TERMS OF REFERENCE

Assisting a forester in conducting the study to evaluate the condition of floodplain forests in Georgia – GIS expert

EC-supported component, CWP Activity No. 2.5. PP Ref. No. GEO-IC12

a) Initial project information

The European Union (EU) funded “European Neighborhood and Partnership Instrument (ENPI) East Countries Forest Law Enforcement and Governance (FLEG) II Program” (the “Program”) is aimed to support the participating countries strengthen forest governance through enhancing their forest policy, legislation and institutional arrangements, and implementing sustainable forest management models on a pilot basis. The Program will be implemented in seven countries: Armenia, Azerbaijan, Belarus, Georgia, Moldova, the Ukraine, and the Russian Federation.

The Program builds on initiatives undertaken under the first EU funded FLEG Program. It will be carried out over a four-year period, with end disbursement date of December 31, 2016. The Program is supported by the European Commission contributing to a single-donor trust fund administered by the World Bank (WB). Austrian Development Cooperation (ADC) provides additional funds to support Program activities in Armenia and Georgia. Implementation of the Program is led by the WB, working in partnership with the International Union for Conservation of Nature (IUCN) and the World Wide Fund for Nature (WWF). The Program has three Development Objectives:

1) To make progress implementing the 2005 St. Petersburg FLEG Ministerial Declaration in the participating countries and support the participating countries commit to a time-bound action plan to ensure its implementation and follow-up activities (regional level).
2) To review or revise (or establish a time-bound action plan to review or revise) forest sector policies and legal and administrative structures; improve knowledge of and support for sustainable forest management and good forest governance (including the impact of related EU regulations) in the participating countries (national level).
3) To test and demonstrate best practices for sustainable forest management and the feasibility of improved forest governance practices at the field-level on a pilot basis in all participating countries (sub-national level).

Main Program activities implemented by WWF-Caucasus Programme Office (WWF-CauPO) in Georgia include evaluation of biodiversity and ecosystem functions of forests, promotion of voluntary forest certification, supporting sustainable forest management planning, restoration of natural forest landscapes and conservation of forest biodiversity. Awareness raising activities about the importance of sustainable forestry and the respective role of the FLEG II program will also be conducted.
Floodplain forests represent critically important, but vulnerable forest ecosystems in Georgia. Healthy floodplain forests are very rich in biodiversity. However, due to heavy anthropogenic pressures (logging, grazing, conversion into agricultural land) throughout centuries, about one percent (of historical range) of natural floodplain forests remain in Georgia at present.

In January 2016, Forest Policy Service of the Ministry of Environment and Natural Resources Protection of Georgia elaborated an Action Plan aiming to maintain the remaining floodplain forests and promote their sustainable management. Initial steps of the Action Plan envisage an assessment of the condition of remaining (representative) floodplain forests and elaborating recommendations for their sustainable management.

WWF-CauPO decided to implement these initial steps under the FLEG II Program, which has been agreed with the Forest Policy Service and other key stakeholders (including Steering Committee and National Program Advisory Committee). WWF-CauPO will hire a forestry specialist, to conduct the respective study. In addition, WWF-CauPO (hereafter “the client”) will hire a GIS (Geographical Information Systems) expert (hereafter “the consultant”) who will assist the forester in fulfilling his/her assignment. A botanist will also be hired by WWF-CauPO to assist the GIS expert and the forester.

**b) Objectives of the assignment**

The main objective of this assignment is to assist the forester by preparing maps and conducting analyses of these maps. The key parts of the assignment of the forester are described in Annex 1.

By completing this task, WWF-CauPO will contribute to the implementation of the FLEG II Program Development Objective “improve knowledge of and support for sustainable forest management and good forest governance in the participating countries (national level)”.

**c) Scope of services**

The consultant will assist the forester in the following:
- Identifying and obtaining maps to select representative forest stands (see Annex 1)
- Specifying the parameters of satellite images (pixel size, study area boundaries, etc.)
- Accompanying the forester in the field visits to identify and record GPS (Global Positioning System) points of key areas
- Based on this, preparation of GIS maps in digital format, and synthesizing and analyzing the obtained information
- Preparing attribute information of GIS (descriptive texts and tables).

The consultant will attend the common stakeholder meeting (see Annex 1) together with the forester. The consultancy will begin in July 2016 and last for about four calendar months. The volume of work is about 50 working days within this period of time.
The outputs will include topographic and GIS maps as well as attribute (descriptive) information. The maps will depict representative floodplain forest contours, degraded forests, remaining natural or close-to-nature forest ecosystems and land use in the study areas. This information will go into the final report of the forester (see Annex 1).

d) Reporting and Approval Procedures

The consultant will send the **first interim report** to the client after the obtaining of all required maps envisaged under step one of the forestry expert’s assignment (see Annex 1), within about one calendar month from the beginning of work. The report will include list and brief description of maps/images. The second interim report will be sent after the common stakeholder meeting within about four calendar months from the beginning of work. The report will include brief description of conducted work, produced outputs and remaining steps of the assignment. The **final report** will be provided after the completion of the study by the forester (see Annex 1) and will include the final versions of GIS maps and attribute information, within about four months from the beginning of service. The report will also include brief descriptive information about performed work and used methodology. The report will be produced in Georgian and will be sent to Ilia Osepashvili, Project Coordinator, iosepashvili@wwfcaucasus.org.

