policy to implement the IPM in addressing conservation issues. The government is empowered to produce initiatives, in this case IPM Awards to mainstream the approach to site levels. At site level, the project facilitated direct supports to two PAs, to address poaching of songbird in BBSNP and wild meat (incl. anoa & babirusa) in BNWNP. The head of each national park has the integrity to foster IPM to address conservation problems by encouraging IPM implementation at their sites, which include developing IPM strategy and mentoring and monitoring targeted communities to achieve the project goal.	
Outcome Enhanced strategic decision-making, underpinned by crime prevention strategies, significantly disrupts IWT networks in two biodiversity-rich landscapes and connected provincial trafficking routes, with rural community livelihood incentives providing sustainable livelihood outcomes.		
Outcome indicator 0.1. By Yr3, post-project implementation of the IPM is secured through assignment of site-based data analysts, activity inclusion in annual work plans and budgets of two project-assisted PAs, with subsequent adoption in an additional two PAs (baseline = 0 PA analysts).	Ten analysts have been appointed in BBSNP, as formally established through decree: SK.08/T.7/BIDTEK/KSA/1/2025 for BBSNP, and 14 analysts in BNWNP through decree: SK.13/BTNBNW/TU/PEG/1/2025 for BNWNP (see Section 3.3). Each team includes representatives from all management sections within their respective parks.	Train and assist data operation teams in analysing SMART data following the three formalised SMART-IPM curricula and syllabus.
Outcome indicator 0.2. By Yr3, >70% of the poachers identified as operating in the poaching hotspots in two PA landscapes have fully transitioned to alternative livelihoods and show increased (>20%) indices for wellbeing, compared to baseline data collected when selecting project beneficiaries (baseline = poaching hotspot locations and number of poachers to support will be determined through IPM planning in Yr1).	Out of 25 poachers identified in Yr1 in BBSNP, in Yr2, three beneficiaries received alternative livelihood intervention through KTH forum in the form of livestock farming, and agricultural activities. In BNWNP, three candidates have been identified to be prioritized for the alternative livelihood intervention, e.g. in the form of eco-tourism, farming, and local food processing. we are currently looking for available farmland and other specific options to implement this strategy. Wellbeing survey data collected in Yr1 is being measured for beneficiaries in BBSNP and BNWNP. Additional data is being collected to complement this well-being data.	In Yr3, we will continue to monitor the alternative livelihood implementation in all beneficiaries. WCS will also continue the collaboration with University of Lampung and University of Sam Ratulangi to collate wellbeing data from beneficiaries and measure the change of wellbeing in Yr3 compared to Yr 1.

Outcome indicator 0.3. By Yr3, >75% threat reduction in poaching hotspots identified by the IPM in Yr1 (baseline to be determined in Yr1).	In BBSNP, SMART patrol data from 2018 to 2023 shows that Biha Resort recorded the third-highest number of songbird poaching incidents, following Sukaraja and Balik Bukit Resorts, with 0.26 incidents/km. Commonly encountered hunting tools included sticks used with glue or net (32 incidents), decoy birds (13), and snares (10). Given these trends and prior interventions, Biha Resort was selected as a priority site for the IPM approach. In 2024, despite a significant increase in patrol coverage to 702 km, no bird poaching signs were detected, indicating a potential 100% decline in such activities in this area. Similarly, in BNWNP, illegal hunting—primarily targeting mammals for domestic consumption—remains a key threat. Between 2017 and 2023, Dumoga Barat recorded the highest incidence of poaching, with up to 1.25 incidents/km. However, in 2024, poaching indicators declined substantially to 0.21 incidents/km (an 83.2% reduction), with patrol teams documenting 44 bamboo snares, 3 nylon snares, 2 large sling snares, 1 small sling snare, and 1 cage trap.	Following the second phase of IPM training delivered to all resort of BBSNP in February 2025, the IPM approach is now being implemented in Sukaraja and Balik Bukit Resorts, identified as the first and second highest in songbird poaching incidents within the park. The SARA (Scanning, Analysis, Response, and Assessment) processes for both resorts were documented during the training and will be further supported through ongoing implementation and monitoring. In BNWNP, the second phase of IPM training—targeting all resort teams—is scheduled to follow a similar approach to that of BBSNP, with implementation activities planned subsequently based on identified conservation challenges.
Outcome indicator 0.4. At least 10 major traffickers of priority species at provincial level are being, or have been, successfully prosecuted by the project end (baseline = 0).	In Lampung, we concentrated in BBSNP, none of the perpetrators were prosecuted under criminal law. However, authorities took preventive measures—such as issuing warnings and community engagement—to ensure violations in the national park were not ignored. One individual that receive bird form 26 individuals poached inside NP in Pesisir Barat were addressed through these approaches and received warning, guidance and mentoring to prevent further offenses. But, in Lampung, one pangolin trafficker has been successfully prosecuted by law enforcement personnel who received training, enabling them to carry out independent legal enforcement.	Disseminate actionable insight based on the network analysis and mentoring national park staff to strengthen their detection and analytical capability to prevent the actors do illegal activities inside NP
Outcome indicator 0.5. By Yr3, the population decline of at least two priority species has been halted and stabilised (baseline to be calculated in Yr1).	In BBSNP, three poaching hotspots previously identified in Biha Resort were targeted for bird surveys using the point count method in May and July 2024. The surveys recorded a total of 69 bird species, including 14 species protected under national law. Notably, 74% of the species identified were	Camera trap surveys will be conducted again in Yr3 in BBSNP & BNWNP.

