## Questions and Answers

## to RFQ UKR/2015/025

1. Q.: Why is there the limit of the number of Landsat channels? It would be helpful to use all of them to identify individual object .Do restrictions relate to the possible transfer of images or to the spatial differentiation? What are the points in the terms of usage of data ETM +, JERS-1 / SAR of the methodology?

A.: The usage of Landsat images are due to several factors, namely:

- Availability of the pictures since 1990 and until nowadays, which is important for retrospective assessment of greenhouse gas emissions

- Free transmission of images is important for the purposes of National Inventory, given the large area of territory

- The optimal spatial resolution (neither small, nor large) for the purposes of estimating emissions for the National Inventory.

2. Q.: In 2000, the Landsat images of the entire territory of Ukraine for 1990 and 2000 (mainly) years were bought and then used for various tasks, majority of these images are now freely available. Should it somehow be specified in the proposal?

A.: Yes

3. Q .: There is a risk that the strict requirements regarding the percentage of cloud cover on the image may not be achieved, even using the combination of different images of the territory on the close dates, because the survey is archive, not the recent one. What is to be done in such a situation?

A: The revision of the images taken during the period after 1990(up to 2 years) and during the period before 2014 year (up to 2 years). In the case of failure to meet the conditions, the years within which the minimal cloud cover percentage is possible, should be selected.

4. Q.: The proposed methodology is based on the 28x28 (30x30)pixel size. There is other data of various sizes/resolutions available. Should all the data be put into the close values of spatial resolution, including images?

A.: Yes

5. Q.: While processing images of one territory at the different times, it is useful to identify the changes, what could be conducted with the Change Analysis technique provided by the USA experts. Is it advisable to carry out such works?

A.: Not necessarily.

6. Q.: Can the requirement of WGS 86 coordinate system be considered as WGS 84?

A.: Yes

7. Q.: The description of methodology (Annexes to Lot1) contains the references to the data (and GIS) available and those that are being created. Is it necessary to use these data? If so, is there a complete list of data in the public domain? Should then the billable expenses be counted only for the data adaptation, but for creation? What is to be done in the case of poor data quality – improvement, revectorizing etc.? The scope of work can differ significantly in that case.

A.: There is a data on the fringes of organic soils. All other data must be converted to a GIS format. Costs are conted at the discretion of the Executive.

**8**. **Q**.: Will the assistance be given in a centralized data obtaining from the regional laboratories of state fertility, meteorological stations, etc., or it is necessary to negotiate with the specific data-creators and pay for the preparation and transfer of data in the required form?

A.: Centralized assistance will not be provided.

9. Q.: How strict is the requirement of compliance with all the provisions of methodology? We have considerable experience in the spatial modeling with the GIS instruments. Could it be acceptable to use geo databases, conduct calculation with the methodology algorithms and present the results with the GIS instruments?

A.: The work should be done according to the requirements of the methodology.

10. Q.: Almost all the results of the work are transferred to our customers in the form of data storage and instruments for handling it through the Dynamic Atlas software, created for the FAO. Is it acceptable for the present project?

A: For the purpose of assessment of GHG emissions and data operating, the software is being developed in accordance with the methodology.

11. Q.: In connection with the fact that most activities relate to the preparation of data and calculations according to the adopted methodology, but not the development of the methodology itself, it is considered that the important criterion for professionals /organizations is the experience of spatial modeling, thematic processing of remote sensing data, the creation of large databases etc. Is the attracting of skilled specialists/experts from the other organizations on the basis of individual contracts supported?

A.: At this stage - no.

12. Q.: We are interested in the Lot 2 as well, but it is not enough time to prepare the proposals. Is it possible to participate partly?

A.: Bids can be submitted for the one Lot as well as for both of them.

13. Q.: In one of the answers you mention that the collection of baseline data for the evaluation of gas emissions must be included in the proposal on system development. Is it possible to get this information from you, or can you specify the source, where the data should be taken?

A.: The winner will be provided with the information on organic soils fringes.

14. Q.: The presented documents contain theses which, in our opinion, are not valid, respectively, certain provisions of the terms of reference cannot be completed at all, and certain ones can be completed partially. According to the Lot 1: "Download Landsat TM space images with five channels (Blue, Green, Red, Red Edge, NIR) taken in July – August and September – October of 1990 and 2014 for 10 northern oblasts of Ukraine, which include Volyn, Zhytomyr, Kyiv, Lviv, Poltava, Rivne, Sumy, Ternopil, Khmelnytsky, and Chernihiv oblasts"

Firstly, series of Landsat TM devices have completed their orbital mission and uploading the photos of 1990 year is possible, while of 2014 is impossible, because there is a new generation machine with sensor ETM + on the orbit now. Secondly, the Landsat devices do not have Red Edge channel. So this task can be performed only partially.

A.: It is possible to use similar pictures, for example Landsat 8.

**15. Q**.: According to the Lot 2: " EXPECTED OUTPUTS / DELIVERABLES UNDER THE ASSIGNMENT:

1. RapidEye space images with five channels (Blue, Green, Red, Red Edge, NIR) for the site area for the period July – August 2015 (by October 30, 2015);

2. The RapidEye space images for the site area corrected in WGS 86 coordinate system (by June 30, 2015);

3. A set of the thematic layers of project site land covers created according to the list of land cover classes (strata) described in Annex 2, presented in Excel format (by October 30, 2015)"

As can be seen from the text of the task, the participant must provide satellite imagery RapidEye taken in July-August 2015 until 30 October 2015, which is logical, but according to the paragraph 2, the customer requires to provide data on the processed images to the June 30, 2015 that is contrary to the paragraph 1 of the task.

Thus, the Lot 2 work cannot be completed within the specified terms.

The methodology presented in Annexes is not complete and cannot be fully applied to this work, for example, it contains references to the work undertaken in the United States:

"Assessment of living aboveground biomass by remote methods (AGLB pixel dry mass, i, p, tn). Stock aboveground live biomass for the purposes of this methodology is defined for areas of the earth surface area equivalent to one pixel of satellite images used for remote data collection. To determine the live aboveground biomass stocks the channels L-band JERS-1 / SAR backscatter are used combined with Landsat B4 / B5.  $\gg$ 

As could be seen from the methodology, it is necessary to use channel L of the radar satellite JERS-1 for estimating biomass along with the multispectral satellite images Landsat. It is well known that the satellite completed its mission in 1998 and came down from orbit in 2001. Thus, the part of the activities and tasks cannot be performed in accordance with the presented methodology.

Due to the above mentioned, please correct the TOR errors and eliminate inconsistencies in the Annexes to the specified lots. Otherwise, this work cannot be performed within a specified terms and using the methodology proposed.

A.: The methodology involves the usage of both ground and radar methods of assessment.

16. Q.: Can the possibility of separating certain types of work for Lot 1 be considered, namely to allocate the expected outputs /deliverables from 1 to 5 as a separate lot, in order to speed up the execution of works until ambiguities in the methodology interpretation and its application are eliminated.

A.: Considering the response given above, the existing integration will not slow down the execution of works.

17. Q.: Can foreign / international companies participate in the tender?

A.: Yes, foreign / international companies can be tenderers.

18. Q.: Are there any requirements for the technical proposal for the bid?

A.: The bidder should provide the detailed description on how the work will be done and present the schedule of the work to evaluate how it corresponds to the timeframe of the deliverables.