Working Party on Transport Statistics

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Capacity-building activities

The Central Asia Countries economies and transport system statistics appraisal

Note by the secretariat

The Working Party may wish to be informed on a study prepared by a consultant (Christian Reynaud) on "the Central Asian Countries economies and transport system statistics appraisal".

Concept Note on
Transport Statistics as a Tool
for Assessing Economic Development

Christian Reynaud

SUMMARY

ACRONYMS

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The objective of this concept note is to raise awareness in the Central Asian countries on the need to collect transport statistics and adopt a common methodology and a common questionnaire for the region. A unified approach would contribute to a coherent and comprehensive data system on transport statistics and accidents statistics.

Such a data system would be a very useful tool:

- For assessing economic development due to the close interrelationship between transport and economics. Transport activity reflects progress in economic development for industrial and agricultural production, internal and external trade as well as evolutions in society through increased mobility (e.g. private and public transport).
- For evaluating major international projects and transport policies for infrastructure development that improve a country's possibility to play a major role in the centre of Asia between the Russian Federation, Europe and the rest of Asia, in particular China.
- For modernizing the transport system, thereby supporting the competitiveness of central Asian economies.

The use of a common questionnaire and methodology:

- Would improve the overall understanding of the interrelationship between regions within the countries, as well as between central Asian countries and their integration in world trade.
- Would mobilize economic and social partners for future development.

In order to support the current interest for a consistent and robust transport statistic system for the region:

- UNECE has long since improved transport data collection in different modes and for specific objectives, such as reducing fatalities and pollution in transport systems. In close cooperation with UNESCAP, UNECE promotes and modernizes major transport networks throughout Europe and Asia (E-roads, rail networks, EATL and CAREC corridors), promotes intermodal transport and improves accessibility.

- Some experiences have improved transport in the Mediterranean and the European Union's eastern countries. Here transport data collection played a major role in assessing "priority corridors" and modernizing transport operations. International organizations, such as the EU, UNECE and IFIs (World Bank, IEB, EBRD) have collaborated on a common goal of sustainable development. This was based on a harmonized diagnosis and harmonized expectations, thereby requiring a common basis for transport statistics.

All these experiences demonstrated how improving a transport database is closely interrelated to the ability to mobilize different actors (public institutions, industries, transport operators, a large part of the community of transport users including households) based on a common appraisal of the situation.

The eight Central Asian countries considered in this concept note are: Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

Although these eight countries differ in size of population, land area, level of income, natural resources, geography and topology, they are all situated at the same interface:

- of major economies such as China, Russian Federation and Europe,
- of the rapidly growing economies of the eastern Mediterranean (Turkey), south Asia (India, Islamic Republic of Iran, Pakistan), the Gulf countries and China.

Azerbaijan, Kazakhstan and Uzbekistan have major energy, petroleum and gas resources, basic industrial products (iron, uranium), have developed the intermediate metallurgy and chemistry industries and have started exporting high technology products.

Other countries have high levels of agricultural production such as wheat, cotton, vegetables (potatoes), fruits and milk.

Important imbalances also exist between the countries, for example, GDP per capita between Armenia and Kazakhstan. Some countries are difficult to access because of the Caucasus mountains (Armenia, Georgia) or the Himalayan mountains (Kyrgyzstan). These border the large central Asian plains (Kazakhstan, Turkmenistan, Uzbekistan) with the Caspian Sea in the centre.

This increases the need for diversified forms of regional goods' transport: import and export of bulk products, and final goods for all modes including oil and gas pipelines and maritime transport.

In passenger transport, motorization increases with income per capita. Important migration movements increase demand for long distance transport, in particular, between the Russian Federation and the central Asian countries.

Other important characteristics of these countries' transport system are:

- the contrast between the privileged position for continental routes between major continents, and the difficulty to access maritime routes and ports.
- the importance of major transport projects for new infrastructure for development of urban areas long distance corridors in order to expend and facilitate trade (E-networks, TRACECA, TEM, TER, CAREC corridors).
- the intermodal transport chains with the coexistence of rail, road, maritime and air transport for long distance travels and transport along corridors.

This diversity of transport organizations must be reflected in the global transport statistics system, from transport of basic products to transport of high-value goods, from urban transport, to long-distance passenger travel.

The proposed methodology to structure such a statistical database will be presented in two parts:

- first, a **top-down** approach: from macroeconomics and transport aggregates to territorial and sectoral components of transport systems,
- second, a **bottom-up** approach: specific questionnaires and particularly, the United Nation's questionnaire on transport equipment and networks feeds progressively up to a consistent set of data. Cross-checks and consolidation would create a performance tool for a short-term "observatory" of economic and social development, as well as a long-term tool for strategic policy assessment at the national and international levels.

Although, the present note only advocates the developing such a statistical system, the detailed description of such a system remains to be seen.

The main Central Asian countries concerned are:

- **Kazakhstan** which has the highest GDP, in the region, of around 130 billion United States dollars for a population of 16 million inhabitants; exceeding 8,000 United States dollars per capita.

  The country benefits from important natural resources in energy (petroleum: 78 million tons en 2009; gas and coal: 94 million tons in 2007; Uranium) and basic industrial products (iron ore: 22 million tons in 2010).

  Kazakhstan produces and exports intermediate industrial products (steel: 4.3 million tons in 2010) electricity and high technology products.
  The country is developing an ambitious programme of transport infrastructures and equipment in order to facilitate internal and external trade with the Russian Federation, Europe and China. Belarus, Kazakhstan and the Russian Federation have an integrated customs union.

- **Uzbekistan** has a population of 20 million inhabitants but a lower GDP of 37 billion United States dollars and only 1,300 US dollars GDP per capita.
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  The country has important gas resources, an intensive cotton production (2.9 million tons) and wheat crop (6.7 million tons). Industrial production is concentrated on steel and automobiles.

  Its national policy seems, however, turned towards national "auto-sufficiency" for food and energy.

- **Kyrgyzstan** and **Tajikistan** are mountainous countries with difficult interregional communications (north and south Tajikistan) closed to the Pamir mountains. The population is lower with, respectively, 5.4 and 7 millions inhabitants with again, a lower GDP per capita (800 and 700 United States dollars). Emigration is high, mainly to the Russian Federation.

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  National resources are fairly low, although there is a high potential for hydroelectricity. Emigrated populations contribute significantly to the national income.

- **Turkmenistan**'s population is 5.2 million inhabitants, with a GDP per capita of around 3,600 United States dollars and important sources of energy (petroleum, gas) and agricultural products.

  In the **Caucasus countries,** the 9.2 million inhabitants of Azerbaijan earn a high revenue from energy and an expanding economy while Georgia and Armenia's 4.3 and 3.1 million inhabitants, earn 2,500 United States dollars GDP per capita.

All these characteristics have direct consequences on the transport economy, the volumes of freight and passenger performances.

GNI PER CAPITA
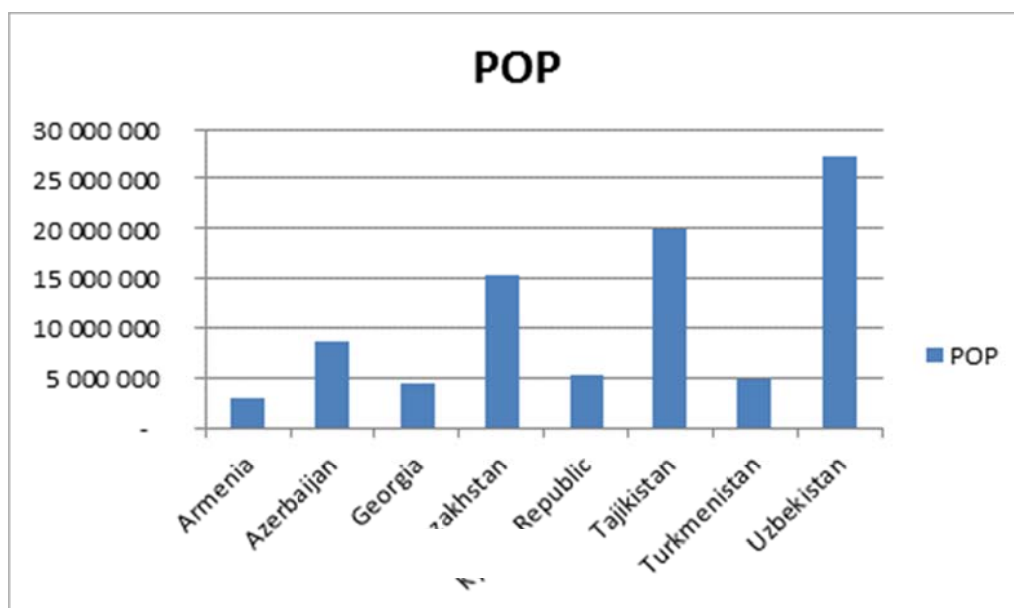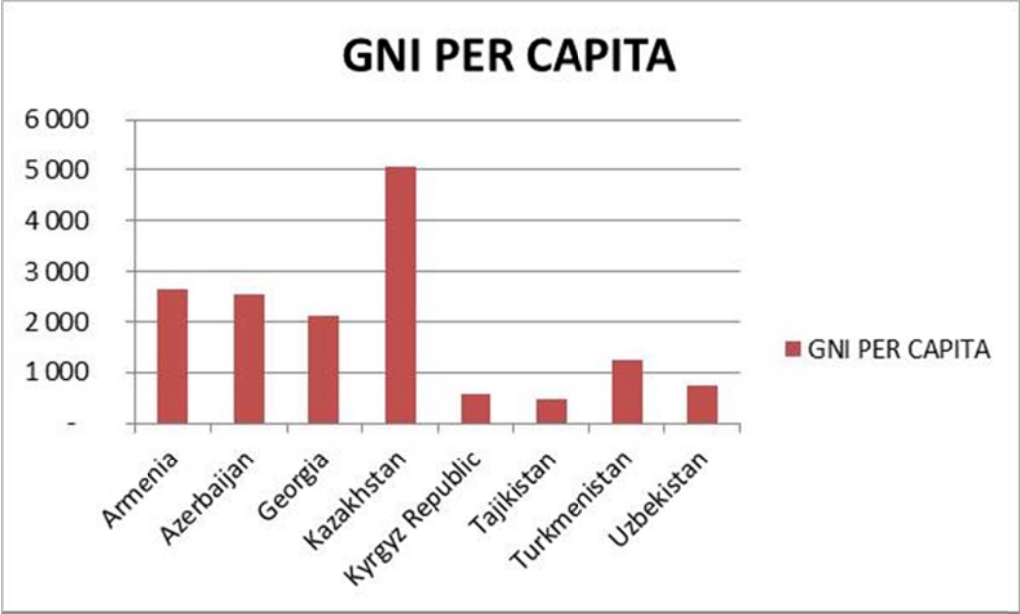
The transport system can be presented as a superposition of "layers" from macroeconomic aggregates in relation to a global socioeconomic context, to disaggregate territorial data in relation to land use and choice of modes and routes.

In between, the sectoral industrial production impacts global economic performances and trade and generates traffic across the region, in addition to transit from East to West and North to South. For passengers, traffic is generated in the major cities of the central Asian region. Their intensity is clearly related to the level of development and the networks.

Statistical data feeds the different "layers" which are interrelated through the intervention of institutional, social and economic actors. These actors develop strategies for facilitating land use for trade and for mobility development, which are the dynamics of the transport system to be appraised.

2.1. Transport Macroeconomics

Different "macroeconomic indicators" of transport are often introduced in official statistical transport publications, but are not always completed so that comparisons between countries are difficult.

Benchmarking, however, remains difficult due to the diversity (see Section 1) between the economic and geographic contexts of countries. Differences of indicators do not necessarily reflect differences between transport sectors and policies. Thus, at this stage, the main objective is to explain many differences.

2.1.1. Freight Transport

"Statistical concepts" must be defined before investigating the interrelationship between transport and economy.

2.1.1.1. Physical Indicators of Transport Performances

Transport performances are measured in "tons" and "tons-kilometres".

The indicator "ton-kilometres" not only reflects a global volume transported (in tons) but also a distance of transport. The tons-kilometres are, therefore, often the preferred indicator for measuring transport activity in volumes.

In addition, it should be stressed that indicators in tons transported within a country depends highly upon the importance of "short distance" transport:

- due mainly to activities such as construction for very low value goods and local distribution of energy, agricultural, food products. These are transported almost exclusively by road;
- ton statistics are not very reliable because of the importance of "own account" transport in the short distance market.

  In fact, these short distances contribute very little to the global added value in the transport sector, considered as the economic sector of companies specialized in transport activity (hire and reward transport).

This raises the question of the limits of the transport sector when defining the relative importance of transport within the global economy of a country.

MACRO ECONOMIC INDICATORS FOR TRANSPORT

	GNI PER CAPITA	GDP US DOLLARS BILLIONs	Number of registered veh.	v km pass car	nb of veh. Per 1000 inhabitants	Fatalities per 100 000 ht	GOODS VEH. STOCK	TKM Millions road	TKM millions rail	Road + rail	NB of billions TK per billion dollars
Armenia	2 640	9,206	366836		121,94	11,50		133	711	844	0,092
Azerbaijan	2 550	33,090	784 018	72 299	90,67	12,90	110 400	9 135	10 374	19509	0,590
Georgia	2 120	10,224	567 900	51 813	129,20	16,80	51 500	907	6 924	7831	0,766
Kazakhstan	5 060	103,142	3 105 954	-	201,40	28,30	359 194	61 459	200 800	262259	2,543
Kyrgyz Republic	590	3,807	318 581		59,92	24,00		903	849	1752	0,460
Tajikistan	460	3,712	268 018		13,45	6,60		958	1 274	2232	0,601
Turkmenistan	1 234	25,962	651 564		131,22						-
Uzbekistan	730	22,307					-	18 200	21 600	39800	1,784
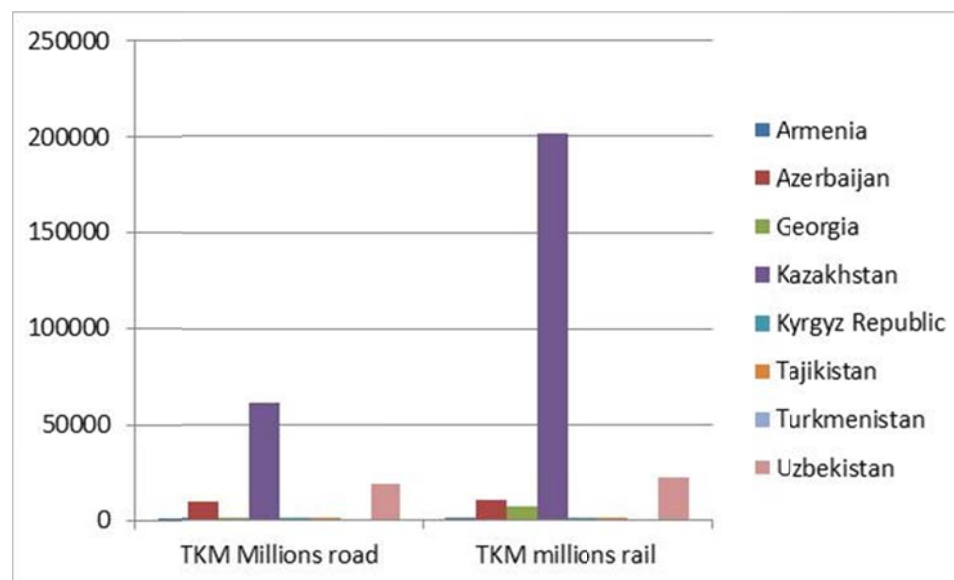
2.1.1.2. National and International Transport

In many of the Central Asian countries, international transport is essential for exporting primary and agricultural products and importing industrial goods for industrial equipment and final consumption.

Thus, it is important to also take into account international transport in foreign trade.

On the other hand, these are transit countries and, therefore, directly concerned with international transport over "very" long distances.

International transport will be analysed in relation to foreign trade, in relation to the country's position in the central Asian networks as well as between Europe, Southern and Eastern Asian countries.

Contrary to national transport (section 2.1.1.1.), the measurement of international transport in "tons" appears highly relevant:

- trade statistics exist, though they are measured more often in volume of goods than in tons.

  This concept note presents detailed data in tons for foreign trade in central Asian countries, using an estimation of ton "values" and applies to COMTRADE UN database expressed in value of products.

  However, for major export and import products (petroleum or agricultural products), it is preferable to develop a sectoral approach (see below) which will normally provide estimations both in tons and value of goods.

Taking into account the fact that the transport operator might be of a different nationality, using national network for international transport

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2.1.1.3. Transport and Macroeconomic Indicators

New concepts are introduced that provide different facets of the relationships for a given year (structural analysis) or in evolution (time series).

- Transport "intensity": a ratio between tons (or tons-kilometres transported) and GDP.

  In central Asian countries, this ratio will be very much influenced by the importance of bulk products transported. This means that the interpretation must be done in close relation with a sectoral analysis of transport.