	categorized as songbirds. In BNWNP, annual camera trap surveys have been conducted at designated monitoring sites to assess the occupancy of key threatened species, including babirusa and anoa. In 2023, the estimated occupancy rate for babirusa was 0.74, indicating that 74% of the surveyed area was occupied. Similarly, anoa showed an occupancy rate of 0.68, suggesting its presence in 68% of the survey area.	
Output 1 A national Working Group is established and oversees the design, implementation and documentation of a problem-oriented policing approach in two landscapes and its subsequent up-scaling across Indonesia's protected area network.		
Output indicator 1.1. One IPM Working Group established (Yr1) (baseline = 0).	Completed in Yr1. A Working Group has been developed, focusing on SMART-RBM, which include the subject on IPM.	NA
Output indicator 1.2. Five bi-annual Working Group meetings (Yr3) (baseline = 0).	As of March 2025, three meetings (FGD and workshops) aimed at scaling up the implementation of the Integrated Prevention Model (IPM) have been conducted in collaboration with the SMART-RBM working group (indicator: three out of five meetings conducted). These workshops were attended by 78 participants, including 61 males and 17 females.	Workshops are planned for Yr3 to further support the national rollout of IPM implementation.
Output indicator 1.3. One IPM training program, >200 national and subnational MoEF staff trained (Yr3) (baseline = 0).	Three curricula and their syllabus for the implementation of SMART and the IPM have been officially endorsed by the MoF's Pusdiklat. To date, a total of 67 government officers (65 males, 2 females) trained (indicator: 1 IPM training program developed; 67 out of 200 MoF staff trained).	The second phase of IPM training for staff of BNWNP is scheduled for implementation in 2025. In addition, IPM training for GLNP is also planned in Yr3. In collaboration with the Dit. KK, additional IPM training sessions will be conducted for ten more national parks across Indonesia.
Output indicator 1.4. One IPM lessons learned document and IPM guidelines (Yr3) (baseline = 0).	In Yr2, lessons learned document from IPM implementation in WKNP have been completed. In addition, a documentation of lessons learned from BBSNP and BNWNP is currently being worked on. Guidelines/SOP on SMART patrol that incorporates IPM approach is drafted, currently under review by the SMART-RBM working group.	Development of the lessons learned from both BBNSP and BNWNP, and the SOP on SMART patrol that incorporates IPM will be continued and finalised in Yr3.
Output indicator 1.5. IPM adopted in two additional PAs (Yr3) (baseline = 0).	Completed in Yr1. IPM approach has been implemented in BBSNP and BNWNP.	Completed
Output 2. The effectiveness of an Integrated Prevention Model is demonstrated in reducing poaching and improving rural livelihoods in two demonstration protected area landscapes in Sumatra and Sulawesi (>700,000 ha).		

