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### **Public and Private Partnerships for the Development of Infrastructure to Facilitate Trade and Transport**

Note by the UNCTAD secretariat

#### *Executive summary*

Efficient transport and trade facilitation require highly specialized managerial and operational skills as well as high-end technologies. These are usually not available to most government agencies but have been developed by private operators. Partnering with business sectors has become critical to ensure the efficiency and sustainability of transport and trade infrastructures and services, and governments have increasingly sought private partners for financing, building, operating and maintaining such infrastructure and services.

In the context of the current crisis, with lower trade volumes and falling freight rates, investments in transport infrastructure and services have been diminishing. Whereas some have benefitted from falling prices in transport services, landlocked developing countries (LLDCs) have seen their transport cost disadvantage worsen as compared to 2007 and 2008.

This note reviews the impact of the current economic and financial crisis on transport and trade support services and infrastructure, and highlights cooperative schemes to improve transport efficiency and facilitate trade. The document also looks at the specific needs of landlocked and transit developing countries, cooperative arrangements triggered by World Trade Organization (WTO) negotiations on trade facilitation and the role of technology in developing and operating efficient transport and trade facilitation infrastructure and services. In its final part the document presents some issues for the consideration of the expert meeting's participants.

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## I. Introduction

1. The Trade and Development Board, at its fifty-fifth session, approved the terms of reference for a Multi-year Expert Meeting on Transport and Trade Facilitation. The multi-year expert meeting addresses, over four sessions, trade logistics issues in developing countries. The findings and recommendations of this expert meeting will be reported to the Trade and Development Commission session to be held in May 2010. In accordance with paragraphs 107 and 164–168 of the Accra Accord, and the approved terms of reference, the second session of the multi-year expert meeting should deal with the following topics:

(a) Measures and actions to optimize the contribution of investment, in particular private sector investment to trade facilitation, with a particular focus on its impacts on international transport networks and on the efficiency of transport services and their contribution to trade facilitation. The meeting will also deal with the use of information and communication technologies (ICTs) in logistics, trade facilitation and supply chain security (all sessions);

(b) Best practices for public-private partnerships (PPPs) in developing infrastructure. Inadequate and poorly maintained infrastructure represents one of the largest barriers to efficient transport and connectivity. By working with private stakeholders, governments of developing countries can leverage capital for investments in infrastructure and promote improved and coordinated infrastructure planning (second year);

(c) Support to the implementation process of the Almaty Programme of Action, including the analysis of bottlenecks between landlocked and transit developing countries, and possible appropriate solutions to address them, such as best practices in the development and use of transport infrastructure, as well as the adoption of common standards, in landlocked and transit developing countries (second and fourth year).<sup>1</sup>

2. It is now widely accepted that transport and trade facilitation infrastructure and services have become essential components for developing countries' competitiveness in the global market. While trade liberalization has reduced the impact of tariffs and quota as barriers to trade, the relative importance of transport costs and delays at border crossings has been increasing in line with the requirements of globalized supply chains. The demands for ever-faster and more reliable trade logistics services have drawn increasing attention to trade and transport facilitation, which can be more important than tariffs to determine the cost of traded goods. This encompasses particular challenges for LLDCs confronted with the need to connect to global shipping networks through neighbouring countries' seaports, combined with additional border crossings and often long distances for overland transport.<sup>2</sup>

<sup>1</sup> The issues to be covered by the second session of the meeting are included in paragraphs (a), (b) and (f) of the terms of reference included in TD/B/COM.3/EM.XX/2.

<sup>2</sup> Most international trade of developing countries is moved by sea. Excluding intra-European Union trade, the maritime share of global trade is estimated as 89.6 per cent in terms of volume and 70.1 per cent in terms of value (UNCTAD (2008). The modal split of international goods transport. *Transport Newsletter*. 38). Given their geography of trade, this share is higher for most developing countries. For example in the United Republic of Tanzania it is estimated that 95 per cent of the country's trade passes through the port of Dar Es Salaam (*Fairplay Shipping News*. [www.fairplay.co.uk](http://www.fairplay.co.uk). 28 May 2009) and for most South American countries the share of seaborne trade is above 95 per cent, reaching up to 99 per cent of the volume of imports for Brazil (ECLAC (2002). *International Trade and Transport Profiles of Latin American Countries*. Santiago de Chile).

3. But efficient transport and effective trade facilitation require highly specialized managerial and operational skills as well as high-end technologies. Most government agencies would need to allocate extra resources and time to develop such capacities. Therefore partnering with the experienced relevant business sectors is critical in enhancing the efficiency and sustainability of transport and trade infrastructures and services. Thus governments have increasingly sought private partners for financing, building, operating and maintaining such infrastructure and services. Increasing private sector involvement in areas belonging historically to the domain of public authorities is confirmed by the fact that between 1990 and 2007, investment commitments to transport projects with private participation in developing countries increased in real terms from \$14 billion to \$30 billion<sup>3</sup> (see figure 1).

4. Public–private partnerships in which there is a contractual relationship and risk sharing between public and private partners have proven to be successful cooperative means for the provision of public infrastructure and services. A public–private partnership can be described as a venture between a government agency and one or more private companies in which the private party provides a public service or project and assumes financial, technical and operational risk in the project. Different models for public–private partnerships reflect the multitude of possible contractual relationships. These may include the short-term service contracts, longer-term delegated management contracts, leases, concessions or so-called “build-operate-transfer” (BOT) models.<sup>4</sup>

5. To set the scene and help stimulate the discussion, this note reviews the impact of the current economic and financial crisis on transport and trade support services and infrastructure and highlights cooperative schemes to improve transport efficiency and facilitate trade. In such a context, the document also looks at the specific needs of landlocked and transit developing countries, cooperative arrangements triggered by WTO negotiations on trade facilitation and the role of technology in developing and operating efficient transport and trade facilitation infrastructure and services. In its final part the document presents some issues for consideration by the expert meeting’s participants.

## II. The economic crisis and international transport

6. Trade has usually grown at a faster rate than gross domestic product (GDP). Indeed, in times of positive economic growth, international trade tends to expand faster than the economy. In the current economic downturn, not only is trade declining but so is investment in ports, which is usually a good indicator of prospects and expectations pertaining to international trade. The economic crisis has led to a contraction of public and private investment including foreign direct investment. It has also depressed trade and derived demand for transport services.

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<sup>3</sup> World Bank. PPI database. [www.worldbank.org](http://www.worldbank.org).