  Therefore, a high intensity of transport for a country does not necessarily mean good performance in the transport sector. In Central and Eastern European Countries (CEEC) -- countries in transition from "central economic" regulation to "market competitive" -- a reduction of transport intensity has been related to the rationalization of transport.
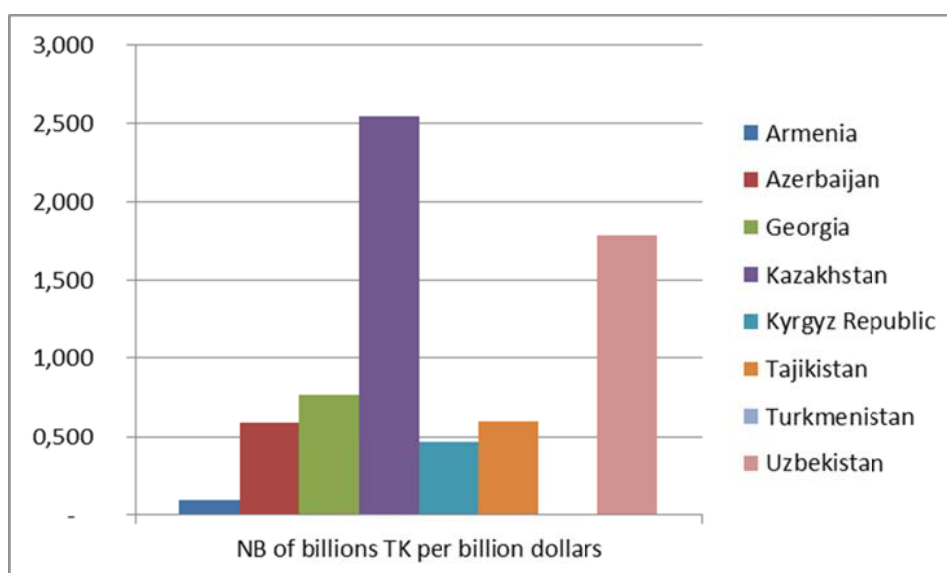
- "Correlation" of elasticity over time between transport performance and GDP

  For this correlation, the transport performance is usually measured in tons-kilometres for all modes.

  During the 1990s, the decrease of bulk transport in CEEC countries negatively impacted this correlation.

  However, in general the correlation is positive between performance of transport for freight and GDP.

  This correlation is, in general, improved if the "industrial production index" is chosen rather than GDP.[1]

  The elasticity appears often to be:

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[1] Because of the weight of services which does not imply transport of goods.

- Greater than 1 for developing economies which reflects the needs of basic and intermediate goods as well as a growing interdependence between sectors and regions of the national economy;
- Higher for the phase of growing activity and lower for the phase of stabilization or regression -- transport amplifies economic fluctuations;
- Lower than 1 for developed industrial economies because of a more important share of higher value goods transported over time.

- Elasticity of foreign trade as regards GDP

When both foreign trade and GDP are expressed in monetary terms, this elasticity is in general greater than 1, thus reflecting the opening of economies and globalization.

The elasticity between world trade and production has been around 2.5 over the past twenty years.

However, for emerging countries where the rate of GDP growth is close to two-digits, such elasticity is often lower than the development of the internal market.

In central Asian countries, this elasticity will very much depend upon:

- the prices of specific products exported such as petroleum, basic industrial and petroleum products, cereals;
- the world economic context with higher demand in an expansion phase.

In fact, there is a sharp contrast between economies with strong export sectors and the other ones.

In general, the elasticity between foreign trade and transport performances is higher when expressed in monetary terms than in tons, at least in developed countries because of a slower growth of bulk product imports (petroleum, industrial bulk products). This, however, is not necessarily the case for countries where foreign trade directly depends upon specific types of products such as petroleum, agricultural products and basic industrial products with more brutal fluctuations.

It must be stressed again that for central Asian countries, the macroeconomic analysis must be coupled with sectoral analysis; such specific sectoral impacts will decrease with the diversification of economies.

- Weight of the transport sector and boundaries within national economies

This weight depends directly upon the definition of "boundaries" in the transport sector. Its measure will depend directly upon the possibility to collect information about associated activities such as logistics, as well as the possibility to estimate the "own account" volume of transport of industrial or agricultural companies.

Another related question is the importance of the industrial activity of foreign trade related to transport:

- Automotive and rolling stock production, and foreign trade.

- Construction of infrastructure.
- Energy consumption.

2.1.2. Passenger Transport

This section will be structured in the same way as the previous section on freight transport, with an overview of statistical "concepts" followed by an analysis of the interrelationship between passenger transport and the development of the socio-economic environment.

2.1.2.1.   Physical Indicators of Passenger Transport

Passenger transport is measured in number of passengers (or number of trips over a given period of time and passengers x kilometres). It measure "mobility".

However, the number of "trips" is difficult to estimate, since it should take into account all the trips for all modes and all distances, including walking.

This is why the indicator "passengers x kilometres" is the most frequently used indicator of mobility. It includes rail, road and air transport as well as, when relevant, maritime transport.

2.1.2.2.   Boundaries

The walking mode will always be difficult to measure, but it cannot be considered independently of the use of other modes and in particular, the bicycle, and even car of public transport.

In fact, the major difficulty comes from "short distance" transport of "daily" life, which is closely related to the "way of life".

With the development of urbanization and motorization, passenger transport has been significantly affected by:

- public transport, which is of increasing importance in planning city development,
- the "private transport", mainly transport by individual cars with an increasing rate of "motorization" and growing households revenues.

Therefore, there is a tendency to dissociate what is relevant to local transport in relation to land-use policy and what is relevant to regional and national transport, although the boundaries are often difficult to establish between local and regional spatial levels.

A second type of boundary in the passenger transport sector relates to the evolution of types of service provided when travelling. The same type of difficulty is encountered when freight transport is associated to logistic services.

This is, particularly, the case for tourism with services provided by travel agencies (including visits, accommodation, restaurants, etc.) In cities, transport points of "interchanges" and, in particular, stations and airports have become "new centres of urban life".

The consequence is that the value added by the supply of passenger transport services becomes more difficult to differentiate from the value added by other types of services associated with transport.

2.1.2.3.   National and International Transport

International transport can be measured by the number of passenger border crossings, although such statistics disappear with the free circulation of passengers between countries, as is the case in freight transport when customs is suppressed.

In addition to business travels, two major components will influence the increase of international passenger transport:

- International tourism which is an activity that a country, like Georgia, aims to develop,
- Migration of workers who regularly travel to their country of origin to visit family and friends, although it can also be considered as tourism.

2.1.2.4.   Relationship between Passengers Transport and the Socioeconomic Context

At that stage, several concepts, different from those presented in freight transport, must be introduced. These reflect different types of relationships in the socioeconomic context:

- The transport "intensity": a ratio between the number of passengers or passengers kilometres by GDP that is rarely used,
- The "mobility" rate: the number of trips per inhabitant is often preferred with a differentiation between:
  - Short distance mobility rate: can be associated with the number of trips per day when all the modes are considered, including walking. This not expected to change very much with an increase in revenue, although trips become more complex with different objectives and several destinations. The average is estimated to be around 3 per person and per day depending of course on the life-style,
  - Longer distance mobility rate: dependent upon the density of population, this trip distance is limited to between 50 and 100 km. There a greater number of occasional trips including weekend or vacation trips,
  - Mobility rate for international transport.

- The rate of "motorization"

This concept results from the place of vehicles in lifestyles and goes beyond the simple use of a mode of transport.

The rate of motorization is correlated to the revenue increase per inhabitant (or household), following a logistic "profile" with:

- A first phase of slow increase in the rate of motorization for countries with a lower revenue index (for example with GDP per inhabitant below 5,000 United States dollars),
- A second phase of fast increase (higher than GDP growth rate) for countries with a revenue between 5,000 and 20,000 United States dollars per inhabitant,
- A third case of lower increase when a saturation phenomenon appears, although such limits must also consider the development of "multi-motorization" of households.

Road fatalities are usually correlated with the rate of motorization, with a higher ratio of the number of fatalities per 100,000 habitants for countries with lower rate of motorization. Safety performance is a learning process involving driver training, infrastructure design and control of vehicles. The number of fatalities often increases drastically with the first phase of acceleration of the motorization rate and then decreases.

Some central Asian countries are still clearly in the first phase with a rate of motorization between 50 and 100 vehicles per 1,000 inhabitants, when others have entered a regional growth rate of motorization with around 100 per 1,000 inhabitants or above.

- The correlation with GDP

The correlation between passenger mobility and GDP growth is affected by the country's rate of motorization and by the policies in favour of public transport. Specifically, some of the central Asian countries have developed railways and air transport services.

Additionally, the correlation is affected by the importance of the rural area. This is specifically the case when rural areas have a limited access to transport networks, thus limiting the possibility for increased mobility for an important part of the population.

Thus, GDP and passenger mobility correlation is not always a very good statistic. The choice of the indicator "final consumption" of household rather than GDP may improve the correlation.

The elasticity between GDP and passengers mobility is therefore, in general, above 1 when economies are entering in a rapid rate of growth -- which corresponds more or less to the second phase of the logistic profiles described earlier.

However, when an economy reaches higher levels of development such as in Western Europe, this elasticity is significantly below 1 -- around 0.8 or even lower. The elasticity for international mobility is nevertheless, in general, higher, close to 0.9 or 1.
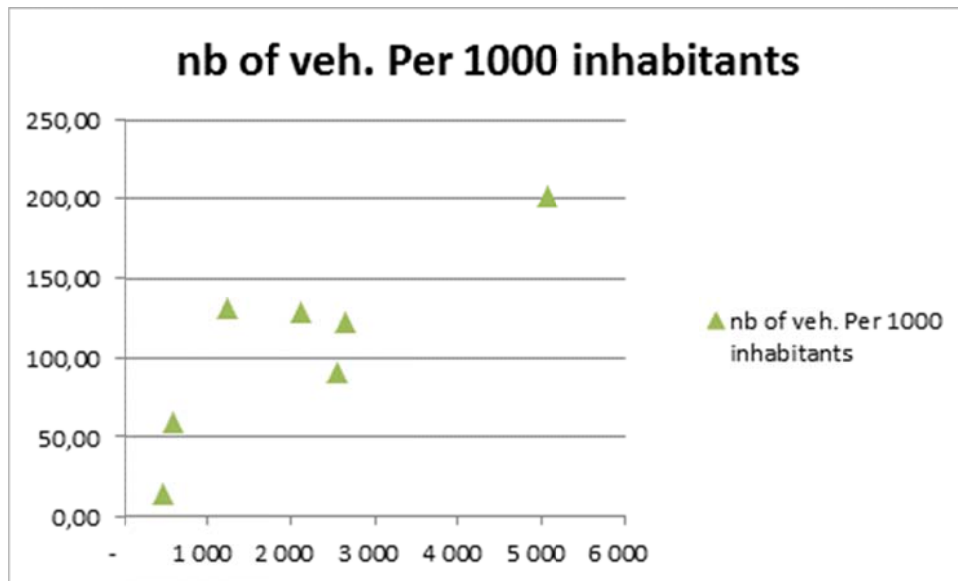
Correlation between GNI per inhabitant and rate of motorization
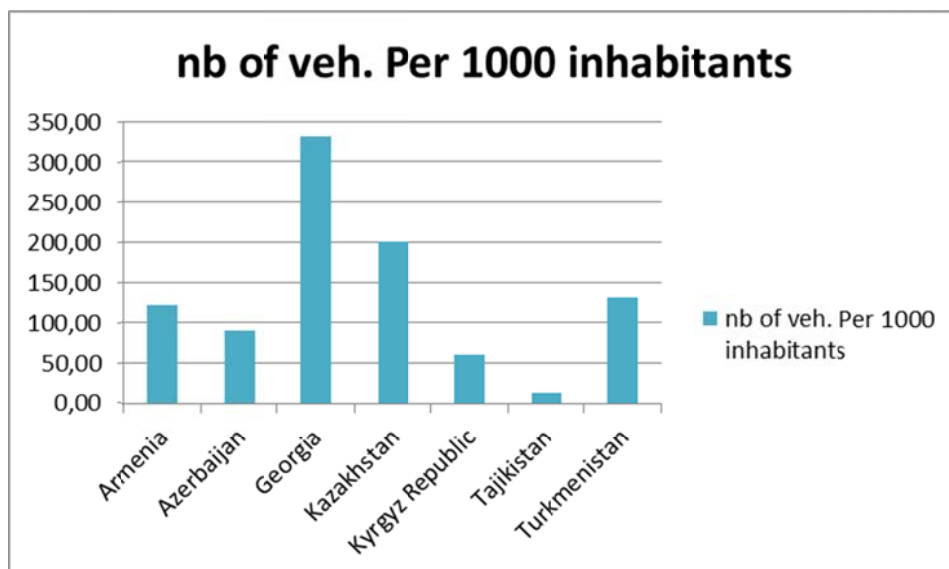
- Weight of passenger transport on the economy

The measure of weight depends upon:

- The delimitation of passenger transport, including or not associated services (tourism) or related industries (automobile production and transport, part of public works relating to passenger transport);
- The choice of the relevant macroeconomic indicator.

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Here, it must be recalled that passenger transport is closely related to lifestyle and a usual indicator is the share of transport expenses (including the acquisition and maintenance of a vehicle) in the household budget.

In many countries, this share is 12 to 14 per cent with even higher percentage (above 20 per cent) in countries where the rate of motorization increases rapidly.

The share of transport expenses will depend highly on the import taxes applied to vehicles and the cost of petrol. These price and tax indicators help define the global statistical data set that will evaluate the transport system's performances.

Few estimations are made, in general, of the total weight of the transport sector, including the associated activities of logistics and tourism and the induced activity in industrial sectors. The existence of so many inter-relations, does advocate for the definition of a so-called satellite account of transport within the national accounts, leading to a better understanding of the strategic impact of transport on the economy as a whole.

2.2. Sectoral Statistics and Developing a Satellite Account of Transport

"Sectoral statistics" is the collection of data relating to transport in the different sectors of the economy.

The data are, therefore, collected from different sources:

- Industrial sources, including imports and exports;
- Transport operators;
- Registration of rolling stocks for freight or passengers;
- Conducted surveys, such as those relating to freight and passenger mobility.

The concentration of industrial production in a few major companies and the existence of major transport companies in central Asian countries facilitate such collection of data for a major sector of the economy.

The sectoral analysis aims at integrating these different sources of information into a global consistent framework.

2.2.1. The Industrial and Agricultural Sectors

The companies which generate freight transport do not generally keep track of the freight generated in tons or tons–kilometres, or at least in a way which can be exploited from a statistical point of view. This is particularly true for road transport with more diffuse traffic.

However, in the case of central Asian countries, a few companies do generate important volumes of bulk traffic, of produced energy (petroleum, gas and coal), agricultural products (wheat, cotton), and industrial basic and intermediate products (iron, copper, steel). Transport is an important part of their costs and such information may be retained.

A few general production figures (in tons per country) gives an order of magnitude of the importance of such traffic

- Petroleum : 94 million tons production in Kazakhstan, 51 million tons in Azerbaijan, 10 million tons in Turkmenistan
- Coal: 95 million tons in Kazakhstan.
- Iron ore: 22 million tons in Kazakhstan
- Cereals: 17 million tons in Kazakhstan, 6.6 million tons in Uzbekistan, 2.7 million ton in Turkmenistan, 1.1. million tons in Kyrgyzstan.
- Cotton: 3 million tons in Uzbekistan, 1 million tons in Turkmenistan.

A further source of data is the foreign trade traffic, which is declared and registered in COMTRADE.

A detailed analysis of these sources has been made for international trade of the countries, per type of product with a distinction between partner countries. It shows:

- A reduced importance of trade between central Asian countries;

- An important volume of trade with major partners from different parts of the world -- Russian Federation and Ukraine, Europe, China and South Asian countries.

Trade data has been estimated in tons and not in monetary units (dollars) using values of tons obtained from the COMEXT database. Such estimations could obviously be improved, and are produced as a sample analysis of such a database, using specific values of tons transported for Central Asian countries.

It shows how transport needs can be assessed in trade patterns of Central Asian countries.

2.2.2. The Transport Sector

A country's transport needs directly reflects the size of it economy's industrial and agricultural structures. These have important freight demands for liquid and solid bulk transport which explains the importance of pipe transport and the high share of rail transport in some of the countries.

On the contrary, countries such as Armenia, Kyrgyzstan or even Georgia with more limited natural resources have a much lower demand for rail transport, although, in the future, they may play an important role as transit countries for such products.

Again, it is difficult to obtain transport needs data from industries, whether they are industrial or agricultural or even from transport operators.

Such information is frequently obtained or rather estimated "indirectly" through:

- The use of rolling stock;
- The analysis of transport flows observed across the countries;
- Or eventually, surveys, which should be systematically centralized and capitalized in order to progressively, obtain a more precise understanding traffic flow patterns.

Before, such data could be obtained through administrative controls for supervision, but are now no longer available in an open transport market.

The transport statistics, therefore, must be collected with new methods and new objectives, with greater focus on economic or social performance rather than upon administrative supervision.

For passenger transport, the question differs from freight with a distinction between public and private transport (household car use).

Detailed statistics exist, in general, for public transport as this sector remain closely controlled, either for safety reasons or because of obligations to provide services set by urban transport administrative authorities. Car use data can only be obtained "indirectly" from data relating to the vehicle stock and the mileages obtained through surveys.

