

## United Nations Development Programme



## REQUEST FOR PROPOSAL (RFP)

NAME & ADDRESS OF FIRM	DATE: September 28, 2020
	REFERENCE: RFP/UNDP/CIWT/112154/020/2020 - <b>Development of Data Base of Protected Species and Mobile Application for the Wildlife Identification</b>

Dear Sir / Madam:

The United Nations Development Programme (UNDP) hereby invites you to submit a Proposal to the Request for Proposal **Development of Data Base of Protected Species and Mobile Application for the Wildlife Identification**

A bidder's conference will be held on:

Date/Time : 6 October 2020

Place : Zoom online Meeting

<https://undp.zoom.us/meeting/register/tJwpcO6srT4oEtFK5GWRNaUc2lchqOXcMQjL>

Meeting ID: 984 7743 5285

Detailed Terms of Reference as well as other requirements are listed in the RFP available on UNDP ATLAS e-Tendering system" (<https://etendering.partneragencies.org>) Event ID: 0000007300

Your offer, comprising of a Technical and Financial Proposal, should be submitted in accordance with RFP requirements, through UNDP ATLAS e-Tendering system and by the deadline indicated in <https://etendering.partneragencies.org>.

NOTE! The **Financial Proposal** and the **Technical Proposal** files **MUST BE COMPLETELY SEPARATE** and uploaded separately in the system and clearly named as either "TECHNICAL PROPOSAL" or "FINANCIAL PROPOSAL", as appropriate. Each document shall include the Proposer's name and address. The file with the "FINANCIAL PROPOSAL" must be encrypted with a password so that it cannot be opened nor viewed until the Proposal has been found to pass the technical evaluation stage. Once a Proposal has been found to be responsive by passing the technical evaluation stage, UNDP shall request the Proposer to submit the password to open the Financial Proposal.

The Proposer shall assume the responsibility for not encrypting the financial proposal. **NOTE: DO NOT ENTER PROPOSAL PRICE IN THE SYSTEM, INSTEAD ENTER ONE.**

In the course of preparing and submitting your Proposal, it shall remain your responsibility to ensure that it is submitted into the system by the deadline. The system will automatically block and not accept any bid after the deadline. In case of any discrepancies deadline indicated in the system shall prevail.

Kindly ensure that supporting documents required are signed and stamped and in the .pdf format, and free from any virus or corrupted files and **FINANCIAL PROPOSAL IS PASSWORD PROTECTED. NOTE! The File name should contain only Latin characters (No Cyrillic or other alphabets).**

You are kindly requested to indicate whether your company intends to submit a Proposal by clicking on "Accept Invitation" button no later than **6 October 2020**. If that is not the case, UNDP would appreciate your indicating the reason, for our records.

If you have not registered in the system before, you can register now by logging in using:

username: event.guest

password: why2change

The step by step instructions for registration of bidders and quotation submission through the UNDP ATLAS e-Tendering system is available in the "Instructions Manual for the Bidders", attached. Should you require any training on the UNDP ATLAS e-Tendering system or face with any difficulties when registering your company or submitting your quotation, please send an email to [Sestyo.wicaksono@undp.org](mailto:Sestyo.wicaksono@undp.org) or [yusef.millah@undp.org](mailto:yusef.millah@undp.org)

Please note that ATLAS has following minimum requirements for password:

1. Minimum length of 8 characters.
2. At least one capital letter.
3. At least one number.

New bidder registering for first time, system will not accept any password that does not meet the above requirements and thus registration cannot be completed.

For already existing bidders whose current password does not meet the criteria, when signing in, system will prompt you to change the password, and it will not accept a new password that does not meet requirement.

The user guide and videos are made available to bidder in the UNDP public website in this link: <http://www.undp.org/content/undp/en/home/operations/procurement/business/procurement-notices/resources/>

Bidder can also access below instruction from youtube with link below:

<https://www.youtube.com/watch?v=Trv1FX6reu8&feature=youtu.be>

The bidders are advised to use Internet Explorer (Version 10 or above) to avoid any compatibility issues with the e-tendering system.

No hard copy or email submissions will be accepted by UNDP.

UNDP looks forward to receiving your Proposal and thanks you in advance for your interest in UNDP procurement opportunities.

Sincerely yours,



*Martin Stephanus Kurnia*  
*Head of Procurement Unit*  
9/28/2020

## Annex I

## Description of Requirements

Context of the Requirement	The Development of Data Base of Protected Species and Mobile Application for the Wildlife Identification
Implementing Partner of UNDP	Directorate of Crime Prevention and Forest Security, Directorate General of Law Enforcement and Forestry, Ministry of Environment and Forestry
Brief Description of the Required Services <sup>1</sup>	<p>Experts considers Indonesia to be one of the 17 “megadiverse” countries. About 35 species of primate place Indonesia fourth in the world and 16% of the world’s reptiles (781 species), 17% of the total species of birds (1,592 species) and 270 species of amphibians. Unfortunately, most of them are under serious threat because of the loss of their habitat, illegal hunting with associates trade and other causes. Some references provide a rough estimation that the value of illegal wildlife trade reaches more than 13 trillion rupiah per year (KLHK, 2018). This could lead to the danger of their extinction.</p> <p>To support more meaningful effort to reduce poaching and its associate trade or illegal wildlife trade, Ministry of Environment and Forestry of Indonesia have issued series of regulations on list of Wildlife that are prohibited to be poached and illegally trade. The regulations is periodically revised based on their status on their habitat. The most up dated regulation that have been issued is Minister of Environment and Forestry Regulation P.106 / MENLHK / SETJEN / KUM.1 / 6/2018. The list has been added protected species animals which currently amounted to 794 species.</p> <p>The proactive Law Enforcement have resulted significant volume of seized wildlife that have been illegally trade. In 2015-2018 it is recorded that more than 609 arrests of perpetrators of illegal hunting and distribution (Ditjen Gakkum LHK, 2019). The significant number of seized wildlife shows two indications. Effort on the law enforcement increases significantly. But at the same time conclude that the intensity of IWT is till high.</p> <p>One of significant challenge that hinder the law enforcement effort is lack of knowledge in identifying a particular species whether they a categorized as protected wildlife or not. Custom, Police and Quarantine officer frequently face the problem of wildlife identification. The complexity come when periodical revision of the regulation in place. It is therefore important to provide some assistance for them in identifying the protected species by developing a mobile application of Wildlife Identification.</p> <p>The United Nations Development Program ("UNDP") through funding support from the Global Environmental Facility ("GEF") - in collaboration with the Director General of the GAKKUM KLHK became one of the partners supporting the eradication of poaching and illegal distribution of wildlife in the form of a collaborative project under the title “Combatting Illegal and Unsustainable Trade in Endangered Species in Indonesia”. The project aims to support the government's efforts to reduce to a minimum the crime against protected wildlife in order to</p>

