

TERMS OF REFERENCE FOR INDIVIDUAL CONSULTANT Approved

[Signature]

TERMS OF REFERENCE (to be completed by Hiring Office)	
Hiring Office:	UNFPA Cambodia Country Office
Purpose of consultancy:	To design and provide technical capacity development for technical personnel of the National Institute of Statistics (NIS), Ministry of Planning (MoP) on Cartography/GIS (Geographical Information System) for 2019 Census.
	<p>Background and Rationale:</p> <p>The first census in Cambodia was held in 1962. Due to civil war and internal disturbances the next census of Cambodia could be conducted only after 36 years in 1998. This was followed by the Census in 2008. Following the successful creation of a valuable population database from the last two censuses, the RGC is committed to further building and strengthening it through the next Census to increase in the demand of governmental agencies, planners and researchers for reliable and updated demographic and social data in order to review their plans and programmes.</p> <p>The National Institute of Statistics (NIS) of the Ministry of Planning (MoP) is currently in the process of preparation for 2019 General Population Census of Cambodia. This work is clearly stated in the Statistical Law, the National Strategic Development Plan 2014-2018 and its Mid-Term Review. This work is under the mandate of the NIS of the MoP to take the lead in the whole process to ensure all aspects of international agreed recommendations are comprehensively synchronized and integrated to the Census round 2020.</p> <p>According to the UN Principles and Recommendations for Population and Housing Censuses, Rev.2, recommends the use of geospatial technologies for improving traditional methods of census mapping (adopted by UNSC in 2007) and other recommendations derived from UN EGM on GIS and Census Mapping emphasized on the need for countries to consider the census geography programme as a continuous process, and the use of application of geospatial technologies and information is beneficial at all stages of population and housing census process (GIS improves the efficiency in the preparatory, enumeration, processing and dissemination phases of the census). Considering the importance of geospatial technologies, there is a need of a National Cartography/GIS Consultant or local company/institution to design a training programme and provide a 5 days training session for 5-8 key technical officials who have already had from basic to intermediary level of GIS knowledge (although numbers and level of experience of trainees are subject to change).</p> <p>The main objective of the training is sought to provide the knowledge and skills needed to improve the efficiency of census information management through the integration of GIS, GPS technologies. Specifically, the training be focused on following key areas:</p> <ul style="list-style-type: none"> - Spatial database management system that will include GIS optimization techniques; - Identifying and mapping environmentally sensitive locations and other significant structures using GPS technology; - Clarifying and cataloging land use and cover; - Integrating geocoded panoramic and profile photographs to GIS maps for viewing through a common Internet platform such as Google Earth.
Scope of work: <i>(Description of services, activities, or outputs)</i>	<p>A National Cartography/GIS consultant or local company/institution is being sought to provide the key technical staff (data analysts, programmers, GIS, statisticians) of the NIS/MoP with a training programme at a province to be fitted with the following needs:</p> <ul style="list-style-type: none"> - To develop and implement the 5 days intensive GIS training programme by covering the following aspects: <ul style="list-style-type: none"> o Introduce the intermediate and advance use of GIS with a focus on applications. o Transformation of Waypoint data from GPS to GIS (Converting Waypoint to shape file and linking databases to application map) and transforming projection. o Introduce the GIS and Spatial Data File Formats (Introduction to some of the basic themes and concepts of GIS and hands-on use of ArcGIS Desktop software, Arc Catalog and Arc Map; coordinated Systems and Map Projections in ArcGIS; working with Tables, Queries, and Basic Reprocessing Tools; GIS data management by setting up folders and documentation, importance of metadata and Designing your project for sharing; and Creating and editing new spatial data files in ArcMap). o Train how to join attribute tables, add field to table, and summarize or calculate data o Create buffer and new shape file o Fill name of shape file and select feature type o Selected by location o Defining coordinate system o How to edit attributes