Output indicator 2.1. Two IPMs and intervention strategies, with accompanying data management system, for target PAs (Yr1) (baseline = 0).	Completed in Yr1. Two IPM strategies developed for BBSNP & BNWNP (evidence provided in AR1).	WCS will continue to analyse and update the intervention strategy when necessary.
Output indicator 2.2. >10 multi-stakeholder meetings and workshops to raise awareness on IWT, socialise the IPM and review its implementation and adaptation (Yr3) (baseline = 0).	In Yr2, to raise awareness on IWT and to socialize the IPM, WCS, in collaboration with other PAs conducted four multi-stakeholder meetings/workshops (indicator: 4 out of 10 multi-stakeholder meetings, see Fig. 15 – 18 for meeting photos), participated by a total of 99 people from more than 40 government and 4 NGOs.	WCS will continue to hold events to increase awareness on IWT and socialize the IPM, aiming to other resorts within BBSNP, BNWNP, as well as other National Parks.
Output indicator 2.3. IWT information collected from community monitoring networks operating in each target landscape over 36 months (Yr3) (baseline = 0).	IWT information in the two landscapes regarding songbird trade and wild meat trade have been collected for 24 months (indicator: 24 out of 36 months). Information from the community monitoring network was collected regarding 277 suspected poachers and traders of songbirds and tiger prey in Lampung, Bengkulu, and South Sumatra Provinces. In BNWNP, we identified 122 suspected poachers and traders of wild meat for consumption in the BNWNP landscape.	WCS, in collaboration with partners will continue monitoring the suspects that have been identified, and analyse their network related to songbirds and wildmeat trades.
Output indicator 2.4. 12 well-trained national park-community ranger teams conduct data-driven SMART patrols over 36 months (Yr3) (baseline = 18 months of patrols conducted in 2021-2022).	In Yr2, SMART patrols in two PAs have been conducted for 12 months (indicator: by Yr2, 24 out of 36 months of patrolling, see Fig. 19-24 for patrol maps and patrolling activities in each landscape).	WCS will continue to support the government conducting patrols in the two PAs.
Output indicator 2.5. Repeat camera trap surveys conducted to estimate priority species population trends in target landscapes (Yr3) (baseline to be calculated in Yr1).	In Yr2, yearly camera trapping was conducted each in BBSNP and in BNWNP (see Fig. 25 for camera trap result on anoa). Population density of tiger in BBSNP (Way Canguk Research Station) and anoa and babirusa occupancy in BNWNP were measured and available to be compared to baseline (indicator: repeat camera trap survey conducted in each landscape.	Annual camera trapping will be conducted in BBSNP & BNWNP in Yr3. Their results will be measured and analysed, compared to the baseline data.
Output indicator 2.6. Two alternative livelihood support strategies developed with community partners to transition poachers to viable livelihoods (Yr2) (baseline = 0).	Completed in Yr2. In collaboration with BBSNP and BNWNP officers, and University of Lampung and University Sam Ratulangi, two alternative livelihood strategies have been developed for poachers each in the two landscapes respectively (evidenced in profiling and alternative livelihood strategy documents in **SM12**).	WCS and partners will continue to engage with the poachers to manage any issues regarding the alternative livelihood implementation.
Output indicator 2.7. Alternative livelihood support strategy implemented over 18 months (Yr3) (baseline = 0).	In Lampung, the alternative livelihood given include livestock rearing, corn cultivation, and selling street food in Lampung, which in part have been given in the last 12 months. In North Sulawesi, poachers have been exposed to alternative livelihood through ecotourism through maleo hatchery (since	WCS will continue to support the alternative livelihood strategy implementation in both landscapes, including through

	Yr1). Farming and local snack development were being planned for poachers by Yr2, although its implementation is still progressing as we need to have adequate preparation.	consistent outreach and dialogue with poachers.
Output 3. Counter-wildlife trafficking strategies targeting >10 high profile intermediaries at major trade hubs and exit points, including seaports, implemented in two provinces connected to the target protected area landscapes.		
Output indicator 3.1. Two repeat provincial IWT supply chain assessments (Yr3) (baseline = 0).	The supply chain assessments of songbirds trade in Lampung and wild meat trade in North Sulawesi have been completed in Yr1, and updated in Yr2. The assessments resulted from information from the community network and FGD results conducted with relevant stakeholders in Lampung and North Sulawesi.	In the next period, we will reassess the supply chain condition at each stage.
Output indicator 3.2. Two provincial counter-wildlife trafficking strategies developed (Yr1) (baseline = 0).	One CWT strategy document has been completed, that is addressing of the illegal trade songbirds in Lampung Province. CWT strategy for addressing of the illegal trade wild meat for consumption in North Sulawesi still at finalization stage.	We will conduct coordination with BBSNP authority to determine the priority strategy. For wild meat document, we will finalize it in early Yr3
Output indicator 3.3. Counter-wildlife trafficking training for >200 law enforcement officials from >3 agencies (including port authorities, prosecutors and judges) (Yr2) (baseline = 0).	20 (18 males, 2 females) government agencies and NGOs were trained in wildlife distribution monitoring at Bakauheni Seaport. A training module titled *"Wildlife Crime in Prosecution"* was developed and subsequently used by the AGO Training Centre to deliver training to two cohorts of newly appointed prosecutors. In total, 626 officers (375 males and 251 females) were trained with the new module. Next, WCS staff also trained 42 judges (29 males, 13 females) during environmental judges certification training hosted by the Court Agency (indicator: >700 out of 200 law enforcement officials from 8 out of 3 agencies trained by Yr2	An integrated training targeting law enforcement agencies in North Sulawesi is currently being planned. WCS has obtained initial approval from the Head of BKSDA for North Sulawesi to hold the event in May 2025 in Yr3.
Output indicator 3.4. >24 months of high-quality data analysis products developed and informing site-based law enforcement operations (Yr3) (baseline = 0).	2 analytical products developed based on data from April 2022-March 2025, one analytical product disseminated to site-based law enforcement to inform prevention strategies (Indicator: 24 out of 24 months of high-quality data analysis products developed)	In Yr3, WCS plans to disseminate the analytical product to site-based law enforcement officers in North Sulawesi. We will also mentor the site-based law enforcement agencies in BBSNP to increase threat detection and data analysis capability.
Output indicator 3.5. >24 months of monitoring court cases using project information (Yr3) (baseline = 0).	One court case on pangolin trade was monitored as part of the training impact assessment to previous training participant, two ongoing cases related to the trade of rhino	WCS will continue the monitoring and supporting the law enforcement officers of ongoing