<sup>4</sup> For a discussion of PPP concepts see also the explanatory note “Public–Private Partnerships in Trade and Transport Facilitation” of the Global Facilitation Partnership (GFP) at [www.gfptt.org](http://www.gfptt.org); and the document United Nations Economic Commission for Europe (UNECE) (2009). Transport trends and challenges. ECE/TRANS/WP.5/2009/4. [www.unece.org](http://www.unece.org). The latter illustrates also the “cyclical nature of PPP investments in the transport sector” (ibid., page 3).

## A. Lower trade demand and transport connectivity

7. At the global level, the elasticity of trade volumes to world GDP has increased gradually from around 2 in the 1960s to above 3 in 2008,<sup>5</sup> due to growingly pervasive production-sharing networks and lean retailing. It is now known that world GDP decelerated in 2008 and for 2009, it is forecasted that global output will contract 2.7 per cent, while trade will decline by as much as 10 per cent or more than three times the fall in GDP.<sup>6</sup> The effect is immediately felt by the suppliers of international transport services such as port operators and shipping companies. The idle containership fleet is estimated to reach 15 per cent of the existing fleet by the end of this year<sup>7</sup> and between July 2008 and July 2009 the container throughput of the world's two busiest ports, Singapore and Shanghai, dropped by almost 19 and 18 per cent respectively.<sup>8</sup> Transits through the Panama Canal declined by 6.3 per cent year-on-year in the second quarter of 2009.<sup>9</sup>

8. As a consequence, the situation of world ports and shipping has changed dramatically in comparison with previous years: before the global meltdown, ships would incur significant delays due to a lack of port capacity to handle surging seaborne trade; nowadays, many ships lie idle because of lower demand.<sup>11</sup> Lower volumes and freight rates have also led to a reduction of vessel deployment on most trade routes and, as a result, shipping connectivity for most countries has worsened. For example, between July 2008 and 2009, the average number of liner shipping services per country went down by 4 per cent, the number of vessels deployed by 11 per cent, and the number of companies offering services by 6 per cent.

9. From a shippers' perspective, the situation in ports has on the contrary actually improved, with a drop in waiting times and transshipment tariffs; lower freight rates paid by shippers have also significantly fallen, bringing to some extent relief for traders in the current economic downturn. For instance, shipping one ton of dry bulk cargo over 1,000 miles by sea in July 2009 was \$4–6 as compared with \$10–16 in 2008.<sup>10</sup>

10. For the transit of LLDC trade, land transport costs and waiting times at border crossings have not declined during the past 12 months of the current economic crisis. The transport cost disadvantage of landlocked countries has therefore actually increased as compared to 2007 and 2008 and to coastal countries, which benefited from the sea freights decline. Landlocked countries' overseas competitiveness worsened during the crisis and the obstacles in their land transport remain the same. These countries could certainly benefit from closer cooperation with coastal neighbours in sharing best practices in the development and use of transport infrastructure and services, in compliance with the spirit of the Almaty Programme of Action.

## B. Impact on transport infrastructure financing in developing countries

11. In general, private sector investment in transport infrastructure and services is well known for being pro-cyclical and following trade patterns: in times of booming trade, operators plan for expansions, investment increases and projects number augment; in the

<sup>5</sup> World Bank (2009). *Trade & Development Quarterly*. July.

<sup>6</sup> UNCTAD (2009). *Review of Maritime Transport 2009*. Geneva.

<sup>7</sup> *Containerization International Online*. [www.ci-online.co.uk](http://www.ci-online.co.uk), 15 July 2009, based on data from Alphaliner. One year earlier, there were practically no laid-off container ships.

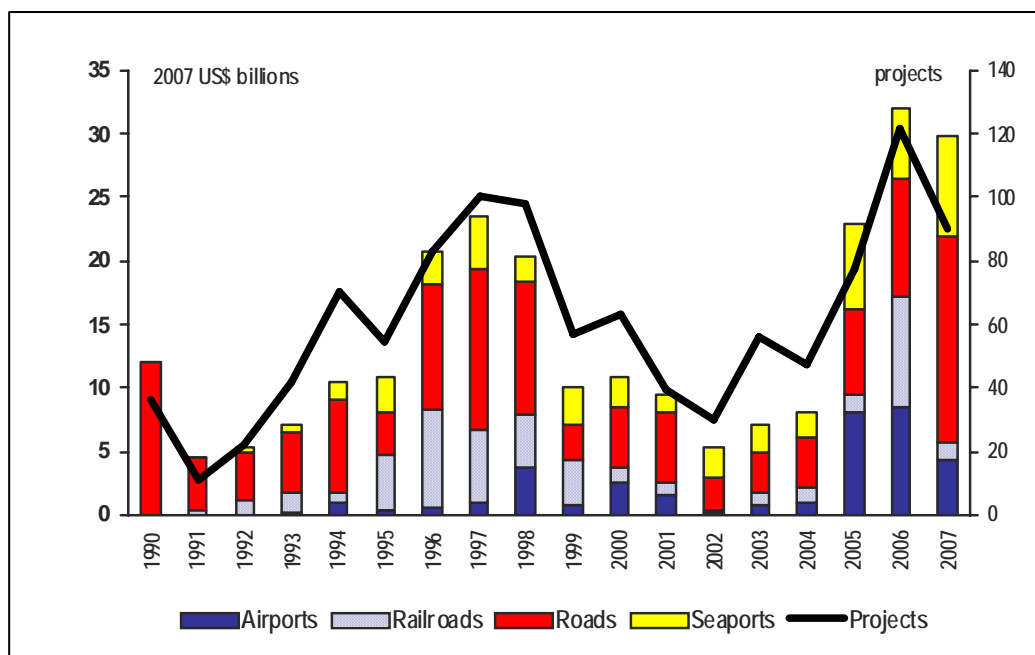
<sup>8</sup> *Maritime News*. <http://worldshippingnews.co.cc>. August 2009.

<sup>9</sup> *Fairplay Shipping News*. [www.fairplay.co.uk](http://www.fairplay.co.uk), 24 July 2009.

<sup>10</sup> Clarkson Research Services (2009). *Dry Bulk Outlook*.

downturn, investments projects are put on hold. Given the time lag between planning an investment and its actual conclusion, especially for large infrastructure projects that require extensive feasibility and environmental impact studies, it is important to keep in mind the long-term requirements for a country's foreign trade, and to recall that a decline in transport investment today will inevitably entail capacity restrictions on trade in the near future.

**Figure 1. Investment commitments to transport projects with private participation in developing countries by subsector, 1990–2007**



Source: World Bank. Private participation in infrastructure data base.

<http://ppi.worldbank.org>.

\* Preliminary data for 2008: 56 projects and \$26 million.