	<ul style="list-style-type: none"> o Create thematic map for printing, show symbols as Quantities, working with the map layout, and add scale a bar, a legend and title. o Connect best map with online. <ul style="list-style-type: none"> - To train on digitization includes creating and working with vector files, points, lines, polygons and plotting the position of geotagged photographs and estimation the area in polygon. - To train on map book in ArcMap includes download data from the NRGIS library, setup data driven pages, creating dynamic layout elements and export map book.
Duration and working schedule:	<ul style="list-style-type: none"> • 12 Working Days (In December, 2017)
Place where services are to be delivered:	The NIS/MoP Office and provision of training at province
Delivery dates and how work will be delivered (e.g. electronic, hard copy etc.):	<p>The National Cartography/GIS consultant or local company/institution is expected to commence the work between 1st - 30th December, 2017. The suggested timeframe required for each deliverable is below:</p> <ol style="list-style-type: none"> 1- Submit 1st Draft Outlines of training programme (include methodology and agenda) and training materials (Khmer or English) by 10-15 December, 2017. The payment of 20% of the total amount will be made upon satisfaction of deliverable by the NIS/MoP and UNFPA. 2- Submit the Final Draft Outlines of training programme (include methodology and agenda) and training materials (Khmer or English) by 16-20 December, 2017. The payment of 40% of the total amount will be made upon satisfaction of deliverable by the NIS/MoP and UNFPA. 3- Complete the training and submit the final training report by between 21-30 December, 2017 (Khmer or English). The payment of 40% of the total amount will be made upon satisfaction of deliverable by the NIS/MoP and UNFPA.
Monitoring and progress control, including reporting requirements, periodicity format and deadline:	The Director General and Deputy Director General of the NIS/MoP will monitor of the consultancy. UNFPA PD Programme Analyst and/or relevant DPs will also assist in monitoring the progress toward achieving each above said deliverables.
Supervisory arrangements:	<p>The National Cartography/GIS consultant or local company/institution will be based at the NIS, MoP. Under the overall guidance and supervision of the Director General of the NIS, MoP, he/she will assist and lead the training programme on Census Cartography/GIS at the NIS/MoP. The National Cartography/GIS consultant or local company/institution will work with the Director General of the NIS, directors of relevant departments, and in close collaboration and coordination with the NIS technical staff and UNFPA Programme/Admin/Finance assistant attached to the NIS, to ensure the full implementation of the ToR.</p> <p>The supervisors will ensure compliance with the TOR and timely delivery of the expected outputs/results. The supervisors will have frequent interactions with the National Cartography/GIS consultant or local company/institution at various stages in order to:</p> <ul style="list-style-type: none"> • Brief the National Cartography/GIS consultant or local company/institution and provide clarify on the assignment; the process and deliverables; • Introduce and facilitate the National Cartography/GIS consultant or local company/institution to work with stakeholders and counterparts if deemed necessary; and • Provide feedback and get agreement/approval during the progress of the assignment. <p>Upon completion of contract assignment, the supervisors will certify relevant documents; evaluation the National Cartography/GIS consultant or local company/institution's performance and process/follow-up on the payments.</p> <p>However, the National Cartography/GIS consultant or local company/institution is expected to report his/her work progress to the Representative of UNFPA Cambodia Office upon a request.</p>
Expected travel:	The assignment is Phnom Penh and province (during 5 days-training). All related costs for mission in a province of National Cartography/GIS consultant or local company/institution are at its own expense or at the expense of its nominating organization.
Required expertise, qualifications and competencies, including	<p>National Cartography/GIS consultant or local professional company/institution is required to:</p> <ul style="list-style-type: none"> • Have a Master Degree or equivalent in the field of spatial sciences, geography or Information technology with GIS or relevant combination of education

<p>language requirements:</p>	<ul style="list-style-type: none"> • Minimum 7 years of professional experience in the field of cartography/GIS, and working knowledge of ArcMap and Remote Sensing related software is desirable. • Experience in working with and strengthening of national institutes with regard to cartography/GIS and its application in the country or other developing countries is an advantage. • Demonstrates integrity by modelling the UN's values and ethical standards; • Be proficient in English and Khmer languages;
<p>Inputs / services to be provided by UNFPA or implementing partner (e.g. support services, office space, equipment), if applicable:</p>	<p>The NIS/MOP will provide appropriate working space with reliable internet connection and other administrative support for the National Cartography/GIS consultant or local company/institution to perform the task during the assignment.</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>Endorsed by Country Representative:</p> <p>Date:</p>	