<sup>1</sup> A detailed TOR may be attached if the information listed in this Annex is not sufficient to fully describe the nature of the work and other details of the requirements.

	<p>protect and conserve endangered wildlife species in Indonesia. One of the activities that will be carried out is the development of database and application of Wildlife identification of the protected wildlife according to Ministerial Regulation.</p> <p>In order to develop such database and develop the application, the Illegal Wildlife Trade Combatting Project (CIWT) will invite a Call For Proposal in the process of developing the Mobile Application for the Wildlife Identification with technical specifications as stated below.</p>
List and Description of Expected Outputs to be Delivered	<p>Description of works:</p> <ol style="list-style-type: none"> <li>1. The development of protected wildlife identification application will be very useful for the Forest Ranger, Investigators, Customs, Babinsa, Polairud and Supervisors Valuation is carried out using an assumption the animals in living condition based on Permenhut No P.106/ MENLHK/ SETJEN/KUM.1 /12/2018;</li> <li>2. Mobile Application through various gadgets / smartphones or computers / laptops that can be accessed 24 hours and multi-platform;</li> <li>3. Activities in the study cover: <ul style="list-style-type: none"> <li>- Focus Group Discussion (FGD) on preparation of study</li> <li>- Data Collection, through: <ul style="list-style-type: none"> <li>• Desk study</li> <li>• Field Survey for collecting databases (Bitung PPT Tasikoki, Jatipark Malang, Taman Safari Bogor). For the field survey, all the administration will include in selected consultant contract value.</li> <li>• FGD for validating work plan of the consultant (will be facilitated by selected consultant)</li> <li>• FGD for data validation (will be facilitated by selected consultant)</li> <li>• Testing and Implementation (will be facilitated by CIWT project)</li> </ul> </li> </ul> </li> </ol> <p><b>Deliverable:</b></p> <p><u>PHASE 1: Initial preparation</u></p> <ol style="list-style-type: none"> <li>1.1 Consultations with project team and other relevant resource persons, as well as thorough review of relevant literature and studies/surveys to gather background information. Literature Review: review of key documents (i.e. project documents, IWT related reports/articles/news, existing and previous IWT campaigns conducted by UNDP and/or other organizations, previous baseline surveys tool and reports);</li> <li>1.2 Focus Group Discussion (FGD) that need to involve LIPI and Directorate of Biodiversity Conservation for the following aims: <ul style="list-style-type: none"> <li>• Identify reference of Species list that have been available in their respective repository.</li> <li>• Agree upon detail information that need to be inserted in the application</li> <li>• Agree upon the working modality to collect the targeted species;</li> </ul> </li> <li>1.3 Finalize the method for data collection after discussion with the project team and the directorate of Forest Protection (Dit PPH, Gakkum); and</li> </ol>

	<p>1.4 Submit detail work plan and scope of study within 2 weeks of signing contract by both parties.</p> <p>PHASE 2: <u>Data Collection and Data Analysis</u></p> <p>2.1. Collecting primary and secondary data (Field survey and FGD) in accordance with Permen No: P.106 / MENLHK / SETJEN / KUM.1 / 6/2018 Focusing in Aves, Mamals, and Perpetofauna.</p> <ul style="list-style-type: none"> <li>- Photographs (Min 3 Pictures) and illustrated images of targeted wildlife;</li> <li>- Prepare a description and information of the wildlife;</li> <li>- Species distribution;</li> <li>- Name of species and / or sub-species that have been validated by LIPI;</li> <li>- Key of species determination.</li> </ul> <p>2.2. System Analysis</p> <p>Data analysis, processing data into information so that the characteristics of the data can be understood and useful for solutions to problems.</p> <p>PHASE 3: <u>Final Report</u></p> <p>Submit draft final report prior to stakeholder meeting to discuss draft report containing all report produced in scope of work I to 2:</p> <p>3.1. System Design</p> <ul style="list-style-type: none"> <li>a. Interactive and real time applications;</li> <li>b. Easy user interface;</li> <li>c. Mockup of the Mobile Application;</li> <li>d. Mockup of the WebPortal Application;</li> <li>e. Server implementation (Linux Operating System, Database PostgreSQL dan PostGIS, Apache CloudStack installed) provided by Directorate General of Law Enforcement on Environmental and Forestry, MoEF; and</li> <li>f. Low maintenance.</li> </ul> <p>3.2. Implementation</p> <ul style="list-style-type: none"> <li>a. Trial (Can be through FGD or Workshop);</li> <li>b. Launch / Go Live;</li> <li>c. Submit the Source Code to Directorate General of Law Enforcement on Environmental and Forestry, MoEF;</li> <li>d. Evaluate the application and input from users and stakeholders, UNDP and Ministry of Environment and Forestry and submit the report in English and Indonesian; and</li> <li>e. Three years Warranty for the Bug Fixing.</li> </ul>
Person to Supervise the Work/Performance of the Service Provider	<ol style="list-style-type: none"> <li>1. Director of Forest Protection, Ministry of Environment and Forestry.</li> <li>2. Programme Manager NRM Cluster Environment Unit, UNDP Indonesia.</li> </ol>