2.2.3. Rolling Stock

There are, in general, different types of files for rolling stock managed by the administrations of the different modes, mainly for safety and security purposes.

These files concern the stock and new registrations for trucks, cars, wagons, locomotives and ships.

One major difficulty is obtaining harmonized registrations and a proper centralization of data which relies very much on different organizations at the local, regional or national levels.

The United Nations had made an immense effort to harmonize the statistical collection of such information at country levels, with detailed types of rolling stock for different modes. The problem there, is how to best organize the collection of such information within countries through the existing administrative channels.

Major difficulties appear, in general, in the road sector due to a greater dispersion of the user population and the intervention of a larger number of organizations.

With files and estimations in the use of rolling stocks, a first global estimation of transport performances is possible. This can be cross-checked with:

- Energy consumption, or
- Infrastructure use (a point developed below).

Another way to proceed would then be to launch specific surveys which provide information, not only on the use of rolling stocks, but also on origin and destination of traffic flows.

2.2.4. A New Approach to Transport Statistics

This question is developed in the context of:

- The progressive suppression of administrative files during the previous period of heavy transport sector controls;
- The objective of having a more global intermodal understanding of the transport sector in relation to sustainable development and land-use policy, environmental and safety impacts;
- Awareness that the multiplication of administrative files has never allowed such a comprehensive appraisal of the transport sector.

Such changes in the orientation of a statistical system advocate for:

- Interfacing or cross-checking different data sources (administrative files, national accounts, surveys).
- Using new technology channels for collection or treatment of information (GIS, GPS, and WEB).

In a statistical system, "safety" can be viewed from three types of sources:

- Vehicle sources with compulsory registration and maintenance;
- Individual sources with delivery of driving licences;
- Infrastructure sources with localization of accidents (see network description below).

In this case, data collection is done on a regular and exhaustive basis.

Other exhaustive data collections are:

- Foreign trade: although customs unions, such as the one existing between Kazakhstan, Russian Federation and Belarus, limit the compulsory declaration of foreign trade;
- Annual company results: used for the elaboration of national accounts, including specific sections for the transport sector, but in which the financial approach prevails and not the "physical" approach.

It should be noted that these two sources are not primarily orientated towards developing transport statistics.

Therefore the transport statistical system will be increasingly based on estimations and simulations, these limiting surveys:

- major companies, which can afford a detailed analysis of their own transport organization;
- specific transport markets, for which a sample can be constituted (e.g. O/D survey for large projects, drivers' behaviour, and evolution of logistic transport chain…), which will help estimation and simulation.

In so doing, the "territorial approach" -- with the new techniques of geo-coding and geo-localisation of mobility -- opens a new dimension for transport statistical systems, where the impact of the transport operations' environment takes a bigger place.

In other words the transport statistical system becomes more global, and probably less exhaustive.

2.3. Territorial Data

The territorial dimension is a rapid expending domain of transport statistics, which benefit from new technologies (GIS) and improves the evaluation of transport policy.

Territorial data can be presented in three steps:

- The identification of different spatial levels;
- The introduction of networks/corridors for infrastructure projects;
- The measure of accessibility and performances of transport chains.

At this stage, the micro economy transport concept of transport chain is introduced and "bridges" between micro economy and macro economy can be built. .

2.3.1. Various Spatial Levels

The distinction between zones is more detailed at national level than at international level, but all spatial levels are integrated in a consistent way which is made possible by geo-coding information.

- Spatial desegregations at national level are in general "administrative units". This is a relevant level for collecting national socio-economic and transport data, which might be desegregated up to the "commune" or "city" levels.

    Zoning for transport is sometimes different from administrative units, but can be most of the time reconstructed from lower administrative units' level, so that transport and socio-economic data can be matched.

    Two important types of information can be geo-coded and used for a territorial analysis of transport, i.e.:

    - Distribution of population;
    - Localization of major units of industrial or logistic sites.

    Which generate transport flows for passengers and freight.

    Topological characteristics, sensitive zones can also be identified and geo-coded which are used for measuring the economic impact of transport.

- Spatial desegregation at international level is in general the country level.

2.3.2. Networks and Corridors

Most transport networks have been geo-coded and can be interfaced, including land routes and maritime routes.

From a transport point of view, it is important to provide a single network including:

- Links for different modes
- Major nodal points which are transhipments at logistic centres.

At the international level, UNECE in collaboration with UNESCAP produced such a network, identifying major routes between Asia and Europe.

Details have been introduced by mode for Central Asian countries in order to integrate international and national transport analysis in a consistent way, so that different spatial levels of circulation can be distinguished in the network use: local, national and international traffic.

ROAD NETWORK IN THE SPECA REGION

RAIL NETWORK IN THE SPECA REGION
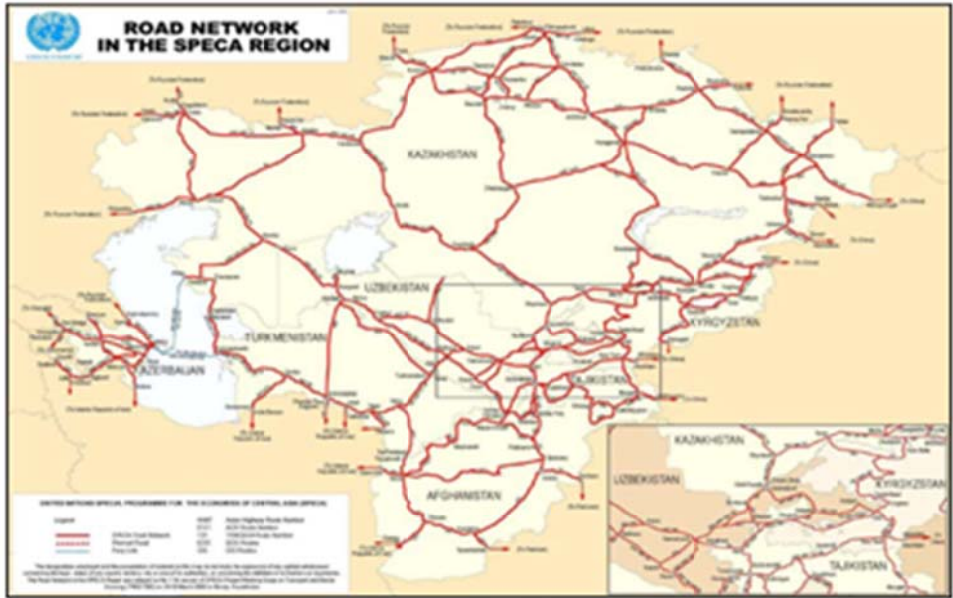
The network attributes are:

- Distance/speed including waiting time by mode;
- Physical description such as type of infrastructure, gauge and slopes;
- Traffic density.

For collecting these attributes, UNECE developed a methodology for measuring the density, the classification of roads, rails and IWW links that can be used as references by countries, so that a consistent, global network statistical information system can be built at the international level including data collected at national or local level.

This is particularly important for imbedding different spatial levels and measuring performances of transport chains across these different spatial levels from the points of origin to the points of destination.

2.3.3. Measuring Transport Chain Performance

From a usage point of view, the performance of the transport system is the performance of the transport chain from point to point.

For a specific zone or location, this can be called the "accessibility" for different types of modes of transport or combination of modes (intermodality).

For a point to point transport there will be a transport chain, for which modes are combined, choices of routes can be tested in order to choose the transport solution with lower cost (or general cost).

To facilitate such an analysis, UNECE, EUROSTAT and OECD/ITF elaborated a "glossary", so that countries have an agreed upon terminology of such concepts and techniques.

UNECE and OSCE have also provided a methodology measuring the performance of a transport "chain" across Asia, including transit times for mode interchange or border crossing.

On a continental scale, this methodology promotes an overview of the various possible routes, including maritime and land routes between Europe and Asia.

Such methods, concepts and tools can be transferred and refined at the national level, with greater details of the national networks.

Comparison of transport chains performances: Hangzhou-Kalouga

MARITIME TRANSPORT: Hangzhou (via Shanghai port) - Kaluga (via Saint Petersburg port)			
Route	km	Cost($)	Time (hrs)
Hangzhou - Shanghai port by road	158	220	2
Shanghai port THC costs	-	100	-
Shanghai port other costs	-	150	-
Shanghai port - Saint Petersburg port by sea	21,713	5,000	624
Saint Petersburg port THC costs	-	250	-
Saint Petersburg port other costs	-	250	-
Saint Petersburg port - Kaluga by road	680	816	11 hrs
Total maritime transport	21,713	5,750	624

	km	Cost($)	Time(hrs)
Total road transport	838	1,036	13
TOTAL	22,571	6,786	637
RAIL TRANSPORT: Hangzhou - Kaluga			
Route	km	Cost($)	Time(hrs)
Hangzhou - Hangzhou rail station by road	20	100	2
Hangzhou rail station loading cost	-	25	-
Hangzhou rail station other costs	-	30	-
China (Shanghai - Alatavi) by rail	3,884.51	1,942.25	185
Kazakhstan (Ucharal - Petropavl) by rail	1657	1,706.7	48
Russia (Petropavl - Kaluga) by rail	1374	755.7	40
Kaluga rail station unloading cost	-	25	-
Kaluga rail station other costs	-	30	-
Kaluga rail station - Kaluga by road	20	100	2
Total rail transport	6,915.51	4,514.65	273
Total road transport	40	200	4
TOTAL	6,955.51	4,714.65	277

Diagrams of transport chains
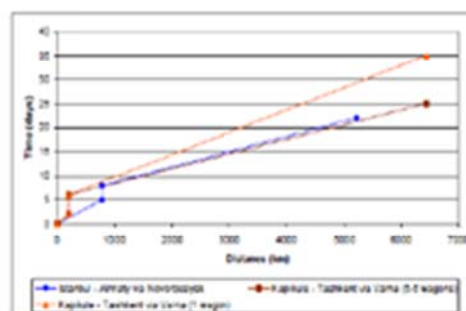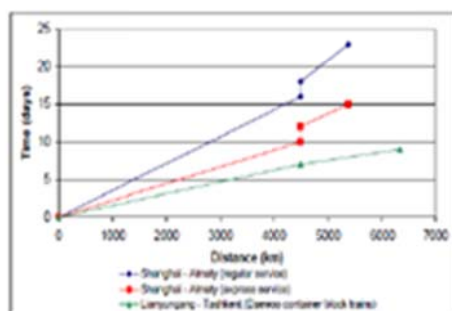
Source UNESCAP

2.3.4. The Concept of Corridors

The concept of corridors is another approach to developing infrastructure networks focusing on major routes.

The concept was initially introduced in Europe by UNECE with the Trans-European Motorways (TEM) and subsequently with the TER project for railways.

The EU has extended it to CEEC countries as well as to the development of the European network towards countries of Asia and the Mediterranean area.

The concept proved to be particularly relevant and useful for:

- Selecting and implementing projects;
- Associating infrastructure development with the use of infrastructures through the introduction of transport operations, including administrative border crossing operations and problems of interoperability; and to
- Facilitating cooperation between transport actors and institutions from different countries. The corridors define a concrete field of cooperation and action.

The countries of central Asia are situated at the crossroads of strategic corridors identified, as such, by international organizations such as CAREC corridors or the EATL routes.

CAREC Corridors

EATL LINKS
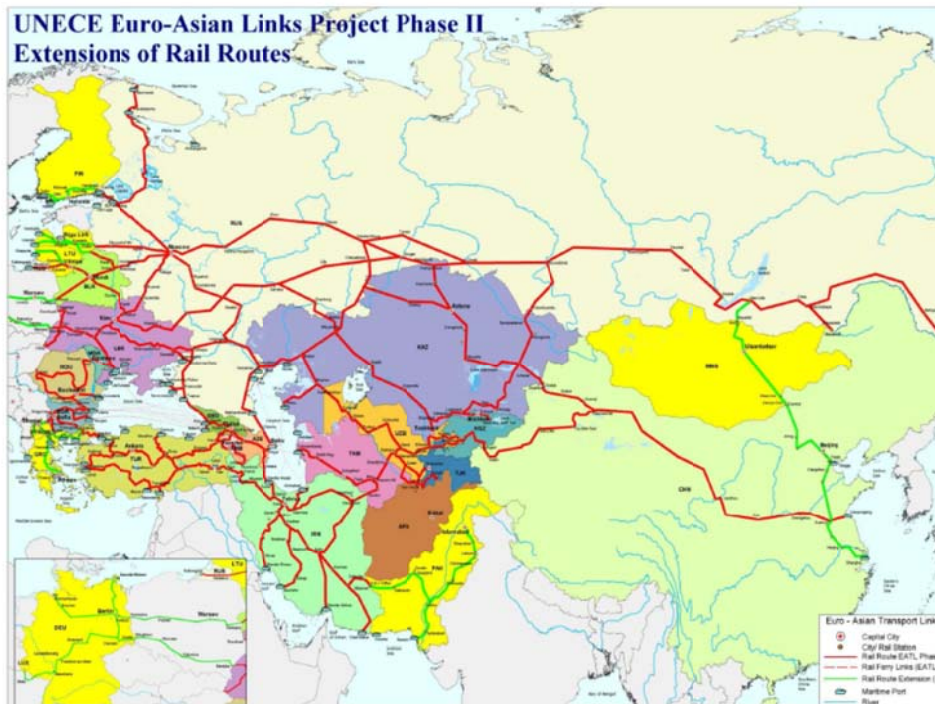
Majors Land and Maritime Routes between Europe and Asia

Source: NESTEAR
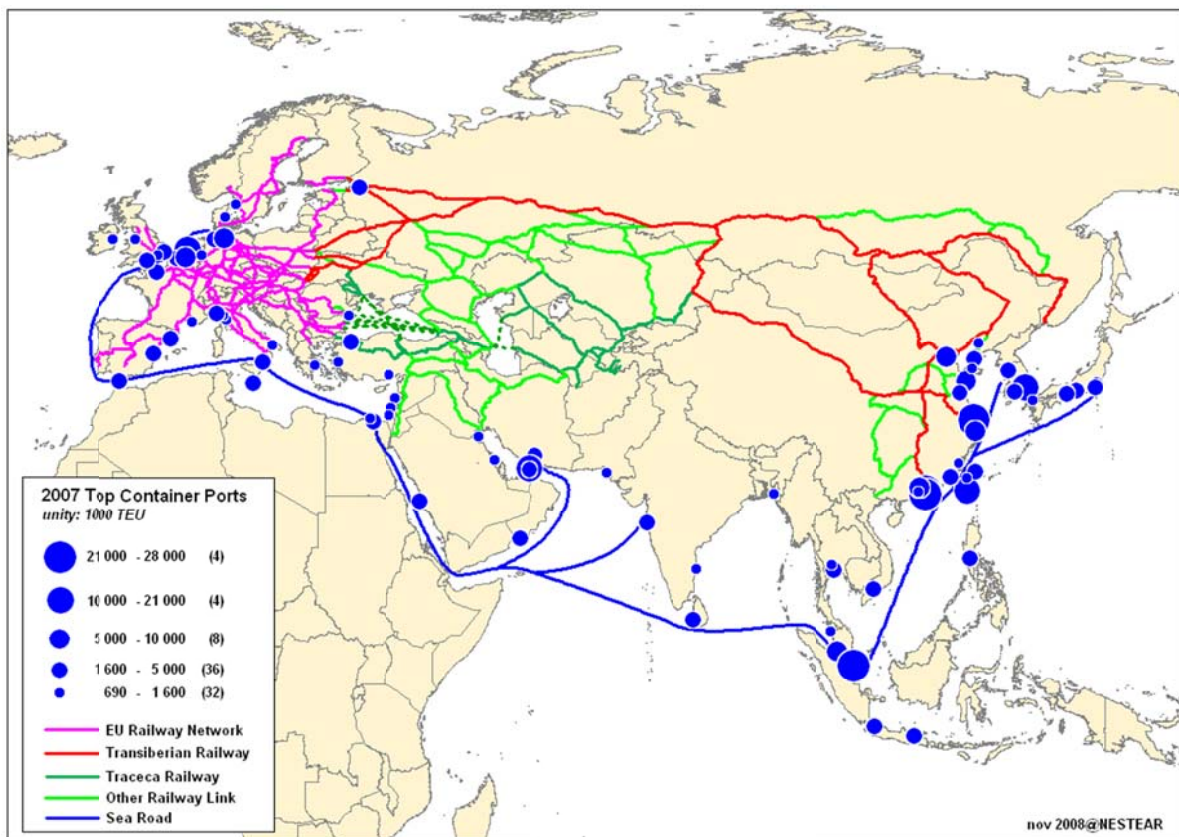
The bottom-up approach starts from various transport data sources with a view of building up, progressively, a statistical transport system, which then becomes a tool for sustainable development policy.

This process will be presented in three steps:

- A short review of the different transport components in the statistical system;
- The transport "dynamics" which combine different transport components in a consistent way. The transport dynamics can be either "observed" (surveys) or "simulated" (with use of a model);
- The transport "decision tool" which is a consolidation of data in order to help decision making, at national or international levels.

3.1. The Transport System Components

They are firstly, the transport system actors, then the rolling stock and the infrastructure.