	horns, tiger canines, and songbird are also being monitored (indicator: 12 out of 24 months of IWT case monitoring by Yr2).	cases, ensuring that these cases were prosecuted accordingly.
Output indicator 3.6. >100 high-impact national and international media pieces covering government partners' successful law enforcement operations using project information (Yr3) (baseline = 0).	In Yr 2, 62 online articles collected from national dan local outlets (indicator: 141 out of 100 online media articles recorded by Yr2, see **SM19** for list of articles).	Media monitoring and media visit will be continued as planned.
Output 4. Key wildlife regulations in Indonesia are reformed and disseminated to strengthen the legal framework to tackle wildlife crime at the national, provincial and landscape levels.		
Output indicator 4.1. One assessment on legislation regarding IWT and wildlife law enforcement to identify inconsistencies, loopholes and recommendations for improvement (Yr1) (baseline = 0).	One assessment on legislation regarding IWT and wildlife law enforcement entitled “Regulation Analysis on Conservation Area Protection and Prevention of Illegal Wildlife Trade” has been developed in Yr1. This assessment has been formally submitted to KSDAE.	This assessment will be used further as the basis in developing the IPM approach related policy and capacity building materials.
Output indicator 4.2. One policy paper on IWT and wildlife law enforcement (Yr1) (baseline = 0).	One policy paper on IWT and wildlife law enforcement entitled “A Study of The Successful Implementation of Data-Driven Problem-Oriented Policing Approach for to Protected Area and Biodiversity Conservation” has been completed in Yr2. This policy paper has been formally submitted to KSDAE.	This policy paper will be used further as the basis in developing the IPM approach related policy and capacity building materials. Furthermore, it will be used in structuring the concept and agenda of IPM award – an approach to encourage the adoption of IPM at the provincial level.
Output indicator 4.3. Three policy dialogue workshops (one national and two provincial) with >50 participants from >3 agencies (Yr2) (baseline =0).	Two policy dialogues at the national level have been conducted (indicator: 2 out of 3 policy dialogues, see Fig. 41-43 for the events). First, it was acted as a dissemination forum for the developed policy paper and second, it was served as a discussion forum to initiate the IPM award. This has been attended by 48 participants in total from across six directorate under KSDAE (Dit. KK, Dit. KSG, Dit. PK, Dit. PJLK, Dit. PEBAP, and Directorate General Secretariat of KSDAE).	As advised by Dit. KK, these policy dialogues have become a major channel to mainstream the IPM approach in the provincial level, including the BBSNP and BNWNP as the targeted landscapes under this grant, without necessarily conducting other separate provincial-level policy dialogues in Yr2.
Output indicator 4.4. One draft policy regarding IWT and wildlife law enforcement, including support for the IPM (Yr3) (baseline = 0).	A Ministerial Regulation No. 18 of 2025 concerning Utilization of Wildlife in Captive Breeding, Pet Keeping, Trade, and Exhibition has been enacted which revoked the Kepmenhut 447/2003 (which its revision has been supported under this grant). Next, a first draft of Government Regulation mandated by Conservation Law has been developed in Yr2.	We will continue to support the development of the Government Regulation mandated by Conservation Law as the umbrella for this newly enacted Ministerial Regulation. In

		parallel, we will also support the development of Circular Letter concerning IPM Award.
Output indicator 4.5. Three policy dissemination workshops (one national and two provincial) on IWT and wildlife law enforcement (Yr3) (baseline = 0).	The IPM approach is planned to be disseminated through a series of IPM Award activities in Yr3. For this, a concept of the IPM Award has been developed.	We will support the government in conducting a public consultation or socialisation forum for the envisioned Government Regulation. In parallel, the IPM approach will be widely disseminated through a series of IPM award activities aimed to be held in Yr3. This will be conducted in the national level and envisioned to involve all the KSDAE UPT across Indonesia without necessarily conducting other separate provincial-level events.