Frequency of Reporting	Please refer to the TOR
Progress Reporting Requirements	Please refer to the TOR
Location of work	<input checked="" type="checkbox"/> At Contractor's Location, if required, for technical works specifically indicated in the proposal
Expected duration of work	6 months
Target start date	November 2020
Latest completion date	April 2021
Travels Expected	1 time for each location and spend minimum 3 days of each location. The list of location are as follows: <ul style="list-style-type: none"> <li>• Bitung</li> <li>• Malang</li> <li>• Bogor</li> </ul> NOTE: The travel expense for field survey should be included as part of Financial Proposal
Special Security Requirements	<input checked="" type="checkbox"/> Comprehensive Travel Insurance
Facilities to be Provided by UNDP (i.e., must be excluded from Price Proposal)	<input type="checkbox"/> Office space and facilities <input type="checkbox"/> Land Transportation <input checked="" type="checkbox"/> Other: N/A
Implementation Schedule indicating breakdown and timing of activities/sub-activities	<input checked="" type="checkbox"/> Required
Names and curriculum vitae of individuals who will be involved in completing the services	<input checked="" type="checkbox"/> Required
Currency of Proposal	<input checked="" type="checkbox"/> United States Dollars <input checked="" type="checkbox"/> <b>Local Currency for Local Bidders</b>
Value Added Tax on Price Proposal <sup>1</sup>	<input checked="" type="checkbox"/> must be exclusive of VAT and other applicable indirect taxes

<sup>1</sup> VAT exemption status varies from one country to another. Pls. check whatever is applicable to the UNDP CO/BU requiring the service.

Validity Period of Proposals (Counting for the last day of submission of quotes)	<input checked="" type="checkbox"/> 90 days  In exceptional circumstances, UNDP may request the Proposer to extend the validity of the Proposal beyond what has been initially indicated in this RFP. The Proposal shall then confirm the extension in writing, without any modification whatsoever on the Proposal.				
Partial Quotes	<input checked="" type="checkbox"/> Not permitted				
	Phase	Deliverable/Outputs	Estimate Due Date	Condition for payment release	Payment Amount
	1	Finalized Work Plan  Work plan covering scope of work 1	(1 month)  Due date: 2 November 2020	subject to approval by NPD CIWT and Programme Manager for NRM, UNDP	25%
	2	Deliverable Containing:  1. Data Report that consist of: a. Collecting primary and secondary data b. FGD and Field Survey report 2. System Analysis; 3. System Design; 4. Mockup of the Mobile Application 5. Mockup of WebPortal Application	(4 months)  Due date: 22 March 2021		50%
	3	Final Report: Implementation of Wildlife Mobile Application to support law enforcement process (submit source code to Directorate General	1 month  Due date: 22 April 2021		25%



		of Law Enforcement on Environmental and Forestry, MoEF)				
Person(s) to review/inspect/ approve outputs/completed services and authorize the disbursement of payment	<ol style="list-style-type: none"> <li>1. Director of Forest Protection, Ministry of Environment and Forestry.</li> <li>2. Programme Manager NRM Cluster Environment Unit, UNDP Indonesia.</li> </ol>					
Type of Contract to be Signed	<input checked="" type="checkbox"/> Professional Service Contract					
Criteria for Contract Award	<input type="checkbox"/> Lowest Price Quote among technically responsive offers <input checked="" type="checkbox"/> Highest Combined Score (based on the 70% technical offer and 30% price weight distribution) – only bidder that reach minimum score 70% where the password in opening the financial proposal will be opened <input checked="" type="checkbox"/> Full acceptance of the UNDP Contract General Terms and Conditions (GTC). This is a mandatory criterion and cannot be deleted regardless of the nature of services required. Non-acceptance of the GTC may be grounds for the rejection of the Proposal.					
Criteria for the Assessment of Proposal	<p><b><u>Technical Proposal (70%)</u></b></p> <input checked="" type="checkbox"/> Expertise of the Firm 30% <input checked="" type="checkbox"/> Methodology, Its Appropriateness to the Condition and Timeliness of the Implementation Plan 30% <input checked="" type="checkbox"/> Management Structure and Qualification of Key Personnel 40% <p><b><i>NOTE: Only bidder(s) who received minimum score of 70 on the technical score will be requested for password to open the financial proposal</i></b></p> <p><b><u>Financial Proposal (30%)</u></b></p> <p>To be computed as a ratio of the Proposal's offer to the lowest price among the proposals received by UNDP.</p>					
UNDP will award the contract to:	<input checked="" type="checkbox"/> One and only one Service Provider <input type="checkbox"/> One or more Service Providers, depending on the following factors					
Contract General Terms and Conditions <sup>1</sup>	<input checked="" type="checkbox"/> General Terms and Conditions for contracts (goods and/or services) <input type="checkbox"/> General Terms and Conditions for de minimis contracts (services only, less than \$50,000)					

<sup>1</sup> Service Providers are alerted that non-acceptance of the terms of the General Terms and Conditions (GTC) may be grounds for disqualification from this procurement process.