12. Port infrastructure development in many developing countries is currently suffering from insufficient funding levels. For instance, in Mexico, the new Punta Colonet megaport development project was delayed due to the reduced number of private companies able to carry out the required investments. In the Middle East, some \$1.7 billion in new port projects in the region have reportedly been either put on hold or cancelled.<sup>11</sup> In Sri Lanka, the port of Colombo South Container Terminal expansion ran into delays following a downturn in traffic volumes. In China, the building of nine container terminals at Ningbo-Zhoushan Port was also suspended and in the port of Dalian capital, expenditure on infrastructure was cut by 36 per cent as a result of the global financial crisis.

13. The crisis is not only affecting plans to enter in new PPPs but existing schemes are also suffering. The liquidity for private infrastructure investment is drying up and most infrastructure projects with private participation in developing countries are facing serious difficulties due to the higher cost of financing and more conservative risk allocation structures.<sup>12</sup>

<sup>11</sup> *Lloyds List*. [www.lloydslist.com](http://www.lloydslist.com). 27 August 2009.

<sup>12</sup> GTKP. The impact of global economic and financial crisis on the financing of transport infrastructure projects. [www.gtkp.com/sectors.asp?step=4&typeOfPage=1&contentID=3569](http://www.gtkp.com/sectors.asp?step=4&typeOfPage=1&contentID=3569)

14. Despite the gloomy picture depicted above it would be inappropriate to assume that investments and reforms in transport and trade facilitation are no longer required or urgent. Some noteworthy exceptions to this overall negative portrayal include Viet Nam, which has attracted the interest of all the major terminal operators in the last few years, and has not experienced the declines noted elsewhere.<sup>13</sup> The widening of the Panama Canal, to be completed in 2014, also remains largely unaffected by the financial crisis.

15. In order to fill the financial gap in infrastructure investment, development banks are expanding their infrastructure portfolio. The World Bank's Infrastructure Recovery and Assets platform and the Infrastructure Crisis Facility set up by the International Financial Corporation will together mobilize more than \$55 billion over the next three years for infrastructure projects in developing countries. The World Bank has further proposed an umbrella Vulnerability Fund to which developed countries could dedicate 0.7 per cent of their planned economic stimulus. The Vulnerability Fund, which could channel resources through the United Nations and multilateral development banks, would help countries without the resources to respond to the crisis by funding investments in key areas, including infrastructure projects.<sup>14</sup>

16. Several national governments, too, are expanding their public expenditures to generate employment in the current economic crisis, and often these expansionary packages include important investments in infrastructure. In 2009, it is forecasted that the world will spend 2.9 per cent of its GDP on infrastructure, up from 2.2 per cent in 2008. It is predicted that the increase will be led by developed countries, while most developing country infrastructure investment will remain stagnant. Among the exceptions are China and India. The economic stimulus package in China includes \$220 billion in transportation infrastructure spending, while India plans to increase infrastructure investments to 4.8 per cent of GDP in 2009, up from 3.3 per cent in 2003.<sup>15</sup>

### III. Public-private partnerships to promote transport efficiency

17. Given the importance of maritime transport for the international trade of developing countries and the key role played by seaports, the following paragraphs focus first on PPPs in seaports. Subsequently, part B discusses inland connections and the potential of PPPs in the area of transit and LLDCs' access to global shipping networks. In part C the role of technology and know-how brought through PPPs is briefly covered.

#### A. Channelling private investments in ports

18. In recent years, private sector investments in seaports have led to increased throughput and frequency of transport services, resulting in lower freight rates and improved connectivity. Today, more than 90 of the top 100 container ports have some degree of private participation in the running of facilities, and practically the entire growth

<sup>13</sup> DP World's Saigon Premier Container Terminal, located on the Soai Rap river about 15 km from Ho Chi Minh City and in the Hiep Phuoc industrial area of the city, is scheduled to officially open for business on 1 October 2009.

<sup>14</sup> GTKP. The impact of global economic and financial crisis on the financing of transport infrastructure projects. [www.gtkp.com/sectors.asp?step=4&typeOfPage=1&contentID=3569](http://www.gtkp.com/sectors.asp?step=4&typeOfPage=1&contentID=3569)

<sup>15</sup> Forecasts by CG/LA Infrastructure, as reported in GTKP. The impact of global economic and financial crisis on the financing of transport infrastructure projects. [www.gtkp.com/sectors.asp?step=4&typeOfPage=1&contentID=3569](http://www.gtkp.com/sectors.asp?step=4&typeOfPage=1&contentID=3569).

of global port throughput since the 1990s is handled by private operators.<sup>16</sup> As regards transport costs, private involvement in Latin American ports has led to increased efficiency and lower freight rates.<sup>17</sup> Concerning access to international transport services, there are numerous examples where new private sector investments in ports have improved the country's connections to the global liner shipping network, including Djibouti (after investment from Dubai-based port operator DP World), Lebanon (benefiting from port reforms since 2006) and Morocco (with a new international transshipment facility in Tangier).<sup>18</sup>

19. The landlord port management model whereby the terminal operator leases land from the port authority is the most common context for private participation in port operations. Terminal operating concessions in ports constitute an efficient method for reducing costs and increasing port throughput by bringing in outside expertise to overcome operational inefficiencies. But these benefits for users and owners of the port often have also social costs: job losses at the quayside are common and while in the long term, increased trade may bring greater employment, the transition period can be difficult for employment. Often retraining of personnel is required and government assistance needed to assimilate people into other jobs within the community. When port reform projects are supported by development banks or other donors, they may need to include funding for retraining or compensatory payments.<sup>19</sup>

20. Another challenge for port authorities in the privatization process is how to evolve from being a self-regulated provider of services to an independent regulator of services provided by the private sector. The need to regulate must be balanced with the need to provide an enabling environment that is conducive to increased trade. In some cases, overregulation has led to concessionaires withdrawing from contracts, while a lack of regulation may lead to the transfer of a public monopoly to a private monopoly. This is a particular challenge for the ports of small island states where there is often not enough trade to economically introduce inter-port competition.

21. Taking advantage of their geographic position and their respective canals (the Panama Canal and the Suez Canal), Egypt and Panama are particularly well connected to global shipping networks. In Panama, container terminal concessions were among the first in Latin America, and today Panama is by far the busiest transshipment centre in the Americas. Importers and exporters benefit from more frequent connections and lower freight rates as the result of economies of scale and competition among service suppliers.<sup>20</sup> In Egypt several terminals have been developed by private sector investors, who provide services to shipping lines that redistribute cargo to other Mediterranean and African destinations. As a consequence, Egypt's traders benefit from direct shipping links to 59

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<sup>16</sup> Drewry Shipping Consultants (2009). *Annual Review of Global Container Terminal Operators*. London.