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

Project summary	SMART Indicators	Means of verification	Important Assumptions
Impact: A project demonstrated problem-oriented policing approach is adopted by empowered government agencies and effectively deployed to maximise impact that maintains forest integrity, recovers biodiversity and improves forest-edge livelihoods at scale. .			
Outcome: Enhanced strategic decision-making, underpinned by crime prevention strategies, significantly disrupts IWT networks in two biodiversity-rich landscapes and connected provincial trafficking routes, with rural community livelihood incentives providing sustainable livelihood outcomes. (Max 30 words)	0.1 By Yr3, post-project implementation of the IPM is secured through assignment of site-based data analysts, activity inclusion in annual work plans and budgets of two project-assisted PAs, with subsequent adoption in an additional two PAs (baseline = 0 PA analysts). 0.2. By Yr3, >70% of the poachers identified as operating in the poaching hotspots in two PA landscapes have fully transitioned to alternative livelihoods and show increased (>20%) indices for wellbeing, compared to baseline data collected when selecting project beneficiaries (baseline = poaching hotspot locations and number of poachers to support will be determined through IPM planning in Yr1). 0.3. By Yr3, >75% threat reduction in poaching hotspots identified by the IPM in Yr1 (baseline to be determined in Yr1). 0.4. At least 10 major traffickers of priority species at provincial level are being, or have been, successfully prosecuted by the project end (baseline = 0). 0.5. By Yr3, the population decline of at least two priority species has been	0.1. Data analyst ToRs; PA annual work plans; minutes of meetings; project reports (Yr3). 0.2. WCS monitoring of community group engagement in project activities through review of minutes of meetings and workshops; livelihood strategy documents; training reports; socio-economic survey data to measure changes in wellbeing over the project (with gender disaggregated data) (Yrs1-3). 0.3. SMART patrol and GIS data and outputs, such as maps, tables and graphs; field reports; project reports (Yrs1-3). 0.4. WCS monitoring of IWT cases and government court records (with crime statistics gender disaggregated) (Yrs1-3). 0.5. Camera trap datasets and analytical products on the spatio-temporal changes in species populations; technical reports; scientific publications and presentations (Yrs1-3).	The IPM identifies the full network of key offenders operating in the two target landscapes and the correct measures for persuading these offenders to transition from illegal to legal livelihood activities, which delivers sufficient benefits for them to not regress, thereby demonstrating to MoF decision-makers that the evidence-based approach offered by the IPM is cost-effective and highly applicable for enhanced protected area management, including MoF 'Priority Species' recovery, in Indonesia, and this leads to IPM adoption in an additional two PAs by the project's end.

Project summary	SMART Indicators	Means of verification	Important Assumptions
	halted and stabilised (baseline to be calculated in Yr1).		
Output 1 A national Working Group is established and oversees the design, implementation and documentation of a problem-oriented policing approach in two landscapes and its subsequent up-scaling across Indonesia's protected area network.	1.1. One IPM Working Group established (Yr1) (baseline = 0). 1.2. Five bi-annual Working Group meetings (Yr3) (baseline = 0). 1.3. One IPM training program, >200 national and subnational MoEF staff trained (Yr3) (baseline = 0). 1.4. One IPM lessons learned document and IPM guidelines (Yr3) (baseline = 0). 1.5. IPM adopted in two additional PAs (Yr3) (baseline = 0).	1.1. Working Group members and minutes of meeting (gender disaggregated data on participation) (Yrs1-3). 1.2. Minutes of meeting, including recommendations for IPM adaptative management (gender disaggregated data on participation) (Yrs1-3). 1.3. Training materials (on IPM, and criminology theory and practice); pre- and post-training questionnaire to measure skills uptake; attendance sheets (gender disaggregated data on participation), training report (Yrs1-3). 1.4. Lessons learned document; IPM guidelines; dissemination workshop minutes of meetings (gender disaggregated data on participation) (Yr3). 1.5. Documentation of IPM in additional PAs; minutes of meeting/workshops; training reports; financial records of investments in IPM in target and additional PAs; project reports (Yr3).	There is a clear understanding within key government agencies on the IPM approach and its applicability for addressing IWT, which creates strong political, active partner participation in the Working Group and high-level support for the PA landscape actions, with Working Group meetings proving effective in evaluating project performance and adapting the intervention strategy over the project years, which in combination greatly increases the probability of IPM success, strong government buy-in and upscaling across the PA network.
Output 2 The effectiveness of an Integrated Prevention Model is demonstrated in reducing poaching and improving rural livelihoods in two demonstration	2.1. Two IPMs and intervention strategies, with accompanying data management system, for target PAs (Yr1) (baseline = 0).	2.1. IPM theory of change and strategy; IPM data model and datasets; minutes of meeting (gender disaggregated data on participation); project reports (Yr1).	All of the key stakeholders are engaged by the project and recognise the need to develop an integrated data-driven approach (through the IPM) to reduce wildlife crime in the landscape, and these stakeholders also understand and