	Applicable Terms and Conditions are available at: <a href="http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html">http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html</a>
Annexes to this RFP <sup>1</sup>	<input checked="" type="checkbox"/> Form for Submission of Proposal (Annex 2) <input checked="" type="checkbox"/> Detailed TOR (Annex 3) <input type="checkbox"/> Others <sup>2</sup> [pls. specify]
Contact Person for Inquiries (Written inquiries only) <sup>3</sup>	<i>Sestyo Ndaru Wicaksono / Yusef Saiful M.</i> <i>Procurement Unit</i> <i>Sestyo.wicaksono@undp.org/yusef.millah@undp.org</i> Any delay in UNDP's response shall be not used as a reason for extending the deadline for submission, unless UNDP determines that such an extension is necessary and communicates a new deadline to the Proposers.
Other Information [pls. specify]	

<sup>1</sup> Where the information is available in the web, a URL for the information may simply be provided.

<sup>2</sup> A more detailed Terms of Reference in addition to the contents of this RFP may be attached hereto.

<sup>3</sup> This contact person and address is officially designated by UNDP. If inquiries are sent to other person/s or address/es, even if they are UNDP staff, UNDP shall have no obligation to respond nor can UNDP confirm that the query was received.

## Annex II

**FORM FOR SUBMITTING SERVICE PROVIDER'S PROPOSAL***(This form must be submitted only using the Service Provider's Official Letterhead/stationery)*[insert: Location].  
[insert: Date]

To: [insert: Name and Address of UNDP focal point]

Dear Sir/Madam:

We, the undersigned, hereby offer to render the following services to UNDP in conformity with the requirements defined in the RFP dated *[specify date]*, and all of its attachments, as well as the provisions of the UNDP General Contract Terms and Conditions:

**A. Qualifications of the Service Provider**

*The Service Provider must describe and explain how and why they are the best entity that can deliver the requirements of UNDP by indicating the following:*

- a) Profile – describing the nature of business, field of expertise, licenses, certifications, accreditations;*
- b) Business Licenses – Registration Papers, Tax Payment Certification, etc.*
- c) Latest Audited Financial Statement – income statement and balance sheet to indicate its financial stability, liquidity, credit standing, and market reputation, etc.;*
- d) Track Record – list of clients for similar services as those required by UNDP, indicating description of contract scope, contract duration, contract value, contract references;*
- e) Written Self-Declaration that the company is not in the UN Security Council 1267/1989 List, UN Procurement Division List or Other UN Ineligibility List.*

**B. Proposed Methodology for the Completion of Services**

*The Service Provider must describe how it will address/deliver the demands of the RFP; providing a detailed description of the essential performance characteristics, reporting conditions and quality assurance mechanisms that will be put in place, while demonstrating that the proposed methodology will be appropriate to the local conditions and context of the work.*

**C. Qualifications of Key Personnel**

*If required by the RFP, the Service Provider must provide :*

- a) Names and qualifications of the key personnel that will perform the services indicating who is Team Leader, who are supporting, etc.;*
- b) CVs demonstrating qualifications must be submitted if required by the RFP; and*
- c) Written confirmation from each personnel that they are available for the entire duration of the contract.*

**D. Cost Breakdown per Deliverable\***

	<b>Deliverables/Outputs</b> <i>[list them as referred to in the RFP]</i>	<b>Percentage of Total Price</b> <i>(Weight for payment)</i>	<b>Price</b> <i>(Lump Sum, All Inclusive)</i>
1	Deliverable 1: Finalized Work Plan Work plan covering scope of work 1:	25%	
2	Deliverable 2: containing scope of work 2 and 3: 1. Data Report that consist of: a. Collecting primary and secondary data b. FGD and Field Survey report 2. System Analysis; 3. System Design; 4. Mockup of the Mobile Application. 5. Mockup of the WebPortal Application	50%	
3	Final Report Containing Scope of Work 3: Implementation of Wildlife Mobile Application to support law enforcement process (submit source code to Directorate General of Law Enforcement on Environmental and Forestry, MoEF)	25%	
	Total	100%	

**E. Cost Breakdown by Cost Component [This is only an Example]:**

Description of Activity	Remuneration per Unit of Time	Total Period of Engagement (Days)	No. of Personnel	Total Rate
<b>I. Personnel Services</b>				
1. Team leader		73	1	
2. Experts in Mammals		58	1	
3. Experts in Aves		58	1	
4. Experts in Perpetofauna		58	1	
5. Mobile Developer and WebPortal Programmer and Database Experts (Two Person)		73	2	
6. Illustrator		68	1	
7. Application Operator concurrently Technical Documentation		73	1	
<b>II. Travel Expenses to:</b>				
1. Bitung (PPS Tasikoki)		min. 3 days	4	
2. Malang (Jatim Park)		min. 3 days	4	
3. Bogor (Taman Safari Indonesia)		min. 3 days	4	
<b>III. Meeting/FGD Expense</b>				
1. Jakarta (FGD Validating work plan) - Venue : min. 4 star hotel - Participants: Jabodetabek - Transport expense must follow government rules (SBU Rates)		2 days	20 participant	
<b>IV. Other Cost (if any, please specify in detail)</b>				

*[Name and Signature of the Service Provider's Authorized Person]*

*[Designation]*

*[Date]*



**Term of Reference (TOR)**  
**Development of Data Base of Protected Species and**  
**Mobile Application for the Wildlife Identification**