<sup>17</sup> Micco A and Pérez N (2002). *Determinants of Maritime Transport Costs*. Inter-American Development Bank; and Sanchez R *et al.* (2003). Port efficiency and international trade: port efficiency as a determinant of maritime transport costs. *Maritime Economics & Logistics*. 5.

<sup>18</sup> UNCTAD (2009). Liner shipping connectivity in 2009. *Transport Newsletter*. Second and third quarter.

<sup>19</sup> Module 7 of the World Bank's "Port Reform Toolkit" deals specifically with "labour reform and related social issues". [http://siteresources.worldbank.org/INTPRAL/Resources/338897-1164990391106/07\\_TOOLKIT\\_Module7.pdf](http://siteresources.worldbank.org/INTPRAL/Resources/338897-1164990391106/07_TOOLKIT_Module7.pdf)

See also Estache A *et al.* (2007). Public-private partnerships in transport. World Bank Policy Research Working Paper 4436.

<sup>20</sup> Wilmsmeier G and Hoffmann J (2008). Liner shipping connectivity and port infrastructure as determinants of freight rates in the Caribbean. *Maritime Economics and Logistics*. 10.



trading partners – more than any other African country, and more than twice the region’s average of 24 direct connections.

22. An enabling environment conducive to increasing trade can also be created through the zoning of certain port areas for development and dedicating these to the performance of specific activities, such as logistics centres or free trade zones. In these cases, while the management of the operation can be a public-private partnership, it is more common that a public agency runs the facility and private companies operate within it. In Viet Nam, for instance, all of the new port development projects with international terminal operators have an area adjacent to the port where logistics activities free of taxation are provided. Located close to or within a port, logistics centres can facilitate increased trade and possible backward linkages of technologies into the wider economy.

## **B. Improving transit and inland connectivity**

23. Investments in transport and transit infrastructure require certain trade volumes to be commercially viable. With low trade volumes, transport services are less frequent, there is less competition and diseconomies of scale lead to higher transport costs, which in turn lead to lower trade volumes. A challenge for many LLDCs is due to the fact their low trade volumes often do not economically justify investments in technologies and infrastructures, be it in the LLDC itself or in the neighbouring transit country.<sup>21</sup> As a result, improved rail, road, air and pipeline infrastructure is one of the five priorities in the Almaty Programme of Action.<sup>22</sup>

24. Identifying common interests between traders from LLDCs and service providers from neighbouring transit-locked countries can be an important step towards improving trade facilitation and transport connectivity. In particular, private port operators may become important allies for LLDCs. As discussed above, ports are increasingly operated by commercially oriented companies or public-private partnerships, and these operators often develop an active interest in attracting additional cargo from neighbouring countries – including landlocked countries. By way of example, Walvis Bay in Namibia actively targets the market of landlocked Zambia, private port operators in Karachi aim at cargo from Afghanistan and Central Asia and newly concessioned ports in Chile and Peru vie for the business of Bolivian importers and exporters.

25. This common interest goes beyond the commercial interests of the transport operators, to also include the common interests of traders from both countries. By combining the trade volumes of both countries, international shipping costs for traders from both sides will be reduced. Combining trade volumes helps to attract more shipping companies, with larger ships and more frequent and direct services to the transit country’s port – and this increase in cargo volumes helps traders from both countries become more competitive. It also helps the port operator pay for the investment in dredging, cranes and ICTs, and it helps national customs invest in modern trade facilitation measures in the seaport and at the border crossings between the two countries.

<sup>21</sup> In his book *The Bottom Billion* (Oxford University Press, 2007), Paul Collier considers the “landlocked trap” to be one of the four major “development traps” that prevent many least developed countries from achieving higher levels of development, the other three traps being the “conflict trap”, the “natural resource trap” and the “bad governance trap”.

<sup>22</sup> See the United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and the Small Island Developing States (UN-OHRLS), [www.un.org/special-rep/ohrlls/lldc/default.htm](http://www.un.org/special-rep/ohrlls/lldc/default.htm).

26. Another area of common interest between the landlocked and the transit country can be the development of inland container depots or dry ports. Public-private partnerships can be engaged in much the same way as logistics centres and free trade zones with the government providing the enabling environment and private companies the services. Located at intermodal intersections where two or more modes of transport meet (e.g. road, rail or inland waterways), advantages such as reduced costs or congestions can be obtained through economies of scale.

27. Another successful approach of mutual benefit for the landlocked and the transit country consists in the development of corridor-based institutional and technological solutions that provide stakeholders with long-term sustainable capacity to improve transit transport operations. Again governments have a role to play in creating the enabling environment and bringing various actors together. A corridor-based solution may include the governments of neighbouring countries as well as private service providers and traders. By focusing upon linking regional and global trade and transport networks it is possible to combine regulatory, institutional, technological and operational improvements along specific corridors. Several corridor-based networks have been established in Africa, Asia and Latin America with proven benefits.

28. The implementation of multilateral cross-border agreements can also facilitate greater cooperation and increased trade at the subregional level. The Greater Mekong Subregion Cross-Border Transport Agreement (GMS Agreement) is one example of a multilateral instrument for the facilitation of cross-border transport of goods and people. The GMS Agreement includes references to existing international conventions that have been widely accepted in a broad range of countries around the world. Other examples include the Association of Southeast Asian Nations (ASEAN) Framework Agreement on Multimodal Transport,<sup>23</sup> the work on the Shanghai Cooperation Organization (SCO) Road Transport Facilitation Agreement<sup>24</sup> and the Economic Cooperation Organization (ECO) Transit Transport Framework Agreement.<sup>25</sup>

29. In the last century, roads have traditionally been provided by the public sector. Issues that can make private sector investment in roads different from, or more complicated than, those in a typical business investment include the following:<sup>26</sup>

(a) They provide a public service that affects the day-to-day welfare of many individuals and the social and economic returns on road investment may exceed financial returns and raise a case for public subsidy;

(b) Roads may occupy a quasi-monopoly position and thus private operations may require a degree of economic regulation;

(c) Roads interconnect with other roads and other transport modes in public or private ownership. The quality and capacity of upstream and downstream transport investments will affect road viability.

30. International cooperation can play a role in catalyzing private investment in roads by supporting at least two elements of a possible concessioning process:

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<sup>23</sup> ASEAN, [www.aseansec.org/17877.htm](http://www.aseansec.org/17877.htm).

