


TERMS OF REFERENCE FOR INDIVIDUAL CONSULTANT

TERMS OF REFERENCE (to be completed by Hiring Office)	
Hiring Office:	UNFPA Cambodia Country Office
Chart of Account:	71205 - DEE12 – 60700 – KHM06MOP - DATA_PLATE – PU0074
Purpose of consultancy:	To provide technical assistance to the Royal Government of Cambodia, specifically the National Institute of Statistics (NIS), Ministry of Planning (MoP), in order to modernize the online data platform known as "CAMSTAT," which is one of the country's most important data exchange and reporting platforms.
	<p>Background and Rationale:</p> <p>Cambodia has made important progress in developing the national statistical system and establishing legal and administrative frameworks to guide the activities of the NIS.</p> <p>However, the past decade has seen unprecedented growth in demand for high-quality, easily accessible data, which can inform policy making and monitor the achievement of national development frameworks, such as the Cambodia Sustainable Development Goals (CSDG), the Rectangular Strategy IV, the National Strategic Development Plan (NSDP) 2019-2023, and the United Nations Development Assistance Framework 2019-2023.</p> <p>The Royal Government of Cambodia (through the Ministry of Economy and Finance) is building a unified data exchange platform called the CAMDX. This platform facilitates secure data sharing over the internet, and aims to connect the various existing data systems into a coherent ecosystem. One of the key data systems contributing to this “whole-of-government” platform will be the National Statistical System (NSS) online data platform, called CAMSTAT. The government has put in place and designated CAMSTAT as the official National Indicator Reporting Platform. However, CAMSTAT still not yet fully operationalize as effective data visualization tools to provide easy navigations to search for data and produce tables, graphs and maps. By using visual elements like charts, graphs, and maps, data visualization tools provide an accessible way to see and understand trends, outliers, and patterns in data. In the world of Big Data, data visualization tools and technologies are essential to analyze massive amounts of information and make data-driven decisions.</p> <p>Following the Mid-Term Review of the National Strategy for the Development of Statistics (NSDS) 2019-2023 conducted in 2020, one of the recommendations for the statistical reform agenda is to modernize the CAMSTAT platform, which also include SDG Portal. NIS has been tasked with implementing the recommendation and ensuring sustained tracking, reporting, sharing, data exchange, and dissemination of national development indicators and SDGs for policymakers and data users from various sectors and programmes. In order to ensure high quality of the work, thus, United Nations Population Fund (UNFPA) with NIS/MoP seek to hire an IT local expert/consultant for assisting the NIS/MoP in modernizing and upgrading the CAMSTAT platform (http://camstat.nis.gov.kh).</p>

<p>Scope of work:</p> <p><i>(Description of services, activities, or outputs)</i></p>	<p>The main objective of this assignment is to focus on the development of an art and science of data visualization to make the CAMSTAT platform to be easier to identify patterns, trends and outliers in large datasets/indicators. This also includes a broader data presentation architecture such as information graphics, information visualization and statistical graphics with created interactive tables, graphs, dashboards and maps, which aims to identify, locate, manipulate, format and deliver data in the most efficient way possible. This also includes the hands on experience and capacity building to NIS officials.</p> <p>The local consultant will provide technical support and assist UNFPA and NIS/MoP with deliverables at the end of the contract:</p> <ol style="list-style-type: none"> i. Submitted An inception report (focusing on modernising the CAMSTAT, its infrastructure and data visualization): <ol style="list-style-type: none"> a. Reviewed existing documents, visualization of CAMSTAT, and frameworks related to appropriate technology solutions and data sharing technologies. b. Carried out assessment of local ministry servers' infrastructure specifications, existing databases, and security risks, providing detailed technical recommendations for feasibility of data sharing and appropriate solutions. c. Consulted NIS, UNFPA, and any other relevant data users or stakeholders for visualization needs of the CAMSTAT and SDG platforms including requirements for improving SDG reporting. d. Proposed feature of the art of data visualization portal to NIS and UNFPA; e. Presented inception report with proposed timeframe in support of NIS and UNFPA for modernising CAMSTAT. ii. Submitted Technical results <ol style="list-style-type: none"> a. Modernized the CAMSTAT with art and science of data visualization that will help discover patterns, trends, and outliers in massive datasets/indicators. This also comprises a broader data presentation architecture that tries to identify, locate, modify, format, and convey data in the most efficient way possible, such as information graphics, information visualization, and statistical graphics. b. Developed user guide for data users and technical solutions guide for ICT department of NIS to be used for future update of the CAMSTAT including SDG Portal. c. Provided hands-on experience/training to CAMSTAT core team and ICT officials and other relevant staff of NIS including provision of the additional services to NIS if deemed necessary. d. Presented results to NIS/MoP and UNFPA. iii. Submitted the final report:
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	<p>a. An end-of-consultancy report with presentations submitted to NIS/MoP and UNFPA for final payment. The report is expected to outline key progress, challenges and lessons learnt including technical recommendations as way forward.</p>
Duration and working schedule:	Maximum within 85 Working Days
Place where services are to be delivered:	UNFPA Country Office and NIS/MoP
Delivery dates and how work will be delivered (e.g. electronic, hard copy etc.):	<p>The local consultant is expected to commence work on 1st July 2022 and complete the assignment by 15 December 2022. The suggested timeframe required for each deliverable is below:</p> <ol style="list-style-type: none"> 1- Submit the final draft of the inception report by 08 July 2022 for comments. The payment of 30% of the total fee will be made. 2- Submit the 1st draft technical results (platform) by 31 August 2022 for testing the platform. The payment of 30% of the total fee will be made upon receipt of satisfaction as per the assessment of UNFPA and the NIS/MoP. 3- Submit the 2nd draft technical results (platform), users-guide/technical note, and hands-on training report by 30 September 2022 for testing the platform. The payment of 30% of the total fee will be made upon receipt of satisfaction as per the assessment of UNFPA and the NIS/MoP. 4- Submit the final deliverables by 15 December 2022. The final payment of 10% of the total fee will be made upon receipt of satisfaction as per the assessment of UNFPA and the NIS/MoP.
Monitoring and progress control, including reporting requirements, periodicity format and deadline:	UNFPA together with the Director General of the NIS/MoP will oversee and monitor the consultancy. The consultant may also be required to consult with the NIS focal person as needed. PD Analyst of UNFPA will also assist in monitoring the progress toward achieving each of the above mentioned deliverables.
Supervisory arrangements:	<p>The consultant will work closely under the guidance and supervision of the UNFPA and Director General of NIS. However, the consultant is expected to report his/her work progress to UNFPA management upon request.</p> <p>UNFPA will ensure compliance with the TORs and delivery of the expected outputs/results as planned. UNFPA will also be required to have frequent interactions with the consultant at various stages in order to:</p> <ul style="list-style-type: none"> • Brief the consultant and provide clarity on the assignment; the process and deliverables; • Introduce and facilitate the consultant to work with stakeholders and counterparts if deemed necessary; and • Provide feedback and get agreement/approval during the progress of the assignment.