A. General Information	Terminology of this TOR
Title	: Development of Data Base of Protected Species and Mobile Application for the Wildlife Identification
Report to	: 1. Director of Forest Protection, Ministry of Environment and Forestry 2. Programme Manager NRM Cluster Environment Unit, UNDP Indonesia 3. National Project Manager of Combatting Illegal Wildlife Trade
Location	: Gedung Manggala Wanabakti Blok IV Lantai 7 Ruang 704B
Expected place of travel	: as listed in annex 2
Duration of contract	: The expected duration of the contract is 6 (six) months upon contract signing by both parties
Provision of support services	: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Equipment (laptop etc.)	: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Secretarial Services	: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

The terms listed here under are used throughout this request for proposal (RFP) to mean the following:

Wildlife crime	<p>Crime (from great dictionary of the Indonesian Language) is a behavior that contrary to applicable values and norms that have been ratified by written law.</p> <p>Wildlife (from great dictionary of the Indonesian Language) are all animals that live and still have wild properties, both free living and those that are maintained by humans,</p> <p>Wildlife (Law NO. 5 of 1990) is all animals that live on land, water, and air that still have wild traits, both free living and those that are maintained by humans.</p> <p>Crime against protected animals (Law NO. 5 of 1990)</p> <p>Article 21 paragraph 2 (a) captures, injures, kills, saves, possesses, maintains, transports and trades protected animals in living conditions; (b) storing, possessing, maintaining, transporting and trading protected animals in a dead state; (c) removing protected animals from a place in Indonesia to another place inside or outside Indonesia; (d) trade, store or possess skin, body or other parts of protected animals or goods made from these parts or</p>
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		remove them from a place in Indonesia to another place inside or outside Indonesia; (e) taking, damaging, destroying, trading, storing or possessing eggs and / or nests of protected animals.
Protected Species		Animal species which have a very small population and have a very slow breeding rate, both due to the influence of habitat and ecosystems, and determined to be protected through legislation.
Mobile App and Web Portal Application		According to Wikipedia A mobile application, also referred to as a mobile app or simply an app, is a <u>computer program</u> or <u>software application</u> designed to run on a <u>mobile device</u> such as a <u>phone</u> , <u>tablet</u> , or <u>watch</u> . Apps were originally intended for productivity assistance such as email, calendar, and contact databases, but the public demand for apps caused rapid expansion into other areas such as order-tracking, and so that there are now millions of apps available. Apps are generally downloaded from application distribution platforms which are operated by the owner of the <u>mobile operating system</u> , such as the <u>App Store (iOS)</u> or <u>Google Play Store</u> . Some apps are free, and others have a price, with the profit being split between the application's creator and the distribution platform. Mobile applications often stand in contrast to <u>desktop applications</u> which are designed to run on <u>desktop computers</u> , and <u>web applications</u> which run in <u>mobile web browsers</u> rather than directly on the mobile device.
Data Base		<p>A database is an organized collection of structured information, or data, typically stored electronically in a computer system. A database is usually controlled by a database management system (DBMS). Together, the data and the DBMS, along with the applications that are associated with them, are referred to as a database system, often shortened to just database.</p> <p>Data within the most common types of databases in operation today is typically modeled in rows and columns in a series of tables to make processing and data querying efficient. The data can then be easily accessed, managed, modified, updated, controlled, and organized. Most databases use <u>structured query language (SQL)</u> for writing and querying data.</p>
Stakeholders		<p>A person, group or organization that has interest or related to illegal wildlife trade, which can affect or be affected by the related actions, activities, or policies. This include:</p> <ol style="list-style-type: none"> <li>1. Ministry of Environment and Forestry</li> <li>2. The Indonesian Institute of Sciences</li> <li>3. Indonesian National Police</li> <li>4. NGOs that are related to wildlife trade research, campaign, and monitoring</li> <li>5. Individuals/institutions that are related to wildlife trade research, campaign, and monitoring</li> </ol>

## B. Background Information

Experts considers Indonesia to be one of the 17 “megadiverse” countries. About 35 species of primate place Indonesia fourth in the world and 16% of the world’s reptiles (781 species), 17% of the total species of birds (1,592 species) and 270 species of amphibians. Unfortunately, most of them are under serious threat because of the loss of their habitat, illegal hunting with associates trade and other causes. Some references provide a rough estimation that the value of illegal wildlife trade reaches more than 13 trillion rupiah per year (KLHK, 2018). This could lead to the danger of their extinction.

To support more meaningful effort to reduce poaching and its associate trade or illegal wildlife trade, Ministry of Environment and Forestry of Indonesia have issued series of regulations on list of Wildlife that are prohibited to be poached and illegally trade. The regulations is periodically revised based on their status on their habitat. The most up dated regulation that have been issued is Minister of Environment and Forestry Regulation P.106 / MENLHK / SETJEN / KUM.1 / 6/2018. The list has been added protected species animals which currently amounted to 794 species.

The proactive Law Enforcement have resulted significant volume of seized wildlife that have been illegally trade. In 2015-2018 it is recorded that more than 609 arrests of perpetrators of illegal hunting and distribution (Ditjen Gakkum LHK, 2019). The significant number of seized wildlife shows two indications. Effort on the law enforcement increases significantly. But at the same time conclude that the intensity of IWT is till high.

One of significant challenge that hinder the law enforcement effort is lack of knowledge in identifying a particular species whether they a categorized as protected wildlife or not. Custom, Police and Quarantine officer frequently face the problem of wildlife identification. The complexity come when periodical revision of the regulation in place. It is therefore important to provide some assistance for them in identifying the protected species by developing a mobile application of Wildlife Identification.