3.1.1. The Transport Actors

Transport actors are the users of the transport system, as well as the institutions at national, local and international levels which play more a role of regulation and coordination of the transport system that generates transport.

The users are industries and households for freight and passenger transport.

Among the industries, there are the industrial and agricultural sectors which generate traffic and transport operators.

Data is collected through surveys, but surveys quickly become a heavy process, even if not directly to industries or households specialized in transport (for which transport is a "main activity"). This concerns, in particular, "own account transport" of industries, so called, and "private transport" for individual car use.

In the case of the transport industry, there are two types of sources:

- Commercial registration files, which are supposed to be exhaustive per type of transport activity (specialization in freight or passengers, for different modes, or forwarding/logistical activities). A major difficulty is to obtain a good overview of small road transport companies.
- General accounting data (in general annual data for reporting activity) which are very much part of the national accounting system but which will only give, in general, main financial results. They are the results of the transport "sector" (hire and reward") as a contribution of the national added value.

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Therefore, it is difficult to obtain "physical" data directly from users, except when major companies are involved such as:

- Rail companies or public transport companies for passengers, or eventually maritime companies, for which specific transport data can be collected directly. Liberalization of rail transport makes it increasingly difficult and it becomes urgent to have harmonized data collections for major rail companies. This concerns, in general, a few companies at the national level.

- Major industries of energy or basic products, for which simple questionnaires can be sent and easily managed, especially when the operator is regularly solicited with a harmonized questionnaire. Managing surveys of a limited number of companies is essential, using new techniques of communication (internet) with general return of information on the transport situation in order to keep the industrial contact motivated to answer. Regularity, stable questionnaire structures, demonstration of the use of the data are essential, including data relative to rolling stocks.

3.1.2. The Rolling Stock

For rolling stock, trucks, cars, wagons, locomotives and ships the main sources of "registration files". This is compulsory for cars and trucks, but not always for other modes.

The registration files are not, however, initially for transport statistics but more for safety or security reasons.

Therefore, the problem is to analyse how such files can be used for transport statistics and, in particular, how to obtain information on the "stock" of rolling stock.

The follow-up of registration files over years gives a first approximation of a country's stock, a major difficulty being how to get rid of the statistics of rolling stocks, which are not used any more. This is particularly true for cars and trucks.

In fact, different types of actors are interested in rolling stock files:

- Police and transport authorities for safety and security purposes, including the proper maintenance of the rolling stock.
- Automotive industry which includes producers but also importers/exporters or distributors for commercial reasons and a better knowledge of the market (with due respect for commercial confidentiality).

Keeping in mind that for rail, inland waterways and maritime transport, the information is, in general, regularly collected from the major industries concerned, as mentioned before.

It is therefore important, mainly for cars, trucks and buses, to find a way of combining the interests of different types of actors, following specific objectives in the management of the files concerning rolling stock, starting from registration up to maintenance follow-up.

For freight, UNECE has proposed a structure of rolling stock classification which sometimes may appear very detailed. It is important to check the information details available in each country, in order to proceed progressively with such information collection and to identify which organization can be in charge of such collection.

3.1.3. Infrastructure

For infrastructure, developments of GIS tools are essential and make it possible to construct a global framework including all types of infrastructure, at various levels, including major intermodal or logistic centres.

To do so, it is important to refer to common classification between countries, as UNECE promotes, so that continuity across borders of such tools is possible and the cooperation with neighbouring countries is achieved more efficiently.

Many examples are readily available today of the development of such data bases with maps illustrations: the objective is now to go beyond physical description and:

- Disseminate such tools, in order to have them as common references.
- Associate physical description with more information about transport flows.

3.2. Transport Dynamics

Transport "dynamics" mainly refers to the confrontation of supply and demand and its consequence for network use.

3.2.1. Transport Supply: The Sources

It is characterized by transport services. For passenger transport such a description is common for local and interregional transport. The objective is more passenger information than transport statistics.

For freight, databases have been developed with the increase of intermodal transport. For road and rail transport, the market was before more a "spot" market.

A database of intermodal services reflects the quality of service supplied to the user with O/D time and price performances as it has been illustrated in the first part of the concept note with O/D performance of intermodal transport chains.

Such databases can be implemented in a consistent way with the description of the network including intermodal centres.

3.2.2. Transport Flows

There are internal (national) and international flows.

- Internal O/D flows are, in general, difficult to survey.

  A good starting point is to:

  - Begin with the major points of traffic generation, which are the locations of major basic, intermediate industries, for which we have specific O/D data (energy production, iron, ore…);
  - For more diffuse flows, for freight or passengers, the use of a simple gravity type of model between origin and destination points which are for example, the major populated areas.

- International flows, for which international trade statistics are available with details of the type of products.

3.2.3. Traffic Density

Traffic density on the network (road, rail, inland waterways) is the result of the assignment of trade flows.

UNECE provides recommendations for measuring traffic density on E-networks, as well as on the corridors for international traffic across central Asia (cf. previous chapters).

Traffic density distinction is made between passengers and freight. For rail freight, a further distinction is made between AGC and AGTC for combined transport.

However, for the network use, it is also interesting to distinguish between what is related to local (national) traffic and what is related to international (transit) traffic, in particular for freight.

For international traffic, the source of information is, in general, international trade statistics or counts made at the border.

The remaining traffic will be national traffic, for which estimates can be made. They depend on the distance to the major economic centres.

3.3. The consolidation of data and the transport decision tool

At this stage, different sources are interfaced in order to provide an overall and consistent representation of the transport system.

Transport aggregates, mainly in tons-kilometres or passengers-kilometres, are estimated and correlated with major economic aggregates, including energy consumption in which transport represents an important share (in particular for petroleum).

The transport database can then be used for the different purposes of policymakers.

3.3.1. General Transport Regulation Measures

These are taxations measures, infrastructures charges, adaptation of regulations, including safety regulation.

3.3.2. Evaluation of Medium and Long-Term Policy

The transport data can be used as a "basis" for projection, and for evaluation of policies.

Among such evaluation, there are in particular, infrastructure project evaluations conducted at national and international levels in relation with neighbouring countries for international links. The cost/benefit analysis associated with such an evaluation can clarify the conditions of co-financing new projects.

3.3.3. The Implementation of a Transport Observatory

Transport reflects interdependence between industries and populations: it provides a "dual" vision of the market economy, a vision based on material exchanges as opposed to a financial appraisal of the economy.

Such a vision is not only useful for managing transport but also for assessing the development of the economy as a whole, in relation to land-use policies and in respect of the environment.

A transport "observatory", with validation of the consistency of the data can then be part of the global statistical system

- Not only for decision makers.
- But also for the return of information to transport users, so that they get involved and are motivated in providing proper data.

In the "layer" approach of the transport system, the transport tools for decision-making will then focus on the interfaces between the different layers, or components of the system, for improving "horizontal" and "vertical" integration of the system.

Presentation by layers
of a Transport System

ion

Regulation (toll tax)

Infrastructure (section, crossroads)

Horizontal
Integration

Exploitation (equipment, massification)

Marketing (service)

ꞮESTEAR
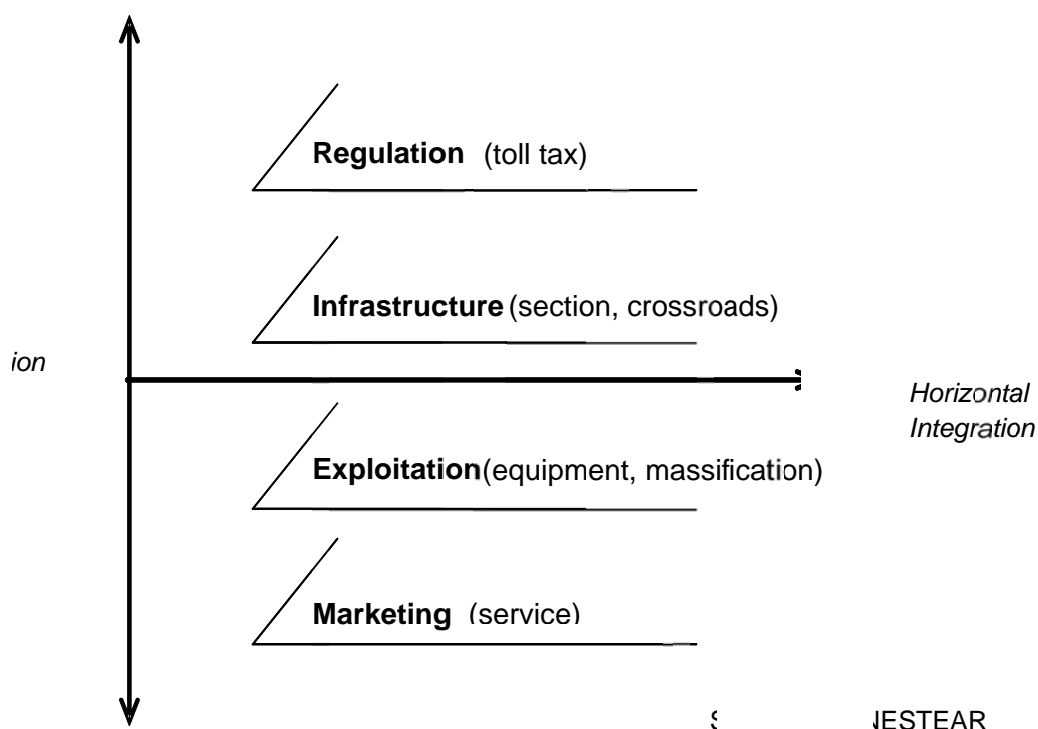
In conclusion, the construction of a data set, consistent and cross-checked using different sources will require three main conditions in order to be reliable and accurately reflect the close interrelationship between transport and economy:

- A condition for motivating not only "data providers", but also the administration or the organization in charge of the transport sectors. Data providers will be motivated by a return of information, so that they can see the usefulness is their contribution. Public organizations and administrations will use such data for decision-making.
- A condition of managing the data system for cross-checking data, setting accurate "formats" for data collection, and guaranteeing precision. In such tasks, the format defined by UNECE is particularly useful so that data collected can be used for national benchmarking as well evaluating international projects.
- A condition of progressivity: it is clear that such a system can only be built "step by step" being aware of the types of information available and the channels in which to collect them.

From this point of view, detailed technical aspects such that description of type of rolling stock measurement of performances are not necessarily a precondition: as a first step more simple or aggregate data can be collected concerning different facets of the transport system, so that more details will be fed in, at a later stage, reflecting more complex

interrelationships. Such screening of available data will also have as an advantage the possibility to better select, for the future, what information will be really useful for transport users and administration.

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The sources in the international database COMTRADE relating to trade between countries, per type of product.

The following operations have been achieved for this analysis:

- Grouping products into 16 categories corresponding to the major logistic families;
- Second level of aggregation with only three families corresponding to the basic products transported in bulk, intermediate products and "final products";
- Transformation of trade in $ into trade in tons using value of a ton per type of products (estimation from COMEXT).

Import - Total

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	30	401	546	0	6	1 160	0	68	525	4	2 740
Armenia	0		8	55	35	0	0	770	0	52	242	9	1 170
Belarus	3	4		10	232	3	116	26 956	2	1	2 088	8	29 423
Georgia	835	506	26		114	1	2	454	0	192	470	4	2 603
Kazakhstan	91	2	121	25		684	75	12 232	12	313	910	1 448	15 911
Kyrgyzstan	3	0	34	1	610		3	501	6	1	45	354	1 558
Moldova	0	0	219	0	37	0		678	0	1	841	3	1 780
Russia	306	142	807	50	14 112	248	1 943		118	69	12 877	347	31 018
Ukraine	72	18	2 572	158	5 628	4	140	19 113	2	8 084		2 803	38 594
Total	1 310	672	3 816	699	21 314	941	2 286	61 864	140	8 780	17 998	4 979	**124 799**

Export - Total

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	2	685	99	3	0	402	43	12	219	3	1 468
Armenia	0		3	502	1	0	0	144	0	0	17	0	667
Belarus	47	6		25	121	28	276	3 815	17	9	2 563	56	6 963
Georgia	1 073	78	9		23	1	1	32	0	1	95	3	1 317
Kazakhstan	452	6	161	96		682	208	14 093	416	597	3 290	2 064	22 065
Kyrgyzstan	0	0	1	1	689		0	94	20	2	1	111	921
Moldova	5	2	110	3	75	3		459	0	0	227	3	887
Russia	1 801	281	1 804	400	11 422	1 524	351		816	287	23 501	1 398	43 585
Ukraine	976	187	1 996	418	800	42	1 204	12 854	40	138		198	18 853
Total	4 354	560	4 086	2 130	13 231	2 282	2 040	31 893	1 353	1 048	29 912	3 835	**96 726**

1. Intra Central Asia and CIS

Import - P1:Produits agricoles et céréales

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	2	2	427	0	2	596	0	0	139	0	1 169
Armenia	0		1	8	29	0	0	238	0	0	49	0	326
Belarus	0	0		0	61	0	32	337	0	0	474	0	905
Georgia	32	0	5		105	0	0	195	0	0	117	0	455
Kazakhstan	0	0	7	0		7	1	299	0	0	75	4	394
Kyrgyzstan	0	0	1	0	297		1	37	0	1	8	0	346
Moldova	0	0	2	0	16	0		29	0	0	74	0	121
Russia	1	1	0	0	258	1	16		7	2	614	9	909
Ukraine	0	0	30	0	8	0	5	172	0	0		1	217
Total	33	2	48	11	1 202	8	58	1 904	7	3	1 551	15	**4 841**

Export - P1:Produits agricoles et céréales

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	32	0	0	0	75	0	0	0	0	108
Armenia	0		0	0	0	0	0	1	0	0	0	0	1
Belarus	3	1		4	6	1	2	101	1	0	30	5	154
Georgia	7	25	0		0	0	0	0	0	0	0	0	32
Kazakhstan	336	2	56	79		293	17	225	325	400	8	588	2 330
Kyrgyzstan	0	0	0	0	7		0	1	1	1	0	1	11
Moldova	2	0	29	0	1	1		14	0	0	45	2	94
Russia	610	183	0	164	313	38	34		57	21	229	121	1 771
Ukraine	145	41	427	113	75	7	283	594	9	6		28	1 727
Total	1 103	252	512	394	403	340	335	1 011	393	429	312	744	**6 228**

Import - P2: Denrées alimentaires (dont boissons)

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	9	5	1	0	2	39	0	0	31	0	87
Armenia	0		0	10	0	0	0	39	0	0	30	0	80
Belarus	1	2		7	0	0	43	230	0	0	78	0	360
Georgia	13	4	10		1	0	0	27	0	0	44	0	99
Kazakhstan	1	1	24	11		5	17	351	2	0	95	6	513
Kyrgyzstan	2	0	20	1	31		2	44	0	0	20	1	122
Moldova	0	0	7	0	0	0		32	0	0	48	0	87
Russia	31	117	0	9	16	1	74		1	1	498	21	769
Ukraine	6	14	40	63	0	0	43	182	0	0		1	351
Total	54	137	110	105	50	6	180	945	4	2	845	29	**2 467**

Export - P2: Denrées alimentaires (dont boissons)

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	1	13	1	2	0	90	0	11	6	2	126
Armenia	0		2	5	1	0	0	120	0	0	14	0	142
Belarus	11	0		9	24	17	7	143	1	2	37	20	271
Georgia	14	16	7		13	1	0	1	0	1	61	0	114
Kazakhstan	1	0	0	1		32	0	16	2	1	0	3	55
Kyrgyzstan	0	0	0	0	5		0	2	3	0	0	1	10
Moldova	2	0	44	2	14	2		68	0	0	41	0	174
Russia	87	27	0	44	348	45	35		18	17	190	14	825
Ukraine	47	24	78	43	92	20	75	503	10	21		4	918
Total	162	69	132	118	499	119	117	943	33	52	349	43	**2 635**

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Import - P3:Denrées alimentaires conditionnées

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	1	0	0	0	5	0	0	3	0	10
Armenia	0		1	1	0	0	0	2	0	0	5	0	9
Belarus	0	0		1	0	0	8	37	1	0	10	1	58
Georgia	1	1	1		0	1	0	3	0	0	7	2	16
Kazakhstan	1	0	20	0		13	1	86	0	0	56	0	178
Kyrgyzstan	0	0	1	0	1		0	5	0	0	2	1	9
Moldova	0	0	1	0	0	0		2	0	0	6	0	10
Russia	159	4	0	9	198	199	28		88	1	260	178	1 123
Ukraine	5	0	8	12	1	0	2	35	0	0		4	69
Total	165	6	32	25	200	214	40	176	89	1	347	186	**1 482**

Export - P3:Denrées alimentaires conditionnées

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	1	1	0	0	157	0	0	3	0	161
Armenia	0		0	1	0	0	0	3	0	0	0	0	4
Belarus	2	1		1	20	1	1	615	0	0	8	0	649
Georgia	2	2	1		0	0	0	1	0	0	8	0	14
Kazakhstan	0	0	0	0		1	0	117	1	0	1	1	121
Kyrgyzstan	0	0	0	1	13		0	43	1	0	0	0	59
Moldova	0	0	8	0	2	0		23	0	0	2	0	34
Russia	18	2	0	5	107	5	3		3	2	34	4	182
Ukraine	6	4	8	6	51	1	9	240	1	3		1	330
Total	28	8	17	15	194	8	14	1 198	6	5	56	5	**1 555**