<sup>24</sup> SCO, [www.sectsco.org/EN/Yolder.asp](http://www.sectsco.org/EN/Yolder.asp).

<sup>25</sup> ECO, [www.ecosecretariat.org](http://www.ecosecretariat.org).

<sup>26</sup> UNCTAD and APEC Committee on Trade and Investment Investment Experts Group (2009). *Best Practices in Investment for Development - Case Studies in FDI: How to Utilize FDI to Improve Transport Infrastructure - Roads: Australia and Peru*.

(a) Extended capacity-building: official development assistance (ODA) has often supported governments in preparing transport plans and identifying high priority road projects. Donors should consider extending their capacity-building support in the transport sector to include the diverse and commercially attuned skills needed to execute road concessions;

(b) Financial support for government contributions: relatively small amounts of ODA support could facilitate very large improvements in critical transport infrastructure. Aid For Trade can act as a catalyst for building trade-related capacity and infrastructure. ODA could assist governments in investing in the infrastructure needed to link products to global markets and increase export competitiveness.<sup>27</sup>

### C. The role of technology and know-how

31. Nowadays, the use of technology is pervasive in the development and operation of transport infrastructures and services. When engaging in public-private partnerships, governments also benefit from the managerial, operational and technological skills developed over the years by successful private operators. For instance, containerization, the dominant method of transporting general cargo, requires specialized handling technologies and equipment and highly sophisticated management software to ensure the highest operational efficiency in seaports and inland terminals. Most efficient international logistics networks also make extensive use of ICTs for exchanging information, booking and tracking shipments, or simply for the preparation of trade and transport documents.

32. While individual ports may face specific situations and conditions, they no longer need to design tailor-made technical solutions since many systems available off the shelf can be tailored to a particular port's needs. In the case of port partnerships with international terminal operators it is not uncommon for partners to bring in tried and tested software solutions from other ports. Developments in cargo handling equipment within ports like super-post panamax cranes, automatic guided vehicles and the inclusion of these individual components within a terminal or port-wide integrated system are already helping increase ship turnaround times and port performance.

33. By operating an integrated system some ports can handle vessel discharge at rates of over 70 TEUs per hour for single cranes and 450 TEUs per hour using multiple cranes in ideal circumstances. In Nigeria, for instance, the APM Terminals-operated Apapa Container Terminal achieved 47 moves per hour for a single crane. The improvement in productivity was due to new training programs, yard improvements and the deployment of new equipment. While some ports have achieved individual crane productivity greater than 70 moves per hour, most cranes operating at less than half that rate are considered efficient. While the arrival over recent years of tandem lift, triple lift cranes and even quad lifts have all helped improve port performance on an incremental scale, they have not revolutionized the industry.

34. The development of human skills is of paramount relevance. In the case of port communities, for the past decade the UNCTAD Train For Trade Port Training Programme has been very active in helping port operators around the world support the economic development role of their nations. The programme plays a key role in building developing countries' capacities by strengthening their human resources. In this endeavour, partnerships have been created with European ports that are sharing their knowledge and expertise through the UNCTAD Port Training Networks in four language groups of

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<sup>27</sup> Ibid., page 95.

African, Asian and Latin American port communities. The programme's main goal is to support port communities of developing countries in their quest to foster economic development by providing efficient and competitive services to facilitate trade.

## IV. Public-private partnerships to promote trade facilitation

### A. Private-public working relations in trade

35. Trade facilitation is central in countries' trade support infrastructure. Similar to developments in the transport sector, governments use different variants of public-private partnerships to provide trade facilitation services and infrastructure. Examples include the construction and modernization of border posts, the provision and programming of automation software, the development of e-documents and paperless trade solutions and the operation of ICT platforms such as single windows for international trade or port community portals. Such public-private partnerships are based on sharing investment and risks between the public and the private sector. In addition, public-private partnerships in a broader sense may also include voluntary and collaborative relationships between the public and private sectors throughout the policymaking process, including through trade facilitation committees or even ad hoc task forces.

36. Public-private consultations and cooperation go back to the essence of trade facilitation and have become an essential part of trade facilitation reform efforts to simplify, harmonize and standardize trade procedures and associated information flows to move goods across borders. Strategic interests of public and business stakeholders differ in practice but reform has to take in account these sometimes conflicting interests (table 1).

**Table 1. Some strategic objectives and issues for trade facilitation stakeholders**

Government (parent-level administration)	Compliance with national regulation to promote legitimate trade, while protecting the integrity and security of national borders and national revenues as well as the safety of goods; Trade and related economic development policy objectives; Compliance with international, regional and bilateral commitments.
Executing agencies	Enforcement and compliance of regulations and legislation; Collection of revenue and statistics.
Manufacturers	Streamline production and lean logistics (reliability, timeliness, safety); Costs reduction (lower direct and indirect transaction costs); Faster access to markets, secure supply chain, integration of the supply chain with other systems (business-to-business – B2B, business-to-government – B2G).
Private service providers (e.g. freight forwarders, logistics companies, transport operators)	Quality of services provided (time, costs, reliability, security); Inter-operability of electronic systems and messages (B2B and B2G).
Financial sector (banks and insurance companies)	Control of the financial risk, reduction of service costs, rapid release of guarantees, data accuracy.
Exporters/importers	Inter-operability of electronic systems and messages (B2B, and B2G); Profitability (time, cost and reliability).
Consumers	Prices of products, product quality and safety, consumer protection.

Source: UNCTAD.

## B. Trade facilitation platforms

37. Efficient trade facilitation reform requires developing a collaborative public-private relationship, allowing for a dialogue on trade facilitation needs and interests, and transparency on policy objectives and actions. Trade facilitation platforms in various forms have been set up to encourage such public-private consultation and collaboration.

38. The concept of trade facilitation committees dates back to the mid-1970s when the first public-private bodies were set up to work on the simplification of documents and the introduction of EDI (electronic data interchange). Some of these organizations continue to function in OECD (Organization for Economic Cooperation and Development) countries (see also box 1).<sup>28</sup> In the 1990s the focus shifted to national trade and transport facilitation committees with a broader mandate covering the simplification of trade and transport procedures, which often acted as steering committees for technical assistance projects.