The United Nations Development Program (“UNDP”) through funding support from the Global Environmental Facility (“GEF”) - in collaboration with the Director General of the GAKKUM KLHK became one of the partners supporting the eradication of poaching and illegal distribution of wildlife in the form of a collaborative project under the title “Combatting Illegal and Unsustainable Trade in Endangered Species in Indonesia”. The project aims to support the government’s efforts to reduce to a minimum the crime against protected wildlife in order to protect and conserve endangered wildlife species in Indonesia. One of the activities that will be carried out is the development of database and application of Wildlife identification of the protected wildlife according to Ministerial Regulation.

In order to develop such database and develop the application, the Illegal Wildlife Trade Combatting Project (CIWT) will invite a Call For Proposal in the process of developing the Mobile Application for the Wildlife Identification with technical specifications as stated below.

## C. Purpose and Goals

The development of protected wildlife identification application will be very useful for the Forest Ranger, Investigators, Customs, Babinsa, Polairud and Supervisors in accelerating the process of identifying protected species from catches, that in turn will accelerate the process of law enforcement especially in the process of determining a suspect. The law enforcers do not necessarily request for advice from experts for identifying the arrested species of wildlife from a particular operation or whenever they found suspected wildlife crime in port or airport. In addition, if the application can be



accessed by the public, civil society can report to the authorities if they find someone owning a wild species of animal.

#### **D. Output**

1. Database of protected species list based on Permenhut No P.106/ MENLHK/ SETJEN/KUM.1 /12/2018. That provide information which include:
  - a. Valid series of Photos of the species that have clear property right and permission to be posted in the application system. In the absence of the photos from database of Puslit Biologi LIPI as the Indonesian CITES scientific Authority, photo illustration can be used.
  - b. Information on species distribution, habitat characteristic, place of origin and IUCN status, CITES status, key of determination, (main restrain for evacuation).
2. The Mobile and WebPortal Application should provide the following menu:
  - a. Data and information about wildlife species are protected based on P.106 /MENLHK/SETJEN /KUM.1/6/2018 through various gadgets / smartphones or computers / laptops that can be accessed 24 hours and must be Android-and open source platform;
  - b. Reporting system that display decision-making options for authorized officials and proposed related recommendation options.
3. Data Script Programming (DSP) and Soure Code. The DSP and Source Code must be submitted to Directorate Forest Protection Directorate General of Forest Law Enforcement on Environment and Forestry and CIWT Project.
4. Reports
  - a. Inception report. The report should include working plan (including fieldwork) and time schedule, updated methodology in data base collection, Application of Program Design, Mockup of the Mobile Application and WebPortal, analysis process;
  - b. Preliminary report for feedback from MoEF, UNDP and relevant parties;
  - c. Final report. The final report needs to accommodate feedback from relevant parties whenever necessary.

#### **F. Risk dan Assumptions:**

Undertaking data collection in the facilities level presents several challenges including rejection or resistance from the host, data is not sufficient or invalid, data is considered as confidential matter, and longer administration process which may delay the project.

One of the other risks that might happen is a slow process of coordination between government agencies and the relevant partners which require additional acceleration support. It is expected that the consultant should consider the successful factor of project implementation, i.e. relevant government agencies sharing data in timely manner.

Reorganization in relevant government agencies might be take place during the development period that potentially also affect organizational commitment / facilities. The organization / company must identify risks before implementing the project and develop mitigation strategies.

## **G. Institutions that need to be consulted**

1. Center for Biological Research (LIPI);
2. Custom Office in Soekarno Hatta Airport and/or Juanda Airport;
3. Quarantine Office in Soekarno Hatta Airport and/or Juanda Airport;
4. Provincial Technical Office of Natural Resource Conservation in Surabaya and in Jakarta;
5. Regional Technical Office of Law Enforcement for Environment and Forestry in Surabaya and or Medan and or Makassar;
6. *Relevant Non-Government Organization* (“NGO”) expert in wildlife conservation;
7. Civil Society related to Combatting Illegal Wildlife Trade.

## **H. Necessary Reference for Database collection**

1. Guidance book of Wildlife Identification (Ministry of Environment and Forestry)
2. Data Base dan Information from the relevant research institution
3. Permen LHK Nomor P.106 About the Types of Plants and Animals Protected; dan
4. Other relevant resources.

## **I. Scope of Work**

### **Phase 1**

- 1.1. Consultations with project team and other relevant resource persons, as well as thorough review of relevant literature and studies/surveys to gather background information. Literature Review: review of key documents (i.e. project documents, IWT related reports/articles/news, existing and previous IWT campaigns conducted by UNDP and/or other organizations, previous baseline surveys tool and reports).
- 1.2. Focus Group Discussion (FGD) that need to involve LIPI and Directorate of Biodiversity Conservation for the following aims:
  - Identify reference of Species list that have been available in their respective repository.
  - Agree upon detail information that need to be inserted in the application
  - Agree upon the working modality to collect the targeted species
- 1.3. Finalize the method for data collection after discussion with the project team and the directorate of Forest Protection (Dit PPH, Gakkum).
- 1.4. Submit detail work plan and scope of study within 2 weeks of signing contract by both parties.

### **Phase 2**

- 2.1. Database collection of protected wild animals in accordance with Permen No: P.106 / MENLHK / SETJEN / KUM.1 / 6/2018 Focusing in Aves, Mamals, and Perpetofauna.
  - Photographs (min 3 pictures) and illustrated images of targeted wildlife;
  - Prepare a description and information of the wildlife
  - Species distribution;
  - Name of species and / or sub-species that have been validated by LIPI; and
  - Key of species determination (min 3 pics).

## 2.2. System Analysis

Data analysis, processing data into information so that the characteristics of the data can be understood and useful for solutions to problems.