Import - P4:Bois et pâte à papier

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	5	0	0	0	0	106	0	0	8	0	120
Armenia	0		4	11	0	0	0	22	0	0	9	0	46
Belarus	0	0		0	1	0	0	392	0	0	75	0	467
Georgia	2	0	4		0	0	0	9	0	0	18	0	34
Kazakhstan	0	0	32	0		5	0	597	0	0	42	0	677
Kyrgyzstan	0	0	4	0	3		0	98	0	0	3	0	110
Moldova	0	0	10	0	0	0		26	0	0	60	0	96
Russia	0	0	0	0	4	0	2		0	0	468	7	482
Ukraine	0	0	82	0	0	0	3	450	0	0		1	537
Total	2	1	143	11	8	6	6	1 700	0	0	682	9	**2 569**

Export - P4:Bois et pâte à papier

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	2	0	0	0	1	0	0	0	0	3
Armenia	0		0	0	0	0	0	1	0	0	0	0	1
Belarus	18	3		4	30	4	11	316	9	2	81	19	496
Georgia	0	9	0		0	0	0	0	0	0	0	0	9
Kazakhstan	0	0	1	0		7	0	5	2	0	0	3	18
Kyrgyzstan	0	0	0	0	6		0	0	0	0	0	0	6
Moldova	0	1	0	0	0	0		2	0	0	3	0	7
Russia	449	19	0	12	607	93	25		189	46	428	673	2 540
Ukraine	18	7	76	16	43	3	67	450	2	2		12	698
Total	486	38	77	34	686	106	104	774	202	50	512	707	**3 777**

Import - P5:Minerai de fer

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	21	0	0	0	1	0	0	0	0	22
Armenia	0		0	1	0	0	0	1	0	0	0	8	10
Belarus	0	0		0	0	0	0	35	0	0	101	0	136
Georgia	10	0	0		0	0	0	0	0	0	1	0	11
Kazakhstan	0	0	0	0		0	0	978	7	0	169	0	1 155
Kyrgyzstan	0	0	0	0	16		0	5	1	0	0	0	21
Moldova	0	0	0	0	0	0		0	0	0	29	0	29
Russia	0	0	0	2	8 274	18	0		0	0	438	0	8 732
Ukraine	0	0	4	0	2	0	1	897	0	0		0	905
Total	10	0	4	24	8 292	18	1	1 918	8	0	738	8	**11 021**

Export - P5:Minerai de fer

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	10	0	0	0	0	0	0	0	0	10
Armenia	0		0	0	0	0	0	0	0	0	0	0	0
Belarus	0	0		0	0	0	0	3	0	0	4	0	7
Georgia	19	1	0		0	0	0	3	0	0	0	3	25
Kazakhstan	0	0	0	0		17	0	7 824	0	0	1	397	8 239
Kyrgyzstan	0	0	0	0	0		0	18	0	0	0	3	21
Moldova	0	0	0	0	0	0		0	0	0	0	0	0
Russia	1	1	0	0	1 011	2	0		2	0	948	0	1 965
Ukraine	0	0	86	0	126	0	44	447	0	0		0	704
Total	20	2	86	10	1 137	18	44	8 295	2	0	954	403	**10 971**

Import - P6:Produits pétroliers et charbon

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	1	0	0	0	30	0	45	8	0	84
Armenia	0		0	0	0	0	0	412	0	52	18	0	482
Belarus	1	0		0	0	0	0	19 933	0	0	21	0	19 956
Georgia	732	0	0		0	0	0	182	0	191	56	1	1 161
Kazakhstan	20	0	0	0		40	0	6 798	1	302	12	326	7 499
Kyrgyzstan	0	0	0	0	43		0	117	1	0	0	157	318
Moldova	0	0	170	0	19	0		507	0	1	393	1	1 090
Russia	53	0	0	18	2 385	1	0		0	6	1 134	1	3 597
Ukraine	55	0	1 907	54	3 739	3	0	12 472	0	8 081		2 721	29 033
Total	860	0	2 077	73	6 186	44	0	40 451	2	8 677	1 642	3 208	**63 220**

Export - P6:Produits pétroliers et charbon

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	599	20	0	0	20	3	0	204	0	846
Armenia	0		0	0	0	0	0	0	0	0	0	0	0
Belarus	0	0		1	8	0	225	54	0	1	1 912	1	2 202
Georgia	1	2	0		0	0	0	16	0	0	0	0	19
Kazakhstan	14	0	0	9		120	20	2 507	45	0	2 300	685	5 700
Kyrgyzstan	0	0	0	0	40		0	0	6	0	0	40	86
Moldova	0	0	0	0	0	0		0	0	0	0	0	0
Russia	26	10	0	100	6 091	1 237	86		443	6	16 317	48	24 363
Ukraine	8	15	19	50	11	0	376	1 139	9	3		2	1 633
Total	49	27	19	758	6 170	1 357	707	3 735	505	9	20 733	777	**34 849**

C. Reynaud

Import - P7:Produits métallurgiques

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	1	16	0	0	71	0	0	87	0	176
Armenia	0		0	3	5	0	0	23	0	0	96	0	127
Belarus	0	0		2	92	0	0	1 997	0	0	502	0	2 592
Georgia	0	0	4		7	0	1	7	0	0	125	0	143
Kazakhstan	53	0	5	0		1	1	1 009	1	0	337	76	1 483
Kyrgyzstan	0	0	0	0	12		0	37	0	0	8	0	58
Moldova	0	0	3	0	1	0		12	0	0	84	0	99
Russia	7	0	0	3	816	1	207		3	0	2 562	11	3 610
Ukraine	0	1	76	22	258	0	38	1 863	0	0		3	2 260
Total	61	2	88	31	1 207	2	246	5 018	4	0	3 800	91	**10 550**

Export - P7:Produits métallurgiques

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	0	52	0	0	6	0	0	0	0	57
Armenia	0		0	0	0	0	0	1	0	0	1	0	2
Belarus	0	0		4	4	0	3	602	0	0	75	2	692
Georgia	6	4	1		0	0	0	2	0	0	22	0	34
Kazakhstan	39	3	82	6		13	166	823	2	15	212	108	1 471
Kyrgyzstan	0	0	0	0	1		0	1	0	0	0	3	6
Moldova	0	0	0	0	3	0		6	0	0	1	0	10
Russia	171	14	0	27	931	33	83		37	106	1 825	283	3 509
Ukraine	298	80	490	116	298	7	124	2 504	3	93		119	4 133
Total	513	101	573	153	1 289	54	376	3 944	43	214	2 137	516	**9 914**

Import - P8:Ciment et autres matériaux de construction manufacturés

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	5	1	0	0	1	43	0	0	9	0	58
Armenia	0		0	0	0	0	0	5	0	0	2	0	7
Belarus	0	0		0	0	0	1	165	0	0	38	0	204
Georgia	1	4	1		0	0	0	9	0	0	14	0	30
Kazakhstan	5	0	4	1		10	0	254	0	0	20	13	307
Kyrgyzstan	0	0	1	0	4		0	12	0	0	0	1	18
Moldova	0	0	9	0	0	0		19	0	0	30	0	58
Russia	1	4	0	0	12	13	4		0	0	237	1	274
Ukraine	0	0	48	0	0	0	4	205	0	0		0	258
Total	7	9	68	2	16	23	10	712	0	0	350	15	**1 211**

Export - P8:Ciment et autres matériaux de construction manufacturés

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	0	5	0	0	1	0	0	0	0	6
Armenia	0		0	4	0	0	0	3	0	0	0	0	8
Belarus	6	0		2	4	0	9	389	0	0	45	2	456
Georgia	1	0	0		1	0	0	0	0	0	0	0	2
Kazakhstan	0	0	0	0		4	0	12	15	2	0	4	37
Kyrgyzstan	0	0	0	0	10		0	12	4	1	0	1	27
Moldova	1	0	1	1	0	0		5	0	0	4	0	11
Russia	91	4	0	11	248	11	20		28	7	201	17	637
Ukraine	8	1	37	11	18	0	35	210	3	2		3	329
Total	106	5	38	28	285	16	64	632	50	12	250	26	**1 513**

Import - P9:Minéraux bruts et matériaux de construction

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	3	368	92	0	1	147	0	17	191	1	818
Armenia	0		0	11	0	0	0	4	0	0	28	0	43
Belarus	0	2		1	65	2	31	2 835	0	0	664	0	3 601
Georgia	30	494	0		0	0	0	9	0	0	69	0	602
Kazakhstan	0	0	2	12		599	55	1 079	0	5	19	961	2 733
Kyrgyzstan	0	0	5	0	192		1	32	4	0	1	161	395
Moldova	0	0	11	0	0	0		6	0	0	81	0	98
Russia	38	12	0	6	1 378	3	1 601		8	39	5 327	6	8 417
Ukraine	0	1	44	1	1 592	0	38	1 533	0	0		1	3 212
Total	68	509	65	398	3 320	604	1 727	5 645	12	61	6 378	1 130	**19 919**

Export - P9:Minéraux bruts et matériaux de construction

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	18	1	0	0	29	0	0	0	0	50
Armenia	0		1	489	0	0	0	14	0	0	1	0	505
Belarus	2	0		0	2	3	12	903	0	0	42	0	964
Georgia	1 018	5	0		8	0	0	6	0	0	1	0	1 039
Kazakhstan	54	0	12	0		161	0	1 654	15	176	739	267	3 077
Kyrgyzstan	0	0	1	0	602		0	4	4	0	0	48	659
Moldova	0	0	28	0	55	0		326	0	0	126	0	535
Russia	226	2	0	20	1 067	26	18		7	45	1 054	142	2 608
Ukraine	404	9	647	41	12	0	132	5 551	1	1		11	6 810
Total	1 703	17	690	568	1 747	190	162	8 487	26	222	1 965	469	**16 247**

Import - P10:Produits chimiques de base

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	0	0	0	0	20	0	0	6	0	27
Armenia	0		0	1	0	0	0	1	0	0	1	0	3
Belarus	0	0		0	9	0	0	260	0	0	58	0	328
Georgia	9	0	0		0	0	0	2	0	0	2	0	14
Kazakhstan	0	0	1	1		1	0	235	0	4	4	7	253
Kyrgyzstan	0	0	0	0	2		0	12	0	0	0	1	15
Moldova	0	0	0	0	0	0		3	0	0	10	0	13
Russia	3	0	0	2	735	1	0		0	1	630	21	1 394
Ukraine	1	0	5	0	12	0	0	241	0	1		0	261
Total	13	1	6	5	759	2	0	774	0	6	713	29	**2 308**

Export - P10:Produits chimiques de base

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	5	0	0	0	5	40	0	1	0	51
Armenia	0		0	0	0	0	0	0	0	0	0	0	0
Belarus	0	0		1	0	0	0	24	3	0	5	0	33
Georgia	0	1	0		1	0	0	2	0	0	0	0	4
Kazakhstan	0	0	6	0		25	0	876	5	1	10	5	929
Kyrgyzstan	0	0	0	0	1		0	1	0	0	0	0	2
Moldova	0	0	0	0	0	0		0	0	0	0	0	0
Russia	19	1	0	2	161	8	4		16	2	381	22	617
Ukraine	6	1	54	2	3	1	13	539	0	0		1	619
Total	25	3	60	10	167	33	17	1 447	65	4	397	28	**2 255**

C. Reynaud

Import - P11:Engrais

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	2	11	0	0	54	0	0	26	0	92
Armenia	0		0	8	0	0	0	1	0	0	0	0	9
Belarus	0	0		0	2	0	0	245	0	0	0	3	250
Georgia	1	0	0		0	0	0	0	0	0	1	0	2
Kazakhstan	0	0	0	0		0	0	77	0	0	1	48	126
Kyrgyzstan	0	0	0	0	0		0	6	0	0	0	30	37
Moldova	0	0	1	0	0	0		29	0	0	6	2	38
Russia	0	0	0	0	0	0	0		0	0	7	2	9
Ukraine	0	0	236	0	13	0	0	534	0	0		46	829
Total	1	0	238	10	25	0	0	946	0	0	41	131	**1 392**

Export - P11:Engrais

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	1	0	0	0	0	0	0	0	0	1
Armenia	0		0	0	0	0	0	0	0	0	0	0	0
Belarus	0	0		0	0	0	1	29	0	0	234	0	263
Georgia	1	8	0		0	0	0	0	0	0	0	0	10
Kazakhstan	7	0	2	0		1	4	0	0	0	15	0	28
Kyrgyzstan	0	0	0	0	0		0	0	0	0	0	0	0
Moldova	0	0	0	0	0	0		0	0	0	0	0	0
Russia	38	1	0	2	74	6	28		1	0	1 372	6	1 528
Ukraine	19	0	0	1	1	0	12	6	0	0		1	41
Total	65	9	2	3	75	7	45	35	2	0	1 621	7	**1 872**

Import - P12:Autres produits chimiques (dont Matières plastiques)

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	1	0	1	0	0	9	0	6	3	0	20
Armenia	0		0	0	0	0	0	9	0	0	2	0	11
Belarus	0	0		0	1	0	0	272	0	0	29	0	303
Georgia	2	2	0		0	0	0	7	0	1	7	0	19
Kazakhstan	1	0	7	0		2	0	222	0	0	19	3	253
Kyrgyzstan	0	0	0	0	4		0	16	0	0	2	0	22
Moldova	0	0	3	0	0	0		6	0	0	14	0	23
Russia	5	0	0	0	8	0	3		0	11	170	15	212
Ukraine	5	0	34	0	0	0	3	237	0	1		14	293
Total	13	2	45	0	13	2	6	778	0	20	246	32	**1 157**

Export - P12:Autres produits chimiques (dont Matières plastiques)

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	1	1	0	0	7	0	0	4	0	15
Armenia	0		0	2	0	0	0	0	0	0	0	0	2
Belarus	1	0		0	6	0	3	181	0	1	33	1	228
Georgia	0	3	0		0	0	0	0	0	0	0	0	3
Kazakhstan	1	0	0	0		7	0	8	3	1	0	3	23
Kyrgyzstan	0	0	0	0	2		0	0	0	0	0	0	3
Moldova	0	1	0	0	0	0		6	0	0	1	0	8
Russia	22	7	0	8	227	15	7		8	7	233	29	563
Ukraine	4	2	34	7	20	1	22	171	1	3		6	271
Total	28	13	35	19	258	23	32	372	13	12	272	39	**1 115**

Import - P13:Matériel de transport

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	2	0	0	0	0	26	0	0	5	1	34
Armenia	0		1	0	0	0	0	7	0	0	0	0	9
Belarus	0	0		0	0	0	0	40	0	0	12	1	53
Georgia	0	0	0		0	0	0	1	0	0	5	0	7
Kazakhstan	7	0	8	0		0	0	90	0	0	36	1	143
Kyrgyzstan	0	0	0	0	0		0	3	0	0	0	0	4
Moldova	0	0	1	0	0	0		2	0	0	1	0	4
Russia	2	0	0	0	4	0	0		0	1	321	44	374
Ukraine	0	0	31	4	0	0	2	138	0	0		8	183
Total	9	0	43	4	5	1	2	308	0	2	381	56	**811**

Export - P13:Matériel de transport

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	0	18	0	0	5	0	0	0	0	23
Armenia	0		0	0	0	0	0	0	0	0	0	0	0
Belarus	2	1		0	7	0	1	151	1	1	30	5	199
Georgia	4	4	0		0	0	0	1	0	0	3	0	12
Kazakhstan	0	0	0	0		0	0	6	0	0	0	1	8
Kyrgyzstan	0	0	0	0	0		0	0	0	0	0	1	1
Moldova	0	0	0	0	0	0		0	0	0	0	0	0
Russia	30	5	0	2	76	2	3		2	17	137	15	288
Ukraine	3	0	14	5	27	0	1	291	0	1		1	343
Total	39	9	14	8	128	2	4	454	3	20	170	22	**875**

Import - P14:Biens d'équipement

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	0	0	0	0	8	0	0	6	0	15
Armenia	0		0	0	0	0	0	3	0	0	1	0	5
Belarus	0	0		0	0	0	0	79	0	0	16	0	96
Georgia	0	0	0		0	0	0	2	0	0	2	0	5
Kazakhstan	0	0	3	0		1	0	91	0	0	18	1	114
Kyrgyzstan	0	0	0	0	0		0	2	0	0	0	0	3
Moldova	0	0	0	0	0	0		2	0	0	2	0	5
Russia	1	1	0	0	12	1	2		0	0	144	2	162
Ukraine	0	0	12	0	1	0	0	99	0	0		0	113
Total	2	1	17	0	14	1	2	287	0	0	189	4	**516**

