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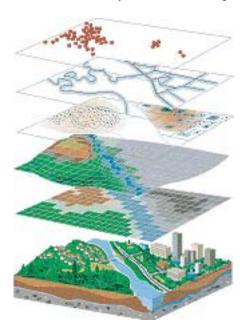
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Geographical Information Systems

Technology to the service of Euro-Asian Transport Linkages

A GIS is a computer system capable of capturing, storing, analysing, and displaying geographically referenced information; that is, data identified according to location.

The power of GIS comes from the ability to relate different information in a spatial context and to reach a conclusion about this relationship. When border crossing points information is collected, it is important to know where these border crossing points are located. This is done by using a location reference system, such as longitude and latitude, and perhaps



elevation. Current status and technical specifications of transport infrastructure in a country or along an international transport route (rail, road, inland waterways) can be easily identified using the GIS system. Motorways/highways, double track rail lines, as well electrified or non electrified, may be easily viewed through GIS application.

Comparing the border crossing points information with other information, such as the main road infrastructure across the landscape, may show how many cross border points exist on specific roads. This may indicate that these roads are likely to be "slower" linkages than others with

fewer cross border points. The GIS computer system therefore, can reveal important new information that leads to better decision-making.

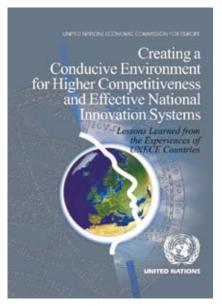
During the development of the Euro-Asian Transport Linkages project, country experts provided a huge amount of data for the creation of a GIS database and related maps that were used by the project. This includes data on technical characteristics and performances of main rail, road and inland water transport infrastructure, border crossing points, ferryboat links, intermodal terminals and ports along the Euro-Asian routes. This work has been made available to participating countries and constitutes a basic toll for future efforts aimed at developing efficient, safe and secure Euro-Asian transport links. ❖

Enhancing innovative capacity of companies in the UNECE region

How can linkages between industry and science be strengthened to ensure that research leads to successful commercial applications? What are the policy strategies and approaches that can increase the effectiveness of innovation intermediaries and seed-and-breed promotion institutions? Can clusters be targeted as policy options to reinforce the innovation capabilities of companies? Are there effective instruments to upgrade innovation skills and human capital at the company level? What can be done to create supportive framework conditions for enhancing the innovative capacity of companies?

These and other issues related to the policy options and instruments that can be used to enhance the innovative capacity of companies in the UNECE region will be debated in the second session of the UNECE Team of Specialists on Innovation and Competitiveness Policies (14-15 February).

Policymakers, practitioners, representatives of industry associations and academia, and other experts participating in this multi-stakeholder policy dialogue will also review the publication "Creating a conducive environment for higher competitiveness and effective national systems. Lessons learned from the experience of UNECE countries", to be issued shortly.



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Wood for fuel

At the Timber Committee market discussions in October 2007, there was a strong message that the continued growth of wood energy was shaping markets for forest products around the globe.

A recent announcement by the Welsh Assembly Government (United Kingdom) of the planned development of a 350 megawatt electricity generation plant, relying entirely on wood chips as the fuel source, emphasizes this. It is claimed that the £400 million plant will be the largest biomass plant in the world, generating enough clean electricity to power half of the homes in Wales. Very little of that fuel will originate from Wales, however. Almost all the 1.4 million tonnes of wood chips that will be needed to fuel the plant every year will be shipped across the Atlantic Ocean from sustainably managed forests in North America .

There has been a rapid growth in international trade of wood fuel in recent years, with wood chips from Uruguay being shipped to power plants in Calabria, Italy and from the Russian

Federation to the Netherlands and pellets from Canada shipped to Sweden. Even allowing for the fuel used in shipping, in most cases using wood to produce energy still results in significant savings in harmful carbon dioxide emissions, compared to conventional fossil fuels.

With oil prices around the \$100 mark per barrel, using wood often makes financial sense too. Unless oil prices fall significantly, the growth in the use of wood as a fuel is likely to continue, provided supply can be put on a sustainable basis. UNECE/FAO is looking into the important but difficult question of potential wood supply from Europe's forests and trees (see http://www.unece.org/trade/timber/workshops/2008/wood-balance/welcome.

htm). In any case, it is clear that wood energy must be a part of a balanced energy system, and other renewable energies also have a major role to play, as well as energy efficiency.



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Facilitation of border crossing

In their endeavour to facilitate transport, governments face difficult challenges, mainly the existence of physical barriers or hindrances, such as insufficient or inadequate transport infrastructure, bottlenecks and missing links, as well as lack of funds to remove them.

But infrastructure is not the only barrier. There are also non-physical obstacles, of administrative and regulatory natures. Long, cumbersome and inefficient border

Time - Cost Diagram (road route Bishkek - Novosibirsk) 250 hrs 2500 \$ Novosibirsk \$2,256.16 \$2,090.66 208.10 hrs (8 days 16 hrs) 200 hrs 2000\$ Sharbakty (KAZ) 150 hrs Kulunda (RF) 1500\$ 57.5 hrs 100 hrs \$1,057.83 1000\$ Cost 50 hrs Akzhol (KYR) Time Kordai (KAZ) 500 \$ 65.5 hrs \$1028.83 1656 Km 2375.3 Km me/Cost 500 1000 1500 2000 2500 Distance (km)

controls, which still persist at many borders, add unnecessarily to transport delays and costs, and at the same time to the operating costs of the borders themselves. Arbitrary, discriminatory and non cost-related transit taxes can also be a deterrent for the development of international transport and trade, particularly for inexpensive commodities and for landlocked countries.

The analysis here shows that time (59%) and money (53%) spent at border crossings and in transit make up a large percentage of the overall time and cost. ❖

Analysis taken from the Euro-Asian Transport Links Study available at <u>www.</u> unece.org/trans/main/eatl/in_house_ study.pdf.

The data for the analysis were provided by Pragma/USAID based on one case only. The data/information was presented in great detail for each stop.

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