39. More recently in the context of the WTO negotiations on trade facilitation, another model of consultative mechanism has emerged: the trade facilitation negotiation support group or task force. In developing countries there existed very little public-private consultation over the country's trade facilitation needs and priorities. It is important to have such a dialogue over the proposed disciplines at the WTO before the future agreement on trade facilitation is signed. It can help negotiators make sure that the proposed provisions respond to their countries' needs and future interests and are adapted to their implementation capacities. Some countries have set up WTO trade facilitation task forces or working groups to organize such a private-public dialogue over the country's strategic trade facilitation negotiation interests and provide expert advice and recommendations on negotiation proposals.<sup>29</sup>

40. Such trade facilitation working groups generally operate in a less formalized manner than trade facilitation committees and often emerge out of the ad hoc stakeholder group that conducted the WTO Secretariat/Annex D trade facilitation self-assessments. The meetings of these working groups take place more or less regularly with participation from public and private representatives. Whilst the main focus of these working groups is on the WTO negotiations, the scope often also extends to linking trade facilitation to regional integration and national economic development objectives. WTO members have stressed that such collaborative structures will facilitate the implementation of the future commitments undertaken under the WTO.<sup>30</sup>

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<sup>28</sup> An updated list of currently existing PRO organizations can be found at [http://www.unece.org/cefact/nat\\_bodies.htm](http://www.unece.org/cefact/nat_bodies.htm).

<sup>29</sup> The UNCTAD/UNECE repository of trade facilitation working groups in the WTO context can be found at [www.unctad.org/tlb](http://www.unctad.org/tlb)

<sup>30</sup> See Communication from Honduras, Norway, and Switzerland (TN/TF/W/158) and Saint Lucia (Job (09)/11) at the WTO.

**Box 1. Public-private facilitation platforms**

Sweden has a long experience with public-private trade facilitation dialogue on trade facilitation. The Swedish trade procedures council, SWEPRO, was set up in 1975 as the private-public body for the simplification of trade and transport documents. Its mandate has since been revised and SWEPRO is now a public-private trade facilitation forum that monitors developments at the international level and serves as a platform for the exchange of information and consultation amongst its private and public stakeholders. The body depends on the National Board for Trade for management, funding of research activities and staffing.

Mali established a permanent working group on the WTO negotiations on trade facilitation based on the customs subcommittee of the Joint Integrated Technical Assistance Programme (JITAP)-piloted "Commission nationale de suivi des accords de l'OMC". It is chaired by the Ministry of Commerce and comprises private sector stakeholders and various ministries and public agencies. Meetings have been irregular but are normally timed to meetings of the Negotiating Group on Trade Facilitation (NGTF) in Geneva. While the main focus is on developing a NGTF negotiation position, the group also works on improving the trade facilitation environment in Mali and has, inter alia, achieved an extension of the validity of the import/export certificate traders have to obtain from the Ministry of Commerce.

In the Caribbean, the Organization of Eastern Caribbean States (OECS) Secretariat encourages its WTO-member member States to set up working groups on trade facilitation to better coordinate their position in the ongoing negotiations. The starting point for these groups was the WTO trade facilitation self-assessment conducted by public-private stakeholder groups. The OECS Secretariat facilitates the exchange of information to and from national working groups and supports their activities through substantive input or the organization of regional meetings. Focusing on developments beyond the WTO, the working groups are considered an important vehicle of trade facilitation reforms in the region and shall become an important element of a regional trade facilitation framework.

41. The different models of existing trade facilitation platforms vary in composition, institutional and legal set up, scope and objectives and range from well-structured institutions established as independent public bodies with a mandate for research and advisory services to less formalized bodies representing a network of interested parties meeting irregularly. Some of these bodies have an independent budget funded through private and public contributions and through payable services, whilst others rely on government sponsorship in the form of staffing and equipment made available. Most of the existing trade facilitation working groups do not have and do not require an independent budget because of their informal structure and modus operandi, but rely on agencies and companies making staff available for meetings and activities. They may require ad hoc funding for training activities or for specific research activities.

42. From the experiences of the various models of national trade facilitation platforms, key lessons can be drawn with regard to the sustainability of such trade facilitation platforms. Collaborative mechanisms go through different phases of success and participants' motivation. During the initial phase the motivation will increase with participants approving the dialogue over the previous non-consultative situation and the first tangible results. However, long-time changes require constant input and collaboration from all participants whilst not offering benefits quickly. Stakeholders, in particular those from the private sector, may lose interest and consider the transaction costs of their participation in such bodies too high compared to the benefits obtained, leading them to

drop out. The management of the group then plays a crucial role in sustaining the group's impetus. Often the public sector has to take over the responsibility for creating such a platform, and not only in terms of providing initial funding. It has to engage the private sector by showing the benefits that can be obtained through cooperation and a real commitment to work through the platform by providing it with an action-oriented mandate. A perceived impact on policy actions will encourage members of such a trade facilitation platform to continue their cooperation as they will feel that the time and resources invested are worthwhile for achieving their own interests and contributing to a more secure, economic and reliable trade environment in general.

### C. PPP-based models for single window development

43. Once they have recognized the need for seamless trade information flows along global supply chains, many developing countries consider implementing a single window for international trade. This is a one-stop facility that makes exchanging trade information between the various stakeholders involved in international trade (see table 1) easier and faster.<sup>31</sup> Such trade information might include up to 30–40 forms and documents<sup>32</sup> that traders, or the customs brokers and freight forwarders on their behalf, have to submit to various authorities, and that the authorities have to share with each other.

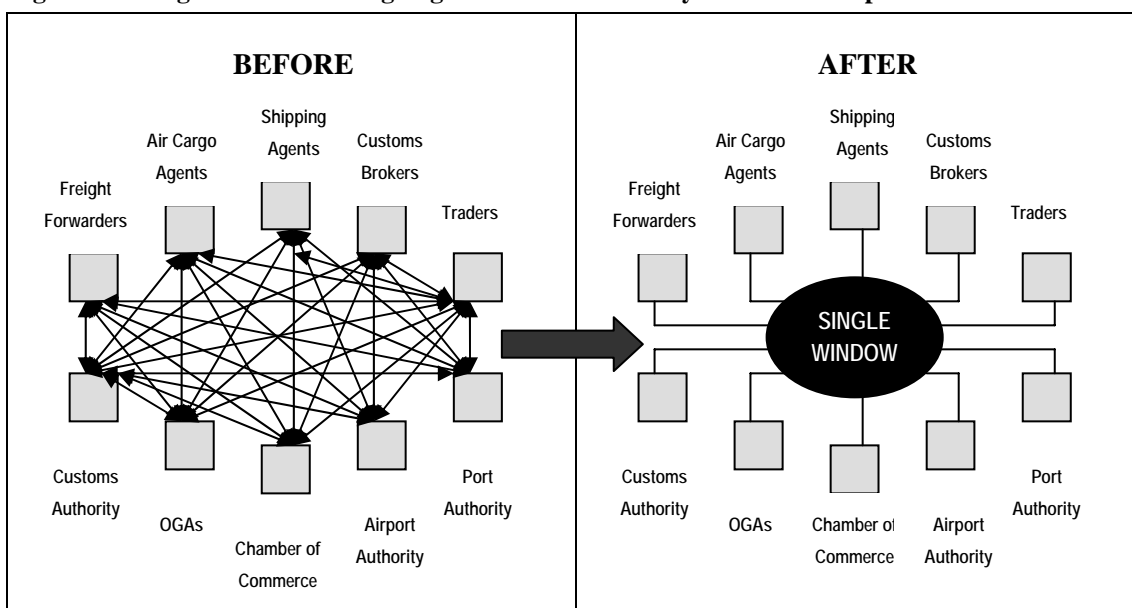
44. Different forms of single window exist; physical single windows bring together public agencies at one physical location so that traders no longer have to visit multiple agencies to submit the forms. If the single window is based on ICT information, documents can be submitted electronically and only once. The data is then transmitted to relevant authorities and private entities through the electronic platform and re-used by each of them for their procedures and operations. The trader is informed of the status of its submission through electronic messaging and receives necessary permits and certificates through the single window.