Export - P14:Biens d'équipement

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	0	0	0	0	1	0	0	0	0	2
Armenia	0		0	0	0	0	0	1	0	0	0	0	1
Belarus	1	0		0	3	0	0	96	0	1	12	1	114
Georgia	0	0	0		0	0	0	0	0	0	0	0	1
Kazakhstan	0	0	0	0		1	0	12	0	0	1	1	16
Kyrgyzstan	0	0	0	0	1		0	1	0	0	0	1	2
Moldova	0	0	0	0	0	0		1	0	0	0	0	2
Russia	9	4	0	2	89	2	2		4	8	98	18	236
Ukraine	6	1	16	2	14	0	4	141	1	2		8	195
Total	16	5	16	5	108	4	7	252	6	12	111	28	**569**

C. Reynaud

Import - P15:Textile habillement

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	0	0	0	0	0	0	0	0	0	1
Armenia	0		0	0	0	0	0	0	0	0	0	0	0
Belarus	0	0		0	1	0	0	26	1	0	3	2	34
Georgia	1	0	0		0	0	0	0	0	0	0	0	2
Kazakhstan	0	0	1	0		0	0	12	0	0	1	1	16
Kyrgyzstan	0	0	0	0	0		0	1	0	0	0	0	2
Moldova	0	0	0	0	0	0		1	0	0	1	0	2
Russia	7	0	0	0	9	8	4		10	7	16	29	90
Ukraine	0	0	9	0	1	0	1	14	1	0		2	28
Total	8	0	11	0	11	9	5	55	12	8	22	34	**175**

Export - P15:Textile habillement

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	0	0	0	0	6	0	0	0	0	7
Armenia	0		0	0	0	0	0	0	0	0	0	0	0
Belarus	0	0		0	1	0	0	78	0	0	10	0	90
Georgia	0	0	0		0	0	0	0	0	0	0	0	0
Kazakhstan	0	0	0	0		0	0	8	0	0	1	0	10
Kyrgyzstan	0	0	0	0	0		0	7	0	0	0	0	8
Moldova	0	0	0	0	0	0		3	0	0	2	0	4
Russia	1	0	0	0	12	1	1		0	1	14	1	32
Ukraine	0	0	4	0	1	0	1	16	0	0		0	23
Total	2	1	5	1	15	1	2	118	1	1	27	2	**175**

Import - P16:Autres produits manufacturés

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	1	0	0	0	0	4	0	0	2	0	7
Armenia	0		0	0	0	0	0	2	0	0	0	0	3
Belarus	0	0		0	0	0	0	74	0	0	6	0	80
Georgia	1	0	0		0	0	0	1	0	0	2	0	4
Kazakhstan	1	0	5	0		1	0	54	0	0	7	0	69
Kyrgyzstan	0	0	0	0	5		0	72	0	0	0	0	78
Moldova	0	0	0	0	0	0		2	0	0	4	0	7
Russia	0	2	807	0	1	1	1		0	0	52	0	866
Ukraine	0	0	5	0	0	0	0	39	0	0		0	46
Total	3	3	819	1	7	2	2	248	0	0	74	1	**1 159**

Export - P16:Autres produits manufacturés

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	0	1	1	0	0	1	0	0	0	0	2
Armenia	0		0	0	0	0	0	0	0	0	0	0	0
Belarus	1	0		0	5	0	1	131	1	1	5	0	144
Georgia	0	0	0		0	0	0	0	0	0	0	0	1
Kazakhstan	0	0	0	0		0	0	1	0	0	0	0	2
Kyrgyzstan	0	0	0	0	1		0	4	0	0	0	13	18
Moldova	0	0	0	0	0	0		5	0	0	2	0	7
Russia	4	2	1 804	1	58	2	2		2	2	39	4	1 920
Ukraine	3	0	5	5	7	0	5	53	0	1		1	80
Total	8	2	1 809	7	71	3	8	195	3	4	46	18	**2 175**

Import - Produits premiers

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	3	389	92	0	1	197	0	62	206	1	951
Armenia	0		0	12	0	0	0	419	0	52	47	8	538
Belarus	2	2		1	75	2	31	23 063	0	0	845	1	24 021
Georgia	780	494	0		0	0	0	193	0	191	128	1	1 788
Kazakhstan	20	0	4	13		640	55	9 090	8	312	203	1 294	11 640
Kyrgyzstan	0	0	5	0	252		1	166	6	0	1	319	750
Moldova	0	0	181	0	19	0		516	0	1	512	1	1 230
Russia	94	12	0	28	12 773	22	1 601		9	45	7 529	28	22 139
Ukraine	56	1	1 961	56	5 345	3	39	15 144	0	8 082		2 723	33 411
Total	952	510	2 153	499	18 556	667	1 728	48 788	23	8 744	9 471	4 375	**96 467**

Export - Produits premiers

Décl\Part.	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Total
Azerbaijan		0	1	632	21	0	0	54	43	0	205	0	957
Armenia	0		1	489	0	0	0	14	0	0	1	0	506
Belarus	2	0		1	11	3	237	983	3	1	1 964	1	3 205
Georgia	1 038	8	0		8	0	0	27	0	0	1	3	1 086
Kazakhstan	67	0	18	9		322	20	12 862	65	177	3 050	1 354	17 945
Kyrgyzstan	0	0	1	0	643		0	24	10	0	0	91	768
Moldova	0	0	28	0	55	0		326	0	0	127	0	536
Russia	272	15	0	122	8 330	1 272	108		467	53	18 700	213	29 553
Ukraine	418	25	806	93	152	1	566	7 675	10	5		14	9 766
Total	1 798	48	856	1 346	9 220	1 599	931	21 964	598	236	24 049	1 677	**64 322**

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Import - Produits intermédiaires

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	153	65	26	20	63	18	25	369
Armenia	101	54	61	8	26	11	7	268
Belarus	1 480	147	11	50	45	44	194	1 972
Georgia	147	54	17	2	15	23	1	260
Kazakhstan	1 007	861	31	18	51	126	11	2 104
Kyrgyzstan	43	111	3	1	2	6	1	166
Moldova	284	57	6	2	8	11	10	378
Russia	13 159	4 550	83	141	1 099	1 169	1 322	21 523
Ukraine	4 580	1 054	38	99	401	338	153	6 661
Total	20 954	6 953	276	340	1 710	1 745	1 723	**33 702**

Export - Produits intermédiaires

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	5	16	63	0	0	7	0	92
Armenia	197	0	7	0	0	6	0	210
Belarus	2 238	685	95	524	380	478	1 650	6 051
Georgia	133	2	17	4	1	159	13	330
Kazakhstan	2 293	1 599	2 218	94	95	10	0	6 308
Kyrgyzstan	4	8	5	0	0	0	0	18
Moldova	162	1	1	0	0	11	1	176
Russia	20 902	12 235	5 670	3 796	2 493	4 949	3 520	53 565
Ukraine	11 159	784	7 736	1 362	1 270	2 259	748	25 319
Total	37 094	15 330	15 813	5 780	4 238	7 880	5 933	**92 068**

Import - Produits finaux

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	109	47	29	7	3	21	94	309
Armenia	88	55	29	10	12	26	38	259
Belarus	609	128	16	13	18	55	117	956
Georgia	106	35	29	7	6	21	53	256
Kazakhstan	434	397	38	24	16	147	236	1 291
Kyrgyzstan	37	85	3	2	1	11	7	147
Moldova	169	35	4	3	3	9	13	236
Russia	8 804	3 363	345	275	515	1 325	2 851	17 479
Ukraine	1 851	490	45	40	65	193	224	2 909
Total	12 207	4 636	537	381	639	1 808	3 632	**23 841**

Export - Produits finaux

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	8	0	1	0	0	1	0	9
Armenia	8	1	1	0	0	4	0	14
Belarus	150	6	13	5	2	12	1	188
Georgia	40	1	4	0	0	5	0	49
Kazakhstan	34	8	9	0	0	3	0	53
Kyrgyzstan	15	2	10	0	0	0	0	28
Moldova	117	1	4	0	0	3	0	125
Russia	628	198	84	112	19	90	2	1 132
Ukraine	371	31	61	27	7	25	1	523
Total	1 371	247	186	144	28	142	3	**2 122**

Import - P1:Produits agricoles et céréales

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	21	4	4	11	60	2	25	126
Armenia	30	5	16	6	20	6	7	89
Belarus	460	19	0	44	41	17	186	766
Georgia	32	10	2	0	11	9	1	64
Kazakhstan	68	34	2	2	29	10	3	147
Kyrgyzstan	4	39	1	0	2	0	0	47
Moldova	64	4	0	1	5	7	9	90
Russia	2 537	287	8	37	927	331	1 199	5 325
Ukraine	874	52	1	42	353	148	106	1 575
Total	4 089	452	34	144	1 446	529	1 536	**8 230**

Export - P1:Produits agricoles et céréales

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	0	0	14	0	0	0	0	14
Armenia	1	0	1	0	0	0	0	2
Belarus	35	0	0	1	5	7	6	53
Georgia	5	0	0	0	0	0	0	5
Kazakhstan	348	71	1 380	55	0	1	0	1 855
Kyrgyzstan	0	3	0	0	0	0	0	3
Moldova	109	0	1	0	0	11	0	121
Russia	1 254	294	2 504	1 004	53	31	59	5 199
Ukraine	4 895	334	4 476	341	90	65	0	10 201
Total	6 647	703	8 377	1 400	147	116	65	**17 454**

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Import - P2: Denrées alimentaires (dont boissons)

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	23	1	2	4	1	0	89	119
Armenia	31	5	4	2	10	3	23	78
Belarus	91	10	8	8	7	22	82	227
Georgia	34	2	3	3	4	6	41	92
Kazakhstan	104	29	8	13	4	53	210	422
Kyrgyzstan	6	2	1	1	1	0	5	16
Moldova	45	4	0	0	1	1	2	53
Russia	2 691	298	45	148	244	279	1 106	4 812
Ukraine	401	44	10	19	23	24	50	572
Total	3 426	395	81	198	294	389	1 607	**6 391**

Export - P2: Denrées alimentaires (dont boissons)

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	3	0	0	0	0	1	0	4
Armenia	3	0	0	0	0	3	0	7
Belarus	10	0	1	0	0	1	0	12
Georgia	25	1	1	0	0	4	0	30
Kazakhstan	3	1	1	0	0	1	0	6
Kyrgyzstan	1	1	0	0	0	0	0	2
Moldova	51	1	1	0	0	3	0	56
Russia	134	24	7	0	9	20	0	194
Ukraine	81	10	8	0	4	11	0	115
Total	311	37	20	1	13	44	1	**424**

Import - P3:Denrées alimentaires conditionnées

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	3	0	5	2	0	3	5	17
Armenia	13	2	6	7	0	13	14	56
Belarus	162	6	6	2	4	10	33	223
Georgia	9	2	1	4	1	11	12	39
Kazakhstan	20	39	9	2	2	29	25	126
Kyrgyzstan	0	12	0	0	0	6	2	22
Moldova	23	3	2	0	1	5	10	45
Russia	2 053	505	271	38	111	701	1 713	5 393
Ukraine	321	16	22	7	21	102	161	651
Total	2 605	585	324	62	141	880	1 975	**6 572**

Export - P3:Denrées alimentaires conditionnées

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	4	0	0	0	0	0	0	4
Armenia	1	0	0	0	0	0	0	1
Belarus	41	1	0	0	1	5	0	49
Georgia	15	0	2	0	0	1	0	18
Kazakhstan	11	0	6	0	0	1	0	18
Kyrgyzstan	4	0	5	0	0	0	0	9
Moldova	25	0	3	0	0	0	0	28
Russia	90	87	2	4	2	4	0	189
Ukraine	84	13	45	20	1	1	0	165
Total	274	103	64	24	4	13	0	**481**

Import - P4:Bois et pâte à papier

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	22	5	2	0	0	0	0	30
Armenia	35	15	3	1	5	1	0	61
Belarus	312	18	0	0	1	3	4	338
Georgia	44	20	1	0	3	1	0	70
Kazakhstan	294	64	1	1	6	4	3	373
Kyrgyzstan	22	11	0	0	1	0	0	35
Moldova	87	14	2	0	1	1	0	105
Russia	3 121	519	5	8	38	141	39	3 870
Ukraine	1 428	115	2	1	12	50	6	1 614
Total	5 366	780	16	12	67	202	52	**6 495**

Export - P4:Bois et pâte à papier

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	0	0	0	0	0	0	0	1
Armenia	1	0	1	0	0	0	0	1
Belarus	446	0	1	0	0	4	0	450
Georgia	5	0	9	0	0	0	0	15
Kazakhstan	0	4	0	0	0	0	0	4
Kyrgyzstan	0	0	0	0	0	0	0	0
Moldova	11	0	0	0	0	0	0	11
Russia	4 761	6 682	623	149	119	210	15	12 559
Ukraine	985	2	10	1	2	3	0	1 003
Total	6 210	6 688	645	150	120	217	15	**14 045**

Import - P6:Produits pétroliers et charbon

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	52	0	14	2	0	1	0	70
Armenia	297	1	82	0	0	0	0	380
Belarus	136	1	0	0	0	1	0	138
Georgia	343	0	17	0	0	2	0	362
Kazakhstan	136	118	29	1	0	14	0	298
Kyrgyzstan	0	0	0	0	0	0	0	1
Moldova	495	0	0	0	0	0	0	496
Russia	930	509	1	32	21	445	30	1 969
Ukraine	2 864	18	229	0	0	545	3	3 661
Total	5 253	648	374	35	22	1 009	34	**7 375**

Export - P6:Produits pétroliers et charbon

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	38 714	1 922	5 830	3 494	2 208	9 522	1 604	63 295
Armenia	0	0	3	0	0	0	0	3
Belarus	15 481	0	11	0	0	29	0	15 521
Georgia	31	0	0	0	0	7	0	38
Kazakhstan	36 111	6 440	4 850	137	0	733	0	48 270
Kyrgyzstan	2	1	0	0	0	0	0	2
Moldova	4	0	0	0	0	0	0	4
Russia	243 085	34 363	3 490	105	1 736	10 136	939	293 854
Ukraine	2 127	4	53	24	38	333	37	2 616
Total	335 555	42 730	14 238	3 760	3 983	20 760	2 580	**423 605**

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Import - P7:Produits métallurgiques

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	62	20	5	1	2	5	0	95
Armenia	12	14	25	0	0	1	0	53
Belarus	229	51	3	4	1	4	1	293
Georgia	26	8	1	1	0	1	1	39
Kazakhstan	330	556	10	12	11	49	5	973
Kyrgyzstan	3	42	0	0	0	1	0	47
Moldova	41	19	2	0	0	0	0	62
Russia	2 297	1 413	6	69	24	114	52	3 975
Ukraine	763	314	6	43	6	12	34	1 178
Total	3 763	2 438	58	130	45	188	94	**6 716**

Export - P7:Produits métallurgiques

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	0	16	44	0	0	0	0	60
Armenia	195	0	6	0	0	5	0	206
Belarus	682	1	47	4	5	7	0	746
Georgia	21	2	7	4	1	137	0	171
Kazakhstan	1 871	1 521	835	37	95	9	0	4 368
Kyrgyzstan	3	3	5	0	0	0	0	11
Moldova	38	0	0	0	0	0	1	39
Russia	11 531	2 677	2 390	552	1 418	1 977	94	20 640
Ukraine	4 815	436	3 216	321	1 136	1 879	221	12 024
Total	19 156	4 657	6 550	918	2 654	4 015	317	**38 267**

Import - P8:Ciment et autres matériaux de construction manufacturés

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	18	24	14	1	0	2	0	60
Armenia	21	30	17	1	0	1	0	70
Belarus	135	45	0	0	1	5	1	189
Georgia	22	16	12	0	0	0	0	51
Kazakhstan	86	196	5	6	2	4	0	300
Kyrgyzstan	2	22	0	0	0	0	0	25
Moldova	43	14	0	0	0	0	0	59
Russia	1 264	797	7	29	17	48	21	2 184
Ukraine	524	193	6	4	3	11	10	751
Total	2 115	1 337	62	43	24	74	33	**3 687**

Export - P8:Ciment et autres matériaux de construction manufacturés

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	0	0	0	0	0	0	0	0
Armenia	0	1	0	0	0	0	0	1
Belarus	41	2	0	0	0	3	0	46
Georgia	0	0	0	0	0	0	0	0
Kazakhstan	1	0	0	0	0	0	0	1
Kyrgyzstan	0	0	0	0	0	0	0	0
Moldova	17	0	0	0	0	0	0	17
Russia	131	13	4	4	0	14	0	166
Ukraine	47	2	0	0	0	6	0	56
Total	238	17	5	5	1	23	0	**288**

Import - P9:Minéraux bruts et matériaux de construction

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	70	20	140	3	0	1	0	234
Armenia	17	2	70	0	0	1	0	89
Belarus	460	8	119	1	0	6	0	593
Georgia	20	0	17	1	0	0	0	38
Kazakhstan	287	656	19	16	2	10	0	990
Kyrgyzstan	2	70	4	0	0	0	0	76
Moldova	57	1	0	1	0	0	0	59
Russia	3 573	2 991	68	90	19	218	0	6 960
Ukraine	1 102	370	1 140	7	0	130	0	2 749
Total	5 588	4 118	1 576	118	21	367	1	**11 788**