## Phase 3

### 3.1. System Design

- a. Interactive and real time applications;
- b. Easy user interface;
- c. Mockup of the Mobile Application;
- d. Mockup of the WebPortal Application;
- e. Server implementation (Linux Operating System, Database PostgreSQL dan PostGIS, Apache CloudStack installed) provided by Directorate General of Law Enforcement on Environmental and Forestry, MoEF, and
- f. Low maintenance.

### 3.2. Implementation

- a. Trial (Can be through FGD or Workshop);
- b. Launch / Go Live;
- c. Submit the Source Code to Directorate General of Law Enforcement on Environmental and Forestry, MoEF;
- d. Evaluate the application and input from users and stakeholders, UNDP and Ministry of Environment and Forestry and submit the report in English and Indonesian; and
- e. Three years Warranty for the Bug Fixing.

## J. Deliverables and Payment Schedule

Considering that the users of the study are the Government of Indonesia, all forms of reports shall be developed in the official language (Bahasa Indonesia) with an excellent translation in English. All reports must be presented first to Director General of Law Enforcement of Environment and Forestry, Ministry of Environment and Forestry of Indonesia for feedback and comments. These comments must be incorporated to the reports before the product's final approval by the project steering committee. The final reports must have an executive summary and Power Point presentation. The team of consultant shall submit the final report both in English and Bahasa Indonesia version in a file storage (i.e. USB or CD) containing soft copy of editable version of final report, all presentation, photos and video, all data and calculation, and simulation result (if available).

### List of Deliverable and Payment Schedule

Phase	Deliverable/Outputs	Duration (months)	Progress	Man days	Estimated date of accomplishment	Schedule of payment	Amount
1	Finalized Work Plan  Work plan covering scope of work Phase 1	1	30%	10	2 November 2020	Within two weeks upon submission and approval NPD CIWT & NRM Programme	25%

						Manager UNDP	
2	Deliverable Containing:  1. Data Report that consist of: a. Collecting primary and secondary data b. FGD and Field Survey report 2. System Analysis; 3. System Design; 4. Mockup of the Mobile Application 5. Mockup of the WebPortal Application	4	75%	50	22 March 2021	(Need approval from NPD CIWT and NRM Programme Manager, UNDP)	50%
3	Final Report: Implementation of Wildlife Mobile Application and WebPortal Application to support law enforcement process (Submit a source code to Implementating Partner)	1	100%	30	22 April 2021	(Need approval from NPD CIWT and NRM Programme Manager, UNDP)	25%

#### **K. Period of the work**

The development of the work will be conducted within 6 months through several meetings (brainstorming meetings / Focus Group Discussions (FGD) and Workshops, desk study, etc). The Trial process of Mobile Application and WebPortal Application for the Wildlife Identification will be consulted with the parties during the manufacturing period.

#### **L. Experience and Qualification of the Consultant Team**

##### **1. The qualification of the desired consultant firm/organization/institution are as follows:**

- a. Minimum 5 years experience in building systems or applications
- b. Experience in projects and programs in Indonesia
- c. Familiar with Indonesian biodiversity and wildlife conservation sector
- d. Experience in managing projects with National and International Organizations or governments
- e. Knowledge in Biodiversity will be preferred

##### **2. The List of Personnel and qualifications**

1. Team Leader;

2. Senior Specialist in Mammalia, Aves and Perpetofauna;
3. Two Programmer dan Database Specialist;
4. Illustrator Specialist;
5. Application operator.

#### **Personnel Qualification :**

##### **1. Team leader (System Analyst)**

###### **Qualification:**

- a. Minimum 10 years working experience for Bachelor Degree (BSc Hon Graduate) or 8 years working experience for Master Degree Graduate, related to Computer Science or Information Technology or equivalent experience;
- b. Experience with projects related information system on biodiversity as an advantage;
- c. Experience handling projects related to stakeholders in government;
- d. Proficiency in English, oral and written. Consultants must have the ability to write reports, make presentations, and to provide training etc. in English; and
- e. Experience 10 years as System Analyst.

###### **Competency :**

- a. Ability to motivate and shape the scope of team work in supporting the achievement of goals;
- b. Confidence in the ability to accept responsibility and accountability for decision making and action;
- c. Creative and innovative in deconstructing and providing solutions to related problems;
- d. Ability to work in a team and individually;
- e. Excellent time management capabilities, with the ability to deliver high-quality results in a timely manner;
- f. Having ability to provide clear presentation, organizational and communication skills and excellent report writing.

##### **2. Senior Specialist in Mammals,**

###### **Qualification:**

- a. Minimum Bachelor Degree majoring in Biological related Sciences or Forestry;
- b. At least 6 years experiences as researcher/lecturer/observer in Biological science with expertise in Mammals;
- c. Experience in collect biological data and specimens for analysis.

###### **Competency:**

- a. Having the ability to characterize and identify mammalian species, especially for protected species under the list of Minister of Environment and Forestry Regulation P.106/MENLHK/SETJEN/KUM.1/6/2018;
- b. Having adequate knowledge of their distribution, habitat and the status of the species in the IUCN Redlist and CITES listing.

##### **3. Senior Specialist in Aves,**

###### **Qualification:**

- a. Minimum Bachelor Degree majoring in Biological related Sciences or Forestry;
- b. At least 6 years experiences as researcher/lecturer/observer in Biological science with expertise in Aves;
- c. Experience in collecting biological data and specimens for analysis.

###### **Competency:**

- a. Having the ability to characterize and identify mammalian species, especially for protected species under the list of Minister of Environment and Forestry Regulation P.106/MENLHK/SETJEN/KUM.1/6/2018;
- b. Having adequate knowledge of their distribution, habitat and the status of the species in the IUCN Redlist and CITES listing.