	Upon completion of contract assignment, UNFPA management will certify relevant documents and evaluate the consultant's performance prior to release of final payment.
Expected travel:	The assignment will be conducted in Country.
Required expertise, qualifications and competencies, including language requirements:	<p>Minimum Qualification Requirements:</p> <p>Education: Advanced University Degree in Computer/Data Science, data governance or related fields. Additional certified professional level certification in data Architecture, data analysis or management of information system, etc is a definite advantage.</p> <p>Experience, Knowledge & Skills:</p> <ul style="list-style-type: none"> • At least 7 years of experience in web technologies, including web design, development and deployment of information and knowledge systems. Strong working experience in the field is a plus. • Strong experienced in Software Development including a solid understanding of how to debug problems, from user interface (UI) down to back-end systems in the country will be an added advantage; • Experience in the design and development of digital data collection, analysis and visualization solutions as integral functions of web-platforms; • Demonstrated ability to develop web-based solutions that promote knowledge cocreation, knowledge exchange, continuous learning and innovation; • Demonstrate solid knowledge of and experience in Open Source Content Management Solutions; • Experience developing web-based information and knowledge systems and tools for international organizations; • Experience in working on building large-scale systems including developing web services (REST API, SOAP, and/or XML-RPC); • High knowledge in back-end programming languages including PHP, Java, ASP.Net. Knowledge of Python and Ruby on Rails will be an added advantage; • Advanced knowledge in OOP, UML, MVC, Net Framework, and version control; • Knowledge of international statistical standards such as the Statistical Data and Metadata eXchange (SDMX), the Generic Statistical Business Architecture (GSBPM) and the Common Statistical Processing Architecture (CSPA); • Experience in developing and administrating Database Management System (DBMS) using MySQL, PostgreSQL and MS SQL. • Experience with message queueing technologies (Kafka, RabbitMQ, Active MQ, MSMQ), Continuous Integration (Jenkins), and performance and load testing; • Good knowledge on data science, but not limited to data governance, data innovation, data visualization and infographics, and data interpretation. • Knowledge in research, demography, economics, statistics, involving data analysis or development of statistical software programme and application is a plus; <p>Language skills: Excellent writing and speaking skills in English – native-level or equivalent. Basic knowledge in Khmer is a plus.</p>

<p>Inputs / services to be provided by UNFPA or implementing partner (e.g. support services, office space, equipment), if applicable:</p>	<p>UNFPA will provide only appropriate working space with reliable internet connection and other administrative support for the consultant to perform the task during his/her assignment. UNFPA will organize virtual consultations with NIS/MoP in case the consultant is not available in country.</p>
<p>Other relevant information or special conditions, if any:</p>	<p>Interested candidates should submit application form and a completed UN Personal History (P-11) Form by email to cambodia.office@unfpa.org . The P-11 form is available for download at http://www.unfpa.org/resources/p11-un-personal-history-form.</p> <p>UNFPA does not charge any application, processing, training, interviewing, testing or other fee in connection with the application or recruitment process. Fraudulent notices, letters or offers may be submitted to the UNFPA.</p> <p>UNFPA provides a work environment that reflects the values of gender equality, teamwork, embracing diversity in all its forms and integrity. UNFPA is committed to maintaining a balanced gender distribution and therefore encourages women to apply. UNFPA promotes equal opportunities for all including persons with disabilities.</p> <p>The following are examples of dashboards/platforms that NIS envisions for the CAMSTAT::</p> <ul style="list-style-type: none"> • https://un-cambodia.exploredata.report/?view=Published • https://www.itu.int/en/ITU-D/Statistics/Dashboards/Pages/Digital-Development.aspx • https://www.unfpa.org/data/world-population/KH
<p>Endorsed by Country Representative a.i:</p> <p style="text-align: center;"></p> <p>Date: 03/06/2022</p>	