Export - P9:Minéraux bruts et matériaux de construction

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	0	0	0	0	0	0	0	0
Armenia	2	0	9	0	0	0	0	12
Belarus	278	0	0	0	0	0	0	278
Georgia	0	0	0	0	0	1	0	1
Kazakhstan	267	1 600	26	311	14	0	0	2 218
Kyrgyzstan	0	1	0	0	0	0	0	1
Moldova	237	0	0	0	0	0	0	237
Russia	6 035	1 579	2 175	735	240	108	1 228	12 100
Ukraine	2 398	56	49	77	1	20	0	2 601
Total	9 216	3 236	2 260	1 123	255	129	1 228	**17 448**

Import - P10:Produits chimiques de base

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	13	3	8	0	1	1	0	25
Armenia	2	3	8	0	0	1	0	15
Belarus	50	36	2	3	1	3	1	96
Georgia	3	0	0	0	0	0	0	4
Kazakhstan	18	40	1	1	2	30	0	93
Kyrgyzstan	9	12	0	0	0	1	0	21
Moldova	4	3	0	0	0	0	0	7
Russia	883	325	12	17	13	307	15	1 574
Ukraine	182	87	2	10	2	41	3	329
Total	1 165	509	34	31	20	385	20	**2 164**

Export - P10:Produits chimiques de base

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	1	14	1	1	0	0	0	17
Armenia	4	0	3	2	0	0	0	10
Belarus	50	37	0	1	1	0	0	89
Georgia	6	0	0	0	0	0	0	7
Kazakhstan	507	205	1	3	1	470	24	1 211
Kyrgyzstan	2	3	0	0	0	0	0	5
Moldova	0	0	0	0	0	0	0	0
Russia	2 395	379	69	76	22	703	36	3 679
Ukraine	377	70	56	17	0	279	1	801
Total	3 342	708	129	101	24	1 453	61	**5 817**

Import - P11:Engrais

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	1	0	1	0	0	0	0	3
Armenia	0	0	1	0	0	0	0	1
Belarus	7	0	0	0	0	0	0	8
Georgia	1	0	1	0	0	0	0	2
Kazakhstan	2	1	9	0	0	0	0	12
Kyrgyzstan	0	1	0	0	0	0	0	1
Moldova	2	0	0	0	0	0	0	2
Russia	38	1	8	0	0	0	1	48
Ukraine	61	0	3	0	0	1	0	65
Total	113	2	23	0	0	2	1	**141**

Export - P11:Engrais

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	0	0	0	0	0	0	0	0
Armenia	0	0	0	0	0	0	0	0
Belarus	869	679	45	517	369	452	1 645	4 576
Georgia	102	0	0	0	0	23	13	138
Kazakhstan	72	0	0	2	0	0	0	74
Kyrgyzstan	0	0	0	0	0	0	0	0
Moldova	0	0	0	0	0	0	0	0
Russia	2 986	2 437	112	2 070	893	2 704	3 348	14 551
Ukraine	291	0	30	697	38	297	523	1 876
Total	4 320	3 117	188	3 286	1 300	3 476	5 529	**21 215**

Import - P12:Autres produits chimiques (dont Matières plastiques)

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	25	15	12	7	1	8	0	69
Armenia	20	14	15	1	1	2	0	51
Belarus	394	43	8	2	2	15	1	464
Georgia	25	7	7	0	1	2	0	42
Kazakhstan	227	130	7	3	3	32	0	401
Kyrgyzstan	9	13	1	0	0	3	0	27
Moldova	75	14	3	0	1	2	0	95
Russia	3 441	866	45	26	67	306	9	4 759
Ukraine	1 134	285	21	9	26	66	3	1 544
Total	5 349	1 386	119	49	102	435	14	**7 453**

Export - P12:Autres produits chimiques (dont Matières plastiques)

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	4	0	5	0	0	7	0	16
Armenia	0	0	0	0	0	0	0	0
Belarus	192	2	0	0	0	4	0	199
Georgia	1	0	0	0	0	0	0	1
Kazakhstan	0	2	2	0	0	0	0	4
Kyrgyzstan	0	2	0	0	0	0	0	2
Moldova	4	0	0	0	0	0	0	4
Russia	192	120	23	15	3	14	2	370
Ukraine	124	11	3	2	3	8	4	154
Total	517	138	33	17	6	33	6	**751**

Import - P13:Matériel de transport

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	22	21	1	0	0	2	0	47
Armenia	4	7	0	0	0	1	0	13
Belarus	78	17	0	0	0	5	2	103
Georgia	19	9	6	0	0	9	0	43
Kazakhstan	87	76	2	0	2	30	0	198
Kyrgyzstan	4	5	0	0	0	1	0	10
Moldova	15	7	0	0	0	1	0	23
Russia	1 725	1 466	12	2	43	278	21	3 546
Ukraine	320	288	5	4	4	61	3	685
Total	2 274	1 895	27	6	50	389	27	**4 666**

Export - P13:Matériel de transport

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	0	0	0	0	0	0	0	0
Armenia	0	0	0	0	0	0	0	0
Belarus	15	3	1	2	1	4	0	26
Georgia	1	0	0	0	0	0	0	1
Kazakhstan	2	0	0	0	0	0	0	2
Kyrgyzstan	1	0	0	0	0	0	0	1
Moldova	1	0	0	0	0	0	0	1
Russia	177	25	16	6	7	13	1	245
Ukraine	48	0	2	1	2	7	0	60
Total	244	28	20	10	10	24	1	**336**

Import - P14:Biens d'équipement

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	49	18	3	0	2	7	0	80
Armenia	12	7	1	0	1	1	0	23
Belarus	142	38	1	1	4	9	1	194
Georgia	21	6	7	0	1	2	0	37
Kazakhstan	163	81	12	2	5	51	1	315
Kyrgyzstan	6	8	0	0	0	2	0	16
Moldova	19	7	1	0	0	1	0	28
Russia	1 790	1 042	9	11	93	208	8	3 160
Ukraine	351	105	1	3	8	33	3	504
Total	2 552	1 313	35	16	113	314	14	**4 357**

Export - P14:Biens d'équipement

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	0	0	0	0	0	0	0	1
Armenia	0	0	0	0	0	0	0	1
Belarus	7	1	0	0	0	0	0	9
Georgia	0	0	0	0	0	0	0	1
Kazakhstan	4	0	1	0	0	1	0	6
Kyrgyzstan	0	0	0	0	0	0	0	0
Moldova	5	0	0	0	0	0	0	5
Russia	96	46	16	61	6	14	1	241
Ukraine	70	4	6	5	1	3	0	89
Total	182	52	24	67	7	18	1	**351**

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Import - P15:Textile habillement

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	1	1	1	0	0	1	0	4
Armenia	4	4	0	0	0	7	0	15
Belarus	35	15	0	2	2	2	0	57
Georgia	6	2	3	0	0	1	0	13
Kazakhstan	9	13	0	1	1	1	0	24
Kyrgyzstan	1	24	1	0	0	1	0	26
Moldova	21	3	0	2	0	0	0	27
Russia	203	337	6	44	24	25	1	640
Ukraine	108	63	2	6	4	10	0	193
Total	390	462	13	56	32	47	2	**1 000**

Export - P15:Textile habillement

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	0	0	0	0	0	0	0	0
Armenia	3	0	0	0	0	0	0	3
Belarus	27	2	7	3	0	2	0	41
Georgia	0	0	0	0	0	0	0	0
Kazakhstan	14	6	1	0	0	0	0	20
Kyrgyzstan	0	0	0	0	0	0	0	0
Moldova	12	0	0	0	0	0	0	12
Russia	18	3	0	1	0	2	0	25
Ukraine	49	1	0	0	0	1	0	51
Total	123	11	9	4	0	5	1	**153**

Import - P16:Autres produits manufacturés

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	15	3	4	0	0	7	0	29
Armenia	6	8	1	0	1	1	0	17
Belarus	44	15	1	0	0	7	0	68
Georgia	14	7	3	0	0	1	0	24
Kazakhstan	52	39	3	0	2	8	0	104
Kyrgyzstan	23	17	0	0	0	2	0	42
Moldova	17	4	0	0	0	1	0	23
Russia	803	383	6	5	26	65	1	1 290
Ukraine	146	70	4	1	6	13	0	238
Total	1 119	545	22	7	36	105	2	**1 834**

Export - P16:Autres produits manufacturés

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	0	0	0	0	0	0	0	0
Armenia	0	0	0	0	0	0	0	1
Belarus	24	0	4	1	0	1	0	31
Georgia	0	0	0	0	0	0	0	1
Kazakhstan	2	0	0	0	0	0	0	2
Kyrgyzstan	11	1	5	0	0	0	0	17
Moldova	6	0	0	0	0	0	0	7
Russia	159	25	55	42	2	35	0	317
Ukraine	40	2	1	2	0	3	0	48
Total	243	28	66	45	3	40	1	**424**

Import - Produits premiers

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	140	23	164	306	1	25	0	659
Armenia	316	20	181	0	0	2	0	519
Belarus	662	45	121	4	2	10	1	845
Georgia	405	1	33	1	0	2	128	570
Kazakhstan	446	815	51	18	5	101	0	1 437
Kyrgyzstan	11	98	4	0	0	1	0	115
Moldova	557	4	0	1	0	1	0	562
Russia	5 614	3 883	154	149	59	1 745	55	11 658
Ukraine	4 173	493	1 374	17	404	964	786	8 209
Total	12 323	5 382	2 081	496	471	2 851	970	**24 574**

Export - Produits premiers

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	38 720	1 936	5 831	3 495	2 208	9 522	1 604	63 317
Armenia	596	2	19	2	0	12	44	676
Belarus	15 813	37	11	1	1	30	0	15 893
Georgia	645	0	0	0	0	8	0	653
Kazakhstan	37 024	12 072	4 878	451	15	1 203	24	55 666
Kyrgyzstan	5	5	0	0	0	0	0	11
Moldova	241	0	0	0	0	0	0	241
Russia	257 431	40 321	5 734	920	1 999	10 947	2 203	319 555
Ukraine	12 098	1 946	158	125	42	655	38	15 062
Total	362 573	56 319	16 630	4 994	4 266	22 377	3 914	**471 074**

Import - Produits intermédiaires

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	153	65	26	20	63	18	25	369
Armenia	101	54	61	8	26	11	7	268
Belarus	1 480	147	11	50	45	44	194	1 972
Georgia	147	54	17	2	15	23	1	260
Kazakhstan	1 007	861	31	18	51	126	11	2 104
Kyrgyzstan	43	111	3	1	2	6	1	166
Moldova	284	57	6	2	8	11	10	378
Russia	13 159	4 550	83	141	1 099	1 169	1 322	21 523
Ukraine	4 580	1 054	38	99	401	338	153	6 661
Total	20 954	6 953	276	340	1 710	1 745	1 723	**33 702**

Export - Produits intermédiaires

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	5	16	63	0	0	7	0	92
Armenia	197	0	7	0	0	6	0	210
Belarus	2 238	685	95	524	380	478	1 650	6 051
Georgia	133	2	17	4	1	159	13	330
Kazakhstan	2 293	1 599	2 218	94	95	10	0	6 308
Kyrgyzstan	4	8	5	0	0	0	0	18
Moldova	162	1	1	0	0	11	1	176
Russia	20 902	12 235	5 670	3 796	2 493	4 949	3 520	53 565
Ukraine	11 159	784	7 736	1 362	1 270	2 259	748	25 319
Total	37 094	15 330	15 813	5 780	4 238	7 880	5 933	**92 068**

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Import - Produits finaux

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	109	47	29	7	3	21	94	309
Armenia	88	55	29	10	12	26	38	259
Belarus	609	128	16	13	18	55	117	956
Georgia	106	35	29	7	6	21	53	256
Kazakhstan	434	397	38	24	16	147	236	1 291
Kyrgyzstan	37	85	3	2	1	11	7	147
Moldova	169	35	4	3	3	9	13	236
Russia	8 804	3 363	345	275	515	1 325	2 851	17 479
Ukraine	1 851	490	45	40	65	193	224	2 909
Total	12 207	4 636	537	381	639	1 808	3 632	**23 841**

Export - Produits finaux

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	8	0	1	0	0	1	0	9
Armenia	8	1	1	0	0	4	0	14
Belarus	150	6	13	5	2	12	1	188
Georgia	40	1	4	0	0	5	0	49
Kazakhstan	34	8	9	0	0	3	0	53
Kyrgyzstan	15	2	10	0	0	0	0	28
Moldova	117	1	4	0	0	3	0	125
Russia	628	198	84	112	19	90	2	1 132
Ukraine	371	31	61	27	7	25	1	523
Total	1 371	247	186	144	28	142	3	**2 122**

Import - Total

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	401	134	219	333	67	64	119	1 337
Armenia	505	129	271	19	38	38	45	1 045
Belarus	2 752	321	148	66	66	109	311	3 773
Georgia	658	90	79	10	21	46	182	1 086
Kazakhstan	1 887	2 073	119	60	72	374	247	4 831
Kyrgyzstan	91	294	10	2	3	18	8	428
Moldova	1 010	96	11	5	11	21	22	1 176
Russia	27 577	11 796	581	566	1 673	4 240	4 228	50 660
Ukraine	10 603	2 037	1 457	155	870	1 495	1 163	17 779
Total	45 484	16 970	2 894	1 217	2 820	6 404	6 326	**82 116**

Export - Total

Décl\Part.	EU27	Asie de l'Est	Asie de l'Ouest	Asie du Sud	Asie du Sud-Est	Amérique du Nord	Amérique du Sud	Total
Azerbaijan	38 733	1 951	5 895	3 495	2 209	9 530	1 605	63 418
Armenia	802	3	27	2	1	22	44	900
Belarus	18 202	729	119	530	382	520	1 651	22 132
Georgia	818	3	21	5	1	172	13	1 033
Kazakhstan	39 351	13 678	7 104	544	110	1 216	24	62 028
Kyrgyzstan	25	15	16	0	0	1	0	57
Moldova	520	2	5	0	0	14	1	542
Russia	278 961	52 754	11 487	4 828	4 512	15 986	5 725	374 252
Ukraine	23 628	2 761	7 955	1 514	1 318	2 939	787	40 903
Total	401 039	71 897	32 629	10 918	8 532	30 399	9 850	**565 264**

C. Reynaud

2008 Commerce extérieur entre EU27 et Le Monde

Source: Eurostat   Nomenclature: HS
Déclarant: EU27   Partenaire: Le Monde
*Taux de change €/$ en 2008: 1,47088*

Import + Export - 2008

| HS	Produit	Mille T	Million €	€/tonne	$/tonne
1	ANIMAUX VIVANTS	12 720	55 876	4 393	6 461
2	VIANDES ET ABATS COMESTIBLES	109 825	264 504	2 408	3 543
3	POISSONS ET CRUSTACEES, MOLLUSQUES ET AUTRES INVE	48 810	152 555	3 125	4 597
4	LAIT ET PRODUITS DE LA LAITERIE	162 771	241 449	1 483	2 182
5	AUTRES PRODUITS D'ORIGINE ANIMALE, NON D+NOMM+S NI	21 131	17 836	844	1 241
6	PLANTES VIVANTES ET PRODUITS DE LA FLORICULTURE	26 850	81 305	3 028	4 454
7	L+GUMES, PLANTES, RACINES ET TUBERCULES ALIMENTAIR	201 975	142 612	706	1 039
8	FRUITS COMESTIBLES	202 973	201 658	994	1 461
9	CAFE, THE, MATE ET EPICES	23 785	63 070	2 652	3 900
10	CEREALES	555 446	138 321	249	366
11	PRODUITS DE LA MINOTERIE	74 547	35 965	482	710
12	GRAINES ET FRUITS OL+AGINEUX	183 425	96 216	525	772
13	GOMMES, R+SINES ET AUTRES SUCS ET EXTRAITS V+G+TAUX	2 159	12 073	5 592	8 225
14	MATI+RES + TRESSER ET AUTRES PRODUITS D'ORIGINE V+G	3 656	1 424	390	573
15	GRAISSES ET HUILES ANIMALES OU V+G+TALES	150 795	154 930	1 027	1 511
16	PREPARATIONS DE VIANDE, DE POISSONS OU DE CRUSTACE	27 581	96 640	3 504	5 154
17	SUCRES ET SUCRERIES	111 350	71 514	642	945
18	CACAO ET SES PR+PARATIONS	35 773	103 209	2 885	4 244
19	PREPARATIONS A BASE DE CEREALES, DE FARINES, D'AMIDO	73 595	150 175	2 041	3 001
20	PREPARATIONS DE LEGUMES, DE FRUITS OU D'AUTRES PAR	140 569	144 279	1 026	1 510
21	PREPARATIONS ALIMENTAIRES DIVERSES	49 096	132 945	2 708	3 983
22	BOISSONS, LIQUIDES ALCOOLIQUES ET VINAIGRES	381 004	288 629	758	1 114
23	R+SIDUS ET D+CHETS DES INDUSTRIES ALIMENTAIRES	387 515	140 138	362	532
24	TABACS ET SUCC+DAN+S DE TABAC FABRIQU+S	10 843	97 716	9 012	13 256
25	SEL	1 820 109	96 785	53	78
26	MINERAIS, SCORIES ET CENDRES	1 174 364	155 859	133	195
27	COMBUSTIBLES MIN+RAUX, HUILES MIN+RALES ET PRODUIT	7 967 300	3 769 303	473	696
28	PRODUITS CHIMIQUES INORGANIQUES	359 924	258 322	718	1 056
29	PRODUITS CHIMIQUES ORGANIQUES	486 467	943 511	1 940	2 853
30	PRODUITS PHARMACEUTIQUES	19 028	1 419 143	74 582	109 702
31	ENGRAIS	231 610	105 838	457	672
32	EXTRAITS TANNANTS OU TINCTORIAUX	82 394	198 885	2 414	3 550
33	HUILES ESSENTIELLES ET R+SINO¤DES	32 768	258 388	7 885	11 598
34	SAVONS, AGENTS DE SURFACE ORGANIQUES, PR+PARATION	91 504	134 804	1 473	2 167
35	MATI+RES ALBUMINO¤DES	27 332	62 830	2 299	3 381
36	POUDRES ET EXPLOSIFS	2 270	7 159	3 153	4 638
37	PRODUITS PHOTOGRAPHIQUES OU CIN+MATOGRAPHIQUES	5 285	45 578	8 624	12 685
38	PRODUITS DIVERS DES INDUSTRIES CHIMIQUES	225 896	398 448	1 764	2 594
39	MATI+RES PLASTIQUES ET OUVRAGES EN CES MATI+RES	600 974	1 230 534	2 048	3 012
40	CAOUTCHOUC ET OUVRAGES EN CAOUTCHOUC	99 285	360 369	3 630	5 339