45. Figure 2 depicts the process interactions between the parties involved in the international trade transaction before and after introducing the single window. Different business and regulatory processes can be offered through a single window. These may include customs clearances, e-payment of customs duties and taxes, other trade requirements-related processes and processes related to shipping, transport and the insurance and banking sectors. The scope of processes covered by the single window and the geographical scope of single windows is different in each country.

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<sup>31</sup> The most commonly applied definition of a single window originates from the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT), according to which the single window is “a facility that allows parties involved in trade and transport to lodge standardized information and documents with a single entry point to fulfil all import, export and transit-related regulatory requirements”.

<sup>32</sup> Such forms and documents may include import/export permits, health certificates, technical certificates, certificates of origin, invoices and customs declarations, to name only a few.

**Figure 2. A single window leading to greater trade efficiency and more competitive trade**

Source: UNCTAD.

Note: OGAs = other government agencies.

46. A single window for international trade is mostly a government-led initiative. It is usually spearheaded by the government agency that is best positioned to ensure a strong political backing and push for the necessary legal and organizational reforms, as well as sustainable human and financial resources. In most cases, the national single window initiative is led and implemented by the customs authority in close collaboration with OGAs involved in border crossing procedures. This is mainly for two reasons. First, customs carries the primary responsibility over the goods declaration, clearance, controls and release. Second, customs usually already operates customs automation systems, including UNCTAD's Automated System for Customs Data (ASYCUDA), that might provide for meeting some basic preconditions to migrate to an electronic one-stop service (see box 2). Functional single windows can be found for example in Ghana, Guatemala, Mauritius, Senegal, Singapore and Thailand.

47. As the implementation of a single window is rather complex, requiring substantial investment, specific technologies, knowledge and skills, governments often seek partnerships with the private sector. The public-private partnership offers the potential for the public sector to tap into private financial resources, management knowledge, technology and skills for the most efficient provision of essential infrastructure for trade. While the government has the responsibility to regulate international trade and transport, the private sector operates in the market as a provider of transport and logistics services, sophisticated information technologies and value added network services. Combining these two strengths is a particularly important ingredient of a single window, which services a specific group of users (i.e. traders, freight forwarders, airport cargo and shipping agents, customs brokers, airport and port authorities), who require swift service round the clock in order to comply with just-in-time delivery of goods. This is crucial for trade in time-sensitive and perishable products.



**Box 2. UNCTAD's ASYCUDA promoting a single window**

The main objective of UNCTAD's ASYCUDA programme, which is currently present in more than 90 countries, is the modernization of customs including the automation of the process for goods clearance. It aims to facilitate trade by speeding up the clearance process through the use of information technology and the simplification of documentation and procedures. Another objective is the increase of budget revenue through the computerization of the customs tariff, thereby automatically calculating duties and taxes. An equally important aim and also a by-product of processing customs data is to provide reliable and timely trade and fiscal statistics to assist governments in planning their economic policy.

ASYCUDA has several versions, including the latest one, ASYCUDAWorld, which promotes and supports the application of modern customs techniques such as the effective management of the goods clearance process, selective examination of cargos, trader compliance, secured payment schemes and control of trade routing to approved customs offices. ASYCUDA applications can therefore be easily interfaced with the single window systems that use other applications. For example, in Madagascar, the customs procedures have been automated through ASYCUDA++. This system was further interfaced with the single window system – GasyNet – which was introduced in 2006 as a public-private partnership entity between customs and the Malagasy Community Network.

The ASYCUDA Implementation Strategy has been developed and refined on the basis of more than 25 years of experience. Implementation projects are structured in phases ensuring a low risk and cost-effective approach that provides for long-term sustainability.

Moreover, the ASYCUDA programme is currently developing a single window concept with two main objectives:

- (a) To establish or increase cooperation between customs, OGAs and border authorities to enable electronic sharing of documents and establishing common procedures for processing and control;
- (b) To allow trade and transport operators to make a single submission of trade documents and information that will satisfy all import, export and transit regulations.

*Source: UNCTAD.*

48. The most common public-private partnership business model for a single window is a commercial entity that serves as a "special purpose vehicle". It operates the single window system, including its maintenance, upgrading and the provision of training programmes and call centres, which are available to its users round the clock. The entity functions on an investment- and risk-sharing basis as a joint venture between one or several public sector agencies including customs, the ministries of commerce and finance, port and airport authorities and the main private sector stakeholders such as chambers of commerce, shippers' associations, banks or telecommunication companies. Table 2 provides an overview of the public-private partnership business models and shareholders in selected countries that operate a single window system.

**Table 2. Country examples of the public-private partnership business models for a single window**

Country/ induction year	Induction cost (millions of dollars)	Special purpose vehicle operating the single window	PPP business model
Singapore (1989)	10	Crimson Logic Ltd. (formerly Singapore Network Services) operating TradeNet and TradeExchange	Trade Development Board, 55 per cent Port of Singapore Authority, 15 per cent Civil Aviation Authority, 15 per cent Singapore Telecoms, 15 per cent
Mauritius (1994)	n/a	Mauritius Network Services Ltd. operating MauriNet Pte. Ltd.	Original shareholders: MaurInvest, 60 per cent (created by domestic partners), of which: - Four government agencies, 53 per cent - Chamber of Commerce and Industry, 47 per cent Crimson Logic Singapore, 40 per cent (foreign partner to provide know-how and technology)
Ghana (2000)	6	Ghana Community Network Ltd. (GCNet)	SGS Société Générale de Surveillance, 60 per cent Customs Excise and Preventive Service, 20 per cent Ghana Shippers Council, 10 per cent Ecobank Ghana Limited, 5 per cent Ghana Commercial Bank, 5 per cent
Senegal (2002)	5	Gainde2000 operating ORBUS 2000 System and CORUS	Customs (Comité de gestion de la prestation informatique douanière), 80 per cent Private sector, 20 per cent

Source: UNCTAD, from different sources.