#### **4. Senior Specialist in Perpetofauna,**

##### **Qualification:**

- a. Minimum Bachelor Degree majoring in Biological related Sciences or Forestry;
- b. At least 6 years experiences as researcher/lecturer/observer in Biological science with expertise in Herpetofauna;
- c. Experience in collect biological data and specimens for analysis.

##### **Competency:**

- a. Having the ability to characterize and identify mammalian species, especially for protected species under the list of Minister of Environment and Forestry Regulation P.106/MENLHK/SETJEN/KUM.1/6/2018;
- b. Having adequate knowledge of their distribution, habitat and the status of the species in the IUCN Redlist and CITES listing.

#### **5. Two persons for Programmer and Database Specialist**

##### **Qualification:**

- a. Minimum Bachelor degree majoring in IT, SI, Mathematics, Statistics, or Electrical;
- b. Having Good understanding of PHP, Laravel Framework / Android / Swift programming and also understanding in the MySQL / PostgreSQL database;
- c. At least 6 years of experience in the development of application software and the like.

##### **Competency:**

- a. Confidence in the ability to accept responsibility;
- b. Able to collaborate in teams;
- c. Having Good understanding of Hardware, Software and devices on the Server;
- d. Having Good understanding of Remote Server;
- e. Having the ability to manage the database, in backing up and restoring; and
- f. Able to stand by when there is a Maintenance request on the Server.

#### **6. Illustrator**

##### **Qualification:**

- a. Minimum education of Bachelor (BSc Hon Graduate) degree;
- b. At least 3 years of experiences as an illustrator or graphic designer for application developer.

##### **Competency:**

- a. Having good understanding of the android application, and picture illustration application;
- b. Familiar with and able to use drawing tablets and digital illustration software. Popular software programs for professional illustration include Adobe Illustrator, Adobe Photoshop, and Coreldraw;
- c. Ability to work under pressure and meet deadlines;
- d. Strong commitment to allocate his /her working time whenever maintenance works is needed.

## **7. Application Operator & Technical Documentation**

### **Qualification:**

- a. Minimum education of Bachelor (BSc Hon Graduate) degree;
- b. At least 3 years of experiences in the field of trial or application trial or similar area;

### **Competency:**

- a. Good ability to communicate with audience in explaining on how the applications work;
- b. Good ability in working within a team or individually;
- c. Having good understanding of the android application; and
- d. Strong commitment to allocate his /her working time whenever maintenance works is needed.

## **M. Timeline**

### **LIST OF APPENDIXES**

APPENDIX 1 : TIMELINE

APPENDIX 2 : LIST OF MINIMAL PROSOED MEETING ACTIVITIES (WORKSHOP, SEMINAR, FGD, CONFERENCE ATAU SIMILAR)

**ANNEX 1. TIMELINE**

Description	Deliverable	Month					
		Nov' 20	Des' 20	Jan' 21	Feb' 21	Mar' 21	Apr ' 21
Sign contract							
1.1. Consultations with project team and other relevant resource persons, as well as thorough review of relevant literature and studies/surveys to gather background information.	Minutes of Meeting						
1.2. Focus Group Discussion (FGD) that need to involve LIPI and Directorate of Biodiversity Conservation	Minutes of Meeting						
1.3. Finalize the method for data collection after discussion with the project team and the directorate of Forest Protection (Dit PPH, Gakkum).	Data Compilation						
1.4. Submit detail work plan and scope of study	Draft Report						
2.1. Database collection of protected wild animals in accordance with Permen No: P.106 / MENLHK / SETJEN / KUM.1 / 6/2018	Data Compilation						
2.2. System Analysis	Draft Report						
3.1. System Design	Draft report						
3.2. Final Report (Implementation of Animal Identification Application to Support Legal Process) Trial Can be through FGD or Workshop. The report must be submitted in English and Indonesian. The consultant shall submit a file storage (i.e. USB or CD) containing soft copy of editable version of final report, all presentation, photos, source code, all data and calculation, and simulation result.	Final Report						
Ensuring multi stakeholder participations. Within each scope of works mentioned above, the team of consultant is expected to ensure the active participation of government, private sector, academicians, local people, and NGO.							

Note: All schedule of activities are subject to discussion  
 FGD, meetings and site visits: Refer to annex 2



**ANNEX 2.LIST OF MEETING ACTIVITIES (WORKSHOP, FGD, CONFERENCE DAFTAR JUMLAH MINIMAL KEGIATAN (WORKSHOP, SEMINAR, FGD, ETC)**

No .	Item	Freq. of activities	No. of Participant	No of Days	Location	Note
1.	FGD: For validating work plan of the consultant - Venue : min. 4 star hotel - Participants: Jabodetabek - Transport expense must follow government rules (SBU Rates)	1	20 (Custom, Quarantine, LIPI, local NGO)	1	Jakarta	Facilitated by Consultant
2.	<ul style="list-style-type: none"> <li>Collecting Pictures from PPS Tasikoki, Jatim Park, and Taman Safari</li> <li>Updating illustrate animal draft</li> </ul>	1 time for each location	4	3	<ul style="list-style-type: none"> <li>Bitung</li> <li>Malang</li> <li>Bogor</li> </ul>	Facilitated by Consultant
3.	FGD for data validation - Venue : min. 4 star hotel - Participants: Jabodetabek - Transport expense must follow government rules (SBU Rates)	1	20 (Custom, Quarantine, LIPI, local NGO)	1	Jakarta	Facilitated by Consultant
4.	Testing	1	20	1	Jakarta	Facilitated by CIWT
5.	Launching	1	60	1	Jakarta	Facilitated by CIWT