41	PEAUX (AUTRES QUE LES PELLETERIES) ET CUIRS	9 903	58 765	5 934	8 728
42	OUVRAGES EN CUIR	7 926	108 630	13 705	20 159
43	PELLETERIES ET FOURRURES	403	14 961	37 155	54 651
44	BOIS, CHARBON DE BOIS ET OUVRAGES EN BOIS	735 488	303 845	413	608
45	LI+GE ET OUVRAGES EN LI+GE	2 048	8 450	4 127	6 070
46	OUVRAGES DE SPARTERIE OU DE VANNERIE	1 276	3 268	2 560	3 766
47	P-TES DE BOIS OU D'AUTRES MATI+RES FIBREUSES CELLUL	252 343	88 031	349	513
48	PAPIERS ET CARTONS	583 945	550 221	942	1 386
49	PRODUITS DE L'+DITION, DE LA PRESSE OU DES AUTRES IND	39 018	131 312	3 365	4 950
50	SOIE	337	6 165	18 281	26 889
51	LAINE, POILS FINS OU GROSSIERS	4 322	33 726	7 803	11 478
52	COTON	11 926	54 245	4 549	6 690
53	AUTRES FIBRES TEXTILES V+G+TALES	3 935	7 384	1 876	2 760
54	LAMES ET FORMES SIMILAIRES EN MATIÈRES TEXTILES SYNT	14 229	71 651	5 036	7 407
55	FIBRES SYNè+TIQUES OU ARTIFICIELLES DISCONTINUES	18 873	58 462	3 098	4 556
56	OUATES, FEUTRES ET NONTISS+S	14 526	52 329	3 603	5 299
57	TAPIS ET AUTRES REV-TEMENTS DE SOL EN MATI+RES TEXTI	6 073	37 384	6 156	9 055
58	TISSUS SP+CIAUX	1 774	19 781	11 149	16 399
59	TISSUS IMPR+GN+S, ENDUITS, RECOUVERTS OU STRATIFI+S	5 668	45 866	8 092	11 903
60	ETOFFES DE BONNETERIE	3 289	25 871	7 867	11 571
61	V-TEMENTS ET ACCESSOIRES DU V-TEMENT, EN BONNETERI	21 670	339 472	15 665	23 042
62	V-TEMENTS ET ACCESSOIRES DU V-TEMENT, AUTRES QU'EN	19 927	406 546	20 402	30 009
63	AUTRES ARTICLES TEXTILES CONFECTIONN+S	22 453	80 710	3 595	5 287
64	CHAUSSURES, GU-TRES ET ARTICLES ANALOGUES	12 424	221 096	17 796	26 176
65	COIFFURES ET PARTIES DE COIFFURES	662	12 654	19 106	28 102
66	PARAPLUIES, OMBRELLES, PARASOLS, CANNES, CANNES-SI-	1 101	4 408	4 002	5 887
67	PLUMES ET DUVET APPR-T+S ET ARTICLES EN PLUMES OU E	485	4 275	8 810	12 959
68	OUVRAGES EN PIERRES, PL-TRE, CIMENT, AMIANTE, MICA OU	211 412	111 319	527	774
69	PRODUITS C+RAMIQUES	139 442	115 456	828	1 218
70	VERRE ET OUVRAGES EN VERRE	117 544	175 266	1 491	2 193
71	PERLES FINES OU DE CULTURE, PIERRES GEMMES OU SIMIL	2 067	405 084	195 971	288 251
72	FONTE, FER ET ACIER	1 570 902	1 230 518	783	1 152
73	OUVRAGES EN FONTE, FER OU ACIER	354 722	752 053	2 120	3 118
74	CUIVRE ET OUVRAGES EN CUIVRE	62 306	299 197	4 802	7 063
75	NICKEL ET OUVRAGES EN NICKEL	4 917	69 460	14 127	20 780
76	ALUMINIUM ET OUVRAGES EN ALUMINIUM	146 704	403 327	2 749	4 044
78	PLOMB ET OUVRAGES EN PLOMB	9 343	15 256	1 633	2 402
79	ZINC ET OUVRAGES EN ZINC	18 725	32 468	1 734	2 550
80	ÉTAIN ET OUVRAGES EN ÉTAIN	895	9 121	10 195	14 996
81	AUTRES M+TAUX COMMUNS	5 256	45 886	8 731	12 842
82	OUTILS ET OUTILLAGE, ARTICLES DE COUTELLERIE ET COUV	10 928	141 297	12 930	19 018
83	OUVRAGES DIVERS EN M+TAUX COMMUNS	31 901	151 248	4 741	6 974
84	R+ACTEURS NUCL+AIRES, CHAUDI+RES, MACHINES, APPARE	349 353	4 551 765	13 029	19 164
85	MACHINES, APPAREILS ET MAT+RIELS +LECTRIQUES ET LEU	177 079	3 212 739	18 143	26 686
86	V+HICULES ET MAT+RIEL POUR VOIES FERR+ES OU SIMILAIR	11 746	73 011	6 216	9 142
87	VOITURES AUTOMOBILES, TRACTEURS, CYCLES ET AUTRES	362 018	3 397 099	9 384	13 802
88	NAVIGATION A+RIENNE OU SPATIALE	1 983	551 893	278 271	409 304
89	NAVIGATION MARITIME OU FLUVIALE	46 781	174 546	3 731	5 488
90	INSTRUMENTS ET APPAREILS D'OPTIQUE, DE PHOTOGRAPHI	26 681	871 801	32 674	48 060
91	HORLOGERIE	1 282	43 240	33 724	49 604
92	INSTRUMENTS DE MUSIQUE	755	12 963	17 163	25 245
93	ARMES, MUNITIONS ET LEURS PARTIES ET ACCESSOIRES	1 043	23 168	22 215	32 676
94	MEUBLES	135 416	483 750	3 572	5 254
95	JOUETS, JEUX, ARTICLES POUR DIVERTISSEMENTS OU POUR	21 437	221 226	10 320	15 179
96	OUVRAGES DIVERS	5 208	53 885	10 347	15 219
97	OBJETS D'ART, DE COLLECTION OU D'ANTIQUIT+	437	33 496	76 675	112 779
99	PRODUITS DIVERS	23 128	206 558	8 931	13 136
	Total	21 872 140	32 948 399	1 506	2 216

Syrian Arab Republic Transport Graph

Syrian graph simulation
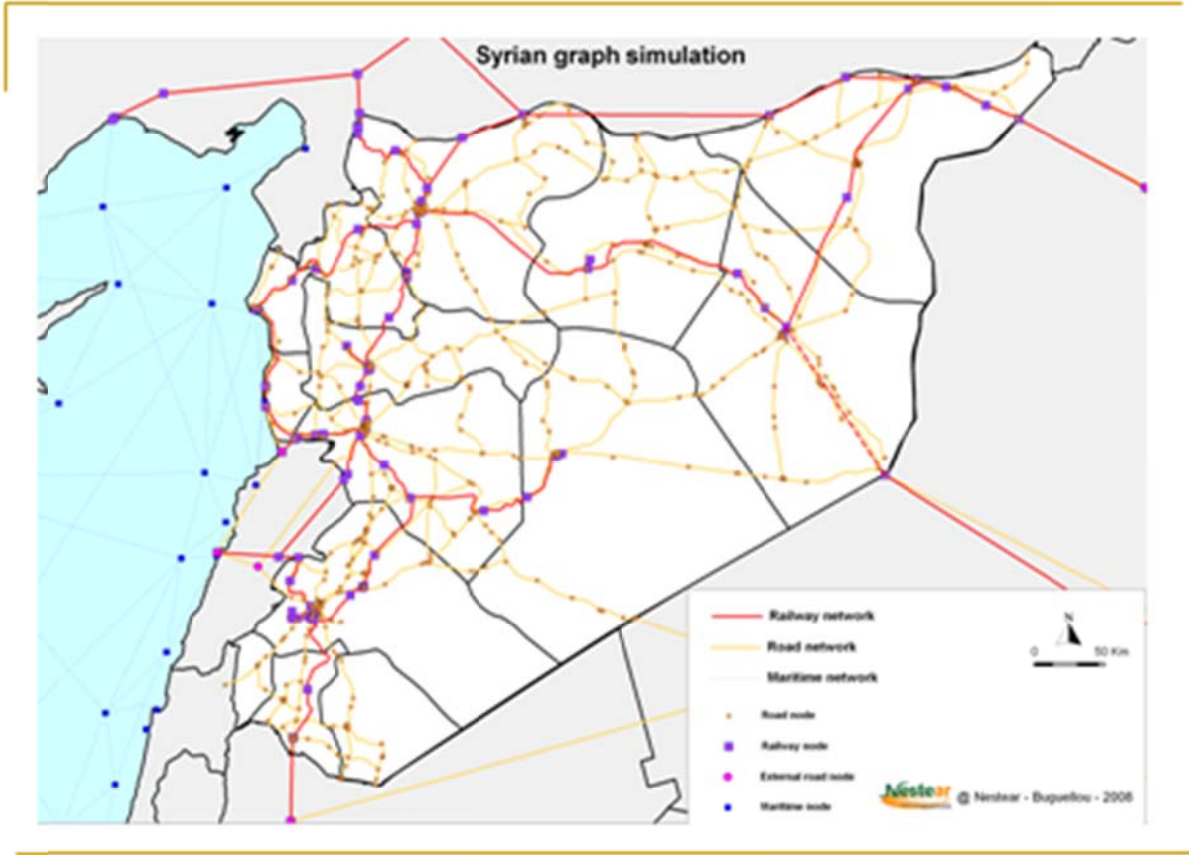
Syrian Arab Republic Transport Network and Population

Syrian transport network

C. Reynaud
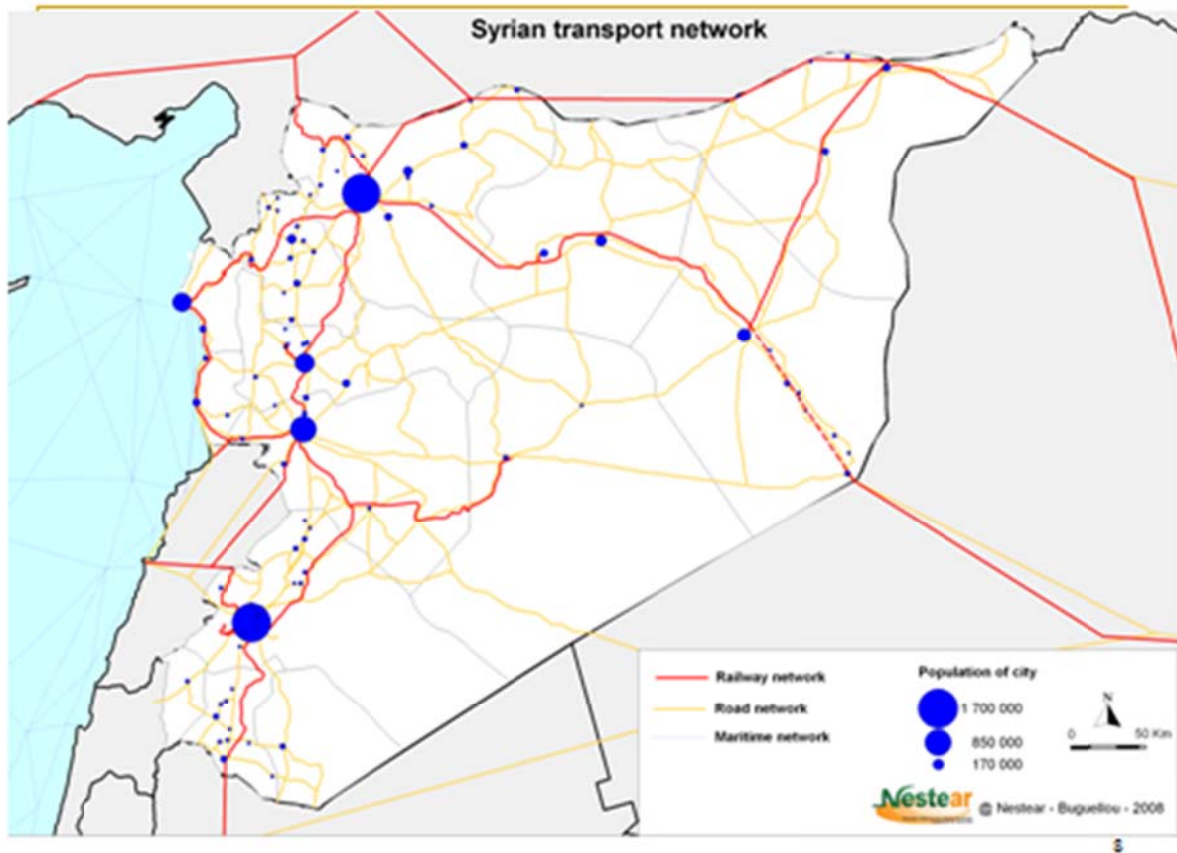
Traffic Assignment for National Transport

Analysis per type of product for road

Domestic flow for all products
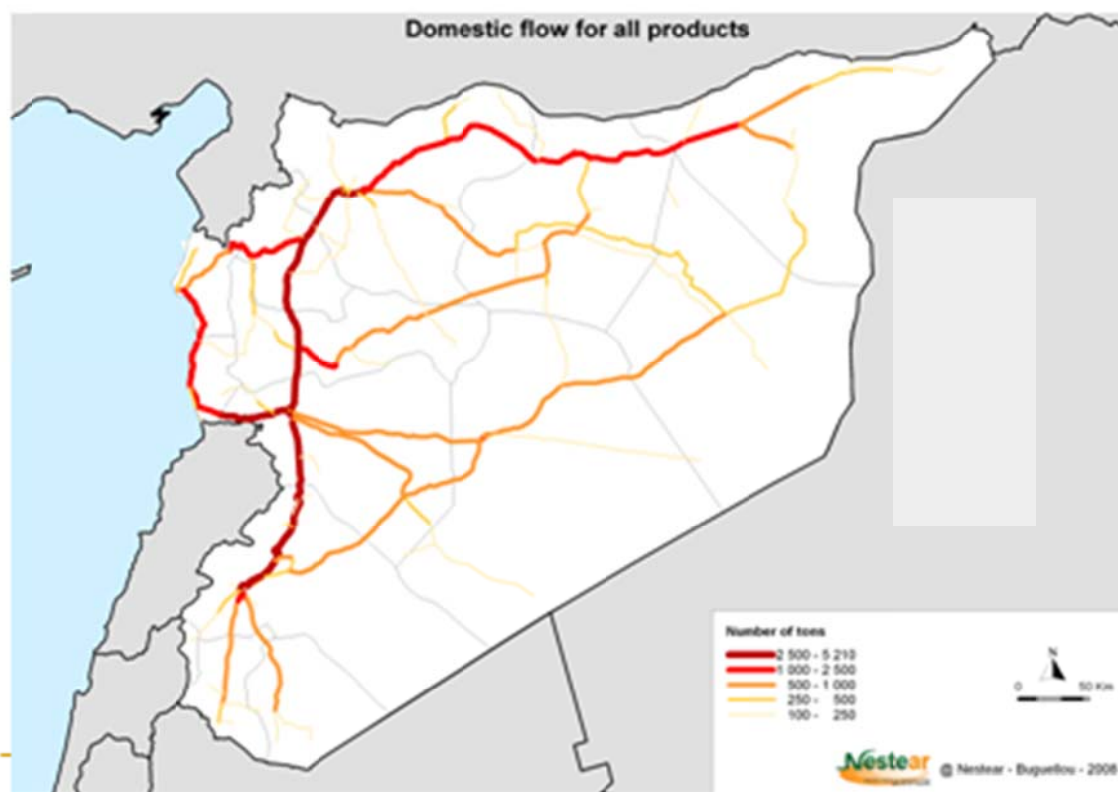
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