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Information updating the Geographical Information System (GIS)

Geographical Information System

Note by the secretariat

1.   The Euro-Asian Transport Links (EATL) Geographical Information System (GIS) was presented to the Inland Transport Committee (ITC) at its seventy-fourth session in 2012. Since that time the EATL GIS has been used by a variety of users as it provides a useful platform to government planners, investors and business operators.

2.   As the EATL became a useful tool, GIS application needs further expansion, improvement, wider coverage as well as regular maintenance in Phase III of the EATL project. Specifically, there ought to be several important changes. They include the following:

- New software: The EATL GIS may need to be based on more sophisticated software which is more precise and which offers a wider variety of data management. For instance, it may need to offer the possibility to transport operators and trades to obtain information about transport schedules and prices along all EATL routes. This would improve the planning and timing of production and efficiency of trade.

- Updates: Transport schedules and prices for transport services along the EATL routes need to be continuously updated. This necessitates regular contacts with the relevant national agencies. Full assistance and continuous cooperation with the governments and the EATL National Focal Points (NFPs) is essential.

- Funds: Further improvement and expansion of the EATL GIS, as well as of other EATL activities, depends fully on the extrabudgetary funds. Assistance for these components of the project is crucial.

3.   Once the new EATL GIS system is in place, it will be a useful tool to transport operators and traders for planning their businesses. It will also be a handy tool for the

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Governments and their agencies which would be able to make the necessary adjustments in infrastructure investments, removal of bottlenecks and other trade and transport-facilitation measures.

A. Possible technical features:

- National authorities will themselves be able to update transport data (geographic coordinates, border crossing costs, transport timetables, EATL routes and labels…);

- Online functionalities will allow viewing data and share public information: online map viewer and interface for selecting routes and other parameters;

- National authorities authentication for managing national public data;

- The possibility to plan trips and calculate travel/customs costs will require specific developments and will be possible only if data quality reaches the prerequisites (in terms of accuracy, update frequency and synchronisation with the data submitted by the other national authorities).

4.   The GIS software provider will be ESRI (United Nations partner for cartographic solutions). The background maps will include topographic data, satellite views and administrative views, provided by ESRI. A specific web application development may be needed if the GIS software provider has no turnkey online solution.

B. Approximate cost of the new EATL GIS:

- A P2 position at 30 per cent for the first year, 10 per cent the following years;

- First year: software investment estimated cost is United States dollars ($)15,000, consulting and training estimated costs are $30,000. Total: $45,000. To customize the solution and allow travel/customs costs estimations in relation with route planning, specific development realized by a consultant will be necessary (cost to be determined depending on the complexity of the application). Cost to be determined;

- Annual maintenance: annual on-going maintenance estimated cost is $20,000 ($7,000 for software maintenance and possible trainings, $13,000 for annual subscription to online services).

C. Important:

- The technical feasibility of this project is highly dependent on the quality of the existing data (the EATL network currently available in cartographic format will have to be checked and maybe edited to allow features like transport costs calculation and travel times estimations) and also depends on the quality of the data that will be sent by the national authorities;

- The application will require a coordinated and regular update of the data from the national authorities, in order to provide to the public a functional and efficient product. If data is not synchronously updated, the whole application won't be able to provide correct costs calculation or travel times;

- Data provided by the national authorities will be public; there will be no management of confidential data (data will be hosted outside United Nations);

• The designations employed and the presentation of the material on the maps will not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The boundaries and other administrative data presented will be those provided by the ESRI company, without any possibility to modify them.

D. Conclusion and the way forward

5.   The new updated and extended GIS offers great and new opportunities for the improvement in the use of this EATL feature. It would make planning (time, route and cost) much more efficient and useful to the business operators. However, there is the other side of this improvement. It consists of:

• The new system will depend on continuous and full cooperation by the national authorities to constantly submit updates. If there is a change which is not reported, then the system would be rendered impractical;

• It would cost at least $45,000 to establish the system;

• Annual running and maintenance cost is at least $20,000.

6.   With this in mind, donations to start the new system and to maintain it are necessary and welcome.