Project summary	SMART Indicators	Means of verification	Important Assumptions
protected area landscapes in Sumatra and Sulawesi (>700,000 ha).	2.2. >10 multi-stakeholder meetings and workshops to raise awareness on IWT, socialise the IPM and review its implementation and adaptation (Yr3) (baseline = 0). 2.3. IWT information collected from community monitoring networks operating in each target landscape over 36 months (Yr3) (baseline = 0). 2.4. 12 well-trained national park-community ranger teams conduct data-driven SMART patrols over 36 months (Yr3) (baseline = 18 months of patrols conducted in 2021-2022). 2.5. Repeat camera trap surveys conducted to estimate priority species population trends in target landscapes (Yr3) (baseline to be calculated in Yr1). 2.6. Two alternative livelihood support strategies developed with community partners to transition poachers to viable livelihoods (Yr2) (baseline = 0). 2.7. Alternative livelihood support strategy implemented over 18 months (Yr3) (baseline = 0).	2.2. Minutes of meeting (gender disaggregated data on participation) (Yrs1-3). 2.3. IWT reports and data received from networks; project reports (Yrs1-3). 2.4. Training and field reports; field and GIS datasets; data recorded in SMART patrol system and outputs, such as maps, tables and graphs (Yrs1-3). 2.5. Field survey reports; camera trap datasets, analysis and presentations (Yr3). 2.6. Minutes of meeting (gender disaggregated data on participation); livelihood strategy documents; agreed (signed plans) from community partners (Yrs1-2). 2.7. Training workshop reports (gender disaggregated data on participation) Socio-economic monitoring and evaluation data, project reports (Yrs2-3).	fulfil their respective roles and responsibilities in successfully implementing the IPM and are willing and able to adapt the intervention strategy based on the applied research findings that emerge over the project years. To complement this approach, there is strong support and commitment from community partners to design and implement livelihood interventions that provide sufficient improvements to community wellbeing, thereby offering a viable alternative to illegal and unsustainable natural resource use.
Output 3 Counter-wildlife trafficking strategies targeting >10 high profile intermediaries at major trade hubs and exit points, including seaports, implemented in two provinces connected to the target protected area landscapes.	3.1. Two repeat provincial IWT supply chain assessments (Yr3) (baseline = 0). 3.2. Two provincial counter-wildlife trafficking strategies developed (Yr1) (baseline = 0). 3.3. Counter-wildlife trafficking training for >200 law enforcement officials from >3 agencies (including port authorities,	3.1. Assessment reports on IWT situation from landscape-urban centres-ports, including government capacity building recommendations (Yrs1&3). 3.2. Minutes of meeting (gender disaggregated data on participation); strategy document (Yr1).	WCS remains a credible and trusted partner with law enforcement agencies that are receptive to capacity building and inter-agency partnership opportunities to jointly tackle IWT, and the project provides reliable information on the extent of wildlife trade that, in turn, elicits time-critical law enforcement actions at key points of intersection that

Project summary	SMART Indicators	Means of verification	Important Assumptions
	prosecutors and judges) (Yr2) (baseline = 0). 3.4. >24 months of high-quality data analysis products developed and informing site-based law enforcement operations (Yr3) (baseline = 0). 3.5. >24 months of monitoring court cases using project information (Yr3) (baseline = 0). 3.6. >100 high-impact national and international media pieces covering government partners' successful law enforcement operations using project information (Yr3) (baseline = 0).	3.3. Training reports with participant lists (gender disaggregated data on participation); post-training monitoring on participant/agency involvement in counter-wildlife trafficking (Yrs2-3). 3.4. i2 network maps and datasets developed for at least four priority species and provincial/national trade routes connected to target landscapes; profiles of major traffickers compiled and submitted to government partners; project reports (Yrs1-3). 3.5. Project monitoring of IWT cases and government's online case tracking system (all crime statistics will be gender-disaggregated) (Yrs1-3). 3.6. WCS media monitoring; project reports (Yrs1-3).	yield the greatest impact towards dismantling major trafficking networks.
Output 4 Key wildlife regulations in Indonesia are reformed and disseminated to strengthen the legal framework to tackle wildlife crime at the national, provincial and landscape levels.	4.1. One assessment on legislation regarding IWT and wildlife law enforcement to identify inconsistencies, loopholes and recommendations for improvement (Yr1) (baseline = 0). 4.2. One policy paper on IWT and wildlife law enforcement (Yr1) (baseline = 0). 4.3. Three policy dialogue workshops (one national and two provincial) with >50 participants from >3 agencies (Yr2) (baseline =0). 4.4. One draft policy regarding IWT and wildlife law enforcement, including support for the IPM (Yr3) (baseline = 0).	4.1. Assessment paper and project reports (Yr1). 4.2. Policy paper and project reports (Yr1). 4.3. Minutes of meeting (gender disaggregated data on participation); workshop proceedings document; project reports (Yr2). 4.4. Policy document; infographic; presentation (Yr3). 4.5. Minutes of meeting (gender disaggregated data on participation); project reports; presentations (Yr3).	The Government of Indonesia remains committed to reducing IWT through improvements to its policy framework related to site-based enforcement and its criminal justice system, and project-assisted expert workshops and policy assessments identify the required reforms, barriers to reform and how to overcome these, which are addressed through policy revisions that are widely disseminated and further empower government agencies to take action against IWT.