The coordinator will provide feedback to the consultant within five working days after receiving the report. If no response is received after the expiration of this period, the report will be deemed as accepted, unless a written request is sent by the coordinator to allow for a few more days for the revision.

The comments and requests for further information/corrections should be addressed by the consultant within five working days. Only after the formal acceptance of the report by the coordinator can the contract be considered as completed.

e) WWF’s Input and additional requirements

The client will provide all information available at their office, which might be useful for the completion of this assignment, free of charge. The client will fully cover the common stakeholder meeting costs. The consultant should have own work space and respective GIS software as well as working GPS device.

f) Qualification requirements for the consultant

- University degree or equivalent in Geography or a related field, which has included GIS in the curriculum/training program, or a certificate in GIS
- Minimum three years of experience in using GIS programmes, which includes digitising, mapping, data analysis and field work
- Knowledge of using GPS and processing respective data
- Working experience in remote sensing would be an asset
- Good communication skills
- Fluent in Georgian.
Annex 1

Evaluating the condition of floodplain forests in Georgia, with recommendations for their sustainable management (forester)

Extracts from the ToR

Objectives of the assignment

The main objectives of this study are to: a) identify and map the remaining (representative), relatively large natural floodplain forest stands in Georgia, b) assess their condition and levels of degradation and c) provide recommendations on their sustainable management, including conservation. This study will not include floodplain forests which are located within officially designated Protected Areas, managed by the Agency of Protected Areas of Georgia.

By conducting this study, WWF-CauPO will contribute to the implementation of the FLEG II Program Development Objective “improve knowledge of and support for sustainable forest management and good forest governance in the participating countries (national level)”.

Scope of services

The remaining floodplain forests are mainly concentrated in eastern Georgia, along rivers Kura, Iori and Alazani and their tributaries. The total area of these forests is about 25,000 ha.

As the first step, the consultant, assisted by a botanist and a GIS (Geographical Information Systems) expert, will select representative floodplain forest areas (up to five). For this purpose, relevant maps will be obtained – free google images available at internet, topographic maps (typically with the scale 1:25,000) and previous forest inventory materials. Key parameters for the selection of representative forests are: size, uniqueness (i.e. closeness to natural set up) and proximity to the roads or population centers for easiness of access.

The second step will include site visits to the selected representative sites, in order to:

- Identify the species composition of the forests (trees, bushes, grasses)
- Assess key stand features (density, average height, undergrowth, natural regeneration)
- Observe signs of anthropogenic impacts such as logging, grazing and infrastructure development
- Based on this, assess ecological conditions of forests (natural succession, degradation, species transformation)
- Identify Red List and other species protected by Georgian legislation and assess their condition
- Identify invasive species and their occurring and potential negative impacts on floodplain forest ecosystems
- Based on the above, assess the degrees of naturalness (correspondence to site conditions) of the forests; identify and map natural or close-to nature floodplain forests

1 Separate ToRs exist for the botanist and GIS expert; these specialists will also be hired to assist the forester.
• Take GPS (Global Positioning System) points of the most severely degraded forest stands
• Describe existing land use pattern within the study area (arable land, pastures, ponds).

Following from the above, overall recommendations on biodiversity conservation (including animal migration corridors), forest rehabilitation and other measures required for sustainable management of floodplain forests, will be provided. These recommendations will mainly be used by forest inventory teams, which will conduct the scheduled forest inventory and management planning in these study areas in the future. These inventory teams will elaborate more specific recommendations in line with the requirements of respective Georgian legislation.

Clear definition of floodplain and related terms (upper terrace of a river, gorge, riverbed, lowland, etc.) will also be provided by the consultant. Potential climate change impacts will be taken into consideration.

More detailed (up to 60 cm resolution) satellite images or orthophotos will be provided in an electronic format by the client, if the levels of details of collected maps will not be sufficient for the fulfilment of above-mentioned tasks.

Towards the end of the second step, a common stakeholder meeting will be held to discuss initial outcomes of the study and take into consideration stakeholder views. The client will organize the meeting and will fully cover its costs.

**The third (final) step** will involve the preparation of the final draft of the study based on the stakeholder inputs provided at the common meeting. The study will begin in July 2016 and last for about four calendar months. The volume of work is about 50 working days within this period of time. The outputs will include:

• Study report containing text, photos and maps
• GIS maps and attribute information on:
  o Existing forest cover with indicated levels of degradation
  o Natural or close-to-nature forests
  o Potential forest rehabilitation sites
  o Land use.

The report will consist of the following main parts:

• Overall description of the condition of floodplain forests in Georgia
• Definition of terms
• Information on the condition of forests obtained during the study visits to the selected representative areas
• Conclusions and recommendations.