49. The initial investment can be provided through public funds (Senegal, Singapore) or shared between the government and the private sector (Ghana, Mauritius). The special purpose vehicle business model is designed to achieve self-sustainability. To ensure the return of investment and self-sustainability, in many countries operating such systems the use of the single window is mandatory, i.e. obliging all traders to use the single window system for documents preparation and clearance. The costs are recovered through different fees charged to the users of the services. These may include the following:

- (a) Software single user fee/registration fee, which is a one-time fee paid at the outset by each business community user;
- (b) Annual fee;
- (c) Service fee per declaration sent and processed through the single window system;
- (d) Fixed service fee per transaction.

50. To build and sustain public-private partnerships for establishing and operating a single window, several important principles should be observed by the partners on both sides. These should include the following:

- (a) A coordinated, realistic and efficient approach to procurement;
- (b) Shared commitment by the public sector and the private sector;
- (c) Transparency and trust;

(d) Realistic expectations by the public sector on what the private sector can deliver and understanding by the private sector of what the public sector is seeking to achieve;

(e) Legal framework consistent with procurement and project needs for services to implement a single window (e.g. responsibilities of each partner agency, acquisition of the information technology (IT) system, provision of value added network services, enabling electronic submission of trade information, authentication and verification electronic signatures, data sharing and storage, confidentiality issues).

51. For an LLDC, the adoption of IT-enabled trade facilitation solutions, such as an electronic single window, may help turn it into a land link and offer transit services to neighbouring countries. When underpinned by efficient infrastructure and logistics systems, a single window may, with low operating and administrative costs, compensate for long distance and geographical remoteness.

52. Even though many LLDCs already operate customs automated systems, such as ASYCUDA, none of them has yet a single window in place, mostly due to lack of know-how and technologies as well as sufficient communication infrastructure. Some, however, in the Caucasus and Central Asia seem to be relatively advanced in this area. Several of them, namely Azerbaijan, Kazakhstan, Kyrgyzstan and Mongolia, have already initiated the first steps towards the implementation of a single window. This is probably not surprising, since the countries of this region are among the countries most distant from their potential overseas markets.<sup>33</sup> In most countries in this region, the customs agency has taken the lead in single window implementation. In Mongolia, however, it is the Mongolian Chamber of Commerce and Industry that is spearheading the single window concept in close partnership with the Mongolian General Customs Administration.

53. The success stories of the existing single window business models reveal that public-private partnerships can indeed play a vital role in trade facilitation. This is particularly true with respect to the use of high-end technologies and the need for the specific services, know-how or skills that might be new to government agencies and would require the allocation of extra resources and time. Such models, therefore, not only prove critical in enhancing the efficiency and sustainability of public services, but also allow the government agencies to focus on their own missions.

## V. Issues to discuss

54. The current challenging times call for a more active role of governments, through creative national and regional policies, in promoting transport infrastructure as part of trade and development plans, including through public-private partnerships. This is particularly true for small and vulnerable economies, landlocked countries and their transit neighbours, and small islands where trade volumes do not allow for proper rates of return and do not easily attract private investment.

55. Some of the issues that the experts participating in the meeting may want to discuss include the following:

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<sup>33</sup> The distance of the countries in the Caucasus and Central Asia to the closest seaports ranges from 700 km from Armenia, 800 km from Azerbaijan, 995 km from Mongolia, 2,950 km from Uzbekistan, 3,100 km from Tajikistan, 3,600 km from Kyrgyzstan and 3,750 km from Kazakhstan (ESCAP, 2006).

(a) Experience shows that timely investments in transport and trade facilitation involving the participation of private operators have led to increased throughput and frequency of transport services, resulting in lower freight rates and improved connectivity. Such investments may become a strategic component to overcome the crisis when made part of anti-cyclical expansionary fiscal policies to promote recovery through trade;

(i) When developing post-crisis recovery packages, how can policymakers take into account and look at existing best practices in financing the development and use of transport and trade facilitation infrastructure and services?

(b) The experience at the global level of public-private partnerships bringing in know-how, advanced managerial skills and operational technologies is now well documented. Public-private partnerships have proven to be instrumental in the development of effective solutions to improve processes in seaports or inland freight terminals as well as in trade facilitation platforms such as single windows. Least developed and small vulnerable economies may face special limitations in their access to best available solutions to reduce transport costs and improve transport efficiency and connectivity;

(i) Can existing public-private partnerships models be adapted to local conditions and requirements?

(ii) What would be the most effective schemes to attract private participation, technology and know-how in ports, land transport and trade facilitation infrastructures and services?

(iii) Can existing successful examples also suit small economies?

(iv) Are there scale or size requirements when developing public-private partnerships for transport and trade facilitation?

(c) Landlocked developing countries and their transit coastal neighbours need to continue monitoring and analysing specific collaborative arrangements, including the participation of private sectors, in the field of trade facilitation and transit transport infrastructure and related services;

(i) What types of measures have been successful in reducing bottlenecks between landlocked and transit developing countries?

(ii) What are the international standards that can be adopted by landlocked and transit developing countries that may remove trade barriers and bottlenecks?

(iii) What are the key international ICTs in logistics, trade facilitation and supply chain security that would assist landlocked and transit developing countries to better participate in world trade?

(d) The ongoing negotiations at the WTO on trade facilitation will eventually lead to a new set of commitments to be implemented by WTO members. For developing and least developed countries these commitments will result in a process of trade facilitation reform. This will require changes in the regulatory framework, adopting new procedures and operational practices, training staff and adopting new technology solutions including for customs administrations and single window development. Developing countries will have to explore options for the financing of these reforms and the necessary strengthening of local capacities;

(i) Can existing national trade facilitation platforms support the process of reforms?

(ii) How can public-private partnerships best provide skills, technology and finance in this context?

(iii) How can customs departments improve their efficiency in facilitating international trade and securing revenue collection, while combating fraud and ensuring compliance with international regulatory frameworks?

(iv) How can the international community provide support, through mechanisms such as Aid For Trade, for building trade facilitation reform capacity?

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