Project summary	SMART Indicators	Means of verification	Important Assumptions
	4.5. Three policy dissemination workshops (one national and two provincial) on IWT and wildlife law enforcement (Yr3) (baseline = 0).		

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)

Output 1

- 1.1. Establish and strengthen a government Working Group to facilitate good communication and coordination for project implementation.
- 1.2. Conduct bi-annual Working Group meetings to develop national and subnational components for the IPM strategy, review progress, and enhance implementation through adaptive management.
- 1.3. Develop an IPM training program and train >200 national and subnational MoEF staff.
- 1.4. Support the Working Group to compile IPM lessons learned and document the model for wide replication.
- 1.5. Support the scaled adoption of the IPM across Indonesia's protected area network.

Output 2

- 2.1. Develop a theory of change to inform the development of landscape specific IPM and intervention strategies (prioritising IWT information gathering, patrolling and livelihood actions).
- 2.2. Hold multi-stakeholder workshops to socialise and jointly review the landscape-level IPM.
- 2.3. Receive and analyse information on wildlife poaching and trafficking from a community monitoring network.
- 2.4. Support a data-driven SMART patrolling strategy conducted by national park-community ranger teams to deter poaching.
- 2.5. Conduct camera trapping to monitor priority species population trends.
- 2.6. Work through partnering community networks to design a locally appropriate alternative livelihood support strategy for poacher reform.
- 2.7. Implement the livelihood strategy, with rigorous monitoring and evaluation, to transition poachers to alternative livelihoods.

Output 3

- 3.1. Map and monitor IWT supply chains in the focal provinces, covering major exit points, and make recommendations for strengthening government capacity to address this IWT.
- 3.2. Develop two provincial counter-wildlife trafficking strategies covering the protected area landscapes, connected urban centres and exit points.
- 3.3. Counter-wildlife trafficking training provided to >200 law enforcement officials from >3 agencies (including port authorities, prosecutors and judges).
- 3.4. Provide high-quality data analysis products to government partners to conduct law enforcement operations across the IWT supply chain.
- 3.5. Monitor court case outcomes of project-assisted cases.
- 3.6. Facilitate high-impact national and international media coverage of successful government law enforcement operations.

Output 4

- 4.1. Assess the legislation regarding IWT and wildlife law enforcement to identify inconsistencies, loopholes and recommendations for improvement.
- 4.2. Conduct research on IWT and wildlife law enforcement to develop a policy paper that further supports the IPM approach.
- 4.3. Run a series of policy dialogue workshops to obtain multi-stakeholder inputs and support.
- 4.4. Support the drafting of policy reforms regarding IWT and wildlife law enforcement.
- 4.5. Support the Indonesian government to run a series of policy dissemination workshops on IWT and wildlife law enforcement.

Annex 3 Standard Indicators

Table 1 Project Standard Indicators

Please see the Standard Indicator guidance for more information on how to report in this section, including appropriate disaggregation.

IWTCF Indicator number	Name of indicator	If this links directly to a project indicator(s), please note the indicator number here	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
IWTCF-B01	Number of criminal networks/related trade routes identified.	3.1.	Map	Type	1 (songbird trade criminal network)	1 (wild meat trade network)		2	2
IWTCF-B02	Number of illegal wildlife products/shipments detected	NA	Number of products	Type	0	42		42	NA
IWTCF-B03	Number of patrols by law enforcement rangers supported through the project.	2.4	Number of patrols	None	12	12		24	36
IWTCF-B05	Number of wildlife crime-related arrests facilitated by the project	0.4	Number of arrests	Male/Female	0	3		3	10
IWTCF-B07	Number of wildlife crime cases submitted for prosecution	0.4	Number	None	0	1		1	5
IWTCF-B08	Number of people charged for wildlife crime	0.4	People	Male/Female	0	3		3	10
IWTCF-B09	Number of people successfully prosecuted for wildlife crime	0.4	People	Male/Female	0	1		1	10
IWTCF-B16	Number of policies and frameworks developed or formally contributed to by projects and being implemented by appropriate authorities	4.4	Document	None	1	2		3	1

IWTCF Indicator number	Name of indicator	If this links directly to a project indicator(s), please note the indicator number here	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
IWTCF-D01	Number of people from eligible countries who have received structured and relevant training	1.3 & 3.3	Number of people	Male/Female	98	750		848	400
IWTCF-D04	Number of local or national organisations with enhanced capability and capacity	1.3., 2.2, & 3.3	Organisations	Type of agency	3 *(BBSNP, AGO, YABI)*	18*		21	10
IWTCF-D09	Number of media-related activities	3.6	Number of activities	Media type	1	3		4	NA
IWTCF-D16	Number of best practice guides and knowledge products published and endorsed	1.4	Document	None	0	1		1	2

*Quarantine, MoEF;s law enforcement agency, Seaport Police, Bakauheni Port Authority, South Lampung Police, BKSDA Java, Sumatra, and Kalimantan, Bali-Nusa Tenggara, Sulawesi, Maluku, Papua, Kerinci Seblat NP, Karimun Jawa NP, Kepulauan Seribu NP, Takabonerate NP, JSI, Save Yaki

Table 2 Publications

Title	Type (e.g. journals, best practice manual, blog post, online videos, podcasts, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)
BTN Way Kambas Raih Penghargaan Internasional Herman Goldstein Award	Press release	Ministry of Environment and Forestry, 2024	NA	Indonesian	MoF's Community Engagement Bureau (Humas PPIP), Jakarta	Press release No. SP.227/HUMAS/PPIP/HMS.3/9/2024
Problem-Oriented Wildlife Protection Approach: Reforming Poachers to Reduce Snaring in Indonesia	Website	Dian Risdianto, Hanifah Siregar, William Marthy, 2024	Female	Indonesian	IWTCF, Edinburgh	Reforming poachers to reduce snaring

Title	Type (e.g. journals, best practice manual, blog post, online videos, podcasts, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)
Balai TNWK raih penghargaan Herman Goldstein Award	News website	Ruth Intan Sozometa Kanafi, 2024	Female	Indonesian	Antara, Jakarta	Balai TNWK raih penghargaan Herman Goldstein Award - ANTARA News
Balai Taman Nasional Way Kambas Raih Herman Goldstein Award dalam Upaya Perlindungan Satwa Liar	News website	Esti Utami, 2024	Female	Indonesian	Ruangkota.com, Tangerang Selatan	Balai Taman Nasional Way Kambas Raih Herman Goldstein Award dalam Upaya Perlindungan Satwa Liar - Ruang Kota
BTN Way Kambas Raih Penghargaan Internasional Herman Goldstein Award atas Perlindungan Satwa Liar	News website	Marwan Aziz, 2024	Male	Indonesian	Beritalingkungan.com, Jakarta	BTN Way Kambas Raih Penghargaan Internasional Herman Goldstein Award atas Perlindungan Satwa Liar – beritalingkungan.com
Balai Taman Nasional Way Kambas Raih Penghargaan Internasional Herman Goldstein Award	Blog post	NA, 2024	NA	Indonesian	Indonesiaproud.wordpress.com, Jakarta	Balai Taman Nasional Way Kambas Raih Penghargaan Internasional Herman Goldstein Award | Indonesia Proud

Checklist for submission

	Check
Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the **correct template** (checking fund, scheme, type of report (i.e. Annual or Final), and year) and **deleted the blue guidance text** before submission?	v
Is the report less than 10MB? If so, please email to BCF-Reports@niras.com putting the project number in the subject line.	v
Is your report more than 10MB? If so, please consider the best way to submit. One zipped file, or a download option is recommended. We can work with most online options and will be in touch if we have a problem accessing material. If unsure, please discuss with BCF-Reports@niras.com about the best way to deliver the report, putting the project number in the subject line.	v
Have you included means of verification? You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	v
Have you provided an updated risk register? If you have an existing risk register you should provide an updated version alongside your report. If your project was funded prior to this being a requirement, you are encouraged to develop a risk register.	v
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see section 17)?	v
Have you involved your partners in preparation of the report and named the main contributors	v
Have you completed the Project Expenditure table fully?	v
Do not include claim forms or other communications with this report.	